

Gold Service Educational Goals and Objectives

12/05

INTERN

Medical Knowledge

Goals

- Understand the indications for adjuvant chemotherapy for colon cancer
- Understand the indications for adjuvant chemoradiotherapy for rectal cancer
- Understand the initial workup of patients with diagnosed colon cancer
- Understand the blood supply and lymphatic drainage of the colon and rectum
- Understand the sequence of evaluation for patients with obstructive jaundice at the level of the ampulla and at the bifurcation of the bile duct
- Understand algorithm for the evaluation of a new breast mass
- Understand the classification of benign and malignant breast lesions
- Understand the role of various biopsy techniques (open, needle localization, stereotactic, core, FNA)
- Know the major prognostic factors and staging system for malignant cutaneous melanoma.
- Know the major prognostic factors and staging system for adult soft-tissue sarcoma.
- Understand the clinical syndromes associated with excess peptide production for gastrin, VIP, somatostatin, glucagons and insulin.

Objectives

- Describe the arterial and lymphatic anatomy of the colon and rectum
- Describe the AJCC staging scheme for colon and rectal cancer
- Explain the workup sequence for patients presenting with obstructive jaundice at the level of the ampulla versus common bile duct
- Describe the vascular anatomy of the stomach and pancreas
- Explain a rational approach to colorectal cancer screening for average risk individuals
- Describe the evaluative sequence (including pertinent elements of history and physical examination) for patients with a new palpable breast mass
- Describe the evaluative sequence (including pertinent elements of history and physical examination) for patients with a new mammographically detected breast mass.
- Describe the key clinical features associated with tumors producing excessive gastrin, insulin, glucagons, somatostatin, and VIP

Patient Care

Goals

- Understand the process of preoperative preparation for patients undergoing colorectal resection
- Understand the management of malignant bowel obstruction
- Understand the metabolic perturbations following liver resection
- Understand routine drain and catheter management
- Understand late radiation toxicity and effects on wound healing
- Understand fluid and electrolyte replacement in patients undergoing complex GI cancer surgery.
- Understand appropriate drain management following axillary dissection.

Objectives

- Describe methods of bowel preparation for colon and rectal resection
- Describe the management sequence for a patient with a malignant small bowel obstruction
- Describe the biochemical and metabolic alterations that occur following major liver resection
- Explain the role of percutaneous drains in the management of postoperative abscess and fluid collection
- Describe the biology of late radiation change to small bowel and soft tissue
- Describe a fluid replacement strategy for a patient with a pancreatic fistula, small bowel fistula
- Describe the appropriate management of the axillary drain following axillary dissection.
- Present a patient in Melanoma Conference. Correctly list the patient's major prognostic factors and staging during the presentation.
- Present a patient in Sarcoma Conference. Correctly list the patient's major prognostic factors and staging during the presentation.

Professionalism

Goals

- Learn to communicate clearly, effectively and compassionately with patients, family, team members and staff
- Understand the principles of efficient and accurate medical communication for sign outs and hand offs
- Learn to place patients reactions to illness within their larger social and cultural backgrounds
- Learn the principles of informed patient decision making
- Respect patient confidentiality

Objectives

- Demonstrate consistent, clear communication with patients and families
- Demonstrate composure and equanimity under stress
- Demonstrate a spirit of helpfulness

- Demonstrate the ability to carefully and thoughtfully describe operative procedures to patients.

Interpersonal and Communication Skills

Goals

- Work as effective team members
- Cultivate a culture of mutual respect with members of nursing and support staff
- Develop patterns of frequent and accurate communication with team members and attending staff
- Gain an appreciation for both verbal and non verbal communication from patients and staff

Objectives

- Demonstrate consistent respectful interactions with members of nursing and support staff
- Demonstrate consistent, accurate and timely communication with members of the surgical team
- Demonstrate sensitivity and thoughtfulness to patients concerns, and anxieties.

