2025

1ST INTERNATIONAL

ONCOLOGY NURSING ASSOCIATION CONGRESS

Abstract Book

35 YEARS OF HERITAGE
IN ONCOLOGY NURSING
FROM THE PAST TO THE FUTURE

21-23 MAY 2025
Gazi University Rectorate
Ankara, Türkiye

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1st International Oncology Nursing Association Congress Abstract Book

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1st INTERNATIONAL

Oncology Nursing Association Congress

21 - 23 May 2025 | Ankara, Türkiye

Abstract Book

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PRESIDENTS' MESSAGE

Prof. Dr. Perihan Güner
President of Oncology Nursing Association
Congress President

Prof. Dr. Sultan Ayaz Alkaya
Dean of Gazi University Nursing Faculty
Congress President

Dear Colleagues,

As Oncology Nursing Association, we are proud and honored to organize our first international congress in accordance with the valuable contributions and intense demands of our colleagues with our 35 years of knowledge and experience. In cooperation with Gazi University Faculty of Nursing, we will hold the **1st International Oncology Nursing Association Congress in Ankara between 21-23 May 2025**. We look forward to inviting you to this historic event.

Oncology nurses are essential in protecting and promoting public health by raising awareness of oncology among individuals, families, and society and providing quality nursing care. In this context, the central theme of the congress is "**35 Years of Legacy in Oncology Nursing: From the Past to the Future**". Our congress will be a unique platform bringing together nationally and internationally renowned scientists, experts, and clinical practitioners shaping oncology nursing. Cancer Prevention and Early Diagnosis in Oncology Nursing Practice: Awareness and Lifesaving Strategies; Innovative and Sustainable Nursing Approaches in Cancer Care; Reflections of Technological Developments in Oncology Nursing; Living with Cancer: A New Balance, and Problems and Solutions in Oncology Nursing, this congress will host discussions that will shape the future of our field.

Our congress will be even more decadent with your valuable contributions, knowledge, and participation in this historic event. We look forward to seeing you at this pivotal meeting, where we will open new horizons in the field of oncology nursing.

Forward together!
Hope to see you at our congress,

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Dr. Manal AL-ZADİALİ

*Names are listed alphabetically.

INTERNATIONAL SPEAKERS

Alex Molasiotis, Prof

Prof. Alex Molasiotis is an academic and researcher in health sciences, currently serving as the Pro Vice-Chancellor and Dean of the College of Arts, Humanities, and Education at the University of Derby, UK. He is also the Editor-in-Chief of the European Journal of Oncology Nursing and holds visiting professorships at institutions including King's College London, the Karolinska Institute, and the University of Technology Sydney.

Eran Ben-Arye, MD, Prof

Eran Ben-Arye has an MD degree from the Faculty of Medicine of the Hebrew University of Jerusalem, Israel. Prof. Ben-Arye is on the faculty of the Bruce Rappaport Faculty of Medicine, The Technion, and since 2022 serves as the Chairman, Department of family Medicine, in the Faculty of Medicine. Prof. Ben-Arye is the founder and director of the Integrative Oncology Program at Lin, Carmel, and Zebulun Medical Centers, Haifa, Israel. He has been the chairperson of the Israel Society for Complementary Medicine of the Israel Medical Association. He is the Primary Researcher of the Middle East Research Group in Integrative Oncology (MERGIO) within the Middle East Cancer Consortium (MECC) and is an elected member of the Society for Integrative Oncology (SIO) Board of Trustees and serves as the SIO Regional Ambassador to Europe and the Middle-East.

Jeannine M. Brant, Ph.D., APRN-CNS, AOCN, FAAN

Dr. Jeannine M. Brant, Ph.D., APRN-CNS, AOCN, FAAN, is an oncology clinical nurse specialist and Director of Clinical Science and Innovation at City of Hope Cancer Center in Duarte, California. Dr. Brant received a bachelor's degree from Montana State University, a master's degree in physiological nursing from the University of California at San Francisco, and a doctorate in cancer nursing from the University of Utah in Salt Lake City. She is a past president of the Oncology Nursing Society. She is editor of the Journal of Advanced Practitioners in Oncology. She also serves as adjunct faculty at the University of Montana Geriatric Education Center, University of Southern Indiana and Montana College of Nursing, Bozeman.

Manal Abdul Majeed Hussain Al-Zadjali, RN. MSN. PhD

Manal Abdul Majeed Hussain Al-Zadjali is the Dean of the Higher Institute of Health Specialties, Oman. She is also the Secretary General of Oman Cancer Association. Dr. Manal has a PhD in Nursing and Healthcare Innovation and a Master degree in Nursing Science - Community Health Nursing from Arizona State University. She teaches in the Postgraduate Diploma in Community Health Nursing Practice Program- a program that she has developed. Dr. Manal is a volunteer in Oman Cancer Association for the past ten years. In addition, she is also a reviewer in several International Journals. Her research interest includes palliative care, healthcare workforce education and training, chronic diseases... etc. Further, Dr. Manal received the Oman Woman of the Year-2019 award in the category of Education.

Maryam Rassouli, Prof.

Prof. Maryam Rassouli is a professor of nursing at the University of Nizwa, Oman, where she is affiliated with the School of Nursing in the College of Health Sciences. Previously, she served as a full professor at Shahid Beheshti University of Medical Sciences (SBMU) in Tehran, Iran, and held the position of Director General of Nursing Services. Dr. Rassouli is a member of the International Society of Nurses in Cancer Care (ISNCC) and the ISNCC Knowledge Development and Dissemination Committee (since 2022). She was also a member of the Iranian National Network of Nursing Research (2016-2021) and a founding board member of the Iranian Scientific Palliative Care Association under the Ministry of Health in Tehran. Additionally, she has been serving as a Temporary Adviser on Palliative Care for the Eastern Mediterranean Region of the World Health Organization (WHO) since 2019. Her research interests include palliative care, spirituality in healthcare, cancer care, mixed-method research, and scale development.

Funda Rohde, Assoc. Prof.

Assoc. Prof. Funda Rohde is a Palliative Care and Psychiatric Nurse. She works as a psychotherapist in her private practice in Germany. Ms Rohde is also an honorary lecturer in nursing departments and reputable institutions providing health and social work education. She collaborates nationally and internationally to develop psychiatric and palliative care nursing.

ACKNOWLEDGMENT

The congress of the Oncology Nursing Association was successfully held with the valuable support of our sponsors, collaborators, and all contributing institutions. We sincerely thank each of them for their contributions, which made this important gathering in oncology nursing possible.

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21 MAY WEDNESDAY - COURSES

TIME	COURSE NAME	ATTENDANCE
13:00-16:00	**Teaching Mindfulness-Based Self-Compassion Skills to Oncology Nurses** **Course Instructor**: Behice Belkıs ÇALIŞKAN	Min:15 Max:30
09:00-16:50	**Immunotherapy Course** **Course Instructor:** Gülbeyaz CAN, Dilek YILDIIRM	Min:15 Max:100
09:00-13:10	**Holistic Approach in Breast Cancer Survivorship Course** **Course Instructor:** Fatma ARIKAN, Yasemin USLU	Min:15 Max:30
09:00-17:30	**Basic Cancer Education in Oncology Nursing** **Course Instructor:** Ayşin KAYIŞ	Min:15 Max:50
09:00-17:00	**Basic Level Stem Cell Transplantation Nursing Course** **Course Instructor:** Dilek URTEKİN	Min:15 Max:100

22 MAY THURSDAY - SCIENTIFIC PROGRAM

TIME	SCIENTIFIC PROGRAM
08:30–09:00	**REGISTRATION**
09:00–09:15	**OPENING CEREMONY** **Prof. Dr. Sultan AYAZ ALKAYA** – Dean of Nursing Faculty, Gazi University **Prof. Dr. Perihan GÜNER** – Oncology Nursing Association President **Prof. Dr. Uğur ÜNAL** – Rector of Gazi University
09:15–09:30	**Music Concert**
SESSION I : ONCOLOGY NURSING FROM THE PAST TO THE FUTURE **Session Chair:** Nurgün PLATIN, Perihan GÜNER	
09:30–10:30	35 Years of Heritage from the Past to the Future Perihan GÜNER
10:30-11:00	COFFEE BREAK
SESSION II: PREVENTION AND EARLY DIAGNOSIS: AWARENESS AND LIFE-SAVING STRATEGIES **Session Chair:** Ayfer KARADAKOVAN, Sultan AYAZ ALKAYA, Gülşen TERAKYE	
11:00–11:20	Cancer Screening Studies in Türkiye Fahriye ÜNLÜ
11:20–11:50	Cancer Screening Studies in Oman Manal AL-ZADJALİ
11:50–12:10	Obstacles and Solutions in Cancer Screening Ayşe ÇAL
12:10–12:30	The Effect of Cancer Screening on Survival Betül TOSUN
CONFERENCE I: REFLECTIONS OF TECHNOLOGICAL DEVELOPMENTS ON ONCOLOGY NURSING **Conference Chair:** Sevinç KUTLUTÜRKAN, Miray AKSU	
12:30–13:00	Use of New Generation Technologies in Oncology Patients Aydanur AYDIN
13:00-14:00	LUNCH
SESSION III: REFLECTIONS OF TECHNOLOGICAL DEVELOPMENTS ON ONCOLOGY NURSING **Session Chair:** Sevinç KUTLUTÜRKAN, Miray AKSU	
14:00–14:30	The Essential Role of Nursing in Integrative Oncology: A Middle East Perspective Eran BEN-AYRE
14:30–15:00	What Have We Learned from Qualitative Studies Related to Cancer Symptom Management? Alex MOLASSIOTIS
15:00-15:30	COFFEE BREAK
SESSION IV : NEW APPROACHES TO CANCER CARE IN THE 21st CENTURY **Session Chair:** Ayla GÜRSOY, Emine İYİGÜN, Özlem OVAYOLU	
15:30–15:50	New Approaches in Systemic Treatment Process Dilek YILDIRIM
15:50–16:10	New Approaches in Cancer Surgery Process Arzu TUNA
16:10–16:30	New Approaches in Palliative Care Process Funda ROHDE
16:30–16:50	New Approaches in Grief Process Meryem RASSOULI
CONFERENCE II: ONCOLOGY NURSING **Conference Chair:** Sultan KAV	
17:00-17:30	Oncology Nursing from a Global Perspective Jeannine M. BRANT

23 MAY FRIDAY - SCIENTIFIC PROGRAM

TIME	HALL A PROGRAM
SESSION V: SUSTAINABLE EMPOWERMENT STRATEGIES IN ONCOLOGY NURSING **Session Chair:** Besti ÜSTÜN, Ayşe OKANLI, Figen Şengün İNAN	
09:00–09:30	Professional Quality of Life Strategies in Oncology Nurses Figen İNCİ
09:30–10:00	Sustainable Empowerment: Mobilizing Social Resources, Self-Care Strategies Songül KAMIŞLI
10:00–10:30	Good Practice Examples in Empowering Oncology Nurses Nesibe KAÇMAZ
10:30-11:00	COFFEE BREAK
SESSION VI: SYMPTOM MANAGEMENT AND SAFE PRACTICES: CASE REPORTS **Session Chair:** Gülbeyaz CAN, Nimet OVAYOLU, Ferhan ÇETİN ŞEREF	
11:00–11:30	Extravasation Kıymet YILMAZ
11:30–12:00	Neutropenia Funda ÇAM
12:00–12:30	Nausea Vomiting Canan PÖRÜCÜ
12:30–13:00	Neuropathy Hatice GÜZEL
13:00-14:00	LUNCH
SESSION VII: THOSE WHO MAKE A DIFFERENCE IN CLINICAL PRACTICE: SUCCESS STORIES **Session Chair:** Fatma GÜNDOGDU, Semra ERCİVAN	
14:00–14:15	Transformation Experienced in the Hematology Clinic Through Teamwork in the Field of Nursing Hatice İMECE
14:15–14:30	Touching Patient Dilşad CİNAL
14:30–14:45	Art and Occupational Therapy in the Cancer Journey Ayşin KAYIŞ
14:45–15:00	Overcoming the Silent Threat; Making a Difference in Service Özlem TOPKAYA
15:00-15:30	COFFEE BREAK
SESSION VIII : PROBLEMS AND SOLUTION SUGGESTIONS IN ONCOLOGY NURSING **Session Chair:** Perihan GÜNER, Figen BAY, Azize ATLI ÖZBAŞ, Erkan SANMAK	
15:30-17:00	
CLOSING & AWARD CEREMONY	
17:00–18:00	

23 MAY FRIDAY - SCIENTIFIC PROGRAM

TIME	HALL B PROGRAM
	SESSION IX: BEING A PEDIATRIC ONCOLOGY NURSE **Session Chair:** Pınar YILMAZ, Kadriye SANCI, Ayşe AY
09:00–09:15	Importance and Priority Issues of Pediatric Oncology Nursing Sevil ÖZKAN
09:15–09:30	International Opportunities and Supports for Empowering Pediatric Oncology Nurses Hazal ÖZDEMİR KOYU
	SESSION X: STEM CELL TRANSPLANTATION NURSING AND INNOVATIVE APPROACHES **Session Chair:** Ülkü POLAT, Yasemin KARACAN, Sevgül ÖZDEMİR
09:30–09:45	Stem Cell Banking and Individualized Therapy Management of Biobanks and Ethical Issues for Nurses Suzan BERKİTEN
09:45–10:00	Targeted Immunity: The Art of Nursing in CAR-T Therapy Tuğba ŞEN
10:00-10:30	COFFEE BREAK
	SESSION XI: EVIDENCE-BASED PRACTICES IN RADIATION ONCOLOGY NURSING **Session Chair:** Ülkü SAYGILI DÜZOVA, Özlem CANBOLAT
10:30–10:45	Managing Sexual Problems Ayla BOZ
110:45–11:00	Managing Skin Reactions Berkay ALİKAN
	SESSION XII: SYMPTOM MANAGEMENT IN GERIATRIC ONCOLOGY PATIENTS **Session Chair:** Öznur USTA YEŞİLBALKAN, Elif SÖZERİ ÖZTÜRK
11:00–11:15	Symptom management in geriatric oncology patients: What should we pay attention to? Pınar TEKİNSOY KARTIN
11:15–11:30	Patient education in symptom management in geriatric oncology patients: Clinical experiences Betül YÜCELKAN
	SESSION XIII: A CURRENT PERSPECTIVE ON BREAST CARE NURSING **Session Chair:** Sevgisun KAPUCU, Fatma ARIKAN
11:30–11:45	Breast Care Nursing in Our Country: Facilitators and Barriers Sevil GÜLER
11:45–12:00	Individualized Care in Systemic Treatments in Breast Cancer: New Horizons Ayşe ARIKAN
	SESSION XV: SYMPTOM MANAGEMENT AND USE OF DIGITAL TECHNOLOGIES IN PALLIATIVE CARE NURSING **Session Chair:** Gülten GÜVENÇ, Esra Nur ERDOĞAN
12:00–12:15	The Importance of Awareness in Gynecological Cancers and Our Roles as Nurses Nazlı ÖZBEK
12:15–12:30	Ethics in Oncology Gülşen VURAL
	SESSION XIV: GYNECOLOGICAL CANCERS AND NURSING: FROM AWARENESS TO CARE **Session Chair:** Özlem UĞUR, Şerife KARACA
12:30–12:45	Symptoms that Requiring Urgent Intervention in Palliative Care (Pain, Dyspnea, Delirium) Merve ÇELİK
12:45-13:00	Use of Digital Technologies in Palliative Care Patient Management Esra TAYAZ
13:00-14:00	LUNCH
14:00–15:30	Workshop: Emotional Freedom Techniques (EFT) Esin AKAN
15:30-16:00	COFFEE BREAK
16:00–17:00	**Workshop**: Innovative Thinking Skill Development Workshopi Aydanur AYDIN

SECTION 1

ORAL PRESENTATIONS

OP - 001

Bone Marrow Transplant Planned Patients The Relationship Between Perception of Vulnerability to Diseases and Health Locus of Control

Tuğba Menekli
Malatya Turgut Özal University Faculty of Health Sciences, Department of Medicine Nursing, Malatya, Türkiye

Ramazan Demir
Malatya Turgut Özal University Faculty of Health Sciences, Department of Nursing, Malatya, Türkiye

Objective: marrow transplantation and high-dose chemotherapy cause many physical and psychosocial changes in patients. The planning of bone marrow transplantation causes patients to perceive themselves as vulnerable to diseases and to wonder whether they have a locus of control over their health. The aim of this study was to investigate the relationship between the perception of vulnerability to diseases and health locus of control in patients who are planned for bone marrow transplantation.

Materials-Methods: This descriptive study was conducted between June 2023 and December 2024 with 119 adult patients who were planned for transplantation at the Stem Cell Transplantation Centre of Malatya Turgut Özal Medical Centre. 'Patient Introduction Form', "Perception of Vulnerability to Diseases Scale" and "Multidimensional Health Locus of Control Scale" were used to obtain the data. In the statistical evaluation of the data obtained, frequency, percentages, one-way analysis of variance, independent groups t test and Pearson correlation analysis were performed using SPSS 29.0. The research was conducted in accordance with the principles of the Declaration of Helsinki.

Results: The mean age of the patients was 46.03±9.15 years, 54.3% were male and 64.9% were married. It was found that 42.2% of the patients were diagnosed with multiple myeloma and the transplant type was autologous in 58% of the patients. The mean total score of the Perception of Vulnerability to Diseases Scale was found to be 65.43±10.18. According to the subscale dimensions: The mean scores of infection perception and germ avoidance were 29.73±6.15 and 35.05±5.27, respectively. Multidimensional Health Locus of Control Scale Internal Health sub-dimension mean score was 24.14±4.05, External Health sub-dimension mean score was 22.07±2.88, Chance Health Locus of Control sub-dimension mean score was 19.36±3.16 and the general mean score was 64.19±2.78. It was found that there was a high level negative relationship between the total mean score of Perception of Vulnerability to Diseases and the total mean score of Health Locus of Control ($p<0.05$).

Conclusion(s): It was determined that the patients who participated in the study had a moderate level of perception of vulnerability to diseases and good health locus of control scores. It was determined that patients with high health locus of control had better perceptions of defense against illness.

Keywords: Bone Marrow Transplantation, Health Locus of Control, Vulnerability to Diseases

OP - 002

Investigation of Illness Acceptance and Self-Efficacy in Coping with Cancer in Cancer Patients

Tuğba Menekli
Malatya Turgut Özal University Faculty of Health Sciences, Department of Medicine Nursing, Malatya, Türkiye

Aslı Tay
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Objective: Acceptance of the disease is important in effectively continuing the treatment and care of cancer, which is difficult to manage, and the level of acceptance affects coping with cancer. Self-efficacy, which has an important place in coping with cancer, is an important guide for health professionals in determining the needs of individuals in this process. The purpose of the study is to evaluate the level of acceptance of the disease and the level of self-efficacy in coping with cancer in cancer patients, to determine the affecting factors and to examine the relationship between these variables.

Materials-Methods: The research was conducted between September 2023 and October 2024 at the Turgut Özal Medical Center Oncology Hospital with 304 patients who accepted the research and met the criteria. Data were collected using the “Introductory Information Form”, “Illness Acceptance Scale” and “Cancer Behavior Inventory-Short Version”. In statistical evaluation, arithmetic mean, standard deviation, percentage, t-test in independent groups, Mann Whitney U, Kruskall Wallis, Spearman Correlation and Linear Regression analysis were performed using SPSS 29.0. The research was conducted in accordance with the Principles of the Declaration of Helsinki.

Results: It was found that 52.00% of the patients were female, 39.60% were primary school graduates, the mean age was 51.47±10.25, 31.2% had breast cancer, 42.8% were in the 2nd stage and the mean diagnosis time was 10.35±9.42. The mean of the Illness Acceptance Scale was 24.11±7.84 and the mean of the Cancer Behavior Inventory was 89.37±14.03. A statistically significant relationship was found between the patients' education and income status, age, receiving support for care, diagnosis time and stage and the mean scores of the Illness Acceptance Scale (p<0.05). A statistically significant relationship was found between the patients' marital status, gender, cancer treatment protocol and the mean scores of the Cancer Behavior Inventory (p<0.05). A positive and high level correlation was found between the mean scores of the Illness Acceptance Scale and the mean scores of the Cancer Behavior Inventory (p<0.05). In addition, it was determined that the Illness Acceptance variable was a significant predictor of Cancer Coping Self-Efficacy and explained approximately 13% of the total variance (R=0.368; R2=0.192; F=18.016; p<0.01).

Conclusion(s): The patients' Illness Acceptance Scale mean score was medium and the coping self-efficacy mean score was high. As the level of disease acceptance increases, the level of cancer coping self-efficacy also increases.

Keywords: Coping with Cancer, Illness Acceptance, Self-efficacy

OP - 003

The Effect of Good Death and Compassion Fatigue on Care Behaviors in Oncology Nursing

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Objective: This study was conducted to examine the relationship between oncology nurses' perceptions of a good death and their levels of compassion fatigue, and to determine how these factors influence their caregiving behaviors toward patients with cancer.

Materials-Methods: This descriptive, cross-sectional and correlation study was conducted between May 2024 and July 2024 to investigate the effects of the perception of a good death and compassion fatigue on the care behaviors of 89 nurses working in the inpatient units of Ege University Tülay Aktaş Oncology Hospital and Ege University Medical Faculty Hospital, including medical oncology, hematology, and bone marrow transplantation. The study was conducted descriptively and cross-sectionally. Data were collected using the Individual Information Form, the Good Death Scale, the Short Compassion Fatigue Scale, and the Care Behaviors Scale. The analysis of the data obtained in the study was carried out using IBM SPSS 25 software. The normal distribution assumption was checked with the Shapiro-Wilk test. Pearson correlation was applied to examine relationships between continuous variables with a normal distribution, while Spearman correlation was used for non-normally distributed data. Linear regression analysis with the stepwise approach was employed to mathematically model the relationship between a dependent continuous variable and independent variables.

Results: The results showed that oncology nurses were aged between 22 and 53 years, 83.1% were female, 61.8% were single, 80.9% held a bachelor's degree, and 19.1% held a graduate degree. The study findings revealed that the care behaviors were at a high level, with a Care Behaviors Scale score of 5.15±0.64. There was a statistically significant, positive, and moderate relationship between care behaviors and the perception of a good death. Additionally, a statistically significant, negative, and low-level relationship was observed between compassion fatigue and care behaviors.

Conclusion(s): The study results indicate that oncology nurses exhibit high levels of care behaviors and that their perception of a good death and levels of compassion fatigue are related to their care behaviors

Keywords: Good Death, Compassion Fatigue, Care Behaviors, Oncology, Nursing

OP - 004

Evaluation of the Awareness of Women Working in an Oncology Hospital Regarding Gynecological Cancers

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Education programs should be organized to increase awareness about gynecological cancers. Specific education programs, especially for healthcare professionals, can increase awareness about early diagnosis and prevention. Policies that encourage healthcare professionals to participate in regular screening programs should be implemented. Healthcare professionals in hospitals should be provided with consultancy services regarding gynecological health, and employees should be encouraged to identify individual risk factors. The study results can be used as basic information for gynecological cancer awareness campaigns and materials.

Current education programs should be organized because lack of information about gynecological cancers can negatively affect the quality of patient care and early diagnosis. Future studies can examine long-term effects in a larger sample group to increase awareness levels. Information seminars and workshops should be organized at regular intervals in oncology hospitals, ensuring continuity in awareness. Informative content and guide documents should be prepared on digital platforms to increase the awareness level of employees.

Conclusion(s): Sustainable development should be aimed in this area by allocating special funds for awareness-raising activities.

Keywords: Awareness, Gynecological Cancer, Nurse, Woman

OP - 005

Evaluation of Mental Health Literacy Levels of Oncology Nurses: A Descriptive Study

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Objective: Cancer is a serious health problem that is rapidly increasing, requires long-term treatment, and involves uncertainties. These uncertainties cause patients to experience psychosocial problems and negatively affect their treatment processes. Nurses, in particular, have an important responsibility in early recognition of psychosocial problems in cancer patients and implementation of preventive interventions. Nurses who are competent in mental health identify patients' psychological problems early, direct them to psycho-oncology services, and effectively manage emotional problems. Therefore, the mental health literacy levels of oncology nurses are important. This study was conducted to evaluate the mental health literacy of oncology nurses.

Materials-Methods: This study was conducted with a descriptive research design. The universe consisted of 677 nurses who were members of the Oncology Nursing Association, and the sample size was determined as 94. Nurses who were members of the association and provided care to cancer patients and volunteered to participate were included in the study. After obtaining ethics committee approval, the data were analyzed, frequency tables and descriptive statistics were used.

Results: Of the participating nurses, 46.8% were between the ages of 28-37, 81.9% were female, and 75.5% were university graduates. 18.1% reported that they had a psychiatric illness diagnosis themselves and 17% reported that their family members had a psychiatric illness diagnosis. 64.9% of the nurses had less than 5 years of experience in the field of oncology. 83% reported that they did not receive psycho-oncology training, and 79.8% reported that they did not evaluate the psychosocial status of patients on a daily basis. The mean score of the RSOY Scale was 14.09±4.78, which is at a moderate level. While there was no significant difference between the RSOY scores according to sociodemographic variables ($p>0.05$), the scores of those who had a psychiatric illness diagnosis themselves or in their family members were found to be significantly higher ($p=0.047$, $p=0.004$).

Conclusion(s): In conclusion, in our study, the level of RSOY was moderate and it was determined that nurses who had a psychiatric disease diagnosis themselves or their family members had a higher level of mental health literacy. In this direction, it is thought that training and awareness studies should be carried out to increase the mental health literacy levels of oncology nurses.

Keywords: Cancer, Oncology Nursing, Mental Health

OP - 006

Factors Affecting Psychological Resilience and Coping Experiences of Cancer Patients: A Phenomenological Study

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Objective: Cancer, the second most common cause of death, is one of the most important and urgent problems of our age. Psychological resilience can increase personal well-being by increasing the adaptive capacity of the individual and facilitate better coping with the cancer process. The aim of this study was to evaluate the factors affecting psychological resilience and coping experiences of cancer patients.

Materials-Methods: This study, in which the phenomenological research method was used, was conducted with 22 cancer patients in northern Türkiye. Criterion sampling method, one of the purposive sampling methods, was used. Interviews continued until data saturation was achieved. All interviews were audio recorded and then transcribed. The data of the study were evaluated using thematic analysis. The study was conducted and reported according to the COREQ checklist.

Results: In the analysis of the data, three themes (effects of cancer, coping with cancer, psychological resilience and influencing factors) and eight sub-themes (mental, physical, social, perception of social support, treatment process, personal competence and future plans, spiritual disposition and perspective on negative events) were identified.

Conclusion(s): The results of the study showed that cancer has a negative psychosocial impact on individuals. The treatment and care process in cancer can negatively affect the psychological resilience of individuals. In this process, it was determined that situations such as perception of social support, coping resources, perspective on negative events, spirituality can affect psychological resilience.

Keywords: Coping, phenomenological study, cancer, psychological resilience, Türkiye

OP - 007

Exposure to body fluids and injuries in the professional activities of operating room nurses

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Objective: Exposure to body fluids and injuries of operating room nurses.

Materials-Methods: The research was conducted using a quantitative research strategy. A questionnaire was posted on the Internet (website of the Lithuanian Society of Operating Room Nurses). The study involved 254 operating room nurses from Lithuania. The research was approved by the Committee for Assessing the Compliance of Applied Research with Research Ethics at Kauno kolegija Higher Education Institution. Statistical analysis of the quantitative data was performed using the IBM SPSS Version 22.0. Methods of quantitative data analysis included descriptive statistics, Anova test for group comparison, Student's t-test.

Results: Almost 15 out of 100 operating room nurses in the study have had a scalpel injury during surgery, with an even higher proportion (20.6%) having a surgical needle injury, 14 per cent having a needle stick injury, and 16.4% having a sharps injury. The lowest risk of injury is from electrocautery, with 6.1 per cent of operating room nurses being injured by electrocautery and 4.8% suffering burns. Splashing with body fluids (body fat or blood) is a very common occupational risk factor. For example, 45.3% of operating room nurses in the study have been exposed to body fat and 58.5% to blood. Operating theatre nurses working in general surgery, including oncology profile operating rooms, are more likely to be covered in blood and other body fluids ($p<0.05$). Operating room nurses with mixed schedules also have a higher incidence of exposure to body fluids and punctures than those working daytime (<0, 05).

Conclusion(s): In terms of occupational risk factors affecting operating room nurses, the biological risk factor 'contact with body fluids and punctures' remains a problem. Nearly half of the operating room nurses surveyed were splashed with the patient's body fat and more than half with blood. Injuries caused by sharp surgical instruments are dangerous more because of the risk of contracting various blood-borne diseases than because of the nature of the injury. Just under a quarter of operating room nurses have been exposed to a surgical needle, sharps, scalpel, or needle stick in surgery. The incidence of injuries while using electrocautery was not high. The high incidence of contamination with blood or other body fluids among operating room nurses highlights the need for careful attention to the use of protective equipment.

Keywords: Operating room nurses, occupational risks, biological factors

OP - 008

The Effect of Music Therapy Applied During Biopsy Procedures on Anxiety Level in the Breast Health Center

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Objective: Cancer, a global health problem, is one of the leading causes of death in the world. Biopsy of the breast can cause anxiety in many patients, adding to the emotional burden of the disease. However, there is hope in the form of music therapy, an innovative approach that has shown promise in alleviating anxiety. This research was conducted to evaluate the potential of music therapy to reduce anxiety levels during biopsy procedures performed at the breast health center, offering a ray of hope in the treatment process.

Materials-Methods: While patients who applied to the relevant breast outpatient clinic for breast biopsy after obtaining the approval of the ethics committee and the permission of the institution formed the research universe, it was performed with music during the biopsy procedure (30min-45min) after the patients who agreed to participate in the study, whose sample met the inclusion criteria, were informed about the study to the patient using the face-to-face interview technique and the informed consent form was signed. Our research is a quasi-experimental study. The data were analyzed using the SPSS 25.0 package program. The suitability of the data to normal distribution was evaluated with Kolmogorov-Smirnov and Shapiro-Wilk tests. Descriptive statistical methods (mean, standard deviation, median, frequency, and ratio) were used while analyzing the study data. A Paired Samples T-Test was applied for pre- and post-procedure tests. Independent Samples T-Test was used to compare two groups with parametric distribution, and the Oneway ANOVA test was used to compare more than two groups with parametric data. The significance level in all analyses was accepted as $p<0.05$.

Results: The findings show that the music played before the procedure is effective in reducing anxiety but may cause a significant increase in continuous anxiety values after the procedure. In this regard, it was determined that continuing to play music to patients before the procedure was beneficial in reducing the patient's current anxiety. Importantly, our satisfaction rate increased by 97, 52% compared to previous years, underscoring our approach's effectiveness and patient-centered nature.

Conclusion(s): We would also like to point out the importance of the music concert we held. Increasing the number of patients and conducting the study will contribute to the literature.

Keywords: Anxiety, Breast Biopsy, Music

OP - 009

Nursing Care for a Patient Diagnosed with Transverse Myelitis According to Gordon's Functional Health Patterns Model; A Case Report

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Objective: To popularize the use of the model among individuals diagnosed with transverse myelitis and their families, and to guide nurses in the effective and systematic management of the nursing process.

Case Report: The patient was a 69-year-old male, married, and the father of three children. His height was 161 cm, and weight 58 kg. He had no known allergies. His medical history included heart disease, a history of coronary artery bypass surgery, and a coronary artery stent. His regular medications included Beloc, Karum, and Tarden. He had a significant smoking history (100 pack-years). There was no known family history of malignancy. In June 2024, he presented to the EŞH Chest Diseases Clinic with complaints of chest pain, hoarseness, and cough. A biopsy was performed, and he was diagnosed with small cell neuroendocrine carcinoma. He was evaluated by the thoracic oncology council, and a cranial MRI and one cycle of chemotherapy (CT) were completed. Subsequently, a chemoradiotherapy (CRT) treatment plan was established. The patient received four cycles of carboplatin + etoposide, and atezolizumab was added in the fifth cycle. Following this, he developed severe cytopenias. He was hospitalized with decreased urine output and underwent bladder catheterization due to benign prostatic hyperplasia (BPH). A week later, he was re-admitted with symptoms of fatigue, muscle weakness, and imbalance. A neurology consultation was requested. Cranial MRI, EMG, and a follow-up PET-CT were performed. No vertebral metastasis was found. He was evaluated by the neurology council after cervical MRI, and was diagnosed with transverse myelitis, likely related to atezolizumab treatment. The patient was monitored without additional treatment until disease progression. He subsequently underwent plasmapheresis and received 1g of prednisolone. After the plasmapheresis session, he developed hypotension and dyspnea. Oxygen therapy at 2 L/min was initiated. On the same day, he was transferred to the intensive care unit (ICU) due to abdominal breathing and worsening blood gas values. In the ICU, he was started on Steradin and dobutamine due to hypotension. Spinal shock was suspected. Oral intake was discontinued, and a nasogastric (NG) tube was inserted. Parenteral nutrition (N7) at 20 cc/h was initiated, and the prednisolone dose was increased. In the following days, a tracheostomy and percutaneous endoscopic gastrostomy (PEG) were performed. The patient's Glasgow Coma Scale (GCS) deteriorated progressively. He passed away in January. At the time of death, his ECOG performance status was 5, GCS was 3, Braden Score was 9, and he had a stage 3 pressure ulcer. *Nursing diagnoses for patient*: Activity Intolerance, Unbalanced Nutrition: Less Than Body Requirement, Infection Risk, Infection, Risk of Transmitting Infection, Acute Pain, Anxiety, Disturbance in Sleep Pattern, Disturbance in Comfort, Self-Care Deficiency, Ineffective Respiratory Pattern, Disturbance in Gas Exchange, Constipation, Fluid Volume Imbalance, Risk of Disturbance in Skin / Tissue Integrity, Disturbance in Skin / Tissue Integrity, Risk of Disturbance in Oral Mucous Membrane, Risk of Bleeding, Risk of Falling, Risk of Disturbance in Role-Performance. *Nursing diagnoses for family*: Lack of Information, Risk of Difficulty in the Caregiver Role, Anxiety, Fear, Inability to Cope with Stress, Risk of Disturbance in Parent-Child Bonding

Conclusion(s): According to the Functional Health Patterns model, the patient was diagnosed mostly with the nutrition-metabolic pattern, elimination / excretion pattern, activity-exercise pattern, sleep-rest pattern, and cognitive-perceptual patterns; and the family was diagnosed mostly with the coping-stress tolerance pattern.

Keywords: Adverse Effect, Immunotherapy, Transverse Myelitis

OP - 010

Peripheral intravenous catheter (PIVK) placement becomes difficult in patients diagnosed with breast cancer who receive chemotherapy because vein visibility decreases

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Objective: The aim of this study was to determine the effect of arm massage applied to patients diagnosed with breast cancer receiving chemotherapy on the success of peripheral intravenous catheter placement.

Materials-Methods: The study was conducted in a randomized controlled experimental type in an outpatient chemotherapy unit of a hospital between August 2024 and February 2025. The sample of the study consisted of 60 patients who met the inclusion criteria (experimental group = 30, control group = 30). Patients in the experimental group received arm massage before peripheral intravenous catheter placement, while patients in the control group received no intervention. The time to successful catheter placement, patient anxiety, and satisfaction levels regarding the procedure were recorded.

Results: In the experimental group, a statistically significant increase was observed in vein degrees with arm massage ($p=0.011$). It was determined that the satisfaction of the patients in the experimental group regarding the current PIVC placement procedure was statistically significantly higher ($p=0.000$) compared to the control group, and the PIVC placement duration was significantly lower ($p=0.014$). While a statistically significant decrease was observed in the anxiety levels before and after the procedure in the experimental group ($p<0.05$), this decrease was not significant in the control group ($p>0.05$). The nurse who performed the catheter placement procedure in the experimental group stated that massage facilitated the PIVC placement procedure in 90% of the procedures.

Conclusion(s): Arm massage applied before the PIVC placement procedure was found to be effective in increasing vein visibility, shortening catheter placement time, increasing patient satisfaction and reducing anxiety levels regarding the procedure in patients with breast cancer who are receiving chemotherapy. It is recommended to use cost-effective massage application in the PIVC placement procedure, which affects patient comfort.

Keywords: Peripheral intravenous catheter insertion, breast cancer, vein visibilty

OP - 011

Nursing Care of a Patient Diagnosed with Breast Cancer During Pregnancy and Starting Chemotherapy During Postpartum - Case Report

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Objective: The aim of this study is to determine the nursing approaches and coping with the problems that develop during the treatment process of a patient diagnosed with breast cancer and receiving chemotherapy during the breastfeeding and postpartum period.

Case Report: Patient M.Ö. is 31 years old, married and has two children. The patient, who is a university graduate, does not have any functional disability. She does not use any medication, cigarettes, substances or alcohol. She has no family history of cancer and has had two normal births. In her second pregnancy, when the patient was 34 weeks along, she noticed a mass in her right breast during manual examination, and a heterogeneous mass of approximately 855 mm with multiple calcifications measuring 2-3 mm was detected on breast ultrasonography. Multiple atypical LAP measuring 23 mm was found in the right axilla and several LAM measuring 15*7 mm in the left axilla. Biopsy results showed carcinoma metastasis, ER (-), PR (-), HER2 (+3), Ki67 20-25%. In the PET CT performed after normal birth, there were findings consistent with the spread of the primary pathology in the right breast, liver, lymph nodes, skeletal system and probably both lungs. After the examinations, the patient was diagnosed with breast malignant neoplasm. The patient had a port catheter inserted (14.6.24) and started chemotherapy treatment. The patient's first chemotherapy started after birth, the first treatment on 17.06.2024. *Neoadjuvant Taxotere + Herceptin + Perjeta was given. The patient knows his illness and thinks that the illness comes from God. He does not want a psychiatric consultation and states that he can cope on his own. He has a strong religious belief and prays. His wife supports him.

Conclusion(s): Nursing diagnoses were planned for the patient during the treatment process and a multidisciplinary care plan was prioritized to strengthen the interventions of diagnoses, especially those aimed at emotional and psychosocial problems, and to increase attention. The patient's treatment is ongoing. Her general condition is good, she can do daily living activities and goes to work. Her baby is growing healthily.

Keywords: Pregnant, postpartum, breast cancer, care plan

OP - 012

Identifying Unmet Care Needs in Patients Receiving Chemotherapy

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Objective: This study was conducted to identify unmet care needs in patients receiving chemotherapy.

Materials-Methods: The descriptive and cross-sectional study was conducted on 161 patients receiving treatment in the medical oncology department of a training and research hospital. Data were collected using the Situation-Based Needs Analysis (DPGA) scale. Chi-square test and mean ± standard deviation calculations were used in statistical analyses.

Results: In the study, although there was no statistically significant relationship between demographic variables (age, gender, marital status, education level, economic status) and unmet care needs in general, significant differences were observed in certain variables. It was determined that female patients needed more support in housework and past functioning, individuals with low education levels had higher emotional support needs, and sadness and anxiety about the future were more pronounced in patients with poor economic status.

Conclusion(s): It was concluded that the care needs of patients during chemotherapy differ from person to person and that comprehensive support programs are needed in both physical and psychosocial areas.

Keywords: Cancer, unmet need, chemotherapy, nursing

OP - 013

Psychosocial and Physical Challenges in Survivors of Breast Cancer Following Lymph Node Dissection: A Descriptive Qualitative Study

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Objective: This study aims to provide insight into the lived experiences and psychosocial and physical challenges encountered by breast cancer survivors within six months of undergoing lymph node dissection.

Materials-Methods: Between June and December 2024, a qualitative design with purposive sampling was employed to recruit 12 participants from two cancer centres. Semi-structured interviews were conducted and audio-recorded for transcription and translation into English. The data were analysed thematically in accordance with the COREQ checklist to ensure rigour. The study was funded by the Scientific and Technological Research Council of Türkiye (TÜBİTAK) (grant number 223S524).

Results: Three principal themes were identified:

- Issues in Survivorship Care: Limited access to healthcare and challenges of the equal access to healthcare.
- Physical Challenges: Persistent fatigue and diminished energy.
- Psychosocial Issues: Disrupted family dynamics, fear of recurrence and death anxiety, financial difficulties, and insufficient psychosocial support.

Conclusion(s): This study highlights the multifaceted psychosocial and physical challenges faced by breast cancer survivors after lymph node dissection. Cancer survivors should be encouraged to express their experiences as soon as lymph node dissection is detected, and this encouragement should continue thereafter to provide consistent support and enhance their coping mechanisms. It is very important to use a variety of different approaches to help people manage their own health effectively and improve their overall well-being. Providing supportive care and equally accessible healthcare can help reduce the difficulties that cancer survivors experience.

Keywords: Breast Cancer, Survivorship, Lymphedema, Psychosocial Challenges, Coping Strategies

OP - 014

The Effect of the Care Bundle Approach on the Prevention of Port Catheter-Related Bloodstream Infections in Children with Leukemia

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Objective: The present study was conducted to analyze Central Catheter Associated Bloodstream Infection (CLABSI) in children with leukemia who had port catheters.

Materials-Methods: Forty-six patients diagnosed with leukemia with port catheter in a university hospital in Türkiye were included in this study with a post-test-control group design. Patients in the control group received no intervention. Care package (Transparent catheter drape (3M™ Tegaderm™ I.V.), needle-free access apparatus, alcohol swab (3M™)) was applied to the patients in the study group. Within the scope of the care package, clinical nurses were trained before collecting data of the study group patients. Procedure steps were assessed with the help of checklists and nurses' compliance with the checklists and care package was assessed. The care package applied to the study group patients included the use of a checklist, needle-free access apparatus, alcohol swab, transparent catheter drape (IV-Tegaderm). The development of CLABSI and catheter infection rate before and after care package implementation were calculated.

Results: 52.1% of the patients were female, 89.1% were diagnosed with acute lymphoblastic leukemia, and 80.4% were in the standard risk group. The mean number of catheter days was 60.21 ± 43.71 (min: 5, max: 164). CLABSI developed in 20.8% (n=5) of the study group patients compared to 40.9% (n=9) in the control group. The CLABSI rate per 1000 catheter days was 3.5 in the study group and 6.5 in the control group. At the onset of CLABSI, 71.4% of the patients were neutropenic, 57.2% had bacteremia and 42.8% had septicemia.

Conclusion(s): The care bundle approach reduced the rate of CLABSI by approximately 50%. A care package approach can be utilized to standardize care and reduce CLABSI rates. Approaches such as care bundling, which is an effective method to reduce CLABSI rates in pediatric cancer patients, can also be utilized.

Keywords: Care Bundle, Catheter-Associated Bloodstream Infection, Child, Leukemia, Port Catheter

OP - 015

Job Satisfaction and Affecting Factors in Oncology Nurses

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Objective: The death rate from cancer ranks first in the world and in Türkiye, and the burden of caring for oncological patients in hospitals is increasing every day. Today, with the advances made in early diagnosis and treatment methods, individuals diagnosed with cancer live longer, so they need long-term nursing care. Job satisfaction is important for every profession, but; nursing profession; having irregular working hours and days, having duties and responsibilities that are life-threatening, competing with time, using different technologies and undergoing rapid changes, being a health discipline that works under intense stress and pressure, working with low wages, lack of professional reputation, business policies, it has been shown that nurses are more risky in terms of job satisfaction compared to physicians and other medical personnel in the dimensions of control / independence and interpersonal relationships. In this context, this study was conducted to determine the factors affecting job satisfaction and factors affecting oncology nurses.

Materials-Methods: This study is a cross-sectional and descriptive study. The data were collected by completing the "Minnesota Job Satisfaction Scale and Personal Information Form" by interviewing 100 volunteer nurses working at the Oncology Hospital face-to-face.

Results: There is a significant difference between the general job satisfaction and internal satisfaction mean scores according to the staff situation. There is a significant difference between the general job satisfaction, internal and external satisfaction average scores according to the title, average weekly working time and the level of satisfaction with the profession. Dec. There is a significant difference between the average internal satisfaction scores according to the number of monthly seizures and the shift time Decently worked. The general and internal job satisfaction of those who work as 4-B staff in oncology nursing is higher. The general, internal and external job satisfaction of the nurses whose title is responsible is high. The internal and external job satisfaction of the patients who work an average of 49 hours and below per week is generally higher. The internal satisfaction of nurses who keep six vigils 4 times a month and stay on shift only during the daytime is higher. The general, internal and external dimensions of nurses who are very satisfied with their profession are high.

Conclusion(s): It can be said that a regular working environment is required under appropriate conditions in order for nurses' job satisfaction to be high.

Keywords: Nurse, Oncology, Job satisfaction

OP - 016

Evaluation of Functional Living Status, Fear of Relapse and Comfort in Oncology Patients

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Objective: The aim of this study was to evaluate the functional living status, fear of recurrence and comfort levels of oncology patients.

Materials-Methods: The descriptive and cross-sectional study was conducted on 180 oncology patients in Oncology Hospital of a university. Data were collected with Personal Information Form, Functional Life Scale (FLS), Cancer Recurrence Fear Inventory (CRF) and General Comfort Scale Short Form (GCS-SF). The data of the study were analyzed using SPSS Programme (version 23.0).

Results: Of the participants, 36.7% were diagnosed with breast cancer and 34.4% with lung cancer, and 48.9% were in the second and 29.4% in the third cancer stage. The duration of the disease diagnosis was one year or more in 48.9% of the patients. While 13.9% of the patients received the second cycle of chemotherapy, 86.1% received three or more cycles of chemotherapy. The mean total score of the Functional Life Scale was 93.90 ± 9.02, the mean score of the Fear of Cancer Recurrence Inventory was 41.51 ± 19.60, and the mean total score of the General Comfort Scale Short Form was 92.83 ± 10.60. A moderate positive relationship was obtained between the mean total score of the Functional Life Scale and the mean total score of the General Comfort Scale Short Form (r= 0.337.p<0.01), but no statistically significant relationship was obtained between the mean total score of the Functional Life Scale and the mean total score of the Fear of Cancer Recurrence Inventory (r= 0.076, p= 0.310).

Conclusion(s): Functional life level and comfort of cancer patients are affected. It is thought that individualised care interventions planned on the basis of the nursing process can increase the functional life level and comfort of oncology patients and improve their ability to cope with psychosocial problems.

Keywords: Oncology; Functional Living Status, Comfort, Relapse; Nursing

OP - 017

The Impact of Digital Health Technologies on Individualised Care in the First Year After Primary Treatment for Breast Cancer: A Qualitative Study

Merve Işık

Semra Seyhan Şahin

Objective: This study aimed to evaluate the impact of digital technologies on individualized care for individuals who completed their first year of breast cancer treatment.

Materials-Methods: Digital health technologies hold significant promise for improving care for individuals by improving coordination, self-management, and monitoring. Based on a thematic analysis approach, data for this study were obtained through individual on-line interviews with 7 breast cancer survivors.

Results: 'Supporting physical recovery with digital technologies', "the impact of digital technologies on psychosocial well-being", "increasing the individual's capacity to manage their own health" and "difficulties in accessing digital health technologies and expectations from health professionals" are the main themes that emerged from this research. The main themes consist of 8 sub-themes: "physical activity and rehabilitation", "symptom management and follow-up", "psychosocial support and coping mechanisms", "social connectedness and peer support", "access to health information and supporting decision-making", "supporting individualized care", "inequality of access" and "expectation of individualized and interactive digital support".

Conclusion(s): Breast cancer survivors state that digital health technologies are effective in providing individualized care. However, they expect more functional and holistic solutions to increase the sustainability of these technologies, to make them equally accessible to everyone, to improve the flow of communication with health professionals, and to develop individualized follow-up and follow-up processes.

Keywords: Individualized care, Digital health technology, Survival

OP - 018

Development of Chemotherapy-Induced Peripheral Neuropathy During and After (Neo)adjuvant Taxane Therapy in Breast Cancer Patients and Its Association with Anxiety and Depression

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Objective: Chemotherapy-induced peripheral neuropathy (CIPN) develops in approximately 80–97% of patients receiving taxane-based chemotherapy. Taxane-related neuropathy is a chronic and distressing complication characterized by symptoms such as numbness, burning, pain, cold sensitivity, muscle weakness, balance disturbances, and impaired fine motor skills. This study aimed to evaluate the development of CIPN during and after taxane-based chemotherapy in patients diagnosed with early-stage breast cancer receiving (neo)adjuvant paclitaxel in our center, and to investigate the association between CIPN and anxiety / depression throughout the treatment period.

Materials-Methods: In this prospective study, early-stage breast cancer patients receiving (neo)adjuvant taxane-based chemotherapy at the were evaluated between 2023 and 2024. The PHQ-9 questionnaire was used to assess anxiety and depression levels, and a CIPN-specific questionnaire was used to evaluate neuropathy symptoms. These assessments were conducted at three time points: before the start of chemotherapy, at the 12th week of treatment, and at 3 months after the completion of therapy. The relationship between baseline patient characteristics and the development of CIPN and anxiety / depression was analyzed using Pearson correlation coefficients, independent samples t-tests, and ANOVA.

Results: A total of 41 patients diagnosed with early-stage breast cancer were included in the study. The median age was 45 years (range 25–80), and 56.1% (n=23) of the patients were postmenopausal. Among the participants, 15 received neoadjuvant and 26 received adjuvant chemotherapy. Twelve patients were HER2-positive, and 18 had node-negative disease. Nine patients had comorbid type 2 diabetes. No significant association was found between baseline CIPN levels and factors such as age, body mass index, smoking status, or diabetes. At baseline, 14 of the 41 patients reported moderate to high levels of anxiety, and 27 reported moderate to high levels of depressive symptoms. Patients with moderate / high baseline anxiety experienced a significantly greater increase in CIPN symptoms during and after chemotherapy compared to those with low anxiety levels ($p < 0.001$). However, no significant association was found between baseline depressive symptoms and the development of CIPN ($p = 0.7$).

Conclusion(s): This prospective study investigated the relationship between pre-treatment anxiety and depression levels and the development of CIPN during and after taxane-based (neo)adjuvant chemotherapy

in breast cancer patients. The findings suggest that pre-treatment anxiety may be a risk factor for the development of CIPN in women receiving taxane therapy. In contrast, depressive symptoms were not associated with CIPN. These results highlight the potential role of psychological factors in the development of nerve damage during chemotherapy.

Keywords: Breast Cancer, Taxane Therapy, Chemotherapy, Peripheral Neuropathy, Anxiety, Depression

OP - 019

The Impact of Fan Application on the Comfort Levels of Patients with Lung Cancer in Managing Dyspnea: A Randomized Controlled Trial

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Objective: Dyspnea is a common and challenging symptom that negatively impacts the quality of life in patients with lung cancer. The aim of this study was to investigate the effects of handheld fan application to the facial area on comfort level, dyspnea severity, and physiological parameters in patients with lung cancer.

Materials-Methods: This study was designed as a randomized controlled trial and was performed in a tertiary care hospital specializing in thoracic diseases and surgery, located in western Türkiye. The research was carried out between December 2022 and February 2024, involving inpatients diagnosed with lung cancer. In the study, patients who were randomly assigned to the intervention group (n = 27) received face-directed handheld fan applications twice daily for five consecutive days, with each session lasting five minutes. Patients assigned to the control group (n = 29) received standard care.

