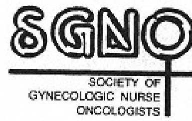
POCKET GUIDE *for* WOMEN AND CANCER

SOCIETY OF GYNECOLOGIC NURSE ONCOLOGISTS

GISELLE J. MOORE
LOIS A. ALMADRONES
BETH COLVIN HUFF
LYNN M. GOSSFELD
JoANN HUANG ERIKSSON

Pocket Guide for Women and Cancer



Editor-in-Chief
Giselle J. Moore, ARNP, MSN, AOCN
Department of Radiation Oncology,
University of Florida College of Medicine,
Gainesville, Florida

Co-editors
Lois A. Almadrones, RN, MPA, OCN
Clinical Research Associate, Department of Nursing/Surgery,
Memorial Sloan-Kettering Cancer Center, New York, New York

Beth Colvin Huff, RN, MSN
Consultant, Women's Health Nursing
Nashville, Tennessee

Lynn M. Gossfeld, RN, C, MSN
Fairfax, Virginia

JoAnn Huang Eriksson, RN, MS
Oncology Clinical Practitioner Educator,
Evanston Northwestern Healthcare
Evanston, Illinois, and Associate Faculty,
Rush University College of Nursing, Chicago, Illinois

Jones and Bartlett Publishers
Sudbury, Massachusetts
Boston London Singapore

Editorial, Sales, and Customer Service Offices
Jones and Bartlett Publishers
40 Tall Pine Drive
Sudbury, MA 01776
978-443-5000
800-832-0034
info@jbpub.com
http://www.jbpub.com

Jones and Bartlett Publishers International
Barb House, Barb Mews
London W6 7PA
UK

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Acquisitions Editor: Robin Carter
Production Editor: Nindy LeRoy
Manufacturing Buyer: Jane Bromback
Design: Modern Graphics, Inc.
Editorial Production Services: Modern Graphics, Inc.
Typesetting: Modern Graphics, Inc.
Cover Design: Dick Hannus
Printer and Binder: Courier Companies—Westford
Cover Printer: Courier Companies—Westford

Library of Congress Cataloging-in-Publication Data

Pocket guide For Women and cancer / Society of Gynecologic Nurse
Oncologists : editor-in-chief, Giselle J. Moore : co-editors, Lois
A. Almadrones … [et al.].
p. cm.
Companion vol. to: Women and cancer.
Includes index.
ISBN 0-7637-0548-9 (alk. paper)
1. Cancer—Nursing—Handbooks, manuals, etc. 2. Women—Diseases
—Nursing—Handbooks, manuals, etc. 3. Nursing care plans
—Handbooks, manuals, etc. I. Moore, Giselle J. II. Almadrones,
Lois A. III. Society of Gynecologic Nurse Oncologists. IV. Women
and cancer.
[DNLM: 1. Neoplasms—therapy—handbooks. 2. Women's Health
Services—handbooks. 3. Patient Care Planning—handbooks. QZ 39
P7393 1997]
RC281.W65P63 1997
616.99'4'0082—DC21
DNLM/DLC
for Library of Congress 97-22074
CIP

Printed in the United States of America
01 00 99 98 97 10 9 8 7 6 5 4 3 2 1

CONTENTS

Preface	xi
Contributing Authors	xiii
Part 1 **Medical Care Plans**	1
Section 1 Collaborative Problems	2
Potential Complications:	3
Pre-existing Medical Conditions	3
Anasarca	4
Ascites	5
Peritonitis	6
Fluid/Electrolyte Imbalance	7
Gastrointestinal Dysfunction/Obstruction	7
Malignant Effusions/Respiratory Compromise	8
Section 2 Nursing Diagnoses	9
Psychosocial Issues	10
Screening and Prevention	10
Altered health maintenance related to: insufficient knowledge of basic reproductive female anatomy, cancer prevention, and screening recommendations	10
Anxiety/fear related to: insufficient knowledge about screening techniques, uncertainty about outcomes, and possible cancer diagnosis	13
Treatment	15
Anxiety/fear related to: loss of feelings of control of life, unpredictability of nature of disease, and uncertain future	15
insufficient knowledge of prescribed chemotherapy (including clinical trials) and necessary self care measures	20
insufficient knowledge of prescribed intraperitoneal chemotherapy and necessary self care measures	23
insufficient knowledge of prescribed radiation therapy and necessary self care measures	26

insufficient knowledge of prescribed gynecologic radiation implant: Conventional afterloading 35

insufficient knowledge of prescribed gynecologic radiation implant: Remote afterloading procedure 40

insufficient knowledge of prescribed biotherapy and self care measures 44

Grief related to: potential loss of body function, negative effects of treatment on body image, changes in self-concept, and perceived effects on life-style 48

Comfort Issues 52

Risk for injury related to: hypersensitivity and anaphylaxis during chemotherapy, particularly paclitaxel therapy 52

Alteration in comfort related to: flu-like syndrome, arthralgia, and/or myalgia 55

intraperitoneal instillation of fluid 58

therapy and/or disease process 64

Alteration in quality of life related to: fatigue 66

Cardiovascular System 73

Risk for alteration in cardiac output during chemotherapy, particularly paclitaxel infusion 73

Respiratory System 75

Risk for alteration in respiratory function related to abdominal distention (disease process and/or intraperitoneal therapy), decreased lung capacity, and/or lung metastasis 75

Immune System 86

Risk for infection related to immunosuppression neutropenia secondary to chemotherapy and/or radiation therapy 86

Risk for bleeding related to immunosuppression thrombocytopenia secondary to chemotherapy and/or radiation therapy 91

Risk for infection related to indwelling peritoneal access port and catheter (PAC) 94

Endocrine and Metabolic Systems 97

Risk for injury related to acute water intoxication (SIADH) 97

Gastrointestinal System and Nutrition 99

Altered nutrition: Less than body requirements related to

nausea, vomiting, anorexia, and/or stomatitis 99

Alteration in elimination: Constipation related to malnutrition, decreased fluid intake, decreased mobility, and the use of narcotics 118

Altered elimination: Diarrhea related to radiation-induced enteritis 121

Alteration in elimination related to development of fistulae 129

Altered health maintenance due to knowledge deficit about colostomy/ileostomy and/or ileal conduit 136

Genitourinary System 143

Risk for alteration in urinary elimination related to hemorrhagic cystitis and nephrotoxicity 143

Integumentary System 146

Risk for alteration in skin integrity related to treatment modality (alopecia) and/or disease process 146

Neurologic System 159

Alteration in sensory perception related to neurotoxicity, neurological pain and parasthesias, ototoxicity, and/or retinal toxicity 159

Risk for injury related to neurologic dysfunction from brain metastsis 164

Part 2 Surgical Care Plans 167

Section 1 Collaborative Problems 168

Potential Complications 169

Bleeding/Hemorrhaging/Disseminated Intravascular Coagulopathy (DIC) 169

Thromboembolic Event 171

Infection/Sepsis 173

Fluid/Electrolyte Imbalance 173

Atelectasis/Pneumonia 174

Bowel Dysfunction 175

Urinary Dysfunction 176

Section 2 Nursing Diagnoses 178

Psychosocial Issues 179

Altered health maintenance related to: insufficient knowledge of condition, diagnostic tests, prognosis, and treatment options 179

insufficient knowledge of dietary restrictions,

medications, activity restrictions, self care activities, symptoms of complications, follow-up visits, and community resources 182

Decisional conflict related to: insufficient knowledge of treatment options 184

Anxiety/fear related to: impending surgery and insufficient knowledge of preoperative routines, intraoperative activities, and postoperative self care activities 189

insufficient knowledge of potential impact of condition and treatment on reproductive organs and sexuality 193

Risk for sexual dysfunction related to disease process, surgical intervention, fatigue, and/or pain 203

Alterations in sexual activity related to disease process, surgical intervention, fatigue and or pain (moderate or possibly permanent) 207

Inability to engage in genital intercourse (severe or permanent) 233

Grieving related to potential loss of fertility and perceived effects on life-style 237

Alteration in coping related to infertility 242

Comfort Issues 246

Altered comfort related to effects of surgery, disease process, and immobility 246

Risk for impaired physical mobility related to surgical interruption of body structures, incisional site pain, and activity restriction 249

Risk for sleep pattern disturbance/fatigue related to disease process, pain, and unfamiliar surroundings and activities 252

Cardiovascular System 255

Risk for fluid volume deficit related to losses secondary to surgical wound or gastrointestinal dysfunction 255

Respiratory System 257

Risk for alteration in respiratory function related to immobility secondary to imposed bedrest and pain 257

Immune System 260

Risk for infection related to susceptibility to bacteria secondary to wound, invasive vascular access, and/or urinary catheter 260

Gastrointestinal System and Nutrition 263

Risk for altered nutrition: Less than body requirements related to disease process, wound healing, and decreased caloric intake 263

Risk for bowel dysfunction related to decreased peristalsis secondary to surgical manipulation of bowel, effects of anesthesia and analgesia, and immobility 267

Genitourinary System 270

Risk for urinary dysfunction related to loss of sensation of bladder distention secondary to surgical and/or pharmaceutical interventions 270

Integumentary System 273

Impaired skin integrity related to surgical wound, decreased tissue perfusion, ostomy stomas, drain sites and/or immobility 273

Risk for impaired tissue integrity/infection related to lymphedema secondary to surgical removal of lymph nodes 278

Appendix A Professional Resource List 282

Appendix B Patient Resource List 286

PREFACE

In 1979, Richard Boronow, M.D., suggested establishing a nursing organization to foster education and communication among nurses interested in gynecologic oncology. Later that year, with the commitment of ten dedicated nurses, the Society of Gynecologic Nurse Oncologists (SGNO) was established. The first symposium was held in Colorado in 1982. From these small beginnings, the SGNO has grown internationally. The Society is a nonprofit organization of registered nurses dedicated to the advancement of patient care, education, and research in the field of gynecologic oncology. The authors and contributors of this pocket guide are members of the SGNO.

Continuing advances in our profession make heavy demands on us for increased knowledge and skills in clinical situations, for new insights and techniques in psychosocial intervention, and for an up-to-date understanding of professional issues. The SGNO responds to these needs and presents the most current information at its annual symposium and through its quarterly journal.

In 1996, our textbook *Woman and Cancer: A Gynecologic Oncology Nursing Perspective* was published with the intent of providing nurses in the outpatient clinic or office, at the bedside, or in an advanced practice role with a comprehensive reference that addresses the specific needs of this patient population. This pocket guide is an adjunct to our textbook. It highlights the unique nursing care issues associated with screening, diagnosis, and treatment of gynecologic malignancies. A medical plan of care and surgical plan of care are provided using the Bifocal Clinical Practice Model, which describes the two foci of clinical nursing: collaborative problems and nursing diagnoses. Specific assessment procedures, nursing interventions, and their detailed rationales, as well as outcome criteria, are included. The collaborative problems

and nursing diagnoses correspond with those identified in the textbook within the diagnostic cluster at the end of each chapter.

We hope that these plans provide a quick and easy reference for developing plans of care for your gynecologic oncology patients. In addition, a list of patient and professional resources that pertain to this patient population is provided in the appendices.

CONTRIBUTING AUTHORS

Lois A. Almadrones, RN, MPA, OCN®
Clinical Research Associate
Department of Nursing/Surgery
Memorial Sloan-Kettering Cancer Center
New York, New York

Jackie Balon, RN, MSN
Karmanos Cancer Institute
The Detroit Medical Center
Detroit, Michigan

Debra Brown, RN, BSN, OCN®
Department of Radiation Oncology
William Beaumont Hospital
Royal Oak, Michigan

Linda Carter, RN, MSN, OCN®
Carlow College of Nursing
Pittsburgh, Pennsylvania

Roberta Cobb, RN, OCN®
Arthur G. James Cancer Hospital
Ohio State University Medical Center
Columbus, Ohio

Ruth Cook, RN, MSN
Pittsburgh, Pennsylvania

Linda S. Fowler, RN, BSN, OCN®
Division of Gynecologic Oncology
University of North Carolina
Chapel Hill, North Carolina

Mary Louise Cullen, RN, C, MSN
Institute of Reproductive Health and Infertility
Rochester, New York

Jane Duffy-Weiser, RN, BSN
Memorial Sloan-Kettering Cancer Center
New York, New York

Anna M. Dugan, RN, BSN, OCN®
William Beaumont Hospital
Royal Oak, Michigan

JoAnn Huang Eriksson, RN, MS
Oncology Clinical Practitioner Educator
Evanston Northwestern Healthcare
Evanston, Illinois
Associate Faculty
Rush University College of Nursing
Chicago, Illinois

Sheryl Frazier, RN
Clinical Research Specialist
Department of Gynecologic Oncology
Vanderbilt University
Nashville, Tennessee

Lynn M. Gossfeld, RN, C, MSN
Fairfax, Virginia

Nancy Haddad, RN, MSN
Oakwood Hospital
Dearborn, Michigan

Evangeline A. Hager, RN, MSN, CRNP, CS
Wayne Christopherson and Associates, Inc.
Pittsburgh, Pennsylvania

Sara Kendall, RN, BSN, OCN
Gynecologic Oncology
University of Iowa Hospitals & Clinics
Iowa City, Iowa

Margaret Lamb, PhD, RN
Associate Professor
Department of Nursing, University of New Hampshire
Durham, New Hampshire

Wilhelmena Liggons, MSN, RN, OCN
Division of Gynecologic Oncology
State University Hospital-HSC @ Brooklyn
Brooklyn, New York

Giselle J. Moore, ARNP, MSN, AOCN
Department of Radiation Oncology
University of Florida College of Medicine
Gainesville, Florida

Maggie Moore, RN, ARNP, MSN, OCN®
Women's Wellness Program
Mount Ascutney Hospital
Windsor, Vermont

Susan A. Nolte, RN, MSN, CRNP
Abington Hospital
Abington, Pennsylvania

James Pace, DSN, RN, MDiv, ANP
Associate Professor of Adult Health Nursing
Nell Hodgson Woodruff School of Nursing, Emory University
Atlanta, Georgia

Bridget M. Paniscotti, RN, BSN
Longbranch, New Jersey

Linda C. Redding, RN
Department of Radiation Oncology
William Beaumont Hospital
Royal Oak, Michigan

Paige M. Saddleir, RN, BSN, ANP
Sound Shore Medical
Center at Westchester
New Rochelle, New York

Kimberly A. Schmit-Pokorny, RN, BSN, OCN®
Clinical Cancer Center
University of Nebraska Medical Center
Omaha, Nebraska

Alice Spinelli, RN, ANP, OCN®
Gynecologic Oncology Associates, PA
Miami, Florida

Ingrid S. Synan, R.N., A.A.
Division of Gynecologic Oncology
Duke University Medical Center
Durham, North Carolina

Janet R. Walczak, RN, MSN
Johns Hopkins University School of Nursing
Clinical Nurse Specialist, Gynecologic Oncology
Johns Hopkins Oncology Center
Baltimore, Maryland

Teresa Wehrwein, RN, PhD, CNAA
Director, Henry Ford Hospital School of Nursing
Detroit, Michigan

Lois Winkelman, RN, MS
Gynecologic Oncology
Rush Presbyterian-St. Lukes Medical Center
Chicago, Illinois

PART 1—
MEDICAL CARE PLANS

Section 1—
Collaborative Problems

Potential Complications

Pre-existing Medical Conditions • Anasarca • Ascites • Peritonitis • Fluid/Electrolyte Imbalance • Gastrointestinal Dysfunction/Obstruction • Malignant Effusions/Respiratory Compromise

Pre-existing Medical Conditions

Nursing Goals	Interventions	Rationale for Interventions
1. The nurse will manage and minimize the potential complications that may be encountered in the woman with pre-existing medical conditions (diabetes, chronic hypertension, respiratory disease, gastrointestinal disease, urologic disease).	**1.** Monitor for signs and symptoms associated with: **A.** Primary/secondary hypertension: 1. persistent elevation of systolic pressure above 140 mm Hg 2. persistent diastolic pressure above 90 mm Hg 3. abnormal lab values: CBC, K^+, Na, serum cholesterol, BUN, serum creatinine 4. headache 5. tachycardia	**1A.** Hypertension and left ventricular hypertrophy can significantly impact the type of treatment and method of delivery a patient may receive for chemotherapy. Care must be taken to ensure that hypertension is controlled and that the patient does not become hypotensive as a result of vascular effects of chemotherapy. **1B.** Altered carbohydrate metabolism results in an imbalance between in-

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Nursing Goals	Interventions	Rationale for Interventions
	6. peripheral edema **B.** Hyperglycemia: 1. polyuria 2. polydipsia 3. polyphagia 4. glycosuria 5. lab values: blood glucose monitoring, urine testing (FBS, GTT)	sulin supply and demand. In patients receiving treatment for cancer, NPO status, nausea, vomiting, and anorexia can significantly alter the diabetic patient's nutritional and insulin needs. In addition, patients who are NPO for surgery or diagnostic procedures may impact insulin needs.

Anasarca

Nursing Goals	Interventions	Rationale for Interventions
2. The nurse will manage and minimize the potential immune, nutritional, vascular, respiratory, and gastrointestinal complications that may be encountered in the woman receiving treatment for a	**A.** Monitor for signs and symptoms of anasarca: 1. baseline and daily weights 2. increased abdominal girth 3. edema of the lower extremities **B.** Implement measures to prevent complications:	**2.** Anasarca or widespread edema is a complication of some gynecologic malignancies. It occurs in response to an obstruction of the lymphatic return by metastatic implants, previous regional lymphatic dissection, and/or malnutrition. It places the patient at

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Nursing Goals	Interventions	Rationale for Interventions
gynecologic malignancy.	1. protect skin from injury through reduction of pressure on areas that have a propensity for breakdown 2. position for comfort 3. maximize potential for fluid return to vascular space by elevation of lower extremities; position in High Fowler's; use of compression hose **C.** Maintain prescribed therapy, and prevention of infection	risk for a variety of sequelae that are difficult to manage and require careful assessment. Anasarca results in decreased tissue perfusion, increasing the risk of skin breakdown and infection.

Ascites

Nursing Goals	Interventions	Rationale for Interventions
	A. Monitor for signs and symptoms of ascites: 1. increased abdominal girth, fullness 2. shortness of breath/dyspnea 3. abdominal discomfort	**3.** Ascites develops as a sequelae of metastatic implants within the abdominal cavity. The symptoms are proportional to the amount of fluid present. The most common symptoms are shortness of breath, dyspnea,

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Nursing Goals	Interventions	Rationale for Interventions
	4. changes in bowel function, constipation 5. presence of an abdominal fluid wave 6. early satiety, indigestion **B.** Postion for comfort and skin protection to improve respiratory status and decrease risk of skin breakdown. **C.** Assist with fluid drainage procedures.	abdominal distention, and discomfort. The fluid will continue to accumulate as long as disease is present. Paracentesis may be performed to obtain cytologies and to improve comfort.
Peritonitis		
	A. Monitor for signs and symptoms of peritonitis: 1. fevers/chills 2. acute abdominal pain 3. nausea/vomiting	**4.** Bacterial or chemical peritonitis may occur in the patient receiving intraperitoneal chemotherapy. Treatment is dependent upon the cause.

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Fluid/Electrolyte Imbalance

Nursing Goals	Interventions	Rationale for Interventions
	A. Monitor for fluid and electrolyte imbalance. 1. decreased urinary output 2. peripheral edema 3. hypotension 4. tachycardia 5. abnormal laboratory values: renal electrolytes	**5.** The body conserves fluids by shifting or third spacing the fluid to extravascular spaces, thereby decreasing urinary output. Side effects of chemotherapy and radiation therapy such as nausea, vomiting, and anorexia may lead to dehydration and subsequent electrolyte imbalance.

Gastrointestinal Dysfunction/Obstruction

Nursing Goals	Interventions	Rationale for Interventions
	A. Assess for signs and symptoms of gastrointestinal dysfunction/obstruction: 1. dysphagia, odynophagia 2. nausea/vomiting 3. abdominal pain and distention 4. anorexia/cachexia 5. weight loss	**6.** Radiation and chemotherapy may case diarrhea, tenesmus, and nausea/vomiting. Impairment of bowel function may result from extrinsic forces, chemical induction, or decreased fluid intake. Accurate assessment of bowel function may help to identify

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Nursing Goals	Interventions	Rationale for Interventions
	6. tenesmus 7. diarrhea 8. hematochezia	the source(s) and appropriate intervention.

Malignant Effusions/Respiratory Compromise

Nursing Goals	Interventions	Rationale for Interventions
	A. Monitor for signs and symptoms of malignant effusions and respiratory insufficiency: 1. dyspnea, orthopnea, tachypnea 2. dry, nonproductive cough 3. decreased breath sounds in lung base **B.** Provide interventions as ordered: 1. oxygen as needed 2. position for comfort 3. thoracentesis tray at bedside 4. assist with thoracentesis/chest tube placement	**7.** Malignant pleural effusion occur when malignant process (tumor invasion of pleural surface, obstruction of lymphatic channels) prevents reabsorption and fluid accumulation in the intrapleural space. This is common in Stage IV ovarian malignancies. Treatment is usually determined based on amount of respiratory compromise and may include thoracentesis, chest tube placement, and/or chemical sclerosing of the pleural space.

Section 2—
Nursing Diagnoses

Psychosocial Issues

Screening and Prevention

NDX

Altered health maintenance related to insufficient knowledge of basic reproductive female anatomy, cancer prevention, and screening recommendations.

Outcome Criteria

• The patient will verbalize an understanding of the anatomy and function of the female reproductive system.

• The patient will demonstrate responsible behavior for self care, cancer prevention, and screening.

Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
1. Level of understanding of female anatomy.	**1–3.** This assessment helps the nurse identify learning needs and plan appropriate strategies	**1.** Assess readiness and motivation to learn.	**1.** Teaching is most effective when the person is ready to learn. Readiness is a complex state that depends on physical as well as psy-

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
	to reduce anxiety and promote learning.		chological factors. Motivation is the crucial variable in learning. It may be absent initially because of anxiety, preoccupation with other needs, or other emotional causes.
2. Knowledge of cancer prevention and follow-up screening.		**2.** Determine the general pattern of screening activities and risk reducing behaviors.	**2.** The general pattern can provide information on the woman's responsibility for self care and cancer prevention.
3. Perception of cancer risk and family history.		**3.** Describe the position and function of the female reproductive system using diagrams when possible.	**3.** It is important that the patient understand the anatomy and physiology, which help promote self care and dispel myths.
		4. Assess the woman's knowledge of the screening test implications of test results.	**4.** Enables the nurse to reinforce knowledge and clarify misconceptions.

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Assessment Criteria	Clinical Significant	Interventions	Rationale for Interventions
		5. Provide individualized information (verbal and written) regarding screening tests, cancer prevention, rich factors and follow-up screening.	**5.** Promotes participation in appropriate cancer screening and risk-reducing behaviors.
		6. Evaluate level of understanding, presenting symptoms, and their implications.	**6.** Determine the need for additional educational interventions.

NDX

Anxiety/fear related to insufficient knowledge about screening techniques, uncertainty about outcomes, and possible cancer diagnosis.

Outcome Criteria

- The patient will describe her own anxiety and coping patterns.
- The patient will relate an increase in psychological and physiological comfort.

Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
1. Level of understanding of screening techniques, past experiences with screening.	**1–3.** This assessment helps the nurse identify learning needs and plan appropriate strategies to reduce anxiety.	**1.** Provide opportunities for the woman and her family to share concerns: **a.** provide an atmosphere that promotes calm and relaxation **b.** convey a nonjudgmental attitude and listen attentively **c.** explore feelings about upcoming screening and resources for coping with anxiety; iden-	**1.** The nurse should not make assumptions about a woman's or her family members' reaction. A nonjudgmental approach indicates acceptance and will facilitate trust. Identification of coping strategies and self-help resource empowers the woman to take control of her health.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		tify support systems, other resources, and coping strategies for reducing anxiety, e.g., diversion, relation techniques, stress management	
2. Familiarity with screening tests and follow-up plan.		**2.** Encourage an open discussion of fear of positive test results.	**2.** Enables the nurse to validate fears and concerns and clarify misconceptions.
3. Life style, strengths, coping mechanisms, and available support systems.		**3.** Reinforce explanations of scheduled tests.	**3.** Accurate description of sensations and procedures help ease anxiety and fear associated with they unknown.

Treatment

NDX

Anxiety/fear related to loss of feelings of control of life, unpredictability of nature of disease, and uncertain future.

Outcome Criteria

- The patient will describe own anxiety, meanings of loss, and feelings about living with cancer.
- The patient will describe own coping patterns and use of effective coping strategy to manage fear and anxiety.
- The patient will share fears and concerns with family and/or significant other.

Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
1. Emotional reactions such as fear, anxiety, anger, depression, and withdrawal.	**1–3.** Anxiety/fear stem from the actual or perceived threat to the patient's self concept, biologic/reproductive integrity, developmental task, and the uncer-	**1.** Provide reassurance and comfort: **a.** be present during discussions of diagnosis and treatment plans **b.** do not make demands or ask for quick decisions **c.** convey empathetic un-	**1.** Patient advocacy is an important concept in reduction of anxiety and fear.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
	tainty of the treatment outcome. Grief is the normal response to loss and may include many different feelings and challenge one's spiritual beliefs. Assessment of these parameters as well as the ability to share feelings with significant others, spiritual leader, or community support system an guide planning of care and further intervention.	derstanding through quiet presence, touch, talking, and expressions of grief **d.** respect personal space of patient and family **e.** create a safe an secure environment for open communication with family and staff	

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Assessment Criteria	Clinic Significance	Interventions	Rational for Interventions
2. Feelings of extreme sadness, doom, worthlessness, guilt, doubt, resentment, and/or spiritual emptiness.		**2.** Encourage opportunity for patient and family to ask questions, verbalize concerns, actively make decisions, and correct any misinformation or myths.	**2.** Misconceptions and myths can interface with learning process and increase anxiety.
3. Unusual sensations such as palpitations, nausea, urinary frequency, and sleep disturbance.		**3.** Provide verbal as well as written information and instructions that are acceptable, concise, and easily understood by patient and family.	**3.** Reinforcement of information can decrease fears and anxiety.
4. Availability of significant others, spiritual leader, and community resources.	**4.** An understanding of the availability of various support systems will assist in developing plan of care.	**4.** Incorporate primary care physician's office staff and/or home health staff in planning for continued care.	**4.** It is important that entire health care team is aware of plan of care in order to decrease risk of misinformation or perceptions.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
5. Successful coping strategies.	**5.** Understanding of previous of coping with stress can guide in development of new plan of care.	**5.** Provide an environment that reduce stimuli that may increase anxiety: **a.** decrease sensory and visual stimulation (e.g., lights and noise) **b.** limit contact with other anxious patients or family members **c.** encourage use of personal relaxation behaviors such as quiet music, breathing exercises, etc.	**5.** Annoying environmental stimuli can increase anxiety.
		6. Be prepared for chances in affect or behavior, and do not confront defenses, denial, or rationalization.	**6.** It is not unusual for patients to move through cycles of anxiety and calm. Anxiety and defensiveness may be increased by confrontation and is counter-

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
			productive to conflict resolution.
		7. Provide physical measures that aid relaxation such as warm baths, massage/back rubs, and warm blackens.	**7.** Physical measures that aid relaxation.
		8. Evaluate for and consult physician if pharmacologic therapy is indicated.	**8.** Anxiolytic agents may be necessary to promote relaxation and rest.

NDX

Anxiety/fear related to insufficient knowledge of prescribed chemotherapy (including clinical trials) and necessary self care measures.

Outcome Criteria

- The patient and family will verbalize understanding of treatment plan, schedule, possible related side effects, self care measures, and reportable signs and symptoms.
- The patient and family will verbalize understanding of clinical trial research, reason for participation, alternatives, possible related side effects, ability to withdraw or change therapies, and issues of confidentiality.

Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
1. Level of understanding prescribed regimen including: • drugs involved • schedule of treatment • possible side effects • self care measures • reportable symptoms	**1.** Treatment with chemotherapy can cause anxiety and fear. A complete understanding of the plan of therapy, potential affects, and self care measures assists patient in participation in process.	**1.** Provide written and verbal explanation of the following: • treatment drugs • treatment schedule, including treatment days, nadir period, and laboratory/radiologic studies • expected side effects of each drug	**1.** Written and verbal explanations of all information can reduce the risk of mis-information and associated morbidity.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		• self care measure including diet, rest, symptom management, and activity restrictions • signs/symptoms to report	
2. Level of understanding of clinical research trials.	**2.** Some patients may be eligible for clinical trials. A complete understanding of the clinical trial process is important for patient wishing to participate.	**2.** Encourage patient and family to ask questions and verbalize concerns.	**2.** Assurance that patients and families have correct information reduces anxiety.
		3. Provide patients with complete instruction regarding the use of clinical research trials, including: • rationale for trials	**3.** Patients and families may question staff about availability of research trials. It is important to explain difference between standard

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		• process of registration • alternatives to trial research	therapy and clinical trials to ally misperceptions.

NDX

Anxiety/fear related to insufficient knowledge of prescribed intraperitoneal chemotherapy and necessary self care measures.

Outcome Criteria

- The patient will verbalize the following regarding intraperitoneal therapy:
    - rationale
    - method of administration
    - side effects and comfort measures

Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
1. Level of knowledge regarding intraperitoneal therapy.	**1.** Common but temporary side effects such as bloating, urinary frequency, and difficulty breathing will be understood by the patient. Common and expected side effects of antineoplastic agents being used in the patient's therapy will be understood.	Also see previous care plan. **1.**Provide the patient with written information on intraperitoneal therapy, e.g., "Your Guide to Intraperitoneal Therapy."	**1.** Patient may refer to written information at home to reinforce verbal teaching.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
	2. The patient will understand when side effects are greater than expected and report them promptly to the physician or nurse. Effective interventions can be started promptly and effectively to relieve untoward effects.	**2.** Explain intraperitoneal therapy to the patient, including: • rationale • method of administration • possible side effects • comfort measures that may minimize side effects	**2.** Lessen fear and anxiety related to therapy and promote compliance with regimen.
		3. Instruct the patient on the specific intraperitoneal agent(s) that will be administered and provide the appropriate chemotherapy/immunotherapy fact cards. Refer to the appropriate Standard of Oncology Nursing Practice.	**3.** Identify side effects related to therapy and drug that may require medical intervention.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		4. Allow the patient to verbalize concerns regarding therapy. Clarify misconceptions.	**4.** Help decrease fear and anxiety related to treatment. Identify misconceptions requiring further explanation.

NDX

Anxiety/fear related to insufficient knowledge of prescribed radiation therapy and necessary self care measures.

Outcome Criteria

• The patient will verbalize and demonstrate positive coping behaviors and strategies to cope with fears and concerns.

Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
1. Level of understanding of radiation therapy: **a.** preconceived myths, misconceptions, and beliefs **b.** previous experience **c.** treatment plan, side effects, and self care measures	**1–6.** Radiation therapy is feared and poorly understood by many patients, families, and health care professionals due to the evolution of myths and misconceptions from early treatment with radiation, hearsay, the media, and a general lack of knowledge about the modality of	**1.** Encourage discussion/verbalization: **a.** utilize active listening strategies **b.** avoid assuring the patient prematurely	**1.**Provides opportunity to establish rapport, identify and asses anxiety, fears, readiness and capability to learn, priorities, critical informational needs, and significant stressors.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
	treatment. Treatment decisions are also made close to the time of diagnosis, which is an exceptionally stressful period for patients and families. Although anxiety and fear cannot always be eliminated, it can frequently be significantly reduced once the patient has been carefully interviewed, assessed and a strategic plan implemented that covers patient education about radiation therapy,		

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
	inclusion in the treatment plan, and mobilization of existing, effective coping strategies are carried out.		
2. Level of fear/anxiety related to: **a.** treatment, disease outcome **b.** list-style changes, social implications **c.** family, children **d.** finances **e.** self, sexuality, body image		**2.** Establish lines of communication: **a.** provide accurate and current information **b.** evaluate and revaluate concerns regularly **c.** including patient in the treatment planning and decisionmaking **d.** be honest, but do not destroy hope **e.** inform about changes, in treatment plans,	**2.** Aids in establishing a trusting relationship. Empowers the patient and family by including them in the treatment decisions. Promotes self-esteems and a sense of value and caring.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		prognosis, and test results **f.** encourage discussion with children and family members **g.** offer support and empathy in response to patient and family concerns **h.** assist the patient in defining realistic expectations and options for managing potential outcomes.	
3. Coping and support, including: **a.** usual coping styles **b.** effectiveness of usual coping behaviors/strategies		**3.** Review and clarify treatment-related information including: **a.** treatment planning, goal, and technique **b.** common side effects	**3.** Educating and familiarizing the patient with radiation therapy reduces the fear of the unknown.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
c. family dynamics **d.** support and communication systems		**c.** self care measure **d.** expected outcome of treatment **e.** resolve misconceptions about treatment **f.** tour of the department, machinery, and introduction to treatment staff	
4. Readiness and capability to learn		**4.** Plan and initiate strategies for supportive care: **a.** encourage and assist in identifying concerns, problems, and/or perceived threats of treatment **b.** encourage problem solving	**4.** Assists the patient in focusing and prioritizing problems or concerns. Encourages use of problem-solving techniques. Stimulates active participation and fosters positive attitudes and behaviors, thus potentially decreasing

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		c. encourage use of past effective coping strategies **d.** assist in identifying alternative strategies to replace and reinforce ineffective or weak behavior problem solving **e.** encourage a positive attitude **f.** suggest drawing upon assistance and support of family and friends **g.** provide information and referral to community resources including spiritual resources, social workers, American Cancer Society, and community support groups	anxiety, promoting control, decision-making capabilities, and maintenance of independence.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		h. encourage stress- and anxiety-relieving behavior and diversional activities such as crying, physical exercise, hobbies, meditation, music, progressive muscle relaxation, or guided imagery	
5. Critical and immediate needs resulting from disease.		**5.** Plan and assist in initiating defensive strategies to avoid stressful or anxiety-provoking situations: **a.** assist in identifying controllable versus noncontrollable situations **b.** assist in arranging the	**5.** Focuses patient on working toward attainable goals rather than unattainable goals, which can foster feelings of frustration, powerlessness, and ultimately depression. Minimizes impact upon life-style, encourage health

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		logistics of treatment time to minimize effect upon employment or life-style **c.** arrange for a medical letters(s) of support for the clients employer as needed **d.** explore and ascertain health and medical benefits **e.** utilize the social worker/clinical specialist to assist with problems, plans for transportation, or housing during treatment **f.** find time and opportunity to do family teaching. Encourage positive health care behavior	maintenance within the family.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		and screening (regular checkups, pap smear testing, breast screening, etc.)	
6. Level of understanding of need to re-evaluate at regular intervals.			

NDX

Anxiety/fear related to insufficient knowledge of prescribed gynecologic radiation implant: Conventional afterloading.

Outcome Criteria

• The patient will verbalize an understanding of the implant procedure, measures to manage side effects, and complications of treatment.

Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
1. Level of understanding of the prescribed implant therapy procedure, expected side effects, and care during hospitalization	**1.** Patients and families frequently develop misconceptions of internal radiation therapy. Education regarding current radiation treatment is needed to decrease anxiety and fear. Pre-admission teaching and reinforcement regarding the implant procedure helps to re-	Also see previous care plan. **1.** Explain that the insertion of the radioactive implant close to the tumor is a local treatment that provides high does of radiation to the cancer while minimizing the effect to normal surrounding tissue.	**1–2** Explanation of procedure and rationale assists to relieve fear and anxiety related to new procedure.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
	duce the fear of the unknown and subsequent anxiety. The goal of treatment and outcome expectations are important and require clarification in order to prevent patient disappointment and to facilitate a realistic plan of care.		
2. Previous or concomittant treatment.	**2.** Previous radiation therapy to the pelvis may enhance the effects to the bowel and bladder resulting in increased diarrhea and possibly cystitis. Previous or recent che-	**2.** Reinforce/clarify the physician's explanation regarding: **a.** the time span of the treatment (hours) **b.** goal (cure, control, palliation) and expected outcomes	

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
	motherapy with doxorubicin or actino-mycin D, among other drugs, may potentiate radiation effects upon cells resulting in a radiation recall of the skin as well as other side effects.	**c.** potential acute and chronic side effects anticipated, including diarrhea, vaginal dryness, and fatigue **d.** individual concerns	
		3. Develop and implement a teaching plan that includes: **a.** preoperative evaluation (hematology, EKG, chest x-ray, anesthesia consult) **b.** preoperative preparation during evening prior to early morning of procedure (bowel prep, douche, anti-em-	**3–5.** A plan of education will guide the health care team to provide appropriate and nonconflicting information to the patient and family. This should include preoperative and postoperative teaching in order to reduce anxiety.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		bolic therapy, intravenous, foley catheter) **4.** Review plan for procedure including anesthesia, packing used to stabalize implant, x-rays for verification of implant, and loading of source into applicator. **5.** Review postoperative care after implant placed, including: **a.** activity: 1. complete bed rest 2. elevations of head of bed limited to 30 degrees, and 45 degrees at mealtime	

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		3. limited to logrolling side to side 4. bathing limitations **b.** fluid/nutrition: 1. intake and output 2. maintenance of intravenous line/heparin lock or until adequate intake is ensured 3. low residue diet4. encourage fluid intake **c.** comfort measures for side effects including diarrhea, nausea, discomfort, anxiety, and insomnia	

NDX

Anxiety/fear related to insufficient knowledge of prescribed gynecologic radiation implant: Remote afterloading procedure.

Outcome Criteria

• The patient will verbalize effective coping and support strategies.

• The patient will demonstrate verbal understanding of the specific brachytherapy procedure.

Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
1. Level of understanding of remote afterloading procedure.	**1–2.** Before and after the implant procedure, the patient and family will experience anxiety related to many factors. New technologies raise a number of different questions for patients, including: Is the treatment experimental? Is this the best treatment for	**1.** See previous care plan.	**1.** See previous care plan.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
	me? Will it work? Most of their fears and anxieties are based on past experience with radiation therapy and the misconceptions based on hearsay. Providing accurate information and emotional support will help patients focus and promote good coping strategies.		
2. Feelings and concerns regarding remote afterloading.		**2.** Assess the patient's support systems and make appropriate referrals as necessary.	**2–3.** Assessing these factors helps the nurse guide the patient and family through a difficult time.
		3. Continuously assess the patient's needs during the	

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		course of treatment, and answer all questions in a timely fashion.	
		4. Assure the patient that, during the treatment time, they are continuously monitored via camera and intercom systems.	**4–5** Reassurance can allay the fears that staff will be unavailable and can ease the feelings of anxiety and isolation.
		5. Assure the patient that a nurse is always available during treatment to assist them.	
		6. Discuss radiation safety precautions related to remote afterloading procedures including: • signs posted on the treatment room door	

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		• quality assurance checks done on the treatment machines • rationale for isolation • rationale for radioactivity during treatment and not after • rationale for staff and family to remain outside room during treatment	

NDX

Anxiety/fear related to insufficient knowledge of prescribed biotherapy and self care measures.

Outcome Criteria

• The patient will verbalize an understanding of the use of biotherapy in treatment plan, potential side effects, and management.

Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
1. Levels of understanding of biotherapy treatment.	**1.** Biotherapy is a relatively new procedure, and patients and their families need to have an understanding of the procedure, side effects, and management options to ensure adherance to the regimen.	**1.** Provide education of patient and family regarding the biotherapy and the injection/infusion procedure.	**1–2.** Patients and families need to have a good understanding of the procedure and potential effects in order to avoid a morbid outcome.
		2. Educated the patient as to types of hypersensitivity reactions that may occur	

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		with each BRM, and anaphylaxis management: **a.** shortness of breath **b.** chest pain **c.** pruritus **d.** localized erythema **e.** flushing **f.** fever/chills	
		3. Monitor patients as 5–15 minute intervals during the infusion of BRM and have emergency equipment and medication immediately available.	**3.** Prompt discontinuation of a BRM and commencement of emergency procedures should be done if a patient experiences a severe or anaphylactic reaction (TNF, INF, MoAb).
		4. Institute measures to relieve or prevent pain during treatment, and evaluate for effectiveness: **a.** premedicate with prescribed pain medication	**4–5.** Flu-like symtoms and hematologic changes associated with BRM therapy may influence a patient's compliance with therapy. Planning

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		prior to administration of the BRM **b.** position changes **c.** application of heat or cold **d.** relaxation techniques, such as guided imagery, music therapy, and hypnotherapy **5.** Educate the patient as to the signs and symptoms of hematologic changes associated with BRMs: **a.** fever **b.** spontaneous bleeding **c.** bruising **d.** mild shortness of breath **e.** change in pallor	for these side effects will ensure continuity with therapy.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		6. Educate the patient as to the need for fluid restrictions and activities needed to monitor fluid status: **a.** limit total daily fluid intake **b.** divide total volume into three shifts **c.** need for strict intake/ output measurement **d.** need to report light-headedness and dizziness **e.** Need for close monitoring of vital signs	**6.** Fluid restrictions can decrease incidence of capillary leak syndrome and resultant emergent crisis.

NDX

Grief related to potential loss of body function, negative effects of treatment on body image, changes in self-concept, and perceived effects on life-style.

Outcome Criteria

- The patient will verbalize realistic impression of the change in her physical appearance.
- The patient will demonstrate a personally satisfying manner for dressing.
- The patient will resume personal and professional commitments.

Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
1. Patient's language, behavior, and activities are she observes body changes, discusses appearance, and selects clothing and prosthetic devices.	**1.** Patients may experience significant physical body changes, including alopecia and weight loss related to surgery, radiation, or chemotherapy. The patient's hesitancy to view her body and use clothing to hide such changes may indicate a lack of	**1.** Discuss with the patient what she perceives a woman to look like and how she differs from than image.	**1.** The meaning of loss is different for each person, and may be related to physical appearance, sexuality, or self-esteem and identity as a woman.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
	acceptance of the change. This may include se]lection of less fashionable clothing than was her custom prior to treatment.		
		2. Encourage the patient to ventilate feelings related to losses or body changes.	**2.** Allows for validation of patient wholeness but also empathy for significance of the change.
		3. Encourage viewing and touching of changed body part.	**3.** Allows for integration of changed body parts and validates that patient may not be alone in these feelings.
		4. Provide reassurance that body image changes are upsetting, but some techniques may help minimize changes: • head coverings	**4.** Increasing patient's self-esteem will promote physical and psychological healing and return to social functioning.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		• ostomy supplies/coverings • prosthesis	
		5. Encourage discussion of how patient perceives that her significant others are reacting to the change in her appearance.	**5.** Patient may misperceive cues from others concerning their reaction to her. Anticipating can also allow her to develop strategies she can use to comfortably clarify a misperception.
		6. Assist the patient to role play expected reactions of others to the change in her body.	**6.** Role playing may facilitate the patient's self-validating responses in the actual and more stressful situation.
		7. Teach the patient how to use and experiment with clothing and prosthetics to attain her desired appearance:	**7.** Appropriate use of clothing and prosthetics can allow the patient to select image and styles suited to her taste and values.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		• Selection of wig similar to original hair color and cut • padded bras for breast shaping after weight loss • use of make-up and jewelry to increase feelings of femininity • selection of clothing that disguises weight loss • self-pampering behaviors such as bubble baths, manicures/pedicures, and use of perfumes	

Comfort Issues

NDX

Risk for injury related to hypersensitivity and anaphylaxis during chemotherapy, particularly paclitaxel therapy.

Outcome Criteria

• The patient will be free of hypersensitivity reaction.

• Hypersensitivity will be recognized and treated promptly.

Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
1. Signs and symptoms include dyspnea, hypotension, flushing, urticaria.	**1.** Hypersensitivity reactions usually occur within 10 minutes of starting paclitaxel. It is unclear if hypersensitivity is caused by paclitaxel or Cremophor EL formation. Hypersensitivity occurs more frequently during shorter infusion durations.	**1.** Prior to paclitaxel administration, obtain baseline vital signs and history of hypersensitivity reactions.	**1.** Identify patient at high risk for hypersensitivity reaction.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		2. Administer prophylactic premedication, such as corticosteroids, diphenhydramine HCL, and H^2 antagonists: • Dexamethasone 20 mg PO/IV 12 and 6 hours before and 20 mg IV 30 minutes before paclitaxel infusion • Diphenhydramine HCL 50 mg IV 30 minutes before paclitaxel infusion • Cimetidine 300 mg IV or Ranitidine 50 mg IV 30 to 60 minutes before paclitaxel infusion	**2.** This regimen prevents hypersensitive reaction in most patients.
		3. If unable to administer paclitaxel within 3 hours of planned treatment time, or 9 hours after last dose of	**3.** If the duration between prophylaxis and infusion is too long, there is a potential for a decreased ef-

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		steroids, contact the physician for further instructions. The patient may require a repeat dose of steroids before starting premedications and paclitaxel.	fectiveness of the prophylaxis.
		4. Review standing orders for management of hypersensitivity reactions per institutional policy and procedure.	**4–5.** A quick response time is needed during a hypersensitivity reaction to avoid severe anaphylaxis and shock.
		5. Identify location of anaphylaxis kit containing epinephrine 1:1000, hydrocortisone sodium succinate (Solu-Cortef), diphenhydramine HCL (Benadryl), aminophylline, and similar emergency drugs.	

NDX

Alteration in comfort related to flu-like syndrome, arthralgia, and/or myalgia.

Outcome Criteria

- The patient will be aware of and identify measures to control flu-like symptoms, arthralgia, and/or myalgia.

Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
1. Flu-like symptoms: • fever • chills • myalgia • headache • nasal congestion	**1.** The rationale for flu-like symptoms associated with the use of biological response modifiers is not well understood. However, some of the potentiating factors may be the dose, route of administration, patient age, and history of poor performance status.	**1.** Advise patients as to the side effects (flu-like) associated with BRM therapy and provide patients and their family members with literature of the same that can be used as a reference point at home.	**1.** Teaching of common side effects is essential to patients so that they know what to expect and do not confuse side effects with progression of their disease, thereby enabling them to implement control over the side effect.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
2. Myalgia may occur 2–3 days after treatment and resolve within 5–6 days. Usually affects large joints of arms and legs and paraspinal muscles.	**2–4.** Endogenous pyrogens may be released which cause muscle proteolysis. This causes increased release of prostaglandins which are known to stimulate pain receptors.	**2.** Administer antipyretics as ordered, or instruct patient to do so at home when temperatures are 38–38.5 C and over. Patients should be instructed to notify their nurse or physician regarding temperature elevations at home.	**2.** While fever and chills may be an expected side effect of some BRMs (especially IFN's and IL2), measures should be taken to avoid dangerously high febrile episodes, increased metabolic rates, and excessive fluid losses.
3. Myalgias are usually mild but may become more severe with higher doses of paclitaxel.		**3.** Suggest symptom management and the use of medications that inhibit release of prostaglandins such as nonsteroidal anti-inflammatory agents.	**3.** These drugs are prostaglandin inhibitors.
4. Myalgia occurs more frequently in patients receiving GCSF.		**4.** Instruct patients as to alternative and medicinal comfort measures to alleviate	**4.** Medications such as acetaminophen will counteract the inflammatory effect

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		headaches and myalgia, such as acetaminophen, cool compresses for the head, low lighting in rooms, quiet environment, and heating pads.	often associated with BRMs and that usually effect the large joints of the arms and legs. The medication will minimize headaches also. The alternative measures may provide localized relief and are often used in conjunction with acetaminophen.
		5. Encourage increased fluid intake during and immediately after febrile episodes, and monitor intake and output.	**5.** Fluid losses may occur secondary to febrile episodes.

NDX

Alteration in comfort related to intraperitoneal instillation of fluid.

Outcome Criteria

- The patient will verbalize adequate pain control.
- The patient's urinary pattern will return to pretreatment state within 2 days.
- The patient will report any change in urinary pattern beyond 2 days.

Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
1. Pain related to intraperitoneal instillation of fluid and/or agent as evidenced by: • abdominal distention • cramping • sensation of fullness and pressure • immediate or delayed abdominal pain and/or burning sensation	**1–2.** One or two liters of fluid are needed to fully expand the peritoneal space and adequately bathe the cavity. Daily instillation of IP therapy consists of 1–2 liters on the first day and 1 liter on each subsequent day of therapy. Patients with a new incision	**1.** Examine the patient's abdomen prior to instillation. Assess for history of ascites, abdominal distention and date of catheter placement. Assess for any area of tenderness or discomfort and for ascites. If ascites is present, consult with the physician regarding paracentesis or drainage through the IP port or	**1.** Draining ascites prior to instillation will increase the patient's comfort.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
	who have not previously had abdominal distention may develop leakage through the incision if overdistended. The peritoneal space, under normal conditions, can absorb 1 liter in 24 hours.	external Tenckhoff catheter.	
2. Urinary frequency.		**2.** Assess the patient's pain history, including prior use of analgesics, dosages, frequency, and response.	**2.** Understand how patient has coped with pain in the past.
	3. Expansion of the peritoneal cavity can cause sensations of fullness, pressure, cramping, and, some-	**3.** Assess pretreatment urinary pattern.	**3.** Identify abnormal urinary elimination during treatment.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
	times, pressure on the diaphragm, resulting in shortness of breath.		
	4. Certain intraperitoneal agents can cause a chemical irritation and inflammation. These are mitomycin and mitoxantrone. This irritation is described as a "burning stinging" type of pain.	**4.** Instruct the patient to wear comfortable clothing with expandable waist on the day of therapy and for a few days after it. Position the patient comfortably in bed with head elevated.	**4.** Loose clothing will lessen constriction on the abdomen and lessen discomfort. Elevation of the head of the bed will help decrease shortness of breath.
	5. Prior abdominal surgeries, repeated intraperitoneal instillations of fluid (especially irritants), and pressure of intraperitoneal tumor are all factors	**5.** Warm the IP fluid to body temperature prior to instillation.	**5.** May reduce abdominal cramping and discomfort.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
	that lead to the development of adhesions.		
		6. Assess the patient during infusion for abdominal discomfort. Slow the infusion until the discomfort subsides. Call the physician if the pain is severe.	**6.** Optimal distribution is assured when entire treatment volume is instilled as quickly as tolerated.
		7. Administer analgesics as required. On subsequent IP administrations, premedication may benefit the patient.	**7.** Pain medication may reduce the severity of the pain and allow the patient to receive the entire treatment.
		8. Instruct the patient to: **a.** empty bladder prior to therapy **b.** use bedpan or commode with assistance during treatment **c.** ambulate after therapy is completed to de-	**8.** Decrease discomfort related to pressure on bladder during treatment caused by expansion of the abdomen by fluid.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		crease abdominal distention **d.** report any change in urinary pattern beyond 2 days	
		9. Make sure that the patient has a prescription for a mild analgesic to take at home. Advise the use of nonsteroidal anti-inflammatory drugs as needed.	**9.** If an irritant is administered, the patient may experience delayed pain up to 1 week after therapy.
		10. Decreasing the volume of the IP fluid may also decrease discomfort. Subsequent administrations may be given in 1.5 liters or 1 liter rather than 2 liters.	**10.** Over-distention of the abdomen may cause more discomfort.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		11. Instruct the patient to call the physician for any moderate to severe abdominal pain or for fever of 38.3 C or higher.	**11.** Severe abdominal pain after therapy is not expected and may be a sign of bowel obstruction or bacterial peritonitis.
		12. After IP instillation, have the patient turn side-to-side several times and ambulate.	**12.** Turning and ambulation may reduce discomfort and will aid in the distribution of the IP therapy.
		13. Advise the patient that frequent urinary elimination is a desired side effect.	**13.** Within 2 days of treatment, this excess fluid should be excreted by the kidney.

