JURSI
SURGERY ROTATION MANUAL

Undergraduate Surgery Education

UNIVERSITY OF SASKATCHEWAN
Department of Surgery

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Department of Surgery

www.medicine.usask.ca/surgery

Welcome to your surgical clerkship rotation at the University of Saskatchewan!

Over the next six weeks, you will have the opportunity to work on a surgical team where you will learn new knowledge and skills that will serve you well in your future medical careers. Although our primary goal is for you to gain competency in the learning objectives outlined in this document, I hope that the positive learning experiences and relationships you develop throughout this rotation will stimulate your interest in becoming a surgeon yourself one day.

Surgical clerkship will challenge you…at least it should challenge you. There is a tremendous amount of information to learn in a very short period of time.

You will also be asked to demonstrate newly-acquired psychomotor skills. The acuity and volume of surgical patients, the demands of long working hours and the stress associated with being in a novel learning environment will likely take you out of your comfort zone at times. This feeling is completely normal and is part of transformative learning, as you transform from being a medical student to becoming a practicing physician. That being said, maladaptive stress and anxiety are not conducive to learning and if you ever feel excessively overwhelmed please ask for assistance and never be afraid to ask for help.

Every student has the opportunity to succeed in this rotation, but like most things in life the more effort you put in, the more you will get out. To be successful in your surgical clerkship, you have to be self-motivated, be a respectful team-player, be well-prepare for clinical encounters, and work hard everyday by doing your best. I challenge you to go into this rotation with an open mind and a positive attitude and you will be remarkably surprised how your attitude will determine your altitude in this rotation!

As the Director of Undergraduate Surgical Education, my goal is to have a surgical education program that enables trainees to reach their highest potential. Physicians not only heal the sick and mend the wounded, they also advocate for their patients and public health issues, conduct important health-related research, lead important initiatives and organizations, and are role models in their communities. Excellently trained physicians add great value to society. As medical educators, we have to remember that we are not only training the next generation of physicians, we are also mentoring the next generation of leaders in medicine and society in general. Surgery and surgical education will continue to evolve over time. Sir William Osler eloquently stated that "the philosophies of one age have become the absurdities of the next, and the foolishness of yesterday has become the wisdom

of tomorrow." As practicing physicians, it is very important for us to evolve over time and as educators I believe we have succeeded when our students question the status quo and lead transformative changes over their careers.

I hope that you enjoy your experience during your surgical clerkship and if you have any suggestions, comments or concerns regarding your rotation or undergraduate surgical education in general, please don't hesitate to let me know.

Sincerely,

Dr. Trustin Domes, Director
Undergraduate Surgery Education Program
Department of Surgery, College of Medicine
University of Saskatchewan

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CONTACT INFORMATION

Dr. T. Domes, Program Director

Marilyn Baniak, Undergraduate Education Coordinator (Clerkship)

Surg I: General Surgery (6 weeks) you will be assigned to one of these 4 sites:

Site	Site Coordinator	Undergraduate Education Coordinator	Phone Number
Regina General Hospital	Dr. S. Pooler	Jennifer Chobot	766-3705
Prince Albert Victoria Hospital	Dr. R. O'Carroll	Nicole Toutant	765-6787
Royal University Hospital	Dr. M. Ogaick	Marilyn Baniak	966-5678
St. Paul's Hospital	Dr. S. Mueller		

SPH Rotations

Janine Corbett, SPH & Elective Coordinator
College of Medicine, 2nd Floor, A Wing – Rm. 2.8.01
St. Paul's Hospital Teaching Office
Telephone: 655-5004 and Fax: 655-5794

Surg II: Surgery Selective (2 weeks) you may select a rotation from one of the following subspecialties (depending on availability).

Surgical specialty	Coordinator	Administrator	Contact Info
Cardiac Surgery	Dr. G. Dalshaug	Lori	844-1094
ENT	Dr. P. Spafford	Teegan	244-7865 #5
Intensive Care Unit	Dr. J. Reid	Susan	655-2053
Neurosurgery	Dr. M.Kelly	Becky	844-1104
Orthopedic Surgery	Dr. A. Dzus	Judy	844-1114
Plastic Surgery	Dr. G. Chandran	Email: drgeethanchandran@gmail.com	
Pediatric Surgery	Dr. G. Miller	Terri	844-1090
Urology	Dr. T. Domes	Deloris	653-3255
Vascular Surgery	Dr. B. Ulmer	Jody	653-3366

Vacation

Allocation of vacation time during surgery rotations follows the guidelines from the College of Medicine. You may take a maximum of 5 vacation days during your 6 weeks of General Surgery and none during your 2 weeks of surgery selective. All vacation requests must be approved by application to **Marilyn Baniak** in the Surgery Teaching Office a minimum of one month in advance of starting your surgery rotation.

CLINIC AND OR SCHEDULES

ROYAL UNIVERSITY HOSPITAL

CTUA	Monday	Tuesday	Wednesday	Thursday	Friday
AM	Keith OR	**Academic ½ day*** Christian OR	Shaw/Luo/ Moser/Beck OR **Christian clinic 8:00-noon***	**Ogaick clinic 9:00 – 12:00**	
PM	Keith OR Shaw/Luo/ Moser/Beck OR: alternating every other Monday	**Shaw clinic 1-4pm** **Shaw/Luo/ Moser/ Beck clinic: 1-4:00, alternate every week** Christian OR	Keith clinic 2-4:30	**Christian clinic 1-4:00*** **Ogaick clinic 1:00 – 4:00**	Keith Clinic **Resident's Academic ½ day (JURSI's can attend)**

Bolded* sections indicate priority activities for the JURSI assigned to that CTU

CTUB	Monday	Tuesday	Wednesday	Thursday	Friday
AM		**Academic ½ day*** Stevenson OR		Kanthan OR **Stevenson clinic 8:00 –11:30**	
PM	**Kanthan clinic 12:30-4:00***	Stevenson OR	**Kanthan clinic* 12:30-4:00**	Kanthan OR	**Resident's Academic ½ day (JURSI's can attend)**

***Bolded* sections indicate priority activities for the JURSI assigned to that CTU**

ST. PAUL'S HOSPITAL CLINIC AND OR SCHEDULE

Divisions of General, Thoracic and Vascular Surgery Schedules
For St. Paul's Hospital Clinical Schedule, check OR slate as information changes regularly; clinic/OR times shared with other surgeons.

Attending	Division	Monday	Tuesday	Wednesday	Thursday	Friday
S. Bharadwaj	Thoracic	Clinic 8:30 to 4:00			OR 8:00 to 4:00	
R. Bigsby	Thoracic	Endo 8:00 to 4:00	OR 8:00 to 4:00	Clinic 8:00 to 1:30		
B. Duval	Vascular	OR	Amb a.m.		Clinic – office	Amb a.m. Var. Vein Clinic p.m.
J. Gaboury	GS		OR 8:00 to 4:00	Endo 8:00 to 12:00	Clinic - office 8:00 to 4:00	
G. Groot	GS	Breast Health a.m. Amb p.m.				Clinic - office
M. Harington	GS	Clinic – office	BHC		Endo or Amb.	
P. Hayes	GS	Clinic - office 8:00 to 4:00	Endo 8:00 to 4:00		OR 8:00 to 4:00	
R. Kennedy	Thoracic		Clinic 8:30 to 4:00	OR 8:00 to 4:00		Endo 9:00 to 12:00
K. Kvinlaug	Vascular	Amb p.m.	Clinic – office	OR	Vasc Lab p.m.	Amb a.m. Vasc Lab/VV Clinic pm
P. Meiers	GS	Breast Health Center			Breast Health Center a.m. and Office p.m.	
S. Mueller	GS			Endo RUH	Clinic - office 8:00 to 4:00	
J. Oucharek	GS	OR 8:00 to 4:00	Endo 8:00 to 4:00	Clinic - office 8:00 to 4:00		
J. Pfeifer	GS	Breast Health Clinic p.m.	Clinic - office		Endo or Amb.	
P. Seshadri	GS	Endo 8:00 to 4:00	OR	Amb a.m.		
J. Spelay	Vascular	Clinic - office	OR	Amb a.m.		
B. Ulmer	Vascular	Amb p.m.	Amb a.m.	Clinic - office	OR	Amb a.m. Var. Vein Clinic p.m.