Results: There was no statistically significant difference identified between the intervention and control groups concerning dyspnea scores and comfort levels ($p > 0.05$); however, the mean heart rate in the intervention group was significantly lower in comparison to that of the control group ($p < 0.05$).

Conclusion(s): The use of a handheld fan directed to the face for five minutes, twice daily over five days, did not significantly affect dyspnea severity or comfort levels in patients with lung cancer. Nevertheless, the intervention resulted in a significant reduction in heart rate, indicating a potential physiological benefit. These findings suggest that handheld fan use may serve as a supportive strategy in dyspnea management.

Keywords: evidence-based practices, dyspnea management, lung cancer, nursing

OP - 020

Therapeutic Plasmapheresis Procedure, Complications and Responsibilities of the Nurse

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Nursing is a dynamic profession that is constantly evolving with the rapid advancement of new health technologies. A good example of this is therapeutic apheresis nursing, a new field of nursing practice. This abstract is written to describe the therapeutic plasmapheresis procedure, apheresis methods, complications and nursing care.

Therapeutic plasmapheresis is a procedure in which the plasma portion of the patient's blood is removed from the body with the help of a medical device and a substitute solution is added and returned to the patient. While plasmapheresis by centrifugation is based on the separation of cellular components according to their density by means of a centrifugal force obtained by blood rotation, plasmapheresis by filtration is the use of plasma filtration that allows the passage of macromolecules such as proteins and lipoproteins through a membrane with non-selective micropores, succeeding in screening macromolecules by size. Due to the technical aspects of the therapeutic plasmapheresis procedure, such as vascular access, the type of substitution fluid and the appropriate volume, patients are at risk for complications due to the inherent principles of the treatment. Complications such as citrate-induced hypocalcemia, vasovagal and hypovolemic reactions, central and peripheral venous catheter-related complications, infection, air embolism, coagulopathy, anaphylaxis and electrolyte imbalances occur during the procedure and lead to early termination or reduced efficacy. Most side effects that occur during apheresis procedures are mild or moderate and do not require early termination of the procedure. The apheresis nurse monitors the patient throughout the procedure for signs of ionized calcium deficiency such as peripheral paresthesia, chills, shivering, sneezing, nasal congestion, yawning, dizziness, nausea and vomiting, tetany, seizures, etc. and may modify the apheresis procedure, especially the citrate uptake rate, if necessary. The apheresis nurse should be aware that some drugs have inhibitory or enhancing interactions not only with each other but also with the replacement solutions used during an apheresis procedure. They must be able to insert various disposables and enter various parameter settings into the device, including patient parameters such as height, weight and hematocrit. The apheresis nurse must be qualified and competent to perform all procedures.

As therapeutic plasmapheresis continues to evolve and expand its scope of practice, apheresis nurses, as a professional group, are in a unique position to identify and address the challenges and opportunities associated with developing and maintaining high standards of care in this field.

Keywords: Nursing care, Plasmapheresis, Therapeutic plasma exchange

OP - 021

Is Fear of Recurrence a Determinant of Breast Examination Awareness in Breast Cancer Survivors?

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Objective: Cancer survivors experience physical and psychosocial problems depending on the type of disease and treatment. Fear of cancer recurrence is the most common psychosocial problem experienced by cancer survivors after completing cancer treatment. A temporary or low fear of recurrence can be considered normal as it allows the patient to self-monitor symptoms, engage in regular health care, and adopt healthy behaviors. However, persistent and excessive fear may lead to negative conditions such as excessive health care utilization and unrealistic treatments. This study aimed to determine the level of fear of cancer recurrence in breast cancer survivors and to examine the relationship between this fear and the level of Breast Self-Examination practice.

Materials-Methods: This descriptive and correlational study was conducted with 259 women enrolled in a hospital in Türkiye between June 2024 and October 2024. Data were collected using the “Patient Information Form”, the Champion Health Belief Model Scale, and the “Fear of Cancer Recurrence Inventory”. The study was reported according to the STROBE checklist.

Results: The mean total fear of cancer recurrence score of breast cancer survivors was 1.42±0.82 points. Fear of cancer recurrence scores were found to have a significant effect on the health belief model (F=31.690, p<0.001). Fear of cancer recurrence explained 11% of this effect (R2=0.110). Fear of cancer recurrence significantly positively affected health belief model scores.

Conclusion(s): It was revealed that women breast cancer survivors experience a common fear of recurrence, and this fear negatively affects health behaviors and psychosocial behaviors. A breast cancer survivor is relieved to have finished treatment but worries about relapse. She may not feel safe because she does not see her cancer care team as often as she used to. The relationship between Breast Self-Examination and fear of recurrence is important to understand how women manage their health concerns.

Keywords: Breast Self-Examination, Breast Cancer, Fear, Health Belief Model, Recurrence

OP - 022

The Effect of The Nurse Navigation Program Applied in Line With Supportive Care Needs on Anxiety-Depression, Adaptation to The Disease and Quality of Life in Patients Diagnosed with Lung Cancer

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Objective: The aim of this study is to determine the effect of the nurse navigation program (LungCaNN) implemented in line with the supportive care needs of newly diagnosed lung cancer patients on depression-anxiety-stress levels, adaptation to the disease and quality of life.

Materials-Methods: This research is a randomized controlled experimental study. The study was included between June 2023 and July 2024, and a total of 77 patients, 39 of whom were in the intervention group (LungCaNN) and 38 in the control group, who met the comprehensively examined criteria and were enrolled by simple randomization method, were completed with newly diagnosed lung cancer treatment. The needs of the patients in the intervention group were determined and a face-to-face navigation program was implemented by the navigator nurse over the phone three times over a period of 12 weeks. The control group received standard care without any intervention. Personal Information Form, Depression, Stress, Anxiety Scale, Chronic Disease Adjustment Scale and EORTC QLQ – C30 Quality of Life Scale / LC-13 Lung Module were used to collect data. Post-test data were collected at the end of week 12.

Results: Sociodemographic and disease characteristics of the intervention group and control group were similar (p>0.05). It was determined that the LungCaNN intervention group had lower mean depression, stress, and anxiety scores, higher mean adaptation to chronic diseases and general quality of life compared to the control group, and the difference between the groups was statistically significant (p<0.01). Emergency room visit rates are lower in the intervention group.

Conclusion(s): The nurse navigation program implemented provided a decrease in depression, stress, anxiety levels, and an increase in adaptation to chronic diseases and overall quality of life in newly diagnosed non-small cell lung cancer patients. It is recommended that this program be integrated into oncology clinics.

Keywords: Nurse navigation program, Depression-anxiety, Adaptation to chronic disease, Quality of life, Emergency department

OP - 023

The Impact of Digital and Health Literacy Levels on the Supportive Care Needs of Patients Diagnosed with Cancer

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Objective: Cancer requires comprehensive care due to both disease-related symptoms and treatment side effects. Supportive care, which involves the prevention and management of cancer and its treatment-related side effects, is important for reducing hospital admissions, improving medication adherence, and shortening hospital stays (Rust et al., 2015; Gönderen C., 2020; McDougall et al., 2019). However, it is considered that health literacy (HL) and digital literacy (DL) levels are significant factors for patients to benefit optimally from health services and for effective management of treatment processes and supportive care needs (Baccolini et al., 2021; Clarke et al., 2021; Grillich & Kostial, 2020; Wu et al., 2022). Considering all these, the aim of our study is to determine the impact of oncology patients' digital and health literacy levels on their supportive care needs.

Materials-Methods: The study was conducted with 128 patients hospitalized in the Oncology Department of Dokuz Eylül University Hospital. A descriptive study was carried out using a sociodemographic data form, Health Literacy Scale, Digital Literacy Scale, and the Turkish Short Form of the Supportive Care Needs Scale. In the analysis of the data, in addition to descriptive statistics, the Shapiro-Wilk test, Spearman correlation test, and reliability analyses of the scales were performed.

Results: A moderate positive relationship was found between health literacy and the sub-dimension of healthcare and information ($r=0.495$). Health literacy played an important role in meeting individuals' daily living needs ($r=0.455$), and a positive relationship was found between supportive care needs and the Health Literacy Scale ($r=0.502$) ($p<0.05$). A significant relationship was found between digital literacy and the sexuality sub-dimension ($r=0.217$), and digital literacy was observed to have an effect on general supportive care needs ($r=0.229$) ($p<0.05$). As the access to information score increased in the health literacy scale, digital literacy scores also increased ($r=0.583$, $p<0.05$).

Conclusion(s): This study shows that DL and HL are directly associated with the supportive care needs of cancer patients, that DL is linked to the search for information on sensitive topics such as sexuality, and that HL and supportive care needs have an important role in patient education and information processes within the healthcare system. It emphasizes the importance of patients' ability to access and use information during care processes. In this context, it is recommended to develop digital health platforms, personalize patient education programs, and integrate psychosocial support services with digital health solutions.

Keywords: Digital Literacy, Supportive Care, Cancer, Health Literacy

OP - 024

Geriatric Predictors of Malnutrition in Older Cancer Patients

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Objective: Malnutrition is a prevalent and clinically significant issue in older adults with cancer, strongly associated with increased morbidity, mortality, and impaired quality of life. This study aimed to determine the prevalence of malnutrition and to identify geriatric and clinical predictors among older oncology patients.

Materials-Methods: This cross-sectional study included 257 cancer patients aged 65 and older who presented to a tertiary geriatric-oncology clinic between January 2023 and January 2024. Nutritional status was assessed using the Mini Nutritional Assessment–Short Form (MNA-SF). A score of <=7 was classified as “malnourished,” and 8–14 as “not malnourished.” Demographic data, comorbidities, and geriatric syndromes (e.g., depression, incontinence, falls, polypharmacy) were recorded. Categorical and continuous variables were compared using chi-square and Mann-Whitney U tests. Significant variables were included in multivariate logistic regression analysis.

Results: Of the 257 patients, 54.1% were female, with a median age of 71 years (IQR: 68–76). Based on the MNA-SF, malnutrition was identified in 42 individuals (16.3%). Although not statistically significant, patients with malnutrition tended to be older (mean 74.3 vs 72.5 years; p=0.108). MNA-SF scores were significantly lower in the malnourished group (mean rank 38.9 vs 146.1; p<0.001).Compared to the well-nourished group, the malnourished patients had higher rates of depression (66.7% vs 37.2%; p<0.001), incontinence (57.1% vs 29.9%; p=0.001), hematological disorders (36.4% vs 13.0%; p<0.001), and metastasis (66.7% vs 50.9%; p=0.062). Additionally, higher but non-significant proportions were noted for falls (16.7% vs 9.3%; p=0.155) and sleep disturbances (45.2% vs 31.2%; p=0.077). No significant associations were found with sex, education level, diabetes, hypertension, cardiovascular or pulmonary comorbidities. Multivariate logistic regression revealed depression (OR: 6.50; 95% CI: 2.26–18.69; p=0.001), being single (OR: 0.003; p<0.001), widowed (OR: 0.008; p=0.002), and certain non-laryngeal cancer types as independent predictors of malnutrition. Metastasis approached significance (OR: 2.78; p=0.069), while other variables did not retain statistical significance.

Conclusion(s): The findings underscore the multi-factorial nature of malnutrition in geriatric oncology. In addition to clinical variables, psychosocial factors such as depression and marital status independently contribute to malnutrition risk. These results emphasize the need for integrated assessments that go beyond nutritional screening tools alone. Incorporating mental health evaluations and social context into routine geriatric assessments may facilitate the early detection and prevention of malnutrition. Targeted interventions toward high-risk individuals, particularly those with psychological vulnerability or lacking social support, are crucial to improving care outcomes in this population.

Keywords: Depression, Geriatric Oncology, Malnutrition, MNA-SF

OP - 025

Effects of Immersive Virtual Reality on Pain, Fear and Emotional Behavior During Port Catheter Needle Insertion in Pediatric Hematology and Oncology Patients: A Randomized Controlled Trial

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Objective: Port catheter needle insertion is a painful and stressful procedure in children. This study evaluated the effect of immersive virtual reality (VR) application on pain, fear, and emotional state associated with port catheter needle insertion in pediatric hematology-oncology patients aged 4 to 12 years with implanted port catheters.

Materials-Methods: This randomized controlled study employed a parallel trial design guided by the CONSORT checklist. The study sample (n = 50) was divided into an immersive VR group (n = 25) and a control group (n = 25) using stratified randomization. Children's emotional behavior before and after port needle insertion was assessed using the Emotional Appearance Scale for Children. Pain and fear associated with port catheter needle insertion were evaluated separately through self-report by the child and assessment by the parent using the Wong-Baker Faces Pain Rating Scale and the Children's Fear Scale. The primary outcome was pain, while the secondary outcomes were fear and emotional behavior. Comparisons of emotional behavior, fear, and pain scores between the two groups were analyzed using the Mann–Whitney U test.

Results: The post-procedure emotional behavior score was 8.2 ± 5.15 in the immersive VR group and 13.9 ± 6.61 in the control group. A significant difference was found between the groups in terms of emotional behavior after the procedure ($p < 0.05$). The self-reported pain scores of patients in the immersive VR and control groups were 3.2 ± 3.15 and 6.1 ± 2.42, respectively, while fear scores were 1.5 ± 1.44 and 2.5 ± 1.38, respectively. A significant difference was also found between the groups in terms of pain and fear scores related to port catheter needle insertion ($p < 0.05$).

Conclusion(s): Immersive VR distraction is an effective method for reducing pain, fear, and negative emotional appearance during port catheter needle insertion in pediatric hematology and oncology patients. (Clinical Trials: NCT06605339)

Keywords: virtual reality, pediatric hematology and oncology, port catheter, emotional appearance, pain and fear

OP - 026

The Effects of a Nurse-Led Supportive Care Program on Caregiver Burden and Family Resilience of Caregivers of Patients with Lung Cancer: A Pragmatic Randomized Controlled Trial

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Objective: Family caregivers (FCs) of patients with lung cancer may experience more difficulties depending on the various symptoms that the patient experiences, their functional capacity, and their dependence on daily living activities. This situation leads to increase in the caregiver burden of FCs and decrease in their level of resilience. The study was conducted to examine the effects of a nurse-led supportive care program on caregiver burden and resilience of FCs of patients with lung cancer.

Materials-Methods: The study was carried out as an assessor-blinded, pragmatic parallel-group, randomized controlled trial. It was conducted with 46 primary FCs who provided care to patients with lung cancer between July 2023 and February 2024 at the Chemotherapy Unit of the Department of Chest Diseases at Izmir Ege University Health Practice and Research Center and who met the inclusion criteria. FCs were randomly assigned to intervention (n=23) and control (n=23) groups. In the study, stratified and block randomization methods were used. A nurse-led supportive care program was applied to the FCs in the intervention group once a week for eight weeks using the face-to-face interview method in the clinic. The FCs in the control group received only routine treatment and care. The research data were collected using a Descriptive Information Form, the Supportive Care Needs Survey for Partners and Caregivers of Cancer Patients, the Zarit Burden Interview (ZBI), and the Connor-Davidson Resilience Scale-Short Form (CDRS-SF). Descriptive statistics, Pearson chi-square test, Independent samples t-test, Repeated Measures ANOVA, and Mixed ANOVA were used for the analysis of the study data.

Results: It was determined that the mean score of the FCs in the intervention group on the ZBI decreased significantly in the eighth and 12th weeks compared to the baseline compared to the FCs in the control group and that the difference in the mean scores of the groups according to the measurement weeks was statistically significant ($p<0.001$). The mean score of the FCs in the intervention group on the CDRS-SF significantly increased in the eighth and 12th weeks compared to the baseline compared to the FCs in the control group, and the difference in the mean scores of the groups was found to be statistically significant ($p<0.001$).

Conclusion(s): According to the results of the study, the nurse-led supportive care program can be used as an evidence-based nursing practice to reduce the caregiver burden of FCs of patients with lung cancer and increase family resilience.

Keywords: Caregiver burden, Lung cancer, Nurse-led care, Resilience

OP - 027

The Effect of Breathing Exercises Performed with Virtual Reality Headsets on Lung Capacity in Cancer Patients

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Abstract

Objective: The aim of this study is to determine the effect of breathing exercises performed using virtual reality glasses on lung capacity.

Materials-Methods: This randomized controlled experimental study was conducted between 15.09.2022 and 30.01.2023 in the Liver Transplant Service and Liver Biliary Tract Surgery Service of a city hospital. A total of 36 cancer patients were included in the study and randomly assigned to experimental (n=18) and control (n=18) groups. The experimental group received breathing exercise training using virtual reality glasses, while the control group received only the classical demonstration method. Respiratory functions were evaluated using SpO_2 and the Triflow device.

Results: A significant increase was observed in both SpO_2 and Triflow values in the experimental group after the intervention with virtual reality glasses ($p<0.05$). In the control group, there was a significant decrease in SpO_2 values, and no significant change was observed in Triflow scores. Additionally, patients in the experimental group reported high satisfaction with the use of virtual reality glasses.

Conclusion(s): Breathing exercises supported by virtual reality glasses were found to improve patients' lung capacity, enable more effective and motivating exercise performance, and positively influence patient satisfaction. Therefore, the use of virtual reality technology in nursing practice should be supported and encouraged.

Keywords: Virtual reality headset, Breathing exercise, Nursing, Cancer

Introduction

Respiratory complications frequently observed in cancer patients following surgical interventions increase hospital mortality rates and prolong hospital stays. After major surgeries, issues such as reduced lung capacity, atelectasis, and pneumonia may arise (Ak, 2021). The management of these complications in the postoperative period depends not only on surgical success but also on the quality of preoperative and postoperative care (Beaumont et al., 2018). Disruption of respiratory muscle integrity and damage to the diaphragm muscles can lead to inadequate breathing depth (Atılgan, 2019; Armstrong, 2017). Consequently, major complications such as increased bronchial secretions and impaired pulmonary defense mechanisms may occur (Çapar, 2015; Beşikçi, 2021). Respiratory exercises play a critical role in preventing respiratory complications in the postoperative period. Deep breathing exercises and respiratory exercise devices like Triflow are used to facilitate lung ventilation, strengthen respiratory muscles, and clear the airways (Kaya et al., 2022). These exercises enhance lung function by increasing lung capacity and facilitating gas exchange (Öner Cengiz et al., 2021). Additionally, they regulate pulmonary circulation and prevent hypostatic pneumonia (Zhang, 2017; Tanrıverdi, 2017). Nurses play a key role in successfully maintaining this process by ensuring patients perform respiratory exercises correctly and regularly, thereby involving patients in the treatment process and conveying the benefits of these exercises (Burgaz Kınas, 2021). However, studies have shown that nurses have a low rate of implementing respiratory exercises with their patients (Baş, 2021; Yıldız et al., 2016). Although many studies emphasize that the application of respiratory exercises reduces complications (Bardakçı, 2019; Baş, 2019; Köroğlu, 2020), some research indicates that the rate of teaching respiratory exercises preoperatively is below 4.2% (Alptekin & Ünver, 2015). Furthermore, in a study by Güner, shortcomings were identified in the implementation stage of the training (Güner, 2021). The use of virtual reality technologies in healthcare services may enhance the effectiveness of respiratory exercises. These technologies can improve treatment outcomes by increasing patient motivation and participation. Additionally, computerized systems used in respiratory physiotherapy allow patients to monitor and evaluate their exercise performance. According to a study, nurses can increase patient participation in exercises by providing adequate education (Mctier et al., 2016). Preventing respiratory complications in the postoperative period is crucial to improving patients' quality of life and reducing healthcare costs. Raising awareness among nurses and healthcare professionals about respiratory exercises and incorporating new technologies will support this process.

The objective of this study is to evaluate the effectiveness of respiratory exercises performed using virtual reality glasses. The research hypothesizes that VR glasses can strengthen nurse–patient engagement and enable patients to perform respiratory exercises more comfortably, reliably, and without boredom through the use of technology.

Research Hypotheses

H1-1: Respiratory exercises performed using virtual reality (VR) glasses have an effect on lung capacity.

H1-2: Respiratory exercises performed with VR glasses provide patient satisfaction.

H1-3: The effective and correct implementation of respiratory exercises positively affects patients' postoperative SpO_2 levels.

H1-4: There is a difference between patients who use and do not use VR glasses in terms of oxygen saturation and Triflow usage skills.

Material - Methods

This study is designed as a randomized controlled experimental trial. It aims to provide effective respiratory support during the pre-rehabilitation period in cancer patients, shorten the length of stay in intensive care and wards during the postoperative period, and reduce respiratory complications. The population of this study consisted of cancer patients hospitalized in the Liver Transplantation Unit and Liver Biliary Tract Surgery Unit between 15.09.2022 and 30.01.2023. The sample of the study consisted of patients who met the inclusion criteria and agreed to participate. Sample size calculation was performed using the G*Power 3.1.9.2 program. Due to the small number of cancer patients and the frequent occurrence of respiratory problems in this group, a high effect size was selected. According to the power analysis, with an effect size of 0.80, 80% power, and a significance level of 0.05, a total of 36 patients were required—18 in each group (intervention and control).

Randomization was applied to eliminate selection bias, ensure equal sample sizes, and achieve comparable baseline criteria between groups. The closed-envelope randomization method was used (Şimşek, 2016). Two identical opaque envelopes, each containing a card labeled "Intervention Group" or "Control Group," were prepared. During the initial assessment after hospital admission, patients were asked to draw one envelope under supervision, and group allocation was made accordingly. Following randomization, patients were numbered, and lists for intervention and control groups were created (Appendix-1). Group assignments were made based on inclusion criteria and the day of patient admission between 15.09.2022 and 30.01.2023. Information on included and excluded patients is illustrated in the CONSORT Flow Diagram.

Inclusion Criteria:

- Being 18 years or older
- Being able to speak Turkish
- Giving consent to participate in the study

- Being a cancer patient
- Having a planned surgery
- Having undergone surgery

Exclusion Criteria:

- Refusal to participate in the study
- Not undergoing surgery
- Inability to speak Turkish
- Not being a cancer patient

Ethical Considerations of the Study

The ethical appropriateness of the study was documented with approval from the Başakşehir Çam and Sakura City Hospital Ethics Committee for the period between 15.09.2022 and 15.11.2023 (Appendix 6). In order to conduct the research, written permissions (E-15916306-604.01.01) were obtained from the Chief Physician of Başakşehir Çam and Sakura City Hospital and the department heads of the relevant clinics (Appendix 7). Before commencing implementation, patients were informed about the purpose and protocol of the study, and written informed consent was obtained from those who agreed to participate using the "Informed Voluntary Consent Form" (Appendices 8 and 9).

Data Analysis

The data collected within the scope of the study were analyzed using SPSS v26 software. Initially, the frequency and percentage distributions of responses given in the introductory information form were presented in tables to determine the sociodemographic characteristics and clinical backgrounds of patients in both the control and intervention groups. Chi-square analysis was applied to the data obtained from the introductory form to examine relationships between the control and intervention groups. To test the hypotheses, the normality of data distribution was assessed using skewness and kurtosis values, and the data were found to conform to a normal distribution. Therefore, parametric tests were employed. Differences between the means of two independent groups were analyzed using the Independent Samples t-Test, while differences between the means of two dependent groups were examined using the Paired Samples t-Test. When statistically significant differences were found, the groups were numbered and the direction of the difference was indicated with a ">" symbol.

Results

A total of 33 cancer patients participated in the study, with 16 allocated to the control group and 17 to the experimental group. The overall mean age of the participants was 55.18 ± 11.29 years. When comparing the socio-demographic characteristics between the groups, chi-square analysis revealed no statistically significant differences ($p > 0.05$), indicating baseline comparability.

Familiarity with Virtual Reality in the Experimental Group

Among the patients in the experimental group, 82.4% reported having no prior knowledge of virtual reality. Of the minority who were familiar with the concept (17.6%), 66.7% had obtained their information through the internet. Furthermore, 82.4% of participants indicated that they had never previously used a virtual reality headset.

Patient Satisfaction

Evaluation of the satisfaction responses from the experimental group revealed that the majority of participants expressed positive opinions regarding their experience with the intervention. Similarly, patients in the control group reported that the "demonstrate-and-perform" technique was motivating, facilitated the application of breathing exercises, and was perceived as an appropriate and supportive method. These findings indicate that both the virtual reality-based intervention and the standard demonstration method were effective and well-received in supporting patient participation in breathing exercises.

Comparison of SpO_2 and Triflow Values within the Control Group

Participants in the control group received standard care and did not use virtual reality technology. A paired samples t-test was used to compare preoperative and postoperative SpO_2 and Triflow values. The results showed that the mean postoperative SpO_2 level (96.31 ± 1.35) was significantly lower than the preoperative value (98.00 ± 1.55), indicating a statistically significant decrease ($t = 5.400$, $p = 0.000$).

However, no statistically significant difference was observed in Triflow values between preoperative (2.23 ± 0.48) and postoperative (2.11 ± 0.53) measurements ($t = 0.657$, $p = 0.521$). These findings suggest that while oxygen saturation declined after surgery, there was no significant change in the patients' ability to perform breathing exercises, as measured by Triflow.

Comparison of SpO_2 and Triflow Values within the Experimental Group

Patients in the experimental group participated in the virtual reality-based intervention. Paired samples t-test analysis (Table 1) revealed that the postoperative mean SpO_2 level (97.94 ± 1.03) was significantly higher than the preoperative level (97.29 ± 0.92), with a statistically significant improvement ($t = -2.393$, $p = 0.029$).

A more pronounced improvement was observed in Triflow values, where the mean increased from 2.04 ± 0.49 preoperatively to 2.68 ± 0.29 postoperatively, showing a highly significant difference ($t = -5.361$, $p = 0.000$). These results indicate that the virtual reality intervention contributed positively to both oxygen saturation and respiratory exercise performance in postoperative patients.

Comparison Between Control and Experimental Groups

To evaluate the effect of the virtual reality intervention more clearly, pre- and post-intervention values between the control and experimental groups were compared using independent samples t-tests.

- SpO_2 Preoperative: No significant difference was observed between the control (98.00 ± 1.55) and experimental (97.29 ± 0.92) groups ($t = 1.60$, $p = 0.119$).
- SpO_2 Postoperative: The experimental group showed a significantly higher mean (97.94 ± 1.03) compared to the control group (96.31 ± 1.35), with a significant difference ($t = -3.91$, $p = 0.000$).
- Triflow Preoperative: No significant difference was found between the groups ($t = 1.12$, $p = 0.270$).
- Triflow Postoperative: The experimental group (2.68 ± 0.29) had significantly higher values than the control group (2.11 ± 0.53), demonstrating a statistically significant improvement ($t = -3.81$, $p = 0.001$).

Discussion

The sociodemographic characteristics of patients in the experimental and control groups participating in the study were examined using chi-square analysis, and no significant relationship was found between group allocation and sociodemographic features. This indicates that the group selection was homogeneous. Similarly, the chi-square analysis showed no significant relationship between participants' group allocation and their clinical history. It was observed that only participants who had previously been hospitalized possessed knowledge about breathing exercises. The success of individuals undergoing surgery is influenced by the quality of care provided by nurses. Nurses should teach patients in the preoperative period how to perform breathing exercises, support their implementation, and encourage continued practice in the postoperative period (Aydın et al., 2015; Armstrong, 2017). Although breathing exercises are a low-cost and low-effort intervention, learning the proper procedure and maintaining motivation for the exercises can be challenging. For this reason, devices that assist with breathing exercises are often used (Abd El-Kader et al., 2013; Bissett et al., 2019; Yankai et al., 2021; Wattie, 1998; Armstrong, 2017). In this study, both a triflow device and a virtual reality headset were used during the preoperative and postoperative periods to facilitate breathing exercises in oncology patients. Thus, supportive devices were employed to aid patients in performing correct and effective breathing exercises as expected. It was observed that the patients who received training used the triflow device effectively, which positively influenced their postoperative SpO_2 values.

The literature reveals a growing number of studies investigating the effectiveness of virtual reality technologies; these have been shown to moderately reduce pain during both invasive and non-invasive proce-

Table 1. Comparison of SpO_2 and Triflow Values Between Control and Experimental Groups

Variable	Group	n	Mean	Std. Deviation	t	p	Significant Difference
SpO_2 Pre	Control	16	98.000	1.549			
	Experimental	17	97.294	0.920	1.60	0.119	–
SpO_2 Post (1 vs. 2)	Control	16	96.313	1.352			
	Experimental	17	97.941	1.029	-3.91	0.000	2 > 1
Triflow Pre	Control	16	2.225	0.484			
	Experimental	17	2.035	0.486	1.12	0.270	–
Triflow Post (1 vs. 2)	Control	16	2.113	0.526			
	Experimental	17	2.682	0.292	-3.81	0.001	2 > 1

dures, thereby enhancing patient comfort, satisfaction, and quality of life (Garrett et al., 2018; Nascimento et al., 2021). As VR headsets shift the focus of attention, they are frequently used in clinical medical care to create therapeutic environments for assessing and treating medical conditions while minimizing symptoms (Burkay, 2021; Seçim & Pekelman, 2017; Yeşilyurt, S. Y., Özengin, N., & Bakar, 2019; Youngjun K., Hannah K., Yong O. K., 2017; Veldhuijzen, G., Klaassen, N. J., Van Wezel, R. J., Drenth, J. P., & Van Esch, A. A., 2020).

Similar to our data, Aydın's study reported that 76% of patients in the experimental group wished to use the VR headset again if needed, and 84% would recommend its use for patients undergoing endoscopy (Aydın, 2018). Şen (2020) conducted a study to evaluate patient satisfaction during arteriovenous fistula cannulation using a VR headset and found high levels of satisfaction (Şen, 2020). In their meta-analysis, Zhang et al. (2022) found that VR headset interventions during colonoscopy increased patient satisfaction (Zhang et al., 2022). Moon et al. (2018) conducted a randomized controlled trial using VR during endoscopic urologic surgery under spinal anesthesia, presenting patients with ocean sounds and visuals instead of sedation. The study concluded that patients experienced high satisfaction and avoided the side effects of pharmacologic methods (Burkay, 2021; Burgaz Kınas, 2021). Veldhuijzen et al. conducted a pilot study on VR as a non-pharmacological alternative during colonoscopy and found that 96.3% of patients accepted the procedure without sedation and were highly satisfied (Veldhuijzen et al., 2020). Other studies have also shown that VR applications did not negatively affect patient experience and resulted in high satisfaction levels (Çalık, 2007; Günaydın, 2021; Kaleci et al., 2017; Lan et al., 2021; Laver et al., 2017; Sunay, 2021; Şen, 2020; Toru, 2018). Based on these results, the use of virtual reality headsets in patient care is recommended for broader application.

Participants in the control group continued their standard treatment during the study and did not undergo any intervention involving a virtual reality headset. Therefore, the comparison of pre- and post-intervention values in the control group is essential in answering the question: “Could positive progress still occur even without active intervention in their treatment?” Indeed, the results of this study showed significant improvements in both SpO_2 and Triflow values following the use of the VR headset, indicating patient progress and a positive impact of VR on recovery.

Although breathing exercises are low-cost and require minimal effort, learning the correct procedure and maintaining motivation can be difficult. Therefore, assistive devices are often used (Abd El-Kader et al., 2013; Armstrong, 2017; Bissett et al., 2019; Yankai et al., 2021). In this study, both the triflow device and VR headset were employed during the pre- and postoperative periods to facilitate breathing exercises among oncology patients. The data indicated that the preoperative SpO_2 values of control group participants were higher than their postoperative values, suggesting a decline. The absence of a significant difference in Triflow values suggests that control group patients maintained a stable profile in this parameter without progress.

Patients in the experimental group were those who used a VR headset throughout their treatment period. Comparing their pre- and post-intervention values is important for assessing whether prolonged use of the VR headset had a positive effect, and whether patients adversely affected postoperatively could still achieve favorable outcomes. The proper and sufficient use of breathing exercises and respiratory devices is crucial in nursing care, supporting patients in completing the surgical process without complications and in a shorter time. Therefore, assessing the situation and identifying deficiencies is essential for ensuring and maintaining quality in nursing care (Ak, 2021; Altınışık & Arıkan, 2021; Alaparthi, Gopala Krishna et al., 2016; Arslangiray, 2010; Atılgan, 2019; Aydın & Ertuğrul, 2009; Bandyopadhyaya et al., 2021; Bardakçı, 2019; Şen, 2020). Numerous studies indicate that breathing exercises enhance quality of life, pulmonary function, muscle strength, functional capacity, exercise performance, and activities of daily living (Branson, 2013; Chen et al., 2020; Dalbosco-Salas M. et al., 2021; Mayer et al., 2018; Sapmaz, 2019).

Based on these findings, it can be said that the preoperative SpO_2 values of control group participants were higher than their postoperative values, indicating a decline—possibly due to inadequate instruction in the use of assistive devices and lack of attention control. The absence of a significant difference in Triflow values shows a stable pattern and no marked improvement in this group. In contrast, in the experimental group, training provided using virtual reality technology helped minimize distraction and established an environment for effective and lasting learning. Thus, both SpO_2 and Triflow values improved significantly after surgery, indicating meaningful progress and a positive impact from the use of the VR headset on patient recovery.

Conclusion

According to the results of this study, it was found that respiratory exercises performed using virtual reality (VR) headsets had an effect on lung capacity, that these exercises provided patient satisfaction, that performing breathing exercises effectively and correctly positively influenced patients' postoperative SpO_2 levels, and that there was a difference in oxygen saturation between patients who used and those who did not use VR headsets.

Recommendations

Based on the findings of this research:

- It is recommended to incorporate the use of virtual reality headsets during breathing exercise training to enhance the efficiency of outcomes for patients.
- Experimental studies comparing virtual reality headsets with other non-pharmacological methods are needed to increase the effectiveness of respiratory exercises and improve patient satisfaction levels.
- It may be advisable to provide education to both patients and healthcare professionals—particularly nurses—on the use of non-pharmacological techniques aimed at enhancing the effectiveness of breathing exercises.
- With advancing technology, more portable applications can be developed to support breathing exercises.

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OP - 028

Investigation of the Effect of Locally Applied Clove and Green Tea Hydrosol in a Model of Oral Mucositis Caused by Cyclophosphamide in Rats

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Objective: In this study, it was aimed to investigate the effect of clove and green tea hydrosol against oral mucositis induced by cyclophosphamide in rats.

Materials-Methods: Research is a preclinical, in vivo experimental and analytical study. In the experimental study, forty female Wistar albino rats, 6-8 weeks old, weighing 200-250 g, were used in the experimental study. Rats were randomly divided into 8 groups. A single high dose (300 mg/kg) of cyclophosphamide was administered intraperitoneally to each animal for mucositis induction. The day of administration of cyclophosphamide was considered day 0. In the study, 0.9% NaCl was used for mucositis maintenance in the negative and positive control groups, and clove and green tea hydrosol was used in the experimental groups. 0.9% NaCl, clove and green tea hydrosols were started to be administered intraorally twice a day as a spray on day 0 and continued until sacrificing. Blood samples from the heart and tissue samples from the right inner cheek were taken from the groups 1,2,3 and 4 on the 4th day of the experiment, and from the other groups (5,6,7 and 8) on the 8th day of the experiment. Serum TAS and TOS levels in blood samples, degrees of erosion, fibrosis, inflammatory cell infiltration and epithelial hyperplasia in tissue samples were evaluated.

Results: Compared to the positive control groups, the mean serum TAS value was higher and the TOS value was lower in the groups treated with clove and green tea hydrosol. Statistically significant (p=0.003) less erosion developed in the application of clove and green tea hydrosol compared to the application of 0.9% sodium chloride. On the eighth day, less fibrosis and minimal inflammatory cell infiltration were detected in the clove and green tea hydrosol groups compared to the positive control group.

Conclusion(s): It has been shown that clove and green tea hydrosol are effective in preventing cyclophosphamide-induced oral mucositis and erosion in rats. Clove and green tea hydrosol may be preferred for the treatment of oral mucositis due to its antioxidant and anti-inflammatory effects.

Keywords: Clove, Cyclophosphamide, Green tea, Nursing care, Oral mucositis

OP - 029

Use of model in the care of pregnant women undergoing colostomy due to rectal cancer: a case report

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Objective: Cancer is defined by uncontrolled cell growth and abnormal spread. According to the American Cancer Society, colorectal cancer ranks as the 3rd most common cancer in both genders and is the 2nd leading cause of cancer deaths, topping mortality in men under 50. Surgical treatment involves resection with end-to-end anastomosis or a colostomy, depending on tumor location. A colostomy reroutes the large intestine to the abdominal wall, significantly impacting a patient's life. Adjusting to this change requires adaptation across physical, psychological, social, and economic aspects. This study aims to enhance quality of life and independence by applying the Roper-Logan-Tierney Daily Living Activities Model to plan nursing care for a 34-year-old pregnant woman with rectal cancer post-colostomy.

Case Report: The case is 34 years old, married and 36 weeks pregnant. She is 168 cm tall and weighs 79 kg. She works as a company representative. The patient, who has a history of Type I DM. She uses Novo-Rapid insulin S=18, A=14 units sc. The patient has Diabetic Nephropathy. She lost her grandfather to colon cancer 20 years ago. The patient stated that her bowel habits changed about a year ago; she had frequent constipation complaints, her stool diameter became thinner, and her bowels did not empty after defecation. She stated that he occasionally showed the urge to run to the toilet, she had been complaining of diarrhea, nausea, vomiting and abdominal pain for the last two months and that she had red blood in her stool. She applied to the General Surgery Polyclinic, thinking that the bleeding might be caused by hemorrhoids. The patient was diagnosed with rectal obstruction. She was diagnosed with Polypoid Colorectal Adenocarcinoma in February 2025. She had a cesarean section in March 2025 (37th week of pregnancy) and underwent abdominoperineal resection (Miles Method) in April 2025, and a permanent colostomy was opened (Post-op Day 4).

Conclusion(s): In the case discussed in this study, a care plan was created with nursing diagnoses in accordance with the Daily Living Activities Model. Nursing Diagnoses: Acute Pain, Inadequate Activity Tolerance, Hyperthermia, Inadequate Parenting, Ineffective Management of Individual Health, Impairment in Body Image, Anxiety, Nutrition Less Than Body Requirements, Constipation, Lack of Self-Care, Inadequate Physical Movement, Inadequate Role Performance, Interruption of Breastfeeding, Disruption in Sleep Pattern, Risk for Impairment in Skin Integrity, Risk for Fluid-Volume Deficiency, Risk for Impairment in Sexual Interaction, Risk for Social Isolation.

Keywords: Care plan, Activities of Daily Living Model, Colorectal cancer, Colostomy

OP - 030

The Effect of Cancer Anxiety and Cancer Information Overload on Individuals' Attitudes Toward Cancer Screenings

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Objective: The rising prevalence of cancer has increased the importance of early diagnosis, especially among high-risk groups, and highlighted the need for participation in screening programs. Although access to cancer-related information has become easier, the abundance of information may cause confusion and overload, potentially increasing cancer anxiety. These factors can negatively affect individuals' attitudes and behaviors toward screenings. This study aimed to examine the effect of cancer anxiety and information overload on individuals' attitudes toward cancer screenings.

Materials-Methods: This cross-sectional and correlational study was conducted between April and December 2024 at the 12th Family Health Center in Aksaray, Türkiye. Using convenience sampling, 400 individuals who applied to the center during the study period, met the inclusion criteria, and agreed to participate were included. Data were collected through face-to-face interviews using the Descriptive Information Form, the Cancer Anxiety Scale, the Cancer Information Overload Scale, and the Attitude Toward Cancer Screenings—Short Form. Data were analyzed using IBM SPSS Version 24.0.

Results: The mean age of participants was 42.02 ± 15.38 years; 52.8% were female, 68.8% were married, and 40.5% had a university degree or higher. Cancer anxiety scores were significantly higher among females ($p=0.049$), those who had received prior information about cancer ($p=0.021$), and those who had undergone screening ($p=0.009$). Cancer information overload scores were significantly higher among those aged 48–62 ($p=0.001$), married individuals, those with primary education ($p=0.022$), those who had not received prior cancer information ($p=0.001$), and those who had undergone screening ($p<0.001$). Attitude scores toward cancer screenings were significantly higher among women ($p=0.014$), those with low or equal income compared to expenses ($p=0.003$), those with a family history of cancer ($p=0.009$), and individuals who had been screened before ($p=0.011$). Correlation analysis revealed a weak but significant positive relationship between cancer anxiety and attitudes toward cancer screenings ($r=0.174$, $p<0.01$). However, no significant relationship was found between cancer anxiety and information overload ($r=0.074$, $p>0.05$) or between information overload and screening attitudes ($r=-0.079$, $p>0.05$).

Conclusion(s): The study found that as cancer anxiety increased, individuals' attitudes toward cancer screenings also became more positive. However, no statistically significant relationship was observed between information overload and either screening attitudes or cancer anxiety. These findings suggest that nurses can contribute to the development of positive screening attitudes by providing precise and simple information without increasing individuals' sense of information overload, thereby helping to reduce cancer-related anxiety.

Keywords: information overload, nursing, cancer, cancer screening, anxiety

OP - 031

Clinical study example: Evaluation of falls in patients hospitalized in an oncology clinic

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Objective: The aim of this study was to reduce patient falls below the set target and to reduce the cost of radiologic imaging after falls.

Materials-Methods: Between January 2024 and December 2024, fall rates and imaging needs resulting from falls in our clinic were analyzed prospectively and data were analyzed retrospectively. Accordingly, action plans and indicators were created. Indicators "Falling Patient Rate: It is calculated by the formula: "Number of patients who fell among inpatients receiving inpatient services in the relevant month / Total number of hospitalization days in the relevant monthx1000. The number of patients dropped is reported monthly and the rates are reported quarterly. Actions taken were as follows: A routine visit program was created and implemented for all patients, Fall warnings and brochures were designed and given to patients. A wireless alarm system was provided for the beds, bed rails were purchased. Fall Prevention Training Guide was started to be used. A fall team was formed and simulated fall training was provided to employees. A fall video was created and broadcast on televisions in patient rooms.

Results: In 2023, the number of patients who fell was 13 (n: 588) and the rate was 2.81 per thousand. Awareness of nurses was increased through routine rounds and trainings. As a result of the improvements made, the number of patients falling in 2024 is 3 (n: 534) and the rate is 0.66 per thousand. Compared to 2023, there was a 77% improvement in the number of patients in 2024 and a 44% profit in radiological examinations.

Conclusion(s): In 2024, there was a 77% reduction in the number of patient falls and a 44% cost advantage. As a result of the findings, it was seen that the actions taken to prevent patient falls were effective and an approach in line with patient safety policies was taken. As a result, it emphasizes the importance of sustainable patient safety practices and multidisciplinary cooperation.

Keywords: Falls, patient safety, nursing care

OP - 032

The Effect of Cancer-Related Stigma Perceptions on the Caregiver Burden of Relatives of Patients Receiving Chemotherapy

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Objective: This study is a descriptive study conducted to determine the effect of cancer-related stigma perceptions on the caregiving burden of relatives of patients receiving chemotherapy.

Materials-Methods: The population of this study consists of the relatives of the patients who received chemotherapy in the Outpatient Day Treatment Unit of Başkent University Hospital and was completed with 270 patients' relatives. The data of the study were collected using the "Patient Relatives Identification Form", "Cancer Stigma Scale (CASS-T)" and "Zarit Caregiver Burden Scale (ZCBS)". SPSS Windows 25 package program was used in the analysis of the research data. The Pearson Correlation coefficient was used to examine the difference between the groups using the Tukey Test, one of the Post-Hoc Tests, and the relationship between the variables.

Results: The mean CASS-T total score of the relatives of the patients was found to be 71.4±17.6. From the mean scores of the CASST subgroups of the relatives of the patients who participated in the study; The mean nonconformity score was 17.1±4.55, the mean seriousness score was 16.2±6.00, the mean avoidance score was 12.7±5.11, the mean score for political opposition was 7.22±4.57, the mean score for personal responsibility was 10.6±4.11, the mean score for financial discrimination was 7.69±3.56. There was no significant difference between the mean CASST scores of the relatives of the patients, gender, marital status, family structure and the number of children; It was determined that there was a significant difference between the CASS-T score of the relatives of the patients and their education levels according to the subgroups of inappropriateness, seriousness, avoidance, political opposition, personal responsibility, the degree of closeness of the patients, occupation, economic status, and previous encounters. The mean score of ZBVYO of the relatives of the patients who participated in the study was found to be 39.2±15.9. While there is a significant difference between the mean ZCBS scores of the relatives of the patients and their age groups, places of residence, employment, education and economic status, occupation, duration of care, and the sufficiency of the people who help during care; There was no significant difference between gender, marital status, having a child, and helping during caregiving. There is a moderately significant positive correlation between CASS-T scores and ZCBS scores

Conclusion(s): It was determined that the stigma perception of the relatives of the patients was moderate and the burden of care was light.

Keywords: Cancer, nursing, patient relatives, caregiving burden, stigma

OP - 033

The Effect of Health Belief Model-Based Cancer Education Provided to Caregivers of Cancer Patients on Cancer Information Overload, Knowledge, and Attitudes Toward Cancer Screenings

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Objective: Cancer is the second most common cause of death in the world and in our country, and is an important public health problem that can be prevented and treated when diagnosed early. Cancer screenings are of great importance for early diagnosis. However, individuals' cancer knowledge load, knowledge and attitude level towards cancer screenings affect early diagnosis. This study was conducted to determine the effect of cancer education based on the Health Belief Model given to caregivers of cancer patients on cancer knowledge load, knowledge and attitude towards cancer screenings.

Materials-Methods: The research was conducted with a control group experimental design. The universe of the research was the caregivers of a total of 108 patients in the Hematology (48), Medical Oncology (48) and Radiotherapy (12) Clinics. A power analysis was performed and the required sample size for each group was calculated as 37 with a power of 0.80 and a margin of error of 0.05. Considering the possibility of caregivers withdrawing from the research, 41 caregivers were determined for each group. The research was completed with 74 caregivers, 37 experimental and 37 control, who provided care to cancer patients. Data were collected between October 1 and December 10, 2024 with the 'Descriptive Characteristics Information Form', 'Cancer Information Burden Scale', 'Knowledge Scale Towards Cancer Screenings' and 'Attitude Scale Towards Cancer Screenings'. The application process consists of four stages: pre-test, intervention, post-test and follow-up test. After the pre-test, the Health Belief Model-based cancer education program consisting of four modules was applied to the participants in the experimental group once a week in the intervention stage. The education program consists of the modules Perceived Susceptibility in Cancer, Perceived Seriousness in Cancer, Perceived Benefit in Cancer and Perception of Barriers in Cancer, Action Tips and Self-efficacy. After the trainings were completed, the post-test and follow-up test were applied. No intervention was made to the participants in the control group. Descriptive statistics, Chi-square, Independent Sample T Test, and Analysis of Variance in Repeated Measures were used in the evaluation of the data. Ethics committee approval, institutional permission and informed consent were obtained for the conduct of the research.

Results: It was determined that there was no significant difference between the pre-test Cancer Information Load, Knowledge Level Towards Cancer Screening and Attitude Level scores of the experimental and control groups ($p>0.05$). In the comparison of mean scores between the groups for the experimental and control groups, the group*time interaction was found to be significant in reducing cancer information load and increasing knowledge and attitude levels towards cancer screenings ($p<0.001$)).

Conclusion(s): It has been determined that the Health Belief Model-based cancer education given to individuals who care for cancer patients is an effective nursing intervention in reducing the cancer information burden and increasing the level of knowledge and attitude towards cancer screenings. It is recommended that the Health Belief Model-based cancer education program be implemented for individuals who care for cancer patients in order to reduce the cancer information burden and increase the level of knowledge and attitude towards cancer screenings.

Keywords: Attitude, early detection, family member,health belief model, health education, knowledge

OP - 034

Examining the Relationship Between Financial Toxicity and Quality of Life in Cancer Patients: A descriptive and cross-sectional study

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Objective: Cancer patients face not only physical and psychological burdens but also economic difficulties due to the treatment process. This study aims to determine the level of financial toxicity, factors associated with it, and its relationship with quality of life in cancer patients.

Materials-Methods: This descriptive and cross-sectional study was conducted at a foundation hospital in Istanbul with 200 cancer patients over the age of 18, diagnosed for at least three months, and who volunteered to participate. Data were collected using the Introductory Information Form, Financial Toxicity Scale (COST), and Functional Assessment of Cancer Therapy - General (FACT-G). Statistical analyses were performed with SPSS-27 using parametric, non-parametric tests, and correlation analyses ($p<0.05$).

Results: The mean age of participants was 59.7±11.8 years; most were female (55%), married (86.5%), and secondary school graduates (56.5%). The mean COST score was 17.6±8.2, and the mean FACT-G score was 70.1±12.4. Financial toxicity was significantly associated with gender, education, income, and employment status, but not with age, marital status, children, or household size. It was higher among women, secondary school graduates, those with insufficient income, unemployed or non-pensioned individuals, and those lacking economic support. Caregivers quitting their jobs was linked to increased financial toxicity, unlike being the main earner or experiencing work changes. Cancer type, diagnosis time, and treatment duration were also significant, while cancer stage, chronic illness, surgery, additional treatments, and recent hospitalizations were not. Financial toxicity increased with longer diagnosis and treatment times and was negatively correlated with quality of life. Although 21% wanted financial counseling, only 10.5% received it.

Conclusion(s): The findings reveal that financial toxicity is a significant problem among cancer patients. It is influenced by socioeconomic factors and the disease / treatment process and negatively affects quality of life. Interventions for financial toxicity management in cancer patients are recommended.

Keywords: Cancer, Financial Stress, Financial Support, Quality of life

OP - 035

Investigation of the Effect of Training on the Side Effects of Chemotherapy given via the Mobile Health Application on the Quality of Life in Colorectal Cancer Patients

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Objective: n experimental study with a pre-test / post-test control group design was conducted to examine the effect of mobile health application use on the control of symptoms that may arise due to chemotherapy side effects in patients with colorectal cancer.

Materials-Methods: The study sample consisted of patients (35 intervention and 35 control) who underwent outpatient chemotherapy for colorectal cancer in the outpatient clinic of a training and research hospital between March 2023 and April 2024. Data were obtained using the Patient Information Form, Functional Assessment of Cancer Therapy - Colorectal (FACT-C) scale, Nightingale Symptom Assessment Scale (N-SAS), Self-Care Needs Assessment Form and Mobile Health Application Training Evaluation Form.

Results: The intervention and control groups showed homogeneous distribution in terms of personal characteristics (except for profession) ($p > 0.05$). The intervention group showed higher post-test scores in all FACT-C sub-dimensions and the total score, while scoring lower in the N-SAS sub-dimensions and total score compared to the control group. A significant correlation was observed between posttest responses of fatigue, appetite loss, nausea, vomiting, and pain between the groups. Although not statistically significant, the intervention group had a higher post-test score on the Self-Care Needs Assessment Form. Those who used the mobile health application reported a high level of satisfaction with the education provided.

Conclusion(s): These findings suggest that the education provided by mobile health applications has a positive effect on the quality of life of patients with colorectal cancer.