NDX

Alteration in comfort related to therapy and/or disease process.

Outcome Criteria

- Patient will verbalize knowledge of medications of pain management and the importance of taking medications on a regular basis.
- The patient will verbalize adequate control of pain and participate in ADL with improved quality of life.

Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
1. Pain **a.** location **b.** intensity **c.** type **d.** response to non-medicinal approaches, such as positioning **e.** behaviors that impact pain **f.** previous response to pain medications	**1.** Pain due to disease may have a significant impact on a patient's ability to perform ADLs and on quality of life. Adequate assessment of the pain is an important step in effective intervention and comfort measures.	**1.** Administer appropriate analgesic on a regular schedule.	**1.** The level of medication should be kept at a steady rate to be effective and to avoid peaks and valleys.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
g. known allergies			
		2. Educate patient and family regarding the source of the pain, the nonmedicinal and medicinal approaches, and the importance of careful evaluation of pain.	**2.** Decreases frustration and improves effectiveness of interventions.
		3. Re-evaluate pain and effectiveness of interventions on a regular basis in order to change interventions in a timely fashion.	**3.** Regular assessment is important, as pain may become more severe or tolerant to intervention.
		4. If pain is unresponsive to interventions, referral to pain specialist may be necessary to integrate other forms of therapy, such as radiation or nerve blocks.	**4.** Pain related to nerve impingement or bone destruction may necessitate other types of intervention to control comfort.

NDX

Alteration in quality of life related to fatigue.

Outcome Criteria

- The patient will identify measures to control quality of life during periods of extreme fatigue.

Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
1. Source of fatigue: **a.** treatment modality as the primary source **b.** secondary sources including pain, anemia, medications, life-style, nutritional deficits, sleep pattern alterations, transportation to and from treatment, anxiety	**1.** Fatigue associated with treatment is dependent upon the mechanism of treatment modality. Fatigue associated with radiation therapy has been attributed to several sources, including large volumes of waste products excreted into the blood stream following cellular death, increased	**1.** Instruct the patient about the anticipated fatigue, the duration, and the value of keeping a log that includes patterns and levels of fatigue, as well as factors that appear to increase or decrease the symptoms.	**1.** Prepares the patient for anticipated side effects, increases knowledge, includes patient in the treatment plan, and promotes self care and empowerment.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
	metabolic activity required to repair damaged cells in the treatment field, as well as other extraneous factors such as travel. Fatigue is often associated with myelosuppresion during chemotherapy, particularly anemia. Severe fatigue often occurs with IFNs during biological therapy.		
2. Patterns and factors that appear to increase or decrease fatigue.	**2.** Establishing a data base assists in developing a strategic plan to help the patient manage fatigue associated with treatment.	**2.** Assist the client in developing a plan of activity based on the information recorded in the log: **a.** encourage rest periods for 1–2 hours during peak periods of fatigue	**2.** Promotes self care and independence. Planned mild exercise may reduce fatigue and promote positive feelings.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		b. suggest frequent rest periods during the day **c.** recommend pacing activities by careful planning and scheduling **d.** encourage use of high energy periods for needed activities or social events **e.** encourage acceptance of assistance from family and friends for chores, errands, and meal preparation **f.** encourage the establishment of regular sleep patterns	

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		g. suggest use of prepared meals or delivered meals **h.** consult the physical therapy department and develop a program of mild exercise **i.** evaluate any pain and work toward providing control	
		3. Instruct the patient about the necessity of maintaining optimal nutrition and hydration. Monitor intake: **a.** encourage the patient to eat a well-balanced diet **b.** encourage drinking 8–10 glasses of fluid each day	**3.** Fatigue frequently is a significant factor in decreased appetite, weight loss, anemia, and may indicate a debilitative cycle.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		c. monitor hemoglobin and hematocrit regularly **d.** provide ideas to increase intake, including small frequent appealing meals, cool, comfortable and well-aerated meal space, and high protein foods including dietary supplements	
		4. Provide emotional support: **a.** encourage open discussion **b.** encourage use of past coping behaviors **c.** consult support services or counseling	**4.** Fatigue is associated with depression; mobilizing the patient's support system may minimize the negative effects of fatigue.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		from medical social worker, psychologists, and/or pastoral services **d.** encourage use of family, friends, and/or clergy for support **e.** refer to community or hospital-based support groups	
		5. Maintain open lines of communication following completion of treatment: **a.** explain gradual disappearance of fatigue over weeks or months **b.** maintain contact with patient as needed **c.** provide patient with the name and telephone number of contact per-	**5.** Fatigue may persist for weeks after treatment. Contact reinforces support and patient understanding.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		son if fatigue progresses	
		6. Treat and prevent fatigue related to anemia: **a.**transfuse with red blood cells as ordered for Hgb less than 7.0 **b.** administer erythropoietin as ordered to prevent chemotherapy-induced anemia	**6.**Anemia may contribute to fatigue that decreases quality of life. It is treatable and may be preventable.

Cardiovascular System

NDX

Risk for alteration in cardiac output during chemotherapy, particularly paclitaxel infusion.

Outcome Criteria

• Cardiac output will return to normal.

Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
1. Transient asymptomatic bradycardia occurs in up to 29% of ovarian cancer patients in Phase II studies.	**1.** Rapid dose escalation may be a factor in cardiac arrythmia related to paclitaxel.	**1.** Monitor vital signs prior to and during paclitaxel infusion.	**1.** Identifies patient with pre-existing dysrhythmias who may be at increased risk during paclitaxel infusion.
2. Hypotension may occur during paclitaxel infusion.		**2.** Report changes in heart rate and blood pressure to physician.	**2.** Identifies dysrhythmias that may require treatment.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
3. Neither cardiovascular event requires stopping treatment or discontinuation of paclitaxel.			

Respiratory System

NDX

Risk for alteration in respiratory function related to abdominal distention (disease process and/or intraperitoneal therapy), decreased lung capacity, and/or lung metastasis.

Outcome Criteria

- The physiologic and psychologic effects of abdominal distention related to disease process will be minimized.
- The patient's respiratory rate, depth, and pattern will return to pretreatment state.
- The patient will verbalize adequate level of comfort.

Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
1. Abdomen **a.** increase in abdominal girth **b.** dullness to percussion **c.** presence of fluid wave	**1.** The effects of accumulation of ascitic fluids is related to the recurrence of an intraabdominal malignancy and the inability to reabsorb	**1.** Explain rationale for fluid accumulation to the patient and family.	**1.** Assists the patient in understanding disease status and reason for discomfort.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
d. taut abdominal skin	peritoneal fluid at the rate of excretion. In some instances, it is possible to control the rate of accumulation by restricting fluids and sodium intake. However, direct removal of fluid is the most effective immediate intervention. Treatment of the disease is the most effective long-term intervention.		
2. Complete respiratory assessment: **a.** rales/rhonchi	**2.** Patients who develop lung metastasis or decreased lung capacity	**2.** Position the patient for comfort, usually in high Fowler's position.	**2.** An upright or high Fowler's position allows the fluid to concentrate in

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
b. peripheral cyanosis **c.** cough **d.** hemoptysis **e.** dyspnea on exertion **f.** inability to expectorate secretions	due to pleural effusions or abdominal distention (ascites) may develop a respiratory infection.		lower abdomen and improves respiratory status.
3. Gastrointestinal tract assessment: **a.** declining nutritional status **b.** decreased appetite **c.** nausea and vomiting **d.** changes in bowel habits	**3.** Altered ventilatory ability secondary to impaired lung function, dehydration, decreased humidity, pooled pulmonary or pharyngeal secretions, or rupture of small vessels secondary to coughing or sloughing.	**3.** Provide oxygen as needed.	**3.** Oxygen may provide comfort to the patient and improve overall respiratory status.
4. Elevated temperature, increased respiratory		**4.** Record intake and output, maintaining fluid restric-	**4.** Provides early identification and interven-

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
rate, and/or increased heart rate.		tion and/or sodium restriction as ordered. Daily weights.	tion of electrolyte imbalance.
		5. If paracentesis is to be performed, obtain supplies and assist in preparation of patient for procedure: **a.** paracentesis tray and vacuum bottles **b.** verify informed consent **c.** obtain baseline vital signs, and then every 15 minutes until procedure is completed and patient is stable **d.** record amount, color, and appearance of	**5.** Paracentesis may be performed to provide comfort and obtain fluid for cytologic evaluation. A rapid removal of fluid may result in hypotension. Since the procedure is invasive, the wound and peritoneal cavity are at risk for the development of infection.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		fluid obtained and send for cytologic evaluation if ordered **e.** observe wound and abdomen for evidence of infection.	
		6. Peritoneal-venous shunt placement may be necessary: **a.** verify informed consent **b.** initiate teaching of pulmonary toilet **c.** encourage low to mid Fowler's position after shunt placed **d.** monitor vital signs, intake and output, and surgical incisions for evidence of postoperative complications	**6.** Peritoneal-venous shunts provide another method to decrease ascites. it is a procedure performed in the operating room.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		7. Intraperitoneal therapy may also produce abdominal distention. Patients should be: **a.** assessed for pretreatment respiratory rate, depth, and pattern **b.** instructed in comfort measures that may relieve symptoms, including elevation of the head of the bed, sitting in an upright chair, and increasing ambulation after treatment	**7.** Shortness of breath is a temporary side effect and should subside when the intraperitoneal treatment fluid is absorbed systemically, usually within 24 hours.
		8. Administer antibiotics as ordered.	**8.** Treats infection early.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		9. Administer opiates (morphine sulphate) 5–10 mg every 4 hours.	**9.** Decreases respiratory drive and provide anxiolytic effect.
		10. Teach proper positioning to decrease the work of breathing, i.e., semi-Fowler's, sitting with head slightly forward and elbows resting on a chair; provide adjustable bed.	**10.** Decreases effort of breathing.
		11. Administer corticosteroid as ordered.	**11.** Decreases dyspnea.
		12. Teach progressive relaxation.	**12.** Decreases anxiety as a component of dyspnea.
		13. Assess for pallor, cool clammy skin, cyanosis, temperature elevations. Auscultate breath sounds, noting rales, rhonchi, friction rubs, and areas of decreased breath sounds.	**13.** Facilitates early intervention for symptom management.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		14. Plan activities to minimize energy expenditure.	**14.** Decreases exertion.
		15. Provide hydration and humidity.	**15.** Decrease symptoms of dry airway and to decrease viscosity of mucous secretions.
		16. Administer sedatives as ordered.	**16.** Decreases anxiety.
		17. Encourage family to stay with patient.	**17.** Decreases anxiety.
		18. Administer antimuscarinic drugs, i.e., scopolamine or atropine subcutaneously or intravenously.	**18.** Decreases secretions and relax bronchial smooth muscle.
		19. Administer oxygen on low setting if hypoxia present.	**19.** Decreases hypoxia.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		20. Administer cough suppressants.	**20.** Decreases discomfort in throat and upper airway, and to enable patient to sleep.
		21. Provide cough suppressants and anti-anxiety medications.	**21.** Minimizes irritation in bronchial tissue, and reduces restlessness and apprehension.
		22. Patients who have malignant pleural effusions may require thoracentesis for removal of fluid. If this is necessary: **a.** verify informed consent **b.** assemble necessary supplies **c.** medicate as ordered to provide comfort	**22.** Thoracentesis provides relief by removing fluid from the pleural space. On occasion, a chest tube may be left in place to provide continuous drainage and to re-expand the lung.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		d. assist in positioning in upright or high Fowler's position **e.** monitor vital signs with baseline, and every 15 minutes during and after procedure until stable **f.** record amount, color, and appearance of fluid obtained and send for cytologic evaluation **g.** obtain wound dressing, if chest tube drain placed, follow protocol for postoperative care	

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		h. evaluate for changes in respiratory status that may indicate lung collapse, including tachypnea, tachycardia, and dyspnea **i.** monitor wound for evidence of infection	

Immune System

NDX

Risk for infection related to immunosuppression neutropenia secondary to chemotherapy and/or radiation therapy.

Outcome Criteria

- Patient will be free of infection.
- If infection occurs, it is recognized and treated promptly.

Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
1. Neutropenic nadirs that are unique to the drugs given	**1–3.** Chemotherapeutic drugs act primarily on rapidly dividing bone marrow cells such as WBCs. Since neutrophils are the first line of defense against invading microbes, a decreased white blood cell count im-	**1.** Monitor CBC with differential before treatment and again during nadir of drug. If patient is receiving radiation therapy, monitoring should be scheduled individually dependent upon the amount of bone marrow included in the treatment fields.	**1.** Delay treatment if counts ANC <1200. **2.** Use G-CSF in subsequent cycles if nadir is <500. **3.** Start prophylactic antibiotics if nadir ANC <500.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
	pairs the body's ability to resist infection. Radiation therapy may also affect the bone marrow, however it is dependent upon the amount of bone marrow included in the treatment fields.		
2. Absolute neutrophil count of less than 500 requires prophylatic treatment.		**2.** Teach patient to recognize and report signs of infection: fever, chills, general malaise, cough, sore throat, URI, urinary symptoms, etc., and temperature over 38.3 C.	**2.** Identify infection and treat promptly.
3. Neutrophil count should be at least 1200–1500 before next treatment.		**3.** Teach patient that when they are neutropenic, they may not have the usual signs and symptioms of in-	**3.** Signs and symptoms may not be normal when a patient is neutropenic as the body is not able to

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		fection, and must report changes in energy during neutropenic periods.	mount an infection response.
4. Level of knowledge of methods to reduce transmission of microbes.	**4–5.** Assessment of patient's knowledge of prevention and early detection of sepsis guides educational interventions.	**4.** Teach patient that fever during a neutropenic period is a symptom that must be treated as an emergency.	**4.** Neutropenic fever is a crtical oncologic emergency.
5. Level of knowledge of early signs and symptoms of infection.		**5.** Teach patient to avoid other individuals who are ill, crowds, etc. when blood counts are low.6. Teach patient handwashing and good hygiene to prevent infection, including: **a.** careful mouth care after meals	**5–6.** Decrease chance of opportunistic infection.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		b. avoidance of constipation, maintain adequate fluid and fiber intake **c.** bathe or shower daily **d.** adequate nutrition and sleep **e.** good pericare after bowel movements	
		7. Teach patient how to administer growth factors such as G-CSF if patient develops significant neutropenia.	**7.** Increase production of neutrophils in subsequent cycles.
		8. While hospitalized: **a.** place in a private room **b.** instruct patient to wash hands before meals and after toileting **c.** instruct visitors and all personnel to wash their hands before and	**8.** Reduces exposure and transmission of nosocomial and opportunistic microbes in hospital setting. Standing water may be a breeding ground for infection.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		after approaching the patient **d.** place patient on a low microbial-cooked food diet, i.e., live culture yogurt **e.** remove fresh flowers, plants, fruits, and vegetables from room **f.** remove all sources of standing water (1) change bedside drinking water and denture cups every 8 hours (2) change respiratory function/suction equipment water every 8 hours	

NDX

Risk for bleeding related to immunosuppression thrombocytopenia secondary to chemotherapy and/or radiation therapy.

Outcome Criteria

- Patient will be without signs and symptoms of bleeding.

Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
1. Platelet nadirs are unique to the drug and/or volume of bone marrow included in radiation fields.	**1–3.** Platelets aggregate to stimulate clotting and promote release of clotting factors to prevent bleeding. Chemotherapy and radiation therapy may cause myelosuppression and subsequent thrombocytopenia.	**1.** Monitor platelet count before treatment and again at drug nadir.	**1.** Delay treatment if platelet count <50,000 **2.** Use GM-CSF or IL-3 in subsequent cycles if nadir <20,000. **3.** Institute bleeding precautions if platelet count <20,000.
2. Desirable platelet nadir ranges from 65,000 to 75,000 with		**2.** Teach patient to observe and report blood in urine or stool, nose bleeds, bruis-	**2.** Low platelets may require treatment or bleeding precautions.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
a return to pretreatment count of at least 100,000.		ing, or petechiae over large portion of body.	
3. Platelet count of 20,000 or below requires close observation for bleeding.		**3.** Teach patient to avoid use of aspirin, nonsteroidal anti-inflammatory drugs, or alcohol. Use anticoagulant drugs only under close medical supervision.	**3.** These drugs increase bleeding time and may cause severe bleeding when platelet counts are low.
		4.Teach patient to use soft toothbrush and floss gently. Patient may be restricted from these activities and may have to use mouth swab or specially designed soft toothbrush.	**4.** Avoid unnecessary friction to gums that may cause bleeding.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		5. Administer growth factor GM-CSF or IL-3 if ordered.	**5.** Stimulate production of platelets in subsequent cycles.
		6. Administer platelets if ordered.	**6.** Random donor or single donor platelets may be given to quickly boost platelet counts and prevent spontaneous bleeding or hemorrhage.

NDX

Risk for infection related to indwelling peritoneal access port and catheter (PAC).

Outcome Criteria

• Peritonitis related to contamination of the PAC or intraperitoneal agent will not occur.

• Exit site and implanted port site infections will not occur.

Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
1. Evidence of infection: **a.** fever **b.** abdominal pain, and/or **c.** positive results of laboratory cultures of ascites or peritoneal aspiration **d.** redness and/or swelling at port or catheter exit site.	**1.** Peritonitis can occur with intraperitoneal therapy. However, early assessment, diagnosis, and intervention can reduce morbidity and mortality.	**1.** Assess the patient's abdomen and PAC site for any signs of infection.	**1.** Redness, pain, drainage, or any signs of bleeding, change in vital signs, and/or increased abdominal girth are signs of infection.
		2. Instruct the patient to keep steri strips in place for 1 or	**2.** A closed and dry incision will lessen possible intro-

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		2 weeks until they eventually fall off. Keep site dry when bathing until the incision is well healed.	duction of bacteria into surgical site.
		3. Instruct the patient to assess abdomen and PAC area for tenderness, redness, or drainage daily and promptly report fever of 38.3 C or higher, chills, abdominal pain, or any other untoward symptoms.	**3.** Signs of infection should be evaluated and treated early.
		4. Assess the patient for signs of infection. It is important to differentiate among bacterial peritonitis, chemical peritonitis, adhesion formation, and/or tumor progression. Monitor temperature and vital signs, assess for presence	**4.** Chemical peritonitis, adhesion formation, and/or tumor progression will not be associated with a fever and chills and may be more commonly associated with bowel problems and pain.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		of chills or other signs of infection.	
		5. Send specimen of ascites, obtained under sterile technique from PAC, for culture and sensitivity if infection is suspected.	**5.** If culture and sensitivity is positive for infection, antibiotic therapy is indicated.
		6. Follow institutional procedure for "administration of intraperitoneal therapy via an implanted intraperitoneal port" to ensure aseptic technique.	**6.** Aseptic technique decreases the possible introduction of pathogens into the abdominal cavity.

Endocrine and Metabolic Systems

NDX

Risk for injury related to acute water intoxication (SIADH).

Outcome Criteria

• SIADH will be recognized and treated promptly.

Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
1. May occur with high-dose cyclophosphamide greater than 50 mg/kg or as an unusual response to normal doses of cyclophosphamide.	**1.** In SIADH, excessive antidiuretic hormone is produced resulting in water intoxication.	**1.** Assess patient for early signs and symptoms: weakness, fatigue, confusion, irritability, nausea, vomiting, diarrhea, thirst, decreased urinary output, and weight gain.	**1.** Identify SIADH and treat early.
		2. Evaluate laboratory data: **a.** serum sodium less than 130 meq/L **b.** serum osmolality less than 280 m osm/kg of H_2O	**2.** These are values which assess for SIADH.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		c. normal BUN and creatinine **d.** hypouricemia	
		3. Limit fluid intake (800 – 1000 cc/day), closely monitor intake and output, daily weights, and frequent vital signs.	**3.** Prevent further fluid overload.
		4. Teach patient rationale for fluid restriction.	**4.** Knowledge of rationale promotes compliance.
		5. Reassure patient that this is a compliction of treatment and it will resolve. Measures can be taken to prevent recurrence.	**5.** Oncologic emergency that subsides with treatment when cause is identified and may be prevented.

Gastrointestinal System and Nutrition

NDX

Altered nutrition: Less than body requirements related to nausea, vomiting, anorexia, and/or stomatitis.

Outcome Criteria

• The patient will demonstrate effective methods to minimize nausea and vomiting as evidenced by a reduced number of emetic episodes.

• The patient will demonstrate increased dietary intake of protein, carbohydrates, and calories as evidenced by 24-hour diet recall, maintenance of body weight or weight gain of 1 lb per week, and normalization of serum albumin.

• The patient will demonstrate ways to reduce oral pain and promote mucosal healing.

Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
1. Number and pattern of nausea or emetic episodes.	**1–6.** Adequate nutrition is essential to maintain cell division	**1.** Assess for evidence of anorexia, nausea, vomiting, or pain including	**1.** Ensure symptoms due to treatment and not due to ileus, bowel obstruction,

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
	and repair following cancer therapy Nausea, vomiting, and anorexia can be caused by the impact of diagnosis, disease process, effects of chemotherapy, radiation therapy, or noxious stimuli such as pain, fatigue, unpleasant sights or odors, or emotional stress. Stomatitis may also compromise nutrient intake and may range from oral dryness to hemorrhagic	onset and quality of symptoms	or other pathology. Antiemetics reduce stimulation of the vomiting center.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
	ulceration with great pain. Knowledge of these parameters and contributing factors guides the development of specific, individualized, effective interventions.		
2. Noxious stimuli promoting nausea, vomiting, anorexia, and stomatitis.		**2.** Administer prescribed antiemetics around the clock (ATC) until emesis is completely controlled.	**2.** Administration ATC maintains constant blood levels and prevents rebound nausea and emesis.
3. Diet history over 1–3 days.		**3.** Administer prescribed anti-inflammatory agents such as nonsteroidal anti-inflammatory (NSAIDS) or steroids.	**3.** Steroids and NSAIDS reduce emetic effects of prostaglandins.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
4. Pattern of appetite intensity over 24-hour period.		**4.** Administer prescribed agents to promote gastric emptying.	**4.** Reduces gastric content and distention; promotes forward motility of bowel; reduces number of emetic episodes and amount of fluid loss.
5. Oral cavity alterations.		**5.** Consider administration of antiemetic regimen by rectal suppository if needed.	**5.** Provides alternative to oral administration of antiemetics.
6. Factors contributing to stomatitis such as poor hygiene, malnutrition, alcohol/tobacco use, chemotherapeutic nadir, immunosuppression, dehydration, or steroid therapy.		**6.** Provide oral hygiene after each emesis.	**6.** Reduces noxious stimuli and helps reduce harmful effects of emesis on oral mucosa.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		7. Teach deep breathing and voluntary swallowing.	**7.** Reduces vomiting reflex.
		8. Instruct client to sit and avoid lying flat for at least 2 hours after eating. Maintain upright or semi-Flower's position or turn slightly to right side.	**8.** Utilizes gravity to promote gastric emptying.
		9. Encourage 30–60 ml of ice chips or cool, clear liquids every 30–60 minutes.	**9.** Maintains hydration.
		10. Restrict fluid intake with meals.	**10.** Reduces gastric distention and nausea.
		11. Reduce the amount of food on plate/tray.	**11.** Provides visual appeal and psychological support.
		12. Suggest small frequent meals each day, such as six small meals with snacks.	**12.** Provides continual flow of nutrients while preventing excessive gastric distension that may stimulate emesis.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		13. Suggest cold, odorless foods such as cottage cheese, gelatin, sherbet, yogurt, dry toast, or crackers.	**13.** Cold, odorless food and dry starches are less likely to promote nausea and vomiting and promote continued nutrient ingestion.
		14. Measure and record amount, character, and number of emesis in each 8-hour period.	**14.** Provides assessment data to guide intervention.
		15. Hemetest all emesis.	**15.** Detects early signs of gastric bleeding. Repeated emesis promotes gastric irritation and bleeding.
		16. Measure total intake and output.	**16.** Provides method of hydration assessment.
		17. Suggest intravenous hydration if output is less than 240 ml in each 8-hour period.	**17.** A minimal output of 30 ml per hour suggests adequate hydration.

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Assessment Criteria	Clinical Significance	Interventions	Rational for Interventions
		18. Suggest hyper-alimentation if weight loss is greater than 10% of body weight.	**18.** Weight loss greater than 10% of body weight suggests negative nitrogen balance.
		19. Teach patient/family methods to control nausea and vomiting after discharge.	**19.** Fosters self care.
		20. Suggest use of mild aerobic exercise before meals, such as a stationary bike or short walk out of doors.	**20.** Reduces nausea and emesis.
		21. Suggest using coke syrup to control symptoms. Following each emetic episode, take 1–2 teaspoons every 15 minutes for one hour, then every 30 minutes for one hour, and then every 3–4 hours as	**21.** Reduces nausea and emesis.

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Assessment Criteria	Clinical Significance	Interventions	Rational for Interventions
		needed to control nausea and vomiting.	
		22. Reduce or eliminate contributing factors: **a.** reduce noxious stimuli as suggested for nausea and vomiting **b.** schedule pain medications and antiemetics to provide optimal relief without drowsiness at mealtime **c.** schedule rest period before meals if needed **d.** teach use of relaxation techniques and aerobic exercise to reduce emotional stress and fatigue	**22.** Promotes optimal meal-time environment.