Karen/Weekly CTU SPH 2014/Template SPH Clinic Schedule 2014

SURGERY OBJECTIVES

Prepared by Dr. McConnell, Dr. Kaban and J. Cruise

College of Medicine, University of Saskatchewan
August 2011

Surgery Rotation in Phase D

Objectives

By the end of the rotation, students will be expected to:

1. Demonstrate competency (perform an appropriate history and physical examination, synthesize data to arrive at a differential diagnosis, use relevant diagnostic tests, participate in patient care) in the management and treatment of patients with surgically oriented problems *(Expert, Collaborator, Communicator, Manager, Professional)*
2. Recognize and provide the clinical conditions in a patient that result in a differential diagnosis and provide an initial treatment/management plan when possible, for the following *(Expert, Communicator)*:
    - Abdominal masses
    - Abdominal pain
    - Abdominal wall and groin masses
    - Asymptomatic patient with positive test
        - Gallstones
        - Hypercalcemia
        - Incidental mass on computer tomography
    - Breast problems
    - Chest pain & shortness of breath
    - Fluid and electrolyte disorders
    - Acid base balance disorders
    - Gastrointestinal hemorrhage
    - Jaundice
    - Leg pain
    - Lung nodule
    - Neck mass
    - Non-healing wounds
    - Perianal problems
    - Peri-operative care
    - Post-operative complications
    - Shock
    - Skin and soft tissue lesions
    - Swallowing difficulty and pain
    - Transplantation
    - Trauma
    - Vomiting, diarrhea, constipation

    - See Appendix A for more specific learning objectives for each condition.

3. Present a surgical research topic *(Expert, Communicator, Scholar)*
4. Identify the elements of informed consent *(Expert, Communicator*)
5. Maintain clear, accurate, and appropriate records of clinical encounters *(Expert, Communicator)*

6. Communicate in a language easily understood by patients and family members *(Communicator)*
7. Demonstrate an awareness of cultural and socio-economic issues that impact patient and population health *(Expert, Communicator, Professional)*
8. Demonstrate an understanding of and practice evidence-based medicine *(Expert, Scholar, Communicator)*
9. Identify and appropriately use resources to improve knowledge base *(Scholar)*
10. Demonstrate insight into one's own limitations and methods to improve *(Professional, Scholar)*
11. Demonstrate application of ethical principles in the clinical decision-making process, including patient confidentiality, privacy and autonomy *(Expert, Communicator, Professional)*
12. Participate with a team of allied health professionals, respecting individual roles, in the care and treatment of a patient *(Collaborator, Communicator)*
13. Demonstrate appropriate professionalism skills including respect for patients and health team personnel, honesty, integrity, altruism, appropriate boundaries, responsibility, timeliness, and striving for personal balance (*Professional*)
14. Practice the art of comforting patients and alleviating suffering *(Communicator, Professional)*
15. Promptly identify emergency situations and respond appropriately *(Expert)*

ED-2s

Patient Categories

a. Evaluate (focused history and targeted physical exam) new patients with surgically orientated problems in the inpatient/outpatient setting
b. Evaluate (focused history and targeted physical exam) review patients with surgically orientated problems in the inpatient/outpatient setting
c. Evaluate and manage postoperative fluid and electrolyte needs in the inpatient setting
d. Evaluate and manage postoperative pain in the inpatient setting
e. Evaluate patients for infectious postoperative complications in the inpatient/outpatient setting
f. Evaluate patients for non-infectious postoperative complications in the inpatient/outpatient setting
g. Manage a patient's postoperative wound in the inpatient/outpatient setting

Procedures/Skills

a. Give an oral presentation of a patient problem-oriented surgical research topic to attending faculty and other members of the patient care team
b. Observe the process of informed consent
c. Perform as a first or second assistant to operating surgeons
d. Scrub, gown and glove to assist operating surgeons
e. Write brief operative reports in the health record
f. Write postoperative orders in the health record
g. Write daily progress notes in the health record documenting an inpatient's hospital course
h. Perform an observed history.
i. Perform an observed physical.

Appendix A - Specific Objectives

The following Medical Expert learning objectives for the Phase D Surgery clerkship are drawn from The Manual of Surgical Objectives by Canadian Undergraduate Surgery Education Committee, 2004 (www.cusec-ccecp.ca) and the Association for Surgical Education (http://www.surgicaleducation.com/).

The following are a list of patient problems or clinical presentations and related objectives which are essential to cover, either as clinical exposures, independent learning activities or in discussion during problem based surgery seminars:

Where appropriate the corresponding Medical Council of Canada objective is referenced.

ABDOMINAL MASSES - OBJECTIVES (MCC #2):
1. Describe the causes of hepatomegaly.
• Discuss the role of liver function testing, radionucleotide imaging, ultrasound and CT scanning in the evaluation.
• Discuss the most frequently encountered benign hepatic tumors and their management.
• Discuss the most frequently encountered malignant hepatic tumors and their management.
2. Describe the causes of splenomegaly.
• Discuss the most common signs and symptoms associated with hypersplenism.
• Discuss the short and long term complications associated with surgical removal of the spleen.
3. Describe the differential diagnosis of a pancreatic mass.
• Discuss the most useful diagnostic studies.
• Discuss the relationship of the pancreatic duct to the common bile duct and how this may impact diagnosis and treatment of pancreatic lesions.
• How do you differentiate a pseudocyst from a cystadenoma or true cyst?
• What are the major complications of pancreatic necrosis and pseudocyst formation?
4. Describe the evaluation and management of abdominal aortic aneurysms.
• Discuss appropriate imaging studies for aneurysms.
• Discuss how to determine which patients need surgical repair of the aneurysm.
• Discuss the risks of surgical treatment and the risks of the aneurysm left untreated.

ABDOMINAL PAIN - OBJECTIVES (MCC #3)
1. Gather a complete or problem focused history for various patients presenting with abdominal pain. Emphasis will be placed on:
• characterization of pain (location, severity, character, pattern)
• temporal sequence (onset, frequency, duration, progression)
• alleviating/ exacerbating factors (position, food, activity, medications)
• associated signs / symptoms (nausea vomiting, fever, chills, anorexia, wt. loss, cough, dysphagia, dysuria/frequency altered bowel function (diarrhea,