Keywords: Chemotherapy, Colorectal Cancer, Mobile Applications, Self Care, Quality of Life

OP - 036

Interventional Studies on Compassion Fatigue in Oncology Nurses: A Scoping Review

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Objective: Compassion is a core nursing value and a moral virtue enabling excellence in care. It stems from the desire to relieve others' suffering. However, prolonged exposure to distress can cause compassion fatigue, leading to emotional, physical, and spiritual exhaustion. This condition undermines nurses' focus and care quality, posing risks to patient and staff safety. Oncology nurses are particularly vulnerable. This review aims to explore the range of studies implementing interventions to reduce compassion fatigue among oncology nurses.

Materials-Methods: A comprehensive systematic search was undertaken across PubMed, Science Direct, Web of Science, and Scopus for studies published between 2015 and 2025. Eligible studies were peer-reviewed, intervention-based, published in English with full-text access, and targeted oncology nursing populations. Searches utilized the keywords 'Cancer nurse' AND 'Compassion fatigue' and relevant Boolean combinations. Two authors independently conducted title, abstract, and full-text screening. This review was registered with the Open Science Framework (https://osf.io/68nf9/) and reported in adherence to PRISMA guidelines.

Results: A total of 91 studies were screened, with duplicates and studies not meeting inclusion criteria excluded, leaving six studies in the review. Four were conducted in the U.S., one in Türkiye, and one in Portugal. Intervention durations ranged from 30 days to 12 weeks, with the longest follow-up 12 months. Three studies were quasi-experimental, one a randomized controlled trial, one a feasibility study, and one a pilot study with group interaction. Interventions included a physical activity program, self-care strategies training, social media-based group interaction, a mobile app with psycho-education and resilience assessments, storytelling, resilience-building training, and a mindfulness-based exercise program for coping with challenging emotions. The studies aimed to assess the impact of physical activity on compassion fatigue and burnout, evaluate the effects of resilience-building programs and apps on professional quality of life, investigate storytelling's effect on resilience and gather feedback, and examine the impact of short- and long-term resilience interventions on professional life quality. Participants' professional life quality, resilience, burnout, and stress levels were measured in all studies.

Conclusion(s): The findings indicated that the interventions significantly enhanced the quality of life of nurses, alleviated levels of compassion fatigue and burnout, and fostered greater resilience and emotional well-being. Consequently, it is recommended that such interventions be broadly integrated within healthcare settings, and that systems attuned to the specific needs of nurses be established to safeguard their mental and emotional health, optimize their professional efficacy, and promote the delivery of high-quality patient care.

Keywords: Compassion fatigue, Oncology nurse, Scoping review

OP - 037

Life Experiences in Acute Leukemia Patients: A Qualitative Study of Uncertainty and Adaptation

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Introduction and Objective: Among hematological malignancies, acute leukemia is a potentially life-threatening disease characterized by emotionally more challenging, sudden onset, and the need for urgent treatment. Leukemia patients experience uncertainty from the moment of diagnosis and have difficulty coping with the disease and treatment process. The study aimed to determine the life experiences of acute leukemia patients according to the Michel Disease Uncertainty Theory (MHBT) and the Roy Adaptation Model (RAM).

Materials-Methods: In the study, a semi-structured interview form prepared in line with the basic concepts of RAM and MHBT and a patient identification form including socio-demographic characteristics were used. The universe of the study was planned to be determined by the purposeful sampling method from qualitative research methods, and n: 15 patients were included in the study. The study was planned according to the COREQ checklist and validity and reliability stages were carried out. The data of the study was evaluated by content analysis with the maxqda software program.

Results: The qualitative data of the study were coded in 5 categories as physiological area-history of uncertainty, self-concept-evaluation of uncertainty, self-concept-coping with uncertainty, role function-history of uncertainty and interdependence-history of uncertainty by associating them with the concepts of both models. The themes in this category were coded as: The process of coming to the hospital, what happened during the diagnosis-examination and treatment stages, changes in physical appearance / coping methods, the effects of the disease process on the perspective of life, what they felt when they saw a leukemia patient, the effect on the perspective of death, the support of the healthcare personnel during the disease process, what they experienced when they did not express their complaints, what they experienced in the spiritual and psychological dimension, the method of coping with situations where they could not fulfill their life roles, the way of coping with symptoms caused by the disease and treatment, the approach of the treatment team and their experiences with the team, the attitude and effects of the family and close circle.

Conclusion(s): Acute leukemia patients experience many physical and psychological problems starting from the moment of diagnosis and continuing throughout the treatment and disease. It is thought that determining the life experiences of patients will guide health professionals in developing coping skills for the disease.

Keywords: Coping, Uncertainty, Nursing, Leukemia, Adaptation

OP - 038

Leukemia Cutis and Sweet Syndrome in a Patient with Acute Myeloid Leukemia: A Case Report with a Nursing Approach

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Leukemia cutis (LC) and Sweet's syndrome are rare but serious dermatologic manifestations in acute myeloid leukemia (AML), often indicating poor prognosis. This case report presents a 67-year-old male with AML who developed LC and concurrent Sweet's syndrome. Despite induction and salvage therapy, the patient exhibited treatment resistance, progressing to severe skin lesions confirmed by biopsy. Supportive care included corticosteroids, antimicrobial therapy, transfusions, and wound management. The patient ultimately succumbed to pneumosepsis. This case highlights the importance of early recognition of cutaneous signs and emphasizes the critical role of nursing in managing rare AML-related complications through multidisciplinary care.

Keywords: Acute Myeloid Leukemia (AML), Leukemia Cutis, Sweet's Syndrome, Nursing Approach, Multidisciplinary Care

Introduction

Leukemia cutis (LC) is a neoplastic infiltration of the skin or subcutaneous tissues caused by leukemic cells. Although rare, it carries a poor prognosis due to its involvement of extramedullary sites. It typically presents with skin findings accompanying bone marrow infiltration, but systemic symptoms may also be observed, making early diagnosis critical. LC is more frequently seen in Acute Myeloid Leukemia (AML) compared to other types of leukemia. The incidence in AML ranges from 2–3.7%. In certain AML subtypes, such as acute myelomonocytic or acute monocytic leukemia (M4 and M5), cutaneous involvement can be observed in up to 50% of patients. The two-year survival rate for AML patients without LC is approximately 30%, whereas it drops to 6% in those with LC. Skin biopsy facilitates early diagnosis and is used in combination with morphological, immunohistochemical, and molecular genetic methods for confirmation (Krooks et al., 2018; Moyer et al., 2018).

The clinical appearance of LC can vary, presenting as macules, papules, bullae, plaques, vesicles, etc. The most common morphology includes erythematous and violaceous papules and nodules, while plaques and macules are seen less frequently. LC can mimic various dermatoses, thus requiring histopathological analysis via skin biopsy, which plays a vital role in diagnosis. There is no specific treatment for LC; skin lesions often improve with treatment of the underlying disease. LC can develop on any part of the skin, especially in previously traumatized areas. It typically appears first on the extremities and later on the trunk and face (Kara et al., 2017; Haidari et al., 2019). LC usually develops within two years following systemic disease involvement but can rarely precede the diagnosis of leukemia. Studies have shown that 23–38% of LC cases emerge concurrently with leukemia diagnosis (Chang et al., 2021). Due to its poor prognosis, patients are often lost within one year following LC diagnosis. In some studies, the mean survival after diagnosis is between 5 to 8 months (Li et al., 2018; Kang et al., 2013).

In leukemia patients, cutaneous lesions are common and may have various causes including paraneoplastic lesions, pyoderma gangrenosum, Sweet syndrome, infections, drug eruptions, and lesions related to antineoplastic agents (Haidari et al., 2019). Sweet syndrome, also known as acute febrile neutrophilic dermatosis, is a rare clinical entity. It exists in three forms: idiopathic, drug-induced, and malignancy-associated. Malignancy-associated Sweet syndrome commonly accompanies hematologic malignancies. It is more prevalent in elderly individuals, affecting males and females equally. It may recur and is characterized clinically by fever, leukocytosis, and painful erythematous papules or plaques. Anemia and thrombocytopenia may accompany the symptoms. Diagnosis requires at least one major and two minor criteria. Major criteria include sudden onset of painful erythematous plaques and dense dermal neutrophilic infiltration on histopathology. Minor criteria include fever >38°C, elevated CRP and ESR levels, and a good response to glucocorticoid therapy (Mo et al., 2018; Aydın et al., 2019). First-line treatment includes glucocorticoids, potassium iodide, and colchicine. Antibiotics may be used in case of infections or prophylactically during chemotherapy (Zheng et al., 2020).

Case Report

M.S., a 67-year-old male patient weighing 57 kg, was diagnosed with primary myelofibrosis in March 2020 and started on treatment. In July 2021, he presented to the emergency department with complaints of fever (38°C), vomiting, reduced oral intake, and night sweats. In August 2021, he was admitted to the hematology department with a preliminary diagnosis of AML transformed from JAK2-positive myelofibrosis. Bone marrow biopsy in September 2021 revealed a blast ratio of 8–10%, and 80% blasts were observed in peripheral blood smear. Flow cytometry of peripheral blood was consistent with AML, and induction chemotherapy with ARA-C (3/7 Cytarabine, Idarubicin) was initiated. Due to lack of engraftment, the disease was considered refractory, and the patient received subcutaneous Vidaza (130 mg) for seven days.

Figure 1. Clinical appearance of the patient's left leg following punch biopsy, showing erythematous and necrotic areas at the biopsy site.

In December 2021, pink-violet nodular lesions, the largest being 1x1 cm, developed on the trunk and lower extremities. A punch biopsy was taken from the anterior surface of the left leg. Histopathology showed widespread staining with CD45, focal staining with CD34, partial positivity with CD68 and myeloperoxidase, and no staining with CD3, CD20, or CD117. Based on these findings, a diagnosis of LC was made. Three days after the biopsy, a necrotic ecchymotic lesion developed at the biopsy site (Figure 1), and cultures were taken, which showed no growth. The presence of neutrophils, leukocytes, and nuclear debris alongside leukemic infiltration in the dermis led to a concurrent diagnosis of Sweet syndrome.

Following this diagnosis, the patient was started on methylprednisolone at 2 mg/kg/day, Piperacillin + Tazobactam, and Amphotericin B due to the possibility of mucormycosis. At the time of LC diagnosis, laboratory results were: hemoglobin 6.5 g/dL, platelets 4,000/mL, leukocytes 2,660/mL, CRP 391, and procalcitonin 14.45. Red blood cell and platelet transfusions were administered as needed. Multiple blood cultures showed no bacterial growth. The dermatology department recommended twice-daily application of Balaban (mupirocin calcium), Fito (Triticum Vulgare), and Silvamed (silver sulfadiazine) creams after 15-minute wet compresses with gauze (Figure 2).

Figure 2. Extensive tissue necrosis observed at the biopsy site following punch biopsy.

Table 2. Clinical Characteristics of the Patient

Clinical parameters	Characteristics of the Patient
Age/Gender	67/M
Diagnosis	AML Transformed from Primary Myelofibrosis
Medical History	Primary Myelofibrosis
Affected Areas	Arms and Legs, Trunk, Necrotic ecchymotic tissue at the biopsy site on the left leg
Symptoms and Findings	Fever, Elevated CRP and PCT, Anemia, Thrombocytopenia, Leukocytosis
LC Characteristic	Erythematous and violaceous papules
Immunohistochemical Features	CD45 + CD34 + CD68 + Partial positivity for Myeloperoxidase CD3 – CD20 – CD117 –

In the following days, the patient's fever rose above 38°C every six hours, and oxygen saturation declined to 78%. A thoracic CT scan showed findings consistent with pneumonia. A COVID-19 test was negative, but the infection could not be ruled out. The patient was treated with antibacterial, antifungal, and antiviral agents. Due to persistent desaturation and blood gas findings, he was transferred to the ICU. Despite intubation, the patient remained hypoxic and died of pneumosepsis.

Marjory Gordon's Functional Health Patterns (FHP) Model (1982) facilitates standardized data collection and identification of appropriate nursing diagnoses in clinical practice, thereby guiding nursing care. The model comprises 11 functional health patterns that aim to enhance an individual's health, quality of life, and overall potential (Temel et al., 2019). In this case, nursing care for a patient followed in the hematology clinic was provided based on Gordon's FHP Model.

1. Health Perception and Health Management: The patient stated that prior to his symptoms, he rarely visited hospitals. As a foreign national, he lacked health insurance. Throughout the illness, recurrent fevers above 38°C, extended hospitalization due to antibiotic therapy, and the development of leukemia cutis all contributed to his awareness of poor health. He remained compliant with treatment.

2. Nutritional-Metabolic Pattern: During chemotherapy, especially in the neutropenic phase, oral mucositis and anorexia caused a significant reduction in oral intake and weight loss. The patient experienced persistent fever, requiring parenteral hydration to manage dehydration. An infected necrotic lesion developed in the biopsy site on his left leg due to leukemia cutis.

3. Elimination Pattern: Bowel movements were present; the abdomen was soft and bowel sounds were audible.

4. Activity and Exercise: Due to pancytopenia, the patient experienced fatigue and weakness. To prevent falls and bleeding, activity was restricted. He required assistance from his spouse for toileting and showering. He was able to eat and dress independently.

5. Sleep and Rest: The patient reported reduced sleep quality in the hospital compared to home and difficulty in falling into deep sleep, often waking up unrested.

6. Cognitive-Perceptual Pattern: The patient had difficulty understanding Turkish but communicated through his spouse. He was oriented to person, place, and time, with no vision or hearing impairments.

7. Self-Perception and Self-Concept: He was aware of the severity of his illness and expressed emotions openly. He maintained hope for recovery.

8. Roles and Relationships: He was married with children and reported missing his family. Social support included his wife, children, and siblings, with his wife and occasionally his son staying as companions.

Table 2. Nursing Care Plan for a Patient

Nursing Diagnosis	Goals	Nursing Interventions	Evaluation
1-Health Perception and Management			
Due to the individual's acceptance of their illness, willingness to seek solutions, utilization of healthcare services when ill, presence of effective support systems, and compliance with treatment, the nursing diagnosis is: **Effective Health Management**.	To ensure the continuity and improvement of the individual's positive health behaviors.	• The individual was encouraged and supported for every correct health-related action taken. • Opportunities were provided for the individual to express their feelings and thoughts. • Existing positive environmental conditions were maintained.	The individual demonstrated adaptive behaviors in improving and maintaining their health.
2- Nutritional Pattern and Metabolic Status			
Due to weight loss, development of oral ulcers, decreased food intake, muscle weakness, and loss of appetite, the nursing diagnosis is: **Imbalanced Nutrition: Less than Body Requirements.**	To ensure that the individual's daily nutritional needs are adequately met.	• *Mouthwash was applied before meals to reduce the sensitivity of oral ulcers. • *The patient was monitored to ensure that snacks were not skipped. • *A suitable high-calorie diet was prescribed. • *Priority was given to foods the patient liked and wanted to eat.	Although the patient's loss of appetite persisted, there was a slight improvement in oral intake.
Due to leukemia cutis (LC), erythematous purplish papules developed on the extremities and trunk. An infected necrotic area formed on the left leg where a skin biopsy was performed, the nursing diagnosis is: **Impaired Skin Integrity**.	To promote the healing of conditions that disrupt skin integrity.	• *Wet dressings soaked with physiological saline were applied twice daily with gauze to the biopsy site on the left leg, and topical applications of Fito, Balaban, and Silvamed creams were administered. • *The patient was advised to protect the wound area from trauma.	The wound exudate ceased and the wound dried; however, complete healing was not yet achieved.
Due to chemotherapy, the development of oral ulcers and dryness and pain in the mouth related to dehydration caused by high fever, the nursing diagnosis is: **Impaired Oral Mucous Membrane**.	To promote the healing of oral cavity problems and to eliminate poor oral hygiene.	• *Daily water intake was increased. • *Gargle treatment was applied before meals to reduce ulcer-related pain. • *The patient was advised to avoid excessively hot/cold, acidic, and spicy foods and beverages. • *Daily oral and dental care was monitored. • *Necessary antiviral medications were administered.	With these interventions and the patient's emergence from the neutropenic phase, oral sensitivity decreased and healing of the oral mucosa was achieved.
Due to leukemia cutis, infection formation on the left leg where a skin biopsy was performed, febrile neutropenia after chemotherapy, and fever rising above 38°C every 6 hours, the nursing diagnosis is: **Hyperthermia**.	To prevent the occurrence of new infections and to ensure the patient's fever returns permanently to normal.	• *Due to the patient's low blood values, appropriate transfusions were provided. • * CRP and PCT levels were monitored daily. • * Frequent temperature checks were performed; when fever increased, blood cultures were taken and antipyretic treatment was applied to reduce the fever. Cold applications were used. Antibiotic therapy was administered. • *To prevent new infections, the patient's room was frequently ventilated and hygiene education was given. • * Intravenous fluids were administered to compensate for dehydration.	The patient's fever continued to rise above 38°C at intervals longer than 6 hours.
3-Elimination	No dysfunctional development in elimination was observed.		

Table 2. Nursing Care Plan (Continue)

Nursing Diagnosis	Goals	Nursing Interventions	Evaluation
4- Activity and Exercise			
Due to pancytopenia, the patient experienced weakness and fatigue, as well as shortness of breath during activity, the nursing diagnosis is: Activity Intolerance.	To enable the patient to be independent in daily needs and to use energy primarily for basic needs.	• *The patient was placed on bed rest. *The patient was advised to have a caregiver assist during activities such as using the sink and shower. • *Walking inside the room was allowed with the caregiver. • *Vital signs were monitored after walking to evaluate activity tolerance. • *Oxygen support at 3 L/min via nasal cannula was provided when oxygen saturation dropped below 90%. • *Necessary items were placed within close reach of the patient.	The patient's participation in activities of daily living increased.
Due to oxygen saturation dropping below 90%, tachypnea, dyspnea, and ground-glass appearance on chest radiography, the nursing diagnosis is: Impaired Tissue Perfusion.	To improve the patient's tissue perfusion level.	• *Frequent vital sign monitoring was performed. The patient was monitored continuously. • *Blood transfusion was provided. • *The patient was observed for cyanosis. • *Oxygen support was given via nasal cannula at 3 L/min. Capillary refill time was assessed. • *Antibiotics targeting lung infection were administered. • *Level of consciousness was evaluated.	The patient's oxygen saturation improved temporarily with oxygen therapy, but persistent hypoxemia necessitated transfer to the intensive care unit.
5-Sleep and Rest			
The patient reported inability to achieve deep sleep and not waking up feeling rested, and due to hospitalization, the nursing diagnosis is: Disturbed Sleep Pattern	To improve the patient's sleep quality.	• *Treatments and interventions were not scheduled late at night. • * Sleeping longer than one hour during the day was prevented. • *Caffeine intake was reduced. • *The patient was encouraged to take a warm shower before bedtime. • *Medication support was provided occasionally for difficulties falling asleep.	The patient reported waking up feeling rested.
6-Cognitive-Perceptual	No signs of cognitive or perceptual dysfunction were observed.		
7- Self-Perception and Self-Concept			
Due to hospitalization, development of leukemia cutis on the left leg, persistent fever above 38°C, limited mobility, shortness of breath, sleep disturbances, ongoing interventions, and intensive treatments, the nursing diagnosis is: Anxiety.	To minimize the patient's stress and anxiety levels and assist in coping with stress.	• *All interventions and treatments were explained to the patient and family to reduce stress. • *The patient was encouraged to express feelings and thoughts. • *The patient was encouraged to ask any questions they had. • *Psychiatry consultation was requested after discussion with the primary physician. • *Appropriate sedative medication was started.	The patient's stress level has increased due to ongoing shortness of breath and the need for intensive care.

Table 2. Nursing Care Plan (Continue)

Nursing Diagnosis	Goals	Nursing Interventions	Evaluation
8-Role and Relationship			
Due to hospitalization, being away from home and children, visitor restrictions because of the illness, language barriers, and receiving healthcare in a foreign country, the nursing diagnosis is: **Social Isolation**.	To promote the patient's social activity.	• *The patient was facilitated to have video calls with children and relatives. • *Active participation in daily living activities was encouraged. • *The family was informed about the importance of their support. • *Visitor tolerance was arranged, allowing relatives to see the patient from a distance.	The patient reported an improvement in morale.
9- Sexuality and Reproduction	No signs of dysfunction in sexuality and reproduction were observed.		
10-Coping and Stress Tolerance			
Due to the patient's expression that this illness is from God and that patience is required, the nursing diagnosis is Readiness for **Enhanced Coping**.	To support individual coping.	• *As a religious patient, the individual primarily used prayer and performing salat as coping methods. • *An appropriate environment was provided for the patient to perform worship without disturbance during prayer times. • *The patient was placed in the same room with another patient who had a similar condition and spoke the same language.	The patient is motivated to cope, and the nurse has worked collaboratively.
11-Spirituality and Values	No dysfunctional development was observed.		

9. Sexuality and Reproduction: He reported fatigue and low energy, and stated that sexuality was not a priority due to his age and illness.

10. Coping-Stress Tolerance: The patient has accepted the reality of cancer and is willing to fight the disease. He expressed a strong desire to complete treatment as soon as possible and return home in a recovered state. He stated that he tries to maintain high morale and motivation, appreciates the healthcare professionals who care for him, and trusts them. He reported that his greatest support in coping with stress comes from his social support network. He expects to regain a sense of control over his life following the completion of treatment.

11. Values and Beliefs: As a Muslim, he viewed his illness as a test from God and frequently gave thanks through prayer.

Discussion

Leukemia cutis (LC) is characterized by infiltration of the skin by neoplastic leukocytes. It may develop prior to the diagnosis of systemic leukemia or concurrently with it. Patients often have a prior diagnosis of systemic leukemia or myelodysplastic syndrome. However, in rare cases, cutaneous lesions may present as the initial manifestation of the systemic disease (Parsi et al., 2022). Although LC can occur in any subtype of leukemia, the most frequently observed types in clinical practice are chronic lymphocytic leukemia (CLL) and acute myeloid leukemia (AML) with monocytic or myelomonocytic morphology. It is most commonly seen in AML, where the prognosis is generally poor (Moyer et al., 2018). In a study by Wasim Haidari et al. (2019) that followed the clinical characteristics of 46 patients with LC, 80% of the cases were diagnosed with AML, and the male gender was more frequently affected. Similarly, Findakly (2020) reported that most LC-diagnosed patients had AML, with more than half being over 50 years old. In our case, the patient was diagnosed with LC following the diagnosis of AML transformed from primary myelofibrosis.

Observing cutaneous manifestations in leukemia patients, particularly those with AML, is of critical importance for the early diagnosis of LC. LC-related skin lesions are typically located on the upper and lower extremities and the trunk. In the literature, Krooks et al. (2018) reported a case with nodular lesions on the face, trunk, and arms. Wasim Haidari et al. (2019) found that papules, nodules, and macules were the most common types of lesions, primarily localized on the arms and legs. In another study from Southern Taiwan, LC was most commonly observed as papules and nodules, mainly located on the trunk and extremities. Findakly's systematic review (2020) also showed that multiple cutaneous nodules were common. In our case, erythematous and violaceous papular lesions were observed on the patient's arms and legs. Therefore, our findings are consistent with the literature.

Histological findings play a fundamental role in diagnosing LC in leukemia patients. In a study by Li et al. (2018), skin infiltration developed in seven patients between 4 to 72 months after the onset of leukemia, and immunohistochemical analyses often showed strong reactivity to myeloperoxidase (MPO), CD15, CD43, and CD45. In Krooks et al. (2018), the biopsy sample showed positivity for CD33 and negativity for CD3, CD20, and MPO. In another study involving three cases, biopsy results showed positivity for both CD68 and MPO in all cases (Moyer et al., 2018). In our patient's biopsy sample, CD45, CD34, CD68, and MPO were positive, while CD3, CD20, and CD117 were negative. Partial positivity for CD45 and MPO in our case is consistent with previous findings in the literature.

Several studies have demonstrated a correlation between the diagnosis of LC and reduced survival in leukemia patients. In the case report by Krooks et al. (2018), a 66-year-old male with AML died five weeks after the diagnosis of LC. Haidari et al. (2019) also reported that most patients died within the first year following diagnosis. Another study showed that 32 patients died within one year of LC diagnosis, and only three survived after treatment and stem cell transplantation (Chang et al., 2021). Conversely, in a case series involving three AML patients with LC, two were still alive 1 to 1.5 years after diagnosis (Moyer et al., 2018). Findakly (2020) noted that nearly half of LC patients died due to the disease or its complications. Another study reported that six AML patients with LC died between two months and one year after the onset of skin lesions (Li et al., 2018). Wang et al. (2019) found that LC reduced survival in AML patients. In the study by Yook et al. (2022), the average time from leukemia diagnosis to the development of LC was 12.3 months, while the time from LC diagnosis to death was 5.4 months. In our case, LC developed five months after leukemia diagnosis, and the patient died two months after being diagnosed with LC, aligning with the literature in terms of survival duration. These results indicate that LC is associated with poor outcomes in leukemia patients. Comprehensive skin examination in such patients may facilitate early detection of LC and contribute to prolonged survival.

Sweet syndrome, a condition associated with hematologic malignancies, can coexist with LC in leukemia patients. Our patient was diagnosed with Sweet syndrome due to the presence of fever, leukocytosis, thrombocytopenia, elevated CRP and PCT levels, erythematous and violaceous papules, and necrotic tissue. Mo et al. (2018) and Özkur et al. (2018) described similar symptoms in their case reports involving patients with AML and LC, respectively, both of whom were diagnosed with Sweet syndrome. In a study by Chavan et al. (2014), six of 22 patients exhibited histiocytoid Sweet syndrome with monocytoid infiltrates, and in four of these cases, the possibility of LC was noted.

Conclusion

Leukemia cutis (LC) is a condition commonly observed in patients diagnosed with acute myeloid leukemia (AML). Therefore, a multidisciplinary team approach is crucial both for early diagnosis and for the effective management of LC following diagnosis. Nurses, as members of the multidisciplinary team who spend the most time with patients, play a key role in this process. Particularly in hematology and bone marrow transplant units, it is essential for nurses to be knowledgeable about the signs and symptoms of LC, to be capable of identifying cutaneous lesions, and to take an active role in patient care after diagnosis. This contributes significantly to early recognition of the disease and to the effective management of the clinical course.

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OP - 039

Effects of Creative Arts Intervention on Anxiety, Depression and Sleep Quality Among Bone Marrow Transplantation Patients During Protective Isolation

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Objective: Protective isolation remains part of the standard of care for patients undergoing hematopoietic stem cell transplant in many places of the world. The consequences of protective isolation include increased anxiety and depressive symptoms. Creative therapies are a way for the individual expression. Creative therapies provide an outlet for individual creative expression to promote and enhance the physical, mental, and emotional well-being during the cancer experience through various art activities. The aim of this study was to determine the effects of creative interventions performed during the protective isolation period on anxiety, depression symptoms, and sleep quality of patients who underwent bone marrow transplantation (BMT).

Materials-Methods: This study was a randomized, controlled, pre test-post test pilot design. A total of 20 patients made up the sample group. Participants were randomly assigned to the experimental (n = 9) or control group (n = 11). Hospital Anxiety and Depression Scale was applied to patients on the first day of admission to the unit and on the day of discharge. Questions prepared by researchers on sleep quantity and quality were administered every day during the patients' hospitalization. The patients in the experimental group carried out creative arts intervention for a total of 60 minutes a day, 3 to 4 days a week, while theywere in the unit.

Results: There was no difference in depression, anxiety, and sleep quality scores between the groups after intervention. However, depression and anxiety scores significantly decreased after the intervention in the experimental group, and sleep quality scores improved significantly.

Conclusion(s): Creative arts intervention may be beneficial for anxiety, depression, and sleep problems among patients undergoing BMT. Creative arts intervention is effective in coping with anxiety, depression, and sleep problems that patients may experience due to social isolation during the BMT process.

Keywords: Anxiety, Creative arts, Depression, Protective isolation, Sleep quality

OP - 040

Investigation of Cancer Patients' Attitudes and Coping Styles Towards Constipation: A Qualitative Study

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Objective: Constipation is a common symptom in cancer patients and has a negative impact on quality of life. Its prevalence ranges from 30-80%, with risk factors including medications such as opioids and anticholinergics, inadequate fluid intake, and lack of physical activity. Untreated constipation can lead to serious problems such as nausea, vomiting, abdominal pain and psychological distress. The fact that it is underdiagnosed and under-managed by nurses in clinics increases the discomfort of patients. Therefore, it is important to investigate the attitudes and coping styles of patients with cancer towards constipation. This study aims to gain an in-depth understanding of constipation experiences and coping strategies in patients with cancer.

Materials-Methods: This phenomenological qualitative study was conducted with patients with constipation who were hospitalized in the oncology unit of a hospital between February 2024 and June 2024. Inclusion criteria included being over 18 years of age, being orally fed, having no communication difficulties, and being diagnosed with chronic constipation according to Rome III criteria. A patient identification form, the Constipation Assessment Scale (CAS), and a semi-structured interview form were used during the data collection process. Quantitative data were analyzed using SPSS 28.0, while qualitative data were evaluated using inductive content analysis.

Results: The mean age of the patients who participated in the study was 57.15±15.58 years. 85% of the patients were female, 80% were married and 50% were illiterate. All patients had constipation complaints according to the Rome III criteria. As a result of the qualitative analysis, four main themes were identified: physical effects, psychological effects, social and lifestyle effects, and coping methods. Physical effects included bodily symptoms (pain, bloating, fatigue) and reduced mobility. Psychological effects included emotional mood disturbances (irritability, unhappiness) and negative thoughts. Social and lifestyle effects were experienced as disruption of daily life (inability to do household chores, inability to go out) and social isolation (feeling lonely). Coping methods included behavioral (walking, showering), nutritional / natural (drinking water, eating fibrous foods), and psychological (positive thinking, spending time with family) strategies.

Conclusion(s): Constipation is a complex problem that significantly affects the physical, psychological, and social well-being of cancer patients. It is an important part of oncology care for nurses to take a holistic approach to assessing patients' experiences and helping them to develop personalized coping strategies.

Keywords: Cancer, Constipation, Coping Strategies, Patient Experience

OP - 041

The relationship between stoma self-efficacy, sexual quality of life, and perceived social support in young adults with ostomy

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Objective: This study aims to examine the relationship between stoma self-efficacy, sexual quality of life, and perceived social support in young adults with ostomies.

Materials-Methods: In this descriptive cross-sectional study, data were collected using the Descriptive Characteristics Form, Stoma Self-Efficacy Scale (SSES), Multidimensional Scale of Perceived Social Support (MSPSS), and Sexual Quality of Life Scale (SQOL-F and SQOL-M). In this ongoing study, data have been collected from 58 participants, and the target sample size, based on the sample size calculation, is 96.

Results: Based on the data collected so far, the mean age of participants is 32.4±3.1 years; 59% are female, 63.8% are employed, and 60.3% are university graduates. A total of 53.4% have a chronic disease, and for 46.6%, the cause of the stoma is inflammatory bowel disease. While 65.5% have an ileostomy, 63.8% have a temporary stoma. Satisfaction with sexual life is 5.37±3.36 out of 10, and the impact of the stoma on sexual life is scored as 6.20±3.62. The stoma care self-efficacy sub-dimension of the SSES shows a strong positive correlation with the social self-efficacy sub-dimension of the SSES ($r=0.727$, $p<0.01$) and the family sub-dimension of the MSPSS ($r=0.520$, $p<0.01$); it also shows a weak positive correlation with the friend ($r=0.482$, $p<0.01$) and significant other ($r=0.395$, $p<0.01$) sub-dimensions of the MSPSS. The social self-efficacy sub-dimension of the SSES is weakly and positively correlated with the family ($r=0.443$, $p<0.01$) and friend ($r=0.432$, $p<0.01$) sub-dimensions of the MSPSS. Among men, sexual quality of life is weakly and positively correlated with stoma self-efficacy ($r=0.457$, $p<0.05$).

Conclusion(s): As social support systems increase in individuals with an ostomy, their self-efficacy perception significantly improves. Moreover, in men, higher stoma self-efficacy is associated with better sexual quality of life. In this context, nursing interventions that strengthen social support systems, enhance self-efficacy, and raise awareness among healthcare professionals should be implemented.

Keywords: perceived social support, stoma self-efficacy, quality of sexual life

OP - 042

A Bibliometric Analysis of Nursing Research on Pain in Cancer Patients

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Objective: Cancer-related pain is among the most distressing symptoms experienced by patients during their treatment process (Schreier et al., 2019). Furthermore, cancer pain is recognized as one of the most significant concerns for patients, families and healthcare providers (Li et al., 2018). As demonstrated in preceding studies, the occurrence of cancer pain is subject to variation according to the treatment stage. Pain is a common complaint among cancer patients. The aetiology of cancer pain is not confined to the neoplasm itself; the condition may also be associated with diagnostic procedures and therapeutic interventions, including chemotherapy, radiotherapy and surgery (Bennett et al., 2019; Portenoy and Dhingra, 2022). The objective of the present study was to undertake a bibliometric analysis of studies published in the Web of Science database over the preceding decade, with a focus on the nursing management of pain in cancer patients.

Materials-Method: A bibliometric analysis of the articles included in the study was performed on 07.04.2025. A search was conducted on the 'Web of Science Core Collection' using the keywords 'cancer pain' OR 'cancer pain nursing management'. The evaluation comprised 1,320 research articles. The bibliometric analyses of the article data were conducted utilising the Biblioshiny package in R Studio.

Results: A general data analysis of bibliometric research indicates that 1,320 articles were published in 138 different sources. The average number of citations per document was 10.59, and the annual growth rate was 9.82. The database contains 5,735 authors and 1,320 published articles. The average number of co-authors per article is 5.65. The analysis revealed a total of 4,700 keywords to have been used in the articles. An examination of the distribution of articles according to year of publication revealed that the most significant number of articles, specifically 154, were published in 2024. An analysis of the research articles revealed that 129 of these were published in the journal 'Cancer Nursing'. The results of the analysis indicated that 48 studies were conducted in Türkiye and published in various journals between 2016 and 2024.

Conclusion(s): The management of pain in cancer patients by nursing professionals is a contemporary issue, and it has been identified as one of the most trending topics since 2020. A moderate number of publications on the subject in question have been identified in Türkiye. It is recommended that further studies on this subject be planned.

Keywords: cancer, pain, nurse, analysis and bibliometry

OP - 043

Examination of the Effect of Internalized Stigma on Patients' Quality of Life, Anxiety and Depression Levels in Breast Cancer Patients

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Objective: Being diagnosed with breast cancer significantly affects the perception of being a woman in many ways. The share of such a diagnosis on values such as a woman's sexuality, femininity, aesthetic appearance, feeding the baby, motherhood, and love is undeniable. Therefore, it is inevitable for women with breast cancer to experience problems such as anxiety, depression, deterioration in body image, decrease in self-esteem, deterioration in sexual functions, hopelessness, guilt, fear, and deterioration in quality of life during the diagnosis, treatment, and post-treatment process The aim is to determine the level of internalized stigma in breast cancer patients and to determine how the quality of life, anxiety, and depression levels of the patients are affected by this situation.

Materials-Methods: The study consisted of 294 patients who applied to a breast surgery center and received breast cancer treatment between June and November 2023. The study was prepared using a descriptive, cross-sectional design; data were collected using the "Patient Identification Form," "Turkish Form of Cancer Stigma Scale," "Rolls Royce Model Quality of Life Scale," "Beck Depression Scale," and "Beck Anxiety Scale."

Results: When the findings of the study are examined, it is seen that there is a statistically significant negative relationship between the cancer stigma scale and the Rolls Royce model quality of life scale (r=-0.211, p<0.05) and a statistically significant positive relationship between the beck depression inventory (r=0.280, p<0.05) and the beck anxiety scale (r=0.138, p<0.05). In addition, it is seen that there is a statistically significant negative relationship between the Rolls Royce model quality of life scale and the Beck depression inventory (r=-0.666, p<0.05) and the Beck anxiety scale (r=-0.634, p<0.05). A statistically significant positive relationship exists between the Beck Depression Inventory and the Beck Anxiety Scale (r=0.682, p<0.05).

Conclusion(s): The results of the study show that patients who stigmatize themselves as having cancer have a low quality of life, and it can also be said that such individuals experience anxiety and depression. In addition, it is supported by the results that patients with high quality of life do not experience anxiety and depression, while patients with high levels of depression experience anxiety. Supporting breast cancer patients in terms of psychosocial aspects and reducing internal stigmatization, depression, and anxiety levels show that their quality of life will also increase.

Keywords: Breast cancer, internalized stigma, quality of life, anxiety, depression

OP - 044

Breast Cancer in the Cycle of Hope and Despair: A Qualitative Study

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Objective: Breast cancer is a significant public health problem that is increasing worldwide. Breast cancer patients internalize an essential concept from every process of their disease. These concepts are hope and hopelessness. The individual's adaptation to the disease is linked to hope. In the presence of hopelessness, the individual may develop anxiety, depression, and treatment refusal. Hope and hopelessness affect all mental and physical functions. The purpose of this study is to explain the experience of breast cancer patients regarding the feelings of hope and hopelessness they experience during the disease process.

Materials-Methods: In the study, 19 breast cancer patients who completed their treatment at a breast cancer treatment center were interviewed in depth with semi-structured questions between September 2023 and February 2024.

Results: As a result of the content analysis, four themes and 18 sub-themes were reached: Hope Cycle, Sources of Hope, Factors Threatening Hope, Ways to Maintain Hope.

Conclusion(s): In the study, the main themes shed light on the hopefulness and hopelessness experienced by breast cancer patients during the diagnosis, treatment, and post-treatment process. When they feel hopeful, what they do and need to be hopeful, when they experience hopelessness, and what coping methods they resort to when they feel hopeless were revealed in the study. In addition, patients interpret their experiences during the cancer process within the framework of hope and hopelessness, emphasizing that hope always exists in this challenging process, that life goes on, and that being hopeful is of supportive importance in continuing treatment and recovery.

Keywords: Breast cancer, hope, hopelessness, qualitative research

OP - 045

Symptom Management in Cancer Patients with the Use of Artificial Intelligence Supported Chatbots

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Chatbots are artificial intelligence-based communication systems developed to mimic human speech to provide online guidance and support. The use of chatbots to support health management in cancer patients has increased significantly in recent years. During the treatment process, cancer patients often experience physical symptoms such as fatigue, nausea, pain, loss of appetite, as well as psychological problems such as anxiety and depression. However, they may be reluctant to share these symptoms and their emotional burden with others. At this point, chatbots allow patients to express their problems without wasting time and protecting their privacy. Chatbots facilitate symptom monitoring, especially during chemotherapy, and contribute to accurate evaluations by enabling rapid interventions. Today, artificial intelligence-supported chatbots offer instant support to patients, enabling early recognition of symptoms and timely appropriate interventions. This is widely used to help patients use their time more efficiently and focus more on their health during the treatment process. When the literature is examined, it has been observed that chatbot systems used in different cancer types have shown various positive effects such as real-time symptom monitoring, reducing emergency room visits and unplanned hospitalizations, and increasing patient activation. In addition, results such as promoting psychological well-being and reducing anxiety and stress levels in different age groups have also been obtained. Chatbots developed for cancer patients stand out with their high acceptability and satisfaction rates. Especially in oncology nursing, considering the continuity of communication with the patient and the importance of individualized care, the use of these technologies as a supportive tool is remarkable. In addition, it was observed that chatbots were effective in key elements of nursing care such as improving self-care behaviors and increasing medication compliance. These findings suggest that chatbots have significant potential for both physical and psychological support in cancer treatment. The aim of this review is to examine the role of artificial intelligence-supported chatbots in the symptom management process in cancer patients, their usage areas and the clinical results obtained in line with the literature, and to reveal how these technologies can be integrated with oncology nursing practices.

Keywords: Artificial Intelligence, Chatbot, Cancer, Oncology, Symptom

OP - 046

How Does Cancer Knowledge Burden Affect Sleep Qualıty and Nutritıon Attıtudes of Unıversıty Students? A Descriptive Study

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Objective: Cancer is the second leading cause of death in many countries of the world and in Türkiye. The need for information increases with the frequency of cancer. Individuals who try to reach reliable and quality information do not use the right information sources. Information is generally obtained from television, radio, newspaper, brochure, internet and friends. In addition, the fact that the information obtained is unnecessary, wrong and excessive causes people to experience information confusion. Failure to manage cancer information correctly may cause uncertainty, stress and anxiety. Therefore, as the cancer information load increases, individuals may exhibit negative behaviors and act fatalistic. In line with this information, our aim of this study was to determine how cancer information load affects sleep quality and nutritional attitudes of university students.

Materials-Methods: The descriptive cross-sectional and correlational study was conducted with 329 university students between 11.04. 2025 and 28.04.2025. Data were collected by face-to-face interview technique using a descriptive information form, Cancer information burden scale, Insomnia complaints and sleep quality basic scale and Attitude towards healthy nutrition scale. SPSS 25 software was used for data analysis. Descriptive statistics such as number, percentage and mean were given. Kolmogorov-Smirnov test was used to determine the distribution of the data. The relationships between variables were analyzed by Spearman correlation analysis. Regression analysis was performed to evaluate the effect on scale scores.

Results: The cancer knowledge burden of the young population was moderate (19.02±3.82), insomnia complaints and sleep quality were moderate (13.40±4.45) and attitudes towards healthy nutrition were high (67.75±10.58). There is a positive low-level correlation ($r=0.111$, $p<0.05$) between cancer information burden and the problem of falling asleep, and a negative low-level correlation ($r=-0.120$, $p<0.05$) between cancer information burden and healthy eating attitude. Insomnia complaints and sleep quality were predicted by cancer knowledge burden and other independent variables by 18% (F= 9,171, *p < 0.001. Adjusted R2= 0.183). Cancer knowledge burden and other independent variables predicted healthy eating behavior by 27% (F= 10,364, *p < 0.001. Adjusted R2= 0.271).

Conclusion(s): Cancer information burden significantly affects sleep and nutrition behaviors of young people. Disease and health awareness should be increased by providing individuals with accurate information with high level of evidence at an early age through correct communication channels.

Keywords: Cancer, nutrition, information, sleep

OP - 047

Radiotherapy-associated vaginitis: a case report of endometrial cancer

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Endometrium cancer is one of the most common gynecologic cancer types. External and internal radiotherapy applications cause toxic side effects as well as curative effects. In this case report, a case of vaginitis developing in a patient receiving radiotherapy for endometrial cancer and nursing interventions were presented.

Case Report: 27 year old female patient, single and working as a nurse. She had not given birth before, had no additional chronic disease, smoked one pack of cigarettes a day for 7 years, and had a family history of endometrial cancer in her grandmother. The patient was admitted to the hospital because of irregular menstrual bleeding lasting 10-15 days and the last menstrual bleeding lasting one month and curettage was performed due to fibroids and endometrial thickness. The pathology result was endometrial adenocarcinoma grade 3. The patient underwent total abdominal hysterectomy + bilateral salpingo oophorectomy ± bilateral pelvic paraaortic lymph node dissection about 3 months ago. The patient who was indicated for EBRT and ICTR received a total of 25 fractions of 45Gy in the first phase and 3 fractions of 5.4Gy in the second phase for a total of 50.4Gy external beam radiotherapy and 2 fractions brachytherapy. The patient who received concurrent chemotherapy (Cisplatin) during radiotherapy treatment was planned to receive 4 more cycles of chemotherapy after the radiotherapy treatment was finished. Radiotherapy may cause erythema, inflammation, mucosal atrophy, loss of elasticity and ulceration in the vaginal epithelium, and some chemotherapeutic agents may increase skin erythema during radiotherapy. In the patient in the case report, it was determined that erythema and vaginitis findings developed in the vaginal mucosa after the completion of external radiotherapy treatment. Nursing practices for vaginitis: Appropriate skin hygiene was provided. She was trained on perineal hygiene and recommended to wear cotton underwear. Medical treatment (antifungal treatment) was organized, its use and what to do to prevent recurrence of vaginitis were explained.

Conclusion(s): Nursing practices and patient education are important in the management of side effects related to cancer treatments. Nurses should monitor acute or chronic toxicities developing in patients and provide the necessary care.

Keywords: brachytherapy, nursing, radiotherapy, vaginitis

OP - 048

Impact of Virtual Reality Intervention on Symptom Management in Pediatric Oncology Patients: A Systematic Review

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Objective: Children undergoing cancer treatment experience a range of physical and psychological symptoms that can adversely affect their quality of life. Virtual reality (VR), as a technology-based intervention, is increasingly being utilized for symptom management. Pediatric oncology nurses play an active role in VR interventions, supporting children's treatment adherence and enhancing their quality of life. This systematic review aims to evaluate the effectiveness of VR in managing symptoms among pediatric oncology patients.

Materials-Methods: This systematic review was conducted in accordance with the PRISMA guidelines and was registered in the PROSPERO database (CRD420251025427). The literature search was independently performed by four researchers across Scopus, PubMed, Cochrane Library, and EBSCO databases. MeSH terms were utilized and combined using the Boolean operator "AND." The search was restricted to studies published within the past ten years, including only English-language articles with full-text access and a randomized controlled trial design. The methodological quality of the included studies was assessed using the "JBI Randomized Controlled Trials Critical Appraisal Tool," and the risk of bias was evaluated with the "Cochrane Risk of Bias 2.0" (RoB 2.0) tool.

Results: The systematic search identified a total of 55 studies. After screening for eligibility criteria, 7 randomized controlled trials were included in the review. A total of 363 pediatric oncology patients were evaluated across these studies. In six studies, VR interventions were compared with a control group, while in one study, VR was compared with the use of an iPad. The symptoms evaluated included anxiety (n=6), pain (n=5), fear (n=2), nausea and vomiting (n=1), and fatigue (n=1). The methodological quality of the included studies, assessed using the JBI tool, showed scores ranging from 76.92% to 100%. Five studies were classified as high quality and two as moderate quality; no studies were categorized as low quality. The risk of bias assessment

revealed that five studies had a high risk of bias, and two had a low risk. The primary reason for the high risk was the lack of blinding among those assessing the interventions.

Conclusion(s): The findings of this systematic review demonstrate that VR interventions are effective in managing symptoms such as pain, anxiety, fear, nausea and vomiting, and fatigue in pediatric oncology patients. Furthermore, VR not only alleviated symptoms but also supported treatment adherence and improved overall well-being. VR were positively received by both participants and parents, emerging as a cost-effective and feasible distraction method for clinical practice.

Keywords: nursing, pediatric oncology, symptom management, virtual reality

OP - 049

Intern Nursing Students' Perceptions of Pediatric Oncology Patients: A Metaphor Analysis

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Objective: Pediatric oncology is a complex field that requires not only clinical proficiency but also emotional resilience for nursing students. In this context, understanding students' perceptions of children undergoing cancer treatment may contribute to supporting the psychological preparation process in nursing education. The aim of this study is to examine intern nursing students' perceptions of pediatric oncology patients through metaphors.

Materials-Methods: This study was conducted using a phenomenological approach, one of the qualitative research designs. Participants were selected by purposive sampling method and consisted of 122 intern nursing students enrolled in the nursing departments of two foundation universities. To collect data, students were asked to complete the statement "Children undergoing cancer treatment are like... because...". This approach was intended to enable students to express their perceptions and attitudes toward pediatric oncology patients. The data were analyzed in a five-step metaphor analysis process: identification and coding of metaphors, classification of metaphors with similar characteristics, construction of thematic structures, ensuring validity and reliability, and reporting of themes using participant expressions with strong representational power.

Results: A total of 122 valid metaphor statements were analyzed and these statements were classified under four main themes and eight sub-themes. Under the main theme of Psychological Resilience, there were sub-themes of Great Battles in Small Bodies and Strong Roots-Difficult Soils. Under the main theme of Positive Cognitive Framework and Meaning Attribution, the sub-themes of Hope Shining in the Darkness and The Power of Innocent Light were identified. The main theme of Emotional Fragility and Perception of Social Isolation was represented by the sub-themes of Wings of Glass and Distant Gaze. Under the main theme of The Need for Love and Attention, the sub-themes of Touch that Warms the Heart and Hands as Bridges were identified.

Conclusion(s): Intern nursing students perceive pediatric oncology patients as both fighters and vulnerable individuals. The metaphors reflect students' emotional, cognitive, and professional perceptions of these children. Based on the findings, it is recommended that nursing education programs incorporate practices that foster empathy, emotional awareness, and child-centered care approaches.

Keywords: perception, nursing students, metaphor analysis, pediatric oncology

OP - 050

Pediatric Acute Lymphoblastic Leukemia and Invasive Pulmonary Aspergillosis Case: Information Process and Nursing Care

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Objective: In pediatric patients, the coexistence of Acute Lymphoblastic Leukemia (ALL) and Invasive Pulmonary Aspergillosis (IPA) presents a critical clinical condition with high morbidity and mortality risks, requiring a multidisciplinary approach. This study aims to provide nursing care and an effective information process for a four-year-old pediatric patient diagnosed with ALL and IPA, along with their family.

Case Report: The case, coded as A, is a 4-year-old male patient. He was hospitalized in the pediatric hematology-oncology ward of a public hospital. The patient's medical history includes complaints of night fever and fatigue for the last two days. During the physical examination, the patient's vital signs were stable, with a body temperature of 36°C, respiratory rate of 24 breaths/min, heart rate of 120 bpm, blood pressure of 90/65 mmHg, and SpO_2 of 97%. Multiple mobile lymphadenopathies were approximately 1cm in diameter and detected in the submandibular and inguinal regions. Laboratory tests revealed a white blood cell (WBC) count of 44,600 /mm^3, hemoglobin (Hb) level of 5.8 g/dL, and platelet (PLT) count of 34,000 /mm^3. .The patient had no history of chronic diseases and evaluated as age-appropriate in terms of motor and mental development. He was admitted to the pediatric hematology-oncology clinic for further examination and treatment. Following the diagnosis of Invasive Pulmonary Aspergillosis (IPA), voriconazole treatment was initiated. During chemotherapy, a protocol containing daunorubicin and vincristine was administered, and the patient closely monitored. During the family information process, the simultaneous management of ALL and IPA, the importance of infection control, and possible side effects of chemotherapy and its effects on the immune system are explained in detail. The family was actively included in the nursing care plan and the patient's symptom management was ensured. Regular fever monitoring and pain management provided. Throughout the treatment process, stress management was supported through family collaboration. The patient's mobilization encouraged, and fluid and nutritional balance maintained. The patient was given nursing diagnoses of "Chronic pain", "Fatigue due to pain, the presence of ALL diagnosis, toxic effects of chemotherapy, Hb value of 5.8 g/dl (anemia)", "Anxiety", "Risk of skin integrity deterioration secondary to toxic effects of chemotherapy, nutritional changes and immobility" and "Risk of infection due to side effects of chemotherapy, anemia and immunosuppression".

Conclusion(s): In treating serious and long-term illnesses like ALL and IPA, involving family in nursing care planning, providing evidence-based information, and supporting their needs significantly enhance patient and family quality of life and improve treatment outcomes.

Keywords: Acute lymphoblastic leukemia, case presentation, invasive pulmonary aspergillosis, nursing care, patient education

OP - 051

Determining the relationship between symptom management and comfort in patients receiving chemotherapy

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Objective: This study was conducted to determine the relationship between symptom management and comfort in patients receiving chemotherapy.