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Assessment Criteria	Clinical Significance	Interventions	Rational for Interventions
		23. Teach the importance of consuming adequate amounts of protein for tissue and cellular healing, carbohydrates for metabolic energy, and calories to maintain weight.	**23.** Provides information to facilitate problem solving and promote competent self care.
		24. Teach food sources with high protein density: **a.** red meat, chicken, turkey, fish **b.** eggs and dairy products **c.** soy products such as tofu **d.** ground meat and vegetable casseroles **e.** foods combined with cheese such as macaroni or pizza	**24.** See above.

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Assessment Criteria	Clinical Significance	Interventions	Rational for Interventions
		25. Teach food sources with complex carbohydrates: **a.** fruits and vegetables **b.** breads and cereals **c.** grains such as rice, wheat, and corn **d.** pasta	**25.** See above.
		26. Maintain good oral hygiene before and after meals.	**26.** Promotes appetite stimulation.
		27. Encourage client to select food items close to actual mealtime.	**27.** See above.
		28. Serve foods with highest protein/calorie density at time of day when appetite peaks.	**28.** See above.

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Assessment Criteria	Clinical Significance	Interventions	Rational for Interventions
		29. Avoid food high in protein and fat at time of chemotherapy administration.	**29.** Increases likelihood of adequate protein and calorie intake.
		30. Suggest use of instant breakfast mix between meals and at bedtime to increase protein and caloric intake.	**30.** Protein and fat delay gastric emptying.
		31. Teach client and family methods to increase protein and calorie content in home food preparation: **a.** add powdered milk or egg to milkshakes, gravies, sauces, puddings, cereals, meatballs, etc. **b.** add blenderized or baby foods to soups	**31.** Increases protein and calorie intake.

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Assessment Criteria	Clinical Significance	Interventions	Rational for Interventions
		c. add vitamin fortified milk to soups and sauces instead of water **d.** add cream cheese or peanut butter to toast, crackers, or celery sticks **e.** add yogurt to vegetable dips **f.** add raisins, dates, or nuts to hot or cold cereals **g.** Keep snacks and finger foods open and within easy reach	
		32. Review high-calorie and low-calorie food choices.	**32.** Provides nutritional education for self care.

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Assessment Criteria	Clinical Significance	Interventions	Rational for Interventions
		33. If the patient is lactose intolerant, teach methods to adapt milk products or use of alternate dairy sources such as acidophilus milk and yogurt.	**33.** Helps maintain intake of high protein dairy products.
		34. Conduct daily dietary recall in hospital and weekly after discharge.	**34.** Provides ongoing nutritional assessment.
		35. Weigh client daily in hospital and weekly after discharge.	**35.** See above.
		36. Monitor serum albumin in hospital and weekly after discharge.	**36.** See above.
		37. Teach patient at risk for stomatitis to perform preventative oral hygiene: **a.** remove and clean dentures before providing mouth care	**37.** Reduces and controls overgrowth of normal flora, maintains integrity of oral mucosa, prevents development of oral lesions and infection.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		b. brush and floss teeth after each meal and at bedtime **c.** rinse mouth with normal saline solution **d.** avoid mouthwashes with alcohol or peroxide content and lemon/glycerine swabs **e.** apply water soluble lubricant to lips every 2 hours **f.** inspect mouth after each cleaning and report lesions or inflammation	
		38. Teach patient to perform oral hygiene every 2 hours if inflammation or	**38.** Reduces numbers of infectious microbes that

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		lesions develop and perform every 6 hours during the night: **a.** if unable to tolerate soft toothbrush, instruct to use sponge swab and normal saline irrigation **b.** make normal saline irrigation set with intravenous solution and tubing or with an enema bag and mixture of 1 liter water with 1 teaspoon salt **c.** floss teeth every 24 hours unless excessive bleeding occurs or platelet count is < 50,000.	colonize the oral cavity or may be swallowed, inhaled, or transmitted to other body cavities.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		39. Culture lesions for bacterial, fungal, and viral infection: **a.** consult physician for needed antifungal or antibacterial agent	**39.** Identifies specific infectious organisms and directs treatment.
		40. Assess oral pain using objective scale of 0–10.	**40.** Provides objective assessment data to facilitate intervention and measure outcome.
		41. Administer prescribed analgesics to reduce oral pain. May be administered before meals to enhance nutritional intake.	**41.** Reduces oral pain and enhances ability for nutritional intake.
		42. Instruct patient to avoid irritating substances and foods such as commercial or alcoholic mouth-	**42.** Protects oral mucosa from further pain and damage.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		washes, citrus juices, spicy foods, extremely hot or cold foods, and crusty or rough foods.	
		43. Instruct patient to eat bland, cool foods and to drink cool liquids every 2 hours or as needed to minimize and reduce inflammation.	**43.** Minimizes and reduces inflammation.
		44. Consult dietician for interventions consistent with patients food preferences and dietary restrictions.	**44.** Individualized, culturally tailored food choices may enhance nutritional intake.
		45. Consult physician for pain relief solution: **a.** viscous xylocaine before meals **b.** mixture of equal parts of viscous xylocaine,	**45.** Specific solutions may be used to manage oral pain and increase oral intake.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		diphenhydramine, and magnesium/aluminum hydroxide oral suspension solutions to swish and swallow every 2–4 hours **c.** mixture of equal parts of diphenhydramine and antidiarrheal suspension to swish and swallow every 2–4 hours	
		46. Teach client and family: **a.** factors that contribute to stomatitis **b.** use of oral hygiene protocol to minimize complications	**46.** Patient and family education increases understanding and compliance with plan of care.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		c. dietary modifications to maintain nutritional needs **d.** dietary modifications to minimize oral pain	
		47. Have patient describe and demonstrate home care regimen for oral care.	**47.** Return demonstration and verbalized understanding provides method to evaluate educational interventions. Understanding increases compliance.

NDX

Alteration in elimination: Constipation related to malnutrition, decreased fluid intake, decreased mo

bility, and the use of narcotics.

Outcome Criteria

- The patient will maintain adequate elimination.

Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
1. Bowel habits: **a.** frequency **b.** consistency **c.** color **d.** presence of melena	**1.** Patients who are receiving treatment for a gynecologic malignancy may develop alterations in elimination due to poor nutritional intake, decreased fluid intake, decreased mobility, narcotic use, and mechanical bowel obstruction. This can become a source of discomfort both dur-	**1.** Determine the physiologic reason for the alteration in elimination and develop plan of care: **a.** bowel obstruction: (1) initiate NPO status (2) provide intravenous fluid hydration (3) medicate as ordered (4) monitor serum electrolytes, urine osmolality, and	**1.** Before appropriate interventions can be taken, it is important to determine the cause for the alteration in bowel function.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
	ing the active treatment phase and during the terminal phase. Patients who develop mechanical bowel obstructions are also at risk of developing dehydration.	urine specific gravity (5) evaluate for weight loss, malaise, weakness, muscle cramps, and/or restlessness (6) document input and output **b.** malnutrition/decreased fluid intake: (1) promote adequate hydration (2) provide oral medications to promote return of normal bowel function (3) encourage adequate nutritional intake	

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		2. Encourage ambulation.	**2.** Ambulation promotes bowel motility.
		3. Teach patient and family dietary methods to promote adequate nutritional intake and methods to decrease risk of constipation.	**3.** Bulk-containing foods promote bowel motility. Adequate fluid intake is necessary to keep stool soft.
		4. Teach patient and family to utilize stool softeners as needed.	**4–5.** Stool softeners are a good method to maintain bowel motility and decrease risk of constipation.
		5. If patient is utilizing narcotics for pain, ensure that a regimen to stool softeners is started and continued during narcotic use.	

NDX

Altered elimination: Diarrhea related to radiation-induced enteritis.

Outcome Criteria

- The patient will verbalize control/resolution of diarrhea.

Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
1. Understanding of radiation effect upon the bowel.	**1–2.** The epithelial lining of the intestinal tract is in a continual state of renewal in order to replace the cells sloughed away each minute by the transit of bowel contents. The rapid reproduction activity causes the epithelial cells to be particularly sensi-	**1.** Instruct the patient about the rationale for the diarrhea.	**1.** Enables the patient to be informed and removes mystique surrounding treatment effects, thus reducing anxiety.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
	tive to radiation. Portions of the bowel and rectum are included in the radiation fields need to treat most gynecologic malignancies. The severity of the diarrhea is influenced by the does, size of the radiation field, and preexisting factors, such as adhesions from previous surgery, peritonitis, PID, diabetes, atherosclerosis, hypertension, poor nutrition, or		

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
	combined modality treatment. Chronic enteritis is characterized by progressive irreversible isthmian, atrophy of the bowel wall, and fibrosis of the muscle, and occurs as a late effect in a small number of patients.		
2. Signs/symptoms of diarrhea and self care measures **a.** loose/watery stool **b.** blood in stool **c.** nausea/vomiting **d.** steatorrhea **e.** abdominal or back pain or cramping **f.** skin breakdown or		**2.** Instruct the patient about the the importance of reporting signs and symptoms **a.** mild to moderate (4–6) stools per day **b.** severe (8 or more) stools per day **c.** nausea and vomiting **d.** addominal cramping, pain:	**2.** Provides the patient with specific information necessary to promote early detection of the onset of symptoms.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
irritation in perineum		**e.** tenesmus **f.** steatorrhea	
3. Understanding of secondary sequelae or progressive symptoms and need to rest bowel **a.** anorexia **b.** malnutrition **c.** dehydration/electrolyte imbalance **d.** chronic enteritis **e.** obstruction **f.** perforation **h.** fistula **i.** obstruction	**3.** Epithelial cells make up the villi and microvilli, finger-like projections that line the intestines and produce enzymes for digestion and absorb nutrients. When the villi and microvilli are damaged or destroyed, secondary effects occur that may be life threatening. Resting the bowel or occasionally a temporary or	**3.** Instruct and reinforce patient about measures to minimize and control diarrhea, and to maximize comfort: **a.** low-residue diet **b.** medication prescribed by physician (antidiarrheal, anticholinergic, antispasmodic, antiemetic, opiates, antiemetic, opiates, anti-inflammatory suppositories)	**3.** Empowers the patient and promotes self-care and independence. Promotes earlier initiation of treatment and potential for better control.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
	permanent ostomy may be required.		
4. Understanding of measures needed to prevent skin impairment of anus and perineum.	**4.** Frequent rapid passage of gastrointestinal contents is irritating to the anus and perineum causing skin breakdown.	**4.** Assess for secondary sequelae/progressive symptoms: **a.** weight loss and/or malnutrition **b.** poor skin turgor **c.** altered electrolytes, serum protein/albumin **d.** lactose intolerance **e.** dehydration **f.** bowel obstruction (hyperactive/absent bowel sounds, vomiting, abdominal pain, abdominal distention) **h.** bowel perforation (pain, febrile, bleeding) **i.** infection (chills/febrile)	**4.** Identifies progressive symptoms requiring management; may prevent life-threatening situations through initiating interventions earlier.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
5. Understanding of measures available to relieve stress.	**5.** Persistent diarrhea can be debilitating as well as affect life-style and contribute to stress and depression.	**5.** Provide support in presence of secondary sequelae/progressive symptoms: **a.** record number, character, and frequency of stool **b.** administer and maintain hydration/nutrition by parenteral route as ordered **c.** maintain patient NG tube **d.** encourage/provide mouth care frequently **e.** prepare patient for possible bowel diversion procedure	**5.** Restores and maintains optimal hydration and nutrition. Mouth care prevents secondary infections and provides comfort to the patient.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		6. Initiate measures to maintain skin integrity of anus and perineum: **a.** cleanse after each stool/urination **b.** protect with moisture barrier **c.** encourage use of topical anesthetic	**6.** Poor nutritional status, weight loss, and constant weight loss, and constant irritation from excreta can impair skin integrity.
		7. Develop and initiate plan for stress management and support: **a.** diversional activities, relaxation techniques **b.** mobilize support, encourage verbalization of feelings and use of coping strategies	**7–8.** Promotes a positive attitude and quality of life, and minimizes feelings of abandonment.
		8. Maintain option for open lines of communication following discharge:	

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		a. use of follow-up phone calls **b.** provide written instructions and referrals **c.** refer to home health agency	

NDX

Alteration in elimination related to development of fistulae.

Outcome Criteria

- The patient will relate the effectiveness of measures to contain drainage and protect skin integrity, maintain comfort, and retain optimal quality of life.

Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
1. Understanding of the predisposing factors and need to report signs and symptoms of fistula formation.	**1.** Fistulae may cause great concern within the patient. Bowel fluids draining through the bladder, vagina, or other orifices may cause considerable emotional distress because of the problems with control, odor, interference with sexual function, and interference with normal	**1.** Educate the patient and family regarding the rationale behind fistulae and the signs and symptoms to report.	**1.** Fibrosis of irradiated tissue may constrict blood vessels within the area leading to a decreased blood supply and further tissue fibrosis formation. Early detection of the complication is important because secondary problems such as infection, dehydration, and skin breakdown can be avoided or minimized. Patient education is a valu-

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
	daily activities. Effluent is frequently malodorous and the abnormal orifice is frightening. Extensive support is needed to help cope with the effects and presence of fistulae.		able part of early detection and prevention.
2. Fistula: **a.** anatomic location of the orifice **b.** classification **c.** diagnostic studies **d.** effluent (color, odor, consistency, volume) **e.** skin integrity surrounding opening		**2.** Protect the skin and contain the effluent. Use management methods for low- and high-volume drainage, odor control, and caustic effluent. If appropriate: **a.** change the dressing frequently **b.** use "mesh" panties to	**2.** Diagnosis and classification of the fistula directs appropriate treatment. Evaluation of the fistula, characteristics of the effluent, volume, skin integrity, and location are important. Caustic effluent will cause extensive skin breakdown

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		keep perianal dressings in place **c.** control odor by using odor absorbent dressings and commercial deodorants **d.** connect drainage tube to bedside drainage system; use commercial deodorant in drainage bag **e.** apply stoma adhesive paste around orifice **f.** empty pouch when half full to avoid tension on skin adhesive **g.** cleanse and dry skin between dressing/pouch changes	unless managed and appropriately. Bowel contents diverted through the bladder or skin may also be malodorous and offensive to the patient causing feelings of humiliation. The location can be a real problem. An enterostomal therapist is a valuable asset in the care of fistulae.
3. Nutritional and fluid/electrolyte status.		**3.** Implement strategies to maintain nutritional/fluid and electrolyte balance:	**3.** Fatigue, anorexia, and significant fluid and nutri-

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
			tional loss are common occurrences. Fluid and electrolyte balance and adequate protein are essential to wound healing.
		a. check daily weights **b.** assess laboratory studies (serum protein, albumin, electrolytes) **c.** encourage oral intake of fluids and high-protein diet **d.** implement low-residue or element diet **e.** implement hyperali-mentation as ordered **f.** administer intravenous fluids as ordered	
4. Presence of pain/discomfort.		**4.** Implement measures to manage pain and discomfort. Evaluate effectiveness: **a.** assess pain	**4.** Skin surrounding the opening often becomes excoriated and deep lesions are not uncommon. The resulting pain can be excruci-

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		b. utilize topical or systemic analgesics **c.** utilize nonmedicinal forms of pain management **d.** evaluate effectiveness of measures every 2 hours until acceptable comfort level is reached and maintained.	ating and difficult to manage.
5. Signs/symptoms of infection.		**5.** Assess for signs and symptoms of infection: **a.** chills/fever **b.** tenderness, pain	**5.** Infections frequently result from bowel contents emptying into the bladder or some other anatomical site as well as from skin breakdown. Depleted nutritional status also contributes to the problem.
6. Effects upon: **a.** body image		**6.** Initiate measures to prevent respiratory and/or cir-	**6.** Anorexia, sepsis, or decreased nutritional intake

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
b. sexuality **c.** life-style/quality of life **d.** coping abilities		culatory complications and to maintain strength and mobility: **a.** encourage deep breathing **b.** encourage ambulation and consult physical therapy as needed	can decrease energy and desire to be mobile, increasing risk of cardiac or respiratory problems.
		7. Initiate supportive measures: **a.** encourage verbalization and ventilation of feelings **b.** evaluate and mobilize effective coping strategies **c.** implement strategies to improve self image	**7.** Support is necessary to assist patient in coping with the development of fistula and with the consequences and impact on quality of life.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		d. consult supportive services, social services, and pastoral care **e.** prepare for possible ostomy procedure	

NDX

Altered health maintenance due to knowledge deficit about colostomy/ileostomy and/or ileal conduit.

Outcome Criteria

- The patient will demonstrate knowledge of basic colostomy management and discusses feelings about altered body image.

Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
1. Understanding of precipitating event (s).	**1.** It is essential that patients understand the events precipitating the formation of an ostomy. Whether the stoma is permanent or temporary has a strong impact psychologically and affects teaching, adaptation of life-style, utilization of community resources, and plan of care.	**1.** Establish a trusting relationship with the patient.	**1.** Elimination is a very personal bodily function that frequently has many private implications for the patient. It is essential for the nurse to establish a rapport in order to gain the patients trust and cooperation and be effective in discharge planning and education.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
2. Understanding of altered route of elimination and of measures necessary to successful management of altered function.	**2.** An understanding of how the ostomy works and what part of the bowel is involved influences the type of stool and measures needed to successfully manage the ostomy.	**2.** Address patients immediate needs: **a.** grief/loss **b.** self esteem **c.** sexuality **d.** perceived alterations in life-style **e.** informational needs about altered body image/functions	**2–3.** Amputation of a body part and extensively altered body image results in emotional shock, grief, and an array of emotions experienced by the patient. By determining the patient's immediate critical needs, support can be mobilized to assist the client through the initial period of adjustment. Patients may never accept an ostomy but they do learn to adjust.
3. Physical dexterity, capability to perform independent ostomy care.	**3.** In order to select equipment that the patient can successfully manage, the coordination, strength, ability	**3.** Mobilize support: **a.** minimize the defect, maximize benefits of surgery (e.g., quality of	

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
	to use the hands and fingers, vision, and mobility must be taken into account. The readiness and capability to learn is also essential. The presence of tubes, pain, nausea, or other distracting influences may also affect learning.	life, family, little impact on life-style) **b.** listen to patients' concerns **c.** utilize previously successful coping strategies **d.** solicit visit from United Ostomy Society volunteers **e.** consult social worker, psychologist, pastoral care, clergy **f.** develop strategies, provide situations for patient to make decisions in order to have successful outcomes **g.** ACS "Best Look Forward" image program	

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		to elevate self image issues **h.** include partner is discussion	
4. Attitudes toward: • self-esteem • body image • sexuality •control/power/powerlessness/reaction to ostomy • perceived effects upon life-style	**4.** Altered routes of elimination are often repugnant to patients. Attitudes toward self, sexuality, and of loss of control or power must be addressed in order to successfully rehabilitate the patient.	**4.** Develop and implement a post-operative teaching plan: **a.** consider patients readiness, capabilities, previous teaching **b.** consider continuity of teaching **c.** develop flow sheet and written instructions for staff members **d.** include the following in teaching plan: (1) dietary instructions (2) impact upon life-style	**4.** A detailed plan that provides continuity of care is essential. Not all agencies employ enterostomal specialists. It is important to delegate responsibility to one individual for the patient's education, establish a system of documentation, and provide for good staff communication.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		(3) impact upon sexuality, show samples of adaptive clothing, and provide resources (4) peristomal skin care (5) preparation of barrier plate (6) protection of surrounding skin (7) application of barrier and pouch (8) procedure to empty appliance and cleanse it **e.** have patient apply, empty, and cleanse stoma and pouch inde-	

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		pendently prior to discharge **f.** include patient's family/partner in teaching plan	
5. Previous coping strategies and effectiveness.	**5.** An understanding of the patient's previous coping strategies and effectiveness is helpful in motivating the patient to move forward.	**5.** Select appliance that the patient will be able to manage successfully: **a.** consider client capabilities, coordination, vision, dexterity, and lifestyle	**5.** A wide variety of appliances are manufactured to meet most patient needs. Custom-made appliances may also be obtained. Some manufacturers have a staff of clinical consultants available to assist with problematic situations. Contact manufacturers' sales representatives for service numbers.
		6. Provide for follow-up care in the community:	**6.** As patients are dis-

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
			charged more rapidly following surgery, teaching is not always complete. Home care is almost always necessary to assist the patient. Patients must also be equipped with a resource for suppliers to avoid unnecessary problems.
		a. provide prescriptions and confirmed resource for supplies **b.** explore financial arrangements for supplies **c.** arrange for home nursing assistance during initial discharge **d.** assure adequate communication with home nursing service to avoid conflict **e.** review and provide helpful literature **f.** provide client with resource list	

Genitourinary System

NDX

Risk for alteration in urinary elimination related to hemorrhagic cystitis and nephrotoxicity.

Outcome Criteria

• Patient will not experience hemorrhagic cystitis.

• Patient will maintain normal kidney function as evidenced by BUN below 20 and creatinine below 1.5.

• Blood chemistries, such as MG^{++}, Ca^{++}, and K^{+}, will be within normal limits.

Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
1. Metabolites of certain chemotherapeutic agents are irritants to the bladder mucosa and can cause chronic hemorrhagic cystitis.	**1.** Administration of cyclophosphamide and ifosfamide are associate with hemorrhagic cystitis.	**1.** Hydrate patient with 1–2 liters of fluid the day (s) of treatment and encourage oral fluid intake for at least 24–48 hours after completion of infusion.	**1.** Dilutes toxic metabolites and promotes faster renal excretion.
2. Certain Chemothera-	**2.** The concentration of	**2.** Encourage patient to void	**2.** Plasma half-life is 6–12

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
peutic agents may cause acute tubular necrosis.	chemotherapy in the bladder is related to the development of cystitis.	2–4 hours thereafter for 12 hours after treatment.	hours. Twenty-five percent of drug is excreted within 8 hours of administration. Frequent urination empties bladder of toxic metabolites that may cause cystitis.
3. Dose of drug may need to be reduced if renal function is poor since the drug is often eliminated by the kidney. If drug is not eliminated promptly, the patient may have increased myelosuppression due to prolonged exposure of the bone marrow.	**3.** The length of time the bladder mucosa is exposed to the chemotherapeutic agent is proportional to the amount of damage to the bladder mucosa.	**3.** Instruct patient to report frequency, dysuria, or blood in the urine.	**3.** Identify and treat bladder injury.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
	4a. Renal glomeruli and tubules can be damaged by toxic effects of chemotherapeutic agents. **4b.** Decreased filtration of urea and creatinine by the kidney will decrease the excretion, which in turn will elevate BUN and creatinine.	**4.** Monitor BUN, creatinine levels prior to each treatment and mid cycle.	**4.** Adequate renal function is necessary for excretion of drugs and metabolites. Renal toxicity may necessitate dose attenuation at the next cycle.
		5. Collect urinalysis for evaluation of microscopic red blood cells if symptoms persist. May be performed prior to the administration of ifosfamide also.	**5.** Hermaturia is a principle symptom of hemorrhagic cystitis.
		6. Administer diuretics as ordered by physician.	**6.** Treat renal injury.
		7. Monitor intake and output daily for 3 days. If outpatient, the patient may be taught to monitor her own output and report to clinic.	**7.** Decreased output with adequate intake may indicate nephrotoxicty which should be treated. Inadequate elimination of drug may precede severe myelo-suppression.

Integumentary System

NDX

Risk for alteration in skin integrity related to treatment modality (alopecia) and/or disease process.

Outcome Criteria

• The patient will report expected skin changes and signs/symptoms of irritation or infection.

• The patient will verbalize an understanding of skin care measures to reduce skin irritation, breakdown, and infection.

• Patient will verbalize feelings regarding hair loss and identify strategies to cope with change in body image.

Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
1. Changes in skin due to chemotherapy and/or radiation therapy.	**1.** Hair follicles are rapidly proliferating cells and are therefore affected by certain chemotherapy drugs.	**1.** Instruct patient about reversible hair thinning or loss prior to beginning chemotherapy in order to prepare her. If patient is	**1.** Give alternative head covering information prior to actual hair loss. Patient may plan for hair loss with ap-

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
	Some chemotherapeutic agents may damage DNA of stem cells in hair follicle resulting in weak, brittle hair that breaks off at the surface of the scalp or is spontaneously released from the hair follicle. Loss of scalp hair occurs suddenly between day 14 and 21 of the first cycle. Regrowth usually begins a few months after chemotherapy is stopped. A high percentage of pubic and axillary hair is in the resting versus miotic	to receive radiation therapy, she should be instructed that hair loss may be permanent. Recommend purchase of hair prosthesis, scarf, or turban. Give names of nearby shops that sell such products. Insurance may reimburse cost.	propriate wigs and scarves.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
	stage, and therefore is often spared. Radiation therapy causes normal skin changes such as darkening of the skin, dryness, and tenderness. Depending on the treatment planned and the health of the patient, the skin may break down to a moist desquamation. Although maximum radiation treatment effects occur below the skin surface, the rap-		

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
	idly dividing epithelial cells of the epidermis may be damaged or destroyed by radiation entering and exiting the field. Potential also exists for damage/destruction of other structures within the skin (hair follicles, sebaceous glands, blood vessels, nerve endings), due either to the direct effects of radiation or indirect effects resulting from effects upon surrounding tissue. Dose, size of the treatment field, number of fractions, and		

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
	time span of treatment influence risk and severity of reaction. Certain areas of the skin are more sensitive to radiation because of anatomical location, characteristics of the skin, current or pre-existing compromising factors (entrance/exit sites within radiation field, folds, creases, boney prominence, thin skin tissue, surgical incisions, stomas or areas of skin irritation).		