constipation, obstipation, hematochezia, melena, etc.)
• pertinent medical history: prior surgery or illness, associated conditions (pregnancy, menstrual cycle, diabetes, atrial fibrillation or cardiovascular disease, immunosuppression). Medications: anticoagulation, steroids etc.
2. Demonstrate the components of a complete abdominal examination including rectal, genital & pelvic examinations.
• Relate the significance of the various component examinations: observation, auscultation, percussion, palpation as they apply to common abdominal pathologic processes. Examples: distention, visible peristalsis, high pitched or absent bowel sounds, tympany, mass, localized vs. generalized guarding and/or rebound tenderness.
3. Demonstrate and relate the significance of various maneuvers utilized in evaluating acute abdominal pain. Examples: iliopsoas sign, Rovsing's sign, obturator sign, Murphy's sign, cough tenderness, heel tap, cervical motion tenderness.
4. Describe the keys to successful examination of infants and children with abdominal pain. Characterize examination skills that may be utilized in pregnancy, or patients with altered neurologic status.
5. Develop a differential diagnosis for various patients presenting with acute abdominal pain. Differentiate based on:
• location: RUQ, epigastric, LUQ, RLQ, LLQ
• symptom complex: examples: periumbilical pain localizing to RLQ, acute onset left flank pain with radiation to the testicle etc.
• age: pediatric, adult, geriatric
• associated conditions: pregnancy, immunosuppression (AIDS, transplant, chemotherapy / radiation therapy)
6. Explain the rationale for utilizing various diagnostic modalities in the evaluation of abdominal pain.
• Laboratory: CBC, amylase, electrolytes, BUN, creatinine, glucose, urinalysis, beta-HCG, liver profile.
• Diagnostic imaging: flat and upright abdominal radiographs, upright chest X-ray, abdominal ultrasonography, CT scan of abdomen and pelvis, GI contrast radiography, angiography, IVP.
• Special diagnostic / interventional techniques: upper endoscopy, proctosigmoidoscopy,
colonoscopy, laparoscopy.
7. Discuss the presentation, diagnostic strategy, and initial treatment of patients presenting with common or catastrophic painful abdominal conditions.
• acute appendicitis
• cholecystitis / biliary colic / choledocholithiasis / cholangitis
• pancreatitis
• peptic ulcer disease with & without perforation
• gastroesophageal reflux
• gastritis / duodenitis
• diverticulitis

• inflammatory bowel disease
• enterocolitis
• small bowel obstruction: incarcerated hernia, adhesions, tumor
• colon obstruction: volvulus, tumor, stricture
• splenomegaly / splenic rupture
• mesenteric ischemia
• leaking abdominal aortic aneurysm
• gynecologic etiologies: ectopic pregnancy, ovarian cysts (torsion, hemorrhage, rupture) tuboovarian abscess, salpingitis, endometriosis
• genito-urinary etiologies: UTI, pyelonephritis, ureterolithiasis, testicular torsion
8. Discuss the common non-surgical conditions that can present with abdominal pain Examples: MI, pneumonia, pleuritis, hepatitis, gastroenteritis, mesenteric adenitis, sickle cell crisis, DKA, herpes zoster, nerve root compression.
9. Compare and contrast acute appendicitis in young adults, the very young, very old, and pregnant women. Discuss issues relevant to presentation, diagnosis, treatment, complications etc. Example: perforation risk.
10. Discuss the diagnosis and treatment of abdominal problems with particular relevance
to the pediatric population. Include: neonates, infants, children, adolescents. Be able to list the abdominal problems, characteristic of each group, and outline diagnostic and intervention strategies for:
• Congenital: hernias, malrotation, midgut volvulus
• Hirschsprung's disease
• Pyloric Stenosis
• Intussuception
• Meckel's diverticulitis
• Child abuse
11. Describe the normal bacterial flora of the GI, GU and GYN systems and compare to pathologic infections.
• Discuss appropriate antibiotic therapy where indicated in various conditions manifesting with abdominal pain.
12. Discuss the approach to patients with postoperative abdominal pain. Contrast findings in non-operated patients with regards to:
• presentation
• examination
• differential diagnosis
• intervention strategies

ABDOMINAL WALL& GROIN MASSES – OBJECTIVES (MCC #2):
1. Discuss the differential diagnosis of inguinal pain, mass or bulge.
• consider hernia, adenopathy, muscular strain
2. Describe the anatomic differences between indirect and direct hernias.
3. Discuss the relative frequency of indirect, direct and femoral hernias by age and gender.

4. Discuss the clinical conditions that may predispose to development of inguinal hernia.
5. Discuss the indications, surgical options, and normal post-operative course for:
• inguinal hernia repair
• femoral hernia repair
6. Define and discuss the clinical significance of incarcerated, strangulated, reducible and Richter's hernias.
7. Discuss the differential diagnosis of an abdominal wall mass.
• consider desmoid tumors, neoplasm, hernia, adenopathy, and rectus sheath hematoma
8. Describe the potential sites for abdominal wall hernias.
• consider incisional, umbilical, inguinal, femoral, Spigelian, and epigastric
• differentiate diastasis recti from abdominal hernia
9. Compare the natural history and treatment of umbilical hernia in children and adults.
10. Describe clinical factors contributing to the development and repair of an incisional hernia.

GALLSTONES – OBJECTIVES:
1. Understand the natural history of symptomatic and asymptomatic gallstone disease.
2. Define "symptomatic" in the context of gallstone disease.
3. Discuss the available literature on the natural history of asymptomatic gallstones.
4. Discuss the indications for cholecystectomy.
5. Discuss the options, pros and cons, for treatment of gallstones:
• cholecystectomy
• dissolution therapy
• watchful waiting
6. Discuss impact of associated medical conditions on the decision to treat gallstones.
7. Discuss the association of cancer of the gallbladder and gallstones.

HYPERCALCEMIA - OBJECTIVES (MCC #12-2):
1. Discuss and understand calcium homeostasis.
2. Understand the symptoms and signs of acute and chronic hypercalcemia.
3. Discuss the differential diagnosis of hypercalcemia.
4. Discuss the evaluation and management of hypercalcemia
INCIDENTAL MASS ON COMPUTER TOMOGRAPHY – OBJECTIVES:
1. Discuss the differential diagnosis of incidental masses of:
• Liver
• Kidney
• Adrenal

BREAST PROBLEMS - OBJECTIVES (MCC #10):

1. Develop a differential diagnosis for a 20-year-old patient with breast mass and a 45-year-old patient with breast mass. Consider benign vs. malignant, abscess.
2. Describe the diagnostic work-up and sequence:
• Discuss importance of the patient's history: estimated duration of illness, nipple discharge, breast cancer risk factor assessment.
• Discuss physical findings to look for.
• Discuss in-office procedures for evaluation and treatment (FNAC, needle aspiration, incision & drainage, core needle biopsy) and their diagnostic/therapeutic implications.
• Discuss the importance of such breast imaging studies as ultrasound and mammography.
3. Discuss the diagnosis and management of the patient with an abnormal mammogram (consider microcalcifications)
4. Discuss the rationale for management with specific emphasis on:
• clinical staging of breast CA
• various possible malignant, pre-malignant, and benign pathology results (including hormonal receptor analysis, tumor DNA analysis)
• follow-up for a patient with a benign lesion (alterations in lifestyle, imaging studies, cancer risk)
• role of incision and drainage and antibiotics in breast abscess treatment.
• current recommendations for screening mammography.
• therapeutic options for the patient with breast CA
• role of surgery/when to consult a surgeon for further diagnosis & treatment

CHEST PAIN & SHORTNESS OF BREATH - OBJECTIVES (MCC #14, 27):

1. Describe the causes, diagnosis, and treatment of spontaneous pneumothorax.
• Discuss the risks of pneumothorax which could prove life-threatening.
• Discuss the underlying pulmonary pathology you might expect to find.
• Discuss the role of: observation, tube thoracostomy, chemical sclerosis, and surgical management of this condition.