Materials-Methods: The study is descriptive. The universe of the study consists of patients receiving inpatient chemotherapy treatment and approximately 1100 patients receiving outpatient chemotherapy in the oncology department of Muğla Education and Research Hospital between 15.10.2024-15.04.2025. 355 people were reached by calculating the known universe. The data collection tool consists of 4 sections. The first section includes the participants' introductory characteristics (such as age, gender, occupation), the second section includes questions about the disease and treatment processes (such as cancer stage, other diseases). The third section uses the Memorial Symptom Assessment Scale consisting of 32 items, and the last section uses the General Comfort Scale Short Form consisting of 28 items. In calculating the Total Memorial Symptom Assessment Scale score, the averages of a total of 32 symptoms are taken. The lowest possible value of 1 indicates low comfort, and the highest value of 6 indicates high comfort. The data collection process was managed without disrupting the clinical operation and according to the availability of each patient. Data were collected both from the patient file and by face-to-face interview. Percentage, average, and parametric tests were used in the analysis of the data. Permission was obtained from the Muğla Sıtkı Koçman University Health Sciences Ethics Committee (14.10.2024/Decision No: 114) and the institution for the study.

Results: The average age of the participants was 62.70±10.80 and 42.32% were female. The average score of the Memorial Symptom Assessment Scale was 1.29±0.41, and the average score of the General Comfort Scale Short Form was 3.97±0.32. It was determined that women had higher Memorial Symptom Assessment Scale total score averages than men. No significant difference was found according to characteristics such as marital status and place of residence. It was observed that gender affected the General Comfort Scale Short Form score averages.

Conclusion(s): It was determined that the participants' total score averages for both scales were average. It was determined that the total score averages changed according to various characteristics. A wider sample group should be studied and patients with different cancer types and stages should be compared.

Keywords: Chemotherapy, comfort, symptom

OP - 052

Marital and Family Relationships of Cancer Patients: A Qualitative Research

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Objective: The physical, emotional, financial and social problems experienced by cancer patients not only during the treatment process but also for many years after treatment have a significant impact on marital and family relationships. The burden of the disease causes restructuring not only of the individual but also of the spouse and the family system. Changes in the marital relationship can directly affect many processes from the perception of the disease to coping styles, from adaptation to treatment to psychological resilience. This study was planned to understand the experiences of cancer patients in marital and family relationships during the disease process, to reveal how these relationships are affected and how they change.

Materials-Methods: This study, which was conducted using qualitative research design, was selected and conducted by purposive sampling method. Between November 2023 and November 2024, 30 participants who were diagnosed with cancer, diagnosed with cancer, married, and treated in the haematology-oncology services of a public hospital were included in the study. Data were collected through semi-structured, in-depth interviews. The data were analysed using Colaizzi's interpretative phenomenological analysis method through NVivo15 software.

Results: The findings obtained from the qualitative phase were structured in three main themes and seven sub-themes. The main themes consist of emotional relationships and dynamics in marriage, sexual relationships and dynamics, and family relationships and dynamics. The findings obtained represent the views of cancer patients on marriage and family relationships.

Conclusion(s): Cancer patients experience significant transformations in marital and family relationships along with physical and emotional changes during the disease process. Relationship dynamics such as commitment, intimacy, care and sexuality between spouses are redefined; some relationships are strengthened while others are weakened. In this period when roles within the family are redistributed, the emotional and physical support provided by the spouse and close family members plays a decisive role in coping with the disease. Therefore, psychosocial support programmes should be developed to strengthen the marital and family relationships of cancer patients, and patients and their relatives should be supported to manage this process in a healthier way.

Keywords: Family Relationships, Marital Relationship, Cancer

OP - 053

Investigation of the Effect of Psycho-Social Support Given to Foreign Patients Undergoing Chemotherapy Treatment on Perceived Stress During the Treatment Process

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Abstract

Health tourism is pursued by patients who prefer to receive healthcare services in countries offering the highest quality of care. Cancer treatment is one of the most commonly sought services within the scope of medical health tourism. The inclusion of psychosocial support in cancer treatment is of critical importance for the treatment process of patients. This study was conducted as a mixed-method design, incorporating both quantitative and qualitative methods, to examine the effect of psychosocial support received by foreign patients undergoing chemotherapy on their perceived stress levels. .

Materials-Methods: The sample of the study consisted of 110 patients selected randomly from both quantitative and qualitative sample groups who applied to the chemotherapy unit of a private hospital in Kocaeli. A patient identification form, a semi-structured interview form, and the Perceived Stress Scale were used as data collection tools. Statistical analyses were performed using the NCSS (Number Cruncher Statistical System) 2007 (Kaysville, Utah, USA) software. Mean, standard deviation, median, frequency, ratio, minimum, and maximum values as well as data distribution were assessed using the Shapiro-Wilk test. The Kruskal-Wallis test was used for comparing more than two groups of quantitative data, and the Mann-Whitney U test was used for comparisons between two groups. Spearman's correlation analysis was used to determine relationships between quantitative variables.

Results: The mean perceived stress score of the patients was found to be 16.97±7.27, indicating a low level of perceived stress. The qualitative findings revealed two main themes (challenges and benefits), each comprising three subthemes (challenges: financial difficulties, communication barriers, and lack of companions; benefits: timely diagnosis and treatment, accessibility, and trust)..

Conclusion(s): Based on the results, it is recommended that psycho-social support be integrated as a part of chemotherapy treatment, and that further research be conducted to develop psycho-social support methods specifically tailored for foreign patients.

Keywords: Biopsycho-social Approach, Medical Oncology, Medical Tourism, Psychiatric Nursing, Psychological Distress

Introduction

There are numerous definitions of health tourism, but in its simplest form, it refers to a journey undertaken by an individual who is unable to access the healthcare services they need in their region for various reasons. Health tourism is categorized based on the type of service the individual seeks to obtain: Medical Tourism, Thermal/SPA/Wellness Tourism, Disability Tourism, and Geriatric Tourism. One of these types, Medical Health Tourism, encompasses all medical care and treatments offered in healthcare centers of another country. The most commonly preferred procedures under medical tourism include medical check-ups, health screenings, dental treatments, cardiac surgeries, prosthesis placement, cancer treatments, neurosurgeries, organ transplants, and advanced medical interventions. According to the data from the Turkish Statistical Institute, although there was a decline in the number of health tourists during the COVID-19 pandemic, an overall increase has been observed over the years. Moreover, the inclusion of health tourism development among Türkiye's 2023 targets suggests a continued upward trend. This growth highlights the importance of cultural diversity and communication in healthcare services.

According to 2020 cancer data from the World Health Organization (WHO), there were approximately 19.3 million new cancer cases and about 10 million cancer-related deaths worldwide. A cancer diagnosis not only affects individuals physically but also leads to existential distress, pushing them into psychological turmoil. These challenges may include helplessness, fear, abandonment, anxiety about death, panic, and confusion. Even today, cancer continues to evoke feelings of hopelessness, fear of death, and chronic pain, leading to significant psychological stress in affected individuals.

Psychiatric morbidity associated with cancer has been reported at 90%, while pre-existing personality or anxiety disorders account for 10%. Psychological symptoms arising after diagnosis can affect the progression and severity of the disease, the patient's quality of life, and their response and adherence to treatment. For patients and their families to cope with the process, psychosocial support and interventions are essential. The support and treatment methods must be tailored individually, considering the unique difficulties experienced by each patient. For patients seeking healthcare through medical tourism, communication with healthcare professionals is often mediated by interpreters. Studies on the impact of language differences between medical tourists and healthcare staff indicate that these differences hinder understanding during treatment explanations and have psychological implications.

A qualitative study by Dastjerdi (2012) on Iranian immigrants in Canada identified language barriers, lack of knowledge about the healthcare system, lack of trust, and the need for psychosocial support as key communication problems. Similarly, Gerrish (2001) investigated communication difficulties among non-native English-speaking patient groups and found that language barriers affected patients' comprehension of treatment protocols and health advice, significantly limiting psychological support.

In a study conducted by Gerrish in 2001, communication difficulties were investigated between healthcare personnel and patient groups speaking different languages. The research findings suggested that language barriers hindered the full comprehension of educational and advisory content related to treatment regimens by patients and their relatives, which was observed to significantly restrict psychological support (12).

Medical health tourism, including the field of oncology, has grown globally (13). When examining the importance of psychosocial support in cancer treatment and the problems caused by language differences between healthcare personnel and patients within medical health tourism, it is believed that psychosocial support processes for cancer patients are either overlooked or face implementation challenges.

A review of the literature was conducted regarding the psychosocial support process for cancer patients receiving medical treatment through health tourism. No national research directly addressing the barriers to psychosocial support for cancer patients undergoing treatment within health tourism was found. In a 2021 study by Seible et al., focusing on language concordance between patients with cancer and their caregivers, it was reported that language barriers negatively impact health outcomes, whereas communication facilitated by medical interpreters has positive effects on cancer patients (14).

When examining studies on psychosocial support, language differences, and related barriers, the sample groups predominantly consist of individuals who have migrated to different countries (11, 15, 16, 17, 18).

The literature includes a 2021 study on migration and psychotherapy interpretation. The study emphasized that while bilingual therapists ideally should conduct therapy for patients speaking different languages, the difficulty in finding such therapists necessitates the use of interpreters during psychotherapy sessions. Considering language differences and barriers to conducting therapy in frequently used psychotherapy methods within psycho-oncology and mental health, challenges in providing psychosocial support are evident (18). This study aims to determine the effect of psychosocial support on patients' perceived stress levels.

Materials - Methods

This study was conducted as a mixed-methods descriptive research aiming to examine the effect of the level of psychosocial support received on perceived stress during the treatment process. The study population consisted of foreign patients diagnosed with cancer who came to Turkey from their own countries to receive chemotherapy treatment. Data collection involved in-depth interviews and the application of the Perceived Stress Scale. The research was carried out between February and May 2023 at the Outpatient Chemotherapy Unit of Anadolu Medical Center. Data were collected in the treatment rooms where patients received chemotherapy.

The population of the study consisted of 561 patients from various countries who were referred to the chemotherapy unit between December 2021 and December 2022 to receive chemotherapy treatment (N=561). No sample selection was performed. Due to the thesis nature of the study and time constraints, all patients who were randomly selected, met the inclusion criteria, consented both verbally and in writing, and completed the data collection forms fully during the designated 3-month research period were included in the study.

Inclusion Criteria

- Patients coming to a private hospital in Kocaeli from a different country for chemotherapy treatment.
- Patients who do not speak or understand Turkish.
- Patients who have come to the same hospital for more than three chemotherapy cycles.
- Patients who consent to participate in the study both verbally and in writing.

Exclusion Criteria

- Patients who know Turkish and can communicate with healthcare staff in the same language.
- Patients who have received fewer than three chemotherapy cycles at the same hospital.
- Patients without a cancer diagnosis.

Ethical Considerations: Ethical approval was obtained from Yeditepe University Non-Interventional Clinical Research Ethics Committee before starting the study (Application Number: 202301Y0351, Date: 10.02.2023). Institutional permissions were secured. Permission was obtained for the use of the Perceived Stress Scale in the research. Informed consent was obtained from volunteer patients after explaining the study procedures through the Informed Volunteer Consent Form.

Data Collection Instruments

Quantitative data were collected using a 12-item Information Form to determine patients' socio-demographic characteristics and the Perceived Stress Scale to assess perceived stress. The qualitative part used semi-structured interview questions.

Information Form: Based on literature review, the researchers developed the Information Form including questions related to socio-demographic features and disease-related variables that might affect perceived stress. The socio-demographic section contained 4 questions about age, gender, marital status, and employment status. There were 7 additional questions related to the disease that might cause variability. Furthermore, to examine the impact of receiving treatment in a country different from the patient's home country on perceived stress, one open-ended question was included to capture patients' subjective experiences (6).

Perceived Stress Scale (PSS): Developed by Cohen, Kamarck, and Mermelstein in 1983, the scale consists of 14 items designed to measure the degree to which situations in one's life are perceived as stressful. Participants rate each item on a 5-point Likert scale ranging from "Never (0)" to "Very Often (4)". Seven of the positively stated items are reverse scored. Besides the 14-item long form, there are shorter 10-item and 4-item versions. Scores on the PSS-14 range from 0 to 56, on the PSS-10 from 0 to 40, and on the PSS-4 from 0 to 16, with higher scores indicating higher perceived stress. The Turkish validity and reliability study was conducted by Eskin et al. in 2013, confirming its appropriateness for use (19,20).

Semi-Structured Qualitative Interview Form: To identify the difficulties experienced by patients coming to Turkey from their home countries for chemotherapy treatment and their views on psychosocial support, a six-question semi-structured interview form was developed by the researchers based on literature review. To ensure reliability and validity, the form was reviewed by two academic experts specialized in psychiatric nursing outside the research team. The form was revised according to their feedback and used in the study (11,21,22).

Results

Among the participants in the study, 62% (n=62) were female, while 38% (n=38) were male. Four participants (n=4) were aged 18–29 years, 29% (n=29) were aged 30–49 years, 32% (n=32) were aged 50–59 years, and 35% (n=35) were aged 60 years and above. Regarding marital status, 78% (n=78) of the participants were married, while 22% (n=22) were single. In terms of employment, 52% (n=52) were employed, and 48% (n=48) were unemployed (Table 1).

Table 1. Socio-Demographic Characteristics of the Participants

Socio-Demographic Characteristics		n	%
Gender	*Female*	62	62,0
	Male	38	38,0
Age Groups	*18–29 years*	4	4,0
	30–49 years	29	29,0
	50–59 years	32	32,0
	60 years and above	35	35,0
Marital Status	*Married*	78	78,0
	Single	22	22,0
Employment Status	*Yes*	52	52,0
	No	48	48,0

Table 2. Disease Status of the Participants

Socio-Demographic Characteristics		n	%
Diagnosis Status	*Breast Cancer*	24	24,0
	Lung Cancer	16	16,0
	Pancreatic Cancer	10	10,0
	Colon Cancer	7	7,0
	Other	43	43,0
Year of Diagnosis	*0–1 Year*	73	73,0
	2–4 Years	17	17,0
	5–7 Years	8	8,0
	8–10 Years	2	2,0
Year of Treatment Initiation	*0–1 Year*	73	73,0
	2–4 Years	17	17,0
	5–7 Years	8	8,0
	8–10 Years	2	2,0
Metastasis Status	*Yes*	46	46,0
	No	54	54,0
Recurrence Status	*Yes*	9	9,0
	No	91	91,0
Underwent Surgical Procedure	*Yes*	61	61,0
	No	39	39,0
Received Additional Treatment	*Yes*	36	36,0
	No	64	64,0

Among the participants, 24% (n=24) had breast cancer, 16% (n=16) lung cancer, 10% (n=10) pancreatic cancer, 7% (n=7) colon cancer, and 43% (n=43) had other types of cancer. Seventy-three percent (n=73) of the participants were diagnosed within 0–1 year, 17% (n=17) within 2–4 years, 8% (n=8) within 5–7 years, and 2% (n=2) within 8–10 years.Similarly, 73% (n=73) of the participants started treatment within 0–1 year, 17% (n=17) within 2–4 years, 8% (n=8) within 5–7 years, and 2% (n=2) within 8–10 years. Forty-six percent (n=46) of the participants had metastasis, while 54% (n=54) did not. Recurrence was present in 9% (n=9) of the participants, whereas 91% (n=91) had no recurrence. Sixty-one percent (n=61) of the participants underwent surgical procedures, while 39% (n=39) did not. Additionally, 36% (n=36) received additional treatment, whereas 64% (n=64) did not. (Table 2).

Among the participants, 32.4% (n=23) experienced language barriers, 11.3% (n=8) lacked sufficient information, 63.4% (n=45) faced financial difficulties, 19.7% (n=14) reported a lack of psychological support, and 33.8% (n=24) encountered other challenges (Table 3).

Table 3. Challenges of Receiving Treatment in a Different Country

Socio-Demographic Characteristics		n	%
Challenges of Receiving Treatment in a Different Country	*Language Barrier*	23	32,4
	Lack of Information	8	11,3
	Financial Constraints	45	63,4
	Lack of Psychological Support	14	19,7
	Other	24	33,8

The responses categorized under “Other” included difficulties in finding someone to care for their children, being away from family, longing for family members, long travel distances, challenges in finding a caregiver due to financial constraints, feelings of loneliness, difficulties with patient transfer, lack of recognition of documents and medical reports in their home country, problems obtaining reports and laboratory tests when choosing to receive treatment in another country, reduced social interactions, and uncertainty during the treatment process.

The scale’s mean score was 16.97 ± 7.27, and the internal consistency coefficient (Cronbach’s alpha) was found to be 0.86. The subdimensions’ reliability coefficients were 0.79 for perceived inadequate self-efficacy and 0.80 for perceived stress-related discomfort.

The perceived inadequate self-efficacy scores ranged from 0 to 18, with a mean of 8.88 ± 4.14. The perceived stress-related discomfort scores ranged from 0 to 17, with a mean of 8.09 ± 3.87. The total Perceived Stress Scale scores ranged from 0 to 33, with a mean of 16.97 ± 7.27 (Table 4).

There was no statistically significant difference in perceived inadequate self-efficacy scores according to age groups ($p > 0.05$). Likewise, perceived stress-related discomfort scores did not differ significantly between age groups ($p > 0.05$). Similarly, Perceived Stress Scale scores showed no statistically significant difference by age groups ($p > 0.05$).

The insufficient self-efficacy perception score of the working group was found to be statistically significantly lower compared to the non-working group ($p=0.001$; $p<0.05$). The stress discomfort perception score

Table 4. Measurement Means

	Mean ± SD	Min-Max (Median)
Perceived Inadequate Self-Efficacy	8,88±4,14	0-18 (9)
Perceived Stress-Related Discomfort	8,09±3,87	0-17 (8)
Perceived Stress Scale	16,97±7,27	0-33 (17)

did not show a statistically significant difference according to employment status (p>0.05). The perceived stress scale score of the working group was found to be statistically significantly lower than that of the non-working group (p=0.001; p<0.05).

Semi-Structured Interview Form Analysis

A semi-structured interview form prepared by the researcher was used in the study. The interviews (n=10) were conducted with a medical interpreter who spoke the patients' native language. The responses provided by the patients were analyzed by two researchers who categorized them into themes. As a result of the analysis, two main themes emerged: "difficulties" and "benefits." The sub-themes of the "difficulties" theme included financial issues, communication (language) problems, and caregiver-related problems. The sub-themes of the "benefits" theme included rapid diagnosis and treatment opportunity, access, and accessibility.

Discussion

In this study, it can be stated that the perceived self-efficacy (PSE) scores of foreign outpatients receiving chemotherapy were low, with a mean score of 16.97 ± 7.27 within the range of 0–40. No previous studies on this topic involving foreign patients in our country were found. Only a limited number of studies with domestic samples and related topics were identified. For example, Joseph conducted a study with 136 patients diagnosed with prostate cancer and receiving outpatient chemotherapy. The study reported a mean perceived stress score of 19.76 ± 5 among the sample (n=136), indicating a low level of stress experienced by participants (23). Although Joseph's study showed a somewhat higher perceived stress score than ours, the results are comparable.

In our study, patients' stress levels decreased due to sufficient information provided by healthcare professionals. Specifically, case manager nurses offered verbal education with an interpreter before treatment regarding the treatment process and how to cope with potential experiences, and provided written materials. Primary nurses administering treatment also delivered detailed information throughout the treatment process and guided patients on possible side effects and symptoms. The expressions gathered during in-depth interviews by the researcher indicated that the compassion shown was beneficial for the patients. This was meaningfully associated with the low perceived stress scores observed.

In the literature, Başkale et al. (2015) conducted a study on cancer patients, reporting that patients desire accessibility to healthcare staff and information about the entire treatment process. Patients experienced intense stress and fear due to uncertainty surrounding the treatment (24). Additionally, previous studies have demonstrated that prior information and education about chemotherapy have positive effects on patients' treatment processes (25, 26, 27).

Cancer is often described in the literature as a disease that imposes significant financial burden on patients and their families, adversely affecting the treatment process. Medical tourists choose hospitals based on multiple criteria (28). In health tourism, low cost is a major factor increasing preference. However, in cancer treatment, focusing solely on the fastest possible treatment while neglecting other factors may lead to financial difficulties caused by disease recurrence and the prolonged treatment process. Language and communication barriers are among the factors as challenging for patients as financial difficulties in health tourism (150). It is well known that effective, trust-based communication between healthcare providers and patients leads to positive outcomes in treatment processes (129). Conversely, inadequate communication reduces service efficiency and poses risks to patient health (1, 27). Psychosocial support for cancer patients requires communication that takes cultural differences into account. Therefore, providing healthcare professionals with training to improve their communication skills is of great importance (28, 29).

Conclusion

This study examined the effect of psychosocial support provided to foreign patients undergoing chemotherapy on their perceived stress levels, and the following results were obtained:

- The mean perceived stress score of the patients was 16.97 ± 7.27, indicating a low level of perceived stress.
- The difficulties experienced by cancer patients receiving treatment in a foreign country were identified as

language barriers, lack of information, financial difficulties, lack of psychological support, long travel distances, absence of companions, and separation from family and social life.

- No relationship was found between age and perceived stress scores. However, patients aged 18–29 had higher average stress scores compared to other age groups.
- The working group's insufficient self-efficacy perception scores and stress scores were found to be lower than those of the non-working group.
- No relationship was found between patients' diagnosis, year of diagnosis, year of treatment initiation, recurrence status, or presence of metastasis and their stress scores.
- In the individual interviews conducted, two main themes emerged: difficulties and benefits. Each main theme included three sub-themes: difficulties (financial issues, communication errors, and absence of companions) and benefits (rapid diagnosis and treatment opportunity, access, and trust).
- During interviews, individuals reported that the professional care services they received helped them to overlook the difficulties they experienced and expressed that they did not wish to receive additional professional psychological support.

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OP - 054

The Effectiveness of ChemoNurs Mobile Application Developed to Strengthen Oncology Nurses' Knowledge and Attitudes Towards Chemotherapy: A Randomized Controlled Trial

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Objective: Chemotherapy administration is a complex and high-risk process that requires oncology nurses to possess up-to-date knowledge, strong clinical decision-making skills, and a positive professional attitude. However, access to standardized and applicable information remains limited in many oncology settings. Mobile health technologies have emerged as a promising strategy to support nurses' professional development and clinical decision-making processes. This study aimed to evaluate the effectiveness of a mobile chemotherapy drug guide application, "ChemoNurs," developed to enhance oncology nurses' knowledge and attitudes toward chemotherapy practices.

Materials-Methods: This study was conducted as a randomized controlled trial with repeated measures between August 1, 2023, and August 1, 2024, at Hacettepe University Oncology Hospital. A total of 59 nurses participated, with 29 in the intervention group and 30 in the control group. Nurses in the intervention group actively used the ChemoNurs mobile application for six months, while no additional intervention was provided to the control group. Data were collected at three time points baseline, third month, and sixth month using the Chemotherapy Practice Knowledge Scale and the Chemotherapy Attitudes Scale for Oncology Nurses. The data were analyzed using repeated measures ANOVA to examine group, time, and group*time interaction effects.

Results: A significant increase in total knowledge scores was observed in the intervention group compared to the control group (group effect: F = 7.628, p = 0.008; time effect: F = 13.271, p < 0.001). Subscale analyses revealed significant time effects in the "Creating a Safe Environment" (F = 12.246, p < 0.001) and "Procurement and Administration of Chemotherapy Drugs" (F = 12.339, p < 0.001) domains. In the "Treatment Planning and Patient Education" subscale, both the group effect (F = 14.848, p < 0.001) and grouptime interaction (F = 15.457, p < 0.001) were statistically significant. In terms of attitudes, the intervention group showed a significant decrease in negative attitudes (time effect: F = 20.356, p < 0.001; grouptime interaction: F = 9.836, p < 0.001) and a significant increase in positive attitudes (time effect: F = 8.194, p < 0.001).

Conclusion(s): The ChemoNurs mobile application significantly improved oncology nurses' knowledge and attitudes toward chemotherapy practices. These findings demonstrate that ChemoNurs has substantial potential as an effective mobile health tool for enhancing clinical competence and supporting safe, evidence-based oncology nursing practices.

Keywords: attitude, chemotherapy, education, oncology nursing, mobile application

OP - 055

Evaluation of Port Care and Family Education Process in Pediatric Acute Lymphoblastic Leukemia Through a Case Presentation

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Objective: With the increasing use of central venous ports (CVPs) in the treatment of pediatric Acute Lymphoblastic Leukemia (ALL), the effectiveness of port care and family education is critically important in reducing infection risk and improving treatment adherence. This case report aims to address the effects of port care applied to a 5-year-old pediatric patient with ALL and the involvement of the family in the port care process and education on the patient.

Case Report: A 5-year-old male patient was coded as case K. His symptoms at the time of admission were reported as weakness, fatigue, vomiting and pyrexia. In the laboratory analysis, the leukocyte (WBC) value was found to be 164000 /µL, the hemoglobin (HGB) level was 11.2 g/dL, the hematocrit (HCT) was 33.1%, and the platelet (PLT) count was 183000 /µL. The patient had no known history of chronic, familial, infectious, or past illnesses. Physical examination showed no pathological findings. Imaging via abdominal ultrasonography indicated increased echogenicity in the liver, mesenteric lymphadenopathy, and pararenal lymphadenopathy. Based on laboratory and clinical assessments, the patient was diagnosed with ALL. Vital signs were recorded as stable, with a body temperature of 36°C, heart rate of 120 beats per minute, blood pressure of 90/65 mmHg, respiratory rate of 18 breaths per minute, and SpO2 at 97%. Due to infection risk, the patient was closely monitored, nutritional status was evaluated, and oral mucosal integrity was noted to be compromised. On November 27, 2024, a port catheter was inserted and used during chemotherapy. On November 27, 2024, a port catheter was inserted and used during chemotherapy. For infection prophylaxis, an antibiotic regimen containing meropenem was initiated. The active treatment plan included imatinib, antineoplastic, and immunomodulatory agents. A holistic nursing care approach was adopted for the patient and family. The family was educated on aseptic cleaning techniques for the port catheter site, recognition of infection symptoms, and care procedures in detail. Nursing diagnoses included "Activity intolerance," "Acute pain," "Oral mucosal integrity impairment," "Infection risk," "Bleeding risk," and "Parental / caregiver inadequate health management risk," with a structured nursing care plan developed accordingly.

Conclusion(s): Findings from this case highlight that involving the family in the port care process significantly benefits the patient's psychological well-being. Active participation of families in education and care procedures may serve as an effective strategy in reducing patient stress and anxiety. Additionally, it may enhance patient comfort and positively influence treatment adherence.

Keywords: acute lymphoblastic leukemia, family education, nursing care, port care

OP - 056

Management of Cancer Pain from a Holistic Nursing Perspective: Barbara Dossey's Theoretical Model Approach

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Pain is a complex and multidimensional symptom that commonly affects cancer patients, significantly impairing their quality of life. This paper proposes a theoretical framework for cancer pain management grounded in Barbara Dossey's Holistic Nursing Theory. Holistic nursing emphasizes comprehensive patient care by addressing physical, psychological, social, and spiritual dimensions of well-being. In advanced-stage cancer patients, pain prevalence exceeds 70%, and it can arise either from the disease itself or as a result of treatment interventions. Conventional pain management typically prioritizes pharmacological methods, such as opioids and NSAID's, which may neglect the psychological and social needs of patients. In contrast, the holistic nursing model encourages an integrative approach by including non-pharmacological interventions such as massage, relaxation techniques, and hot / cold therapy alongside medications. The psychological component of holistic care highlights the importance of emotional support and cognitive-behavioral strategies, including counseling and psychotherapy, to enhance patients' coping skills and reduce distress. Socially, maintaining relationships with family, peers, and the broader community contributes to better adjustment and emotional resilience. Holistic nursing emphasizes assessing these relationships and implementing strategies to reduce social isolation. The spiritual dimension plays a crucial role in providing comfort and fostering hope. Supporting patients' spiritual beliefs and values can enhance their ability to cope with pain and promote inner peace. Nurses play a vital role in delivering spiritual care and facilitating a sense of meaning during illness. In conclusion, applying holistic nursing theory in cancer pain management provides a patient-centered, multidimensional care model that supports individualized interventions. By addressing all aspects of the human experience—body, mind, social context, and spirit—nurses can more effectively improve patient outcomes, promote satisfaction, and enhance quality of life. The integration of this theory into practice underscores the importance of treating each patient as a unique and holistic individual, ultimately contributing to more effective and compassionate cancer care.

Keywords: Cancer pain, Holistic nursing, Nursing theory, Pain management

OP - 057

Single Center Experience for Prevention of Chemotherapy-Induced Extravasation

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Objective: Chemotherapeutic agents, which play a key role in cancer treatment, are most commonly administered via the intravenous (IV) route. One of the undesirable complications of IV administration is extravasation. Vesicant agents in particular can cause severe tissue damage, potentially leading to amputation. Therefore, current extravasation guidelines recommend preventative measures, as well as close monitoring of chemotherapy units. This study aims to share the experience of a chemotherapy unit in Ankara regarding the prevention of extravasation.

Materials-Methods: Between January 1 and December 31, 2024, a total of 8,059 chemotherapy administrations were performed, including 482 vesicant and 4,250 irritant drug infusions. Of these, 5,726 were administered via peripheral IV access, and 2,333 via implanted port catheters.

Preventive Interventions:

- All IV or port accesses were performed by chemotherapy nurses with a minimum of 3 months of experience.
- Specific guidelines were established to ensure secure catheter fixation and prevent dislodgement.
- Only 22G needles were used for peripheral access, and 20G / 20mm needles for port access.
- IV lines inserted in other departments were routinely replaced.
- Nurses inserted and followed up the IV access for their own patients.
- Drug dilutions and infusion durations strictly followed manufacturer and protocol guidelines.
- The IV insertion site was kept visible during treatment.
- All infusions, including premedications and hydrations, were administered via infusion pumps — manual or gravity sets were not used.
- Patients and their families were educated before and during treatment to report any signs of pain, swelling, or burning.
- Post-treatment, all IV lines and ports were flushed with 100 mL of saline.

Results: During the monitoring period, suspected extravasation occurred in only two patients (between 26.02.2024–25.03.2024 and 14.09.2024–19.10.2024). Both cases were followed up using an extravasation reporting form. Appropriate advice was given to the patients and families based on the drug involved. A 5-week follow-up revealed no tissue damage, and monitoring was successfully completed.

Conclusion(s): Through standardized protocols and experienced nursing staff, extravasation events were minimized. The findings highlight the importance of proactive prevention strategies and suggest that similar protocols should be adopted in other chemotherapy centers.

Keywords: Chemotherapy, Extravasation, Oncology Nurse, IV Therapy Safety

OP - 058

Missed Nursing Care in Cancer Units and Its Relationship with Cancer Nurses' Professional Quality of Life: A Correlational, Descriptive Study

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Objective: Missed nursing care in cancer units is critical because it can lead to high mortality rates. Little is known about how cancer nurses' compassion fatigue, burnout, and compassion satisfaction levels affect missed nursing care, and no study has been conducted in Türkiye.

Materials-Methods: This cross-sectional, descriptive, and correlational study was conducted between October and December 2023 with 147 cancer nurses working in Türkiye. Data was collected via an online survey, which included a Personal Information Form, the Professional Quality of Life Scale-IV, and the Missed Nursing Care (MNC) Survey. Before starting the study, permission was obtained from the Ethics Committee of Istanbul Arel University (22.09.2023, No: 19). Spearman correlation analysis determined the relationships between compassion fatigue, burnout, and compassion satisfaction with missed nursing care. Multiple linear regression analysis was performed. For the statistical significance, $p<0.05$ was accepted.

Results: The mean compassion fatigue score of the nurses was 18.1±8.54, the mean burnout score was 26.53±5.48, the mean compassion satisfaction score was 33.60±9.18, and the mean MNC score was 0.98±0.60. The most missed care need was emotional support to the patient and / or the patient's relatives (1.27±0.94); the least missed care need was evaluating the patient at every shift (0.79±0.80). Multiple regression analysis reported three variables as independent predictors of MNC: (1) the hospital where work (private or government), and (2) the level of received social support.

Conclusion(s): In this study, cancer nurses experience high compassion fatigue, and their burnout levels are also close to high. It was determined that the missed nursing care practices of nurses working in state hospitals and perceived institutional support as low were higher. Institutional managers have a crucial role in providing support to create and maintain a healthy workforce.

Keywords: Burnout, cancer nursing, compassion fatigue, compassion satisfaction, missed nursing care

OP - 059

Use of Machine Learning in Psychosocial Care of Cancer Patients: A Current Approach

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Timely determination of psychosocial care needs in cancer patients is very important for the patient, the individual, and the system. Many variables, such as diagnosis and treatment options, history, accompanying problems, social life, and family characteristics, play a role in the management of psychosocial care. Addressing these variables in addition to physical care and managing them effectively, evidence-based, quickly, and safely requires professional skills and advanced health systems. In this process, new approaches and techniques emerge depending on the developing technology to analyze existing information in many areas, determine basic interventions in patient care, and anticipate and address some risks. The machine learning approach, which has been discussed recently, is one of these technologies. This review aims to examine the current literature on the use of machine learning in the psychosocial care of cancer patients and to evaluate the potential contributions of this technology to patient care. Machine learning is a subgroup of artificial intelligence that can analyze data, determine predictive factors, and relationships. With this approach, patient outcomes can be predicted in cancer patients by analyzing existing information through a system or model, and some possibilities can be predicted by analyzing risks. With this method, many psychosocial risk factors such as anxiety, depression, trauma, and difficulty in stress management can be predicted in patients by analyzing the data in the system in cancer patients, or groups with low risk factors can be determined. Thus, early diagnosis and treatment possibilities can be increased, and positive results can be provided in the health system. Nurses can benefit from machine learning techniques to determine risky groups, create individual-specific care plans, and evaluate nursing care. In some studies, it is seen that systems are developed to screen depression, anxiety, and psychological morbidity in oncology patients using artificial intelligence and machine learning, and these data are compared with real data. In addition, studies have been conducted to detect psychological conditions such as symptom management and post-traumatic stress disorder with the deep learning technique, which is a sub-branch of machine learning. As a result, machine learning offers current and exciting approaches in psychiatric nursing in providing care to oncology patients while shaping early diagnosis, treatment, and individualized care. However, more studies are needed on the use of these technologies and the results of their application, especially in the field of psychiatric nursing and psychosocial care of cancer patients.

Keywords: Cancer, Psycho-oncology, Psychiatric Nursing, Machine Learning, Deep Learning

OP - 060

Subjective Experiences of Patients Who Underwent Immediate Breast Reconstruction Due to Breast Cancer Regarding the Perioperative Process: A Qualitative Study

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Objective: Breast cancer significantly impacts the physical and psychological well-being of patients. Immediate breast reconstruction performed concurrently with mastectomy is a treatment approach that aims to restore body image and improve quality of life. Understanding patients' subjective experiences during the perioperative period is crucial for enhancing care and support processes. This study aims to explore the perioperative experiences of patients who underwent immediate breast reconstruction through thematic analysis.

Materials-Methods: The study was conducted using a qualitative design based on a phenomenological approach. Data were collected through a "Patient Demographic Information Form" and a "Semi-Structured Interview Form" consisting of 17 open-ended questions. The interviews were audio-recorded, and the obtained data were analyzed inductively using thematic analysis based on interview transcripts. Participants were selected through purposive sampling, and data collection was concluded upon reaching data saturation.

Results: The study was completed with 10 female patients who had undergone immediate breast reconstruction following mastectomy, after data saturation was achieved. Thematic analysis revealed five main themes: decision-making and information provision, preoperative emotions, postoperative physical process, psychosocial experiences, and experiences with the healthcare team and services. These were further categorized into 13 sub-themes and 31 codes. Participants reported experiencing multidimensional physical and emotional challenges during the perioperative period, and emphasized that support and information provided by the healthcare team played a critical role in facilitating their adaptation to the process.

Conclusion(s): The findings highlight the importance of addressing the needs of breast cancer patients undergoing immediate reconstruction with a holistic and patient-centered approach. The results of this study may provide guidance for physicians and nurses in managing post-mastectomy complications and minimizing challenges throughout the reconstruction process. Furthermore, the study is expected to inform future research involving similar patient populations.

Keywords: Breast cancer, immediate breast reconstruction, perioperative period, qualitative research, subjective patient experience

OP - 061

Saying Goodbye to a Dying Child: Experiences of Mothers in the Pediatric Intensive Care Unit – A Qualitative Study

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Objective: The aim of this study is to explore and understand the profound, complex, and unique experiences of mothers who are bidding farewell to their dying children in a pediatric intensive care unit through a qualitative research approach. In this context, the study seeks to examine the emotional, cognitive, and spiritual processes of mothers during these final moments, with the goal of contributing to a more sensitive and holistic approach to care in such traumatic experiences.

Materials-Methods: Using a descriptive exploratory design and content analysis, 25 mothers were interviewed and observed between March and October 2024. The study was conducted in a City Hospital in Ankara, Türkiye. Participants were selected through purposive sampling. Data were collected through semi-structured interviews and non-interventional observations, which were transcribed verbatim and analyzed using MAXDA10 software. Conventional content analysis was used for data analysis. Ethical considerations were strictly adhered to, ensuring participant anonymity and informed consent.

Results: This study reveals the emotional journey of mothers facing the impending death of their child. The coding and analysis of the data generated one main themes, four subthemes, and eleven categories. The main theme of enduring a mother's love in the face of loss is supported by subthemes such as the complex farewell process, emotional challenges, inner strength and spiritual growth, and the importance of support in coping with grief. Mothers often find strength in their faith and resilience, yet the emotional toll is immense.

Conclusion(s): This study underscores the emotional complexities mothers face when saying goodbye to a child, highlighting the importance of support, resilience, and hope. It emphasizes the need for compassionate, tailored care to address the profound grief and emotional needs of families during this heartbreaking experience.

Keywords: Child, Dying, Mother, Pediatric Intensive Care Unit, Qualitative Study

OP - 062

Cardioprotective Nursing Interventions in Cancer Patients

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Despite recent advancements in cancer treatment, cardiotoxic effects associated with these therapies continue to increase morbidity and mortality rates. Cardiotoxicity, a major complication especially linked to chemotherapeutic agents such as anthracyclines and targeted therapies, can lead to serious cardiovascular outcomes including heart failure, arrhythmias, and myocardial dysfunction. Therefore, the implementation of cardioprotective strategies for both primary and secondary prevention is of critical importance

In primary prevention, it is recommended to identify patient- and treatment-related risk factors at an early stage, perform cardiovascular assessments, monitor biomarkers, evaluate left ventricular function through echocardiography, and use medications such as ACE inhibitors, beta-blockers, and statins when necessary. Additionally, regular physical exercise has been shown to support endothelial function and effectively prevent cardiotoxicity. For secondary prevention, tools such as troponin, LVEF, and GLS are used for early detection of subclinical cardiac dysfunction, aiming to preserve heart function through appropriate medical treatment.

This review aims to examine nursing interventions that protect against cardiotoxicity associated with cancer treatment and to highlight the pivotal role of nurses in cardioprotective care. Nurses play an active role in multiple areas of cardioprotective strategies, including risk assessment, early diagnosis, monitoring, education, counseling, and rehabilitation. In this context, nursing practices encompass interventions such as identifying individuals at risk, promoting lifestyle changes, providing exercise counseling, and coordinating with multidisciplinary teams.

Keywords: Nursing care, Cancer, Cardioprotective agents, Cardiotoxicity

Introduction

Although newly developed cancer therapies in recent years have significantly improved the survival of patients diagnosed with malignancies, adverse effects associated with these treatments have led to an increase in both morbidity and mortality. Cardiotoxicity is one of the most critical complications of chemotherapeutic agents, contributing to deterioration in cardiac and endothelial function, reduced quality of life, and increased cardiovascular mortality. The prevalence of asymptomatic cardiac dysfunction developing over the years, especially after anthracycline therapy, can reach up to 57% (1). Cardiovascular death risk varies depending on cancer type, ranging from 3–5% in brain and liver cancers to 30–40% in prostate and bladder cancers (2,3). Moreover, a significant and persistent decline in cardiopulmonary fitness (CRF) has been observed throughout the disease trajectory, which may not recover even after treatment. Therefore, the application of cardioprotective strategies is crucial. Within both primary and secondary prevention strategies, it is necessary to conduct risk stratification prior to cancer treatment and closely monitor high-risk individuals during and after therapy. Current treatment protocols often include multiple agents, increasing the likelihood of cardiotoxic effects. The main cardiotoxic agents include anthracyclines, HER2 inhibitors, VEGF inhibitors, Bcr-Abl kinase inhibitors, proteasome inhibitors, immune checkpoint inhibitors, and ibrutinib.

The lack of a universally accepted definition of cardiac toxicity is another major limitation in this field. The Cardiac Review and Evaluation Committee has recommended the presence of at least one of the following criteria, synthesizing definitions from various institutions: cardiomyopathy characterized by a reduction in left ventricular ejection fraction (LVEF), particularly in the interventricular septum; symptoms of congestive heart failure (CHF); signs accompanying CHF (e.g., S3 gallop, tachycardia); or a ≥5% decrease in LVEF falling below 55% with symptoms, or a ≥10% decrease without symptoms, also dropping below 55% (1,4,5).

Cardiovascular complications are not limited to myocardial dysfunction and heart failure but also include valvular diseases, pulmonary hypertension, pericardial complications, coronary artery disease, arrhythmias, arterial hypertension, thromboembolic disorders, peripheral vascular diseases, and stroke. These cardiotoxic effects may occur shortly after treatment or years later, and may be temporary or permanent (1).

Primary Cardioprotective Prevention

Identification and Management of Risk Factors: Early detection and effective management of cardiovascular side effects are essential to prevent or minimize cardiotoxicity. Numerous risk factors—both patient- and treatment-related—have been identified (6).

Patient-related risk factors include age, race, Eastern Cooperative Oncology Group (ECOG) performance status, number of tumor metastases, tumor location, size, grade, cardiovascular comorbidities (such as hypertension, hyperlipidemia, hypercholesterolemia, stroke, anemia, neutropenia, infections, diabetes mellitus, kidney disease, thyroid disorders), body mass index (BMI), smoking, and alcohol consumption. Treatment-related risk factors encompass the type and mode of chemotherapy regimen, number and duration of chemotherapy cycles, doses of capecitabine and 5-FU, concurrent chemotherapy, treatment setting, concurrent or prior radiotherapy, radiation dose, previous surgery, previous chemotherapy, and previous cardiac medications (6). Modifying key patient-related factors—such as smoking cessation, regular exercise, and a healthy diet—constitutes the core of primary prevention strategies (4,5,6). (Figure 1)

Cardiovascular Assessment: Currently, there are no cancer-specific cardiovascular risk scores available. Therefore, it is recommended to use risk scores designed for the general population at the time of diagnosis (5). Elevated serum cardiac biomarker levels prior to chemotherapy may indicate an increased risk for cardiotoxicity. For example, an increase in troponin I levels is a strong predictor of future cardiac dysfunction, particularly in patients treated with anthracyclines. Biomarker measurement is generally recommended only for high-risk patients. A multi-biomarker approach (e.g., troponin + global longitudinal strain) may enhance early diagnosis. In patients with elevated troponin levels, early cardioprotective treatment (e.g., initiation of enalapril) has been found effective in preserving cardiac function (4,8–10).

Measurement of left ventricular ejection fraction (LVEF) remains the most commonly used method for both initial assessment and follow-up. Transthoracic echocardiography, especially with 3D LVEF and global longitudinal strain (GLS) measurements, is valuable for early detection of subclinical cardiotoxicity. Cardiac MRI is considered only when echocardiographic imaging is insufficient; however, due to its high cost, it is not used for routine screening. In patients who will receive trastuzumab after anthracycline therapy, cardiac function should be evaluated twice—once after anthracyclines and again before trastuzumab initiation (10).

Medical Treatment: In recent years, various cardioprotective medications have been investigated to prevent or mitigate these cardiac side effects.

Beta-blockers and angiotensin-converting enzyme (ACE) inhibitors have been found effective in reducing the risk of heart failure and improving cardiac function. These agents may be particularly beneficial in patients receiving anthracycline-based chemotherapy.

Statins, due to their anti-inflammatory and antioxidant properties, may also exert a cardioprotective effect.

Dexrazoxane is the only agent approved by both the FDA and EMA for reducing anthracycline-induced cardiotoxicity. It can be effective in preventing cardiac damage in patients receiving anthracycline therapy.

Physical Exercise: Regular physical activity supports cardiovascular health and may reduce the risk of cardiotoxicity. Exercise programs during and after chemotherapy have been shown to help preserve cardiac function in cancer patients.

Exercise reduces the formation of reactive oxygen species (ROS), improves endothelial function, and decreases intracellular anthracycline concentrations. As a result, cardiac tolerance to cardiotoxic agents increases, and improvements are observed in functional, subclinical, and clinical parameters. However, following a cancer diagnosis, patients tend to experience a decline in physical activity levels (11). In patients with asymptomatic, subclinical left ventricular dysfunction—particularly those with a baseline left ventricular ejection fraction (LVEF) ≥ 50%—these types of cardioprotective strategies are generally not implemented. Such strategies are typically reserved for patients receiving high-dose anthracycline therapy. In individuals with cardiovascular risk factors such as hypertension or diabetes, decisions are made on a case-by-case basis by specialists. For proper identification of these patients, risk stratification through biomarkers and echocardiography is recommended (11–13).

In asymptomatic patients with LVEF ≥ 50% and cardiovascular risk factors, the most commonly recommended strategies include effective management of hypertension, smoking cessation counseling, weight control, and increased physical activity. In asymptomatic individuals with LVEF between 40% and 50% and subclinical dysfunction, it is recommended to optimize cardiovascular status, control blood pressure, and discontinue chemotherapy if a drop in LVEF greater than 10% is observed. For this patient group, initiating treatment with an angiotensin-converting enzyme (ACE) inhibitor or angiotensin receptor blocker (ARB) and a beta-blocker before starting anthracycline therapy and titrating their dosages is considered important (4).

Current guidelines suggest that physical exercise may help reduce morbidity and mortality in cancer patients. Meta-analyses and retrospective studies provide reliable evidence supporting physical activity as a strategy to reduce cardiovascular mortality (13–16). Chemotherapy contributes to the development of cardiovascular disease by inducing endothelial dysfunction. Exercise has been shown to improve endothelial function and reduce vascular wall thickening (17–19). Therefore, a supervised and structured physical exercise program can enhance the cardiovascular profile of cancer patients and potentially reduce cardiovascular mortality in the medium and long term (20,21).

According to a recent meta-analysis, combined aerobic and resistance exercise was found to be the most effective method for improving left ventricular ejection fraction, followed by exercise-based cardio-oncology rehabilitation and aerobic training alone (20).

International guidelines recommend incorporating both aerobic and resistance training in cancer patients, accompanied by warm-up, cool-down, and stretching exercises. It is advised to perform moderate-intensity aerobic exercise at least three times per week, for a minimum of 30 minutes per session, totaling 90–150 minutes per week over a period of 8 to 12 weeks. Moderate-intensity aerobic activity has been shown to reduce anxiety and depressive symptoms, improve quality of life, bone health, and sleep quality, regulate lipid profiles, lower blood pressure, and provide cardiovascular benefits. Resistance training should be added to aerobic exercise twice weekly, consisting of at least two sets of 8–15 repetitions at a minimum of 60% of one-repetition maximum (23–26). Moreover, patients should be provided with a comprehensive approach to care, including long-term medical assessment, modification of cardiac risk factors, and education, rather than exercise alone.

Cardioprotective Secondary Prevention

Biomarkers and imaging methods are utilized for the early detection of subclinical cardiac dysfunction. Nurses are required to clinically observe and assess cardiovascular system issues. In this context, for patients with left ventricular ejection fraction (LVEF) below 40%, nurses should support medical treatment as members of the multidisciplinary team, recognizing the effectiveness of ACE inhibitors and beta-blockers in improving LVEF. Additionally, enalapril may reduce the risk of cardiotoxicity by preventing troponin elevation (4,11,2). Recent studies in the literature support this perspective (4-6,27,28). Nurses play a critical role in ensuring patient safety, education, and continuity of care.

Conclusion

Cardioprotective nursing practices may include the following components:

- Assessing patients' risk status, screening, and diagnosis (vital signs, ECG, biomarkers, symptom monitoring, risk of low cardiac output),
- Monitoring and evaluation (early recognition of signs and symptoms),
- Planning and implementing nursing interventions (exercise counseling, medication adherence monitoring, patient education, support for lifestyle modifications), and
- Ensuring patient safety and continuity of care (communication and coordination with the multidisciplinary team).

Within the scope of cardioprotective nursing for cancer patients, nurses play a vital role in primary and secondary prevention through care, education, counseling, and rehabilitation.

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OP - 063

Metaphor, Cancer and Nursing Profession: Examples of Innovative Technologies

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Objective: The present study was conducted to ascertain the definitions of innovative technologies employed by oncology nurses, with a particular focus on the use of metaphors.

Materials-Methods: The research was conducted as a qualitative study based on metaphor analysis and was carried out with 27 oncology nurses working in Türkiye in March 2025. Data were collected using a semi-structured interview form that determined oncology nurses' definitions of innovative technologies using metaphors and investigated their nursing reflection. The semi-structured interview form included the metaphor expression, "The reflection of innovation technologies on nursing is like …… because…….". Thematic analysis was employed to analyze the data, and the study was reported following the COREQ checklist.

Results: The study presents a conceptualization of “Oncology nurses’ perception of innovative technologies”. As a result of the analysis of the data, seven valid metaphors were obtained. The most frequently used metaphors were found to be “convenience”, “innovation”, “light”, “fear” and “cumulative”. The analysis of the metaphors produced by the nurses regarding the concept of innovative technologies showed that mostly positive themes prevailed.

Conclusion(s): This study proposes a framework for comprehending the multifaceted nature of innovative technology from a metaphorical perspective. It is hypothesized that the results will provide a holistic approach to the use of innovative technology, especially in the education of nurses, and increase awareness of this concept.

Keywords: Cancer, oncology nursing, innovative technologies, metaphors

OP - 064

Evaluation of the Effect of Training Provided on Implanted Port Catheter Applications on the Knowledge Levels of Nursing Students

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Objective: The research was planned to evaluate the effect of training provided to nursing students on their knowledge levels regarding implanted port catheter applications

Materials-Methods: It is a quasi-experimental study with a single-group pretest-posttest design.The students were provided with theoretical lessons and video content through the "Microsoft Teams" program, followed by a 60-minute online training session. Prior to the training, the students completed the "Individual Introduction Form" and the "Implanted Port Catheter Knowledge Assessment Form." Fifteen days after the training, the students filled out the "Implanted Port Catheter Knowledge Assessment Form" again. The survey responses were evaluated using SPSS 22.0.