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
	Some chemotherapy agents are radioenhancing (doxorubicin, actinomycin D, bleomycin). Some antide-pressants, diuretics, hypoglycemics, NSAID, antihistamines, and antibiotics may also potentiate radiation skin effects.		
2. Changes in skin related to disease process.	**2.** If the disease process has interrupted the skin, an open, draining wound may occur.	**2.** Assess for signs and symptoms of hair loss and patient's psychological response to loss. Allow for verbalization of feelings especially in response to pubic hair loss. Introduce patient to another patient who has experienced hair loss and	**2.** Identify inappropriate coping mechanisms. Helps to identify positive role model with good coping skills that may assist patient.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		has developed coping skills.	
3. Changes in skin integrity related to drains, tubes, and/or catheters	**3.** Drains, catheters, or tubes may irritate the skin, and increase the risk of superficial infection.	**3.** Instruct patient on ways to minimize hair thinning/loss such as minimal manipulation of the hair by washing less frequently, gently combing, avoidance of harsh hair products such as dyes or bleaches, and use of a silk pillow for sleep.	**3.** Minimizing trauma to thinning, weakened shafts may prevent or decrease loss.
4. Understanding of effects of chemotherapy and/or radiation upon the skin.		**4.** Instruct patient on proper scalp care: **a.** use mild soap **b.** use soft brush **c.** use mineral oil or A&D ointment to reduce itching	**4.** Promotes comfort of scalp during period of hair loss.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		d. use #15 sunscreen/block on scalp once hair loss is significant	
5. Knowledge of the sites/areas at risk for radiation skin reaction and contributing factors.		**5.** Instruct patient to use methods to protect eyes (eyeglasses, visors, and hats with wide brims).	**5.** Promotes eye safety.
6. Knowledge of measures to prevent or minimize skin impairment.		**6.** Encourage patient to enhance other aspects of appearance (makeup, jewelry, etc.).	**6.** Encourages positive body image.
		7. Assess the skin carefully for evidence of erythema, pruritus, skin breakdown, or drainage.	**7.** Careful evaluation is necessary daily to identify potential areas of breakdown and initiate early intervention.
		8. Apply appropriate skin-care measures to provide comfort and reduce risk	**8.** Irritated skin or open wounds need to be supported with appro-

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		of infection as per institution protocol.	priate medication and wound covering.
		9. Develop a plan tailored to the needs of the patient and family to teach about the potential for radiation skin reaction and skin impairment.	**9.** Increases patient understanding of treatment effects upon the skin and validates transient nature of most skin reactions.
		10. Identify applicable risk factors for skin reaction.	**10.** Promotes awareness of personal risk factors and need to increase surveillance and use of preventive measures.
		11. Teach the patient and family about preventative measures; reinforce teaching and the need for self evaluation at regular intervals:	**11.** Promotes the use of preventative behavior conducive to maintaining maximum skin integrity. Provides the

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		a. wash the area with mild soap and pat dry **b.** wear soft, loose, cotton clothing **c.** use only water-based cream or lotions recommended by the health-care team **d.** use cornstarch to help dry pruritic skin **e.** cleanse the perineum after bowel movements and urination with warm water	patient with a sense of control. Anxiety and fear about disease and treatment frequently "blocks" communication pathways. Reinforcement and repetition help overcome the problem particularly in adults.
		12 Teach the patient about the signs and symptoms of radiation skin reaction and the necessity of reporting any occurrence to the health-care team.	**12.** Effects of radiation upon the skin are cumulative. Early recognition and interventions can minimize effects and skin impairment. Self care

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
			also increases the patients's sense of independence and control.
		13. Teach the patient about the need for good nutrition to assist with cell damage repair.	**13–14.** Anorexia, fatigue, and nausea frequently occur during treatment resulting in depleted visceral proteins and vitamins needed for tissue repair, anemia, and electrolyte imbalance. All scenarios increase risk for skin breakdown due to multiple factors. Maintaining nutritional and fluid intake maintains optimal baseline integrity.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		14. Asses nutritional status: **a.** weekly weight **b.** laboratory values (hemoglobin, hematocrit, blood glucose, serum protein, serum albumin, and electrolytes **c.** provide suggestions to improve/maintain nutrition (see care plan on nutrition) **d.** obtain nutritional consult **e.** provide and review helpful literature	
		15. Provide discharge teaching **a.** special life-long precautions will be needed	**15.** Subtle radiation effects take place with exposure to radiation and are permanent. The irradiated skin

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		b. avoid exposure to the sun, wear protective clothing, and sunscreen **c.** use an electric razor within treatment fields **d.** keep skin lubricated **e.** project against infection	will always be thinner, dryer, and may appear darker, and should be protected after treatment for the remainder of the patient's life.

Neurologic System

NDX

Alteration in sensory perception related to neurotoxicity, neurological pain and paresthesias, ototoxicity, and retinal toxicity.

Outcome Criteria

• Patient may experience transient or permanentneuropathy in hands and feet.

• Patient will experience control of neurological pain.

• Patient may experience transient or permanent hearing loss.

• Patient may experience blurred vision or loss of color perception.

Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
1. Some patients will experience peripheral neuropathy in hands and feet which is progressive or often delayed until late in treatment regimen.	**1–5.** Neural conduction can be impaired by some chemotherapeutic agents.	**1.** Assess patient for tingling, numbness, or pain in hands and feet before treatment induction and prior to each treatment.	**1.** Identify patients with pre-existing and progressive neurotoxicty and educate patient regarding safety. Delay treatment if paresthesias are severe.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
2. Diminished sense of touch and sense of hot and cold feeling in fingers and toes is common. This occurs in a "stocking-glove" distribution.		**2.** Caution patient to be careful handling hot objects and test water with elbow before entering bathtub or shower.	**2.** Promotes safe environment in patient at risk for injury related to inability to assess temperature.
3. Loss of proprioception of extremities may occur, which may progress to ataxia. May lessen ability to complete activities of daily living.		**3.** Caution patient to walk carefully. If proprioception is diminished, use of a walker may be suggested in severe cases. Encourage the use of practical shoes with velcro closures and the use of visual cues. Patient may require assistance with daily tasks such as dressing, eating, hygiene, and walking.	**3.** Promotes safety and prevents falls or injury. Assures completion of ADLs.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
4. Severe tingling or prickling sensations, often described as cramping or burning pain, may occur. Pain may be continuous or intermittent. Sleep may be interrupted by neurological pain.		**4.** Use of antidepressant drugs may be helpful to eliminate neurological pain, along with anti-inflammatory drugs and narcotics.	**4.** May help to decrease or control discomfort related to neurologic pain.
5. Intensity of pain may be variable and may increase with hot or cold stimulation.		**5.** Teach patient to avoid temperature extremes.	**5.** Decreases discomfort associated with extreme temperature Avoids injury in patient who can not distinquish temperature.
6. High-pitched hearing loss may occur. It may be cumulative and occur late in treatment.	**6–8.** Neural conduction of sound waves may be interrupted by certain agents.	**6.** Schedule audiology exam for baseline prior to initiation of therapy.	**6.** Pre-existing hearing deficit may require a change in treatment or closer monitoring during treatment.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
7. Risk of hearing loss is increased with dose intensity is elevated.		**7.** Instruct patient to report tinnitus and repeat audiology exam if symptoms of hearing loss present.	**7.**Tinnitis may precede diminished hearing.
8. Tinnitus may precede diminished hearing.		**8.** Dose of drug may be diminished or drug discontinued in cases of serious hearing loss.	**8.**Prevents further or permanent hearing loss.
		8a. Assist patient to decrease environmental noise during conversation. Teach family to speak slowly in low tone and directly toward patient.	**8a.** Maximizes ability to hear in presence of ototoxicity.
9. Blurred vision and alternation in color vision may occur in up to 37% of patients.	**9.** Papilledema and retrobulbar neuritis may occur due to augmented CNS	**9.** Increase patient awareness of visual disturbance.	**9.** Promotes use of visual cues and aids to prevent injury.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
treated with high-dose cisplatin.	penetration with repeated dosing.		
		9a. Encourage ophthalmic exam and change in glasses if indicated.	**9a.** Treats vision changes and promotes optimal vision.

NDX

Risk for injury related to neurologic dysfunction from brain metastasis.

Outcome Criteria

• The patient and family will identify signs and symptoms of increased intracranial pressure.

• The patient will maintain optimum level of functioning.

• The patient will be remain free of injury.

Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
1. Altered or decreased level of consciousness.	**1–5.** Indicate increased intracranial presure.	**1.** Perform neurologic assessment including performance status, level of consciousness, mentation, motor function, and sensory function. Report changes to physician.	**1.** Provides early recognition of neurological changes.
2. Decreased motor and sensory function.		**2.** Teach the patient and family signs and symptoms of increased intracranial presure.	**2.** Promotes early recognition of neurological changes.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
3. Increased blood presure, decreased pulse and respiratory rate.		**3.** Teach the patient and family information regarding medications prescribed to decrease intracranial pressure and manage symptoms, i.e., anticonvulsants, steroids, antiemetics, and analgesics.	**3.** Provides early recognition of medication adverse effects and/or side effects
4. Altered pupil size and reactivity.		**4.** Assist the patient and family with management of self care deficits as they arise, i.e., provide assistive devices for ambulation.	**4.** Maintains independence in ADL for as long as possible.
5. Nausea, vomiting, and headache.		**5.** Teach safety precautions specific to neurologic changes the patient is experiencing, i.e., seizures.	**5.** Prevents self injury.
6. Level of knowledge of patient/family regarding symptom management.	**6.** Potential knowledge deficit.		

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Assessment Criteria	Clinical significance	Interventions	Rationale for Interventions
7. Motor/sensory function changes.	**7.** Disease progression.		

PART 2
SURGICAL CARE PLANS

Section 1
Collaborative Problems

Potential Complications

Bleeding/Hemorrhaging/Disseminated Intravascular Coagulopathy (DIC) • Thromboembolic Event • Infection/Sepsis • Fluid/Electrolyte Imbalance • Atelectasis/Pneumonia • Bowel Dysfunction • Urinary Dysfunction

Bleeding/Hemorrhaging/Disseminated Intravascular Coagulopathy (DIC)

Nursing Goals	Interventions	Rationale for Interventions
1. The nurse will manage and minimize the potential vascular, respiratory, gastro-intestinal, urologic, and neurologic complications that may be encountered in the woman who has undergone exploratory laparotomy or other tumor debulking surgical proce-	**1.** Monitor for changes in hemodynamic status, including hemorrhage or anemia: **a.** hypotension **b.** tachycardia, tachypnea **c.** oliguria, anuria **d.** cool, clammy skin **e.** restlessness and pain **f.** frequent observation of dressings	**1.** Extensive surgery may cause excessive blood loss, resulting in loss of intravascular volume. Due to the radical nature of most cancer surgeries, there is an increased risk of continued oozing or frank bleeding of vessels and/or surfaces within the operative site.

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Nursing Goals	Interventions	Rationale for Interventions
dures that are commonly associated with gynecologic malignancies.	and closed drainage systems for blood loss	
	2. Maintain adequate hydration.	**2.** Hydration helps to maintain intravascular volume and reduces hyperviscosity of blood and risk of thrombus formation.
	3. Maintain anticoagulation therapy and antithromboembolic devices such as support stockings or sequential compression stockings as ordered.	**3.** Support hose increase venous return to the heart and decrease the risk of venous stasis and subsequent thrombus formation.
	4. Monitor systems for signs and symptoms of disseminated intravascular coagulopathy (DIC): **a.** gastrointestinal: gastric distention, hematemesis, melena **b.** pulmonary: dyspnea, hypoxemia, hemoptysis	**4.** DIC is manifested by simultaneous, wide-spread bleeding and clotting.

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Nursing Goals	Interventions	Rationale for Interventions
	c. renal: oliguria, azotemia, hematuria, seizures, headache **d.** skin: acral cyanosis, generalized diaphoresis, mottled cool extremities, ecchymosis, petechiae	
Thromboembolic Event		
	1. Monitor for signs and symptoms of thromboembolic event or development of deep vein thrombosis/thrombophlebitis: **a.** Pain, swelling, redness, pallor, cyanosis, or edema of an extremity **b.** Decreased capillary refill or palpable pulse rate of an extremity **c.** Positive Homan's sign **d.** Paraesthesias	**1.** Prolonged immobility and the edema resulting from surgery may increase risk of development of thromboemboli.
	2. Monitor for signs and symptoms of pulmonary embolus:	**2.** Pulmonary embolism interferes with

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Nursing Goals	Interventions	Rationale for Interventions
	a. chest pain **b.** dyspnea, tachypnea, cyanosis **c.** hemoptysis **d.** hypotension **e.** altered levels of consciousness	perfusion, increasing the work of breathing and leading to hypoxia.
	3. Encourage frequent position changes and avoid high Fowler's position and elevation of knees.	**3.** Position changes decrease the risk of venous stasis, particularly in the large vessels of the lower extremities, thereby decreasing the risk of development of deep vein thrombosis.
	4. Monitor for signs and symptoms of intracerebral hemorrhage: **a.** motor/semsory changes **b.** visual/ocular changes **c.** pupil size/reaction **d.** speech changes/aphasia **e.** changes in cognition or level of consciousness.	**4.** Cerebral vascular accidents may result from thrombosis, embolus, or hemorrhage.

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Infection/Sepsis

Nursing Goals	Interventions	Rationale for Interventions
	1. Monitor for signs and symptoms of sepsis: **a.** temperature <101F or less than 98.6F **b.** change in cognition or level of consciousness **c.** decreased urine output (<30 ml/hr) **d.** hypotension, tachycardia **e.** abnormal laboratory values: WBC count, serum creatinine, pH, and arterial blood gas analysis	**1.** Sepsis is caused by the presence of micro-organisms in the blood, usually gram negative rods. It involves massive vasodilation and hypovolemia that result in tissue hypoxia, impaired renal function, and decreased cardiac output. The compensatory response increases heart rate and respiration in an attempt to correct hypoxia and acidosis.

Fluid/Electrolyte Imbalance

Nursing Goals	Interventions	Rationale for Interventions
	1. Monitor for fluid and electrolyte imbalance: **a.** decreased urinary output **b.** peripheral edema	**1.** The body conserves fluids by shifting or third spacing the fluid to extravascular spaces, thereby decreasing urinary output. This is common after

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Nursing Goals	Interventions	Rationale for Interventions
	c. hypotension **d.** tachycardia **e.** abnormal laboratory values: renal electrolytes	extensive surgical procedures where there has been a moderate amount of blood loss as well as insensible losses (transient SIADH syndrome). The natural tendency is to administer a diuretic to increase urinary output; however, by maintaining adequate fluid hydration and/or administering intravascular fluid volume expanders, the syndrome will resolve as the patient recovers from the trauma of the surgery.

Atelectasis/Pneumonia

Nursing Goals	Interventions	Rationale for Interventions
	1. Monitor for signs and symptoms of respiratory compromise: **a.** dyspnea, tachypnea **b.** chest pain	**1.** Respiratory compromise in the post-operative period is not uncommon. It may be due to aspiration pneumonia that occurs during intubation, to poor

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Nursing Goals	Interventions	Rationale for Interventions
	c. cyanosis **d.** cough, hemoptysis **e.** alteration in breath sounds **f.** altered level of consciousness **g.** fever	inspiratory effort leading to atelctasis, or to the mobilization of thromboemboli. Each interfere with the perfusion of tissues, thereby increasing the effort of breathing and leading to hypoxia.
	2. Encourage incentive spirometry and other pulmonary toilet.	**2.** Deep-breathing exercises assist in expansion of the lungs and thereby decrease atelectasis and subsequent respiratory compromise.

Bowel Dysfunction

Nursing Goals	Interventions	Rationale for Interventions
	1. Monitor for signs of bowel function return: **a.** auscultate the abdomen for bowel sounds **b.** Assess abdomen for distention	**1.** The extended period under anesthesia and trauma to the nerves that inervate the bowel during surgery can cause paralytic ileus. Bowel function should slowly return within 48–72 hours as evidenced by positive bowel sounds, flat abdomen, and passing flatulus.

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Nursing Goals	Interventions	Rationale for Interventions
	2. Advance diet as ordered while maintaining adequate hydration status.	**2.** Nutrition by oral intake should not begin until bowel function retunrs to prevent vomiting. Nasogastirc tube output should decrease over the first 48 hours and then can be clamped to evaluate patient's ability to tolerate here own gastrointestinal secretions. Advance diet slowly from ice chips to clear liquids to full liquids if patient is tolerating each level for greater than 24 hours. This allows return of bowel function without stress on surgical wound.
	3. Mointor for signs of paralytic ileus of poor treutn of bowel function: **a.** assess bowel sounds prn and as ordered **b.** maintain strict NPO unless otherwise ordered	**3.** Some patients may have prolonged return to normal bowel function due to tumor debulking, resection, reanastamosis of bowel, or persistent intrabdominal disease.

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Nursing Goals	Interventions	Rationale for Interventions
	c. observe for nausea and/or vomiting **d.** observe for complaints for abdominal pain, cramping, or for signs of abdominal distention	

Urinary Dysfunction

Nursing Goals	Interventions	Rationale for Interventions
	1. Monitor for urinary retention.	**1.** Extensive dissection in the pelvis can interrupt nerve supply to the bladder. Extensive dissection of tissue surrounding the urethra or urethral meatus may cuase edema and subsequent urinary retention.

Section 2
Nursing Diagnoses

Psychosocial Issues

NDX

Altered health maintenance related to insufficient knowledge of condition, diagnostic tests, prognosis, and treatment options.

Outcome Criteria

• The patient and family will verbalize a clear understanding of the condition diagnostic tests, prognosis, and treatment options before the procedures are begun and throughout treatment initiation.

Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
1. Knowledge level: **a.** the condition **b.** diagnostic tests **c.** treatment options	**1–4.** Learning is dependent upon level of education, past experience, and perceived importance of the information. The learning environment and one's anxiety can affect the ability to learn	**1.** Develop and implement a teaching plan based on completion of learning assessment that include the current condition, diagnostic studies necessary, and possible treatment options.	**1.** An education plan provides the nurse and patient with a clear understanding of the necessary information, method of education, and schedule.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
	and retain information. The timing and content of teaching are critical to the patient and family's understanding, acceptance, and compliance.		
2. Ability to learn; willingness to learn; level of anxiety; learning environment.		**2.** Assist the patient and family to maintain focus on reality.	**2.** Sometimes the patient/family coping mechanisms interfere with reality, and it is necessary to reorient them to the current situation.
3. Barriers to learning.		**3.** Include the family or support system in the teaching sessions at the patient's discretion.	**3.** It is important to maintain patient confidentiality.
4. Previous experiences		**4.** Provide consistent infor-	**4.** With the stress of the diag-

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
with cancer and health-care system.		mation to help prevent or correct misconceptions.	nosis and possible procedures, and the numerous health-care professionals involved, the patient/family may misconstrue or receive conflicting information.
5. Family's ability to express their understanding of the disease and the impact the diagnosis has on their life.	**5.** It is important that the patient and family (or support system) have an adequate understanding of the health of the patient and the altered role she will have in the home or facility she is discharged to.	**5.** Create a forum for questions and ventilation of feelings.	**5.** Encouraging questions validates understanding of information provided.
		6. Provide written or visual teaching tools, such as pamplets or video tapes.	**6.** Providing written information enhances verbal learning and offers references at home as needed.

Nursing Diagnosis

NDX

Altered health maintenance related to insufficient knowledge of dietary restrictions, medications, activity restrictions, self care activities, symptoms of complications, follow-up visits, and community resources

Outcome Criteria

• The patient and family will verbalize and demonstrate an appropriate understanding of diet, medications, activity restrictions, self care activities, symptoms of complications, and follow-up visits prior to discharge.

• The patient and family will have appropriate brochures and contacts with local, state, and national resources.

Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
1. Readiness and ability to learn new information.	**1.** The patient and family must be ready and able to learn when confronted with new information. In order to decrease the risk of a serious complication	**1.** Develop plan that will incorporate all the information the patient will need prior to discharge. Begin teaching as soon as patient and family are ready to learn.	**1.** Early planning and education provides opportunity for retention and reinforcement.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
	or accident, information must be provided at time of discharge.		
		2. Provide brochures and contacts for local, state, and national resources (e.g., American Cancer Society, National Cancer Institute).	**2.** Such community resources can provide additional information and support to patients and their families.
		3. Provide written instructions when possible of procedures, medications, symptoms, and follow-up appointments.	**3.** Written instructions help to reinforce information and provide an additional resource once discharged.
		4. Include the home health nurse in the discharge plan and keep her informed of all changes.	**4.** Including the home health nurse in the discharge plan will reduce the possibility of misunderstandings and potential complications.

NDX

Decisional conflict related to insufficient knowledge of treatment options.

Outcome Criteria

- The patient and family will verbalize a clear comprehension of the advantages and disadvantages of each treatment option.
- The patient and family will verbalize a clear comprehension of the rationale used to determine the choice for adjuvant therapies before or after surgical intervention.

Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
1. Patient/family's comprehension of diagnosis, treatment options, and treatment plan.	**1–2.** Knowledge of the patient's current comprehension of the disease and her options for treatment allow the nurse to assess areas of insufficient or in-	**1.** Allow the patient and family to verbalize understanding and feelings about the diagnosis and treatment options. Clarify and reinforce information as needed.	**1.** This will allow the nurse to clarify misunderstandings and provide information if gaps exist.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
	correct information. Additional information or clarification may then be provided to allow for an informed consent. Patient's decisionmaking pattern should be assessed in order to facilitate the process.		
2. Decisionmaking pattern.		**2.** Allow the patient and family as much time as possible to make a decision.	**2.** Decisionmaking takes time to review all the alternatives and possible conflicts.
3. Assess the response of patient's support system to diagnosis and potential treatment.	**3.** Assessment of the level of comprehension and emotional status of the patient's support persons can provide an opportu-	**3.** Teach the patient to write advantage/disadvantage list for each option.	**3.** Writing out options can focus decisional criteria and allow the patient to compare choices more easily.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
	nity to ensure that their input is based on understanding of the facts of the situation. Additionally, it will allow the nurse o assess family or relational stresses that may be impacting the patient's decision.		
4. Possible conflicts such as religion, culture, or family.	**4.** Some cultures, religions, or families may not support certain health-care practices. These issues must be carefully reviewed with the patient in order that she have complete information	**4.** Provide written materials that further reinforce the information regarding the diagnosis and treatment options. Be aware of and respect religious and cultural beliefs.	**4.** Providing both written and verbal explanations increases understanding and retention of information.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
	upon which to make a decision.		
		5. Encourage participation of significant others in discussion of options.	**5.** Patient and her support persons may have misperceptions regarding each other's response to the disease and treatment. Encouraging communication will promote mutual understanding.
		6. Encourage patient to verbalize perceived negative consequences for each treatment option.	**6.** If patient verbalizes her understanding of the consequences, the nurse can determine misperceptions and determine areas of conflict.
		7. Avoid presenting personal views or making choices for the patient.	**7.** Patients may seek to have professionals give their opinion to avoid decisionmaking. Use caution to provide accurate data with-

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
			out biasing information toward one option.
		8. Provide privacy and maintain confidentiality during discussions.	**8.** The breast and female pelvic organs are highly associated with sexuality. The patient may be more open to frank discussion if privacy is provided.
		9. Respect the patient's right to make her decision and support that decision, including that of a second opinion.	**9.** For many patients, more than one treatment option may be medically appropriate. An individual patient's decision may not be related only to disease but also to relationship and life-style considerations.

NDX

Anxiety/fear related to impending surgery and insufficient knowledge of preoperative routines, intraoperative activities, and postoperative self care activities.

Outcome Criteria

• The patient will verbalize her fears and concerns regarding impending surgery.

• The patient will demonstrate her understanding of postoperative self care activities as instructed prior to surgery.

Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
1. Level of anxiety; specific concerns.	**1–3.** A patient's level of anxiety and fear may impact her physiologic status during surgery and ability to comprehend and complete self care activities required. Understanding the specific concerns and allevi-	**1.** Provide reassurance and support to both the patient and the family. Encourage verbalization of fears and concerns.	**1.** Alleviating fears and concerns and providing support reduces the excess physiological and psychological toll.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
	ating fears will make the experience of surgery more pleasant for the patient, family, and staff.		
2. Previous experiences with surgery and anesthesia.		**2.** Review understanding of surgery and diagnosis with patient, and correct any misconceptions or misinformation.	**2.** Inaccurate information or misconceptions can elevate fears.
3. Understanding of planned surgery and postoperative self care activities.		**3.** Encourage the patient and family to utilize previous coping mechanisms, including spirituality, to alleviate fears and reduce anxiety.	**3.** Coping skills that have succeeded in the past, including spirituality, may assist in managing anxiety.
		4. Encourage family (identified support system) to par-	**4.** Support from family and friends can significantly

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		ticipate in teaching process and anxiety-reducing behaviors.	reduce anxiety and fears, and promote coping.
		5. Provide instruction on necessary preoperative procedures the prior evening and morning of surgery, including diet restrictions. bowel preparation, and medications. Encourage patient to call and ask questions she may have related to the information.	**5.** Preoperative preparation can be uncomfortable and can increase anxiety and fears.
		6. Provide instruction regarding postoperative expectations, including devices such as tubes, drains, dressings, pain management, medications labora-	**6–7.** A clear understanding of what is to be expected reduces anxiety and encourages compliance with procedures.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		tory studies, and possible restrictions such as mobility and/or visitors.	
		7. Provide instruction on postoperative self care activities such as breathing exercises, use of patient-controlled analgesia pumps, and position changes.	

NDX

Anxiety/fear related to insufficient knowledge of potential impact of condition and treatment on reproductive organs and sexuality.

