



Surgical Interventions

**Advanced Oncology Nursing Certification Review
& Resource Manual (3rd Edition) Chapter 6**

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THE UNIVERSITY OF TEXAS
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Cancer Center
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AOCNP® Test Content Outline

II. Cancer Treatment and Supportive Care - 45%

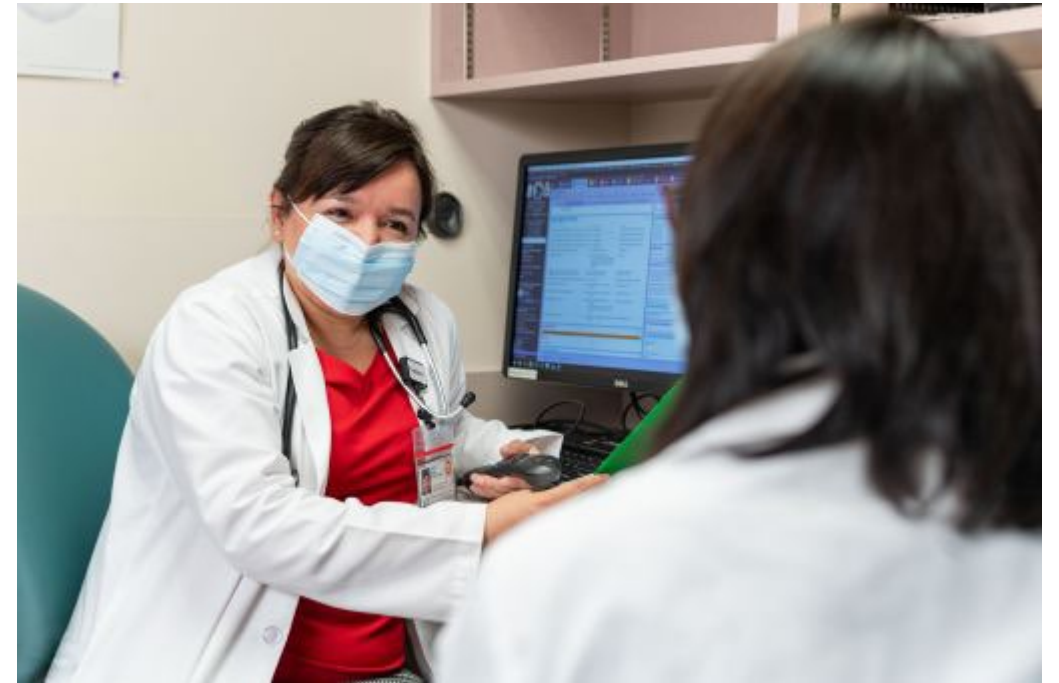
- A. Clinical trials and research studies
- B. Systemic therapy (e.g., chemotherapy, hormonal, targeted, immunotherapy, cellular therapy)
- C. Localized therapy (e.g., intravascular, intraperitoneal, intrathecal, intra-arterial)
- D. Surgical interventions
- E. Radiation therapy
- F. Blood and marrow transplantation
- G. Multimodal therapy
- H. Complementary, alternative, and integrative therapies
- I. Etiology, incidence, and patterns for treatment-related symptoms (e.g., acute, late, long term)
- J. Response to therapy (e.g., imaging, biomarkers, clinical response)
- K. Palliative care
- L. Pharmacologic interventions for symptom management
- M. Nonpharmacologic interventions for symptom management
- N. Interrelationship between disease, treatment, and comorbid conditions
- O. Controlled substance safety



Surgical Intervention Overview

"Surgery, although often a necessary intervention, is extremely strenuous on the body" (Boley, Larose, & Rocha, 2023, p. 215).