Practice-Based Learning

Goals

- Accept responsibility for all dimensions of routine patient management on the wards
- Apply knowledge of scientific data and best practices to the care of the surgical patient
- Facilitate learning of medical students and physician assistant students on the team.
- Use the OHSU library, databases on on-line resources to obtain up to date information and review recent advances in the care of the surgical patient.

Objectives

- Demonstrate a consistent pattern of responsible patient care and application of new knowledge to patient management
- Demonstrate teaching efforts with medical students and physician assistant students
- Demonstrate a command and facility with on line educational tools.

Systems-Based Practice

Goals

- Understand, review, and contribute to the refinement of clinical pathways
- Understand the cost implications of medical decision making
- Partner with health care management to facilitate resource efficient utilization of hospital resources
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Objectives

- Describe in general terms the benefits of clinical pathway implementation
- Demonstrate consistency in working with healthcare management personnel in discharge planning

JUNIOR RESIDENT

Junior resident is also responsible for all intern goals and objectives.

Medical Knowledge

Goals

- Understand the process of patient selection for neoadjuvant versus adjuvant therapy for rectal cancer.
- Understand the genetic defects in HNPCC
- Understand the surgical decision making for patients with distal rectal cancer: APR versus sphincter preservation
- Understand the mechanisms of 5-FU, Irinotecan, and Oxaloplatin
- Understand the role of endoscopic ultrasound in staging pancreatic cancer
- Appreciate the differences between a D1 and a D2 lymphadenectomy for gastric carcinoma
- Understand patient selection for breast conservation versus mastectomy for invasive breast cancer and DCIS.
- Understand patient selection for adjuvant chemotherapy.
- Understand patient selection for adjuvant hormonal therapy.

Objectives

- Describe the clinical criteria for which neoadjuvant chemoradiation would be the optimal treatment for rectal cancer
- Describe the genetic defects involved in the pathogenesis of HNPCC
- Explain the mechanisms of action of 5-FU, Irinotecan, and Oxaloplatin.
- Describe the different lymph nodes that are resected for D1 and D2 lymphadenectomy for gastric cancer
- Describe Endoscopic ultrasound findings that indicate that a patient with pancreatic cancer is unresectable.
- Describe stage specific guidelines for adjuvant chemotherapy.
- Describe specific contraindications to breast conserving therapy.
- Describe clinical guidelines and pathologic criteria for adjuvant hormonal therapy.

Patient Care

Goals

- Understand the appropriate staging and initial management of patients with rectal cancer
- Understand the appropriate staging and initial management of patients with a pancreatic tumor.

- Understand the aims of adjuvant therapy for rectal cancer and colon cancer
- Understand the diagnosis and evaluation of patients with cystic pancreatic tumors
- Understand the principles of oncologically sound colon resection
- Understand the anatomic principles (including orientation of incision) for lumpectomy and breast biopsy.
- Understand the anatomy of the axilla.
- Understand the work-up and management of primary melanoma.
- Understand the work-up and management options for extremity, truncal, and retroperitoneal adult soft tissue sarcomas.
- Understand the general strategy for localization of neuroendocrine tumors of the pancreas.

Objectives

- Describe the appropriate staging and evaluation of patients with known rectal cancer
- Describe the role of endoscopic ultrasound in determining surgical therapy for rectal cancer
- Describe the sequence of evaluation for a patient with a periampullary neoplasm
- Indicate when direct cholangiography (ERCP, PTC) is appropriate for patients with suspected pancreatic or bile duct malignancy
- Describe the sequence of technical maneuvers for right and left hemicolectomy for carcinoma
- Describe the management of postoperative pancreatic fistula
- Describe the operative approach to breast biopsy (including open and needle localization).
- Describe the anatomic landmarks and general approach to axillary lymph node dissection.
- Present a patient in melanoma conference. During the presentation correctly outline the rationale for the work-up and treatment.
- List the pros and cons of PET scan, CTs scans, Brain MR and CT, and LDH levels in the work-up of melanoma.
- Present a patient in Sarcoma Conference. During the presentation correctly outline the rationale for the work-up and treatment.
- Describe the correct options and techniques for biopsying extremity, truncal, and retroperitoneal sarcomas.
- Describe an appropriate localization strategy for a patient with a suspected pancreatic neuroendocrine tumor.