Outcome Criteria

- Patient demonstrates knowledge related to potential alteration in sexuality:
  - states potential impact of disease and/or treatment on sexuality
  - identifies factors that influence sexual identity
  - identifies manifestations of alteration in sexuality

Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
1. Assess adult developmental level to determine potential alterations in self concept, role, and sexual function: **a.** role function: student, spouse, parent **b.** living arrangements: independ-	**1.** The diagnosis of cancer and its treatment affects a patient's physical, social, and psychological well being. Prior to initiation of treatment, it is imperative to assess the patient's relationships and self-concept. Identifying	**1.** Examine own knowledge, attitudes, and skills in areas of sexuality, sexual dysfunction and sexual counseling.	**1.** Evaluating one's attitudes and feelings toward sexuality will allow the nurse to identify strengths and limitations and develop a proper plan of care to address patients' sexual concerns.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
ent (apartment, dormitory, own home) vs. dependent (living with family of origin) **c.** Impact of diagnosis on significant, intimate relationships (e.g., partner(s), spouse) **d.** impact of diagnosis on interpersonal relationships (e.g. employer, colleagues, friends, children) **e.** impact of diagnosis on developmental activities	patients at high risk for sexual dysfunction will allow for development of development of effective interventions. Young women may lack basic information regarding sexual functioning and have had less time to develop their sexual identity. Single women may have dating and appearance issues related to their self-esteem.		

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
(e.g., student, establishing career, establishing independence, flourishing in career activities, establishing and supporting "own" nuclear family)			
2. Elicit information about previous sexual history as appropriate: **a.** sexual activity **b.** reproductive history **c.** desire for children **d.** use of contraceptives **e.** impact of previous therapies (e.g., drugs, previous	**2.** Most cancer patients have sexual concerns but frequently do not ask for help regarding them. In order to evaluate sexual function, a sexual history must be obtained. Obtaining a sexual history at the time of diagnosis reduces the risk of giving wrong or	**2.** Utilize interviewing techniques that demonstrate acceptance of a variety of sexual behaviors as within a normal range in order to increase patient comfort.	**2.** By providing a warm, comfortable setting, the patient will feel more at ease disclosing her private concerns.

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Assessment Criteria	Clinical significance	Interventions	Rationale for Interventions
cancer treatment) on sexuality/sexual function **f.** reaction of partner to illness **g.** coping style **h.** attitudes about sex **i.** impact of involved body part on sexuality	inappropriate advice to the patient later. Assessment of sexual functioning prior to treatment provides baseline information to judge the magnitude of treatment-related alterations.		
		3. Discuss potential impact of disease process/treatment on sexuality as appropriate: **a.** process of cancer (including feelings of being ill, fatigue, and alterations in body functions)	**3.** Anxiety and fear of cancer and treatment can delay recovery time. Patients cope better knowing what to expect in terms of changes that have or will occur physically and physiologically

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		b. personal process of accepting cancer diagnosis **c.** treatment effects: 1. surgical interventions 2. radiation therapy 3. chemotherapy 4. biotherapy 5. side effects of therapies **d.** results of disease or treatment on physical appearance/self-image **e.** impact of diagnosis of cancer on family and uncertain future and uncertain future that accompanies it (e.g., anticipatory grief, role changes)	as a result of cancer and its treatment.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		4. Respect sociocultural factors (religion, culture, peer pressure) that may affect the individual's sexual concept and identity.	**4.** Awareness of and respect for cultural and religious beliefs will facilitate understanding one's individuality.
		5. Clarify terms relative to sexuality to ensure understanding.	**5.** Increases patients's knowledge of female anatomy; clarification of terminology is necessary for teaching and understanding.
		6. Clarify myths and misconceptions about normal sexual responses to provide basis for understanding potential changes.	**6.** Cancer myths can interfere with patient's understanding of what is factual and should be clarified when revealed.
		7. Identify major areas of sexuality that cancer may potentially affect.	**7.** By identifying areas of sexuality that may be affected, patients, are better

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
			prepared to deal with changes if they should occur and potential complications may be prevented. Patients have a right to know how treatment will affect their sexual health.
		8. Identify measures to assist patient/partner to prevent or cope with possible changes: **a.** methods toprevent fatigue **b.** proper use of medications (e.g., analgesics and antiemetics) **c.** signs/symptoms that may signal need for intervention (e.g., low	**8.** Rest before sexual activity, scheduling of time, and the proper use of medications facilitates periods of intimacy.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		mood, avoidance of intimacy)	
		9. Describe available community resources and groups.	**9.** Support groups and individual therapy may be helpful in providing support, education, and financial assistance.
		10. Refer to ACS booklet entitled "Sexuality and Cancer: For the Woman Who Has Cancer and Her Partner."	**10.** Written resources can be educational and provide additional support.
		11. Utilize PLISSIT Model to develop nursing interventions. Use levels with which you feel comfortable: P=Permission: convey permission to have (or not have) sexual thoughts,	**11.** Annon's model is a quick and affective method for offering sexual counseling.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		concerns, feelings. Assure patient that concerns regarding sexual function after cancer diagnosis are legitimate LI=Limited Information: provide limited information relative to patient's problem while acknowledging that other individuals experience similar concerns (e.g., many women express concern of body image changes while undergoing chemotherapy) SS=Specific Suggestions: offer specific suggestions relevant to patient's problems (e.g., use of pillows and various positions to minimize dis-	

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		comfort during sexual activity) IT=Intensive Therapy: refer to appropriate resource for long-term therapy or rehabilitation (e.g., sex therapist for prolonged sexual dysfunction or a surgeon for reconstructive surgery)	
		12. Focus all information on the individual meaning of all the questions that are raised.	**12.** Interventions are based on the patient's expressed concerns and needs
		13. Stress that all concerns, orientations, and behaviors (celibacy, heterosexuality, homosexuality) are legitimate and are not judged by caregivers.	**13.** Nonjudgmental communication patterns facilitate verbalization of sexual concerns.

NDX

Risk for sexual dysfunction related to disease process, surgical intervention, fatigue, and/or pain.

Outcome Criteria

- Patient maintains satisfying sexual role/concept:
    - verbalizes/demonstrates awareness and acceptance of self as sexual being
    - states satisfaction with sexual expressions

Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
1. Determine if disease and attendant psycho-physiologic changes have affected sexual self-image.	**1.** Dimensions altered by cancer therapy may affect behavior used to express sexual identity. May see avoidance of sexual relationships, lowered self-esteem.	**1.** Active listening to patient's and significant other's efforts to express fears or talk about changes in body image affecting sexuality. Elicit concerns regarding loss of health and attractiveness.	**1.** Patient's self-esteem may be fragile. Nurse must listen with caring and sensitivity.
2. Allow patient to discuss her perception of how disease process and/or treatment will	**2.** Patient may have poor understanding of the etiology of cancer and may view the disease	**2.** Reassure patient that many side effects are temporary (e.g., hair loss, weight loss). Offer suggestions on	**2.** Such efforts promote positive body image.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
affect sexuality and sexual function.	as punishment for past behaviors.	how to manage side effects of treatment (e.g., cosmetics, wigs, clothing).	
3. Upon elicitation of a specific problem, gather data relative to: • onset of problem • course of events • patient's perception of problem • past interventions • desired goals	**3.** For many cancer patients, concerns about the impact of treatment on sexual function seem to be less during treatment (when the focus is on surviving the treatment) and greater after treatment is completed (when the psychological effects become evident).	**3.** Promote self-esteem by emphasizing the "net worth" of an individual: physical self, social self, achieving self, and spiritual self. Assist patient in identifying the positive aspects in her life.	**3.** Measures focus patient's attention on positive aspects of her life.
		4. Allow patient and significant other to verbalize perceptions of how treatment	**4.** Facilitates verbalization of sexual concerns.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		affected sexual function and sexuality. Should share concerns with partner: • the imagined response of the partner • the fear of future losses • the fear of physically hurting the other	
		5. Clarify the patient's understanding of the etiology of the disease and dispel myths.	**5.** Providing accurate information and dispelling myths assists patient in the psychological adjustment to their disease.
		6. Review disease process and the short- and long-term effects of treatment	**6.** Help focus on positive aspects of patient's life.
	7. In order to determine if there is a sexual complaint, ask questions assessing function based on the Tri-	**7.** Treatment recommendations should be individualized to specific sexual-response phase problem.	

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		phasic Model of sexual response.	
		8. Reassure the patient that result from cancer and its treatment are treatable. The ability to feel pleasure remains regardless of treatment.	**8.** It is essential that hope be maintained in the treatment of sexual dysfunction.
		9. Set goals with patient and partner. Follow up at regular visits or via telephone. Identify support systems	**9.** Follow-up is essential to evaluate progress (or lack of).

Adapted with permission: Hogan CM: Sexual dysfunction related to disease process and treatment, in McNally JC, Somerville ET, Miakowski C, Rostad M (eds), *Guidelines for Oncology Nursing Practice,* Orlando: Grune & Stratton, 1991, pp 330–344.

NDX

Alterations in sexual activity related to disease process, surgical intervention, fatigue, and/or pain (moderate possibly permanent).

Outcome Criteria

- Patient demonstrates knowledge related to alteration in sexuality:
  - identifies alterations in sexuality and/or sexual function caused by disease process and/or treatment
  - identifies factors that influence sexual identity
  - identifies manifestations of alteration in sexuality
- Patient identifies/demonstrates strategies to manage or correct alteration in sexuality:
  - demonstrates proper knowledge and administration of medications
  - performs necessary treatments and procedures
  - identifies/demonstrates behaviors and measures to promote acceptance of self as sexual being
  - identifies appropriate long-term care plan
- Patient achieves improving or satisfying sexual role and concept:
  - verbalizes/demonstrates awareness and acceptance of self as sexual being
  - states satisfaction with sexual expressions

Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
1. See Assessment in previous care plan.	**1.** See Clinical Significance in previous care plan.	**1.** See Nursing Interventions in previous care plan.	**1.** See Rationale in previous care plan
2. Ask specific questions relative to altered sexual function to identify problems early.	**2.** By identifying alteration of sexual function of sexual function early, a time frame can be given to the patient within which alteration might be expected to normalize. Nursing interventions can be employed to reduce anxiety.	**2.** Maintain open, nonjudgmental communication pattern with patient/partner to facilitate verbalization of sexual concerns.	**2.** Openness and a willingness to discuss patient's sexual concerns are components of holistic nursing.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
3. Integrate knowledge of disease process and treatment to identify problem areas.	**3.** In order to prevent and treat sexual function morbidity, the nurse must be familiar with the disease process and treatment plan. Changes in sexual behavior relate to the disease process, the effects of treatment, and/or the psychological sequelae.	**3.** Refer to community agencies that offer support programs.	**3.** Volunteer and support groups can provide information and promote networking.
		4. Identify expected duration of sexual alteration, high-lighting time frame within which alteration is expected to normalize (e.g., sexual activity may be resumed at a specific time following surgery).	**4.** Reassurance is provided when expected side effects and time frames are discussed.
		5. Provide information ap-	**5.** Specific suggestions

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		propriate to specific problem exhibited by patient.	should be tailored to the individual's needs
		6. General considerations: **A.** Dyspnea: Use of oxygen, bronchodilators, altered positions, waterbed. Keep affected partner's head and torso elevated and have affected partner assume more passive/dependent role. **B.** Fatigue: Scheduling sexual activity after rest periods or when energy levels are highest, avoiding heavy meals or excessive alcohol before sexual	**6A.** Positioning and the use of bronchodilators promotes maximum air exchange. **6B.** Fatigue, pain, nausea, and vomiting are not conducive to feeling "sexy." Measures offered promote sexual intimacy.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		play, experimentation with positions that require minimal exertion. Intimacy is also expressed by close body contact.	
		C. Pain: Administration of analgesics so that peak of activity coincides with sexual activity (if drugs interface with arousal, sexual activity might be scheduled when analgesic effect is decreased). Other measures like warm baths and soaks, pillows, position changes (find a position for caressing or intercourse that puts as	**6C.** Position changes, warm soaks, and analgesics reduce pain, muscle tension, and spasms. The scheduling of drug administration prior to sexual activity promotes intimacy by reducing pain and discomfort.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		little pressure as possible on the painful areas), and other noninvasive methods of pain management may be appropriate to make patient more comfortable during sexual activity (i.e., relaxation techniques, guided imagery, romantic music, massage). Explore alternative ways of expressing physical love if couple's traditional ways are impaired (i.e., mutual masturbation, oral or anal intercourse).	

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		D. Nausea and vomiting: (1) use medication(sparingly) (2) recall past strategies that were effective in (3) eat foods that are cold or at room temperature (4) eat small frequent meals (especially avoid large meals before sexual play) (5) avoid foods/substances with strong odors (6) avoid sights, sounds, and smells that trigger nausea	**6D.** Antiemetics and adjusting the analgesic regimen will reduce nausea and discomfort

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		(7) user relaxation or distraction techniques (8) provide fresh air	
		E. Range of motion difficulties: (1) experiment with different positions (side lying/posterior entry) (2) use pillows to support body weight (3) use relaxation techniques/massage (4) use warm baths or hot/cold soaks before sexual activity	**6E.** Surgery and radiation therapy may result in ROM difficulties. Use of pillows, positioning, and warm baths or soaks promote circulation, relieve pressure on surgical sites, decrease pain, and promote comfort.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		(5) use medication (sparingly) (6) explore alternate ways of expressing physical love	
		F. Depression: (1) must be treated before sexual counseling begins (2) may require treatment with antidepressants or psychotropic medications (3) may require referral for psychological counseling	**6F.** Once depression has been treated and has been lessened, sexual counseling may be employed.
		G. Treatment-related menopause:	**6G.** Premature menopause may occur as a result of

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		(1) education related to symptoms and symptom relief (2) use of estrogen replacement therapy if not contraindicated (3) discussion of significance of early menopause: loss of fertility, changes in skin and body habits, issues of femininity (4) use of vaginal lubricant (Astroglide®) and moisturizer (Replens®) two to	surgery, chemotherapy, or radiation. The effects of menopause should be addressed to promote quality of life. When possible, replacement hormones can reduce vaginal dryness and hot flashes.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		three times a week to improve vaginal comfort (5) psychological disturbances may require referral and treatment	
		H. Dyspareunia may be secondary to radiation therapy- or chemotherapy-induced vaginitis or fibrosis, or decreased vaginal lubrication: (1) water soluble lubrication (e.g., Astroglide®, Lubrin®, Replens®) can be used to ameliorate vaginal dryness	**6H.** Dyspareunia, if untreated, may lead to avoidance of sexual activity. Water-soluble lubricants increase comfort and decrease trauma during sexual activity.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		(2) when appropriate, use of vaginal graduated dilator should be recommended. Use of dilator, in conjunction with adequate lubrication, may prevent further fibrosis and vaginal tightening (3) hormonal replacement therapy may be appropriate for female patients experiencing premature menopausal symptoms; however hormone re-	

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		placement is contraindicated with hormonally dependent tumors.	
		(4) teach Kegel exercises to increase awareness of vaginal tension; increase attention to foreplay to arouse woman to high levels; partner may then gently stretch vagina with use of lubricant with first one, two, then three fingers before attempting penile penetration.	

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		I. Decreased libido: (1) reassure individual that decreased libido is normal and may be secondary to disease, treatment, and/or medications. (2) encourage sexual activities which may increase desire, such as fondling, hugging, kissing, strongly encouraging individual not to consider genital intercourse as the only option in sex-	**6I.** Decreased libido is common during active treatment. Promotion of alternate methods of sexual expression will foster intimacy until patient is ready or able to resume sexual relations.

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Assessment Criteria	Clinical significance	Interventions	Rationale for Interventions
		ual expression during episodes of decreased libido	
		J. Altered body image: (1) Provide emotional support (2)allow patient time to grieve the loss of body part or body function (3) teach appropriate management procedures to deal with body changes (4) teach partner ways of supporting patient's self-esteem	**6J.** Patient should be supported during grieving for loss of fertility, loss of body part, or changes in physical appearance. Some physical changes can be disguised or minimized.
		K. Alopecia and skin changes: (1) Kold Kaps may prevent further	**6K.** Selective makeup, wigs, scarves, and clothing can minimize physical

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Assessment Criteria	clinical Significance	Interventions	Rationale for Interventions
		scalp hair loss if not medically contraindicated (2) prepare individual for loss of non-scalp hair (eye brows, eye lashes, pubic hair) (3) Wigs, scarves, head coverings, additional makeup, jewelry may assist individual in feeling more normal	changes and promote positive feelings of self.
		L. Changes in normal body weight: (1) encourage individual to express feelings regarding	**6L.** Changes in body weight are common during cancer treatment. Measures promote positive self-

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		changes from normal weight (2) weight gain: assure individual of temporary nature if result of steroid or hormonal therapy (3) weight loss: suggest use of nontailored clothes, makeup, and jewelry to draw attention away from torso	image with weight changes.
		7. Surgical Considerations: **A.** Mastectomy: elicit meaning of breast loss to patient/partner, allowing opportunity for discussion:	**7A.** Establishing the meaning of the patient's breast allows discussion of her femininity and promote acceptance of alterations. Breast prostheses aid in

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		(1) breast prostheses, camouflaging clothes, reconstructive surgery, and support groups such as Reach to Recovery are approaches that may facilitate rehabilitation (2) chest and shoulder pain during sexual activity may be alleviated by support with pillows and by avoiding positions where weight rests on chest and arm	hiding the scar if patient so desires. Breast reconstruction also may bolster self-esteem and decrease negative reactions to body image alterations.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		(3) encouraging patient/partner to view mastectomy scar and discuss feelings is important (4) acknowledgement of loss and frank discussion of feelings are first steps toward acceptance of alteration in body image (5) investigate new erotic zones	
		B. Hysterectomy: (1) advise whether hormonal effects should be expected (e.g.,as occurs with oophorectomy)	**7B.** Removal of the uterus and ovaries may result in the loss of fertility and produce the onset of menopause.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		(2) prepare individuals for anticipated menopausal symptoms (3) advise patient when normal sexual activity can be resumed, providing reassurance that removal of the uterus does not preclude further sexual activity	
		C. Vulvectomy: (1) suggest use of water-soluble lubricant and gentle caress	**7C.** Removal of part or all of the vulva may result in the loss of an erotic zone. Patient may lose arousal and orgasmic capacity.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		(2) investigate remaining genital area for possible erotic sensations (3) encourage more time for foreplay (4) explore alternative positions (5) if scar tissue has narrowed entrance to vagina, making intercourse painful, use of vaginal dilators may stretch opening (6) lymphedema may result after nodal dissection (7) good communication skills are required by couple to	However, erotic sensations may still occur in remaining genital area.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		overcome pain and fatigue	
		D. Vaginectomy: may be partial or complete (1) those undergoing partial vaginectomies usually can engage in normal intercourse with use of large amounts of lubricant and modified positioning (2) provide information illustrating positions that increase perceived length of vagina barrel as well as to	**7D.** Total vaginectomy will prevent vaginal intercourse unless a neovagina is constructed. Remaining tissue may develop erotic sensitivity.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		minimize discomfort associated with penile thrusting	
		E. Colostomy: (1) encourage patient to empty pouch before sexual activity to minimize potential spills, unpleasant odors, etc. (2) some patients may wish to wear pouch coverings (3) if pouch is continent, time sexual activity accordingly, remove appliance, and cover stoma.	**7E.** Colostomies are less likely to interfere with sexual activity if adjustments are made to reduce the chance of leakage and prevent odors.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		(4) explore alternate positions (5) if leakage occurs, continue sexual play in the shower (6) small cushion placed above ostomy face plate can deflect partner's weight (7) be creative and maintain sense of humor	
		F. Pelvic exenteration: (1) most radical pelvic surgery requires up to six months for recovery	**7F.** Results in profound disruption of patient's self-and body-image. Frequently requires 6 months to recover physically and

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		(2) possible to feel pleasure and reach orgasm since genital organs are not usually removed (3) encourage couples to explore alternate methods of expressing sexual affection (4) rehabilitation requires team approach, including physician, nurse, social worker, enterostomal therapist, dietician, and chaplain (5) for those patients interested in maintaining vaginal	up to 2 years to adjust to the loss of organs. Patient must be made aware that it is possible to lead happy and fulfilling life regardless of the treatment. Neovagina may bolster self-esteem and decrease negative reactions to body alterations.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		function, vaginal reconstruction should be discussed and offered	

Adapted with permission: Hogan CM: Sexual dysfunction related to disease process and treatment, in McNally JC, Somerville ET, Miakowski C, Rostad M. (eds.), *Guidelines for Oncology Nursing Practice,* Orlando: Grune & Stratton, 1991, pp 330–344.

Inability to engage in genital intercourse (severe or permanent).

Outcome Criteria

- Patient/partner demonstrates knowledge related to severe alteration in sexuality:
  - identifies impact of disease/treatment on sexuality
  - identifies factors that influence sexual identity
  - identifies manifestations of alteration in sexuality
- Patient/partner identifies/demonstrates strategies to manage severe alteration in sexuality:
  - identifies alternate methods of sexual expression/intimacy
  - identifies/demonstrates behaviors and measures to promote acceptance of self as sexual being
  - identifies/utilizes appropriate community resources

Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
1. See Assessment in previous care plans.	**1.** See Clinical Significance in previous care plans.	**1.** See Nursing Interventions in previous care plans.	**1.** See Rationale in previous care plans.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
2. Utilize assessment process to further clarify alterations in sexuality and sexual function.	**2.** Assessment of sexual concerns should begin prior to onset of therapy and continue well into post-treatment and follow-up stages.	**2.** For patients who are unable to engage in genital relations, alternative means of expressing sexuality may be explored. Manual stimulation, oral-genital stimulation, anal intercourse, and mutual masturbation may all be successful alternatives if such methods are congruent with the individuals social, cultural, and religious belief systems.	**2.** Regardless of physical circumstances or medical history, it is always possible to have pleasurable sexual touching.
		3. Make referrals to appropriate sex therapists for sexual counseling to maximize rehabilitation.	**3.** Nurses should recognize the limitations of their sexual counseling expertise and make referrals to

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
			trained health-care professionals.
		4. Provide information specific to alteration in sexual function and sexuality. Help patient and significant other understand that sexuality does not necessarily mean genital intercourse. Individuals who are unable to engage in genital intercourse may wish to explore alternate methods, as appropriate. Manual stimulation, oral-genital stimulation, anal intercourse, and mutual masturbation may all be successful alternatives if such methods are congruent with the individual's	**4.** Exercises that improve communication and promote sexual enjoyment will reduce anxiety and promote sexual health.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		social, cultural, and religious belief systems.	

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Grieving related to potential loss of fertility and the perceived effects on life-style.

Outcome Criteria

• Patient/couple will identify causative factor of infertility.

• Patient/couple will demonstrate consistent verbalization of feelings and concerns related to potential infertility.

• Patient/couple express appropriate sadness and express realistic expectations regarding future family.

Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
1. Anxiety/fear related to potential or perceived loss.	**1.** Without adequate knowledge of the impact of the loss, the viable available options, and adequate resources, it is impossible to make an informed decision. Self-esteem is enhanced when ade-	**1.** Develop teaching plan that includes basics of reproductive biology, anatomy of reproductive organs, and how they related to childbearing/fertility.	**1.** A complete understanding of the reproductive organs is necessary to understand the impact of treatment on future fertility.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
	quate, informed decisions are made.		
2. Altered communication patterns.	**2–4.** Infertility is a loss; hence, grieving must occur in order to achieve a degree of resolution and enable one to move forward and consider alternatives. It is important to the individual's self-esteem and self-confidence to separate loss of fertility from self-worth.	**2.** Discuss potential impact of planned surgery and adjuvant therapy on reproductive organs and fertility	**2.** The potential impact on fertility is critical in the decision-making process regarding treatment options.
3. Perceived potential loss of partner.	**3.** Grieving can influence and alter communication and	**3.** Validate the impact of the loss of the reproductive organs and the potential	**3.** Providing information regarding potential options for fertility helps

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
	interpersonal relationships.	of the remaining organs to affect viable options for childbearing.	to decrease impact of loss.
4. Expressions of guilt.		**4.** Provide private atmosphere for discussion of feelings, perceptions regarding potential loss, and impact on relationship and life style.	**4.** Providing a nonthreatening environment allows for enhanced communication.
		5. Review past life experiences, role changes, and coping skills in similar situations.	**5.** Past coping skills may be beneficial and promote patient's self-esteem in decisionmaking.
		6. Determine responsiveness and sensitivity of spouse and other support systems.	**6.** Early identification and intervention of potential interpersonal conflicts may reduce long-term impact.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		7. Encourage appropriate expressions of anger and frustration.	**7.** Verbalization of anger and frustration helps to facilitate grieving process and allow patient to confront loss appropriately.
		8. Discuss alternatives such as adoption and child-free living.	**8.** Provides information regarding other alternatives to family building and allows patient to evaluate all options.
		9. Provide information regarding time commitments, expenses, and legal implications of various options.	**9.** Medical and nonmedical approaches to family building take a vast amount of time, financial, and emotional commitments that the patient must be prepared for.
		10. Refer to community resources; encourage par-	**10.** Resources, especially those who have pre-

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		ticipation in community support programs.	viously experienced infertility, are helpful in supporting the patient and spouse during the process of decisionmaking.

NDX

Alteration in coping related to infertility.

Outcome Criteria

• Patient/couple will identify life's values.

• Patient/couple will identify and express alternative ways of coping.

• Patient/couple will express improved decisionmaking skills.

Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
1. Personal vulnerability.	**1.** Infertility may affect individuals's definition of self and alter life's goals.	**1.** Facilitate an opportunity for couple to clarify and prioritize values; list and rank what is held in high regard.	**1.** To validate what is of most importance to couple; to provide support.
2. Unrealistic expectations.	**2.** Setting realistic goals and assisting patient to achieve goals is fundamental.	**2.** Allow couple to define clearly what the most important life values are as well as the most important problem.	**2.** To help couple identify the most important problem and to provide strategies to deal with the problem.
3. Inadequate past coping mechanisms.	**3.** Current coping response frequently mirrors past coping	**3.** Reinforce that what is valued for them, not others, is most important.	**3.** To validate what is valued by them and to promote self-confidence.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
	during crises. Should adopt the most constructive coping mechanism.		
4. Situation crisis.	**4.** Positive decisionmaking allows the patient/couple to feel more in control, thereby enhancing self-esteem.	**4.** Encourage communication with health-care providers.	**4.** To enhance communication with team approach.
5. Multiple complex life changes.	**5.** Couple may be going through multiple life changes (change in roles, financial situation, etc.). May require assistance in prioritizing values.	**5.** Facilitate open discussion related to sexual concerns.	**5.** To provide support if changes in sexuality occur.
		6. Recommend relaxation techniques utilizing information gained from what has worked in the past in similar situations.	**6.** To increase relaxation techniques to help defuse stress.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		7. Introduce to other couples with similar infertility problems.	**7.** To validate that they are not alone in their infertility situation; to provide support outside the family and health-care team.
		8. Refer to Resolve.	**8.** To introduce to others in similar situations; to increase their awareness of alternative family building.
		9. Support positive self care behavior strategies.	**9.** To enhance self-esteem.
		10. Facilitate decisionmaking by coaching.	**10–11.** To validate the importance of positive decisionmaking and the importance of remaining open to change.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		11. Validate ambivalence in life decisions and reinforce that values and decisions change over time.	
		12. Affirm and reward control gained by good decisionmaking.	**12.** To enhance self-esteem and to provide support.

Comfort Issues

NDX

Altered comfort related to effects of surgery, disease process, and immobility.

Outcome Criteria

- The patient will identify the source of the pain and verbalize the effectiveness of pain-reducing measures.

Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
1. Source of pain: **a.** surgical wounds **b.** decreased mobility **c.** invasive interventions (IVs, antiembolism devices, chest tubes etc.) **d.** disease process, including tumor invasion of nerve or bone sites	**1.** The source of pain can be multifocal. It may be related to the disease process, intubation, nasogastric tubes, intravenous devices, the surgical wound, abdominal distention, urinary retention, or stiffness related to immobility. It	**1.** Administer pain medications as needed.	**1.** The use of pain medication for relief of pain has two approaches. One is curative, meaning that the patient is experiencing pain and requires relief of it. The other approach is preventative or anticipatory. By administering the pain medication on a regular basis prior to procedures or

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
	is important to identify the source of pain in order to select the correct intervention.		activity, the nurse can prevent pain that may interfere with the patient's ability to participate. The nurse should offer an explanation for the necessity of utilizing pain medication as needed and with regularity.
		2. Assess the effectiveness of pain medications.	**2.** Evaluation of the effectiveness of the pain medication is important to the care of the patient as well as to decrease her anxiety and stress. A patient expects to have pain relief; if unrelieved it may lead to unnecessary anxiety and as a consequence intensified pain.
		3. Assist the patient in finding positions of comfort and	**3.** Teach the patient that performace of ROM exercises

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		explain the need for frequent changes and ROM exercises.	and position changes frequently can reduce muscle tension and spasms and may decrease the need for pain medication.
		4. Provide enviroment that reduces stress and promotes relaxation. Offer patient relaxation techiniques, such as guided imagery, as additional tools to use in reducing pain.	**4.** Reducing stress and implementation of relaxation exercises promotes pain reduction.

NDX

Risk for impaired physical mobility related to surgical interruption of body structures, incisional site pain, and activity restriction.

Outcome Criteria

• The patient will show an increase in physical mobility when pain is controlled and activity restrictions are removed.

Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
1. Source of pain: **a.** surgical incision **b.** invasive vascular access device **c.** antithrombosis stockings **d.** gastrointestinal distention/flatus	**1–2.** Identification of the source of pain or decreased mobility is necessary to determine appropriate interventions. Cancer patients often have a number of reasons for immobility, including pain, disease, fatigue, weakness, or equipment restrictions.	**1.** Accurate assessment and documentation of physical mobility prior to surgery to determine baseline related to chronic illness or disease.	**1.** An accurate assessment of baseline mobility decreases the chances of unrealistic expectations which may interfere with desire and progress.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
2. Source of decreased mobility: **a.** underlying chronic disease **b.** fatigue **c.** depression **d.** weakness		**2.** Accurate assessment of daily progress of activity.	**2.** Activity may be slow; however, accurate documentation will assist in determining progress.
		3. Assess barriers to activity and provide appropriate intervention: **a.** pain management **b.** adequate nutrition **c.** periods of rest and sleep **d.** removal of unnecessary equipment **e.** adequate staff to assist with activity	**3.** Most barriers to mobility can be removed through careful planning and intervention.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		4. Schedule ADL and ambu-lation with patient' permisssion	**4.** Giving Patients control of mobility behaviors encourages compliance.
		5. Consult physical therapist to assist with walking devices and range of motion exercises	**5.**Physical therapists are a good source of information regarding appropriate walking devices and alternative ROM exercises.
		6. Teach family (support system methods for bed-to-chair and bed-to-commodemobility and ambulation, as well as ROM exercises	**6.** Family members involvement in mobility can be a time of closeness and are relaxation for both the patient and family.

NDX

Risk for sleep pattern disturbance/fatigue related to disease process, pain, and unfamiliar surroundings and activities.

Outcome Criteria

• The patient will verbalize an acceptable amount of sleep and rest.

• The patient will verbalize methods to decrease associated fatigue.

Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
1. Normal sleep patterns.	**1.** Sleep patterns vary among individuals dependent upon age, activity levels, stage in life, life-styles, and perception of stress. It is important to identify previous sleep patterns, methods of promotion of sleep, and new barriers to sleep in order to develop appropriate plan	**1.** Educate patient and family about the sleep cycle and the impact of disease on sleep patterns and fatigue.	**1.** It is important that the patient understand the process of sleep and the impact of disease if the new plan is to work.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
	to treat fatigue due to sleeplessness.		
2. Present sleep patterns.		**2.** Develop a plan to reduce barriers and promote appropriate sleep/rest periods: **a.** exercise **b.** planned bedtime/bedtime routine **c.** schedule of daily activities	**2.** A plan that includes necessary daily activities, periods of rest, and promotion of sleep is important in order to reduce barriers and introduce a new sleep pattern.
3. Behaviors that promote falling and staying asleep.		**3.** Encourage patient to utilize methods of stress reduction and physical relaxation.	**3.** Stress reduction and relaxation techniques will help the body relax and will induce sleep.
4. Barriers to sleep.		**4.** Encourage patient to avoid use of stimulant food or drink (i.e., caffeine) prior to planned sleep periods.	**4.** Foods that may stimulate the body will negate the effects of relaxation and interrupt sleep patterns.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		5. Explain the use of sedative and hypnotic drugs and when it is appropriate to utilize them for sleep.	**5.** Prolonged use of these drugs can lead to dependence and poor sleep habits.

Cardiovascular System

NDX

Risk for fluid volume deficit related to losses secondary to surgical wound or gastrointestinal dysfucntion.

Outcome Criteria

• The patient will be without evidence of dehydration as evidenced by a urine specific gravity of 1.010 and 1.025.

Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
1. Monitor vital signs including blood pressure, temperature, pulse, and respirations.	**1–4.** Evidence of dehydration includes hypotension, tachycardia, tachypnea, elevated body temperature, dry mucous membranes, weight loss, and abnormal laboratory studies. Careful measurement of	**1.** Monitor for early signs and symptoms of intravascular fluid volume deficits, including changes in vital signs, mucous membranes, and laboratory studies.	**1–2.** Early assessment and intervention can reduce the potential for permanent renal damage.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
	body fluids output and oral or parenteral fluid intake is vital in maintaining adequate intravascular fluid volumes.		
2. Skin turgor, mucous membranes, urine output, other drain output (ie., NG, Jackson-Pratt).		**2.** Maintain accurate records of intake, output, and patient weight.	
3. Volume of emesis and liquid stool.		**3.** Provide appropriate medications to decrease emesis or diarrhea as indicated.	**3.** Management of nausea, vomiting, and diarrhea can significantly impact the intravascular volume and patient level of comfort.
4. Laboratory studies including serum electrolytes and urine specific gravity.			

Respiratory System

NDX

Risk for alteration in respiratory function related to immobility secondary to imposed bedrest and pain.

Outcome Criteria

• The patient's lungs will remain clear to auscultation and percussion.

Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
1. Risk assessment of factors that may impact respiratory status postoperatively: **a.** tobacco use **b.** asthma **c.** obesity **d.** chronic illness **e.** nutritional status **f.** surgical procedure	**1.** These factors along with the anesthesia, fatigue, and pain may impact respiratory status. A careful assessment of factors that may increase the risk of dyspnea, impaired oxygen exchange, or infection assists in	**1.** Auscultate and percuss all lung fields for evidence of rhonchi, rales, wheezes, or areas of consolidation.	**1.** These are common sounds that indicate respiratory compromise.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
g. prolonged immobility	planning appropriate prophylaxis postoperatively and subsequent early intervention.		
2. Respiratory status: **a.** lung sounds **b.** respiration rate and rhythm **c.** coughing effort **d.** mucous production	**2.** Assessment of respiratory status routinely aids in early assessment of respiratory compromise.	**2.** Prevent potential postoperative aspiration and subsequent respiratory compromise: **a.** position patient appropriately to avoid aspiration of stomach contents if nausea and vomiting present **b.** Maintain NPO until fully awake and oriented	**2.** Postanesthesia nausea is common and places the patient at increased risk of aspiration.
		3. Maintain adequate hydration.	**3.** Dehydration may lead to hyperviscosity of body flu-

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
			ids, and subsequent respiratory compromise or vascular/pulmonary emboli.
		4. Educate and reinforce the patient regarding the importance of pulmonary toilet, positioning, and ambulation.	**4.** Compliance with self care activities is dependent upon complete understanding of procedure and rationale by the patient.

Immune System

NDX

Risk for infection related to susceptibility to bacteria secondary to wound, invasive vascular access, and/or urinary catheter.

Outcome Criteria

- The patient will remain infection-free as evidenced by
  - body temperature within normal limits
  - serum laboratory studies within normal limits
  - absence of evidence of inflammation/drainage at the surgical incision, vascular access sites, and drain sites

Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
1. Vital signs including blood pressure, body temperature, pulse, and respirations	**1–4.** Infection is usually evidenced by the presence of an elevated body temperature, tachycardia, evidence of inflammation, and serum laboratory study ab-	**1.** Carefully monitor vital signs, vascular access sites, wounds, and drains for signs or symptoms of change from baseline.	**1.** Early recognition of infection/sepsis impacts early intervention and overall outcome.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
	normalities. Hypotension and tachypnea may be present in generalized sepsis. Early identification of signs and symptoms of infection can allow early intervention and reduced morbidity and mortality.		
2. Surgical wounds, vascular access sites, drain sites.		**2.** Carefully evaluate all wounds during dressing changes for signs of drainage, foul odor, erythema, or necrotic tissue.	**2.** Wounds are common sites of postoperative infections, and the tissue changes will indicate the response to invasion of the pathogen.
3. Respiratory status.		**3.** Use sterile technique when changing vascular access sites, drain tubes, or providing wound care.	**3.** Aseptic technique reduces the risk of contamination of the tissue with microorganisms.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
4. Body fluids including respiratory, mucous, urine, and wound drainage.		**4.** If patient is immuno-compromised at time of surgery or subsequently due to disease process or adjuvant therapy, maintain appropriate isolation procedure.	**4.** Protection of the immuno-compromised patient from the risk of opportunistic infections will improve overall morbidity.
		5. Maintain good total-body hygiene.	**5.** Reduced the risk of an opportunistic infection.
		6. Maintain adequate nutrition and fluid hydration.	**6.** Adequate nutrition and fluid hydration are necessary for tissue healing and maintenance of healthy immune system.
		7. Teach patient the importance of good body hygiene, wound care, nutrition, and the signs/symptoms of infection prior to discharge.	**7.** The patient will need to maintain an optimal environment for tissue healing after discharge to facilitate complete healing.

Gastrointestinal System and Nutrition

NDX

Risk for altered nutrition: Less than body requirements related to disease process, wound healing, and decreased caloric intake.

Outcome Criteria

• The patient will maintain admission body weight during hospital admission.

• The patient's serum albumin and protein values will remain or return to normal range by discharge from hospital.

Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
1. Daily body weight.	**1–4.** Initial assessment should include preoperative weight and history of weight management and dietary concerns. In many cancer patients, weight	**1.** Accurate assessment of daily body weight and dietary intake.	**1.** An accurate assessment is necessary in order to identify changes in baseline and need for intervention.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
	loss is a presenting symptom, and therefore initial or ideal body weight may not be an accurate measure. Dietary intake and laboratory studies may provide accurate assessment of the needed nutritional requirements for maintenance of immune system and tissue healing.		
2. Dietary and fluid intake.		**2.** Identify potential reasons for inadequate nutrition with help from patient and family:	**2.** A number of reasons may cause poor nutritional intake. Careful assessment is

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		a. uncontrolled pain or discomfort **b.** anxiety or fear **c.** gastrointestinal disturbances such as nausea, vomiting, diarrhea, or constipation **d.** decreased appetite or taste changes **e.** increased metabolic needs secondary to stress, infection, or prolonged tissue healing **f.** dietary restrictions related to chronic disease, culture, or religion	necessary in order to determine the correct intervention necessary.
3. History of weight issues, such as anorexia or obesity.		**3.** Arrange dietary consult to determine precise caloric needs and appropriate foods.	**3.** A nutritionist can assist in meal planning.
4. Laboratory studies in-		**4.** Encourage small, frequent	**4.** Small, frequent meals re-

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
cluding serum albumin and protein.		meals and snacks rather than several large meals.	duce overdistention of the stomach and associated discomfort and nausea.
		5. Encourage patient to get out of bed to chair for meals.	**5.** Enhances palate for food as well as aids digestion.
		6. Limit fluid intake during meals.	**6.** Fluids may cause overdistention of stomach and feeling of fullness.
		7. Encourage good oral hygiene before and after meals to stimulate saliva production and taste.	**7.** A clean oral cavity with saliva enhances the taste of foods and reduces infection that can alter taste.
		8. Educate patient and family about methods to increase calorie and protein content of foods, including use of powdered milks, fortified milks, creams, cheeses, and butter.	**8.** Many dairy products can be used to enhance the taste and nutritional content of a variety of easily digested foods.

NDX

Risk for bowel dysfunction related to decreased peristalsis secondary to surgical manipulation of bowel, effects of anesthesia and analgesia, and immobility.

Outcome Criteria

• The patient will resume effective bowel function prior to discharge.

Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
1. Bowel habits prior to surgery: **a.** normal bowel habits **b.** recent changes due to disease **c.** use of diet modifications or medications to regulate bowel function	**1.** Bowel function is dependent upon an intact bowel and peristalsis, adequate hydration and nutrition, and absence of substances that decrease normal colonic peristalsis. Accurate assessment of preoperative bowel function and habits can provide a baseline upon which to measure return of normal function.	**1.** Careful assessment of bowel function prior to increase of oral intake.	**1.** Knowledge of baseline bowel function will reduce unrealistic expectations by staff and family.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
2. Presence of abdominal distention, pain, flatus, and bowel function characteristics and amount.	**2–4.** Assessment of bowel function postoperatively and early intervention can decrease discomfort and promote postoperative healing.	**2.** Encourage ambulation as possible after surgery.	**2.** Ambulation influences bowel activity by providing abdominal muscle tone and subsequent peristalsis stimulation.
3. Daily intake and output of fluids.		**3.** Maintain adequate fluid volume balance.	**3.** Adequate fluid intake is necessary to promote bowel function and maintain soft consistency of stool.
4. Patterns of mobility.		**4.** Encourage use of non-narcotic pain management when possible to promote colonic peristalsis.	
		5. Educate patient and family about dietary modifica-	**5–6.** Patient will need to

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		tions to reduce constipation: **a.** fresh fruits and vegetables **b.** adequate fluid intake **c.** high-fiber grains and cereals	maintain effective bowel function after discharge.
		6. Educate patient and family regarding methods to promote daily bowel habits: **a.** regular time for defecation **b.** proper positioning on toilet or bedpan **c.** promotion of relaxation	

Geritourinary System

NDX

Risk for urinary dysfunction related to loss of sensation of bladder distention secondary to surgical and/or pharmaceutical interventions.

Outcome Criteria

- The patient will demonstrate the ability to perform bladder training techniques at time of discharge.
- The patient will remain continent of urine at the time of discharge.

Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
1. Perception of need to void and/or incontinence.	**1–3.** The nerve pathways to the bladder may be interrupted or temporarily affected by surgery for some gynecologic malignancies. In addition some anesthetics and anal-	**1.** Instruct the patient to notify staff if she experiences bladder fullness and inability to void or incontinence.	**1.** The patient should have a good understanding of the impact of the surgery/medications upon bladder function in order to notify the staff of discomfort or incontinence.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
	gesics may affect bladder function.		
2. Bladder distention and capacity.		**2.** Maintain patency of foley or suprapubic catheter.	**2.** Extensive surgical procedures may result in some hermaturia/clots which may clog the drain holes in the catheter.
3. Characteristics of urine.		**3.** Maintain adequate hydration.	**3.** Adequate hydration will keep the urine dilute and decrease risk of stone formation and bladder irritation/spasms.
		4. Assess skin carefully for evidence of breakdown if incontinence persists. Provide meticulous hygiene.	**4.** Urine can cause irritation to the skin and subsequent skin breakdown.
		5. Instruct patient and family on appropriate management of foley/suprapubic catheter upon discharge, including:	**5.** Bladder training to encourage the bladder tone and function to return to normal is commonly used. It

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		a. catheter site care **b.** normal characteristics of urine **c.** accurate documentation of urine output during clamping/unclamping for bladder training **d.** signs/symptoms to report	usually begins several weeks after surgery and takes several weeks to complete.
		6. Instruct patient and family on procedure for intermittent self-catherization if ordered as an alternative to foley/suprapubic catherization.	**6.** Intermittent self-catherization may be chosen as an alternative to a temporary foley/suprapubic catheter for some patients with prolonged bladder atony.

Integumentary System

NDX

Impaired skin integrity related to surgical wound, decreased tissue perfusion, ostomy stomas, drain sites, and immobility.

Outcome Criteria

- The patient will have intact skin at time of discharge or wound that shows evidence of healthy granulation tissue.
- The patient will verbalize and demonstrate strategies for wound care at time of discharge.

Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
1. Factors disrupting the process of wound repair: **a.** increased fatty tissue **b.** excessive stretching of tissue (i.e., coughing, vomiting)	**1–2.** Wound repair can be influenced by one or more factors. Identification of these factors will help in tailoring interventions.	**1.** Inspect the incision site for redness, swelling, or signs of evisceration or dehiscence.	**1.** Provides baseline condition of incisional site.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
c. slow healing due to diabetes, infection, hypoxia, and/or malignancy			
2. Presence of complications: **a.** hemorrhage **b.** dehiscence **c.** infection		**2.** Observe incision, noting approximation of wound edges, hematoma formation and resolution, and bleeding/drainage.	**2.** Influences the choice of Intervention.
		3. Document characteristics of any drainage, including color, consistency, odor, and amount.	**3.** Indicates potential complications of healing, hemorrhage, infection, or dehiscence.
		4. Monitor the healing process of the incision site.	**4.** Reflects the progression of incision/wound healing.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		5. Use aseptic techniques when providing incision and would care.	**5.** Promotes healing. Contamination and infection disrupt the process of wound repair.
		6. Device plan for wound management: **a.** note characteristics of the wound (length, width, depth, color of tissue, presence and characteristics of exudate and/or necrotic tissue) **b.** debride necrotic tissue and cleanse wound with appropriate solution **c.** dress wound with appropriate dressing to provide absorption of exudate and protection	**6.** Monitors healing process and effectiveness of wound care regimen. Necrotic tissue inhibits wound healing. Debridement increases blood supply to wound bed and promotes granulation. Tissue with a good blood supply heals faster.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		of healing wound tissue.	
		7. Compare and record changes in the wound on a regular basis.	**7.** Identifies changes in wound or excision sites.
		8. Position to avoid placing tension on the wound. Support incision when turning, coughing, breathing, and ambulating.	**8.** Reduces possibility of dehiscence or stress on incisional site.
		9. Facilitate the patient's viewing of the incision or wound.	**9.** Encourages the patient to express feelings about surgery. Keeps the patient informed about progress of incision/wound healing.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		10. Instruct the patient in caring for the incision during bathing or showering.	**10.** Independence in self care helps improve self confidence and acceptance of the situation.
		11. Teach the patient and/or family how to care for the incision or wound, including signs and symptoms of infection or poor healing.	**11.** Early recognition of complications and prompt intervention may prevent healing complications.
		12. Refer to community nursing agency if additional assistance at home is needed.	**12.** Provides communication of wound healing progress and identifies complications. Facilitates teaching/learning process regarding wound care in the home setting.

NDX

Risk for impaired tissue integrity/infection related to lymphedema secondary to surgical removal of lymph nodes.

Outcome Criteria

• The patient will identify measures to decrease or control lymphedema.

• The patient will achieve resolution or control of lymphedema.

• The patient will verbalize knowledge of reason for increased risk of infection, activities to avoid potential for infection, and strategies to use if infection is suspected.

Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
1. Determine range of motion in affected extremity.	**1–3.** Lymphedema may be seen to varying degrees after surgery related to alteration in the return of lymph fluid from the distal extremity with the removal of the normal lymph	**1.** Educate the patient and family regarding the reasons lymphedema may occur, the management options, and the signs and symptoms to report.	**1.** Lymphedema usually occurs several weeks to months after surgery and may not be evident prior to discharge.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
	channels and nodes. Edema can be increased with prolonged immobility or dependency of the extremity. Marked or sudden increase in the edema or pain may indicate an infection with resulting lymphangitis.		
2. Determine the location and extent of the edema in the affected extremity.		**2.** Once lymphedema occurs, develop a plan for management and prophylaxis against lymphangitis.	**2.** Early detection and intervention will decrease the risk of permanent long-term complications.
3. Determine the location, severity, and description of the pain in the edematous area, as well as evidence of		**3.** Protect the extremity from potential trauma. The extremity should not be used for blood pressure measurement or venipuncture.	**3.** Avoiding breaks in the skin and increased peripheral pressure will decrease injury and infection.

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
skin erythema or breakdown.		Instruct the patient to inform other health-care workers not to use affected extremity for such procedures.	
		4. Avoid Prolonged dependency of the affected extremity.	**4.** Changes in position will decrease the risk of dependent edema.
		5. Encourage active range of motion exercises.	**5.** Exercises will improve venous circulation and muscle tone which encourages removal of fluid.
		6. Carefully measure affected extremity and apply correct size of compression stocking or device.	**6.** External compression will decrease lymphedema by encouraging fluid movement.
		7. Educate patient on methods to decrease trauma to affected limb:	**7.** Avoidance of trauma to the skin of the extremity will

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Assessment Criteria	Clinical Significance	Interventions	Rationale for Interventions
		a. avoidance of sharp devices; careful use of instruments to cut finger/toenails. **b.** avoidance of products that may cause skin breakdown, rash, or blisters **c.** avoidance of sunburn or insect bites **d.** if lower extremity, wear comfortable fitting shoes to avoid development of blisters or skin trauma **e.** avoid use of razor blades; electric razors may be an alternative **f.** avoid tight fitting clothing	decrease the risk of the development of lymphangitis.

APPENDIX A
PROFESSIONAL RESOURCE LIST

Agency for Health Care Policy and Research (AHCPR)
Publications and Information Branch
2151 E Jefferson Street
Rockville, MD 20852
(800) 358-9295
Publishes various guidelines on the control of cancer-related pain and HIV.

American Association of Sex Educators, Counselors, and Therapists (ASECT)
435 North Michigan Ave., Suite 1717
Chicago, IL 60611
(312) 644-0828
Provides names of sex therapists in the particular area requested.

American College of Obstetricians and Gynecologists (ACOG)
409 12th Street SW
Washington, D.C. 20024
(202) 638-5577
Professional medical organization for Obstetricians/Gynecologists. Will also provide a list of physicians board certified in the subspecialty of Reproductive Endocrinology.

American Fertility Society
2140 Eleventh Avenue South, Suite 200
Birmingham, AL 35205-2800
(205) 933-8494
Professional organization for physicians involved in infertility. Provides informational booklets for the general public, suggested reading lists; publishes a monthly medical journal, Fertility and Sterility. *In addition, provides annual statistics on selected ART programs nationwide. Their affiliate, SART (Society for Assisted Reproductive Technology), sets minimum clinical standards for ART programs.*

American Pain Society
5700 Old Orchard Road, 1st Floor
Skokie, IL 60077-1024
(708) 966-5595
Membership includes subscriptions to the APS Bulletin *(a quarterly newsletter) and to the* APS Journal. *In addition, "Principles of Analgesic Use in the Treatment of Acute and Cancer Pain" (3rd ed.) is available, along with the "Directory of Pain Management Facilities."*

American Society of Pain Management Nurses
P.O. Box 2162
Tucker, GA 30085
Professional organization dedicated to the constant endeavor of promoting the highest standards of care for patients of all ages experiencing acute, chronic, and malignant pain.

Hospice Link
190 Westbrook Road
Essex, CT 06426
(800) 331-1620
"Notes on Symptom Control in Hospice and Palliative Care" available.

International Association for the Study of Pain (IASP)
909 NE 43rd Street, Room 306
Seattle, WA 98105-6021
Membership includes a subscription to the journal Pain.

Oncology Nursing Society (ONS)
501 Holiday Drive
Pittsburgh, PA 15220-2749
(412) 921-7373
ONS exists to provide optimal care to persons with an actual and/or potential diagnosis of cancer.

PDQ (Physician Data Query)
(800) 4-CANCER
PDQ is the National Cancer Institute's computerized listing of up-to-date and accurate information for patients and health professionals on the latest types of cancer treatments, research studies, clinical trials, new and promising cancer treatments, and organizations and physicians involved in caring for people with cancer. To access PDQ, a physician may use an office computer or the services of a medical library. Physicians and patients can also get information by calling the number above.