- Treatment intervention for solid malignancies
- Goals of Surgery
 - Removal of the malignant tumor
 - Negative margins
 - Pathologic staging



Advanced Practice Nursing Surgical Roles

- H&P
- Preoperative testing
- Pre- & Postoperative education & management
- Discussions on risks of surgery
- Provision of referrals and resources
- *First assist in the operating room



Prevention &
Risk
Reduction

Prophylactic Surgical Interventions

- Mastectomy
- Salpingo-oophorectomy
- Hysterectomy
- Total gastrectomy
- Bariatric surgery





Diagnosis

- Biopsy type depends on tumor location, size, accessibility, & presumptive diagnosis
- Negative biopsy does \neq no cancer
- Surgical excision may be indicated for proper evaluation

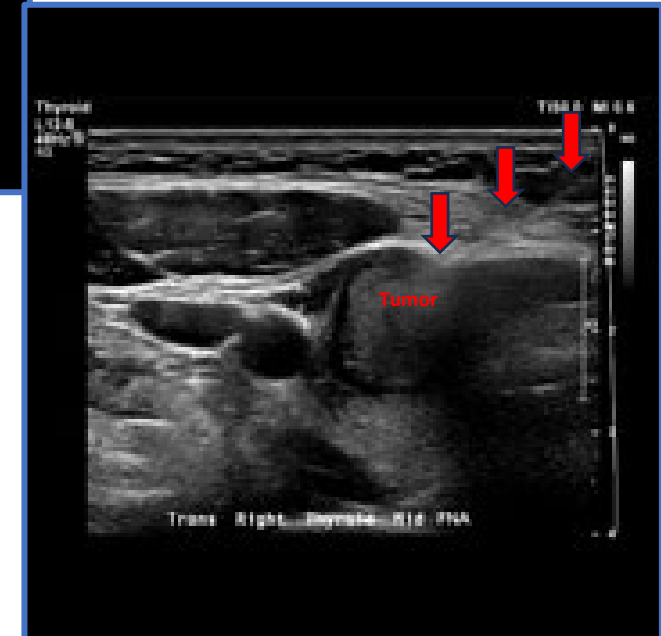
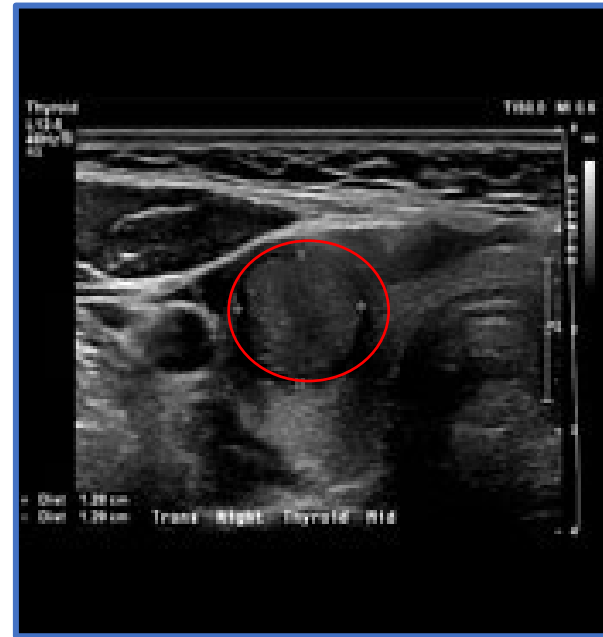


Biopsy Techniques

Fine Needle Aspiration (FNA)

- Evaluates cellular material using 20- to 21-gauge needle
- Advantages: easy, less invasive, US guidance, inexpensive
- Disadvantages: yields minimal pathologic info
- Common Cancer Use: palpable masses, breast masses, skin lesions, lymph nodes, groin areas

Review Table 6-2 on page 213



Biopsy Techniques

A grayscale ultrasound image showing a breast biopsy procedure. A needle is visible, inserted into a tissue mass. The image is oriented vertically, with the needle pointing towards the top right. The tissue shows various echogenicities, with a darker area indicating the target lesion.