Professionalism

Goals

- Learn to assume an increased role in team leadership
- Gain increasing comfort with managing the complex emotional and psychosocial needs of cancer patients

Objectives

- Demonstrate increasing leadership by assuming increased supervision of intern and medical students, while attending to their needs for education and guidance
- Demonstrate sensitivity and composure while discussing complex medical issues with anxious patients

Interpersonal and Communication Skills

Goals

- Understand appropriate indications for referral to other oncologic specialists
- Effectively communicate with nursing and support staff to facilitate patient care
- Gain familiarity with telephone based patient assessment
- Understand the importance of the goals of cancer therapy and the distinction between curative and palliative therapy

Objectives

- Demonstrate appropriate transfer of information to other oncologic specialists
- Demonstrate effective communication with nursing and support staff to facilitate patient care
- Demonstrate thoughtful and timely telephone based patient assessment
- Articulate the difference between curative and palliative therapy and be able to provide examples

Practice-Based Learning

Goals

- Practice regular reviews of outcomes
- Gain increasing understanding of the literature regarding the management of clinical problems in surgical oncology
- Practice regular review of technical issues surrounding breast procedures, biopsies, soft tissue excisions and lymph node dissections

Objectives

- Demonstrate a pattern of regular review of outcomes for all cases
- Demonstrate a familiarity with relevant literature regarding the management of clinical problems in surgical oncology
- Demonstrate a pattern of consistent evaluation and ongoing improvement of technical approach to surgical oncology procedures

Systems-Based Practice

Goals

- Learn to assist in the coordination of multidisciplinary cancer care

- Gain an understanding of the function of a multidisciplinary cancer clinic
- Gain an understanding of expense of cancer care at the population level
- Understand the role of nursing, social work and support groups in the care of the cancer patient

Objectives

- Describe the importance of coordination of care in multidisciplinary cancer treatment
- Describe the cost of treatment with targeted therapy for one month for a patient with metastatic colorectal cancer
- Describe appropriate indications for referral of a cancer patient to social work, or to a counselor or psychologist

CHIEF RESIDENT

Responsible for all Intern and Junior goals and objectives as well as the Chief specific goals.

Medical Knowledge

Goals

- Understand the advantages and disadvantages of preoperative versus postoperative chemoradiotherapy for rectal cancer
- Understand the indications and contraindications for a transanal resection for rectal cancer
- Understand the biology of KIT protooncogene and imatinib therapy for GIST
- Understand the anatomy of a D1 and D2 lymphadenectomy for gastric cancer
- Understand the importance of data from the GI Tumor Study Group in the decision-making regarding adjuvant therapy for resected pancreatic cancer.
- Understand segmental hepatic anatomy
- Understand the principles of inflow and outflow control in liver resection
- Understand the indications and contraindications to liver resection for colorectal liver metastases.
- Understand the indications for postmastectomy radiation.
- Understand the principles of sentinel node mapping, including definition of sentinel nodes and patient selection.
- Understand patient selection for neoadjuvant chemotherapy.
- Understand the difference between tamoxifen and aromatase inhibitors.
- Understand options for adjuvant/neo-adjuvant and palliative therapy of adult soft-tissue sarcomas.