• Discuss the likelihood of recurrence and occurrence on the opposite side.
2. Describe the common etiologies for hemothorax.
• Discuss an appropriate diagnostic evaluation for a patient with hemothorax.
• Discuss the appropriate management of blood in the pleural cavity.
• Which patients need an operation?
• What are the risks in leaving the blood in the chest?
3. Describe the presentations, etiologies and management of pulmonary embolus.
• Discuss the predisposing factors which may lead to PE.
• Discuss the electrocardiographic changes which might be seen and how they might be distinguished from those of myocardial infarct.
• Discuss the main points in the diagnostic evaluation for PE.
• Discuss management options:
• Who needs anticoagulation with heparin?
• Who needs lytic therapy?
• Who needs vena caval filter protection?
4. Describe the presentation, etiology and management of acute thoracic aortic dissection.
• Discuss initial medical vs. surgical management
• Discuss the usual sites of dissection within the proximal aorta and how the location affects prognosis and management.
5. Describe the usual presenting symptoms and etiology of esophageal rupture.
• Discuss the most common causes of rupture.
• Discuss the sites within the esophagus most frequently perforated.
• Discuss the risks of untreated perforation.
• Discuss the treatment priorities in treating most esophageal perforations.
• Discuss the relationship of underlying esophageal disease to treatment options in the management of perforation.
6. Describe the common presenting symptoms associated with gastro-esophageal reflux.
• Discuss the relationship of reflux to chronic asthma and aspiration.
• Discuss the appropriate diagnostic work-up of a patient with suspect reflux. What is the role of barium swallow, endoscopy, manometry, 24 hour pH testing?
• Discuss the evaluation of dysphagia.
• Discuss the treatment of esophageal stricture. What are the risks of dilation?
• Discuss Barrett's esophagus and its implications.
• What are the risks of malignancy?
• Who needs surgical management and which procedure (antireflux or resection) is needed?
• Discuss the pathophysiology and treatment of achalasia and diffuse esophageal spasm.
7. Describe the clinical findings, symptoms, and etiology of empyema.
• Discuss the clinical situations likely to be associated with formation of an empyema.
• Discuss the usual organisms isolated in culture.

FLUID, ELECTROLYTE & ACID BASE DISORDERS

FLUIDS AND ELECTROLYTES – OBJECTIVES:

1. List the normal range of Na+, K+, HCO3 -, Cl- in serum and indicate how these ranges change in perspiration, gastric juice, bile and ileostomy contents.
2. List at least four endogenous factors that affect renal control of sodium and water excretion.
3. List at least six symptoms or physical findings of dehydration.
4. List and describe the objective ways of measuring fluid balance.
5. List the electrolyte composition of the following solutions:

- normal (0.9%) saline
- 1/2 normal saline
- 1/3 normal saline
- 5% dextrose in water
- Ringer's lactate

6. In the following situations, indicate whether serum Na, K, HCO3, Cl and blood pH will remain stable (0), rise considerably (++), rise moderately (+), fall moderately (-), or fall considerably (--):

- excessive gastric losses
- high volume pancreatic fistula
- small intestine fistula
- biliary fistula
- diarrhea

7. In the following situations, indicate whether serum and urine Na, K, HCO3, Cl and osmolality will remain stable (0), rise considerably (++), rise moderately (+), fall moderately (-), or fall considerably (--):
• acute tubular necrosis
• dehydration
• inappropriate ADH secretion (SIADH)
• diabetes insipidus
8. Describe the possible causes, appropriate laboratory studies needed, and treatment of the following conditions:
• hypernatremia
• hyponatremia
• hyperkalemia
• hypokalemia
• hyperchloremia
• hypochloremia
9. Describe the concept of a "third space" and list those conditions that can cause fluid sequestration of this type.

ACID BASE BALANCE - OBJECTIVES (MCC #45):
1. List the physiological limits of normal blood gases.
2. List the factors that effect oxygen delivery and consumption.
3. Indicate the mechanisms, methods of compensation, differential diagnosis, and treatment of the following acid base disorders:
• acute metabolic acidosis
• acute respiratory acidosis
• acute metabolic alkalosis
• acute respiratory alkalosis

GASTROINTESTINAL HEMORRHAGE - OBJECTIVES (MCC #6):
1. Outline the initial management of a patient with an acute GI hemorrhage.
• Discuss indications for transfusion, fluid replacement, and choice of fluids.
2. Differentiate upper vs. lower GI hemorrhage
• Discuss history and physical exam abnormalities.
• Discuss diagnostic studies.
3. Discuss the differences in evaluation and management of the patient presenting with:
• hematemesis
• melena
• hematochezia
• guaiac positive stool
4. Discuss medical vs. surgical management for:
• peptic ulcer
• variceal hemorrhage
• Mallory-Weiss tear

• gastric ulcer (benign vs. malignant)
• Meckel's diverticulum
• intussusception
• diverticulosis
• ulcerative colitis
• colon cancer
• rectal cancer
• hemorrhoids

JAUNDICE - OBJECTIVES (MCC #49):
1. Describe the differential diagnosis of a patient with jaundice.
• Discuss, prehepatic, intrahepatic (both non-obstructive) and posthepatic (obstructive) etiologies.
• Discuss painful vs. non-painful
• Discuss benign vs. malignant
• Discuss inflammatory vs. non-inflammatory
2. List & explain justification for the diagnostic modalities used in the evaluation of a patient with jaundice, to include limitations, relative costs and potential risks.
• Discuss importance of the patient's history: estimated duration of illness, associated symptoms (pain and its characteristics), and risk factors.
• Discuss important physical exam findings:
• hepatomegaly
• palpable mass
• Courvoisier's sign
• Murphy's sign
• scleral icterus
• abdominal tenderness
• lymphadenopathy
• Charcot's triad
• Reynold's pentad
3. Explain the rationale for using these diagnostic tests in the evaluation of a patient with jaundice. What is the significance of abnormalities?
• liver function tests
• other laboratory tests and their indications (including hepatitis profile, peripheral blood smear, Coombs tests, etc.)
• hepatobiliary imaging procedures (ultrasound, CT scan, ERCP, PTHC, HIDA scan).
4. Discuss the management principles (to include initial treatment; role and timing of surgery; and, if necessary, timing of appropriate consultation) of:
• cholecystitis
• choledocholithiasis
• cholangitis
• cholangiocarcinoma
• pancreatic CA

• periampullary CA
• hepatic CA
• hepatitis

LEG PAIN - OBJECTIVES (MCC #15-2):
1. Describe atherosclerosis, its etiology, prevention and sites of predilection.
• Discuss the intimal injury that characterizes the process and how that injury impacts therapy and prevention.
2. Describe the differential diagnosis of hip, thigh, buttock, and leg pain associated with exercise.
• Discuss neurological vs. vascular etiologies of walking induced leg pain.
• Discuss musculoskeletal etiologies.
• Discuss the relationship of impotence to the diagnosis.
3. Describe the pathophysiology of intermittent claudication.
• Discuss the diagnostic work-up of chronic arterial occlusive disease.
• Discuss the medical management of arterial occlusive disease.
• Discuss risk factors associated with arterial occlusive disease.
4. Describe the pathophysiology of ischemic rest pain.
• Discuss evaluation and management of rest pain.
• Discuss the role of anticoagulation in peripheral vascular disease.
5. Describe the etiologies and presentation of acute arterial occlusion.
• Discuss embolic vs. thrombotic occlusion.
• Discuss the signs and symptoms of acute arterial occlusion (the "P's")
• Discuss the medical and surgical management.
• Discuss the complications associated with prolonged ischemia and revascularization.
• Discuss the diagnosis and treatment of compartment syndrome.
6. Describe the differential diagnosis, location, appearance and symptoms of leg ulcers due to:
• arterial disease and venous stasis disease
• neuropathy
• infection and malignancy
7. Describe the differential diagnosis of the swollen leg.
• Discuss how to differentiate lymphedema from venous stasis.
• Discuss painful vs. non-painful swelling.
8. Describe the factors that lead to venous thrombosis and embolism.
• Discuss the usual locations for thrombosis.
• Discuss differing implications of deep and superficial venous thrombophlebitis.
• Discuss the common invasive and noninvasive diagnostic tests for DVT.
• Discuss methods for DVT prophylaxis and identify high-risk patients.
• Discuss the risks, benefits and available options for anticoagulation and thrombolysis.
• Discuss the signs, symptoms, diagnostic evaluation and treatment of pulmonary embolism.

9. Describe the diagnosis, work-up and management options for symptomatic varicose veins and venous ulcers.
• Discuss the physical exam and tests for venous valvular competence.
• Discuss the role of venography, ultrasound and plethysmography.
• Discuss medical vs. surgical management.