Core Needle/ Stereotactic/ Vacuum-assisted Biopsy/Mammotome®

- Evaluates cores of tissue using 14- or 16-gauge (core) or 12- or 14-gauge (stereotactic) needle
- Advantages: somewhat easy for patients, can be combined w/radiographic guidance, provides pathologic & histologic info
- Disadvantages: can be painful, requires removal of needle track, prone positioning
- Common Cancer Use: palpable soft tissue masses, breast, prostate, brain, lymph nodes



Biopsy Techniques

Incisional Biopsy

- Removes part of tumor via small incision
- Advantages: provides pathologic & histologic info; local anesthesia; performed with flexible fiber-optic tool
- Disadvantages: painful, invasive, scars, may require sedation, will require further treatment
- Common cancer use: any mass

Excisional Biopsy

- Removes all of tumor via small incision
- Advantages: provides pathologic & histologic info; local anesthesia; performed with flexible fiber-optic tool
- Disadvantages: painful, invasive, scar, may require sedation, will require further treatment, not intended to obtain clean margin
- Common cancer use: any mass

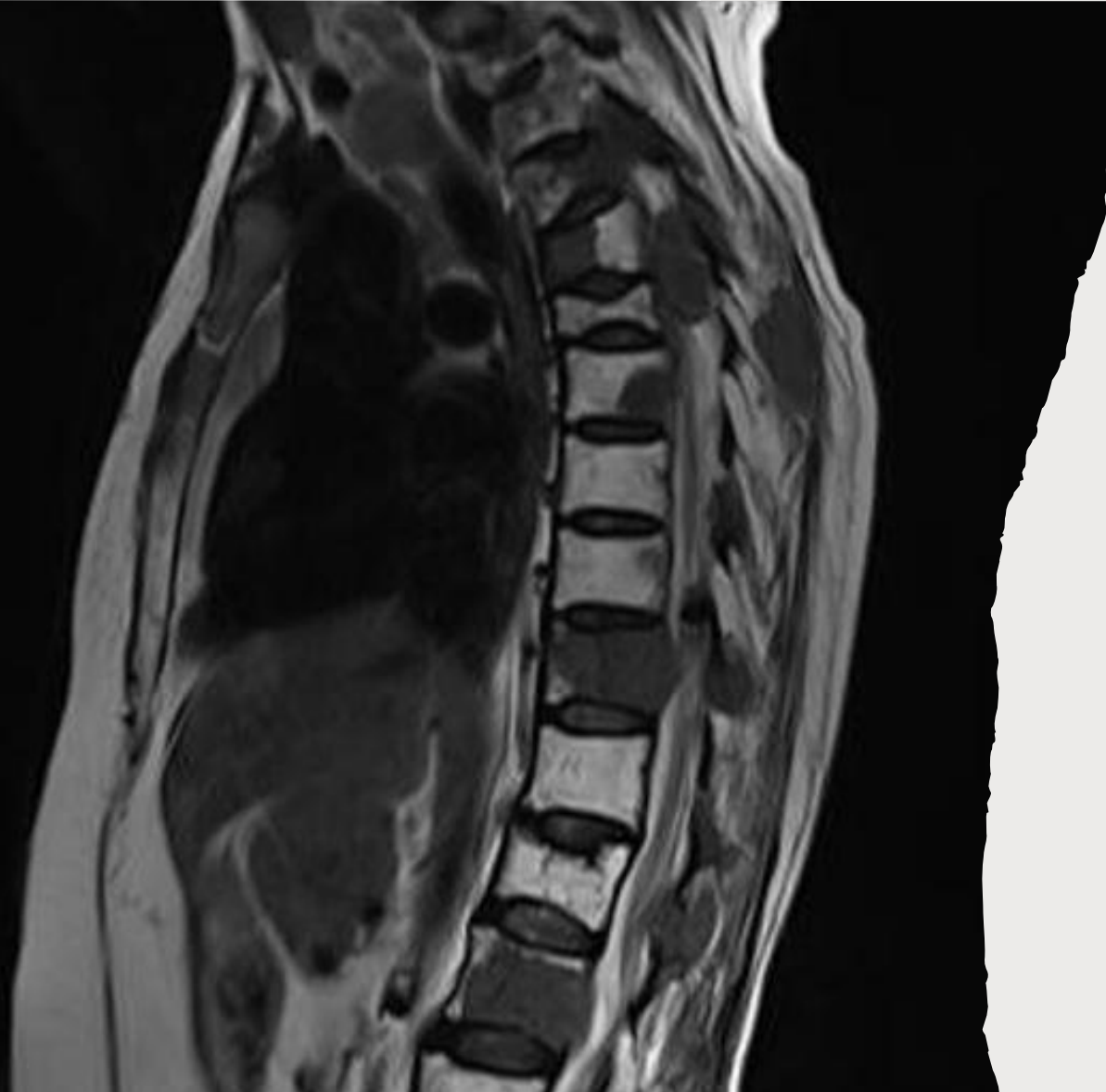




Resection

- Goal = complete resection
- Classifications
 - Total
 - Subtotal
 - Gross
- Tumor debulking for advanced disease





Palliation

- Goal = Improve quality of life (QOL)
 - Relieve pain
 - Stabilize or repair pathologic fractures
 - Remedy oncologic emergencies
- Goals of care discussions are vital
 - Risks versus benefits
 - Patient wishes



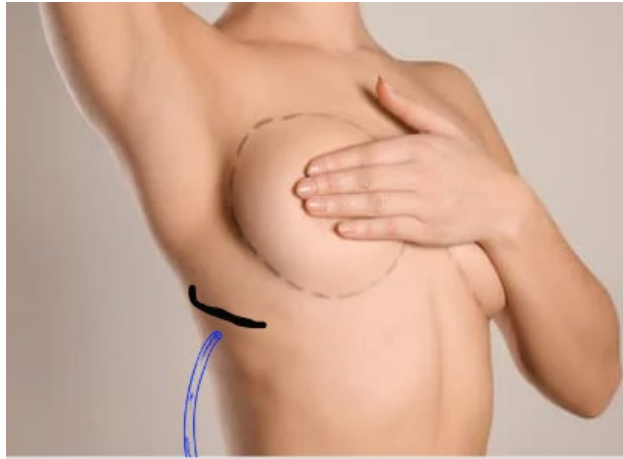
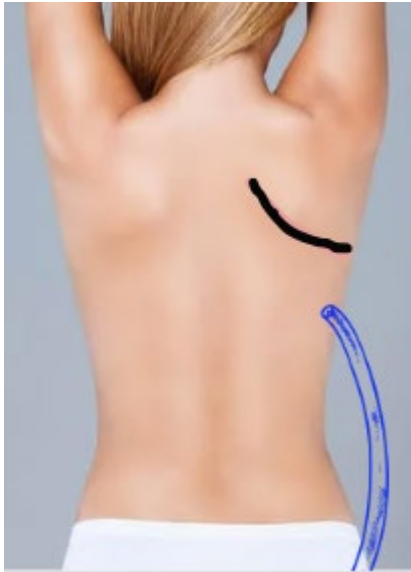
Minimally Invasive Surgical (MIS) Techniques

- Consists of robotic-assisted and laparoscopy surgery
- Uses specialized instruments
- Small incisions and portholes for access
- Examples
 - Video-assisted laparoscopic & thoracoscopic procedures
 - Robotic-assisted laparoscopic & thoracoscopic procedures
 - Endobronchial tumor ablation
 - Mediastinoscopy

