

“Role of Nurses in Supporting Patients with Cancer Undergoing Surgery and Chemotherapy”

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Abstract: Cancer remains one of the leading causes of morbidity and mortality worldwide, with millions of patients undergoing surgery and chemotherapy as part of their treatment. While medical interventions are crucial for disease control and survival, the physical, psychological, and social challenges associated with cancer therapies demand holistic nursing care. Nurses play an indispensable role in supporting patients across the cancer care continuum—before, during, and after surgery and chemotherapy. Their responsibilities extend from patient education, symptom management, and psychological support to fostering treatment adherence and improving quality of life. This article explores the multifaceted role of nurses in supporting patients with cancer undergoing surgery and chemotherapy, emphasizing evidence-based interventions, patient-centered approaches, and the integration of holistic care practices. It highlights nursing contributions to pain management, infection prevention, psychological resilience, family involvement, lifestyle modification, and survivorship care. The discussion underscores the need for strengthening oncology nursing education, interprofessional collaboration, and research to enhance outcomes for cancer patients.

Keywords: Cancer nursing, Oncology care, Surgery, Chemotherapy, Nursing support, Patient education, Quality of life

Introduction

Cancer treatment is a physically and emotionally demanding journey for patients, involving complex medical procedures such as surgery, chemotherapy, and often radiotherapy. While these interventions are central to disease control, they are associated with a range of physical side effects, psychological distress, and lifestyle disruptions. Patients frequently face fear of mortality, changes in body image, financial strain, and long-term uncertainties regarding survival.

Nurses form the backbone of oncology care, providing continuous support to patients across settings—from surgical wards to chemotherapy infusion centers and palliative care units. Their role extends beyond technical

assistance to encompass education, counseling, advocacy, and holistic care. By working closely with patients and families, nurses help reduce treatment-related anxiety, manage side effects, enhance adherence to therapy, and promote overall well-being.

This article provides an in-depth analysis of the role of nurses in supporting patients undergoing surgery and chemotherapy for cancer. It explores preoperative, intraoperative, and postoperative nursing responsibilities, management of chemotherapy-induced side effects, psychological and emotional care, patient education, family involvement, and survivorship support.

1. Preoperative Nursing Support for Cancer Patients

Before surgery, patients often experience intense anxiety, uncertainty, and fear. Nurses play a vital role in preoperative counseling by providing clear information about the surgical procedure, expected outcomes, risks, and postoperative recovery. Education about wound care, pain management, and mobility prepares patients and reduces anxiety. Preoperative assessment by nurses also helps identify comorbidities, nutritional deficiencies, and psychosocial needs. Additionally, nurses support emotional well-being through active listening, reassurance, and connecting patients to peer support groups or psychological counseling when necessary.

2. Intraoperative Nursing Care

During cancer surgery, nurses are responsible for maintaining sterile environments, monitoring vital signs, assisting surgeons, and ensuring patient safety. The perioperative nurse also serves as a patient advocate in the operating room, ensuring informed consent and respecting the dignity of unconscious patients. While the surgical team focuses on the technical aspects, nurses bridge the humanistic dimension by anticipating complications and supporting smooth surgical outcomes.

3. Postoperative Nursing Support

After surgery, patients require intensive nursing care for wound management, pain relief, prevention of infections, and early mobilization. Oncology nurses play a central role in monitoring surgical sites, administering medications, and providing comfort measures. Postoperative pain, body image concerns, and the fear of cancer recurrence are addressed through both medical and emotional support. Nurses also provide discharge planning, including wound care instructions, dietary advice, and signs of complications that warrant immediate medical attention.

4. Nursing Role in Chemotherapy Administration

Chemotherapy is one of the most widely used cancer treatments but is associated with significant physical and psychological burdens. Nurses are trained in safe handling and administration of cytotoxic drugs, ensuring accurate dosage, preventing extravasation, and monitoring for immediate adverse reactions. Patient education is a critical component, as nurses inform patients about potential side effects such as nausea, fatigue, alopecia, neutropenia, and mucositis. Through continuous monitoring and supportive interventions, nurses help patients cope with the demanding treatment regimens.