LUNG NODULE – OBJECTIVES:
1. Create an algorithm for the evaluation of a patient with a lung nodule on chest x-ray.
2. Discuss the common risk factors and clinical symptoms of lung cancer.
3. Describe the role of surgery in lung cancer
• Describe pulmonary function tests and values that are predictive of severe risk of pulmonary complications following thoracic surgery.
• Identify conditions that preclude curative surgical resection for lung cancer.
4. List the most common sources of malignant metastases to the lungs.
5. Compare and contrast the management and prognosis of metastatic vs. primary lung malignancies.
6. Describe the most common diagnostic procedures used to evaluate pulmonary and mediastinal lesions.
7. List the common tumors of the anterior, posterior and superior mediastinum.

NECK MASS - OBJECTIVES (MCC #63):
1. Describe the neck masses commonly presenting in childhood.
• Discuss the embryologic origin of these lesions and the anatomic implications to consider when resecting them.
2. Describe the signs, symptoms & etiologies of inflammatory neck masses.
• Discuss Ludwig's angina and why it may be life-threatening.
• What is appropriate treatment for cervical adenitis?
• Discuss the evaluation of suspected tuberculous adenitis.
3. Describe the most common neoplastic neck masses and their origin.
• Discuss the role of fine-needle cytology, open biopsy, CT scan, MRI, thyroid scan, and nasopharyngeal endoscopy in the diagnostic work up of a neck mass.
• Discuss the relationship of smoking and alcohol abuse to squamous cell cancers.
• Discuss the evaluation and differential diagnosis of a patient with a thyroid nodule.
• Discuss the common thyroid malignancies, their cell of origin and their management. Which has the best prognosis? The worst? Which is associated with MEN syndrome?
• Discuss the relationship of radiation exposure to thyroid malignancy.
• Which malignancies frequently metastasize to the neck? How is the metastatic nodal disease managed and how does this differ based on the origin of the primary?
4. Discuss the common non-neoplastic thyroid diseases that could present as a mass.
• Discuss the symptoms associated with hyperthyroidism and discuss treatment options.

NON-HEALING WOUNDS - OBJECTIVES (MCC #95, 109-12):
1. Define "non-healing".
2. Discuss a differential diagnosis, evaluation, and treatment of a patient with:
• non-healing lower extremity wound
• non-healing wound of the torso, or body area other than the lower extremity
3. Describe the pathophysiology involved for each of the diagnostic possibilities.
• Consider: pressure, ischemia, infection, malignancy, and foreign body

PERIANAL PROBLEMS - OBJECTIVES (MCC #3-4):
1. Develop a differential diagnosis for a patient with perianal pain. (Be sure to include benign, malignant and inflammatory causes.)
2. Discuss the characteristic history findings for each of the above including:
• character and duration of complaint
• presence or absence of associated bleeding
• relationship of complaint to defecation
3. Describe physical exam findings for each diagnosis. Indicate in which part of exam (external, digital, anoscopic or proctoscopic) these findings are identified.
4. Discuss treatment plan for each diagnosis listed in objective one, including nonoperative
interventions and role and timing of surgical interventions.

PERIOPERATIVE CARE - OBJECTIVES
PREOPERATIVE ASSESSMENT (MCC #74-3)
1. Describe features of a patient's clinical history that influence surgical decision making. Consider: known diseases, risk factors, urgency of operation, medications etc.
2. Discuss tools that may assist in preoperative risk assessment. Consider laboratory studies, imaging studies etc. Include the following:
• Pulmonary (example: exercise tolerance, pulmonary function testing)
• Cardiovascular (ASA classification, Goldman criteria, echocardiography, thallium studies, Doppler)
• Renal (Bun/Cr, dialysis history)
• Metabolic (nutritional assessment, thyroid function)
3. Compare and contrast anesthetic risk factors. Consider the following variables:
• Age: neonates to geriatrics
• Urgency of intervention:
• emergent versus elective surgery
• associated conditions: pregnancy, diabetes, COPD, valvular or ischemic heart disease, cerebral/peripheral vascular disease, renal insufficiency etc.
4. Discuss history, physical and laboratory findings utilized in nutritional assessment. Be familiar with the most common forms of nutritional & deficiency disorders. Consider: protein-calorie malnutrition, chronic alcoholism, iron & B12 deficiencies, malabsorption syndromes and requirements of the morbidly obese.

• Discuss disease states and surgical interventions at high risk for nutritional impairment.
• Discuss the advantages and disadvantages of nutritional support.
• compare and contrast enteral vs. parenteral administration
• complications
• methods of determining requirements and assessing response

PERIOPERATIVE ASSESSMENT

1. Discuss the components of informed consent as it applies to surgical interventions (procedures, transfusions etc.)
• Demonstrate documentation of consent in the medical record.
• Discuss the rationale for documentation in the medical record.
• Describe the components and demonstrate the ability to formulate an operative or procedure note, postoperative orders, a postoperative note.
2. Describe the indications and efficacy of various monitoring techniques.
• Compare & contrast invasive vs. noninvasive.
• Consider the following: vital signs, I&O, arterial lines, pulse oxymetry, ABG, ECG, Swan Ganz, CVP, ICP etc.
3. Discuss conditions that potentially interfere with fluid and electrolyte homeostasis in the peri-operative period, and describe strategies for replacement / monitoring.
• Example: effects of bowel preparation, NPO status, NG drainage, dialysis, operative losses, etc.
4. Describe factors that might impair coagulation or increase risk of bleeding.
• Describe the various blood component therapies available.
• Discuss the indications, risks and benefits of transfusion therapy.
• Consider: packed cells vs. whole blood , FFP, platelets, cryoprecipitate, albumin.
• Discuss alternatives to allogeneic blood transfusion and their appropriate use. Include: autologous donation, hemodilution, , iron / erythropoetin therapy, and modification of transfusion trigger.
5. Discuss risk factors for alcohol withdrawal syndromes. Consider prevention strategies.

POSTOPERATIVE ASSESSMENT

1. List the conditions necessary for discharge of a patient to home or to the floor following a general or spinal anesthetic
2. Understand the pharmacological action, benefits, risks, and side effects of various pain control agents.
• Compare and contrast : parenteral vs. enteral agents and describe the role of epidural and nerve blocks in pain management
3. Describe the expected outcome of an uncomplicated surgical procedure. Discuss a normal post-operative course for various common operations. Consider:
• Time to recovery, order of recovery of digestive function (stomach, small bowel, colon) etc.
• Characteristics of a healing surgical wound.
• Impact of various incisions on recovery.
• Functional abilities and disabilities acutely and chronically.

• Nutritional and fluid needs and options for replacement.
• Potential complications : prevention strategies.
• Patient support systems and options for post hospital care.

POST-OPERATIVE COMPLICATIONS – OBJECTIVES:
1. Describe the differential diagnosis of a patient having postoperative fever. For each entity, discuss the clinical manifestations, appropriate diagnostic work-up, and management:
• Intraoperative - malignant hyperthermia
• Within 24 hours - response to surgical trauma; atelectasis; necrotizing wound infections.
• Between 24 and 72 hours:
• pulmonary disorders (atelectasis, pneumonia)
• catheter related complications (IV-phlebitis, Foley-UTI)
• After 72 hours:
• infectious (UTI, pneumonia, wound infection, deep abscess, anastomotic leak, prosthetic infection, acalculous cholecystitis, parotitis)
• noninfectious (deep vein thrombosis)
2. Discuss the following wound complications in terms of predisposing risk factors (patient condition, type of operation, technique), as well as their recognition, treatment, and prevention:
• hematoma and seroma
• wound infection
• dehiscence
• incisional hernia
3. Discuss the various causes of respiratory distress and respiratory insufficiency that may occur in the postoperative patient. For each complication, describe the etiology, clinical presentation, management, and methods of prevention:
• atelectasis
• pneumonia
• aspiration
• pulmonary edema
• ARDS
• pulmonary embolism (including deep venous thrombosis)
• fat embolism
4. Discuss the diagnostic work-up and treatment of oliguria in the postoperative period. Include pre-renal, renal, and post-renal causes (including urinary retention).
5. Discuss the possible causes of hypotension which may occur in the postoperative period. For each etiology describe its pathophysiology and treatment:
• hypovolemia
• sepsis
• cardiogenic shock - including postoperative myocardial infarction, fluid overload, arrhythmias, pericardial tamponade
• medication effects