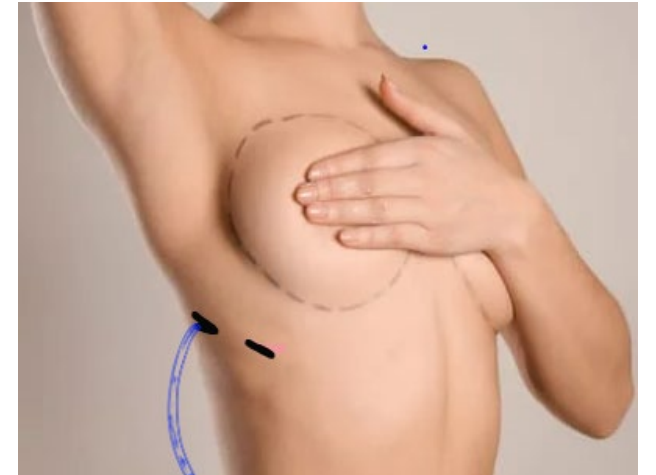
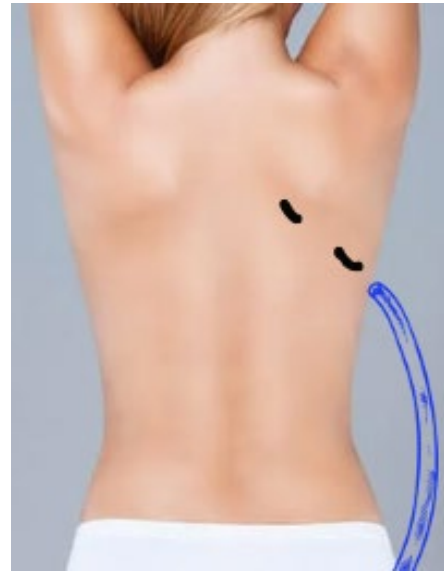


Minimally Invasive Surgical Techniques

Open Thoracotomy



Robotic-assisted Thoracoscopy



Minimally Invasive Surgical Techniques

Radiofrequency Ablation

- Used in MIS & open procedures
- Heat → coagulation necrosis & cell death
- Common cancer use: lung, liver, & kidney

Laser Therapy

- Concentrated light beams
- Treats superficial or epithelium cancerous lesions



Preoperative & Postoperative Management

Preoperative

- High risk = hx of cardiac & respiratory disease; obesity; malnutrition
- Standard preoperative testing
- Anesthesia history
 - Malignant hyperthermia
- Medications

Postoperative

- Care dependent on type of surgery
- Surgical site infections
- Pain management
- Education

Table 6-3 on page 216



Image References

Slide	Image designation/description/position	Attribution
4	APP in Clinic	https://das.mdanderson.edu/CIP/preview/image/guests-general-access/7118;jsessionid=48FA7A567544A4495312DB09D66483A8?maxsize=512&showtransparencygrid=true&cachecontrol=clientdefault
5	APP Educating Patient	https://das.mdanderson.edu/CIP/preview/image/guests-general-access/6337;jsessionid=48FA7A567544A4495312DB09D66483A8?maxsize=512&showtransparencygrid=true&cachecontrol=clientdefault
7	Reviewing CT scan for Diagnosis	https://das.mdanderson.edu/CIP/preview/image/guests-general-access/7134;jsessionid=883BE7FFB7A278B934F20BBCE03672C8?maxsize=512&showtransparencygrid=true&cachecontrol=clientdefault
8	Thyroid Nodule	https://prod-images-static.radiopaedia.org/images/52661519/d8c31fcab634711de02b0e8f7f239c_thumb.jpeg
8	FNA of Thyroid Nodule	https://prod-images-static.radiopaedia.org/images/52661523/c5219ce34d1677d924d50fbb496576_thumb.jpeg
9	Core Needle Biopsy	https://prod-images-static.radiopaedia.org/images/1995553/95ffe900dcfa50594bf6763acb521d_big_gallery.jpeg
11	Surgery Image	https://das.mdanderson.edu/CIP/preview/image/guests-general-access/5127;jsessionid=48FA7A567544A4495312DB09D66483A8?maxsize=512&showtransparencygrid=true&cachecontrol=clientdefault
12	Spinal Cord Compression	https://prod-images-static.radiopaedia.org/images/2427616/925c3b2138cd813492bc589899235a_big_gallery.jpg
13	Minimally Invasive Surgery	https://das.mdanderson.edu/CIP/preview/image/guests-general-access/6096;jsessionid=883BE7FFB7A278B934F20BBCE03672C8?maxsize=512&showtransparencygrid=true&cachecontrol=clientdefault

Thank you!



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