Results: It was determined that 91.1% (n=41) of the nursing students who participated in the study were female, and 8.9% (n=4) were male, with an average age of 21.93 ± 1.17 years. The analysis revealed that the students' pre-test scores ranged from 0.00 to 70.00, with an average pre-test score of 38.66 ± 19.38. The post-test scores ranged from 42.00 to 100.00, with an average post-test score of 78.13 ± 14.72.

Conclusion(s): An evaluation of the pre-test and post-test average scores revealed a significant difference, with the knowledge scores increasing.

Keywords: implanted port, student, knowledge

OP - 065

Posttraumatic Growth and Social Support as Predictors of Care Burden in Caregivers of Gynecological Cancer Patients

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Objective: This study aimed to examine the effects of post traumatic growth and social support on the caregiving burden among caregivers of gynecologic cancer patients.

Materials-Methods: A descriptive and cross-sectional design was utilized. A total of 154 caregivers participated in the study. Data were collected using the Personal Information Form, the Caregiving Burden Scale, the Post traumatic Growth Inventory, and the Multidimensional Perceived Social Support Scale. Data analysis was performed using ANOVA, t-tests, Pearson's correlation, and hierarchical linear regression analysis.

Results: The mean caregiving burden score of the participants was 23.84 ± 11.35 (range: 1–65), the mean Post traumatic Growth Scale score was 73.42 ± 22.84 (range: 10–105), and the mean Social Support Scale score was 67.90 ± 19.03 (range: 12–84). A moderate, significant negative correlation was found between the Post traumatic Growth Scale ($r = -0.505$; $p = 0.001$) and the Social Support Scale ($r = -0.638$; $p = 0.001$) with the Caregiving Burden Scale. Hierarchical regression analysis revealed that the final model, which included descriptive characteristics, post traumatic growth, and social support, was significant ($F = 20.559$; $p = 0.001$) and explained 60% of the variance in caregiving burden. In this model, the presence of a caregiver ($\beta = 0.277$; $p = 0.001$), time spent on daily care ($\beta = 0.144$; $p = 0.015$), post traumatic growth ($\beta = -0.143$; $p = 0.045$), and social support ($\beta = -0.376$; $p = 0.001$) were statistically significant predictors of caregiving burden.

Conclusion(s): The caregiving burden among caregivers of gynecologic cancer patients should be addressed and reduced. The findings indicate that higher levels of post traumatic growth and greater perceived social support significantly alleviate the caregiving burden.

Keywords: Caregivers, Caregiving burden, Gynecological cancer, Post traumatic growth, Social support

OP - 066

The Effect of Intolerance of Uncertainty on Depression, Anxiety, and Stress in Gynecological Cancer Patients

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Objective: This study aims to examine the impact of intolerance of uncertainty on depression, anxiety, and stress in patients with gynaecological cancer.

Materials-Methods: A descriptive and cross-sectional design was utilized. A total of 133 women diagnosed with gynaecological cancer participated in the study. Data were collected using the Personal Information Form, the Intolerance of Uncertainty Scale, and the Depression Anxiety Stress Scale (DASS-21). Data analysis was performed using ANOVA, t-tests, Pearson's correlation, and hierarchical linear regression analysis.

Results: The mean score on the Intolerance of Uncertainty Scale was 41.88 ± 12.12 (range: 16–60). The participants' mean scores on the DASS-21 subscales were as follows: depression, 6.78 ± 5.47 (range: 0–21); anxiety, 5.73 ± 4.12 (range: 0–18); and stress, 7.91 ± 4.86 (range: 0–21). A significant positive correlation was observed between intolerance of uncertainty and depression ($r = 0.437$, $p < 0.001$), anxiety ($r = 0.394$, $p < 0.001$), and stress ($r = 0.516$, $p < 0.001$) scores. Hierarchical regression analyses were conducted to identify significant predictors of psychological outcomes. For depression, significant predictors were intolerance of uncertainty ($\beta = 5.107$, $p < 0.001$) and income level ($\beta = 2.101$, $p = 0.038$). For anxiety, significant predictors included intolerance of uncertainty ($\beta = 4.893$, $p < 0.001$) and age ($\beta = 2.253$, $p = 0.026$). Regarding stress, intolerance of uncertainty was found to be the sole significant predictor ($F = 19.949$, $p < 0.001$). Overall, intolerance of uncertainty emerged as the strongest predictor of depression ($\beta = 5.107$), anxiety ($\beta = 4.893$), and stress ($\beta = 6.693$).

Conclusion(s): The findings of this study demonstrate that intolerance of uncertainty significantly contributes to levels of depression, anxiety, and stress in patients with gynecological cancer. These results suggest that intolerance of uncertainty should not be viewed solely as a psychological symptom, but rather as an independent determinant of psychological distress. Therefore, clinical interventions should incorporate strategies aimed at strengthening patients' coping mechanisms for managing uncertainty.

Keywords: Anxiety, Depression, Gynecological Cancer, Intolerance of Uncertainty, Stress

OP - 067

Determination of the Relationship Between Attitude and Awareness Towards HPV Test and Fatalism in University Students

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Objective: HPV is a common sexually transmitted infection and a major cause of cervical cancer. However, HPV-induced cervical cancer can be largely prevented by early diagnosis and regular screening programs. The attitudes and awareness levels of young adults towards HPV testing are critical for the widespread and effective implementation of these tests. Our study examines the relationship between university students' attitudes and awareness levels towards HPV testing and their fatalistic tendencies.

Materials-Methods: This descriptive and cross-sectional study was conducted with 332 undergraduate students studying at a foundation university in 2025. Data were collected through an online survey using a sociodemographic information form developed by the researchers, the Attitudes and Beliefs about HPV Testing Scale, and the Multidimensional Fatalism Scale. Participants were selected using convenience sampling method. Descriptive statistics and Pearson correlation analysis were used to analyze the data. Ethics committee approval and online consent were obtained from the participants.

Results: The mean age of the participants was 22.27 ± 2.45 years, the majority were female (85.1%), single (96.3%), and had a nuclear family structure (79.1%); although 82.1% stated that they were informed about the HPV vaccine, only 2.2% had received the vaccine. The mean HPV attitude score of the participants was 75.77 ± 11.64 and the mean fatalism score was 55.94 ± 9.77. A negative and significant relationship was found between HPV attitude and fatalism ($r = -0.346$; $p < 0.001$).

Conclusion(s): Despite positive attitudes towards HPV, vaccination rates are low and fatalism negatively affects this attitude. The findings show the importance of faith-based approaches in awareness raising efforts.

Keywords: University students, HPV testing, fatalism, nursing

OP - 068

An Examination of the Experiences of Oncology Nurses in Discharge Education Using the Teach Back Method: A Focus Group Study

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Objective: Teach Back is an effective patient education method that has been used in recent years. In addition to aiming to check whether the patient has understood the information they have received correctly, this method improves health outcomes, increases patient safety, and enables individualized patient education. To our knowledge, a limited number of studies have been published examining the experiences of oncology nurses who provide patient education with this method. To deeply understand oncology nurses' experiences of using the "Teach Back" method in discharge education and to examine their perceptions of this method.

Materials-Methods: This qualitative research was conducted based on the phenomenological approach. Qualitative data were collected through focus group interviews; interviews were conducted online via Microsoft Teams in March 2025 with 19 oncology nurses working in a private hospital in Istanbul in three sessions (each session with at least 6 people). In these interviews, moderated by the researcher, data were collected by asking semi-structured questions and the interviews were recorded. The audio recordings of the interviews were transcribed and thematically analyzed using Colaizzi's phenomenological analysis method and the MAXQDA software program. The research was reported in accordance with the COREQ checklist.

Results: As a result of the thematic analysis, four main themes reflecting the experiences of nurses were obtained. These were determined as; (1) The Essence of Teach Back in My Discharge Education, (2) Problems We Encounter While Trying to Teach, (3) Empowered Nurse, Empowered Patient, Empowered Organization (4) Organizational Memory and Facilitating Tactics.

Conclusion(s): It was understood that oncology nurses saw the method of teach back as an effective educational tool in discharge education, and it was found that the method improved the professional values of nursing and patient outcomes, but that there were some difficulties in its applicability in discharge education. Nurses stated that they overcame these difficulties with the help of organizational memory and facilitating tactics. This study, conducted with a focus group, contributes to understanding the essence of common experiences.

Keywords: Discharge education, teach back, oncology nursing, focus group study

OP - 069

Bibliometric Analysis of Nursing Research on Geriatric Oncology

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Objective: Geriatric oncology stands out as a multidisciplinary field that includes special approaches to the diagnosis, treatment and care processes of elderly cancer patients. The complex care needs of this patient group make the roles of nurses even more critical; issues such as age-specific symptom management, preservation of functional capacity and improvement of quality of life are becoming a priority in nursing research. In this study, it was planned to examine the studies on geriatric oncology published in the Web of Science database in the last decade by bibliometric analysis method.

Materials-Methods: The bibliometric analysis of the articles included in the study was conducted on May 3, 2025. A search was performed in the Web of Science Core Collection using the keywords “geriatric hematology,” “geriatric oncology,” “aged cancer patients,” “older cancer patients,” and “elderly cancer patient.” The study included publications categorized under “Nursing,” published between 2015 and 2025, and classified as “articles.” For the bibliometric analysis, data were retrieved from the Web of Science Core Collection, specifically from the Social Sciences Citation Index (SSCI), Science Citation Index Expanded (SCI-E), and Emerging Sources Citation Index (ESCI). A total of 57 academic articles were analyzed. The VOSviewer software was used for the analysis, focusing on the distribution of publications by year, journal-based publication counts, the most frequently cited studies, countries with the highest number of publications, commonly used keywords, and co-authorship networks.

Results: The study revealed that the highest number of publications in the field of geriatric oncology nursing on the Web of Science was in the year 2016. Elsevier was identified as the most frequent publisher in this area. Ohio State University (USA) and the University of Toronto (Canada) were the leading institutions affiliated with authors contributing to this field. The United States ranked first both in terms of publication volume and international collaboration networks. The journals Seminars in Oncology Nursing and European Journal of Cancer Care were identified as the top sources publishing on geriatric oncology. Janine Overcash was the most prolific author in this field. The most highly cited study was “Expert consensus panel guidelines on geriatric assessment in oncology,” published in 2015 by O’Donovan et al.

Conclusion(s): The findings are expected to reveal current trends in the field, provide researchers with a broad perspective, and guide future studies.

Keywords: Bibliometrics, geriatrics, hematology, nursing, oncology

OP - 070

The Effect of Music on Anxiety and Caregiver Burden in Family Caregivers of Lung Cancer Patients: A Randomized Controlled Trial

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Objective: Lung cancer affects not only the patients but also the family members who actively participate in the care process physically and psychologically. In this context, music therapy is considered as a promising complementary intervention in terms of reducing anxiety levels and alleviating the burden of care by supporting the mental well-being of caregivers. The aim of this study was to evaluate the effects of music on anxiety level and care burden in family caregivers of lung cancer patients.

Materials-Methods: This study was conducted with a randomised controlled experimental design. The study was conducted with first-degree family caregivers of patients diagnosed with lung cancer who applied to the outpatient chemotherapy unit of a tertiary health institution affiliated to a university hospital between February 2025 and April 2025. Caregivers who were included in the intervention group (n=25) by random assignment method were asked to choose a piece from the music list prepared by the researchers in line with the opinions of the Turkish Music Research and Promotion Group; they were advised to listen to the selected music for 30 minutes at the same time every day for seven days. For the individuals in the control group (n=25), no intervention was made and the routine care process was continued. Caregiver Individual Descriptive Information Form, Zarit Caregiving Burden Scale and State-Trait Anxiety Inventory were used to collect the data of the study.

Results: In the intervention group, a statistically significant decrease was observed in the Zarit Caregiving Burden Scale scores after the intervention compared to the pre-intervention period (p=0.007), while no significant change was found in the control group (p=0.703); no statistically significant difference was found between the groups in terms of post-intervention scores (p=0.660). In the State Anxiety Inventory scores, a significant decrease was found in the intervention group (p=0.059), no significant change was found in the control group (p=0.237); no significant difference was found in the comparison between the groups (p=0.240). In the Trait Anxiety Inventory scores, a statistically significant decrease was observed in the intervention group (p=0.001), no significant change was found in the control group (p=0.088); the difference between the groups was not statistically significant in the post-intervention measurements (p=0.956).

Conclusion(s): This study found that the music therapy intervention positively influenced the perceived caregiving burden, state anxiety, and trait anxiety levels in family caregivers of lung cancer patients.

Keywords: lung cancer, care burden, nursing, evidence-based practices, anxiety

OP - 071

The Effect of Breathing Exercises on Chemotherapy-Induced Nausea and Vomiting in Autologous Hematopoietic Stem Cell Transplantation Patients: A Randomized Controlled Trial

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Abstract:

In patients undergoing hematopoietic stem cell transplantation, high-dose chemotherapies used as conditioning regimens have high emetic potential. This research was conducted as a randomized controlled trial to examine the effect of breathing exercises on managing chemotherapy-induced nausea and vomiting in patients undergoing autologous hematopoietic stem cell transplantation. A randomized controlled trial was conducted to select patients who underwent autologous hematopoietic stem cell transplantation, including an experimental group (n=35) performing breathing exercises for chemotherapy-induced nausea and vomiting and a control group (n=35) receiving standard care. Various variables were evaluated, such as frequency and degree of nausea and vomiting, nutritional status of the patient, and need for antiemetics. Data were analyzed and interpreted using Mann Whitney U, Pearson chi-square test, Independent t-test, and multiple linear regression methods. It was found that there was a negative relationship between the number of breathing exercises, the number of nausea and vomiting, and the severity of nausea. As the number of breathing exercises increased, there was a significant decrease in the number of nausea and vomiting and the severity of nausea. It was found that the use of antiemetics decreased in the experimental group. It was found that the daily food consumption of the experimental group was higher on days 3, 7, and 9. This study showed that the application of breathing exercises is a practical approach to managing chemotherapy-induced nausea and vomiting

Keywords: Breathing exercise, chemotherapy, hematopoietic stem cell transplantation, nausea, vomiting

Introduction

Nausea and vomiting caused by chemotherapy are among the most common side effects in hematopoietic stem cell transplantation. High-dose chemotherapies used as conditioning regimens in hematopoietic stem cell transplantation have a high emetogenic potential (1). Patients experiencing nausea and vomiting may face adverse effects such as metabolic disorders, functional impairments, dehydration, and impaired drug absorption (2). Nurses play a crucial role and bear significant responsibilities in managing nausea and vomiting in patients undergoing hematopoietic stem cell transplantation. This study was conducted as a randomized controlled trial to examine the effect of breathing exercises on managing chemotherapy-induced nausea and vomiting in patients undergoing autologous hematopoietic stem cell transplantation.

Materials-Methods

This study was conducted between February 2022 and March 2023 in patients undergoing autologous hematopoietic stem cell transplantation. Patients were assigned to intervention and control groups using a computerized randomization program (www.random.org). A randomized controlled design was used, including an intervention group (n=35) that performed breathing exercises for chemotherapy-induced nausea and vomiting and a control group (n=35) that received standard care. All participants were assigned to groups through blinded randomization; however, the researchers were not blinded as they were responsible for teaching the breathing exercises to the patients. At the beginning of the study, all patients completed a Patient Information Form.

Previous studies have shown that chemotherapy-related nausea and vomiting in hematopoietic stem cell transplant patients most commonly develops within the first 15 days (3). Therefore, starting one day before treatment and continuing for 14 days, patient follow-up forms were completed using the Rhodes Index of Nausea, Vomiting and Retching (RINVR), a daily food intake diary prepared by the researcher, and the Visual Analog Scale (VAS). In addition, the patients' primary nurses recorded the number of additional antiemetic treatments used each day.

Ethical approval was obtained from the Koç University Clinical Research Ethics Committee (2022.065. IRB1.034), and institutional permission was granted by the hospital. Written informed consent was also obtained from patients' relatives. Data were analyzed and interpreted using Mann–Whitney U, Pearson chi-square test, independent t-test, and multiple linear regression methods.

Results

The mean age was 55.86 in the intervention group and 57.66 in the control group, with no statistically significant difference between the two groups. The majority of patients were male and married. When examining the conditioning regimens in both groups, most patients received either melphalan (44.3%) or BEAM (44.3%) protocols.

Multiple linear regression analysis was conducted to evaluate the independent variables affecting the frequency and severity of nausea, and the frequency of vomiting. It was observed that as patient age increased, the number of nausea and vomiting episodes also increased. A negative relationship was found between the number of breathing exercises and the number and severity of nausea and vomiting. As the number of breathing exercises increased, a significant decrease in the frequency and severity of nausea and vomiting was observed.

A positive relationship was found between the number of antiemetics used and the frequency of nausea and vomiting. As the frequency and severity of nausea increased, the need for antiemetic treatment also increased. When comparing the groups, the need for antiemetic treatment was significantly lower in the intervention group ($p < 0.05$). It was found that the use of antiemetics decreased in the intervention group.

On days 3, 7, and 9, the daily food intake was higher in the intervention group. Overall, the intervention group had higher average daily food consumption compared to the control group.

Discussion

This study aimed to examine the effect of breathing exercises on the management of chemotherapy-induced nausea and vomiting in patients undergoing autologous hematopoietic stem cell transplantation. In the literature, no studies have been found specifically investigating the effect of breathing exercises on nausea and vomiting in patients undergoing hematopoietic stem cell transplantation.

Nausea is a common expected side effect in patients receiving high-emetogenic chemotherapy regimens during autologous hematopoietic stem cell transplantation. It is reported that nausea and vomiting are among the most frequently observed side effects in these patients (4). In a study conducted by Pasyar et al. (2022), it was found that 70–80% of patients undergoing hematopoietic stem cell transplantation and chemotherapy experienced nausea and vomiting, with 36% experiencing acute nausea and vomiting, and 59% experiencing delayed nausea and vomiting (5).

In contrast to existing literature, this study found that gender alone did not have a significant effect on the number or severity of nausea, or on the frequency of vomiting, based on multiple regression analysis. Similarly, previous studies have shown that neither gender nor age (above or below 50 years) significantly affected the incidence of ≥ grade 2 gastrointestinal symptoms in patients undergoing autologous stem cell transplantation (6).

Unlike the existing literature, this study observed that as patient age increased, the number of nausea and vomiting episodes also increased, although the severity of nausea did not change.

Due to the growing interest in breathing exercises and their healing effects, they are increasingly being used in various fields for symptom management. Several studies have demonstrated the effects of breathing exercises in managing symptoms among patients undergoing hematopoietic stem cell transplantation. However, no studies have specifically investigated the effect of breathing exercises on nausea and vomiting in this patient group. Our study is the first to examine the impact of breathing exercises on nausea and vomiting in these patients.

However, these patients often experience very difficult times during transplantation. Therefore, we believe it is important to make frequent visits to monitor breathing exercises and to encourage regular repetition of the exercises. At the end of the study, researchers may gather feedback and suggestions from patients regarding the implementation of the breathing exercises.

The effects of breathing exercises on nausea and vomiting have primarily been studied in breast cancer patients. In one study examining the impact of deep breathing exercises on nausea and vomiting in breast cancer patients, the intervention group experienced reductions in nausea severity, as well as in the frequency and intensity of nausea, vomiting, and retching (7). Nelwati and Noviyani (2024) found that diaphragmatic breathing exercises could reduce nausea and vomiting and improve the functional status of breast cancer patients receiving chemotherapy (8).

The effectiveness of breathing exercises on nausea and vomiting has often been studied in conjunction with progressive relaxation exercises. A systematic review found that breast cancer patients who practiced progressive relaxation exercises for 25–30 minutes every one or two days showed no difference in the incidence of acute or delayed nausea and vomiting between groups (9). Studies typically limit the number of daily breathing exercises to specific boundaries (9). However, depending on the patient's experience of nausea and vomiting, more frequent breathing exercises may be required beyond these standard limits. In this study, patients performed breathing exercises when they felt nauseous.

A study by Aybar et al. examined the effect of breathing exercises on nausea and vomiting without setting a fixed limit on the number of daily exercises based on the patient's needs, making it a different approach (7). This study also found that patients in the control group required additional antiemetic treatment beyond the standard protocol, indicating that they experienced more severe nausea compared to the intervention group.

The study showed that 5-HT3 antagonist antiemetic treatments used by patients have side effects such as dizziness, constipation, and headache (10). Nurses play an important role and bear significant responsibility in managing nausea and vomiting in patients undergoing chemotherapy and hematopoietic stem cell transplantation. Nurses should be directed to certification programs on breathing techniques and their awareness should be raised. Furthermore, they should provide counseling and training to patients on breathing exercises. Nurses can integrate breathing exercises into patients' daily routines to help manage a variety of issues.

Future studies should be conducted as multi-center trials with larger sample sizes. This study has some limitations. The small sample size and the fact that data were collected from a single center limit the generalizability of the findings to all patients undergoing autologous hematopoietic stem cell transplantation.

Conclusion

This study demonstrated that breathing exercises have a positive effect on the frequency and severity of nausea and vomiting. The findings showed that breathing exercises reduced the number and severity of nausea and vomiting episodes, improved patients' nutritional status, and decreased the need for antiemetic treatment. It is recommended that standard breathing exercise protocols be developed and implemented in clinical settings to manage chemotherapy-induced nausea and vomiting. Additionally, because breathing exercises are easy to perform, they can also be incorporated into discharge education programs.

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OP - 072

The Effects of Nursing Interventions on Early Postoperative Wound Complications and Lymphedema in Patients Undergoing Breast Cancer Surgery: A Systematic Review

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Objective: Breast cancer is the second most common cancer type globally and the leading cancer among women. Its incidence continues to rise worldwide, necessitating both local and systemic treatments. These therapies often result in various physical and psychosocial challenges for patients. This systematic review aims to synthesize current evidence on the effectiveness of nursing interventions targeting physical complications—specifically postoperative wound complications and lymphedema—in individuals undergoing breast cancer surgery, and to evaluate their impact on clinical and patient-reported outcomes.

Materials-Methods: A comprehensive literature search was conducted for studies published between January 1, 2010, and April 1, 2025, using the databases PubMed, Web of Science, Scopus, Cochrane, and ScienceDirect. The PICOS framework (Population, Intervention, Comparison, Outcomes, Study design) was adopted to guide the development of inclusion and exclusion criteria, as well as search strategies. The search was performed using the keywords: ("Breast Cancer Surgery" OR "Mastectomy") AND ("Nursing Care" OR "Nursing Intervention") AND ("Complication" OR "Symptom Management"). Studies that met the eligibility criteria were screened based on their titles and abstracts. A total of 14 studies were included in the final review.

Results: The included studies encompassed data from 1,643 women diagnosed with breast cancer. Nursing interventions aimed at preventing or managing wound complications and lymphedema included the use of supportive bras, structured physical activity programs, simple lymphatic drainage massage, patient education, home visits, wound site monitoring, personalized diet and sleep plans, complication tracking, evidence-based nursing protocols, psychological support, motivational counseling, comfort-focused care, and online education modules. All reviewed studies demonstrated a reduction in the incidence of complications following the interventions.

Conclusion(s): Nursing interventions were found to contribute positively to both clinical and patient-reported outcomes. These findings underscore the importance of supporting such interventions and implementing routine training programs for nurses on postoperative wound care, wound-related complications, and lymphedema to enhance the quality of patient care.

Keywords: Nursing Intervention, Lymphedema, Breast Cancer Surgery, Wound Complications

OP - 073

Relationship Between Chemotherapy-Induced Alopecia, Social Support, and Self-Esteem

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Objective: Alopecia, which negatively affects the individual's self-esteem and sense of identity and causes psychological distress, is a very common symptom in patients receiving chemotherapy. This study was conducted to evaluate the relationship between chemotherapy-induced alopecia, social support, and self-esteem.

Materials-Methods: The universe of this descriptive, correlational study was composed of individuals who received chemotherapy and developed alopecia between October 2024 and February 2025 in Ankara. The research was conducted with a total of 108 patients with G*Power 3.1., 9.7 program, ▯ = 0.05, 80% power and 0.234 effect. Data were collected face-to-face using the “Personal Information Form”, “Chemotherapy-Related Alopecia Distress Scale”, “Rosenberg Self-Esteem Scale”, “Multidimensional Scale of Perceived Social Support”. Ethical approval was obtained. Data were evaluated in SPSS 25 program using percentage, mean, frequency, chi-square independent sample t test, Mann Withney U test, Kruskall Wallis Test, Regression analysis.

Results: The average age of the participants was 55.37±12.61 years,69.4% were female, 68.5% were married, and 44.4% had a bachelor's degree. It was observed that the majority of the participants had breast cancer (61.1%), 77.8% received training on alopecia, and 24.5% had cut their hair very short before developing alopecia. It was determined that.60.2% of the participants had complete hair loss and 73% had hair loss gradually. It was determined that 55.6% of the participants lost their eyebrows and 48.1% their eyelashes along with alopecia. 38.9% of the participants stated that they used wigs for alopecia management. Participants' chemotherapy-related alopecia distress scale mean score was determined as 18.27±10.60 points, self-esteem mean score was 21.38±5.00 points, and perceived social support mean score was 67.37±15.49 points. A moderately significant relationship was found between chemotherapy-related alopecia distress and perceived social support (r=-.503; p=0.00). There was no significant relationship between chemotherapy-related alopecia distress and self-esteem (r=-.127; p=0.19), and a significant relationship was found between perceived social support and self-esteem (r=0.21; p=0.029).

Conclusion(s): This study provided evidence that there was a relationship between chemotherapy-related alopecia distress and perceived social support, but no relationship with self-esteem. Further studies evaluating the effect of social support to manage chemotherapy-related alopecia distress are recommended.

Keywords: Alopecia, self-esteem, chemotherapy, social support

OP - 074

Investigation of Postgraduate Theses Utilizing Virtual Reality in Nursing

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Objective: The integration of technological advancements into healthcare has led to the development of innovative approaches in nursing practice and education. One such approach, virtual reality (VR), is increasingly utilized in both clinical and educational settings. VR provides users with a controlled, multidimensional digital experience, creating new opportunities in areas such as patient safety, skill training, communication competence, and management of psychosocial symptoms. The potential of this technology in nursing education and practice has become a significant subject of research. Accordingly, this study aims to examine postgraduate theses in Türkiye that involve the use of virtual reality in the field of nursing.

Materials-Methods: A search was conducted in the National Thesis Center of the Higher Education Council of Türkiye between December 1, 2024, and May 1, 2025, using the keywords “virtual reality” and “nursing.” Accessible theses relevant to the topic were included. The selected theses were analyzed based on the year of publication, academic level (master’s / PhD), department, sample group, and research topics. The data were evaluated descriptively through frequency and percentage distributions.

Results: A total of 123 postgraduate theses were identified. Of these, 53.7% were master’s theses and 46.3% were doctoral dissertations. The majority (51.2%) focused on adult patient samples, followed by healthy / sick children (23.6%) and students (13.8%). Most of the theses (32.5%) were conducted in the Department of Nursing, followed by Surgical Diseases Nursing (19.5%) and Pediatric Health and Diseases Nursing (13%). Notably, 81.3% of the theses were completed in the last four years, with 25.2% in 2024, 23.6% in 2023, 18.7% in 2022, and 13.8% in 2021. The most frequently studied topics included pain (n=76), anxiety (n=59), fear (n=20), and the effectiveness of education using VR (n=20). In addition, variables such as participants’ vital signs (n=20) and satisfaction levels (n=12) were also commonly assessed.

Conclusion(s): This study reveals a significant increase in postgraduate research on the use of virtual reality in nursing in recent years. The fact that most theses were completed in the past four years indicates a growing adoption of this technology in nursing research. The frequent focus on pain, anxiety, fear, and educational effectiveness highlights that VR is considered an effective and innovative tool in both patient care and nursing education.

Keywords: Disease, Nursing, Postgraduate, Health, Virtual Reality

OP - 075

Intolerance of Uncertainty and Treatment-Related Symptoms in Cancer Patients: The Mediating Role of Health Literacy

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Objective: Individuals diagnosed with cancer face uncertainty related to factors such as treatment plans, survival rates, symptom severity, and disease progression, which can significantly affect their psychological well-being and quality of life. These symptoms can deeply influence both physical and emotional-social aspects of life.Health literacy can help patients better understand their treatment and cope with symptoms, thus facilitating their ability to manage uncertainty. This study aims to examine the mediating role of health literacy in the relationship between intolerance of uncertainty and treatment-related symptoms in cancer patients.

Materials-Methods: This is a cross-sectional study. Data were collected through face-to-face interviews with cancer patients at an oncology clinic and outpatient chemotherapy unit in a research hospital located in Southeastern Türkiye,from February to June 2024.Ethical approval and institutional permission were obtained prior to the study. The data collection tools included the Individual Characteristics Form, the Intolerance of Uncertainty Scale (IUS),the Health Literacy Scale (HLS) and the Nightingale Symptom Assessment Scale (N-SAS). Descriptive statistics, such as mean,standard deviation, frequency, and percentage distributions, were used for data analysis. Pearson correlation analysis was used to assess the relationship between IUS and N-SAS, while regression analysis was applied to evaluate the effect of IUS scores on N-SAS. Mediation analysis was conducted to investigate the mediating effect of HLS in the relationship between IUS and N-SAS.A significance level of $p<0.05$ was accepted for all analyses.

Results: A total of 183 participants were included. The mean age was 56.36 %C2%B1 13.81, with 52.5% (n=96) being women, 29.5% (n=54) having completed middle school, and 25.7% (n=47) diagnosed with breast cancer. No statistically significant relationship was found between IUS and HLS ($p>0.05$).A low-level positive correlation ($r=0.218$) was found between IUS and N-SAS ($p=0.003$), indicating that as IUS scores increase, N-SAS scores also increase. However, no statistically significant relationship was found between N-SAS and HLS ($p>0.05$). Mediation analysis revealed that the effect of IUS on HLS was not statistically significant ($p>0.05$), and the effect of HLS on N-SAS was also not significant ($p>0.05$).The effect of IUS on N-SAS was statistically significant ($\beta 1=0.020$, $p=0.007$), but the mediation effect was not statistically significant ($\beta=-0.001$,CI(-0.023, 0.027)).The confidence interval containing 0 indicates that the mediation model was ineffective

Conclusion(s): This study found that health literacy does not mediate the relationship between intolerance of uncertainty and symptoms. However,a significant relationship was found between intolerance of uncertainty and symptoms. Educational programs aimed at improving health literacy could enhance cancer patients symptom management and help them cope with uncertainty,and further research in this area is recommended.

Keywords: Cancer, health literacy, intolerance of uncertainty, mediating role, symptom severity

OP - 076

The Effectiveness of Non-pharmacologic Interventions in Postgraduate Theses on the Management of Chemotherapy-Induced Peripheral Neuropathy: A Systematic Review

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Objective: Chemotherapy-induced peripheral neuropathy, caused by neurotoxic chemotherapy, leads to sensory, motor, and autonomic nerve damage. Regular assessment and non-pharmacologic interventions are important for its management. This study aimed to systematically review postgraduate theses on non-pharmacological approaches to managing this condition.

Materials-Methods: This review was scanned using the keywords ''chemotherapy'' and ''neuropathy'' in the database of the National Thesis Center of the Council of Higher Education of Türkiye between 24.04.2025 and 30.04.2025. As a result of the search, a total of 1455 theses were reached. Repetitive (n=25), non-nursing (n=1164) and non-pharmacologic intervention (n=255) theses were excluded from the study. The 11 theses included in the study were analyzed in terms of year, type, research design, sample, data collection tools and findings obtained from the thesis.

Results: This review identified 11 postgraduate theses—2 master's and 9 doctoral—that evaluated the effectiveness of non-pharmacologic interventions in managing chemotherapy-induced peripheral neuropathy. The majority (72.73%) were conducted between 2020 and 2025, and all employed randomized controlled trial designs. Most studies (90.90%) included adult cancer patients, with over half (54.55%) involving individuals diagnosed with different types of cancer. Nearly half (45.45%) focused on patients receiving platinum and taxane-based chemotherapy protocols. Reflexology, exercise, and walking were the most frequently used interventions (each 18.18%), primarily applied to the hands and feet (63.63%). Over half of the studies (54.55%) had sample sizes smaller than 30, and the EORTC QLQ-CIPN20 was the most commonly used tool to assess peripheral neuropathy symptoms.

Conclusion(s): In managing peripheral neuropathy, integrating non-pharmacologic interventions alongside pharmacologic treatment is essential. Recent applications of these interventions have shown positive effects on patient outcomes. This study reviewed interventions used in the management of peripheral neuropathy and found that, although the number of related postgraduate theses has increased in recent years, it remains insufficient. The non-pharmacologic methods examined were found to improve neuropathy symptoms; however, most studies lacked standardization in sample characteristics and chemotherapy protocols. To generalize intervention outcomes, there is a need for specificity in cancer diagnosis and treatment protocols. The literature includes a variety of methods such as acupuncture, cryotherapy, massage, and especially different forms of exercise. It is therefore recommended that nurses conduct studies using standardized protocols and diagnoses, and evaluate the effectiveness of diverse non-pharmacologic interventions on chemotherapy-induced peripheral neuropathy.

Keywords: Cancer, Chemotherapy, Nursing, Peripheral Neuropathy, Thesis

OP - 077

Investigation of Internet Searches Related to HPV Using Data from Google Trends

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Objective: Internet search engines constitute a valuable data source with regard to the analysis of individuals' behaviours in accessing health-related information. Human Papillomavirus (HPV) is a common sexually transmitted infection that can lead to various health complications, including cervical cancer. The present study aims to analyze internet search trends related to HPV using Google Trends data between 7 May 2024 and 7 May 2025.

Materials-Methods: The research is of descriptive type. Data were obtained through Google Trends for the period between 07 May 2024 and 07 May 2025. The data pertaining to Türkiye were evaluated and the search terms ‘HPV’, ‘HPV vaccine’, ‘cervical cancer’ and ‘HPV test’ were used in the health category and in Turkish language. While the highest level of interest in the searches conducted on Google Trends is indicated by a value of ‘‘100’’; on the Relative Search Volume (RSV) scale, searches with no discernible interest or insufficient data are indicated by a value of ‘‘0’’ on the same scale.

Results: It was observed that Google searches related to HPV did not fall below 20 RSV throughout the year. The analysis revealed a surge in search activity, with a notable peak observed in May 2024. During this period, there was a pronounced concentration of searches on specific topics, including 'Is the HPV vaccine free?', 'How is the HPV test conducted?' and 'HPV symptoms'. In terms of geographical distribution, it was determined that the highest levels of interest were observed in metropolises such as Istanbul, Ankara and Izmir, while the lowest levels of interest were observed in the Eastern Anatolia Region. It is evident that a number of searches have yielded prominent results, with queries such as 'At what age is the HPV vaccine given?' and 'Does HPV cause cancer?' being among the most frequently asked.

Conclusion(s): There is a significant level of interest in internet searches related to HPV in the last year. This shows that individuals are in search of information about HPV and that the subject arouses curiosity in the society. Increasing access to accurate and reliable information about HPV is important for public health. Therefore, it is recommended that nurses working in the field of women's health take an active role in this issue.

Keywords: Vaccine, Google Trends, HPV, Internet, Cervical Cancer

OP - 078

Investigation of Symptom Differences and Quality of Life Between Geriatric Oncology Patients Receiving Daily Chemotherapy Treatment and Young Oncology Patients

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Objective: In the study, the symptom differences and the extension of the distance between the living temperatures of the geriatric oncology region and the young oncology region receiving the daily treatment method were investigated.

Materials-Methods: This research is a comparative, descriptive and correlation type study. The universe of the study consisted of patients who applied to the Daily Chemotherapy Service of İzmir Atatürk Education and Research Hospital. Considering that there may be loss during the study, the sample number, which was calculated as 128, was taken as 140. Considering that there may be loss during the study, the sample number, which was calculated as 128, was taken as 140.. The criteria for inclusion in the sample in the study were; For young patients, being between 18-64 years of age, for geriatric patients, being 65 years of age and older, volunteering to participate in the study, being literate, having a diagnosis of breast, prostate, testicular, lung, colorectal, stomach, gynecological cancer, being able to maintain cognitive functions, being suitable for interviewing in general condition, and having received the diagnosis at least 2 months ago. In this study, the Patient Identification Form, ECOG Performance Score, Mini-Cog Test, Rotterdam Symptom Checklist, and Rolls Royce Model Quality of Life Scale were used to collect data. Before the study, patients were informed about the research topic and their verbal and written consents to participate in the study were obtained. The data of the study were collected by face-to-face interviews with cancer patients. In the evaluation of the data, descriptive statistics such as number, percentage, mean and standard deviation were used. In order to conduct the study, an ethics committee permit was obtained from the Dokuz Eylül University Faculty of Medicine Non-Interventional Research Ethics Committee..

Results: When the frequency of symptoms experienced by young and old cancer patients was examined in the study, it was found that they frequently experienced symptoms such as nausea-vomiting, pain, fatigue, and infection. It was determined that the quality of life of old patients was affected more than young patients due to their inability to perform daily living activities. It was determined that young patients had higher total Rolls Royce Model Quality of Life Scale scores than geriatric patients.

Conclusion(s): It has been determined that geriatric oncology patients and young oncology patients experience differences in symptoms and that their quality of life is affected in different areas.

Keywords: Symptom Differences, Quality of Life, Geriatric Oncology Patients, Young Oncology Patients

Introduction

Many symptoms are encountered in young cancer patients and geriatric cancer patients with the diagnosis of cancer. Although there are proportional changes among cancer patients, there are similarities between the symptoms. Their frequency also varies. Elderly cancer patients may have trouble noticing the presence of symptoms, therefore, it becomes difficult to manage the symptoms well. Symptoms such as fatigue (50-70%), pain (80%), depression (17-25%), and sleep disorders are frequently seen in elderly cancer patients. Infertility, cardiovascular disease, sexual dysfunction and secondary cancers are more common in young cancer patients than in elderly cancer patients. The symptoms that occur in cancer patients affect the continuation of treatment, quality of life and therefore survival. In addition, the quality of life of patients is impaired due to complications that may occur due to cancer treatment, type of cancer and requiring long-term hospitalization. For these reasons, the symptom differences of elderly and young patients must be known. There are studies in Türkiye for geriatric cancer patients, but the studies generally focus on a single symptom. When the studies in the field of oncology are examined, no study was found that examined the symptom differences experienced by geriatric and young cancer patients and the quality of life. For these reasons, the aim of the study was to examine the symptom differences and quality of life between geriatric and young oncology patients receiving daily chemotherapy treatment.

Materials-Methods

This research is a comparative, descriptive and correlation type study. The universe of the study consisted of patients who applied to the Daily Chemotherapy Service of İzmir Atatürk Education and Research Hospital. In the study, the stratified sampling method was used based on age, gender, and cancer type in determining the sample. In determining the sample size, the unknown sample calculation method and the G-Power statistics program were used. Accordingly, based on the medium effect size and assuming that there would be the same number of samples in the groups, the total number of samples to be reached at 80% power and 0.05 significance level was calculated as 128. However, it was anticipated that there could be losses during the study and the total number of samples was taken as 140. The research data were collected between April and June 2023. The criteria for inclusion in the sample in the study were; For young patients, being between 18-64 years of age, for geriatric patients, being 65 years of age and older, volunteering to participate in the study, being literate, having a diagnosis of breast, prostate, testicular, lung, colorectal, stomach, gynecological cancer, being able to maintain cognitive functions, being suitable for interview in general condition, having received the diagnosis at least 2 months ago. The exclusion criteria from the sample were determined as being under 18 years of age, not accepting to participate in the study, having a hematological cancer disease, having an expected life expectancy of less than 4 months, and having a mini-cog test result below 3.

In this study, the Patient Identification Form, ECOG Performance Score, Mini-Cog Test, Rotterdam Symptom Checklist, Rolls Royce Model Quality of Life Scale were used while collecting data. Before the study, the patients were informed about the research topic and their verbal and written consents to participate in the study were obtained. The data of the study were collected by face-to-face interviews with cancer patients. In the evaluation of the data, descriptive statistics such as number, percentage, mean and standard deviation were used. In the study, the groups' scale scores were analyzed using Chi-square, t test, Mann Whitney U, Kruskal Wallis, Bonferroni Posthoc, One-Way Variance Analysis and Spearman's Correlation tests. In the study, the results with a p value below 0.05 ($p < 0.05$) were considered statistically significant. In order to conduct the study, an ethics committee permit was obtained from the Dokuz Eylül University Faculty of Medicine Non-Interventional Research Ethics Committee with the decision number 2023/13-07.

Results

When the frequency of symptoms experienced by young and elderly cancer patients in the study was examined, it was found that they frequently experienced symptoms such as nausea-vomiting, pain, fatigue, and infection. According to the results obtained, a statistically significant difference was found between young patients and geriatric patients in terms of ECOG performance scores ($Z=-3.161$; $p<0.05$). It was found that the ECOG performance scores of young patients were lower than those of geriatric patients. In addition, a statistically significant difference was found between young patients and geriatric patients in terms of Mini-Cog Test scores ($Z=-2.043$; $p<0.05$). It was found that the Mini-Cog Test scores of young patients were higher than those of geriatric patients (Table 1).

It was determined that the total Rolls Royce Model Quality of Life Scale scores of young patients were higher than those of geriatric patients (Table 2).

Discussion

When the symptoms experienced by geriatric and young cancer patients were examined in our study, nausea and vomiting came first, fatigue came second, and pain came third in both groups. Similar to the results in our study, Kutlutürkan et al. (2019) also found that the most common symptoms experienced by geriatric

Table 1. Characteristics of Young and Geriatric Patients Regarding Medical Information

Symptom Experience	Young Patient (n=70)		Geriatric Patients (n=70)		χ^2	p
	n (%)	% (Column)	n (%)	% (Column)		
Nausea - Vomiting	34 (24,3)	48,6	27 (19,3)	38,6		
Pain	21 (15,0)	30,0	24 (17,1)	34,3		
Fire	3 (2,1)	4,3	1 (0,7)	1,4		
Fatigue	33 (23,6)	47,1	38 (27,1)	54,3		
Diarrhoea	12 (8,6)	17,1	12 (8,6)	17,1		
Constipation	17 (12,1)	24,3	13 (9,3)	18,6		
Mouth Wound	6 (4,3)	8,6	6 (4,3)	8,6		
Hair Loss	21 (15,0)	30,0	15 (10,7)	21,4		
Appetite / Weight Loss	20 (14,3)	28,6	19 (13,6)	27,1		
Infection	1 (0,7)	1,4	2 (1,4)	2,9		
Respiratory Distress	3 (2,1)	4,3	5 (3,6)	7,1		
Psychological Problems	8 (5,7)	11,4	10 (7,1)	14,3		
Sexual Problems	2 (1,4)	2,9	0	0		
Other	19 (13,6)	27,1	15 (10,7)	21,4		
	$\bar{x}$ ±SS	M (Min-Max)	$\bar{x}$ ±SS	M (Min-Max)		
ECOG Performance	0,47 ± 0,56	0 (0 - 2)	0,83 ± 0,68	1,0 (0 - 2)	**Z=-3,161**	**0,002***
Mini - Cog Test	4,96 ± 0,20	5,0 (4 - 5)	4,80 ± 0,67	5,0 (0 - 5)	**Z=-2,043**	**0,041***

Chi-Square Test, *p<0,05

Table 2. Rotterdam Symptom Checklist and Rolls Royce Model Quality of Life Scale Scores of Young and Geriatric Patients

	Young Patient (n=70)		Geriatric Patients (n=70)		z/t	p
	$\bar{x}$ ±SS	M (Min-Max)	$\bar{x}$ ±SS	M (Min-Max)		
Rotterdam Symptom Checklist						
Physical Symptoms	17,13 ± 10,22	14,0 (1 - 47)	17,26 ± 11,15	15,0 (2 - 57)	z=0,136	0,892
Psychological Symptoms	6,39 ± 5,56	5,0 (0 - 25)	4,47 ± 5,04	3,0 (0 - 21)	z=-2,494	0,013*
Activities of Daily Living	7,21 ± 4,96	7,0 (0 - 20)	11,97 ± 4,98	11,0 (3 - 24)	Z=-4,973	0,000*
Rolls Royce Model Quality of Life Scale Scores						
General Favour	27,13 ± 4,43	27,0 (18 - 35)	24,31 ± 5,39	24,0 (13 - 34)	t=3,374	0,001*
Physical Symptoms and Activity	27,57 ± 5,20	28,0 (15 - 39)	24,00 ± 4,99	24,0 (11 - 34)	t=4,145	0,000*
Sleep Disorder	10,54 ± 4,12	11,5 (3 - 15)	11,80 ± 3,76	13,0 (3 - 15)	Z=-2,011	0,044*
Appetite	7,61 ± 2,27	8,0 (2 - 10)	7,37 ± 2,16	8,0 (3 - 10)	Z=-0,845	0,398
Sexual Disorder	12,13 ± 4,98	12,0 (4 - 20)	11,44 ± 4,30	12,0 (4 - 20)	Z=-0,829	0,407
Detection Function	21,34 ± 4,63	22,0 (11 - 30)	22,31 ± 8,35	22,0 (7 - 79)	Z=-0,583	0,560
Medical Interaction	12,57 ± 2,50	13,0 (6 - 18)	11,87 ± 2,99	12,0 (4 - 16)	Z=-1,101	0,271
Social Relations and Job Performance	24,73 ± 4,60	24,5(14 - 36)	21,54 ± 4,05	21,0 (14 - 30)	Z=-4,010	0,000*
RRM QoL Scale Total	143,63 ± 21,04	144,5 (96 - 185)	134,66 ± 24,98	135,0 (70 - 195)	t=2,298	0,023*

z- Mann Withney U, t - t-test, *p<0,05

oncology patients were fatigue with 83% and pain with 62.3%, respectively. No study was found in the literature examining the fatigue of elderly and young cancer patients, and mostly the relationships between fatigue and other symptoms in geriatric patients were examined.

Symptoms trigger each other. In our study, it was found that the scores of geriatric female patients were higher than those of geriatric male patients in the psychological symptoms sub-dimension.In our study, it was determined that sleep disorders in young patients negatively affected the quality of life more than in elderly patients. When compared with the literature, they found that sleep problems affected young patients more than in elderly patients, similar to our study. In our study, it was found that both the General Well-being sub-dimension scores and the Physical

Symptoms and Activity sub-dimension scores of young patients were higher than those of geriatric patients. In our study, the General Well-being sub-dimension scores of the Rolls Royce Model Quality of Life Scale were found to be higher in young patients than in elderly patients. According to these results, it can be said that the general well-being and quality of life of elderly patients are lower compared to young patients. When the literature is examined, there are studies that support our study. When the relationship between the Rotterdam Symptom Checklist Daily Life Activity sub-dimension scores of young and elderly patients and the total scores of the Rolls Royce Model Quality of Life Scale was examined, a negative weak relationship was found in young patients, while a negative high-level relationship was found in elderly patients.

When the results were examined, it was determined that as the total scores of the daily life activities sub-dimension of both young and elderly patients increased, the total scores of the Rolls Royce Model Quality of Life Scale decreased and the quality of life decreased. However, it was found that the quality of life of elderly patients was affected more than that of young patients due to their inability to perform daily living activities. This finding is similar to the results of the study conducted by Kutlutürkan et al. (2019).

As a result; it was determined that geriatric oncology patients receiving daily chemotherapy treatment and young oncology patients experienced symptom differences and their quality of life was affected in different areas. As a suggestion; within the scope of monitoring of both populations, especially elderly cancer patients should be followed up more closely, evaluated, and individual counseling should be provided depending on their processes.

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OP - 079

Bibliometric Analysis of Research Evaluating the Use of Acupressure in the Management of Cancer Pain in the Last 20 Years

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Objective: Cancer pain is the symptom that most affects quality of life and acupressure is among the most commonly used integrative modalities for symptom management in cancer patients, especially pain. This study aims to provide the current status of acupressure interventions for cancer pain over the past 20 years, current trends and highlights for future research directions.

Materials-Methods: To collect studies on acupressure interventions for cancer pain, the Web of Science Core Collection was searched between 02.04.2025 and 25.04.2025 using the keywords "cancer or neoplasm or tumor or carcinoma", "pain" and "acupressure or acupoint pressing or ear points' pressing or auriculotherapy or acupoint massage or self-acupressure" in English. VOSviewer (1.6.20), Biblioshiny software in R Studio, and Microsoft Excel program were used for co-authorship and co-citation analysis and to create networks based on co-occurrence of keywords. In the bibliometric analysis; WoS category, document type, most published journals, number of citations, publication years, prominent authors, prominent countries and links, and most used keywords were analyzed.

Results: In the study, 191 publications were reached and 86 publications that met the inclusion criteria were analyzed. It was determined that 70% of these publications were research articles, 67.5% were nursing studies, the most publications were published in the Integrative Complementary Medicine category, the most popular journal in this field was the Journal of Clinical Oncology, the publications increased especially as of 2017, the most productive countries were the USA and China, the most linked keyword was "acupressure" and there were only 6 publications from Türkiye.

Conclusion(s): The results of this study, which revealed the current trends of acupressure interventions in the management of cancer pain in the last two decades, may play an effective role in future research for nursing professionals to integrate acupressure more effectively into the pain management of cancer patients and improve their quality of life.

Keywords: Acupressure, bibliometric analysis, cancer, pain

OP - 080

The Effect of Fatalism on Healthy Life Behaviors and Cancer Screening Perceptions in Nursing Students

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Objective: Fatalistic beliefs can influence how individuals perceive the necessity and benefits of cancer screening by affecting their beliefs about the preventability of disease. This study aimed to evaluate the effect of fatalism on nursing students' healthy lifestyle behaviours and perceptions of cancer screening.

Materials-Methods: This cross-sectional study was conducted between April 15 and May 15, 2025, in the Nursing Department of the Faculty of Health Sciences at a university. The study population consisted of 461 students enrolled in the Spring Term of the 2024–2025 academic year. A total of 288 students who were present during data collection and voluntarily agreed to participate were included in the sample. Data were collected in classroom settings using face-to-face interviews. The data of the study were collected by using Demographic Form, Multidimensional Fatalism Scale, Healthy Lifestyle Behaviour Scale, Cancer Screening Perception Scale.

Results: A significant relationship was found between the interiority and pessimism sub-dimensions of the Multidimensional Fatalism Scale and the Healthy Lifestyle Behaviour Scale ($p<0.01$). The interiority sub-dimension was positively associated with exercise ($p<0.01$), personal health responsibility ($p<0.01$), sleep ($p<0.01$), social support ($p<0.05$), and stress management ($p<0.01$). The pessimism sub-dimension was negatively associated with personal health responsibility ($p<0.01$), social support ($p<0.05$), positively associated with higher stress management, alcohol use ($p<0.01$). The chance sub-dimension was also associated with poor stress management, increased alcohol use ($p<0.01$). In terms of cancer screening perceptions, the interiority sub-dimension was positively associated with perceived severity, perceived benefits ($p<0.01$), and negatively associated with perceived barriers ($p<0.05$). The pessimism sub-dimension was associated with lower perceived benefits ($p<0.01$) and higher perceived barriers ($p<0.01$). The chance sub-dimension was positively associated with perceived sensitivity and perceived barriers ($p<0.01$), while the fatalism sub-dimension was associated only with perceived barriers ($p<0.01$).