Objectives

- Explain the advantages, disadvantages and principles of patient selection for neoadjuvant versus adjuvant therapy for rectal cancer
- List the indications and patient selection criteria for transanal excision for rectal cancer.
- Explain C-KIT biology
- Describe D1 and D2 lymph node stations
- Describe the results of the pivotal GI Tumor Study Group randomized trial of adjuvant therapy in resected pancreatic cancer.
- Describe the numbers and locations of the 8 hepatic segments.
- Describe several methods of inflow and outflow control for hepatectomy.
- Describe indications and contraindications for liver resection for hepatic colorectal metastases.
- Describe the steps of sentinel lymph node mapping and biopsy and describe risks of procedure.
- Describe appropriate stages and diagnoses that would be appropriate for referral for neoadjuvant chemotherapy for breast cancer.
- Describe the major types of postmastectomy breast reconstruction including advantages and limitations of each method.
- Describe the hormonal mechanism of tamoxifen versus aromatase inhibitors.
- Name the most active systemic agents used for sarcoma and state at least 1 side effect for each drug.

Patient Care

Goals

- Understand the operative sequence for standard and pylorus preserving pancreaticoduodenectomy.
- Understand the approach and anatomic specifics of autonomic nerve preserving mesorectal excision for rectal cancer
- Understand the operative approach to liver resection, including the importance of central venous pressure management
- Understand the principles of gastric resection for carcinoma
- Understand the principles of GIST surgery for primary and metastatic disease.
- Understand the principles of patient selection and operative approach for laparoscopic colectomy.
- Understand criteria for the identification of patients at high risk for breast cancer (ADH, LCIS, BRCA).
- Understand the operative approach, including contraindications for skin sparing mastectomy.
- Understand options for adjuvant and palliative therapy of melanoma
- Know the conduct of basic operations for node positive melanoma, including groin and axillary dissections.
- Know the conduct of basic operations for extremity, truncal, and retroperitoneal sarcomas.
- Understand the operative approach for a patient with a suspected gastrinoma.

Objectives

- Describe the operative sequence for standard and pylorus preserving pancreaticoduodenectomy.
- Demonstrate the hypogastric pelvic plexus and the plane of mesorectal dissection.
- Describe the operative approach to liver resection including right side versus left side resections.
- Describe the appropriate operative approach including lymph node dissection for tumors of the distal stomach, body, cardia, and GE junction.
- Describe the operative approach for GIST of the stomach, or small bowel.
- Describe the criteria for identification of patients at high risk for breast cancer.
- Describe the operative approach for skin sparing mastectomy.
- Describe the management of a patient with ADH, LCIS, or BRCA positive.
- Describe the indications for breast MRI.
- Tell the indications and side effects of adjuvant interferon. Briefly describe the dose-schedule.
- Describe at least 3 options for the treatment of metastatic melanoma.
- List or demonstrate the proper steps in a standard axillary dissection and inguinal/femoral lymph node dissection. Tell the indications and side effects for each operation.
- Tell the indications and side effects of adjuvant/neo-adjuvant treatment of extremity, truncal, and retroperitoneal adult soft tissue sarcomas.
- Describe the indications/contraindications for chemotherapy and surgery for the treatment of metastatic sarcoma.
- List or demonstrate the proper steps in a standard resection for extremity sarcoma.
- Describe the appropriate operative approach for a patient with a suspected, but non localized gastrinoma.

Professionalism

Goals

- Understand the role of the chief resident as team leader.
- Develop professional commitment to care for cancer patients on the Gold service.
- Foster respectful communication between patients, team members, students and staff

Objectives

- Demonstrate the leadership by example and by providing for the needs of other members of the surgical team.
- Demonstrate consistent and compassionate care for cancer patients on the Gold service.

Interpersonal and Communication Skills

Goals

- Develop an ability to communicate complex medical information to anxious patients.
- Develop effective team-building skills.
- Learn how to honestly and thoughtfully relay bad news to patients and families.
- Learn how to assess patients' knowledge of their disease process.

Objectives

- Demonstrate an ability to communicate complex medical information to anxious patients.
- Demonstrate effective team-building skills as evidenced by satisfaction of junior level residents and medical students.
- Be able to describe a general approach to delivery of bad news.
- Describe an interview technique which allows the examiner to gauge the patients' understanding of their disease.