6. Describe the management of postoperative chest pain and arrhythmias.
7. Describe factors which can lead to abnormal bleeding postoperatively, and discuss its prevention and management:
• Surgical site - inherited and acquired factor deficiencies, DIC, transfusion reactions, operative technique
• Gastroduodenal (i.e. stress ulcerations)
8. Discuss disorders of alimentary tract function following laparotomy which may produce nausea, vomiting, and/or abdominal distension:
• paralytic ileus
• acute gastric dilatation
• intestinal obstruction
• fecal impaction
9. Discuss precipitating factors and treatment of the following postoperative metabolic disorders:
• hyperglycemia
• adrenal insufficiency
• thyroid storm
10. Discuss external gastrointestinal fistulas:
• contributing factors
• management
11. Describe the factors which can give rise to alterations in cognitive function postoperatively, as well as their evaluation and treatment:
• hypoxia
• perioperative stroke
• medication effects
• metabolic and electrolyte abnormalities
• functional delirium
• convulsions

SHOCK - OBJECTIVES (MCC #9-2):

1. Define shock.
2. Differentiate the signs, symptoms, and hemodynamic features of shock:
• hemorrhagic
• cardiogenic
• septic
• neurogenic
• anaphylactic
3. Discuss priorities and specific goals of resuscitation for each form of shock:
• Define goals of resuscitation
• Defend choice of fluids
• Discuss indications for transfusion
• Discuss management of acute coagulopathy
• Discuss indications for invasive monitoring
• Discuss use of inotropes, afterload reduction in management
4. Discuss priorities in resuscitation (ABC's)

SKIN & SOFT TISSUE LESIONS - OBJECTIVES (MCC #95):
1. Describe the commonly used local anesthetics.
• Discuss the advantages and disadvantages of epinephrine in the local anesthetic.
• Discuss special precautions needed on the digits.
• Discuss safe dosage ranges of the common anesthetics and the potential toxicities of these drugs.
2. Describe the common benign skin lesions and their treatment (papillomas, skin tags, subcutaneous cysts, lipomas).
3. Describe the characteristics, typical location, etiology and incidence of basal cell and squamous skin cancers.
• Discuss the relationship to solar irradiation, ethnicity, previous tissue injury, & immunosuppression.
• Discuss the characteristics of malignant skin lesions which distinguish them from benign lesions.
• Discuss the appropriate treatment of small and large basal and squamous cancers and their prognosis.
4. Describe the characteristics, typical locations, etiology and incidence of malignant melanoma.
• Discuss the relationship of melanoma to benign nevi and characteristics which help differentiate them.
• Discuss risk factors for melanoma. What are the lesions which have high potential for malignant transformation?
• Discuss the various types of melanoma and prognosis for each type.
• Discuss the relationship of size and thickness to prognosis.

SWALLOWING DIFFICULTY & PAIN – OBJECTIVES (MCC #26):
1. Define dysphagia and odynophagia.
2. Describe the differential diagnosis for a patient with dysphagia / odynophagia.
• Motility Disorder
• neurologic disorders
• motor disorders
• Extrinsic obstruction / compression
• Intrinsic obstruction
• neoplasm
• inflammation
• foreign body
• Inflammation/Infections
3. Compare and contrast the history, presentation, physical findings, and laboratory findings for these different conditions.
4. Discuss the diagnostic modalities available, how they are used, and how they relate to the normal swallowing mechanism.
5. Describe the options for management of these conditions.
6. Discuss indications for operative vs. non-operative management when appropriate.

TRANSPLANTATION – OBJECTIVES:
1. Describe the common organs and tissues currently being transplanted:
• Discuss issues of living related and unrelated vs. cadaveric donation.
• Discuss potential ethical issues as they relate to organ donation.
• Define autograft, allograft, xenograft, orthotopic and heterotopic as they relate to transplantation.
2. Discuss common infectious complications of immunosuppression and their prevention and management.

TRAUMA – OBJECTIVES (MCC #109):
1. Describe the priorities and sequence of a trauma patient evaluation (ABC's).
2. Describe the four classes of hemorrhagic shock and how to recognize them.
3. Describe the appropriate fluid resuscitation of a trauma victim.
• Discuss choice of IV access
• Discuss the choice of fluid and use of blood components.
• Discuss the differences between adult and pediatric resuscitation.
4. Discuss the types, etiology and prevention of coagulopathies typically found in patients with massive hemorrhage.
5. Describe the appropriate triage of a patient in a trauma system.
• Discuss the importance of mechanism of injury on management and triage decision making.
6. Describe the diagnostic evaluation, differences between blunt and penetrating mechanisms of injury and the initial management of:
• Closed head injury (consider Glasgow Coma Scale, ICP, subdural hematoma,

epidural hematoma, diffuse axonal injury, basilar skull fractures & CSF leaks)
• Spine injury (consider mechanism of injury, level of injury, use of steroids, immobilization, neuro exam, management of shock)
• Thoracic injury (consider hemo / pneumothorax, tension pneumothorax, tamponade, pulmonary contusion, massive air leak, widened mediastinum, flail chest)
• Abdominal injury (consider role of physical exam, ultrasound, CT, peritoneal lavage, operative vs. non-operative management of liver and spleen injury, which patients need urgent laparotomy, management of hematomas)
• Urinary injury (consider operative vs. non-operative renal injury, ureteral injury, testicular trauma, intraperitoneal and extraperitoneal bladder injury, urethral trauma, when not to place a Foley, candidates for cystogram, relationship to pelvic fracture)
• Bony injury (consider open vs. closed fractures, compartment syndromes, concepts of immobilization (splinting, internal fixation), treatment of patients with pelvic fractures, hemorrhage control, commonly associated vascular injuries)
7. Describe the early management of a major burn.
• Discuss estimation of total body surface burn and burn depth.
• Discuss fluid resuscitation, choice of fluid and monitoring for adequacy of resuscitation (rule of 9's, differences in pediatric and adult management).
• Discuss options for topical antimicrobial therapy.
• Discuss inhalation injury, CO poisoning and triage of patients to burn centers.
• Discuss the basic principles of wound coverage, skin grafting, and timing.
8. Describe the recognition of suspected child abuse and domestic violence presenting as trauma and the physician's role in reporting.

URINARY COMPLAINTS – OBJECTIVES (MCC #8, 111):
1. Describe the potential etiologies of hematuria.
• Consider age, presence of pain, character of bleeding trauma, etc.
• Consider occult vs. gross hematuria
2. Discuss the diagnostic modalities available for evaluation of hematuria including cost, risks indications and limitations.
• Consider CT, cystoscopy, IVP, ultrasound, cystourethrogram, and retrograde pyleography.
3. Discuss the risk factors for composition of, and management of renal and ureteral calculi.
4. Discuss the clinical presentation of renal and ureteral calculi and the differential diagnosis of renal colic.
5. Discuss the etiologies and diagnostic evaluation of a patient with dysuria.
6. Outline the etiologies and work-up of a patient with pneumaturia.
7. Outline the evaluation and treatment options for patients with urinary stress, urge, total and overflow incontinence.
8. Outline the initial evaluation of patients presenting with urinary frequency, nocturia,

urgency or urinary retention.
• Consider pertinent H & P, and diagnostic tests including prostate ultrasound.