Conclusion(s): This study revealed significant associations between nursing students' fatalistic beliefs and their healthy lifestyle behaviors and perceptions of cancer screening. Fatalism emerged as a multidimensional construct, each dimension of which affects health-related perceptions and behaviors in distinct ways. Notably, the internalism dimension—reflecting a belief in personal control over health—was positively associated with the adoption of healthy behaviors and more favorable cancer screening perceptions. In contrast, pessimism and belief in luck were associated with unhealthy behaviors such as poor stress management and alcohol, and with increased perception of barriers to cancer screening. Health education programs should therefore incorporate content designed to enhance individuals' beliefs in personal control, promote a sense of health responsibility, and develop health management skills.

Keywords: Cancer Screening Perception, Fatalism, Healthy Lifestyle Behaviors, Nursing Students

OP - 081

Preparedness for death and end of life care: Does this influence willingness of nursing students to provide palliative care?

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Objective: For student nurses, the task of caring for a dying person is a situation that creates anxiety, fear and stress, and being prepared for this process may affect their willingness to provide palliative care. In this study, it was aimed to examine the effect of preparedness for death and end-of-life care on nursing students' willingness to provide palliative care in their professional lives.

Materials-Methods: This descriptive cross-sectional study was conducted between 15 March 2025 and 15 April 2025 with 370 nursing students who were actively enrolled in the 2024-2025 academic year of Kafkas University Faculty of Health Sciences. Data were collected using the Student Information Form, Attitude Towards Death Scale and End-of-Life and Postmortem Self-Efficacy Scale. Descriptive statistical methods (mean, standard deviation, frequency, percentage), chi-square, independent groups t test, one-way variance (ANOVA) analysis and Pearson correlation analysis were used in the analysis of the data using SPSS 23.0 software.

Results: The mean total score of the ‘Attitude Towards Death’ scale was 117.65±20.8 and the mean score of the ‘End of Life and Postmortem Self-Efficacy’ scale was 58.08±17.31. The mean score of the End-of-Life and Postmortem Self-Efficacy Scale of the students who wanted to become palliative care nurses was significantly higher than the mean scores of the students who were undecided and did not want to become palliative care nurses ($p<0.05$). There was no statistically significant difference between the total and sub-dimensions of the ‘Attitude Towards Death’ scale and the desire to become a palliative care nurse ($p>0.05$).

Conclusion(s): It is important to make appropriate arrangements in the nursing education curriculum to prepare new graduate nurses academically and emotionally to provide end-of-life care.

Keywords: Death, end-of-life care, student nurse

OP - 082

Evaluation of Pain Management and Results of Patients Hospitalized in the Oncology Clinic

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Objective: This study aims the pain management of cancer patients hospitalized in the oncology clinic and to evaluate the effectiveness and results of the applied treatment methods.

Materials-Methods: This descriptive and retrospective study was conducted with 98 patients who were hospitalized in an oncology clinic between February 2024 and December 2024 and who completed a pain assessment form (total number of patients: n=687). Data were collected using the Adult Patient Identification Form and the Pain Assessment Form; descriptive statistical analyses were performed using the SPSS 26 program. Patients were educated during admission and during the pain period, assessments were made once or twice a week by a pain nurse, and follow-up was provided by the primary nurse during daily visits

Results: Demographic characteristics of the 98 patients participating in the study; 52.5% were female, 86.9% were married, and 56.6% had a bachelor's degree. The average age was 55.5. 27.5% of the patients were Turkish nationals, and 90.9% had a care partner. When the clinical characteristics were evaluated, it was seen that 18.36% of the patients were diagnosed with breast malignant neoplasm, 11.22% with colon malignant neoplasm, 36.7% were in stage 3, and 88.9% received chemotherapy treatment. It was determined that 40% of the patients were hospitalized due to pain and the average length of stay was 16 days. Regarding pain characteristics and coping methods, 65.7% of patients described their pain as “sharp,” and 40.4% as “stabbing.” In 31.3% of the cases, the pain was reported to be related to the disease process. Pain severity was rated as 0–5 in 35.3% of the patients, and 6 or above in 64.7%. Additionally, 70.7% of patients described their pain as acute.

Pain management:

12.24% of patients with an NRS score ≥8 were treated with third-step analgesics (e.g., morphine, fentanyl)

50.4% of patients with an NRS score of 6–7 received second-step analgesics (e.g., tramadol, Durogesic patch)

36.7% of patients with an NRS score ≤5 were administered first-step analgesics (e.g., paracetamol, NSAIDs).

As for non-pharmacological methods, 29.61% of the patients used suggestion techniques, while 27.63% practiced breathing exercises.

Pain control was achieved within the first hour in 39.6% of the patients, and only 1.11% of patients had uncontrolled pain. For at-home pain management, the most frequently used analgesic was Voltaren (diclofenac), used by 45.5% of the patients.

Conclusion(s): It has been determined that the treatment is effective and that the patients' pain control is provided.

Keywords: Cancer Pain, Oncology Nursing, Pain Management, symptom

OP - 083

Compliance with Acute Radiation Dermatitis Precautions and Affecting Factors in Patients Receiving Radiotherapy for Breast Cancer-A Cross-Sectional Study

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Objective: Individuals who receive radiotherapy due to breast cancer are at risk of developing acute radiodermatitis due to radiotherapy. Prevention and early diagnosis of acute radiation dermatitis are of great importance in terms of management. This study was conducted to evaluate compliance with acute radiation dermatitis precautions and affecting factors in individuals who received radiotherapy due to breast cancer.

Materials-Methods: The universe of this descriptive study consisted of individuals who received radiotherapy due to breast cancer at the Konya City Hospital Radiation Oncology Clinic between October 2024 and February 2025. No sample selection was made and 105 patients who agreed to participate in the study constituted the sample of the study. Data were collected face to face using the "Personal Information Form" and the "Acute Radiation Dermatitis Evaluation Form". Ethical approval was obtained for the conduct of the study. Data were evaluated using percentage, average, minimum, maximum, frequency analysis in SPSS 25 program.

Results: It was determined that the average age of the participants was 55.96±11.52 years, 41.9% were primary school graduates, 62.9% had breast-conserving surgery, 37.1% had modified radical mastectomy, and 83.8% had chemotherapy. It was determined that 41.9% of the participants were white-skinned, the majority (91.4%) washed the radiotherapy area, 86.7% washed the radiotherapy area only with water, and very few (6.7%) washed it every day. It was determined that 77.1% of the participants did not use moisturizer. It was determined that 12.4% of the participants used St. John's wort oil. It was determined that 29.5% of the participants had a BMI of 30 and above. It was determined that 31.4% of the participants developed grade 1, 15.2% grade 2, and 4.8% grade 3 radiodermatitis. It was observed that there was no statistically significant relationship between the participants' radiodermatitis development status and BMI (t= -0.418; p= 0.67), skin color (X2= 4.269; p= 0.11), type of surgery (X2= 0.404; p= 0.52), washing frequency (X2= 5.837; p= 0.32), and moisturizer use (X2= 3.430; p= 0.33).

Conclusion(s): Evidence was obtained regarding the precautions and practices taken for acute radiodermatitis in individuals receiving radiotherapy due to breast cancer. It was observed that compliance with washing the radiotherapy area was good, but the use of moisturizers was not at the desired level. Further studies are recommended to increase compliance with the use of moisturizers.

Keywords: Breast cancer, acute radiodermatitis, prevention

OP - 084

Cognitive Dysfunction After Chemotherapy in Newly Diagnosed Lung Cancer Patients

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Objective: Advances in cancer treatments have significantly prolonged survival for patients with cancer. Many patients experience cognitive changes as a side effect of both cancer and cancer treatment. These cognitive changes negatively affect the quality of life of patients (1). Recognizing the cognitive changes will make it easier for the patient to cope with and adapt to the situation. With this study, it was aimed to define cognitive impairments that may develop after chemotherapy in lung cancer patients, raise awareness about cognitive changes that will develop in patients, and have a positive reflection on the quality of patient care.

Materials-Methods: This descriptive cross-sectional study was planned to identify cognitive impairments that may develop after chemotherapy in lung cancer patients. This research was carried out on newly diagnosed lung cancer patients, who are being followed up by Gazi University Hospital Oncology Department, and receiving the first cure chemotherapy between September 15, 2020, and November 15, 2020. "Cognitive Dysfunction Data Collection Form after Chemotherapy in Newly Diagnosed Lung Cancer Patients," "Hospital Anxiety and Depression Scale, (HAD)" and "Montreal Cognitive Assessment Scale (MoCA)" were used. The second evaluation of the patients was made in the sixth month of the first evaluation, and the results were compared.

Results: Twenty-six patients were included in the initial phase of the study. At the sixth-month follow-up, four of the patients were found to have died, and one of them had high HAD scores (Anxiety score: 15, Depression score: 15), so they were excluded from the study, and 21 patients were evaluated. In this study, it was observed that the MoCA scale scores of the patients with lung cancer who received chemotherapy at the 6th-month follow-up were decreased compared to the scores before the drug administration. The median value of the Montreal Cognitive Assessment score was 23 (IQR 25-75=22-25) in the first measurement and 22 (IQR 25-75=21-23) in the second measurement, and the difference was statistically significant (p=0.008).

Conclusion(s): In this study, cognitive dysfunction was observed after chemotherapy in lung cancer patients receiving chemotherapy.

Keywords: chemotherapy, cognitive impairment, lung cancer

OP - 085

Empowerment of Cancer Patients in Nursing: A Bibliometric Analysis

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Objective: Empowerment is a multidimensional concept that deals with people's development processes to overcome their weaknesses, recognize their strengths and take control of their own lives (Eskildsen et al., 2017; Burke et al., 2019). Due to improved treatment options and increased survival rates, cancer patients are either overcoming their disease or living with it for long periods of time (Johnsen et al.,2017). Research emphasizes that interventions that involve and engage patients and support patient empowerment increase cancer patients' satisfaction, quality of life and reduce the cost of treatment (Anderson et al.,2009; Jerofke et al.,2014; Hibbard and Greene,2013; McCorkle et al.2011). Therefore, the aim of this study was to conduct a bibliometric analysis of research on cancer patient empowerment in nursing, to visualize global research trends in this field, and to identify the journals, authors, and countries with the most publications.

Materials-Methods: The data of articles published until May 10, 2025 from the Web of Science database were used in the study. The analysis included 347 publications that met the research criteria and was conducted using the Vosviewer program.

Results: When the annual scientific outputs of nursing studies on empowerment in nursing were analyzed, it was found that the most productive journals were Journal of Clinical Nursing (n=18), Journal of Perianesthesia Nursing (n=13) and Journal of the American Geriatrics Society (n=13). It was determined that the highest number of publications on the subject (n=35) was made in 2021, publications have increased in the last 13 years and the author who published the most was Christine Miaskowski (n=8). It was determined that a total of 5,112 citations were made to studies on empowerment, 4,968 citations were made when self-citations were removed, and the most cited study received 169 citations. As a result of the analysis, 51 journals in which publications on empowerment of cancer patients in the field of nursing were identified. In these journals, the highest number of publications were found in Cancer Nursing (n=57), European Journal of Oncology Nursing (n=55) and Oncology Nursing Forum (n=44), respectively. The countries with the highest number of publications were USA, China and Australia. The most commonly used keywords were cancer, self management and nursing.

Conclusion(s): The results of the analysis show that studies on empowerment of cancer patients are increasing day by day. This bibliometric study provides a comprehensive and integrative overview as well as global enlightenment on cancer patient empowerment in nursing.

Keywords: Cancer patient, nursing, empowerment

OP - 086

Investigation of Chemotherapy-Related Symptoms, Sleep Quality, and Dysfunctional Beliefs and Attitudes Regarding Sleep

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Objective: This study was conducted to investigate chemotherapy-related symptoms, sleep quality, and dysfunctional beliefs and attitudes regarding sleep.

Materials-Methods: The universe of this descriptive and correlational study consisted of individuals who received chemotherapy at the Outpatient Chemotherapy Unit of Private Medova Hospital in Konya between June 2024 and April 2025. The sample of the study consisted of 100 participants in total with G*Power 3.1., 9.7 program with □ = 0.05 and 95% power and 0.3 effect. Data were collected face to face using the "Introductory Information Form", "Pittsburgh Sleep Quality Index (PSQI)", "Memorial Symptom Assessment Scale (MSAS)", "Dysfunctional Beliefs and Attitudes About Sleep Scale (DYSAT)". Ethical approval was obtained. Data were evaluated in SPSS statistical package programs such as IBM SPSS Statistics Standard Concurrent User V 25 (IBM Corp., Armonk, New York, USA). Descriptive statistics were given as unit number, percentage, mean-standard deviation, median and minimum, maximum values. Parametric and nonparametric tests were used for comparative tests. Relationships between numerical variables were examined with Pearson correlation coefficient. $p<0.05$ level was considered statistically significant.

Results: It was determined that the average age of the participants was 49.46; 11.07 years, 75% were female, 81% were married, 42% had a bachelor's degree. It was determined that 48% of the participants were diagnosed with breast cancer, 24% received radiotherapy before chemotherapy, and 51% received surgical treatment before chemotherapy. It was determined that the participants experienced fatigue (68%), feeling sad (67%), insomnia (65%), and worry (64%) the most, respectively. The participants' DYSAT mean score was 5.59 ±1.59 points, their PSQI mean score was 9.43±3.37 points, and their MSAS mean score was 1.35±0.74 points. It was determined that there was a positive and significant relationship between the PSQI and MSAS scores ($r=0.414$; $p=0.001$). There was no significant relationship between the PSQI and DYSAT scores ($r=0.021$; $p=0.83$).

Conclusion(s): This study provided evidence that there was no significant relationship between sleep quality and dysfunctional beliefs and attitudes about sleep, and that there was a significant relationship between sleep quality and chemotherapy-related symptoms. It is recommended that further studies be conducted to evaluate the effects of interventions aimed at reducing symptoms and improving sleep quality in individuals receiving chemotherapy for cancer.

Keywords: chemotherapy, symptom, sleep quality, sleep belief, sleep attitude

OP - 087

The Relationship Between E-Health Literacy and Self-Efficacy in Oncology Patients

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Objective: From diagnosis onward, cancer patients experience a significant need for information about their disease, treatment options, and necessary lifestyle changes. This need often results in increased digital information-seeking behaviors. Literature shows a positive association between e-health literacy and self-efficacy, especially in managing chronic conditions. Higher e-health literacy enables patients to access accurate information, potentially strengthening their self-efficacy in coping with illness. This study aims to examine the relationship between e-health literacy and self-efficacy in individuals diagnosed with cancer.

Materials-Methods: This descriptive and correlational study included 150 cancer patients aged 18 or older, diagnosed at least one month prior, aware of their diagnosis, and receiving treatment at a university hospital's oncology unit. A non-probability sampling method was used. Data were collected through a "Personal Information Form," the "E-Health Literacy Scale (e-HLS)," and the "Self-Efficacy / Effectiveness Scale." Ethical approval was obtained from the Acıbadem University Medical Research Ethics Committee (decision number: 2023-05/148, dated 24.03.23), and institutional permissions were secured.

Results: The mean age of participants was 41.09 ± 11.64 years. No statistically significant correlation was found between total e-health literacy and self-efficacy scores or subscales ($p > 0.05$). However, a significant difference was observed in e-health literacy scores based on gender ($t = 2.732$; $p = 0.007$) and education level ($KW = 11.942$; $p = 0.008$). The average e-health literacy score was moderate ($\bar{X} = 28.6 \pm 5.2$).

Conclusion(s): While no significant relationship was found between e-health literacy and self-efficacy levels, gender and education level were associated with e-health literacy scores. Individuals with higher education tended to have better e-health literacy. These findings suggest that sociodemographic factors may influence individuals' ability to access and utilize online health information. Therefore, community-based e-health literacy training programs are recommended, especially for women and those with lower education levels. Future studies should further explore the relationship between e-health literacy and self-efficacy among diverse age groups, diagnoses, and socioeconomic contexts.

Keywords: Oncology, E-Health Literacy, Self-Efficacy

OP - 088

Assessing Virtual and Digital Options to Lower Stress and Enhance the Quality of Life for Cancer Patients and Their Families

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Objective: Cancer is a complex condition that imposes a range of physical, psychological, and social challenges on patients and their family caregivers. This study aims to systematically evaluate the effectiveness, acceptability, and impact of digital and virtual applications on the quality of life of cancer patients and their caregivers, with a particular focus on anxiety reduction.

Materials-Methods: This systematic review synthesizes findings from recent academic publications addressing a variety of digital and virtual solutions. These include telemedicine platforms, mobile health (mHealth) applications, artificial intelligence-based systems, and social media platforms. The selected studies were reviewed for their focus on psychological support, symptom management, anxiety reduction, and treatment monitoring.

Results: The findings indicate that digital interventions provide significant benefits in delivering psychological support, managing symptoms, reducing anxiety, and monitoring treatment processes. In particular, telemedicine and mHealth applications have been shown to reduce caregiver burden, alleviate anxiety, and improve communication between patients and caregivers in palliative care settings. Artificial intelligence-supported systems demonstrate promising potential in improving clinical outcomes through personalized diagnostics and treatment recommendations. Furthermore, while social media platforms offer opportunities for information sharing and social support, they also pose risks related to misinformation. Several interventions directly target anxiety symptoms in both patients and caregivers. Nature-based virtual reality (VR) environments and guided digital mindfulness sessions have shown measurable reductions in stress and anxiety scores. Additionally, platforms integrating real-time monitoring with psychoeducational support have contributed to improved emotional resilience.

Conclusion(s): Digital and virtual solutions are generally well-accepted and positively perceived by both patients and caregivers. However, for broader implementation and more effective utilization, factors such as digital literacy, access to technology, and user education must be addressed. There is also a need for large-scale and controlled studies to better understand the long-term effectiveness of these interventions. By incorporating targeted anxiety-reduction strategies, these interventions offer a holistic approach to psychosocial care. Multidisciplinary collaborations and the development of comprehensive training programs are recommended to optimize their adoption and sustained use.

Keywords: Digital health solutions, Virtual interventions, Cancer treatment, Anxiety reduction, Quality of life

OP - 089

The Effect of Music Interventions on Fatigue and Anxiety in Cancer Patients Receiving Radiotherapy: A Systematic Review & Meta-Analysis of Randomized Controlled Trials

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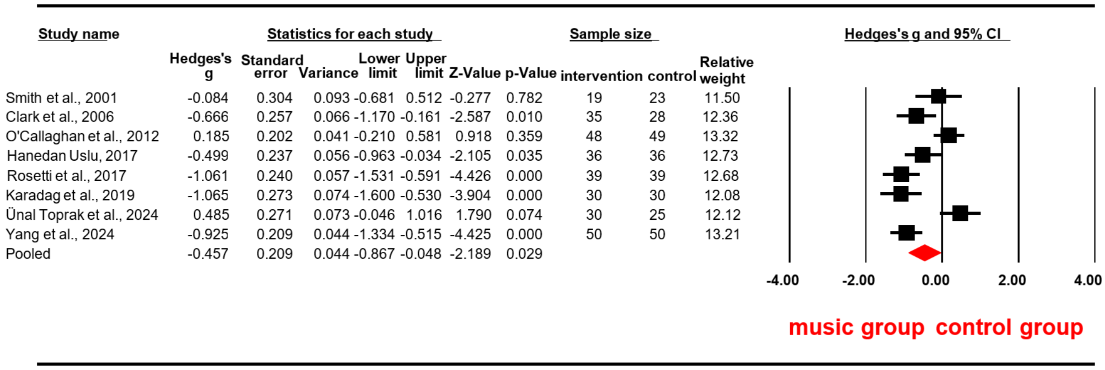
Objective: Radiotherapy is a common cancer treatment often linked to anxiety and fatigue, which can impair patients' well-being and treatment adherence. Identifying effective, accessible, and non-pharmacological methods to manage these symptoms is essential in oncology care. This study aimed to evaluate the effectiveness of music-based interventions on fatigue and anxiety in cancer patients undergoing RT.

Materials-Methods: This systematic review and meta-analysis followed PRISMA 2020 guidelines and was registered in PROSPERO (CRD42024570969). A comprehensive search of seven databases was conducted up to December 2024. Randomized controlled trials evaluating music-based interventions for anxiety and fatigue in cancer patients undergoing radiotherapy were included. Risk of bias was assessed using RoB 2, and evidence certainty was graded using GRADE. Meta-analysis was conducted using a random-effects model, with Hedge's g for effect sizes, I^2 and Q statistics for heterogeneity, and Egger's test for publication bias.

Results: Music-based interventions demonstrated a statistically significant moderate effect on reducing anxiety in cancer patients undergoing radiotherapy (Hedges's g = -0.457, 95% CI = -0.867 to -0.048; p = 0.029), while no significant effect was found for fatigue (Hedges's g = -0.202, 95% CI = -0.812 to 0.408; p = 0.516) (Figure 1). Subgroup analyses indicated that patient-selected music (p = 0.036), shorter session durations (<=15 minutes; p = 0.009), and multiple-session interventions (p < 0.001) were significantly more effective in reducing anxiety (Figure 2).

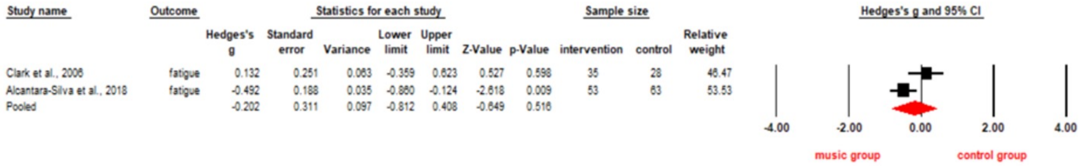
Conclusion(s): This meta-analysis shows that music-based interventions effectively reduce anxiety in cancer patients undergoing radiotherapy. Personalized and repeated sessions enhance outcomes, supporting their use in clinical nursing practice.

Keywords: cancer, meta-analysis, music-based interventions, symptom management, radiotherapy



Study name	Hedges's g	Standard error	Variance	Lower limit	Upper limit	Z-Value	p-Value	intervention	control	Relative weight
	Statistics for each study							**Sample size**		
Smith et al., 2001	-0.084	0.304	0.093	-0.681	0.512	-0.277	0.782	19	23	11.50
Clark et al., 2006	-0.666	0.257	0.066	-1.170	-0.161	-2.587	0.010	35	28	12.36
O'Callaghan et al., 2012	0.185	0.202	0.041	-0.210	0.581	0.918	0.359	48	49	13.32
Hanedan Uslu, 2017	-0.499	0.237	0.056	-0.963	-0.034	-2.105	0.035	36	36	12.73
Rosetti et al., 2017	-1.061	0.240	0.057	-1.531	-0.591	-4.426	0.000	39	39	12.68
Karadag et al., 2019	-1.065	0.273	0.074	-1.600	-0.530	-3.904	0.000	30	30	12.08
Ünal Toprak et al., 2024	0.485	0.271	0.073	-0.046	1.016	1.790	0.074	30	25	12.12
Yang et al., 2024	-0.925	0.209	0.044	-1.334	-0.515	-4.425	0.000	50	50	13.21
Pooled	-0.457	0.209	0.044	-0.867	-0.048	-2.189	0.029			

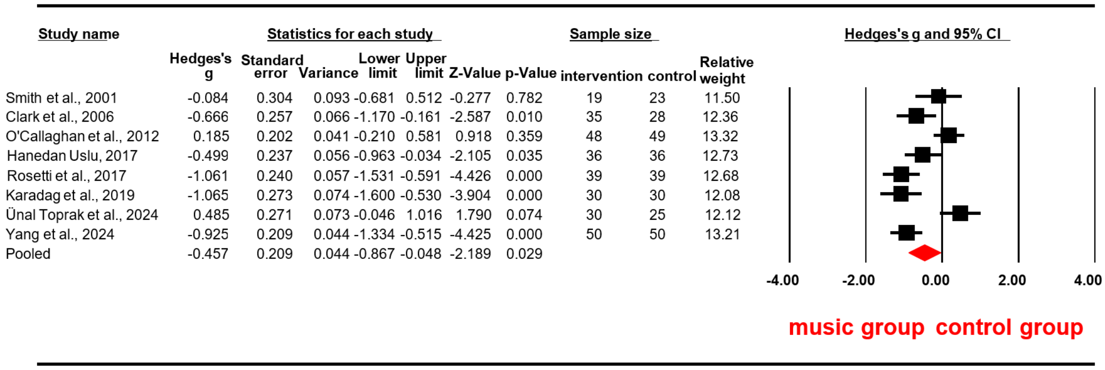
a) the effect of music intervention on anxiety



Study name	Outcome	Hedges's g	Standard error	Variance	Lower limit	Upper limit	Z-Value	p-Value	intervention	control	Relative weight
		Statistics for each study							**Sample size**		
Clark et al., 2006	fatigue	0.132	0.251	0.063	-0.359	0.623	0.527	0.598	35	28	46.47
Alcantara-Silva et al., 2018	fatigue	-0.492	0.188	0.035	-0.860	-0.124	-2.618	0.009	53	63	53.53
Pooled		-0.202	0.311	0.097	-0.812	0.408	-0.649	0.516			

b) the effect of music intervention on fatigue

Figure 1. Forest plots. a) Anxiety b) Fatigue



Study name	Statistics for each study							Sample size		Relative weight
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O'Callaghan et al., 2012	0.185	0.202	0.041	-0.210	0.581	0.918	0.359	48	49	13.32
Hanedan Uslu, 2017	-0.499	0.237	0.056	-0.963	-0.034	-2.105	0.035	36	36	12.73
Rosetti et al., 2017	-1.061	0.240	0.057	-1.531	-0.591	-4.426	0.000	39	39	12.68
Karadag et al., 2019	-1.065	0.273	0.074	-1.600	-0.530	-3.904	0.000	30	30	12.08
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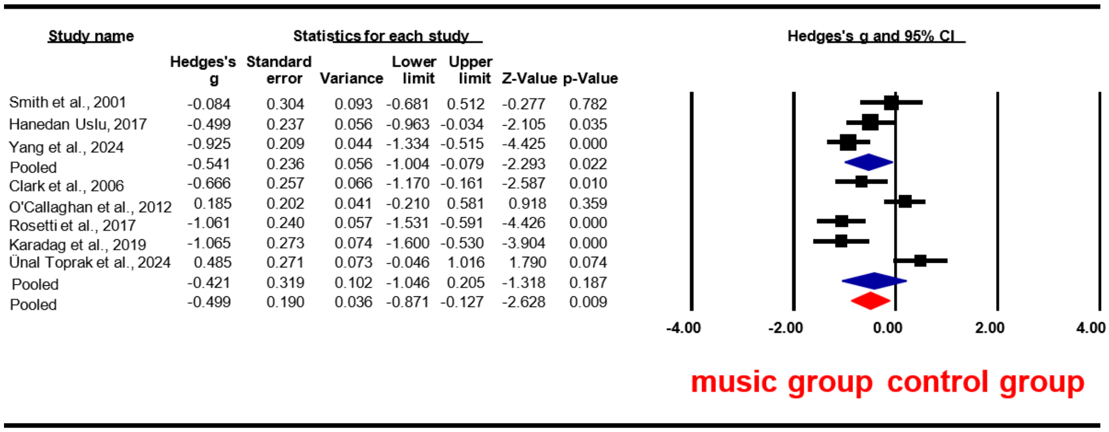
Yang et al., 2024	-0.925	0.209	0.044	-1.334	-0.515	-4.425	0.000	50	50	13.21
Pooled	-0.457	0.209	0.044	-0.867	-0.048	-2.189	0.029			

a) Outcomes of the impact of music selection



Study name	Statistics for each study						
	Hedges's g	Standard error	Variance	Lower limit	Upper limit	Z-Value	p-Value
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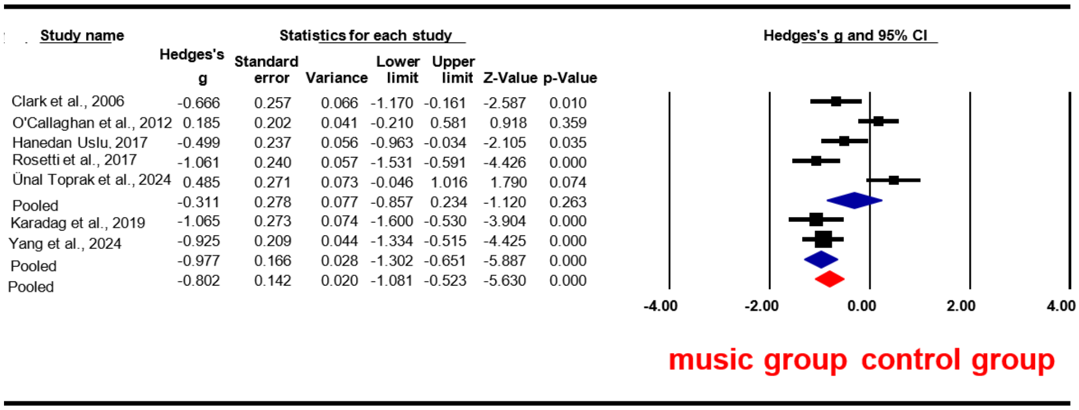
Hanedan Uslu, 2017	-0.499	0.237	0.056	-0.963	-0.034	-2.105	0.035
Yang et al., 2024	-0.925	0.209	0.044	-1.334	-0.515	-4.425	0.000
Pooled	-0.541	0.236	0.056	-1.004	-0.079	-2.293	0.022
Clark et al., 2006	-0.666	0.257	0.066	-1.170	-0.161	-2.587	0.010
O'Callaghan et al., 2012	0.185	0.202	0.041	-0.210	0.581	0.918	0.359
Rosetti et al., 2017	-1.061	0.240	0.057	-1.531	-0.591	-4.426	0.000
Karadag et al., 2019	-1.065	0.273	0.074	-1.600	-0.530	-3.904	0.000
Ünal Toprak et al., 2024	0.485	0.271	0.073	-0.046	1.016	1.790	0.074
Pooled	-0.421	0.319	0.102	-1.046	0.205	-1.318	0.187
Pooled	-0.499	0.190	0.036	-0.871	-0.127	-2.628	0.009

b) Impact of music duration



Study name	Statistics for each study						
	Hedges's g	Standard error	Variance	Lower limit	Upper limit	Z-Value	p-Value
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Hanedan Uslu, 2017	-0.499	0.237	0.056	-0.963	-0.034	-2.105	0.035
Rosetti et al., 2017	-1.061	0.240	0.057	-1.531	-0.591	-4.426	0.000
Ünal Toprak et al., 2024	0.485	0.271	0.073	-0.046	1.016	1.790	0.074
Pooled	-0.311	0.278	0.077	-0.857	0.234	-1.120	0.263
Karadag et al., 2019	-1.065	0.273	0.074	-1.600	-0.530	-3.904	0.000
Yang et al., 2024	-0.925	0.209	0.044	-1.334	-0.515	-4.425	0.000
Pooled	-0.977	0.166	0.028	-1.302	-0.651	-5.887	0.000
Pooled	-0.802	0.142	0.020	-1.081	-0.523	-5.630	0.000

c) Outcomes of the impact of number of music session

Figure 2. Forest Plots. Subgroup Meta Analysis Results for Anxiety a) Selection of music b) Duration of music c) Number of music sessions

SECTION 2

POSTER PRESENTATIONS

PP - 001

Investigation of the Effect of Oncology Education Program on Symptom Management of Newly Diagnosed Cancer Patients Before Chemotherapy: ‘A City Hospital Example’

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Objective: The aim was to determine the effect of individual education given to patients on the frequency, severity and degree of discomfort in controlling the symptoms experienced by newly diagnosed cancer patients after chemotherapy.

Materials-Method: In this randomized controlled study planned as an experimental design with an experimental control group, 70 patients were included in the experimental group and 70 patients in the control group. The data obtained by filling in the demographic information form and the 'Chemotherapy Symptom Assessment Scale' were analyzed with the SPSS21.0 package program. Basic statistics such as frequency and percentage were used in the analysis of the data. Chi-square analysis was used to compare the research findings. Face-to-face education support was provided to the patients in the experimental group by a chemotherapy education nurse, dietitian and psychologist.

Results: Of the patients in the experimental group who participated in the patient information training, 85.7% stated that face-to-face training was very beneficial in coping with the side effects of chemotherapy, 12.9% stated that it was somewhat beneficial, and 1.4% stated that it was very beneficial. Of the patients in the experimental group who participated in the patient education, 95.7% stated that face-to-face training was an adequate method for coping with the side effects of chemotherapy, but 4.3% stated that it was not an adequate method. 95.7% of the patients stated that they were very satisfied with the face-to-face training.

Conclusion(s): It was observed that patients were more conscious in the management of possible symptoms of chemotherapy after the education, where they could express themselves comfortably, find answers to their questions, and their fears and concerns were eliminated, and it was reported by nurses serving in this field that patients' trust and compliance with the treatment increased.

Keywords: Chemotherapy, Education, Symptom Management

PP - 002

Compassionate Care in Pediatric Oncology and the Effects of Fear of Compassion in Nurses: A Literature Review

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This review aims to summarize the effects of compassionate care in pediatric oncology and the impact of compassion fear in nurses. Pediatric oncology is a field that not only aims to improve children's physical health but also takes into account their emotional and psychological needs. Compassionate care is an integral part of this process, and the role of nurses is not limited to providing medical care but also involves emotionally supporting the children, establishing an empathetic bond, and alleviating their psychological symptoms. However, according to findings in the literature, nurses face difficulties in providing compassionate care, particularly in emotionally draining situations such as loss and death, where they tend to avoid forming emotional attachments. At this point, the concept of the fear of compassion arises. The fear of compassion refers to nurses avoiding deep emotional connections, which can lead to a decrease in the quality of care provided. The literature suggests that this fear operates as a self-protective mechanism, leading to challenges in delivering professional care. In this context, this fear, which negatively affects the ability to provide compassionate care, can lead to emotional and psychological burnout in nurses. Especially in end-of-life care, nurses are observed to be emotionally deeply engaged, and this interaction often triggers empathetic responses in them. Nurses try to strike a balance between professionalism and compassion when forming emotional bonds with children at the end of life. It is emphasized that providing compassionate care becomes a challenge for nurses, especially when witnessing death and loss, as it deeply affects them emotionally. Many nurses have expressed that they try to limit their emotional attachment to avoid being overly affected by these experiences. Nurses need psychological support to cope with these challenges, highlighting the importance of support systems. It is pointed out that compassionate care cannot be achieved solely through individual efforts of nurses but must be supported at an institutional level. Key factors such as family involvement, interdisciplinary collaboration, sufficient resources, and psychological support are crucial to maintaining the quality of care. In conclusion, for compassionate care to be provided in pediatric oncology, nurses need to develop the ability to cope with the fear of compassion. This process relies not only on the individual efforts of nurses but also on institutional support and appropriate working conditions. The entire healthcare team and institutions must support nurses to build the emotional resilience needed to sustain compassionate care.

Keywords: cancer, pediatric oncology nursing, compassionate care, fear of compassion

PP - 003

Spiritual Well-Being and Quality of Life in Caregivers of Cancer Patients: A Systematic Review of Postgraduate Theses

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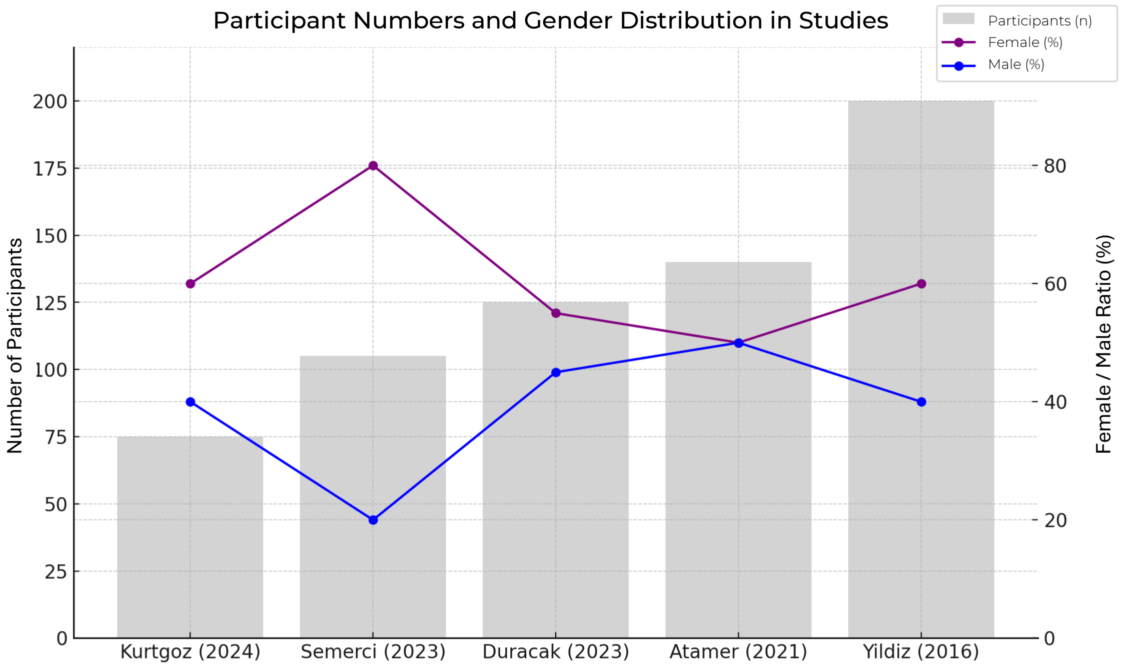
Objective: The aim of the research is to comprehensively examine postgraduate thesis studies in the field of nursing regarding the relationship between spiritual well-being and quality of life of caregivers of cancer patients.

Materials-Method: This research was conducted as a systematic review study. The PRISMA method was used to select the theses to be included in the study. As a result of the scanning conducted in the Turkish Council of Higher Education National Thesis Center database between January 20, 2025 and February 9, 2025, with the keywords "caregivers," "spiritual well-being" and "quality of life", 20 theses were reached. Theses published between 2015 and 2025, written in Turkish and whose full text was accessible, were included in the scope of the research.Theses that did not meet the criteria determined in terms of duplications and content appropriateness were excluded from the scope of the study and the remaining 5 theses were included in the research. These theses are categorized in terms of the type of thesis, the distribution of the studies by year, the measurement tools used, the institutions in which they were conducted, the region where the research was conducted and the sample characteristics. After the obtained data were transferred to the computer environment, the number was evaluated using descriptive statistical methods such as percentage.



Results: When the studies are examined, it is seen that the Yıldız (2016) study has the largest sample (200 individuals), while the Kurtgoz (2024) study was carried out with the smallest sample (42 individuals). The female ratio was found to be the highest (84.62%) in the Semerci (2023) study and the lowest (43%) in the Atamer (2021) study. The proportion of men is the highest in Atamer (2021) (57%), the lowest in Semerci (2023) (15.38%). These differences, in particular, indicate that caregivers are mostly women. Studies have shown that spiritual support increases the spiritual well-being of patients, while caregivers improve the quality of life. It has been determined that the burden of care and depression are high, but the burden of care decreases as spiritual well-being increases.

Conclusion(s): This systematic review shows that moral support is a critical requirement for cancer patients and caregivers. Gender distribution differences reveal that caregivers are mostly women. It is proposed to strengthen moral support mechanisms in order to reduce the burden of care and improve the quality of life.

Keywords: Cancer, caregivers, spiritual well-being, quality of life, nursing

PP - 004

Intestinal Microbiota and Microbiota Management in Patients with Microsatellite Instability High Colorectal Cancer Receiving Pembrolizumab Therapy

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Due to the loss of genetic stability, microsatellite instability-high (MSI-high) colorectal cancer develops as epithelial cells in the mucosa of the colon and rectum transform into malignant cells due to a defect in DNA repair mechanisms. These tumors are characterized by a high mutation burden, the presence of neoantigens, and intense infiltration of CD8+ T cells, making them sensitive to immunotherapies. Consequently, they exhibit high sensitivity to pembrolizumab while tending to resist conventional 5-FU-based chemotherapy. Currently, the anti-PD-1 antibody pembrolizumab, one of the immune checkpoint inhibitors, is recommended as the first-line treatment for patients diagnosed with MSI-high colorectal cancer.

These treatments are known to induce colitis by triggering inflammatory processes in the intestinal mucosa. Additionally, patients with colorectal cancer experience various pathogenetically associated changes in their gut microbiota. For all these reasons, the gut microbiota of MSI-high colorectal cancer patients undergoing pembrolizumab treatment is disrupted. Dysbiosis leads to adverse effects such as diarrhea and colitis, which negatively impact the patients' quality of life. Therefore, managing the gut microbiota in these patients is crucial.

Although pharmacological treatments are recommended for managing diarrhea in patients receiving pembrolizumab, the side effects of these drugs increase the symptom burden in cancer patients. Therefore, it is essential to investigate non-pharmacological treatments in the field of nursing that do not exacerbate symptom burden or cause side effects in patients with MSI-high colorectal cancer undergoing pembrolizumab treatment.

In the literature, interventions that have been shown to influence the microbiota of cancer patients receiving various immune checkpoint inhibitor therapies include prebiotic and probiotic applications, dietary modifications, and fecal microbiota transplantation. However, applying these previously demonstrated interventions specifically to patients diagnosed with colorectal cancer, conducting further studies on the subject, and exploring new interventions to regulate the gut microbiota through preclinical and clinical research could positively impact the quality of life and reduce the symptom burden of MSI-high colorectal cancer patients undergoing pembrolizumab treatment.

In light of this information, the aim of this review is to compile up-to-date literature findings to enable nurses to incorporate appropriate interventions for regulating the gut microbiota into care plans for MSI-high colorectal cancer patients receiving pembrolizumab treatment, and to examine studies conducted on gut microbiota in these patients.

Keywords: colorectal cancer, immunotherapy, microbiota, nursing

PP - 005

Digital Transformation In Healthcare: Breast Cancer Care with AI-Supported Clinical Decision Systems

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Artificial intelligence (AI)-supported clinical decision systems are computational systems that leverage big data analytics, machine learning, and deep learning algorithms to assist healthcare professionals in diagnosis, treatment, and patient management processes. These systems contribute to the delivery of healthcare services in a faster, more reliable, and efficient manner. This review examines the role of AI-supported clinical decision systems in breast cancer nursing, highlighting the opportunities they offer and the challenges encountered.

AI enhances the clinical decision-making processes of nurses in breast cancer management by supporting the development of personalized care plans and improving patient management, thereby contributing to resource optimization. AI systems serve as crucial tools in patient assessment, symptom management, and medication administration. By reducing nurses' workload and enhancing time efficiency, these systems enhance the effectiveness and quality of nursing care. Additionally, AI-supported digital health platforms streamline patient education and counseling processes. Moreover, AI-powered diagnostic algorithms provide high precision in radiological image analysis, facilitating early diagnosis. Risk prediction models enable the development of individualized care plans and the optimization of treatment processes. However, the implementation of AI-supported systems also presents technical, ethical, and compliance challenges. The reliability of these systems depends on the quality of the datasets used; incomplete or biased data can lead to inaccurate diagnoses. Furthermore, the lack of transparency in AI algorithms' decision-making processes may reduce healthcare professionals' trust in these systems. Protecting patient privacy and ensuring data security within ethical frameworks remain critical challenges that need to be addressed.

While AI-supported systems contribute to the enhancement of patient management in breast cancer nursing, certain technical and ethical issues must be resolved. Primarily, high-quality data management should be ensured, algorithms should be improved, and data security and transparency should be enhanced for AI models to function more reliably. To facilitate nurses' adoption and integration of these systems into care practices, both theoretical and practical training programs should be organized, awareness should be raised, and adaptation to AI systems should be encouraged. Initiatives should be undertaken to inform and raise awareness among patients to foster trust in AI-supported healthcare services.

Keywords: Clinical Decision Support Systems, Breast Cancer Nursing, Artificial Intelligence, Digital Health

Introduction

Breast cancer is the most commonly diagnosed cancer among women worldwide, and its incidence continues to rise each year. Early diagnosis and effective treatment methods play a critical role in reducing breast cancer-related mortality rates (Wei et al., 2021; Zhou et al., 2023). The management of breast cancer is a complex process that requires a multidisciplinary approach, with nurses playing a vital role in this continuum of care (Yala et al., 2021; Shah et al., 2022). In recent years, advancements in digitalization and data analytics technologies in healthcare have led to the emergence of new approaches in breast cancer management. One such development is the integration of artificial intelligence (AI)-assisted clinical decision support systems into healthcare services (Chen et al., 2021; Zhou et al., 2023).

AI-assisted systems help optimize clinical decision-making processes by analyzing large datasets. Through machine learning and deep learning algorithms, high levels of accuracy can be achieved in disease risk prediction, early diagnosis, treatment planning, and prognosis estimation (Zhang et al., 2018; Conant et al., 2022). The integration of AI into healthcare not only enhances diagnostic and treatment processes but also brings significant transformations to nursing care services. For nurses, clinical decision support systems are used in various areas such as patient assessments, symptom management, medication administration, and patient education (Hung et al., 2019; Daly et al., 2020). These technologies help reduce nurses' workload and support more effective and faster decision-making. In addition, digital solutions such as wearable devices and mobile health applications contribute to the development of personalized care plans by enabling remote patient monitoring (Fu et al., 2018; Imai et al., 2019; Fang et al., 2021).

This article examines the role of AI-assisted clinical decision support systems in breast cancer nursing, their potential contributions to care quality, and how they can transform nursing practices. Moreover, the opportunities presented by AI technologies and the ethical, technical, and practical challenges encountered in their effective use are discussed in detail.

The Use of Artificial Intelligence Technologies in Breast Cancer Management

AI-assisted systems play a significant role in the management of breast cancer, particularly in early diagnosis, personalized treatment planning, patient monitoring, and effective care processes (Zhou et al., 2023). Through big data analytics and machine learning algorithms, AI enhances the accuracy and speed of healthcare services while significantly improving patient safety (McKinney et al., 2020).

Enhancing Early Diagnosis: AI systems improve diagnostic processes by increasing the accuracy of early breast cancer detection (Zhang et al., 2018; Conant et al., 2022). Specifically, they reduce error rates in the analysis of mammography images, thereby minimizing false positives and false negatives. As a result, patients receive earlier and more accurate diagnoses, allowing for timely and appropriate treatment (Conant et al., 2022). Image processing algorithms and machine learning models evaluate radiological data to support risk prediction and establish early warning systems (Yala et al., 2021). Studies have shown that AI-assisted systems can achieve lower error rates in breast cancer diagnosis compared to human radiologists (McKinney et al., 2020).

Personalized Treatment Approaches: AI algorithms enable the development of personalized treatment plans by analyzing patients' genetic profiles, medical histories, and symptoms (Fu et al., 2018; Yala et al., 2021). This facilitates the selection of treatment strategies tailored to individual patient characteristics, preventing unnecessary interventions and optimizing the treatment process. Electronic health records and clinical decision support systems contribute to the creation of individualized care plans based on patient risk profiles (Fang et al., 2021; Fu et al., 2022). By improving diagnostic accuracy and minimizing erroneous results, AI provides significant advantages in terms of both patient safety and clinical decision-making.

Remote Patient Monitoring: AI-supported wearable devices and mobile health applications enhance the remote monitoring of breast cancer patients (Imai et al., 2019; Fang et al., 2021). Smart sensors continuously track data such as heart rate, blood pressure, sleep patterns, and physical activity, providing nurses with real-time health information. These systems analyze the collected data to detect abnormal changes, enabling early intervention (Xu et al., 2020; Shah et al., 2022). Consequently, the risk of complications is reduced while patients' health status is continuously monitored.

Maintaining Effective and Efficient Care: AI systems help optimize care processes by reducing nurses' workload. Intelligent scheduling systems improve resource efficiency by organizing care timing (Hung et al., 2019; Daly et al., 2020). Additionally, by automating routine tasks, they allow nurses to focus more on direct patient care (Daly et al., 2020). AI-assisted clinical decision support systems enhance patient safety and improve healthcare delivery by enabling healthcare professionals to make more informed decisions.

The Use of AI-Assisted Clinical Decision Support Systems in Breast Cancer Nursing

Artificial intelligence (AI)-assisted systems are profoundly transforming nursing practices within breast cancer treatment and care processes by strengthening clinical decision-making. These systems enable nurses to take more active roles in implementing treatment plans, managing symptoms, supporting treatment adherence, and delivering personalized care during the post-diagnostic phase (Fang et al., 2021; Chen et al., 2021). In particular, big data analytics and AI algorithms support evidence-based and informed decisions in critical areas such as symptom monitoring, prevention of treatment side effects, patient education, and remote care (Fu et al., 2018).

Data obtained from mobile health applications and wearable devices contribute to the early detection of changes during the treatment process and assist nurses in planning timely interventions (Imai et al., 2019). Moreover, AI systems support the creation of individualized care plans by providing data-driven insights that enhance the effectiveness of patient education and counseling services (Hung et al., 2019). Additionally, AI technologies strengthen a holistic approach to care by identifying psychosocial risks early on, contributing significantly to patient safety and quality of life (Xu et al., 2020). While reducing the physical, cognitive, and emotional burden on nursing services, AI systems also improve patient safety, the accuracy of clinical decisions, and continuity of care. These systems offer innovative solutions in areas such as risk assessment and management, cost-effective care delivery, workload reduction, and the development of patient-centered services. The following sections explore these contributions in detail:

Risk Assessment and Risk Management: AI systems provide significant support for nurses in identifying individuals at high risk for breast cancer. Particularly those integrated with electronic health record (EHR) systems can automatically identify high-risk individuals by evaluating data such as age, BRCA1/2 genetic mutations, family history, and hormonal factors (Esteva et al., 2019; Yala et al., 2021). In a model developed by Yala et al. (2021), mammography images were combined with clinical data to achieve an 88% accuracy rate in predicting 5-year breast cancer risk. When used by nurses to prioritize routine screening, this model enables the development of personalized preventive care plans for high-risk individuals. Additionally, IBM's AI system "Watson for Genomics" offers individual risk analyses based on genetic variations, allowing nurses to ground their risk management strategies on scientific foundations (Esteva et al., 2019).

Remote Patient Monitoring: AI-supported remote monitoring systems facilitate follow-up care and symptom management for breast cancer patients in the post-treatment phase. These systems are often integrated with wearable technologies and mobile health apps, enabling real-time monitoring of vital signs, sleep patterns, physical activity, and even post-surgical symptoms (Imai et al., 2019; Fang et al., 2021). For instance, the "Pink Journey" decision support app developed by Fang et al. (2021) monitored pain, anxiety, and functional limitations in patients following breast reconstruction surgery, providing nurses with individualized feedback. In the intervention group using the app, the average time for reporting postoperative complications was reduced by approximately 30%, and the response time for nursing interventions was significantly accelerated. Similarly, a mobile therapy system developed by Imai et al. (2019), managed remotely by nurses, was reported to reduce fear of recurrence and psychosocial stress levels in individuals with breast cancer. These technologies offer significant advantages not only in the early detection of symptoms but also in reducing hospital admission rates and alleviating the burden of emergency interventions on nurses (Imai et al., 2019; Fang et al., 2021).