Practice-Based Learning

Goals

- Gain experience with using a case based conference (Gold Teaching Conference) as an educational tool.
- Evaluate the literature to support or question surgical oncology practices.
- Review outcomes with the team to improve and enhance learning.

Objectives

- Demonstrate the ability to select cases and guide preparation to optimize the benefits from a case based conference.
- Demonstrate that relevant literature is used in making clinical decisions
- Demonstrate that outcomes are discussed and reviewed as a team.

Systems-Based Practice

Goals

- Understand the surgical oncologists role in coordinating multidisciplinary cancer care.
- Understand the importance of multidisciplinary decision making at the early stage of treatment.
- Understand the organization of a multidisciplinary clinic

Objectives

- Describe the surgical oncologists role in coordinating multidisciplinary cancer care for patient a variety of complex malignancies.

- Describe the potential pitfalls that arise if appropriate multidisciplinary input is not obtained prior to treatment initiation.
- Describe the organization of a multidisciplinary clinic for example, for breast cancer.

Reading List

1. Schwartz's Principles of Surgery, eighth edition
 - Oncology Ch. 9 Pages 249-289
 - Colorectal Cancer Pages 1084-1097
 - Hepatic Neoplasms Pages 1165-1182
 - Gallbladder Cancer Pages 1213-1215
 - Bile duct cancer Pages 1215-1218
 - Pancreatic Neoplasms Pages 1274-1290
 - Soft Tissue Sarcoma (including GI Stromal Tumor) Pages 1329-1347
 - Gastric Carcinoma Pages 971-983
 - Melanoma Pages 440-445
 - Breast Cancer Pages 466- 496
2. Level Specific Reading from Schwartz
 - Intern
 - i. Oncology Chapter
 - ii. Colorectal Cancer
 - iii. Sarcoma
 - iv. Melanoma
 - Junior Resident
 - i. All intern level material
 - ii. Breast Cancer
 - iii. Gastric Carcinoma
 - iv. Pancreatic Carcinoma
 - Chief
 - i. All intern and junior material
 - ii. Hepatic neoplasms
 - iii. Gallbladder Cancer
 - iv. Bile Duct Carcinoma

Oral Exam for R1

Rectal Cancer

Service: Gold Surgery
Competency: Patient Care

Vignette for resident: A 65 year old man presented with a history of rectal bleeding. He underwent flexible sigmoidoscopy in the office of his primary care physician. A bulky mid rectal mass was discovered.

Guidelines for faculty examiner:

1. Describe the key points of physical examination, particularly rectal examination
 - R1 must describe complete physical examination including :
 - i. Rectal examination
 - ii. Examination of inguinal nodes
 - iii. Pelvic examination for women
2. Describe the key point of history
 - Characteristics of changes in bowel habit
 - Presence of blood in stool
 - Urinary symptomatology
 - Family history including relatives with CRC diagnosed before age 50
3. Describe the preoperative evaluation
 - Indicate need for biopsy and tissue diagnosis
 - Indicate need for complete colonoscopy to clear colon
 - CT scan
 - i. Indicate CT scan to provide information about distant metastatic disease
 - ii. Indicate CT also provides locoregional staging information
 - Endorectal Ultrasound to provide additional local staging information

Grade	Question 1 (points)	Question 2 (points)	Question 3 (points)
Honors	3	4	4
Pass	2	3	3
Fail	<2	<3	<3

Note: For pass, R1 must pass questions all three questions

Oral Exam for R2/3

Rectal Cancer

Service: Gold Surgery
Competency: Patient Care

Vignette for resident: A 65 year old man presented with a history of rectal bleeding. He underwent flexible sigmoidoscopy in the office of his primary care physician. A bulky mid rectal mass was discovered.