VOMITING, DIARRHEA, CONSTIPATION
VOMITING – OBJECTIVES (MCC #116):
1. Discuss in general, the differential diagnosis for a patient with emesis.
• Consider timing and character of the emesis and associated abdominal pain.
• Contrast etiologies in infants, children and adults.
• Contrast dysmotility vs. ileus vs. mechanical obstruction.
2. Describe the clinical presentation and etiologies of gastric outlet obstruction.
3. Describe the types of neoplasms that occur in the stomach and discuss diagnosis and prognosis for each.
4. Discuss the diagnosis and management of peptic ulcer disease.
5. Describe the signs and symptoms of small bowel obstruction.
6. Describe the common etiologies of mechanical small bowel obstruction, including less frequent causes, such as small bowel tumors.
7. Discuss the potential complications and management of small bowel obstruction.
8. Outline the initial management of a patient with mechanical small bowel obstruction, including laboratory tests and x-rays.
9. Contrast the presentation and management of partial vs. complete small bowel obstruction.
10. Differentiate the signs, symptoms and radiographic patterns of paralytic ileus and small bowel obstruction

DIARRHEA – OBJECTIVES (MCC #22):
1. Discuss the differential diagnosis of diarrhea in adults.
• Consider chronicity, absence or presence of blood and associated pain.
• Consider infectious causes.
2. Describe the presentation and potential complications of ulcerative colitis and Crohn's disease.
3. Contrast the pathology, anatomic location and pattern, cancer risk and diagnostic evaluation of ulcerative colitis and Crohn's disease.
4. Discuss the role of surgery in the treatment of patients with ulcerative colitis and Crohn's disease.
5. Discuss the clinical manifestations, risk factors, diagnosis and management of pseudomembranous colitis.
6. Outline the risk factors, presentation, diagnosis and management of ischemic colitis.

CONSTIPATION – OBJECTIVES (MCC #16):
1. Discuss the potential etiologies of constipation in adults and children.
• Consider chronic vs. acute.
2. Describe the clinical presentation and etiologies of large bowel obstruction, including pseudo-obstruction (Ogilvie's syndrome).
3. List the diagnostic methods utilized in the evaluation of potential large bowel

obstruction, including contraindications and cost effectiveness.
4. Outline the diagnosis and management of colonic volvulus, diverticular stricture, fecal impaction and obstructing colon cancer.
5. Outline the treatment of carcinoma located at different levels of the colon, rectum and anus. Include a discussion of the use of radiotherapy and chemotherapy for each.
6. Describe the postoperative follow-up of patients with colorectal carcinoma.
7. Discuss the staging and survival of patients with colorectal carcinoma.

PHASE D SURGERY SYLLABUS

Prepared by the College of Medicine, University of Saskatchewan
Phase D Syllabus - **Class of 2015 / 2016**

Course Number: MED 409
Credit Units: 8

	Saskatoon	Regina	Prince Albert
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ROTATION DESCRIPTION

Duration: Eight weeks
Call: 1 in 4
Vacation/Leave: 5 working days; cannot be during the last week of the rotation

The University of Saskatchewan, Department of Surgery would like to welcome you. We hope that you find your 8 weeks of Surgery Clerkship a valued learning experience that aids you in your career development. I hope that the following information will be of value to you in helping you get the most from your surgical experience.

Surgical Education Team – Saskatoon

Department Chairman	Dr. I. Mendez	966-8641
Director of Education	Dr. T. Domes	966-5678
Director of Undergraduate Education	Dr. T. Domes	966-5678
Surgical Education Office Secretary	Marilyn Baniak	966-5678
Site & Subspecialty Coordinators	see below	

Surgical Education Team – Regina

Undergraduate Education Coordinator	Dr. S. Pooler	766-6911
Surgical Education Office Secretary (including surgery selectives)	Jennifer Chobot	766-3705

ROTATION OBJECTIVES

By the end of the rotation, students will be expected to:

1. Demonstrate competency (perform an appropriate history and physical examination, synthesize data to arrive at a differential diagnosis, use relevant diagnostic tests, participate in patient care) in the management and treatment of patients with surgically oriented problems *(Expert, Collaborator, Communicator, Manager, Professional)*

2. Recognize and provide the clinical conditions in a patient that result in a differential diagnosis and provide an initial treatment/management plan when possible, for the following *(Expert, Communicator)*:

- Abdominal masses
- Abdominal pain
- Abdominal wall and groin masses
- Altered neurologic status
- Asymptomatic patient with positive test
  - Elevated PSA
  - Prostate nodule
  - Gallstones
  - Carotid bruit
  - Hypercalcemia
  - Incidental mass on computer tomography
- Back pain
- Breast problems
- Chest pain & shortness of breath
- Ear & nose problems
- Fluid and electrolyte disorders
- Acid base balance disorders
- Gastrointestinal hemorrhage
- Jaundice
- Leg pain
- Lung nodule
- Neck mass
- Non-healing wounds
- Perianal problems
- Peri-operative care
- Post-operative complications
- Scrotal pain and swelling
- Shock
- Skin and soft tissue lesions
- Swallowing difficulty and pain
- Transplantation
- Trauma
- Urinary complaints
- Vomiting, diarrhea, constipation

*You will be provided with more specific learning objectives for each condition as a separate document at the start of your surgery clerkship).

3. Present a surgical research topic *(Expert, Communicator, Scholar)*
4. Identify the elements of informed consent *(Expert, Communicator*)
5. Maintain clear, accurate, and appropriate records of clinical encounters *(Expert, Communicator)*
6. Communicate in a language easily understood by patients and family members *(Communicator)*
7. Demonstrate an awareness of cultural and socio-economic issues that impact patient and population health *(Expert, Communicator, Professional)*
8. Demonstrate an understanding of and practice evidence-based medicine *(Expert, Scholar, Communicator)*
9. Identify and appropriately use resources to improve knowledge base *(Scholar)*
10. Demonstrate insight into one's own limitations and methods to improve *(Professional, Scholar)*
11. Demonstrate application of ethical principles in the clinical decision-making process, including patient confidentiality, privacy and autonomy *(Expert, Communicator, Professional)*
12. Participate with a team of allied health professionals, respecting individual roles, in the care and treatment of a patient *(Collaborator, Communicator)*
13. Demonstrate appropriate professionalism skills including respect for patients and health team personnel, honesty, integrity, altruism, appropriate boundaries, responsibility, timeliness, and striving for personal balance (*Professional*)
14. Practice the art of comforting patients and alleviating suffering *(Communicator, Professional)*
15. Promptly identify emergency situations and respond appropriately *(Expert)*

ED-2 PATIENT/PROCEDURE LOGS	
Patient Categories	**Procedures/Skills**
➢ Evaluate (focused history and targeted physical exam) new patients with surgically orientated problems in the inpatient/outpatient setting ➢ Evaluate (focused history and targeted physical exam) review patients with surgically orientated problems in the inpatient/outpatient setting ➢ Evaluate and manage postoperative fluid and electrolyte needs in the inpatient setting ➢ Evaluate and manage postoperative pain in the inpatient setting ➢ Evaluate patients for infectious postoperative complications in the inpatient/outpatient setting ➢ Evaluate patients for non-infectious postoperative complications in the inpatient/outpatient setting ➢ Manage a patient's postoperative wound in the inpatient/outpatient setting	➢ Give an oral presentation of a patient problem-oriented surgical research topic to attending faculty and other members of the patient care team ➢ Observe the process of informed consent ➢ Perform as a first or second assistant to operating surgeons ➢ Scrub, gown and glove to assist operating surgeons ➢ Write brief operative reports in the health record ➢ Write postoperative orders in the health record ➢ Write daily progress notes in the health record documenting an inpatient's hospital course

STRUCTURE OF THE ROTATION

There will be an orientation session the 1st day of your Surg I and Surg II rotations. It is mandatory that you attend both of these orientation sessions.