Supporting Personalized Care: AI-assisted systems enable nurses to develop individualized care plans by analyzing the personal health data of breast cancer patients. These systems provide personalized care recommendations by considering genetic mutations, lifestyle data, treatment responses, and symptom characteristics (Fu et al., 2018; Chen et al., 2021). For instance, a machine learning model developed by Fu et al. (2018) predicted the development of lymphedema following breast cancer, allowing nurses to take early preventive measures for high-risk individuals. This model demonstrated an accuracy rate of 85%. Moreover, IBM Watson for Oncology, an AI application, ranks personalized treatment options based on patients' genetic and clinical data and supports nurses in providing appropriate follow-up and counseling for these treatments. Studies have reported a statistically significant increase in patient satisfaction in groups where this system was used (Chen et al., 2021).

Providing Cost-Effective and Safe Care: AI systems enhance patient safety in nursing practice while also improving the cost-effectiveness of healthcare services. Decision support systems, in particular, offer personalized approaches to treatment planning and symptom management, helping to prevent unnecessary tests and interventions, which in turn reduces direct healthcare costs (Fang et al., 2021). In a study conducted in China by Chen et al. (2021), an AI-supported model was shown to reduce the average hospital stay by 1.4 days in breast cancer surgery patients, leading to a 12% reduction in total hospital costs. This not only decreases healthcare expenditures but also supports safe care by reducing the risk of complications. Similarly, an AI-based mobile application developed by Fang et al. (2021) enhanced patient satisfaction by supporting postoperative decision-making, and decreased the rate of postoperative complications, reducing the need for readmissions and further interventions. The study reported an 18% increase in the patient safety index in the intervention group. AI systems particularly sustain the delivery of safe and effective care by reducing error rates in symptom tracking, medication side effect assessment, and the management of early warning systems (Fang et al., 2021; Chen et al., 2021).

Reducing Workload: AI systems reduce the cognitive and physical workload of nurses by automating routine and time-consuming tasks, thereby enabling them to focus more on complex and critical aspects of patient care. This shift offers significant benefits in terms of patient safety, care quality, and healthcare worker satisfaction (Cao et al., 2021; Masukawa et al., 2022). For example, the AI-assisted nursing planning system developed by Cao et al. (2021) prioritized tasks such as bedside monitoring, medication administration, and symptom tracking, optimizing the sequence of nursing interventions. In clinics where this system was implemented, the time spent on daily care planning by nurses decreased by an average of 28%. In a study conducted by Masukawa et al. (2022) in Japan, AI-supported patient monitoring systems were shown to reduce alarm fatigue among nurses and shorten response time to critical conditions by approximately two minutes. This has made a significant contribution to balancing workload, especially in intensive care and oncology units. Furthermore, such systems save time on electronic documentation tasks, allowing nurses to increase direct patient care time and thereby improving care satisfaction (Masukawa et al., 2022).

Challenges Encountered in the Use of Artificial Intelligence–Supported Clinical Decision Systems

Data Security and Privacy: AI systems operate based on large amounts of data, making data security and patient privacy critical issues (Reddy Allan et al., 2020; Xu et al., 2020). AI systems must protect patient information through security measures such as data encryption, anonymization, and authorization (Reddy Allan et al., 2020; Wu et al., 2022). Protecting patient health data from unauthorized access, breaches, and misuse is vital for ensuring patient safety (Wu et al., 2022).

Algorithmic Biases: AI can produce incorrect or inappropriate results due to biases present in data sets. This situation may lead to misinterpretations, especially in disease diagnosis and treatment decisions (Wu et al., 2022). To reduce biases in data sets, diversification of data, continuous monitoring of algorithms, and adherence to ethical principles are necessary (Reddy Allan et al., 2020).

Trust of Patients and Healthcare Professionals: Adoption of AI systems by health professionals and patients depends on the system's reliability. Algorithms should be transparent, clinically validated, and training programs should be provided to increase healthcare workers' trust in AI (Zhou et al., 2023). The success of AI use in healthcare depends on patients and healthcare workers being able to use these systems confidently.

Integration into Practice: Integration of AI into healthcare systems involves significant challenges regarding technical infrastructure, staff training, and process management (Zhou et al., 2023). For effective use of these systems, training and adaptation programs should be organized, and integration into clinical decision-making processes should be facilitated (Fu et al., 2022). Additionally, software and hardware infrastructure must be established for integration (Reddy Allan et al., 2020).

Challenges in Equal Access: Use of AI systems may cause inequalities in access to healthcare services. Since AI systems rely on historical data, systematic biases in this data can affect model outcomes. If algorithms depend on biased data, they may produce different results for different patient groups in breast cancer diagnosis and treatment processes. This situation may lead to demographic disparities in early diagnosis rates, access to treatment, and disease outcomes (Obermeyer et al., 2019). Obermeyer et al. (2019) reported in their study that AI algorithms contain biases toward certain patient groups and negatively affect Black patients' access to breast cancer care.

Conclusion and Recommendations

Artificial intelligence systems offer significant technological advancements in breast health by providing personalized, efficient health solutions. AI-supported clinical decision systems in breast cancer nursing offer important opportunities in early diagnosis, treatment planning, and patient management. These systems improve diagnostic accuracy and help nurses make faster and more effective decisions by reducing their workload. However, challenges such as data security, algorithmic biases, and equal access should be considered. To ensure reliable and ethical use of AI systems, data privacy must be ensured, and diversified data sets should be used to promote algorithm fairness. Training programs should be organized so nurses can use these technologies effectively. To increase patient trust, AI systems should be transparent and based on clinical validation. Furthermore, continuous monitoring and auditing mechanisms should be developed to prevent discrimination in healthcare services due to AI. When these factors are taken into account, the correct and effective use of AI systems will significantly contribute to improving the quality of care for breast cancer patients.

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PP - 006

Nursing Care of a Patient with Rectal Adenocarcinoma According to NANDA Nursing Diagnoses: A Case Report

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Introduction

Rectal cancer is the third most common type of cancer after skin and lung cancers and occurs with similar frequency in both genders. Although it is generally diagnosed around the age of 70, it can be seen in different age groups as well. About 90% of rectal tumors are adenocarcinomas, and the tumor's location affects the prognosis. Treatment methods include surgery, chemotherapy, and radiotherapy (Demirkasımoğlu et al., 2008). Neoadjuvant chemotherapy is a method used as an alternative to surgical treatment and can affect the social relationships of the individual and their family (Ertuğrul, 2010). In nursing, it is important to adopt a holistic approach to individuals and to assess support systems. Postoperative stoma care, management of complications, and support of the individual's psychosocial status are necessary. This case presentation discusses the nursing care of a 64-year-old individual diagnosed with rectal adenocarcinoma, utilizing the nursing diagnoses of the North American Nursing Diagnosis Association (NANDA). The aim is to address nursing diagnoses, care goals, and interventions, as well as to evaluate the effectiveness of the process. Nursing care for colorectal cancer is critical for addressing the patient's physical, emotional, and social needs.

Keywords: Rectum Adenocarcinoma, Nursing Care, Chemotherapy

Case Report

A 64-year-old female patient was diagnosed with rectal adenocarcinoma after a colonoscopy performed on March 7, 2019, which revealed a mass located 10-12 cm from the anal canal. Imaging results indicated a 7 mm perirectal lymph node. The patient underwent long-term chemo-radiotherapy from April 1, 2019, to May 8, 2019, followed by a low anterior resection and ileostomy on June 23, 2019. During the perioperative period, she was monitored for 6 months with the XELOX protocol and received her last chemotherapy regimen in November 2019. A computed tomography scan conducted in June 2022 identified new developing masses, leading to the initiation of second-line treatment with bevacizumab + FOLFIRI protocol on July 2022. On August 2, 2024, the patient presented to the emergency department with decreased urinary output and flank pain and was admitted with diagnoses of acute kidney injury and complicated urinary tract infection. During the nursing process, issues such as infection risk, nutritional imbalance, and psychosocial support needs were prioritized.

Vital Signs

Temperature : 36.5°C
Pulse : 102 bpm
Respiratory Rate : 22 breaths/min
Blood Pressure : 140/90 mmHg

Laboratory Results

BUN : 16 mg/dl → 2.09 mg/dl (Post-chemotherapy)
Creatinine : 0.56 mg/dl → 0.98 mg/dl (Post-chemotherapy)
CEA : 21.9 ng/dl (Normal: <20 ng/dl)
CA 19-9 : 48 U/mL (Normal: <37 U/mL)

Treatment

The patient received 6 cycles of chemotherapy with the XELOX protocol. Due to a reduction in body surface area, a dose adjustment was made in the 6th cycle.

Table 1. Nursing Assessment for a Patient with Rectal Adenocarcinoma

Affected Area	Characteristics
Patient and Family History	• Vaccination Status: Childhood vaccinations are complete. • Allergies: No known allergies. • Surgical History: No previous surgeries. • Medical Devices/Prosthetics: None used. • Family History: Mother and sibling diagnosed with lung cancer; father has a history of hypertension.
Health Behaviors and Habits	• Tea Consumption: Drinks approximately 10 cups of tea daily. • Substance Use: Denies use of alcohol, cigarettes, or illicit drugs.
Socio-Economic Status	• Financial Assessment: Income is lower than expenses, indicating potential financial strain.
Respiratory Status and Pain	• Respiratory Status: No current complaints noted. • Pain Level: Rated as 0 on the Numerical Rating Scale for adults capable of verbal communication.
Nutrition and Hydration	• Meal Pattern: Consumes two main meals per day (breakfast and dinner); no snacks. • Diet Type: No specific or therapeutic diet followed. • Fluid Intake: Approximately 1500 cc/day.
Elimination Patterns	• Urinary Output: Around 1000 cc/day. • Bowel Elimination: Reports constipation and rectal bleeding.
Sleep, Rest, and Activity	• Sleep Pattern: Sleeps at 23:00 and averages 7 hours per night. • Sleep Quality: No difficulty falling asleep; does not use sleep aids; no daytime napping. • Activity Level: Independent in physical needs and ambulates inside the home.
Emotional and Psychological Status	• Emotional Response to Illness: Patient experienced sadness and initial difficulty accepting the cancer diagnosis, expressing concern about following the same fate as his mother and sister. Has begun to accept it as “fate.”
Skin Integrity and Personal Hygiene	• Skin Assessment: Skin appears dry and pink, with no visible breaks or lesions. • Personal Hygiene: Personal hygiene practices are inadequate; patient needs support.
Sensory Function	• Vision and Hearing: No deficits observed.
Safety Considerations	• Safety Measures: All standard inpatient safety protocols implemented, including: • Patient wristband control • Accessible call bell • Bed in low position with sides up • Bed wheels locked

Table 2. Nursing Care Plan for a Patient with Rectal Adenocarcinoma

Nursing Diagnosis	Goals	Nursing Interventions	Evaluation
Risk for Electrolyte Imbalance *Due to side effects of treatment (e.g., medications, drains)*	Minimize risk and prevent electrolyte disturbances.	• Identified contributing factors. • Monitored for signs of imbalance. • Consulted a dietitian to determine a proper dietary regimen. • Tracked fluid intake/output and monitored weight. • Administered physician-ordered fluid replacement. • Regularly monitored and documented vital signs.	No abnormalities detected in routine lab results.
Fatigue *Related to biochemical changes from chemotherapy*	Engage in balanced physical, cognitive, emotional, and social activities	• Explained causes of fatigue. • Encouraged expression of emotional responses. • Assessed fatigue patterns and energy peaks. • Helped prioritize activities based on energy levels. • Taught energy conservation techniques. • Explained benefits of light exercise and stress reduction. • Provided coping strategies (e.g., relaxation, emotional expression).	No abnormalities detected in routine lab results.
Anxiety *Related to illness and fear regarding physical integrity*	Improve psychological well-being and coping capacity.	• Assessed anxiety levels; provided a calm, safe environment. • Limited contact with other anxious individuals when appropriate. • Taught anxiety reduction techniques (e.g., breathing control, distraction). • Offered music therapy tailored to patient preference. • Encouraged engagement in calming activities.	Anxiety triggers reduced; patient appeared happier and more cooperative
Disturbed Sleep Pattern *Related to hospitalization, environmental noise, and fear*	Patient achieves balance between rest and activity; contributing factors identified and managed.	• Reduced nighttime noise and disturbances. • Restricted nighttime fluids; encouraged pre-sleep voiding. • Developed a daily activity plan to promote nighttime sleep. • Limited daytime naps. Established and maintained familiar pre-sleep routines. • Restricted caffeine in the afternoon. • Educated patient/family on sleep hygiene techniques.	Sleep-disrupting factors were successfully minimized.
Interrupted Family Processes *Related to disruption of family routines due to illness and treatment*	Maintain supportive family dynamics.	• Helped the family assess and realistically understand the situation. • Provided a private, supportive hospital environment. • Identified and reinforced family strengths. • Encouraged involvement in the patient's care. • Offered guidance and emotional support. • Promoted realistic expectations and adaptive coping	Family unity strengthened; family members became more involved in care and accepted their roles.
Disturbed Self-Concept *Related to changes in appearance, lifestyle, and social roles*	Patient demonstrates healthy adaptation and effective coping	• Encouraged emotional expression and self-reflection. • Promoted patient questions regarding health and treatment. • Provided accurate, empathetic information. • Clarified any misunderstandings about care and caregivers. • Avoided judgment and fostered a supportive environment.	Patient demonstrated improved self-concept and adaptive coping mechanisms

Table 2. Nursing Care Plan for a Patient with Rectal Adenocarcinoma

Nursing Diagnosis	Goals	Nursing Interventions	Evaluation
Risk for Infection *Related to exposure to invasive procedures and decreased immune response*	Minimize the patient's exposure to infectious agents, enhance immune function, and ensure infection control.	• Identified the patient as being at risk for nosocomial infection. • Implemented standard and isolation precautions: asepsis, hand hygiene, minimized unnecessary diagnostic/therapeutic procedures. • Protected immunocompromised patients via restricted visitation, strict handwashing, and minimized invasive interventions. • Educated the patient and relatives on infection control measures. • Monitored for signs and symptoms of infection (e.g., fever, cloudy urine). • Reduced susceptibility through a high-protein, high-calorie diet and timely administration of antibiotics.	No signs or symptoms of infection were observed.
Nausea *Related to side effects of chemotherapy*	Patient reports a decrease in nausea	• Explained the cause and duration of nausea. • Encouraged frequent, small meals eaten slowly; recommended cold, bland, non-sweet foods and drinks. • Ensured the dining environment was free from unpleasant stimuli. • Instructed the patient to avoid hot/cold drinks and foods high in fat, fiber, spices, and caffeine. • Advised resting in a semi-Fowler position after meals and changing positions slowly. • Taught nausea-reducing techniques (e.g., avoiding fluids during meals, loosening clothes). • Informed the patient about antiemetic medications.	Patient reported a reduction in nausea
Imbalanced Nutrition: Less Than Body Requirements *Related to anorexia, nausea, vomiting, and dietary restrictions*	Ensure the patient receives adequate nutrition for metabolic and activity needs.	• Determined daily caloric needs with the dietitian. • Explained the importance of main and snack meals. • Controlled nausea-inducing smells before meals. • Promoted oral hygiene before and after meals. • Optimized the mealtime environment. • Encouraged small, frequent meals. • Allowed rest periods before and after eating. • Supported the patient in maintaining effective nutrition as symptoms improved.	Symptom control achieved; partial compliance with nutritional recommendations observed.
Impaired Oral Mucous Membranes *Due to long-term use of antineoplastic/steroid/immunosuppressive drugs*	Achieve and maintain oral tissue integrity	• Emphasized daily oral hygiene and regular dental check-ups. • Assessed the patient's ability to perform oral care. • Taught correct oral care practices (e.g., brushing, flossing). • Educated on preventive measures for stomatitis. • Taught alternative oral rinsing methods for intolerant patients. • Applied lip moisturizers regularly. • Collaborated with the physician for pain-relieving oral solutions. • Educated the patient/family on stomatitis risk factors. • Ensured the patient demonstrated correct oral care techniques at home.	Oral tissue integrity was maintained; oral hygiene effectively practiced.

Conclusion

The care process for colorectal cancer extends from diagnosis to home care. Secondary chemotherapy treatment can lead to issues in individuals' physiological, emotional, spiritual, intellectual, and social patterns. Evaluating the process related to the case, it was observed that nursing interventions addressing issues such as infection risk, nutritional imbalance (inadequate intake), disturbed body image, ineffective sexuality patterns, and fatigue were partially effective in achieving the goals. The uncertainty surrounding the disease and the new way of life made it challenging for the case to adapt to the process and negatively impacted the quality of life. Providing good counseling to the individual and family members played an important role in preserving the individual's autonomy and reducing the issues faced and involving them in care decisions positively influenced the process. It was found that developing a therapeutic relationship was beneficial for ensuring spiritual well-being, effectively utilizing coping methods, and enhancing socialization. In our case, well-planned nursing interventions were determined to reduce the experienced issues and effectively achieve the established goals.

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PP - 007

Evaluation of Hemophilia A Patient Undergoing Surgical Intervention According to the Nursing Model Based on Life Activities: Case Report

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Objective: Hemophilia A is a genetic disorder that affects the ability of blood to clot and mayput patients at increased risk for surgical interventions. This study aims to evaluate the nursing care of a patient with Hemophilia A who underwent orchiectomy for testicular cancer and received adjuvant chemotherapy treatment based on the Roper-Logan and Tierney Life Activities Model as a case report.

Case Report: Data were collected by face-to-face interview method. After the patient was informed about the study, verbal and written informed consent was obtained. The nursing process of the male patient who underwent orchiectomy, was diagnosed with hemophilia A and received adjuvant chemotherapy in the oncology service was planned using NANDA-International (NANDA-I) nursing diagnoses. The patient, who had been complaining of a palpable swelling in the left testicle since April 2024 and had been diagnosed with Hemophilia A for 25 years, applied to a hospital abroad with complaints of hemoptysis and cough in November 2024 and antibiotic treatment was started. The patient returned to Türkiye and applied to the emergency room upon the continuation of his complaints and was diagnosed with testicular tumor. The patient underwent radical orchiectomy on 09.12.2024 and was transferred from the urology service to the oncology service for adjuvant chemotherapy. Data on the patient's postoperative period and adjuvant chemotherapy process were collected and holistic care was planned in line with the Roper-Logan and Tierney Life Activities Model. In accordance with the model, nursing diagnoses were categorized and nursing interventions were planned.

Conclusion(s): Roper-Logan and Tierney's Life Activities Model enables the implementation of effective nursing care throughout the entire treatment process of hemophilia patients, including the postoperative period and chemotherapy treatment processes. This model facilitates the recognition of existing problems and possible complications while providing nursing care to patients, allowing a professional care to be maintained in the nursing process.

Keywords: chemotherapy, hemophilia A, orchiectomy, nursing care

PP - 008

Artificial Intelligence in Cancer and Nursing: A Systematic Literature Review

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Artificial intelligence (AI) holds significant potential to enhance the quality of patient care in healthcare settings through technologies integrated into data collection, analysis, and decision-making processes. In oncology, AI is increasingly utilized in early cancer diagnosis, personalized treatment planning, and patient monitoring, thereby supporting nursing care. The integration of AI into nursing practices aims to reduce errors, alleviate workload, and improve patient safety. In this review, the use of artificial intelligence (AI) in the fields of cancer care and oncology nursing was systematically examined. The research question, formulated using the PICOT framework, was: "An examination of experimental and descriptive studies on the use of artificial intelligence in nursing care and symptom management, with or without comparison, for individuals with cancer". Literature was searched via Google Scholar, PubMed, EBSCO, and the National Thesis Center using the keywords "cancer", "artificial intelligence" and "nursing" for publications from January 2014 to December 2024. Out of 1,770 full-text articles, 9 studies met inclusion criteria. Of these, 3 were randomized controlled trials, 3 experimental, and 3 descriptive. The studies were conducted in China (4), the United States (2), South Korea, and Egypt. Eight studies involved cancer patients; one focused on healthcare professionals. Two of the studies utilized AI-based mobile applications, namely 'ChemoFreeBot' and 'AI-TA', which provided personalized information to participants, facilitating symptom management. These tools offered real-time, customized information tailored to users' needs, thereby enabling patients to take a more active role in managing their health and improving their quality of life. In two other studies, machine learning techniques were employed to predict the severity of symptoms on an individual basis, allowing for early intervention and effective symptom management for high-risk patients. This contributed to reducing symptom burden and improving clinical outcomes. In three studies, artificial intelligence algorithms were integrated into imaging techniques for use. AI applications were found to enhance diagnostic accuracy, support treatment management, and assist nurses in developing individualized care plans. Furthermore, technologies such as electronic health records, remote monitoring systems, and decision support systems were identified as having a positive impact on patient care quality and nursing practice.

In conclusion, the reviewed studies suggest that the integration of artificial intelligence into oncology nursing has the potential to improve both clinical outcomes and the quality of nursing services. Future research in this area is expected to encourage nurses to use technology effectively and contribute to the development of evidence-based practices in patient care.

Keywords: Artificial Intelligence, Cancer, Oncology nursing

PP - 009

Providing Supportive Care for Anxiety Symptoms in a Breast Cancer Patient Based on Barker's Tidal Model: A Case Report

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Breast cancer is a significant global health issue due to its high prevalence and the symptoms it causes (1,2). Along with physical symptoms, patients often experience psychological distress such as anxiety (3,4). Supportive care is essential in meeting these needs throughout all phases of cancer, including treatment and recovery (5,6,7). Nursing, as a discipline combining science and art, aims to improve individual and community well-being (8,9). The use of nursing theories and models contributes to more structured and holistic care (10).

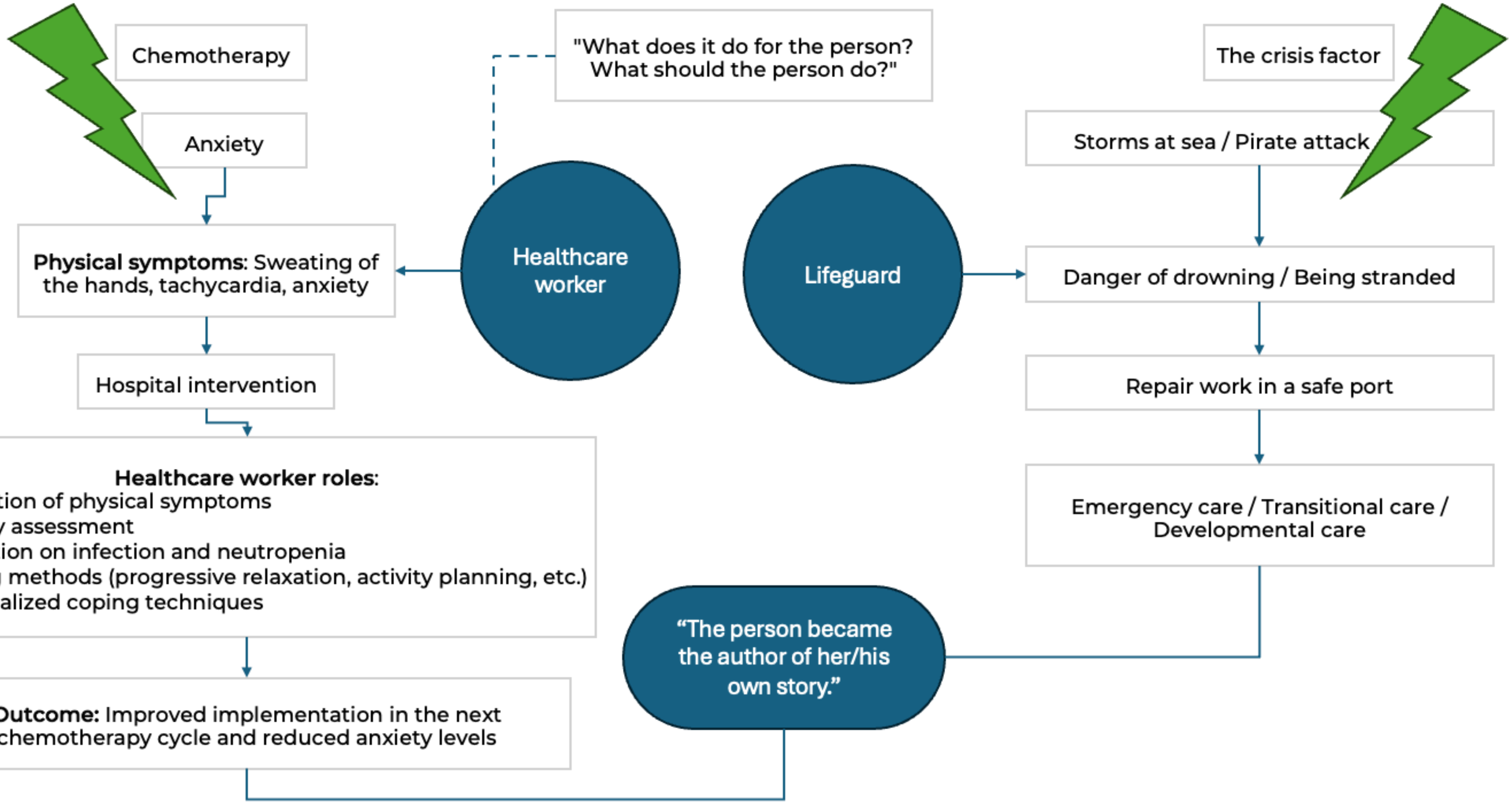
One such model is Barker's Tidal Model, developed initially for psychiatric nursing (11). Although it originates in mental health care, the model emphasizes the uniqueness of each individual's experience and highlights that the need for emotional safety is universal (12). It is based on the metaphor of water, where life is viewed as a journey across an ocean of experience. The Tidal Model uses ten core values that guide the care process through a person-centered approach (13,14). Rather than prescribing exact steps, it offers principles that help the caregiver support the recovery journey (15).

Case Report: BD is a 58-year-old married woman, a university graduate, and a retired private sector employee. She has two children aged 29 and 25. Two years ago, she was diagnosed with Stage 3 breast cancer following a biopsy. Initial treatment included eight cycles of Docetaxel (every 21 days), and she is currently receiving Pertuzumab and Trastuzumab.

Her vital signs were stable, but her Beck Anxiety Inventory score was 20, indicating moderate anxiety. A nursing plan was developed using Barker's Holistic Assessment and Personal Safety Plan (Figure 1). Stress management techniques such as progressive relaxation, breathing exercises, and guided imagery were introduced. The patient visualized the yellow chemotherapy bag as a sun, which she described as emotionally comforting.

Conclusion(s): The patient was revisited on the date of her next chemotherapy cycle. She scored 20 points on the Beck Anxiety Inventory. Before arriving at the hospital, she practiced progressive muscle relaxation techniques. During treatment, she used stress awareness techniques to observe changes in herself and engaged in breathing exercises for relaxation. She imagined the yellow cover of the chemotherapy medication as the sun and reported feeling better as a result.

Keywords: Cancer, Barker, supportive care, nursing



Chemotherapy

Anxiety

Physical symptoms: Sweating of the hands, tachycardia, anxiety

Hospital intervention

Healthcare worker roles:
- Alleviation of physical symptoms
- Anxiety assessment
- Education on infection and neutropenia
- Coping methods (progressive relaxation, activity planning, etc.)
- Personalized coping techniques

Outcome: Improved implementation in the next chemotherapy cycle and reduced anxiety levels

"What does it do for the person? What should the person do?"

Healthcare worker

Lifeguard

"The person became the author of her/his own story."

The crisis factor

Storms at sea / Pirate attack

Danger of drowning / Being stranded

Repair work in a safe port

Emergency care / Transitional care / Developmental care

Figure 1. Flow Diagram of Nursing Care According to the Tidal Model

Following a comprehensive assessment and the development of a personal safety plan, nursing care was implemented based on Barker's Holistic Assessment, Personal Safety Plan, and Tidal Model

PP - 010

Adaptation of the Breast Cancer Stigma Scale' to Turkish culture

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Objective: This study aimed to translate, cross-culturally adapt and validate the Breast Cancer Stigma Scale for use in Turkish.

Materials-Methods: This descriptive and methodological study was conducted with 150 people with breast cancer in a public hospital in Istanbul between 24 March and 12 October 2023. The Turkish version of the Breast Cancer Stigma Scale was prepared with translation, back-translation and expert review. Data were obtained using the personal information form and BCSS. Cronbach's alpha analysis and item analysis were performed for scale reliability. Test-retest reliability was measured by intraclass correlation coefficient (ICC). CVI was determined for content validity. DFA was performed for construct validity, and fit index values were examined. Ceiling and floor effects were also evaluated.

Results: The Content Validity Index of the scale was 0.974. The item-total score correlations of the scale, which includes 15 items and four subscales, were between 0.369 and 0.663, and the factor load values were between 0.425 and 0.799. Construct validity goodness-of-fit indices were acceptable. There was a significant difference between the lower and upper 27% groups of the participants' scores from the scale for ceiling or floor effects ($p<0.05$). Cronbach coefficient for internal consistency was 0.88. To evaluate measurement stability, test-retest reliability was examined with ICC and was found to be high (0.952; $p = 0.000$). There was no difference between test-retest values ($p<0.05$).

Conclusion(s): We concluded that the Turkish version of the BCSS has adequate psychometric properties as per the best international recommendations. The BCSS adapted to Turkish had high validity and reliability.

Keywords: Breast cancer, scale, scale adaptation, stigma, nursing

PP - 011

Development of Educational Materials for Fear and Sleep Conditions of Patients with Intracranial Masses

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Objective: The aim of this study is to develop information cards (flashcards) as educational materials for use in nursing care for common fear and sleep problems in patients with intracranial masses.

Introduction: Intracranial masses cause many neurological, cognitive, psychosocial and economic problems in individuals. A large number of factors, such as the location of the tumor, its size, the drugs used and the treatment process, can be effective in the occurrence of these problems. In particular, steroids, anxiolytic agents and neurological effects caused by the tumor lead to disruptions in the sleep-wake cycle. The diagnosis and treatment process causes serious emotional stress in patients such as uncertainty, future anxiety and social isolation. In this context, patients often encounter problems such as fear and sleep disorders. This condition makes it difficult to comply with treatment and negatively affects the quality of life of patients.

Nurses have an important role in providing appropriate care and education to patients with intracranial masses. As a result of the holistic education given to patients, compliance with treatment is increasing, and hospitalization times are decreasing. Using evidence-based educational materials in patient education increases the professional relationship between the patient and the nurse and patient satisfaction, while ensuring that up-to-date, accurate information is transmitted to patients Decently. In addition, evidence-based training materials help nurses make faster and more accurate decisions. In this direction, educational materials have important effects on the planning of nursing practices and the holistic treatment of patients and the improvement of patient care outcomes.

Conclusion(s): In this study, information cards (flashcards) were prepared for use in trainings given for fear and sleep disorder situations in patients with intracranial masses.

Keywords: patient education, nursing, intracranial mass, fear, sleep disorder

PP - 012

The Effect of Symptoms Experienced by Patients with Lung Cancer on Caregiver Burden

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Objective: To investigate the effects of symptoms experienced by patients with lung cancer on caregiver burden.

Materials-Methods: Sectional Type Research was conducted with lung cancer patients and patients who were treated at Dokuz Eylül University Hospital Day Treatment Center between January-October 2022. Socio-demographic features form, carnofsky performance status scale, lung cancer symptom scale, Nightingale symptom evaluation scale were used in the collection of data. Average, standard deviations and percentage data were analyzed by correlation, T test in independent groups, Mann Whitney U test and Krusskal Wallis tests.

Results: It was determined that 76.3% of the patients included in the study were male, 83.3% were married, 82.5% had stopped smoking, 71.9% of the caregivers were female, 82.5% were married, and 52.6% were the spouses of the patients. In the study, it was determined that the patients' mean performance score was 77.02±10.96, their lung cancer symptom mean score was 40.96±13.96, their physical symptom mean score was 23.14±11.68, their social symptom mean score was 9.21±6.08, and their psychological symptom mean score was 18.12±8.66.

Conclusion(s): Oncology nurses' diagnosis of the symptoms experienced by patients, determining the educational needs of patients and caregivers and planning accordingly will help determine the symptom burden of patient relatives.

Keywords: lung cancer, caregiver burden, cancer symptoms

PP - 013

Use of Eucalyptus in Symptom Management in Cancer Patients

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Introduction

Cancer is a significant global health issue, and symptoms such as pain, nausea, and anxiety experienced during the treatment process negatively impact patients' quality of life. Aromatherapy, one of the complementary medicine practices, is increasingly being used in the management of these symptoms. In particular, eucalyptus oil has drawn attention due to its analgesic, antidepressant, and anxiolytic effects. This review aims to evaluate the potential effects of eucalyptus in symptom management among cancer patients and to present evidence that may contribute to care processes.

Keywords: Aromatherapy, Cancer, Eucalyptus, Symptom Management

Cancer accounts for approximately one in six deaths worldwide (World Health Organization, 2025). The International Agency for Research on Cancer projects that the global cancer incidence, which was 20.05 million in 2022, will reach 32.6 million by 2040 (International Agency for Research on Cancer, 2025). Today, various treatment methods such as chemotherapy, radiotherapy, immunotherapy, hormone therapy, surgery, and biological therapies are used in cancer treatment (Farahani, 2019; Li et al., 2022). Along with these advances, individuals with cancer experience a variety of physical and psychological symptoms that significantly affect their quality of life, depending on the type and stage of the disease and the side effects of treatments. Pain, nausea and vomiting, anxiety, sleep disturbances, fatigue, and depression are among the most common symptoms observed in patients (Keyhanmehr et al., 2018). In response to these symptoms, individuals have turned to complementary and alternative medicine due to their organic structures, low risk, fewer complications, and low cost (Farahani, 2019; Varkaneh et al., 2022). One such method is aromatherapy.

Aromatherapy is the use of essential oils obtained from different parts of plants to prevent or treat physical and mental ailments (Keyhanmehr et al., 2018). The main molecules in essential oils can be inhaled or absorbed through the skin via massage (Li et al., 2022). Aromatherapy via inhalation sends signals to the limbic system and hypothalamus, which secrete neurotransmitters such as serotonin and dopamine. These neurotransmitters alleviate psychological issues and pain (Aćimović, 2021). Aromatherapy has been shown to improve various physical and psychological complications in cancer patients (Farahani et al., 2019). It has been reported to be effective in relieving symptoms such as pain, sleep problems, anxiety, depression, nausea, and vomiting in cancer patients (Ahn et al., 2024; Kang et al., 2024; Yaman et al., 2024). More than 40 plant derivatives have been identified for therapeutic use, but the most commonly used include lavender, eucalyptus, rosemary, chamomile, orange, and peppermint extracts (Akeren & Hintistan, 2021).

The essential oil derived from the Eucalyptus camaldulensis plant used in aromatherapy possesses various therapeutic activities such as analgesic, antioxidant, antibacterial, antiviral, and sedative properties (Chandorkar et al., 2021; Önel & Akbay, 2022). The main active compound in eucalyptus, 1,8-cineole, crosses the blood–brain barrier and acts at the neuronal level (Kim et al., 2014). By stimulating the release of neurotransmitters and endorphins in the brain, 1,8-cineole exerts an analgesic effect. Eucalyptus oil can be administered topically or through inhalation (Varkaneh et al., 2022). Eucalyptus extracts have been shown to exhibit potential anticancer activity against certain cancer cells, including colon, lung, prostate, ovarian, cervical, liver, and neuroblastoma cancers (Vuong et al., 2015). In a study by Varkaneh and colleagues (2022), eucalyptus inhalation was found to reduce pain and improve quality of life in patients with rheumatoid arthritis. A study conducted by Kim et al. demonstrated that inhalation of 1,8-cineole before surgery reduced both pain and anxiety. One of the components of eucalyptus oil has been reported to show anxiolytic activity through an antidepressant-like effect (Kim et al., 2014). In a study by Ovayolu et al. (2014) on women undergoing cancer treatment for breast cancer, aromatherapy using eucalyptus, almond, lavender, peppermint, chamomile, jasmine, violet, and rosemary was found to reduce symptoms such as nausea-vomiting, pain, and fatigue.

The aim of this review is to examine the effects of eucalyptus—known for its analgesic, antioxidant, antimicrobial, and sedative properties—on cancer patients. As a result of the literature review, it was found that eucalyptus has effects on pain, anxiety, and quality of life; however, studies conducted specifically on cancer patients were found to be insufficient. In this context, it is believed that the findings obtained from this review regarding eucalyptus and symptom management in cancer patients may contribute to the planning of evidence-based studies to improve the quality of care for cancer patients.

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PP - 014

Nursing Care in Car T Cell Therapy in Adult Patients with Hematological Malignancies in the World and in Türkiye

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Hematological neoplasms refer to malignant diseases originating from the hematopoietic and lymphoid tissue system and can involve all systems and organs in the body. Hematological neoplasms mainly include acute leukaemia, chronic leukaemia, lymphoma, multiple myeloma, myelodysplastic syndrome and myeloproliferative neoplasia. The therapeutic field of hematological neoplasms includes immune-targeted antibodies, immune checkpoint inhibitors, tumor vaccines, adaptive cell therapy and stem cell transplantation. The use of the patient's own immune system to recognize and eliminate tumors has emerged as an important treatment modality in the field of cancer. This involves genetically modifying chimeric antigen receptors (CARs) to enable autologous T cells to recognize specific molecules on target cells and activate them to eliminate them. With the potential to induce long-term remission in patients with refractory or relapsed hematological neoplasms, immunotherapy has led to change in cancer treatment and clinical success. Car T-cell therapy is a new treatment for patients with multiple myeloma and other B-cell hematological neoplasms and despite its potential for success, it has serious side effects such as cytokine release syndrome and immune effector cell-associated neurotoxicity syndrome. Nurses play an important role in the care, symptom management, monitoring and evaluation, and psychosocial support of patients receiving CAR T-cell therapy. And this effective process guarantees safe and successful treatment. Consequently, there will continue to be a need for up-to-date education and training to ensure that patients receive specialized nurse care. The aim of this traditional review is to identify key aspects of the current literature applicable to nurses working in this field.

Keywords: Hematologic Neoplasms, Immunotherapy, Nursing Care

PP - 015

A Patient with Guillain-Barré Syndrome Using a Chronic Care Model Approach to Holistic Nursing Care: Case Report

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Objective: Guillain-Barré syndrome (GBS) is an immune-mediated polyradiculoneuropathy that affects approximately 100,000 new cases globally each year, occurring more frequently in older adults and men. Clinical symptoms include progressive muscle weakness, reduced reflexes, and motor, sensory, and autonomic involvement. These findings usually follow a viral or bacterial infection. Treatment consists of two main components: medical intervention and supportive care. The Chronic Care Model (CCM), developed by Edward H. Wagner and colleagues in 1990, has been integrated into the health systems of many countries since the 2000s. The CCM offers a structured, proactive, and patient-centered approach to managing chronic diseases. This study aims to evaluate the individual's health status from a biopsychosocial perspective, collect data within the CCM framework, identify nursing diagnoses, and develop an individualized care plan.

Case Report: N.S., a 56-year-old, married, university graduate, follows a protein-rich and salty diet and has undergone facelift, appendectomy, and hemorrhoid surgeries. He has chronic conditions such as hypothyroidism, rheumatic disease, panic attacks, and sleep apnea. On December 25, 2024, he presented with leg weakness and was diagnosed with GBS. Due to an allergic reaction during the fourth cycle of immunotherapy, treatment was discontinued, and plasmapheresis was initiated. Clinical evaluation revealed lower extremity muscle strength as 5/3 and upper extremity as 5/5; stage 2 sacral pressure injury, foley catheter, spastic bladder, and immobility were identified. Within the CCM framework, plasmapheresis was planned through multidisciplinary collaboration; positioning and secretion management were provided. Rehabilitation and home care services were arranged via the social service unit. The patient and family received education on pressure injury prevention, mobilization, and bladder management. Clinical data were monitored using digital systems. The individualized care plan was implemented with multidisciplinary coordination.

Conclusion(s): The individual diagnosed with GBS was evaluated holistically, and nursing diagnoses were identified within the CCM framework. A patient-centered and effective care process was established. The CCM proved functional in structuring nursing care planning.

Keywords: Guillain-Barré syndrome, chronic care model, case report, nursing

PP - 016

Nursing Care of a Patient Undergoing Subtotal Gastrectomy According to Gordon's Functional Health Patterns Model: A Case Report

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Objective: The aim of this study was to collect data in line with Gordon's Functional Health Patterns Model in the postoperative nursing care of a patient who underwent subtotal gastrectomy for gastric cancer and to create an individualized evidence-based nursing care plan based on NANDA-I nursing diagnoses and NIC, NOC classifications.

Case Report: A 60-year-old man, HG, graduated from primary school and was self-employed. He smoked 1 pack of cigarettes in 1 day and drank alcohol 3-4 times a month for 20 years. He has cataract, eczema and food (fungal) allergy. He has no history of any previous surgical operation and chronic disease. There is no family history of cancer. The patient has been experiencing intermittent abdominal pain for the last 2 months and it has become more severe especially in the last week. HG. who applied to an external center because of this exacerbated pain underwent endoscopy and was diagnosed with gastric cancer. According to the esophago-gastro-duodenoscopy report performed in the external center, it was determined that there was a 3 cm malignant mass in the distal corpus distal to the antrum corpus junction and the antrum mucosa was spotted, hyperemic and edematous. After learning that he needed to have an operation, the patient applied to Gazi University Hospital General Surgery outpatient clinic and after the necessary examinations and tests were performed, he was hospitalized in the ward with the diagnosis of gastric cancer and subtotal gastrectomy operation was performed on 24.03.2025. The data collection process for the patient in the postoperative period was based on Gordon's Functional Health Patterns Model; the individual's nutritional status, elimination pattern, activity-tolerance level, pain perception and psychosocial adaptation were comprehensively evaluated. Based on the collected data, nursing diagnoses were determined according to NANDA-I diagnoses. Care interventions were planned and implemented according to NIC and care outcomes were planned and implemented according to NOC classification. This patient-specific systematic nursing care accelerated postoperative recovery and prevented the development of complications.

Conclusion: In patients undergoing subtotal gastrectomy for gastric cancer, collecting data with Functional Health Patterns and creating individualized care plans based on NANDA-I, NIC, NOC positively affects both patient safety and the healing process. This approach makes a significant contribution to strengthening nursing care with scientific foundations and improving patient outcomes.

Keywords: Gastric Cancer, Subtotal Gastrectomy, Case Report

PP - 017

Determination of Factors Affecting Body Image and Sexual Adjustment of Women with Mastectomy

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Introduction

Breast cancer is the most common type of cancer among women both globally and in our country. Mastectomy, a commonly applied surgical treatment in breast cancer, involves the partial or complete removal of the breast, which symbolizes femininity and sexuality. The change in body image alters a person's attitude toward their body perception and can lead to sexual dysfunction. This study was conducted as a descriptive and cross-sectional research to determine the factors affecting body image and sexual adjustment in women who have undergone mastectomy.

Keywords: Body Perception, Sexual Adjustment, Mastectomy

Materials-Methods

The study was conducted in a descriptive and cross-sectional design. The study population consisted of women who had undergone surgery for breast cancer, and the sample included 167 women who presented to the medical oncology unit between May 1 and July 15, 2019, and who had undergone mastectomy at least three months prior. Data were collected using a Socio-Demographic Characteristics Form and the Sexual Adjustment and Body Image Scale.

The Sexual Adjustment and Body Image Scale consists of two subscales that assess sexual adjustment and body image, comprising a total of 14 items. The Body Image Subscale consists of two dimensions—'preoperative body image' and 'postoperative body image'—with a total of six items. The Sexual Adjustment Subscale consists of three dimensions—'preoperative sexual adjustment,' 'impact on sexual function,' and 'importance of breasts in sexuality'—with a total of eight items. The scale does not yield a total score; instead, scores are calculated separately for each subscale. Lower mean scores on the subscales indicate more negative (poorer) outcomes, while higher mean scores suggest more positive (better) outcomes.

In data analysis, descriptive statistics (frequencies and percentages), independent samples t-test, Shapiro-Wilk test, Pearson correlation analysis, Mann-Whitney U test, Kruskal-Wallis test, and Dunn-Bonferroni post-hoc test were used. Prior to data collection, participants were informed about the study, and written informed consent was obtained. Additionally, permission to use the scale was acquired via email from the original author..

Results

The mean age of the women participating in the study was 47.15 ± 10.14 years. Of the participants, 88% were married, 68.3% were diagnosed after ten or more years of marriage, 61.1% had completed primary education, and 62.3% were in stage II of the disease. In terms of treatment, 99.4% received chemotherapy, 65.9% received hormone therapy, 56.3% received radiotherapy, and 23.4% underwent total mastectomy.

The mean score of the "Preoperative Body Image" subscale of the Body Image Scale was 9.50 ± 2.05, while the mean score of the "Postoperative Body Image" subscale was 5.45 ± 2.50. A statistically significant difference was found in the "Preoperative Body Image" subscale scores based on whether the participants received radiotherapy (p=0.009). Women who received radiotherapy had lower scores on the "Preoperative Body Image" subscale.

Being single was found to result in a 1.104-point increase in the "Preoperative Body Image" subscale score, indicating a statistically significant and positive correlation between being single and higher preoperative body image perception (p<0.005).

A statistically significant difference was also found in the "Postoperative Body Image" subscale scores according to the stage of disease (p=0.033). According to the Dunn-Bonferroni post-hoc test, women with stage III breast cancer had higher postoperative body image scores than those with stage II disease (p=0.048).

A statistically significant difference was found in the "Postoperative Body Image" subscale scores of the Body Image Scale according to whether the women received hormone therapy (p=0.001).

The mean scores of the Sexual Adjustment Scale subscales among the women included in the study were as follows: "Pre-treatment Sexual Adjustment" 6.77 ± 1.41, "Impact on Sexual Function" -4.10 ± 2.15, and "Role of Breasts in Sexuality" 8.67 ± 1.48.

Discussion

Within the scope of the study, it was found that the participants' preoperative body image was positive, whereas their postoperative body image was negative. Additionally, pre-treatment sexual adjustment and the role of breasts in sexuality were reported as good, but the impact on sexual function was found to be poor.

It was determined that women who received radiotherapy had significantly lower scores in the "Preoperative Body Image" subscale of the Body Image Scale. In a study conducted by Teo et al., a strong and positive correlation was found between receiving radiation and dissatisfaction with preoperative body image. Side effects of radiotherapy lead to deterioration of the chest wall's cosmetic appearance, resulting in a negative body image.

The study also found that being unmarried was associated with an increase in the "Preoperative Body Image" subscale score, indicating a more positive body perception. Hoyle and colleagues examined factors affecting body image and sexual adjustment in women with breast cancer-related lymphedema. Their study reported that women with partners experienced higher anxiety regarding body image due to "misunderstanding by the significant other." This suggests that concerns increase among partnered individuals, which negatively impacts body image.

Furthermore, women undergoing hormone therapy had significantly lower scores in the "Postoperative Body Image" subscale. Anderson et al. reported that hormone therapy caused symptoms such as polyneuropathy, musculoskeletal pain, hair loss, and fatigue, which affected women's physical appearance and consequently their body image

Conclusion

As a result of the study, it was found that the women had a positive preoperative body image, as well as good preoperative sexual adjustment and recognition of the role of breasts in sexuality. However, their postoperative body image was negative, and mastectomy was found to have a detrimental effect on sexual function. Marital status and not receiving radiotherapy were identified as factors affecting pre-mastectomy body perception, while disease stage and not receiving hormone therapy were found to influence postoperative body perception. Additionally, hormone therapy status and economic status were determined as factors impacting women's sexual adjustment. It is recommended that the study be repeated with a larger sample size and different variables.

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PP - 018

The Role of Artificial Intelligence in Optimizing Transitional Care Models for Oncology Patients

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The complex and prolonged treatment journeys of oncology patients render seamless transitions between different healthcare settings (transitional care) critical. Inadequate transitional care can lead to patient dissatisfaction, treatment non-adherence, increased emergency department visits, and elevated costs. Artificial intelligence holds significant potential in optimizing transitional care models for oncology patients. This paper aims to outline the role of artificial intelligence in the optimization of transitional care models for oncology patients.

Artificial intelligence algorithms can identify at-risk patients early by analyzing large datasets. Patient demographics, disease trajectories, treatment responses, comorbidities, and social support systems can be evaluated through artificial intelligence models to create personalized transitional care plans for high-risk individuals. These plans may include the frequency of post-discharge follow-up, home care support needs, and early warning systems for potential complications. Artificial intelligence-powered decision support systems can guide healthcare professionals in patient transfer processes. The determination of which patient should transition to which healthcare setting at what stage can be made more accurately and promptly based on artificial intelligence analyses. Furthermore, artificial intelligence-based platforms can be developed to improve information flow between different healthcare teams. These platforms enhance the continuity of care by enabling the secure and effective sharing of patient information. Another crucial contribution of artificial intelligence lies in enhancing patient education and self-management skills. Personalized educational materials and interactive applications can improve patients' understanding of their diseases, treatments, and potential side effects. Artificial intelligence applications in areas such as data-driven risk assessment, personalized care planning, decision support systems, information sharing, and patient education have the potential to improve patient outcomes and reduce healthcare costs. However, the careful development and implementation of artificial intelligence applications, adhering to ethical principles and ensuring patient privacy, are essential.

Artificial intelligence presents promising tools for enhancing the effectiveness and efficiency of transitional care in oncology patients. Artificial intelligence applications in data-driven risk assessment, personalized care planning, decision support systems, information sharing, and patient education can improve patient outcomes and reduce healthcare costs. However, the development and implementation of artificial intelligence applications must be carried out cautiously, adhering to ethical principles and ensuring patient privacy.

Keywords: Artificial intelligence, care model, transitional care

PP - 019

Estrogen's Shadow: The Reality of Vaginal Dryness

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Vaginal dryness, a common and often overlooked issue among women with breast cancer undergoing hormone therapy, arises as a consequence of decreased estrogen levels. This estrogen deficiency can lead to the thinning of vaginal tissue, loss of lubrication, and dyspareunia. Beyond the physical discomfort, vaginal dryness can contribute to reduced libido, avoidance of sexual activity, relationship difficulties, and diminished self-esteem, highlighting its significant impact on psychological and social well-being. Indeed, vaginal dryness is a critical factor negatively affecting the quality of life for women undergoing breast cancer treatment. The associated physical discomfort, coupled with the aforementioned psycho-social challenges, can also negatively influence treatment adherence and overall patient well-being. Furthermore, vaginal dryness may elevate the risk of vaginal infections.

The management of vaginal dryness in this patient population necessitates a multidisciplinary approach. Non-hormonal strategies include the use of water-based or silicone-based lubricants prior to sexual activity and the regular application of vaginal moisturizers. Emerging evidence suggests the potential benefit of local laser and radio-frequency therapies in alleviating vaginal dryness in breast cancer survivors, although further research on their long-term safety and efficacy is warranted. While systemic hormone therapy is generally contraindicated, local estrogen therapy (in the form of creams, suppositories, or rings) may be cautiously considered in select cases under close oncological supervision, particularly in patients with hormone receptor-negative tumors or those on tamoxifen. Pelvic floor exercises, which can enhance vaginal blood flow, and sexual therapy, offering psychological support and improved communication for couples, represent valuable adjunctive approaches.