5. Managing Chemotherapy-Induced Side Effects

One of the most important roles of nurses is in managing side effects associated with chemotherapy. For instance:

- **Nausea and vomiting** are addressed through antiemetics, dietary modifications, and relaxation techniques.
- **Oral mucositis** is managed with oral hygiene education, saline rinses, and topical anesthetics.
- **Alopecia** requires emotional support and information on wigs or head coverings.
- **Neutropenia and infection risk** demand strict infection control measures, including patient education on hand hygiene and avoiding crowded areas.
- **Fatigue** is managed through energy conservation strategies and lifestyle modifications.

Through these interventions, nurses not only reduce physical discomfort but also enhance patient adherence to therapy.

6. Psychological and Emotional Support

Cancer diagnosis and treatment evoke profound psychological distress, including depression, anxiety, and existential fears. Nurses often serve as the first line of emotional support, providing empathetic listening, reassurance, and validation of feelings. They help patients

develop coping mechanisms and refer those with severe distress to mental health professionals. Group counseling, mindfulness training, and cognitive behavioral interventions are increasingly being incorporated into nursing care to reduce cancer-related psychological burden.

7. Patient Education and Empowerment

Patient education is a cornerstone of oncology nursing. Nurses provide information about treatment procedures, expected outcomes, self-care practices, and strategies for managing side effects. Empowering patients with knowledge fosters active participation in decision-making and enhances treatment adherence. Education is individualized, taking into account literacy levels, cultural backgrounds, and learning preferences. Visual aids, pamphlets, and digital resources are frequently used to improve comprehension and retention of information.

8. Family Involvement and Support

Cancer not only affects patients but also profoundly impacts families. Nurses extend care to family members by educating them about treatment regimens, caregiving responsibilities, and strategies for emotional support. They help families cope with role changes, financial strain, and anticipatory grief in advanced stages. Family-centered care fosters resilience and improves overall quality of life for both patients and caregivers.

9. Spiritual and Holistic Care

Many cancer patients seek meaning and purpose during their illness. Nurses address spiritual needs by offering compassionate presence, facilitating chaplaincy services, and supporting practices aligned with patients' beliefs. Holistic care—including complementary therapies like relaxation exercises, massage, yoga, and music therapy—is integrated into nursing practice to enhance well-being and reduce treatment-related stress.

10. Role in Survivorship and Rehabilitation

The journey does not end with treatment completion. Cancer survivors often struggle with long-term effects such as fatigue, neuropathy, infertility, and fear of recurrence. Nurses provide survivorship care planning, lifestyle modification counseling, and follow-up assessments. They promote physical rehabilitation, vocational reintegration, and social reintegration, enabling survivors to regain normalcy.

11. Palliative and End-of-Life Nursing Care

In cases where cancer progresses despite treatment, nurses play a central role in palliative and end-of-life care. Their focus shifts to pain relief, symptom management, emotional comfort, and dignified death. Nurses advocate for patient preferences, support families during the dying process, and provide bereavement care afterward.

12. Interprofessional Collaboration in Cancer Care

Nurses collaborate closely with oncologists, surgeons, psychologists, physiotherapists, nutritionists, and social workers to provide holistic care. Their position as constant caregivers enables them to bridge communication gaps and coordinate multidisciplinary interventions for optimal patient outcomes.

13. Oncology Nursing Research and Evidence-Based Practice

Nurses contribute to oncology research by assessing patient outcomes, testing interventions, and implementing evidence-based practices. Research on chemotherapy side effect management, quality of life, and patient education has significantly shaped modern cancer care. By participating in clinical trials and practice-based research, nurses enhance the scientific foundation of oncology nursing.

14. Challenges in Oncology Nursing

Despite their pivotal role, oncology nurses face multiple challenges such as emotional burnout, staffing shortages, lack of specialized training, and limited resources in low-income settings. Addressing these challenges requires investment in oncology nursing education, mental health support for nurses, and policy reforms to strengthen workforce capacity.

Summary and Conclusion

Nurses are integral to the cancer care continuum, providing vital support to patients undergoing surgery and chemotherapy. Their role encompasses preoperative preparation, intraoperative care, postoperative recovery, safe chemotherapy administration, side effect management, psychological and emotional support, patient education, family involvement, spiritual care, survivorship support, and palliative care. By integrating evidence-based interventions and holistic approaches, nurses enhance not only survival outcomes but also the quality of life for cancer patients.

Strengthening oncology nursing requires sustained investment in specialized education, research, and interprofessional collaboration. As the global cancer burden continues to rise, empowering nurses to deliver comprehensive, patient-centered care will remain fundamental to achieving optimal outcomes.

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