Guidelines for faculty examiner:

4. Describe the key points of physical examination, particularly rectal examination
 - R2/3 is responsible for all of the test points for the R1
 - R2/3 must describe at least two specific features of rectal exam
 - i. relationship of tumor to anal verge,
 - ii. relationship of tumor to the top of anorectal ring
 - iii. fixation/mobility
 - iv. anterior versus posterior location
5. Describe the key point of history
 - R2/3 is responsible for all of the test points for the R1
 - Characteristics of changes in bowel habit
 - Presence of blood in stool
 - Urinary symptomatology
 - Family history including relatives with CRC diagnosed before age 50
6. Describe the preoperative evaluation
 - Indicate need for biopsy and tissue diagnosis
 - Indicate need for complete colonoscopy to clear colon
 - CT scan
 - i. Indicate CT scan to provide information about distant metastatic disease
 - ii. Indicate CT also provides locoregional staging information
 - Endorectal Ultrasound to provide additional local staging information
 - Be knowledgeable about MR as an alternative to EUS for local staging
 - Suggest Preoperative CEA measurement
7. Describe the criteria for selection of patients for sphincter sparing surgical procedure (local tumor characteristics)
 - R2/3 describes no evidence of invasion into sphincteric complex
8. Describe the indications for adjuvant chemoradiation in rectal cancer
 - R2/3 describes
 - i. T3
 - ii. Node positive disease
9. Describe the technical approach to rectal resection with total mesorectal excision
 - R2/3 Describes preservation of the mesorectal fascial envelope

Grade	Ques. 1	Ques. 2	Ques. 3	Ques. 4	Ques. 5	Ques. 6
Honors	4	4	6	1	2	1
High Pass	4	4	4	1	1	1
Pass	2	3	3	1	1	0
Fail	<2	<3	<3	<1	<1	0

Note: To pass R2/3 must have the scores indicated for all 5 questions. If the R2/3 has a failing score for any of the questions 1-5 (as indicated by the scores in the fail row) a failing grade will be given.

Oral Exam for R5

Rectal Cancer

Service: Gold Surgery
Competency: Patient Care

Vignette for resident: A 65 year old man presented with a history of rectal bleeding. He underwent flexible sigmoidoscopy in the office of his primary care physician. A bulky mid rectal mass was discovered.

Guidelines for faculty examiner:

Note: R5 will be responsible for all of the history, exam and staging information that is specifically tested for the R1 and R2/3, but in the interests of time, the R5 should be tested on more advanced material. If there is doubt in the mind of the examiner, the R5 should be tested on the earlier material as well.

10. Describe the criteria for selection of patients for sphincter sparing surgical procedure
 - Describes no evidence of invasion into sphincteric complex
 - Describes adequate sphincter tone for a continent reconstruction.

11. Describe the indications for adjuvant chemoradiation in rectal cancer
 - Describes T3 disease
 - Describes node positive disease

12. What are the advantages and disadvantages of preoperative chemoradiotherapy?
 - Advantages
 - i. Facilitates sphincter preservation
 - ii. Improved local control versus postoperative chemoRT
 - iii. Less acute toxicity
 - iv. Facilitates resection of locally advanced disease with clear margins
 - Disadvantages
 - i. Pathologic analysis of specimen may understage disease after radiation
 - ii. Patients may be overtreated as the decision to treat is made on clinical, rather than pathologic staging information.

13. Describe the technical approach to rectal resection with total mesorectal excision
 - Describes preservation of the mesorectal fascial envelope
 - Describes sharp dissection
 - Describes dissection under direct vision with deep pelvic retractor (St. Marks)
 - Describes Autonomic nerve identification and preservation

- Describes dividing mesorectum approximately 5 cm distal to proximal rectal cancers

Grade	Question 1	Question 2	Question 3	Question 4
Honors	2	2	6	5
High Pass	2	2	5	4
Pass	2	2	3	3
Fail	<2	<2	<3	<3

Note: R5 must pass at least $\frac{3}{4}$ advanced questions with the scores indicated to achieve overall passing score.