Vaginal dryness is a significant concern for women with breast cancer receiving hormone therapy and warrants routine assessment by healthcare professionals. Often representing a "silent cry" that diminishes quality of life, awareness of this issue is crucial for the physical and psychological well-being of these patients. Management is feasible through non-hormonal and, when appropriate and carefully monitored, hormonal treatment options. Encouraging open communication between patients and healthcare providers, alongside the development of individualized treatment plans within a multidisciplinary framework, plays a pivotal role in enhancing the quality of life for these women. Recognizing vaginal dryness as an integral aspect of breast cancer care is essential for delivering truly patient-centered care.

Keywords: Estrogen, hormone therapy, vaginal dryness

PP - 020

The Power of Preventive Healthcare Services in the Global Elimination of Cervical Cancer

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Cervical cancer remains one of the most prevalent gynecological cancers affecting women worldwide. Persistent infection with high-risk types of Human Papillomavirus (HPV) has been identified as the primary etiological factor in the development of this disease, highlighting its largely preventable nature. In recent years, significant progress has been made in both preventive strategies and early diagnostic methods. The widely used HPV vaccine plays a fundamental role in preventing cervical cancer by offering strong protection against the HPV genotypes most commonly associated with the disease. Administering the vaccine to both girls and boys at an early age not only protects individuals but also contributes to herd immunity, helping to reduce transmission at the community level. From an early diagnosis perspective, HPV DNA testing has shown greater sensitivity compared to the traditional Pap smear, representing a major advancement in screening. The development and dissemination of self-sampling kits have further improved participation rates, particularly in regions with limited access to healthcare services. Additionally, technological innovations such as artificial intelligence-supported diagnostic tools, automated analysis systems, and mobile health applications have accelerated and enhanced the quality of screening and diagnosis processes. Cervical cancer is highly preventable and treatable when detected at an early stage. Comprehensive vaccination programs, evidence-based screening strategies, and the integration of digital health technologies can collectively contribute to a significant reduction in the global burden of cervical cancer. In 2020, the World Health Organization set ambitious targets for the global elimination of cervical cancer by 2030. These targets include achieving 90% HPV vaccination coverage, screening 70% of eligible women, and ensuring that 90% of diagnosed cases receive appropriate treatment. Preventive healthcare services play a vital role in achieving these goals. Nurses, and midwives act as the front line in raising community awareness, administering vaccinations, conducting screening programs, and referring high-risk individuals. They also serve as critical sources of reliable information, particularly in areas with low health literacy, thus fostering greater awareness and engagement in preventive care. This review aims to examine current developments in the prevention and early detection of cervical cancer based on recent literature, and to highlight the essential roles and responsibilities of primary healthcare workers within this context.

Keywords: Early diagnosis, Cancer of cervix, Preventive healthcare services, Elimination of cervical cancer

PP - 021

The Relationship of Alexithymia and Psychological Resilience with Posttraumatic Growth in Women with Gynecological Cancer - Preliminary Results

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Objective: Trauma is defined as an event that produces long-term psychological symptoms that the person's internal resources cannot cope with. Post-traumatic growth (PTG) is a person's improved functioning in certain areas of life after a traumatic event, taking steps towards self-actualization, positive changes in self-perception and interpersonal relationships. Psychological resilience (PR) is defined as the adaptation that an individual exhibits after experiencing stressful life events. Alexithymia is defined as the inability to describe and identify the emotional aspects of an event. The aim of our study was to examine the relationship between PTSD and alexithymia and PR levels.

Materials-Methods: This study was approved by Başkent University Medical and Health Sciences Research Board (Project No: KA19/381). Female patients between the ages of 18 and 65 years who were admitted to Başkent University Ankara Hospital, had a first diagnosis of cancer, no distant organ metastases and volunteered to participate in the study were included. A total of three interviews were conducted with the patients enrolled in the study: within one week prior to the initiation of the treatment process, and in the first and sixth months of the treatment. The Toronto Alexithymia Scale and the Adult Psychological Resilience Scale were completed in the first interview, and the Post-traumatic Growth Scale was completed in the first- and sixth-month interviews. This presentation includes data from 13 patients for whom the sixth month interview was completed. Non-parametric Spearman correlation and linear mixed models were preferred for the temporal analysis of PTG. PR and alexithymia were included as covariates in the model.

Results: The mean age of the patients was 48.7±11.6 years (min.26 - max.63). 6 patients were diagnosed with endometrial cancer, 4 with cervical cancer and 3 with ovarian cancer. The mean time since the start of diagnostic procedures was 11.8±9.2 days. The mean PTG score was 42.2 ± 26.6 at 1st month and 49.1 ± 25.3 at 6th month. Among the study variables, a statistically significant correlation was found only between the PTSD scores at 1st month and 6th ($\rho=0,713$, $p<0,01$). Time had no effect on PTG, F(1, 22)=0.576, p=0.456, whereas PD had a statistically significant effect, F(1, 22,0)=7.58, p=0.012.

Conclusion(s): Psychological resilience had significant effect on PTG, whereas time had no effect. The limited sample size may be an explanation for this finding. In order to understand the psychosocial effects of cancer on individuals, studies with larger samples are needed.

Keywords: Cancer, psychological trauma, psychooncology

PP - 022

Use of Smart Wound Care Systems According to Orem's Self-Care Theory in Oncologic Surgery Patients

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Wound care is important for patients undergoing oncologic surgery. Therefore, it is important to prevent infection and support wound care. In this process, it has become possible to monitor physiological changes thanks to smart wound care systems (smart bandages, sensor dressings, temperature and humidity monitoring apparatus) with the developing technologies in wound care; this provides technological support to evidence-based care practices in nursing. Unlike traditional wound care interventions, it is important to prevent the development of complications and to ensure and maintain patient safety with the integration of sensor wound care systems, temperature and humidity monitoring devices and artificial intelligence supported bandages into the clinic within the developing technological changes. According to Orem's Self-Care Theory, individuals should participate in their own care. However, oncologic surgery patients have difficulty in realizing their own care and therefore need nurses from the professional health care group. Therefore, nurses help patients regain their autonomy by including oncology patients in their self-care with full or partial support. Smart dressings are artificial intelligence-supported systems that instantly detect changes in the wound area. It provides critical data such as temperature change, humidity, pH level instantly. In this way, with smart wound care systems, it aims to provide individualized care to patients, monitor complications and support patients in developing self-care behaviors by providing an informative approach to wound care. Thus, it ensures patient safety and infection control of nurses and at the same time, it reveals the innovative aspects of nurses as instructors, guides, case managers and integrates technology into care. In this context, smart wound care systems should be seen as a tool that supports the integration of nursing theories into clinical practice with an innovative perspective in health. As a result, with the use of smart technologies in wound care with Orem's Self-Care Theory, it is expected that there will be developments in oncologic surgery, and it is thought that evidence-based practices in nursing will support the development of the nursing process by taking place in the same denominator with technology. The use of nursing theories assimilated with modern technology is expected to improve not only physical healing but also the quality of holistic patient care.

Keywords: Orem's self-care theory, Self-care, Wound care

PP - 023

A Case Report of Laparoscopic Cholecystectomy According to Gordon's Functional Health Pattern Model

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Objective: This case report aims to develop a nursing care plan for a patient undergoing laparoscopic cholecystectomy using Gordon's Functional Health Patterns Model. Data were collected with a surgical nursing data form structured according to Gordon's model. Nursing diagnoses were defined using NANDA-1, interventions planned with NIC, and outcomes evaluated using NOC.

Case Report: The case involves a 57-year-old male patient, 1.75 m tall and 95 kg, hospitalized in a private hospital in Ankara with a diagnosis of calculous cholecystitis. The patient's main complaints were right upper quadrant tenderness, severe abdominal pain, nausea, and vomiting. Abdominal ultrasonography showed a contracted gallbladder with millimetric exogenous stones. Vital signs were: 36.6°C temperature, 57 bpm pulse, 171/86 mmHg blood pressure, 94% SpO_2, and 20 breaths per minute. Nursing diagnoses included pain, nausea, disturbed sleep pattern, knowledge deficit, and infection risk. The patient received training in deep breathing and coughing exercises, balanced nutrition, hand hygiene, perineal care, and medication use. Emotional expression was supported to reduce surgical anxiety and promote independence. According to Gordon's model, the patient stated: "I had pain before surgery and still have some, but I believe it will get better." Sleep duration was 6–7 hours, but quality was reduced due to postoperative pain. Tissue/organ loss was noted as a current stressor.

Conclusion: Using Gordon's Functional Health Patterns Model enabled a holistic nursing assessment. Integrating such models in clinical practice is recommended to create personalized care plans and improve the quality of nursing care.

Keywords: Cholecystectomy, functional health patterns, nursing care, patient education, postoperative care

PP - 024

The Impact of Telehealth in the Healthcare Journey of Oncology Patients: An Exploration of Current Literature

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Objecctive: The increasing prevalence of telehealth applications in oncological care necessitates a systematic examination of their effects on patients and healthcare professionals. In this context, the present study aims to explore the potential impacts of telehealth on the follow-up of oncology patients, the delivery of healthcare services, and patient-centered care by synthesizing findings from selected literature.

Materials-Method: This study was structured based on selected scientific publications. The results of these studies were interpreted considering their research focus.

Results: The reviewed studies cover various themes including the integration of tele-oncology into standard treatment protocols, perceptions of patients and healthcare professionals regarding telehealth experiences, the feasibility and acceptability of telehealth in postoperative cancer care, the role of digital health technologies in oncological care processes, the contribution of telehealth to the development of patient-centered approaches, and telehealth adaptation strategies. The integration of tele-oncology into current treatment processes, the updating of clinical practice guidelines, and the adaptation of telehealth services into standard care practices are of significant importance. The attitudes and perceptions of patients and healthcare professionals toward telehealth applications are critical factors influencing the adoption level and long-term sustainability of these technologies. In the postoperative period of cancer surgeries, the effectiveness of telehealth in patient follow-up and complication management serves as an alternative method in addition to traditional face-to-face follow-ups. The integration of digital health tools into the care processes of oncology patients has the potential to enhance patient engagement, improve treatment adherence, and support clinical decision-making. Telehealth practices offer new opportunities for delivering key elements of patient-centered care, including patient education, supportive care, and individualized treatment approaches.

Conclusion(s): The reviewed studies demonstrate that telehealth has a significant impact on various dimensions of oncological care, offering different experiences and outcomes for both patients and healthcare professionals. Telehealth shows notable effects in key areas such as integration into standard care processes, user perceptions, adoption strategies during the pandemic, effectiveness in postoperative follow-up, and its role in enhancing patient-centered care. For telehealth applications to be effectively and safely expanded in the follow-up of oncology patients, these findings should be supported by further research and integrated into clinical practice.

Keywords: digital health, nursing care, oncology, telehealth

PP - 025

Between Healing and Farewell: An Emotional Perspective on Pediatric Intensive Care and Oncology Nursing

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Every morning, I step through the doors of the unit. Time seems to pause for a brief moment, and the outside world fades away. Children—tiny and fragile—fight for their lives, connected to monitors, while beside them stand mothers and fathers silently weeping, their eyes searching mine with desperate hope. In these moments, I feel my heart split in two—one side beating for the children battling between life and death, and the other carrying the silent burdens I can no longer express with words. These settings are not only places of medical intervention, but also stages where the deepest sorrows, the most heartfelt prayers, and the most fragile hopes unfold. On one side, the terrified eyes of a little child taking their first steps into the hospital; on the other, the gaze of a body with no hair, eyes aged far beyond their years. As nurses, we try to exist silently between these two worlds. Sometimes we whisper lullabies while drawing blood; sometimes we hold a child's hand through unrelenting pain, swallowing our own tears. Because being a nurse means sometimes standing beside a child taking their last breath, and sometimes silently sharing a mother's tears by simply holding hands. Children in oncology wards often have to give up not only their strength, but also their dreams during months of chemotherapy. In the intensive care unit, one moment without breath turns into a desperate fight to bring back life. In both areas, our role as nurses carries not only physical, but also emotional and spiritual weight. Most of the time, this burden grows in the silence of unspoken pain, hidden behind words like "You must be strong." Touching a child's world is beautiful, but witnessing their pain is deeply exhausting. And through it all, we must remain strong—because that is what is expected of us. Yet behind this mask of strength is a soul quietly fading. Long shifts, sudden losses, medical helplessness—and worst of all, the inability to save a tiny heart slipping away... these accumulate within us over time. This accumulation is not just exhaustion, but a kind of invisible grief—an unnamed sorrow. Because we are not just "healthcare workers"; We are witnesses to a child's last breath, And to a mother's silent scream. The heaviest burdens are often the ones unseen. We have all seen and experienced much in this nursing journey, but perhaps what we need most is the chance to share the silent weight growing inside us—before anyone even notices. I hope these words remind others that we are not only caregivers of physical healing, but also fragile human beings who carry the full burden of being human. Because without seeing our invisible faces, the truest form of this profession will always remain incomplete.

I write this letter in memory of the children in the oncology unit we lost before we could even comb their hair, for the little ones in the ICU whose hands we held as their hearts stopped, and for all the nurses who silently fight for them—those who haven't had the chance to speak their own pain, who walk the thin line between life and death, and who bury their own feelings deep inside. These words are for the mothers lost in the depths of sorrow, for the children battling disease in every cell of their bodies, and for us—who strive to stay strong for them without ever running out of compassion.

Keywords: Pediatric nursing, Pediatric intensive care, Pediatric oncology, Mother, Farewell

PP - 026

Breast Care Nursing

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Every 14 seconds, a woman somewhere in the world is diagnosed with breast cancer. According to the World Health Organization (WHO, 2022) data, breast cancer is the most frequently diagnosed type of cancer in Türkiye when both sexes are included. In 2022, 25,200 new breast cancer cases were recorded in Türkiye, and this number is projected to rise to 34,900 by 2045 (Breast Cancer Research Foundation [BCRF], 2025; International Agency for Research on Cancer [IARC], 2025).

The specialization of breast care nursing has gained prominence over the past 30 years in countries such as the United Kingdom, Australia, the United States, Scandinavia, Ireland, and the Benelux countries. The UK was the first country to define the role of the breast care nurse at a national level. Breast care nursing is defined at three levels:

Level 1 is the "breast care nurse," who has completed post-licensure education in breast care

Level 2 is the "clinical nurse specialist," who holds a master's degree in breast care; and

Level 3 is the "nurse consultant," a specialized clinical nurse with doctoral training (Biganzoli et al., 2020).

In February 2009, the European Oncology Nursing Society (EONS) convened a panel of seven academics and clinical nurses from across Europe who provide breast care nursing education and care for women with breast cancer. The panel aimed to develop a post-basic curriculum for breast cancer nursing. A nursing model that starts with the patient experience was used as the foundation for this curriculum (Eicher et al., 2012).

According to the ABC Global Charter, ensuring access to comprehensive, integrated, and multidisciplinary care is among the most urgent and applicable recommendations for patients with breast cancer (ABC Global Alliance, 2025). However, in Türkiye, the concept of "breast care nursing" is not yet fully established, and breast care nurses are not commonly found in breast care centers. The Oncology Nursing Association of Türkiye, founded in 1989, has a "Breast Nursing Subcommittee" that organizes annual "Breast Care Nursing" training courses (Onkoloji Hemşireliği Derneği, 2025).

A study by Brown et al. (2021), which included 2,905 women, showed that individual interventions by specialist breast cancer nurses were as effective as standard care. This review was prepared to highlight the increasing need for breast care nurses due to the growing incidence of breast cancer.

Conclusion

Studies have demonstrated that comprehensive, continuous, and individualized nurse-led care can facilitate the adaptation of breast cancer patients to symptoms throughout the processes of diagnosis, treatment, and life after discharge (Brown et al., 2021; Refeld et al., 2023; Huang et al., 2022). To ensure that breast cancer patients benefit from evidence-based and personalized healthcare, there is a need to define the standards of breast care nursing and to develop postgraduate and doctoral programs aimed at supporting professional development in this field.

Keywords: breast care nursing, breast cancer, breast care

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PP - 027

Investigation of the effect of cold application in the management of peripheral neuropathy associated with taxane-based therapy

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Objective: Peripheral neuropathy (PN) is a toxicity that is frequently seen in chemotherapy patients receiving taxane-based treatment and affects the quality of life. The aim of this study was to show whether cold application is effective in preventing PN due to taxane-based treatment.

Materials-Methods: This descriptive study was conducted with the participation of 63 cancer patients receiving taxane-based treatment in our hospital's chemotherapy unit. Patient data were collected using the Patient Identification Form, Common Terminology Criteria Adverse Events, and Performance Scale. Google Scholar and Pubmed databases were used to access articles on the subject. The keywords “chemotherapy”, “peripheral neuropathy”, “nursing”, “neuropathic pain”, “peripheral neuropathy” were used in the searches.

Results: The patients participating in the study were divided into two groups as those who received ice application and those who did not during chemotherapy and were evaluated comparatively.43.7% of the patients who received ice application and 45.1% of the patients who did not receive ice application consisted of patients who received paclitaxel in the treatment protocol, and approximately 70% of these patients received paclitaxel once a week. While 75% of the patients who received ice application had grade 1 and 21.9% had grade 2 neuropathy; In patients who did not receive ice, neuropathy degrees were detected as Grade 1 in 64.5% and Grade 2 in 32.3%. Grade 3 neuropathy was observed in only 1 patient who received ice. Chemotherapy dose reduction due to neuropathy was calculated as 12.4% in patients who received ice and 32.3% in patients who did not receive ice; treatment delay due to neuropathy was calculated as 12.4% in patients who received ice and 19.4% in patients who did not receive ice.

Conclusion(s): In this study, Grade 2 neuropathy rates were found to be numerically lower in patients who received taxane-based treatment and who received ice during treatment than in patients who did not receive ice. In addition, the number of patients who had treatment dose reductions and treatment delays in patients with ice application was found to be numerically lower than in patients without ice application. According to the obtained data, it was shown that cold application during treatment may be an effective approach in the management of PN in cancer patients receiving taxane-based treatment.

Keywords: chemotherapy, peripheral neuropathy, “nursing, neuropathic pain, peripheral neuropathy

PP - 028

A Phoenix in a White Night: Psychosocial Collapse During the Oncological Diagnosis Process and the Nursing Approach – A Case Report

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Objective: A cancer diagnosis is a traumatic experience that induces not only physiological but also profound psychological and social effects on individuals. This case report aims to explore the psychosocial deterioration experienced by a young woman diagnosed with cervical cancer and to highlight the role of nursing care in supporting the patient throughout the diagnostic process.

Case Report: The patient is a 42-year-old woman, a high school graduate, mother of three, and actively employed. Following medical investigations and evaluations, she was diagnosed with cervical cancer. It was observed that she attended treatment sessions unaccompanied. Her elderly mother was unable to consistently provide support due to age-related limitations. During this period, the oncology nurse engaged in supportive interviews with the patient to foster trust, sustain hope, and assist her in rediscovering meaning in life. These interviews provided a safe and empathetic environment for self-expression, utilizing active listening to fully attend to the patient's emotional needs. Topics addressed during the sessions included the treatment process, side effects, critical considerations during therapy, as well as the patient's fears, anxieties, pre-diagnosis adversities, coping strategies, and her decision-making process regarding treatment initiation. The patient's statement, "While I wished to die on a white night, I was reborn like a phoenix; my nurse held my hand," poignantly illustrates the profound impact of the nurse–patient care relationship.

Conclusion(s): Oncology nursing represents a comprehensive guidance process that integrates knowledge, skill, and emotional sensitivity. This case underscores the critical importance of psychosocial support in cancer care and the transformative role nurses play in this context. It is recommended that initiatives be implemented to enhance oncology nurses' competencies in psychosocial and spiritual care, in addition to physical care.

Keywords: Cancer, oncology nursing, psycho-oncology, trauma

PP - 029

Nursing Care of a Patient Underwent Breast Reconstruction with Pedicled Tram Flap According to Gordon's Functional Health Patterns Model: Case Report

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Objective: Breast cancer is the most common type of cancer affecting women, both in Türkiye and worldwide. In the treatment process, reconstruction options play an important role in maintaining physical and psychosocial well-being. One of the most preferred methods for breast reconstruction after mastectomy is a surgical procedure called TRAM. In this procedure, skin, fat, and a portion of the lower abdomen muscle are used to create a new breast. The aim of this presentation is to discuss the nursing care of a patient who underwent TRAM flap reconstruction.

Case Report: S.T., 50, had a left mastectomy + axillary lymph node dissection for breast cancer in 2023. After 28 cycles of chemotherapy and 4 of radiotherapy, she had breast reconstruction with a tissue expander followed by an implant. The breast implant was removed in 2024 due to recurrent surgical site infections, and a tissue biopsy culture showed Pseudomonas Aeruginosa. She was hospitalized and treated with Colimycin (2x1 IV) and Fosit (4x1 IV). After the infection was treated, she had left breast reconstruction with a pedicled TRAM flap. She was given antibiotics due to seropurulent discharge on the incision line. Her lungs showed passive atelectasis, ground glass appearance, and pleural effusion on a chest CT from the second postoperative day due to shortness of breath and low blood oxygen. During her stay, she was diagnosed with impaired respiratory pattern, activity intolerance, acute pain, impaired physical mobility, impaired tissue integrity due to infection, lack of self-care due to pain, and delayed healing. She also had a sleep pattern due to pain, anxiety, and fatigue from the treatment process. A holistic approach was presented according to Gordon's functional health patterns model with nursing diagnoses of deterioration in body image, lack of information about the healing process, delay in wound healing, risk of infection, and peripheral neurovascular dysfunction. The patient's postoperative recovery process was supported, pain management was provided, emotional changes related to body image were observed, and appropriate psychosocial support was given.

Conclusion(s): Reconstructive surgery after breast cancer improves quality of life and reduces psychological effects of treatment. In a 50-year-old female patient who underwent breast reconstruction with a pedicled TRAM flap, the patient's physical and mental well-being improved thanks to nursing care according to the Gordon Functional Health Patterns Model. These results show the importance of holistic nursing care in patients who underwent breast reconstruction with native tissue.

Keywords: Mastectomy, Breast cancer, Breast reconstruction, Tram flap

PP - 030

Nursing Care of a Patient with Pleomorphic Sarcoma Reconstructed with Latissimus Dorsi Flap According to Gordon's Functional Health Patterns Model: Case Report

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Objective: Sarcomas are malignant tumors that develop from cells of mesenchymal origin and can originate from supporting tissues such as bone, cartilage, muscle, adipose tissue, blood vessels and fibrous tissue. It has been reported that approximately 80% of sarcomas originate from soft tissues and the rest originate from bone tissue. The aim of this study was to discuss individualized nursing care according to Gordon's Functional Health Patterns Model for a patient who underwent surgery for pleomorphic sarcoma and was followed up in the clinic for a long time due to complications.

Case Report: SŞ. is 55 years old and underwent surgery in 2024 for pleomorphic sarcoma of the right knee in an external center, but the lesion could not be completely removed. The patient was admitted to our hospital and received two courses of chemotherapy. On 17.02.2025, the anterior right knee was reconstructed with a free latissimus dorsi flap after excision of pleomorphic sarcoma. During the follow-up period, necrosis and malodor developed in the patient's right knee, Streptococcus Mitis-Oralis was found in the tissue biopsy and Acinetobacter growth was detected in the swab culture. Tipraxin (4x1 IV) and Merosid (3x1 IV) treatment was started. On 02.03.2025, necrotic tissue debridement was performed on the right knee, and negative pressure wound therapy (NPWT) was started. On 11.03.2025, a left gastrocnemius muscle flap and a skin flap from the left thigh were harvested and applied to the right knee tissue defect, and NBWT was terminated. The patient received individualized care according to Gordon's Functional Health Patterns Model with NANDA nursing diagnoses of acute pain, delayed wound healing, impaired skin and tissue integrity, less nutrition than needed, impaired physical mobility, anxiety, fatigue, lack of self-care, impaired body image, risk of infection, risk of peripheral neurovascular dysfunction, and risk of falls. The patient's postoperative recovery process was supported, and pain was controlled. Emotional reactions due to body image changes were monitored, and psychosocial support was provided. Infection and postoperative complications were prevented by encouraging mobilization and performing respiratory exercises. The patient was trained and prepared for home care before discharge.

Conclusion(s): In oncologic patients with post-surgical complications, individualized nursing interventions positively affect the healing process. In addition, Gordon's individualized care according to the Functional Health Patterns Model has been a valuable guide in providing safe and quality care in oncological surgery patients.

Keywords: Flap management, Nursing care, Oncologic surgery, Reconstructive surgery

PP - 031

Difficulties Experienced by Nurses in Providing Care to Geriatric Oncology Patients

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According to GLOBOCAN 2022 data, 15 million cancer cases were reported in 2022 and approximately 9.8 million of these cases occurred in individuals between the ages of 60-85 (GLOBOCAN, 2022). According to the Türkiye Cancer Statistics report published in 2020, the cancer incidence rate among patients aged 65 and over in our country is 48.1% (Halk Sağlığı Genel Müdürlüğü, 2025). Older age is a weel-known risk factor with patients who has cancer and it is characterized by high incidence and mortality (Li, Shan, Zhang, & Ma, 2024). Moreover, approximately %70 cancer related deaths are occurs in this age group. Therefore, cancer is approved as a elderly disease (Estape, 2018). Working with oncology patients is a very stressful experience for nurses, as it is for other professionals working in the healthcare field (Yılmaz & Üstün, 2019). Nurses working in this field faced situations such as compassion fatigue, burnout, aging anxiety, professional stress, and difficulty coping with uncertainties in the treatment process. In the study conducted with oncology nurses determined that nurses experienced intermediate aging anxiety and occupational stress (Eroğlu, 2024). Another study determined that nurses have difficulty in meeting the physical, cognitive and psychosocial needs of elderly cancer patients. The study emphasized that lack of education and system-related limitations are factors that negatively affect the quality of nursing care; more education and support are needed for a more sensitive approach to elderly patients (Li, Cheng, Yu, Wang, & Christensen, 2025). Puts and colleagues found that nurses had a lack of knowledge in the geriatric field and that the resources provided by the state were insufficient for quality care. They also emphasized that nurses could not spare time for complex issues such as planning the care to be provided as the disease progressed, managing symptoms, and home care (Puts, Oldenmenger, Haase, & al., 2021). As a result, nurses face many difficulties in providing care to geriatric cancer patients. These difficulties need to be revealed through different studies and nurses' skills in coping with these difficulties need to be increased.

Keywords: care, difficulty, geriatrics, nursing, oncology

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PP - 032

The Role of Peer Counseling as a Psychosocial Support in the Process of Living with Cancer

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The diagnosis of cancer is a process that affects the patient on a psychosocial level as well as on a biological level and requires a restructuring of life. The difficulty, length and uncertainty of the treatment process cause patients to need support not only in physical but also in emotional, social and cognitive areas. In this context, peer counseling provides the opportunity to be in contact with someone going through the same medical process, to improve coping skills with the diagnosis, and to be informed about what patients can expect during and after treatment. It also provides psychosocial support by guiding patients on how to cope with the negative effects of treatment. The aim of this study is to examine the role of peer counseling as a psychosocial support in the process of living with cancer.

Peer counseling is based on people who have gone through cancer treatment sharing their experiences to provide information, emotional support and coping skills to patients with similar diagnoses. This approach, which can be applied through face-to-face individual interviews, group support sessions, telephone and online platforms, reduces patients' sense of isolation, fills information gaps and increases their sense of hope. The literature reveals that peer support is particularly effective in strengthening coping strategies, increasing treatment adherence and improving quality of life. In a systematic review and meta-analysis study, it was reported that peer support had significant positive effects on depression, anxiety, quality of life and self-efficacy. However, there are also some limitations and risks in peer counseling practices. Technical glitches in online interventions, intra-group conflicts, reliving negative experiences or loss of one of the group members may lead to new sources of stress in patients. Therefore, it is important that peer support programs are conducted by trained peer coaches, supported by regular supervision and guidance, and implemented under the supervision of a professional healthcare team. Nurses should integrate peer counseling with a patient-centered and holistic care approach and assign peer counselors through specific training processes. They should also work in collaboration with multidisciplinary teams to organize this support model, increase access through digital platforms and evaluate the process. It is thought that systematic integration of peer counseling into nursing practices will be an effective and sustainable psychosocial intervention option to improve the quality of life of individuals living with cancer.

Keywords: Cancer, Nursing, Peer Counseling

PP - 033

The Relationship Between Self-Efficacy and Quality of Life in Patients with Gastrointestinal System Cancer

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Objective: The aim of this study is to examine the relationship between self-efficacy and quality of life in patients with gastrointestinal system (GIS) cancer.

Materials-Methods: The study, which is descriptive, comparative, cross-sectional and correlational, was conducted with 100 cancer patients who were receiving treatment at a university hospital between May 2022 and May 2023. The data of the research were collected from the "Information Form on Sociodemographic and Disease Characteristics", "General Self-Efficacy Scale (GÖYÖ)", "European Organization for Research and Treatment of Cancer Quality of Life Scale (EORTC QLQ C-30)" and "Karnofsky Performance Scale (KPS)". It was collected face to face using".

Results: GIS cancer patients' GIS total mean score was 33.74±5.93, EORTC QLQ C-30 subscale mean total score mean; Symptom Scale was 32.05±18.13 (minimum 0, maximum 97.44), Functional Scale was 65.02±20.31 (minimum 0, maximum was 100), General Health Scale was 55.75±25, It is 00 (minimum 0, maximum 100). It was determined that the KPS total score average was 59.30±9.01. There is a statistically significant and negative relationship between the EORTC QLQ C-30 total score and the GÖYÖ total score (p<.01).

Conclusion(s): It was determined that as the self-efficacy of patients with GI cancer increased, their quality of life increased.

Keywords: Cancer, Quality of Life, Self-efficacy, GI Cancers, EORTC QLQ C-30

PP - 034

Nursing Care of a Patient Underwent Surgery for Oropharyngeal Squamous Cell Carcinoma According to Gordon's Functional Health Patterns Model: A Case Report

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Objective: Oropharyngeal squamous cell carcinoma is a serious malignancy that often requires multidisciplinary treatment, especially in advanced stages. While early-stage disease may respond well to surgery and radiotherapy, advanced cases typically involve combined approaches, including chemotherapy and targeted therapies. Wide excisions and neck dissection are common, particularly for tumors in the retromolar trigone, due to lymphatic spread risk. Postoperative patients frequently face physical, functional, and psychosocial challenges such as impaired mandibular function, speech and feeding difficulties, and body image issues. Addressing these requires a holistic nursing approach. This case report discusses the nursing care of a patient who underwent right retromolar trigone excision, cervical neck dissection, and free flap reconstruction, using Gordon's Functional Health Patterns Model.

Case Report: H.K. is a 52-year-old female patient. Over the course of a year, she presented multiple times to the dental clinic with infections around the dental tissues. As her complaints did not resolve with antibiotic therapy, a biopsy was taken from the affected area, leading to a diagnosis of squamous cell carcinoma. The patient was hospitalized for tumor excision, and subsequently underwent right retromolar trigone mass excision, right 1A-2A-2B-3-4 neck dissection, and reconstruction with a free flap taken from the lower extremity. During her hospitalization, comprehensive nursing care was provided in accordance with the following nursing diagnoses: impaired swallowing, impaired physical mobility, imbalanced nutrition: less than body requirements, impaired verbal communication, disturbed sleep pattern, risk of ineffective tissue perfusion, risk of aspiration related to dysphagia, risk of impaired skin and tissue integrity, and risk of infection. Education and counseling were also provided to the patient and her family.

Conclusion(s): With the implementation of individualized and holistic nursing care targeting the patient's specific problems, the patient's comfort and functional capacity were improved, thereby supporting the healing process. In this context, delivering personalized care through a nursing model and providing comprehensive education and counseling are of vital importance.

Keywords: Oropharyngeal Cancer, Squamous Cell Carcinoma, Neck Dissection, Gordon's Functional Health Patterns Model, Nursing Care

PP - 035

Breast Cancer and Frailty in the Elderly

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This review aims to address the relationship between breast cancer and frailty in older individuals.The elderly population is increasing in the world and in our country. According to the 2024 data published by TurkStat, it reports 10.6% of the elderly population (TurkStat, 2024). The increase in the elderly population also increases health problems such as chronic diseases and cancer (İlhan and Bakkaloğlu, 2019). The risk of breast cancer increases in women as they age (Ban and Godellas, 2014), (Howlader et al., 2016). According to the cancer statistics published breast cancer ranks first in women with 43.4%. While the prevalence of breast cancer in the 50-69 age range is 28.3, breast cancer ranks first with 17.1 in the elderly aged 70 and over (T.R. Ministry of Health, General Directorate of Public Health, Department of Cancer, 2020).

According to the WHO, old age occurs as geriatric syndromes. These geriatric syndromes are the result of multiple underlying factors, and these factors include frailty (WHO, 2024). As people age, the risk of frailty increases (Clegg et al., 2013), (Xue Q-L, 2011). "Frailty" is an established term to describe susceptibility associated with aging (Doody et al., 2022), (Clegg et al., 2013). It has been recognized as one of the major barriers to cancer treatment in elderly patients (Handforth et al., 2015), (Ethun.ve et al., 2017). Routine assessment of frailty in elderly cancer patients guides treatment decisions. Frailty must be accurately assessed for patient-specific planning of treatment. At this point, comprehensive geriatric assessment and frailty screening scales can be instructive (Wildiers et al., 2014). Failing to identify frailty has the potential to expose older cancer patients to treatments that may not benefit or even harm (Handforth et al., 2015). The high level of vulnerability makes it difficult to achieve therapeutic success. For example, frailty increases the risk of chemotherapy intolerance and the likelihood of a worse treatment response (Jespersen et al., 2021), (Narasimhulu et al., 2020). Frail elderly patients undergoing cancer surgery are more likely to experience postoperative complications. In addition, advanced frailty poses a risk for morbidity and mortality independent of cancer and its treatment (Ribeiro et al., 2020), (Shaw et al., 2022).

As a result, old age is closely related to the concepts of breast cancer and frailty. In elderly breast cancer patients, the level of frailty should be included in the treatment process and a holistic approach should be provided.

Keywords: Breast Cancer, Breast Cancer in the Elderly, Cancer and Frailty, Frailty in the Elderly

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PP - 036

Symptom Tracking with Digital Health Technology in Gynecologic Oncology: Integration into Nursing Practice

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Today, digital health technologies have become an important tool in chronic disease management and transform patient monitoring and care processes in oncology nursing. Digital health technologies, which are frequently used in gynecological cancers that significantly affect women's quality of life, play a key role in facilitating the early diagnosis and management of symptoms that develop due to processes such as chemotherapy, radiotherapy or surgical treatment for individuals diagnosed with gynecological oncology. In this context, digital technologies such as mobile applications, telehealth services, wearable technologies, patient outcome platforms, remote monitoring systems, artificial intelligence-supported digital platforms support nurses' decision-making processes in symptom monitoring and enable them to develop care strategies. The aim of this review study was to evaluate the integration of digital health technologies and symptom monitoring into nursing practices in patients diagnosed with gynecologic oncology.

Some studies in the literature show that symptom monitoring using mobile health applications facilitates early diagnosis of symptoms such as nausea, fatigue, pain, sleep disorders and emotional problems and improves nursing interventions, and it is stated that nurses can instantly access patient data and plan individualized interventions through these digital technologies. In another study, it was found that a mobile application including electronic patient results, educational materials and secure messaging system was feasible, facilitated symptom monitoring and improved the timing of nursing interventions. Another study examining the acceptability and effectiveness of mobile health applications in the management of cancer-induced pain found that mobile applications support patient care and improve patient outcomes in different areas such as pain monitoring, education, reminders and support coordination. In addition to all these, remote monitoring systems ensure continuity of care, especially for patients with difficulties in accessing healthcare services.

For the effective use of digital health systems, it is necessary to increase the level of knowledge of nurses on this subject, ensure data security at the institutional level and strengthen integration. In conclusion, it is thought that the use of digital technologies in gynecology oncology nursing positively affects both patient outcomes and nursing care quality.

Keywords: digital health, gynecologic oncology, nursing care, symptom tracking

PP - 037

The Holistic Role of the Nurse in Oncologic Surgery: The Care Journey from Surgery to Discharge

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Cancer is one of the most serious chronic health issues due to its high mortality rates, with increasing incidence worldwide and in our country. This rise is linked to factors such as aging populations, lifestyle changes, environmental pollutants, and advancements in early diagnosis. Cancer requires an expert, evidence-based approach and multidisciplinary collaboration. Cancer patients undergoing surgical treatment face not only physical trauma but also psychological and social challenges. In this context, nursing care should go beyond physical recovery to include emotional well-being, social support, and quality of life. Before surgery, the nurse helps to alleviate anxiety by meeting the patient's information needs and ensures preparation for the procedure. The nurse also assesses the patient’s physical condition and, in collaboration with the multidisciplinary team, develops a personalized care plan by identifying potential risks. During the surgical process, the nurse ensures patient safety by applying aseptic techniques and supports the operation’s smooth progression. In the postoperative period, the nurse handles pain management, wound care, mobilization, nutrition, and psychological support. Early detection of complications and timely intervention is crucial, and nurses play a vital role in this. Furthermore, during discharge, the nurse provides essential education to the patient and their family to ensure effective home care continuation. In the discharge process, the nurse not only completes patient care but also initiates an educational process for both the patient and their family. This includes developing individualized care plans and providing necessary information for home care. The nurse’s leadership, decision-making ability, and coordination within the team are critical in managing the discharge effectively. Additionally, the nurse serves as a consultant, ensuring the continuity of home care and preemptively addressing any complications. The nurse’s role is not limited to technical skills; it also includes clinical observation, empathic communication, and professional guidance. In oncological surgical care, the nurse is essential in supporting the patient’s physical, psychological, and social well-being throughout the treatment process. Continuous professional development, active participation in clinical decision-making, and adherence to scientific guidelines are necessary to enhance patient satisfaction and improve clinical outcomes.

Keywords: Oncological surgery, Surgical nursing, Multidisciplinary approach, Nursing roles

PP - 038

Management of Cancer-Related Cognitive Impairment in Oncology Patients with a Multidisciplinary Approach

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Nowadays, cancer-related cognitive disorders have become a more likely problem with the extension of cancer survival. However, this situation has led to a greater incidence of long-term complications, such as cognitive impairment that develop due to cancer. This review aims to define cancer-related cognitive impairment, to explain etiology, symptoms, and treatment approaches multidisciplinary perspective based on literature. Cancer-related cognitive impairment are also known as chemotherapy-related cognitive dysfunction, cognitive changes, and neurocognitive effects in cancer survivors, “chemo brain” or “chemo fog”. During this process, patients may experience cognitive impairments such as memory, attention, executive functions, processing speed, and verbal fluency. Cancer patients and their relatives do not anticipate that they will have to deal with cognitive impairment during cancer. Therefore, this unexpected situation can complicate patients’ cancer experiences, cause disappointment, shock, and a new crisis management. The causes of cancer-related cognitive impairment are multifactorial and may include chemotherapy, radiotherapy, surgery, hormonal treatments, tumor location, biological, genetic, and psychological factors. First of all, when we look at the literature, we see that objective and subjective tools exist for determining and diagnosing cognitive impairment. These tools can sometimes be used alone and sometimes together to determine the affected area and to make a rating. Many factors can affect the degree of cognitive impairment and its effect on quality of life during the patient's overall and disease-free survival. These factors may include many conditions such as sociodemographic characteristics, pre-cancerous comorbidities, previous surgery, chemotherapy regimens, and additional radiotherapy protocols, if any. Therefore, it is important to evaluate risk factors early and to address and manage personalized care plans with a multidisciplinary approach. A multidisciplinary approach that includes the collaboration of surgical oncology, medical oncology, neurology, psychiatry, and nursing can be applied according to the needs of each patient. In addition to medical care, cognitive rehabilitation, counseling, and the inclusion of psychosocial support, cognitive training exercises, memory techniques, and some therapy approaches can help relieve symptoms. In patients going through this process, family support and the participation of family members in treatment and rehabilitation are important in meeting their emotional and psychological needs. In addition, exercise programs, psycho-education, and digital health applications can be added to the treatment and care program. In conclusion, cancer-related cognitive impairment are a condition that should be taken into consideration during the cancer diagnosis and treatment process, monitored and treated at certain intervals, and require a multidisciplinary and patient-centered approach.

Keywords: Cancer Survivors, Cognitive Dysfunction, Chemotherapy-Related Cognitive Impairment, Patient-Centered Care, Psycho-Oncology

PP - 039

Pancreatic Cancer Case Report and Nursing Care

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Objective: Pancreatic cancer is a malignancy that develops in the pancreas, which is an important part of the digestive system, and is usually aggressive. Ductal adenocarcinomas constitute approximately 85–90% of cases, and these tumors are usually located in the head of the pancreas (1). Since symptoms mostly appear in the late stage, diagnosis is difficult, and most patients present at advanced stages (2). While surgical resection is the only option with curative potential in the early stages, treatment in advanced stages is mostly based on chemotherapy and palliative approaches (2). The purpose of this case report is to address the nursing care of pancreatic cancer patients.

Case Report: Ö.O. applied to Niğde Ömer Halisdemir University Hospital 6 years ago with complaints of abdominal pain, weight loss and loss of appetite. As a result of imaging methods such as ultrasonography and MRI, a mass was detected at the head of the pancreas. The patient was then referred to Adana City Education and Research Hospital and a biopsy was performed to diagnose pancreatic adenocarcinoma. The patient first underwent whipple surgery in 2019 and no metastatic formation or postoperative complications were observed. The patient was given FOLFIRONOX treatment, which was administered every 14 days. The patient, whose general condition improved, continued to be followed up in the Oncology Polyclinic with KAPEDA tablets and drugs for secondary symptoms of the disease (such as contramal, granisetron). During the treatment process, our patient was admitted to the Nigde Omer Halisdemir University Hospital Oncology Clinic with complaints of fatigue, weakness, nutritional problems, shortness of breath, pain, and suspicion of infection. The nursing diagnoses made for the patient were fatigue, impaired gas exchange, ineffective respiratory pattern, impaired comfort/pain, impaired sleep pattern, activity intolerance, inadequacy in individual coping, impaired role integrity, undernutrition for body requirements, excess fluid-volume, risk of hyperthermia, and impaired oral mucous membrane. The patient was provided with nutritional support and chemotherapy complications were reduced with symptom management.

Conclusion(s): Pancreatic adenocarcinoma is an aggressive tumor with late onset and low survival rates. This case demonstrates that psychosocial support and palliative care are as critical as physical support in advanced-stage oncology patients. This patient diagnosed with pancreatic adenocarcinoma continues the surgery and chemotherapy process after diagnosis. However, as a result of disease progression, the patient was taken under close follow-up again to control nutritional problems, pain and other symptoms. The patient's symptomatic treatment and nursing care continue.

Keywords: Pancreatic cancer, chemotherapy, care, symptom management

PP - 040

Integration of Artificial Intelligence in Oral Mucositis Management in Cancer Patients: Current Approaches and Clinical Implications

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Oral mucositis, a prevalent and painful side effect of cancer treatments like chemotherapy and radiotherapy, significantly impacts patient comfort and treatment adherence, particularly in those undergoing treatment for leukemia or head and neck cancers (ArbabiSarjou et al., 2022; Reuss et al., 2023; Kusiak et al., 2020). Innovative management strategies are thus essential. Artificial intelligence (AI) technologies offer advantages in monitoring, risk prediction, and personalized care for oral mucositis. This review summarizes the current role and potential of AI applications in the diagnosis, monitoring, and management of this condition, which frequently affects cancer patients and negatively impacts their quality of life.

AI-based systems enhance symptom tracking and patient monitoring by enabling the collection and analysis of patient data from diverse sources, facilitating better identification of risk factors and individualized treatment strategies (García-Saisó et al., 2024; Vakili et al., 2024). A study using thermal imaging combined with a deep learning model to predict oral mucositis in head and neck cancer patients achieved 82% test accuracy, indicating potential for early identification (Thukral et al., 2023). Another study highlighted the effectiveness of Convolutional Neural Networks (CNNs) in mucositis screening, while noting issues like overfitting, suggesting the need for further model training improvements (Kapoor & Mahajan, 2023).

AI can enhance existing treatment methods. For example, photobiomodulation therapy, a recommended method for preventing oral mucositis (Zadik et al., 2019), could benefit from AI-optimized dosage and timing, potentially reducing complications and increasing treatment success. AI's analytical capabilities can also contribute to preventive approaches by revealing the relationship between oral microbiota changes due to cancer treatments and mucositis development (Reuss et al., 2023; Triarico et al., 2022). Clinical decision support systems offer treatment recommendations through real-time data integration, assisting oncologists (Oehring et al., 2023) in managing side effects like oral mucositis.

Ethical dimensions and patient perspectives are important. Research indicates that patients prefer AI as a supportive tool rather than a replacement for human decision-making (Hilbers et al., 2025; Hantel et al., 2024). Therefore, patient expectations and ethical standards should be considered in AI application development.

In conclusion, integrating AI into clinical workflows has the potential to enhance the quality of care in oral mucositis management through monitoring, personalized interventions, and optimal treatment strategies, ultimately improving patient outcomes and quality of life during cancer treatment.

Keywords: Mucositis, cancer, artificial intelligence

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PP - 041

Hypodermoclysis in Terminal Cancer Patients: An Innovation That Started in the 1990s, Why Does It Still Wait to Be Discovered?

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Hypodermoclysis is the process of administering fluid therapy subcutaneously and stands out as a method with proven efficacy that improves patient comfort by providing a less invasive option, especially in patients with difficult intravenous access. The aim of this review is to examine the uses, effectiveness, and potential risks of hypodermoclysis, and to evaluate its potential as an alternative for nurses in managing fluid therapy for terminal cancer patients. In addition, it aims to provide suggestions for its wider adoption in nursing practice by addressing the reasons why this treatment method is not widely used today, the gaps in the literature and the difficulties in clinical practice. Hypodermoclysis, which was first proposed in the early 1990s, has been included in the literature as an important alternative treatment method in providing fluid balance, especially in cancer patients, elderly individuals and patients in the terminal period. However, due to complications arising from the administration of hypertonic solutions, it has been less frequently used in clinical practice. Examples in the existing literature were generally conducted with small sample groups,so it is difficult to make a clear definition of the efficacy of the drugs. This has been emphasized by some researchers in their studies. Hypodermoclysis is preferred not only in cancer patients,but also in the elderly and individuals with weak vasculature. It is emphasized that subcutaneous infusion is an important option for elderly patients where it is difficult to establish an intravenous line. However, the efficacy of subcutaneous fluid infusion may vary according to the rate of fluid intake and the type of devices used. In particular, factors such as the fluid uptake capacity of the subcutaneous tissue,the amount of fluid used, and the duration of infusion may affect the treatment process. More comprehensive research is needed to confirm the efficacy and safety of this method. In order for nurses to effectively utilize important treatment methods such as hypodermoclysis, comprehensive education and information support should be provided, their independent roles should be strengthened, and the integration of these methods into clinical practice should be ensured. Hypodermoclysis, while a potential treatment method for fluid management in terminal cancer patients and elderly individuals, requires nurses to receive comprehensive training and for further scientific research to be conducted for effective use.

Keywords: Hypodermoclysis, cancer, fluid therapy, subcutaneous infusion, terminal stage

Figure 1. Hypodermoclysis

The image is taken from the reference 'Arthur, A. O., Goodloe, J. M., & Thomas, S. H. (2012). Subcutaneous fluid administration: a potentially useful tool in prehospital care. Emergency Medicine International, 2012(1), 904521

PP - 042

Investigation of nursing theses conducted on oncology patients undergoing surgery in Türkiye

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This study aims to evaluate theses written by nurses on oncology patients who underwent surgery in Türkiye. This retrospective literature study examined nursing theses written on oncology patients who underwent surgery. A search was conducted in the Turkish National Theses Database using the words “oncology”, “cancer”, “oncological surgery” and “cancer surgery” in the title. As a result of the search, 28 theses were reached. The theses were examined after being separated as master’s and doctoral theses. It was determined that 9 of the 28 theses that met the research criteria were doctoral and 19 were master’s theses. When the research methods of the theses were evaluated, it was determined that 17 were descriptive, 8 were experimental, 1 was phenomenological, 1 was qualitative, and 1 was meta-analysis. 14 of the studies were conducted with patients with breast, 8 with colorectal, 1 with bone, 1 with prostate, 1 with hematological, 1 with hepatobiliary, and 2 with different cancer diagnoses. In recent years, it has been observed that the number of nursing theses conducted with patients who have undergone oncological surgical interventions has increased

Keywords: Nursing, Oncology, Surgery, Thesis

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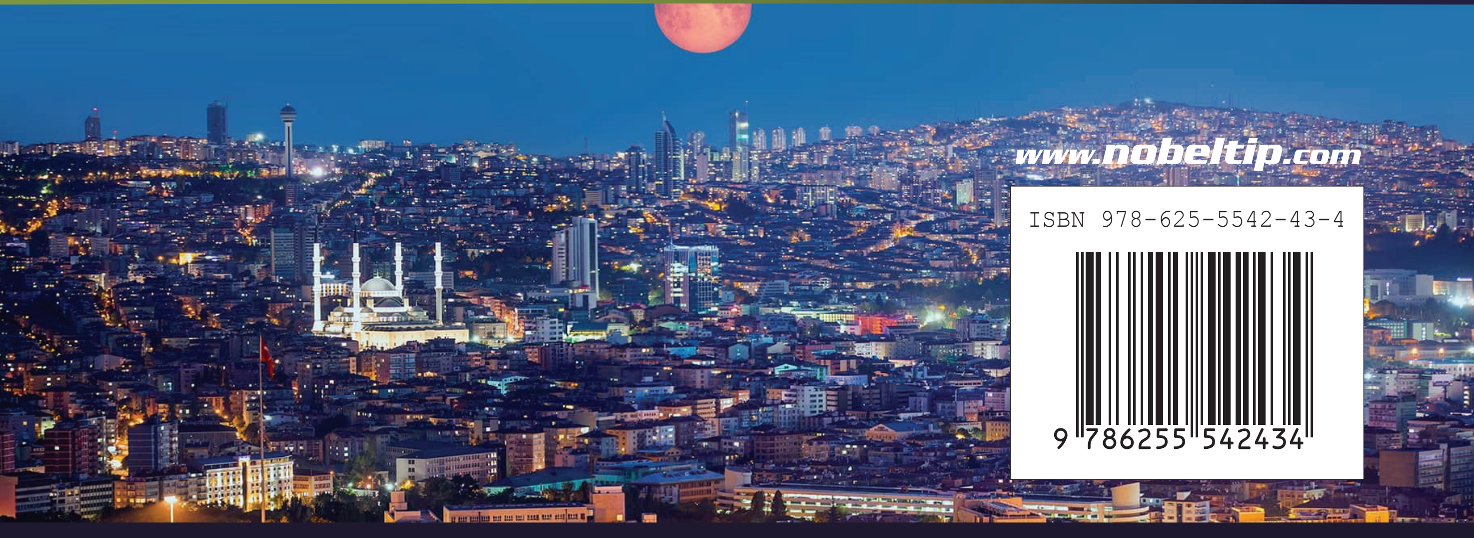

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