Serono Symposium
100 Longwater Circle
Norwell, MA 02061
(617) 982-9000
(800) 283-8088
A division of Serono Laboratories, Inc. Sponsors medical conferences for reproductive physicians. Also cosponsors, with local RESOLVE chapters, symposia for consumers designed to educate them on various infertility treatments. In addition, publishes a series of informational booklets free of charge.

Society of Gynecologic Nurse Oncologists (SGNO)
14628 Stonegate Drive
Lockport, IL 60441
(708) 301-7868
A national organization of registered nurses dedicated to the advancement of patient care, education, and research in the field of gynecologic oncology.

Society for the Scientific Study of Sex
P.O. Box 29795
Philadelphia, PA 19117
Provides names of sex therapists and educational materials.

APPENDIX B
PATIENT RESOURCE LIST

American Cancer Society (ACS)
1599 Clifton Road, N.E.
Atlanta, GA 30329
(800) ACS-2345CanSurmount
I Can Cope
Look Good, Feel Better
Reach to Recovery
Dedicated to eliminating cancer as a major health problem through research, education, and service.

American Chronic Pain Association (ACPA)
P.O. Box 850
Rocklin, CA 95677-0850
(916) 632-0922
Publishes a quarterly newsletter, the ACPA Chronicle.

CAN ACT (Cancer Patients Action Alliance)
26 College Place
Brooklyn, NY 11201
(718) 522-4607
Addresses problems of access to advanced cancer treatments, barriers created by the FDA drug approval process, and restrictive insurance reimbursement policies.

Cancer Care, Inc.
1180 Avenue of the Americas
New York, NY 10036
(212) 302-2400
Offers professoinal social work counseling and guidance to help patients and families cope with the emotional and psychological consequences of cancer.

Center for Surrogate Parenting, Inc.
8383 Wilshire Blvd., Suite 750
Beverly Hills, CA 90211
(213) 655-1974
See ICNY below.

ChemoCare
220 St. Paul Street
Westfield, NJ 07090
(800) 55-CHEMO (outside NJ)
(908) 233-1103 (inside NJ)
Offers personal one-on-one support to people undergoing chemotherapy and/or radiation treatment from trained and certified volunteers who have survived the treatment themselves.

Corporate Angel Network (CAN)
Westchester County Airport, 1 Loop Road
White Plains, NY 10604
(914) 328-1313
Helps cancer patients bridge the miles between home and needed treatment using volunteer aircraft.

ICA
2601 E. Fortune Circle Dr., Suite 102B
Indianapolis, IN 46241
(317) 243-8793
Both the Center for Surrogate Parenting and ICNY are established programs that help create families through the use of surrogate mothers, either through traditional surrogacy (surrogate is artificially inseminated with the husbands's sperm), IVF/host surrogacy, or egg donation.

National Chronic Pain Outreach Association, Inc.
7979 Old Georgetown Road, #100
Bethesda, MD 20314
(504) 997-5004
Publishes a bimontly newsletter, Lifeline.

National Cancer Institute
International Cancer Information Center
Building 82, Room 123
Bethesda, MD 20892
(301) 496-2794
(800) 4-CANCER
FAX: (301) 402-5874
Provides the latest information on cancer research, diagnosis, and treatment to physicians and other health professionals, basic and clinical researchers, policy makers, and health and science reporters. ICIC uses an array of products and services including cancer information databases and technical journals. All of their services are described in the Scientific Information

Services of the National Cancer Institute *booklet. The booklet is available upon request. Patient education materials are also available.*

National Coalition for Cancer Research (NCCR)
426 C Street, NE
Washington, DC 20002
(202) 544-1880
Educates the public and elected officials about the need to provide a supportive environment for the successful implementation of the National Cancer Act.

National Coalition for Cancer Survivorship (NCCS)
1010 Wayne Avenue, Suite 505
Silver Spring, MD 20910
(301) 650-9127
Exists to enhance the quality of life of cancer survivors and to promote an understanding of cancer survivorship.

The National Committee on Adoption
1930 17th Street, N.W.
Washington, D.C. 20009
(202) 328-1200
National organization that can provide updated list of particular area's agencies and pertinent publications.

National Hospice Organization (NHO)
1901 N. Moore Street, Suite 901
Arlington, VA 22209
(800) 338-8619
Publishes the Directory of Hospices in America.

National Lymphedema Network (NLN)
2211 Post Street, Suite 404
San Francisco, CA 94115
(800) 541-3259
Nonprofit organization that disseminates information on the prevention and management of primary and secondary lymphedema.

Oley Foundations
214 Hun Memorial
Albany Medical Center, A-23
Albany, NY 12208
(800) 776-OLEY
Support for home parenteral and/or enteral nutrition therapy consumers and their families through a newsletter, conferences, meetings, and outreach and support activities.

RESOLVE, Inc.
1310 Broadway
Somerville, MA 02144-1731
(617) 623-0744
RESOLVE is a national, nonprofit organization offering information, advocacy, and support to people with problems of infertility. Publishes a national newsletter. With over 40 local chapters, members can attend support groups or obtain medical referrals or counseling through a telephone hotline.

United Ostomy Association, Inc.
36 Executive Park, Suite 120
Irvine, CA 92713
(714) 660-8624
Association of ostomy chapters dedicated to the complete rehabilitation of all ostomates.

Vital Options
Support for Young Adults with Cancer
4419 Coldwater Canyon Ave., Suite A
Studio City, CA 91604
(818) 508-5657
Meets the psychosocial and emotional needs of young adults, predominantly between ages of 1 and 40, who are diagnosed with cancer or other life-threatening diseases.

The Wellness Community
2200 Colorado Avenue
Santa Monica, CA 90404-3506
(310) 453-2300 FAX
Provides free psychosocial support to people fighting to recover from cancer, as an adjunct to conventional medical treatment. Fourteen nationwide facilities.

The Women's Cancer Network
2413 West River Road
Grand Island, NY 14072
Provides support, referral, and resource services for women who have or have had cancer.

Y-ME
National Organization for Breast Cancer Information and Support
18220 Harwood Avenue
Homewood, IL 60430-2104
(800) 221-2141
Hotline counseling, educational programs, and self-help meetings for breast cancer patients, their families, and friends.

INDEX

A

Abdominal distention, risk for alteration of respiratory function related to, 75-85

Activity restrictions

- health maintenance alteration related to insufficient knowledge of, 182-183
- risk for impaired physical mobility related to, 249-251

Allergic reactions, during chemotherapy, risk for injury related to, 52-54

Analgesia, risk of bowel dysfunction related to decreased peristalsis secondary to, 267-269

Anaphylaxis, during chemotherapy, risk for injury related to, 52-54

Anasarca, 4-5

Anesthesia, risk of bowel dysfunction related to decreased peristalsis secondary to, 267-269

Anorexia, altered nutrition: less than body requirements related to, 99-117

Anxiety/fear

- related to impending surgery and insufficient knowledge of preoperative routines, intraoperative activities, and postoperative self care activities, 189-192
- related to insufficient knowledge about screening techniques, uncertainty about outcomes, and possible cancer diagnosis, 13-14
- related to insufficient knowledge of potential impact of condition and treatment on reproductive organs and sexuality, 193-202

related to insufficient knowledge of prescribed chemotherapy and necessary self care measures, 20-25

intraperitoneal chemotherapy and, 23-25

related to insufficient knowledge prescribed radiation therapy and necessary self care measures, 26-47

radiation implants with conventional afterloading and, 35-39

radiation implants with remote afterloading and, 40-47

related to loss of feelings of control of life, unpredictability of nature of disease, and uncertain future, 15-19

Appetite, altered nutrition: less than body requirements related to, 99-117

Arthralgia, alteration in comfort related to to, 55-57

Ascites, 5-6

Atelectasis, as surgical complication, 174-175

B

Bedrest, risk for alteration in respiratory function related to immobility secondary to, 257-259

Bleeding

risk related to immunosuppression thrombocytopenia secondary to chemotherapy and/or radiation therapy, 91-93

as surgical complication, 169-171

Body function, grief related to potential loss of, 48-51

Body image, grief related to negative effects of treatment on, 48-51

Bowel dysfunction. *See also* Elimination, bowel

risk related to decreased peristalsis secondary to surgical manipulation of bowel, effects of anesthesia and analgesia, and immobility, 267-269

as surgical complication, 175-177

Brain metastasis, risk for injury related to neurologic dysfunction from, 164-166

C

Caloric intake, reduced, altered nutrition: less than body requirements related to wound healing and, 263-266

Cancer. *See* Disease; Disease process

Cardiac output, risk for alteration during chemotherapy, 73-74

Cardiovascular system

medical care plans and, 73-74

surgical care plans and, 255-256

Chemotherapy

alteration in sensory perception related to neurotoxicity, neurological pain and paresthesias, ototoxicity, and retinal toxicity, 159-163

anxiety/fear related to insufficient knowledge of, 20-25

immunosuppression neutropenia secondary to, risk of infection related to, 86-90

immunosuppression thrombocytopenia secondary to, risk of bleeding related to, 91-93

intraperitoneal

alteration in comfort related to intraperitoneal instillation of fluid, 58-63

anxiety/fear related to insufficient knowledge of, 23-25

risk of infection related to indwelling peritoneal access port and catheter and, 94-96

risk for alteration in skin integrity related to, 146-158

risk for alteration of cardiac output during, 73-74

Collaborative problems

medical care plans and, 2-8

surgical care plans and, 168-177

Colostomy

altered health maintenance due to knowledge deficit about, 136-142

impaired skin integrity related to wound and, 273-277

Comfort

alteration related to effects of surgery, disease process, and immobility, 246-248

alteration related to flu-like syndrome, arthralgia, and/or myalgia, 55-57

alteration related to intraperitoneal instillation of fluid, 58-63

alteration related to therapy and/or disease process, 64-65

Comfort issues

medical care plans and, 52-72

surgical care plans and, 246-254

Community resources, health maintenance alteration related to insufficient knowledge of, 182-183

Complications, 3-8

anasarca, 4-5

ascites, 5-6

gastrointestinal dysfunction/obstruction, 7-8

health maintenance alteration related to insufficient knowledge of symptoms of, 182-183

malignant effusions, 8

peritonitis, 6-7

pre-existing medical conditions, 3-4

respiratory compromise, 8

Constipation, related to malnutrition, decreased fluid intake, decreased mobility, and use of narcotics, 118-120

Control, anxiety/fear related to loss of feelings of, 15-19

Coping, alteration related to infertility, 242-245

Cystitis, hemorrhagic, risk for alteration in urinary elimination related to, 143-145

D

Decisional conflict, related to insufficient knowledge of treatment options, 184-188

Diagnosis, anxiety/fear related to possibility of cancer diagnosis and, 13-14

Diagnostic tests, health maintenance alteration related to insufficient knowledge of, 179-181

Diarrhea, related to radiation-induced enteritis, 121-128

Dietary restrictions, health maintenance alteration related to insufficient knowledge of, 182-183

Disease

anxiety/fear related to insufficient knowledge of potential impact on reproductive organs and sexuality, 193-202

anxiety/fear related to unpredictability of course of, 15-19

health maintenance alteration related to insufficient knowledge of, 179-181

prevention of, health maintenance alteration related to insufficient knowledge of, 10-12

Disease process

alteration in comfort related to, 64-65, 246-248

altered nutrition: less than body requirements related to, 263-266

risk for alteration in skin integrity related to, 146-158

risk of alterations in sexual activity related to, 207-232

risk of sexual dysfunction related to, 203-206

risk of sleep pattern disturbance/fatigue related to, 252-254

Disseminated intravascular coagulation (DIC), as surgical complication, 169-171

Drains, impaired skin integrity related to wound and, 273-277

E

Electrolyte imbalance, as surgical complication, 173-174

Elimination

bowel

altered: constipation related to malnutrition, decreased fluid intake, decreased mobility, and use of narcotics, 118-120

altered: diarrhea related to radiation-induced enteritis, 121-128

altered: related to development of fistulae, 129-135

risk of bowel dysfunction related to decreased peristalsis secondary to surgical manipulation of bowel, effects of anesthesia and analgesia, and immobility and, 267-269

urinary

risk for alteration related to hemorrhagic cystitis and nephrotoxicity, 143-145

risk of infection related to susceptibility to bacteria secondary to catheters and, 260-262

risk of urinary dysfunction related to loss of sensation of bladder distention secondary to surgical and/or pharmacological interventions and, 270-272

urinary dysfunction as surgical complication and, 177

Endocrine system, medical care plans and, 97-98

Enteritis, radiation-induced, diarrhea related to,121-128

F

Fatigue

alteration in quality of life related to, 66-72

risk of alterations in sexual activity related to, 207-232

risk of sexual dysfunction related to, 203-206

risk related to disease process, pain, and unfamiliar surroundings and activities, 252-254

Fear. *See* Anxiety/fear

Fertility

alteration in coping related to loss of, 242-245

grieving related to potential loss of, 237-241

Fistulae, altered elimination related to development of, 129-135

Fluid/electrolyte imbalance, as surgical complication, 173-174

Fluid instillation, intraperitoneal, alteration in comfort related to, 58-63

Fluid intake, decreased, constipation related to, 118-120

Fluid volume deficit, risk related to losses secondary to surgical wound or gastrointestinal dysfunction, 255-256

Flu-like syndrome, alteration in comfort related to to, 55-57

Follow-up visits, health maintenance alteration related to insufficient knowledge of, 182-183

G

Gastrointestinal system. *See also* Elimination, bowel

dysfunction/obstruction of, 7-8

risk of fluid volume deficit related to losses secondary to, 7-8

medical care plans and, 99-142

surgical care plans and, 263-269

Genital intercourse, inability to engage in, 233-236

Genitourinary system. *See also* Elimination, urinary

medical care plans and, 143-145

surgical care plans and, 270-272

Grieving

related to potential loss of body function, negative effects of treatment on body image, changes in self-concept, and perceived effects on life-style, 48-51

related to potential loss of fertility and perceived effects on life-style, 237-241

H

Health maintenance

alteration due to knowledge deficit about colostomy/ileostomy and/or ileal conduit, 136-142

alteration related to insufficient knowledge of basic reproductive female anatomy, cancer prevention, and screening recommendation, 10-12

alteration related to insufficient knowledge of condition, diagnostic tests, prognosis, and treatment options, 179-181

alteration related to insufficient knowledge of dietary restrictions, medications, activity restrictions, self care activities, symptoms of complications, follow-up visits, and community resources, 182-183

Hemorrhage. *See also* Bleeding

as surgical complication, 169-171

Hemorrhagic cystitis, risk for alteration in urinary elimination related to, 143-145

Hypersensitivity, during chemotherapy, risk for injury related to, 52-54

I

Ileal conduit, altered health maintenance due to knowledge deficit about, 136-142

Ileostomy

altered health maintenance due to knowledge deficit about, 136-142

impaired skin integrity related to wound and, 273-277

Immobility

alteration in comfort related to effects of, 246-248

impaired skin integrity related to wound and, 273-277

risk for alteration in respiratory function related to immobility secondary to imposed bedrest and pain and, 257-259

risk of bowel dysfunction related to decreased peristalsis secondary to, 267-269

Immune system

medical care plans and, 86-96

surgical care plans and, 260-262

Immunosuppression neutropenia, secondary to chemotherapy and/or radiation therapy, risk of infection related to, 86-90

Immunosuppression thrombocytopenia, secondary to chemotherapy and/or radiation therapy, risk of bleeding related to, 91-93

Infection

risk related to immunosuppression neutropenia secondary to chemotherapy and/or radiation therapy, 86-90

risk related to indwelling peritoneal access port and catheter, 94-96

risk related to lymphedema secondary to surgical removal of lymph nodes, 278-281

risk related to susceptibility to bacteria secondary to wound, invasive vascular access, and/or urinary catheter, 260-262

as surgical complication, 173

Infertility

alteration in coping related to, 242-245

grieving related to potential loss of fertility and perceived effects on life-style and, 237-241

Injury, risk for

related to acute water intoxication, 97-98

related to hypersensitivity and anaphylaxis during chemotherapy, 52-54

related to neurologic dysfunction from brain metastasis, 164-166

Integumentary system

medical care plans and, 146-158

surgical care plans and, 273-281

Intercourse, genital, inability to engage in, 233-236

Intraoperative activities, anxiety/fear related to insufficient knowledge of, 189-192

Intraperitoneal chemotherapy

alteration in comfort related to intraperitoneal instillation of fluid, 58-63

anxiety/fear related to insufficient knowledge of, 23-25

risk of infection related to indwelling peritoneal access port and catheter and, 94-96

Intraperitoneal fluid instillation, alteration in comfort related to, 58-63

L

Life-style, grief related to perceived effects on, 48-51

Lung capacity, decreased, risk for alteration of respiratory function related to, 75-85

Lung metastasis, risk for alteration of respiratory function related to, 75-85

Lymphedema, secondary to surgical removal of lymph nodes, risk for impaired skin integrity/infection related to, 278-281

M

Malignant effusions, 8

Malnutrition

constipation related to, 118-120

related to disease process, wound healing, and decreased caloric intake, 263-266

related to nausea, vomiting, anorexia, and/or stomatitis, 99-117

Medical care plans, 2-166

collaborative problems and, 2-8

nursing diagnoses and, 9-166

for cardiovascular system, 73-74

for comfort issues, 52-72

for endocrine and metabolic systems, 97-98

for gastrointestinal system and nutrition, 99-142

for genitourinary system, 143-145

for immune system, 86-96

for integumentary system, 146-158

for neurologic system, 159-166

for psychosocial issues, 10-51

for respiratory system, 75-85

Medical conditions, pre-existing, 3-4

Medications. *See also* Chemotherapy

health maintenance alteration related to insufficient knowledge of, 182-183

risk of urinary dysfunction related to loss of sensation of bladder distention secondary to, 270-272

Metabolic system, medical care plans and, 97-98

Metastasis

to brain, risk for injury related to neurologic dysfunction from, 164-166

to lung, risk for alteration of respiratory function related to, 75-85

Mobility. *See* Physical activity

Myalgia, alteration in comfort related to to, 55-57

N

Narcotics, constipation related to, 118-120

Nausea, altered nutrition: less than body requirements related to, 99-117

Nephrotoxicity, risk for alteration in urinary elimination related to, 143-145

Neurological pain, alteration in sensory perception related to, 159-163

Neurologic system

dysfunction of, from brain metastasis, risk for injury related to, 164-166

medical care plans and, 159-166

Neurotoxicity, alteration in sensory perception related to, 159-163

Neutropenia, immunosuppression, secondary to chemotherapy and/or radiation therapy, risk of infection related to, 86-90

Nutrition

altered: less than body requirements

constipation related to, 118-120

related to disease process, wound healing, and decreased caloric intake, 263-266

related to nausea, vomiting, anorexia, and/or stomatitis, 99-117

health maintenance alteration related to insufficient knowledge of dietary restrictions, 182-183

medical care plans and, 99-142

O

Ototoxicity, alteration in sensory perception related to, 159-163

Outcomes, anxiety/fear related to uncertainty about, 13-14

P

Paclitaxel therapy

risk for alteration of cardiac output during, 73-74

risk for injury related to hypersensitivity and anaphylaxis during, 52-54

Pain

neurological, alteration in sensory perception related to, 159-163

risk for alteration in respiratory function related to immobility secondary to, 257-259

risk for impaired physical mobility related to incisional site pain and, 249-251

risk of alterations in sexual activity related to, 207-232

risk of bowel dysfunction related to decreased peristalsis secondary to analgesia and, 267-269

risk of sexual dysfunction related to, 203-206

risk of sleep pattern disturbance/fatigue related to, 252-254

Paresthesias, alteration in sensory perception related to, 159-163

Patient resources, 286-291

Perception, sensory, alteration related to neurotoxicity, neurological pain and paresthesias, ototoxicity, and retinal toxicity, 159-163

Peristalsis, decreased, secondary to surgical manipulation of bowel, effects of anesthesia and analgesia, and immobility, risk of bowel dysfunction related to, 267-269

Peritoneal access port and catheter, risk of infection related to indwelling peritoneal access port and catheter and, 94-96

Peritonitis, 6

Physical activity/mobility

impaired, risk related to surgical interruption of body structures, incisional site pain, and activity restriction, 249-251

lack of. *See* Immobility

alteration in comfort related to effects of, 246-248

restriction of

constipation related to, 118-120

health maintenance alteration related to insufficient knowledge of, 182-183

risk for impaired physical mobility related to, 249-251

Pneumonia, as surgical complication, 174-175

Pre-existing medical conditions, 3-4

Preoperative routines, anxiety/fear related to insufficient knowledge of, 189-192

Professional resources, 282-285

Prognosis, health maintenance alteration related to insufficient knowledge of, 179-181

Psychosocial issues

medical care plans and, 10-51

surgical care plans and, 179-245

Q

Quality of life, alteration related to fatigue, 66-72

R

Radiation therapy

enteritis induced by, diarrhea related to, 121-128

immunosuppression neutropenia secondary to, risk of infection related to, 86-90

immunosuppression thrombocytopenia secondary to, risk of bleeding related to, 91-93

risk for alteration in skin integrity related to, 146-158

Reproductive organs

anxiety/fear related to insufficient knowledge of potential impact of condition and treatment on, 193-202

grieving related to potential loss of fertility and perceived effects on life-style, 237-241

health maintenance alteration related to insufficient knowledge of anatomy of, 10-12

Resources

community, health maintenance alteration related to insufficient knowledge of, 182-183

for patients, 286-291

professional, 282-285

Respiratory function

compromise of, 8

risk for alteration related to abdominal distention, decreased lung capacity, and/or lung metastasis, 75-85

risk for alteration related to immobility secondary to imposed bedrest and pain, 257-259

Respiratory system

medical care plans and, 75-85

surgical care plans and, 257-259

Retinal toxicity, alteration in sensory perception related to, 159-163

S

Screening

anxiety/fear related to insufficient knowledge about, 13-14

health maintenance alteration related to insufficient knowledge of recommendations for, 10-12

Self care measures

with chemotherapy, anxiety/fear related to insufficient knowledge of, 20-25

intraperitoneal chemotherapy and, 23-25

health maintenance alteration related to insufficient knowledge of, 182-183

postoperative, anxiety/fear related to insufficient knowledge of, 189-192

with radiation therapy, anxiety/fear related to insufficient knowledge of, 26-47

radiation implants with conventional afterloading and, 35-39

radiation implants with remote afterloading and, 40-47

Self-concept, grief related to changes in, 48-51

Sensory perception, alteration related to neurotoxicity, neurological pain and paresthesias, ototoxicity, and retinal toxicity, 159-163

Sepsis, as surgical complication, 173

Sexual activity

inability to engage in genital intercourse and, 233-236

risk of alterations related to disease process, surgical intervention, fatigue, and/or pain, 207-232

Sexual dysfunction, risk related to disease process, surgical intervention, fatigue, and/or pain, 203-206

Sexuality, anxiety/fear related to insufficient knowledge of potential impact of condition and treatment on, 193-202

Skin

impaired integrity related to surgical wound, decreased tissue perfusion, ostomy stomas, drain sites, and immobility, 273-277

risk for alteration in integrity related to treatment modality and/or disease process, 146-158

risk for impaired integrity related to lymphedema secondary to surgical removal of lymph nodes, 278-281

Sleep pattern disturbance, risk related to disease process, pain, and unfamiliar surroundings and activities, 252-254

Stomatitis, altered nutrition: less than body requirements related to, 99-117

Surgery

alteration in comfort related to effects of, 246-248

altered nutrition: less than body requirements related to wound healing and, 263-266

anxiety/fear related to, 189-192

impaired skin integrity related to wound and, 273-277

lymphedema secondary to surgical removal of lymph nodes and, risk for impaired skin integrity/infection related to, 278-281

risk for impaired physical mobility related to incisional site pain and, 249-251

risk for impaired physical mobility related to surgical interruption of body structures and, 249-251

risk of alterations in sexual activity related to, 207-232

risk of bowel dysfunction related to decreased peristalsis secondary to, 267-269

risk of fluid volume deficit related to losses secondary to surgical wound and, 255-256

risk of infection related to susceptibility to bacteria secondary to wound and, 260-262

risk of sexual dysfunction related to, 203-206

risk of urinary dysfunction related to loss of sensation of bladder distention secondary to, 270-272

Surgical care plans, 167-281

collaborative problems and, 168-177

nursing diagnoses and, 178-281

for cardiovascular system, 255-256

for comfort issues, 246-254

for gastrointestinal system and nutrition, 263-269

for genitourinary system, 270-272

for immune system, 260-262

for integumentary system, 273-281

for psychosocial issues, 179-245

for respiratory system, 257-259

Syndrome of inappropriate antidiuretic hormone, risk of injury related to, 97-98

T

Therapy, alteration in comfort related to, 64-65

Thrombocytopenia, immunosuppression, secondary to chemotherapy and/or radiation therapy, risk of bleeding related to, 91-93

Thromboembolic events, as surgical complication, 171-172

Tissue perfusion, decreased, impaired skin integrity related to wound and, 273-277

Treatment. *See also* Chemotherapy; Radiation therapy; Surgery

anxiety/fear related to insufficient knowledge of potential impact on reproductive organs and sexuality, 193-202

Treatment options

decisional conflict related to insufficient knowledge of, 184-188

health maintenance alteration related to insufficient knowledge of, 179-181

U

Uncertainty, about future, anxiety/fear related to, 15-19

Unfamiliar surroundings and activities, risk of sleep pattern disturbance/fatigue related to, 252-254

Urinary catheters, risk of infection related to susceptibility to bacteria secondary to, 260-262

Urinary elimination. *See* Elimination, urinary

V

Vascular access, risk of infection related to susceptibility to bacteria secondary to, 260-262

Vomiting, altered nutrition: less than body requirements related to, 99-117

W

Water intoxication, acute, risk of injury related to, 97-98