The goal of the surgical clerkship is to assist the student in developing their competency in those tasks within the range of problems addressed by the field of surgery. The level of competency to be achieved is that which is needed for the student to carry on in postgraduate training in any discipline, including family medicine and other specialty training programs.

This goal will be realized through 8 weeks of clerkship in surgery split into 2 separate components:

Surg I: General Surgery (6 weeks)

You will be assigned to one of 4 sites:

Site	Coordinator	Phone no.
Regina General Hospital	Dr. S. Pooler	766-6911
Pasqua Hospital	Dr. S. Pooler	766-6911
Royal University Hospital		
St. Paul's Hospital		

Surg II: Surgery Selective (2 weeks)

You may select a rotation from one of the following subspecialties (depending on availability):

Subspecialty	Coordinator	Phone no.
Otolaryngology	Dr. P. Spafford	244-7865
Orthopedic Surgery	Dr. A. Dzus	844-1114
Neurosurgery	Dr. M. Kelly	844-1104
Urology	Dr. T. Domes	653-3255
Plastic Surgery	Dr. G. Chandran	384-8001
Paediatric Surgery	Dr. G. Miller	844-1090
Intensive Care Unit	Dr. J. Reid	844-1009
Vascular Surgery	Dr. B. Ulmer	653-3366
Cardiac Surgery	Dr. G. Dalshaug	844-1382

Other surgery selectives may be arranged but must meet the following criteria:

- A traditional surgery specialty or subspecialty (this does not include: anesthesia, gynecology, ophthalmology, etc.) approved by the University of Saskatchewan Department of Surgery
- Supervised by a surgeon with a University of Saskatchewan faculty appointment
- Written objectives approved by the University of Saskatchewan Department of Surgery
- The supervising surgeon must be willing to complete a Departmental approved student performance evaluation form

During the clerkship, students are expected to achieve a basic degree of competence in diagnosis and management of surgical problems. As the clerkship experience progresses, the students' diagnostic skills will be further enhanced and their competence in management deepened, and the range of problems and illnesses dealt with broadened. This will be achieved through a combination of In-patient Ward and Outpatient Clinic/Office practical patient care experience and teaching.

At all times, remember that you are involved in the treating of diseases, but in the care of the patient. The patients in your care represent a unique opportunity to learn not only about their surgical disorders but to get to know them as fellow human beings with their own hopes, fears, uncertainties and unique stories. This is the essence of the doctor-patient relationship and constitutes one of the most rewarding aspects of the practice of medicine.

JURSI DUTIES/EXPECTATIONS

The In-Patient Ward Experience

The student will be a full member of a surgical team involved in the care of patients. The team will include an attending surgeon and, in some cases, one or more residents at varying levels of postgraduate training and other students.

At the start of the rotation the supervising faculty and residents will orient the student to the team and the ward. The elements of being a full team member include the following tasks:

- Performing an admission history and physical examination on an appropriate number of patients.
- Developing a differential and provisional diagnosis and a plan for the presenting problems.
- Documenting the history, physical examination, impression and plan in the medical record.
- Presenting (orally) the findings to the resident &/or attending surgeon.
- Following patients first encountered in the emergency room, after admission
- Assessing the patient's clinical progress daily and when problems occur.
- Documenting patient events with regular progress notes in the medical record.
- Communicating with others involved in the care of the team's patients:
  - Attending physicians and residents
  - Consultants
  - Family doctors
  - Family members
  - Nurses
  - Other allied health care professionals
- Gathering and reviewing relevant data, including laboratory and radiological data.
- Facilitating patient discharges, including writing prescriptions and Dear Dr. or discharge letters (co-signed by qualified MD)
- Informing the team and the clerkship coordinator at least one month prior to starting the rotation of any expected absences

Number Of Assigned In-Patients
Students need to see a certain minimum number of patients but they must not become so busy in looking after patients that they have no time to reflect on what they are doing. A reasonable maximum number of in-hospital patients assigned to the student are 10. The assigned patients should represent a good variety of presenting problems and diagnoses. It is expected that the student will know these patients and their conditions better then anyone on the team.

Call Responsibilities
Being on-call is an essential component of learning in surgery. This is when acutely ill patients are often first encountered. Also, this is often when inpatients develop problems that require prompt attention. Being the first one to assess these patients is a valuable learning experience. This is often a time when you get specific and timely feedback from supervising residents and surgeons.

- Student's call is limited to a maximum of every fourth night
- Students should contact the resident or attending on call to discuss expectations
- Students should see patients in the ER before or in conjunction with residents or attending surgeons.
- Students should attend all seminars, even if you are post-call
- Students should be excused from duty by noon the day following call once they've had a chance to ensure follow-up care for their assigned patients. (The student may, however, stay on after 12 noon at his/her discretion)
- Students will not be on call the night before an examination
- Students will receive specific and timely feedback from residents and attending surgeons about their assessment of patients, their formulation of the patient's problems and the management plan

The Outpatient Clinic/Office Experience
You will be expected to attend the outpatient surgical clinic on a regular basis. In all surgical disciplines the outpatient clinic/office experience is a very valuable component of the learning experience. Students must become familiar with assessing surgical patients in the ambulatory setting and then developing management plans for them. This is important because:

- Many surgical patients are dealt with in the ambulatory setting (both pre-op and post-op)
- The ambulatory setting requires a different approach to patient assessment and management than the in-patient setting
- Many surgical diagnoses and presenting problems are likely to be encountered by students only in the ambulatory context.
- Attending surgeons often have more time available to teach students and residents in an outpatient setting.

Objectives of the Outpatient Clinic/Office Experience
During the rotation the student will:

1. Gain familiarity with the conduct of surgical practice in an ambulatory setting
2. Be exposed to a broad range of commonly seen patient problems in surgery and its subspecialties
3. Develop an understanding for the appropriate pace and techniques for the assessment, evaluation, and management of surgical problems in the ambulatory setting
4. Refine and further develop information gathering skills, generation of different diagnoses and problems lists, appropriate use and interpretation of diagnostic tests, and development and institution of management plans
5. Develop effective communication skills with patients and office staff in ambulatory settings
6. Demonstrate the ability to effectively communicate with referring physicians and other allied health professionals, and participate in the process by writing referral and consultation letters
7. Develop and practice appropriate standards of interpersonal and professional conduct and interaction in an ambulatory based surgical office or clinic

8. Gain familiarity with some of the basic principles of office structure, management, personnel and resources in an ambulatory surgical practice

Structure of the Outpatient Clinic/Office Experience

- Site and rotation coordinators will encourage supervising surgeons to ensure that the student will attend at least 1, preferably 2, half day clinics or offices per week. Some variation will exist depending on the specialty
- At each individual clinic or office the supervising clinician will provide an initial orientation
- The clinician will provide the student an opportunity to delineate his/her objectives and expectations for the experience
- The supervising clinician will delineate his/her expectations of the student
- The supervising clinician will ensure a clinical atmosphere that includes the clinical clerk as an integral member of the patient care team
- A schedule for the clinic/office experience will be provided at the beginning of the student's rotation by the site or selective coordinator

Student's Role in the Outpatient Clinic/Office

- Students may be assigned new patients referred for consultation or patients returning for reassessment or follow-up. They will perform appropriate history and physical examinations. This may be comprehensive or focused on a specific system or problem. Students will formulate a differential diagnosis, problem list, investigation and management plan where appropriate.
- Students will present the history, physical findings and assessment to the supervising clinician. Constructive content and process feedback about the case presentation and assessment will be offered by the supervising clinician and teaching points made relevant to the case. This may occur with each encounter or in designated time at the end of the clinic.
- An attempt will be made to maximize the opportunity for the student to play an active role in patient care
- The student will demonstrate courteous, professional behavior and appearance, and will be punctual. If the student must be late or absent or leave early from a clinic, he/she must inform the supervisor and or clinic staff well in advance.

Performing Patient Procedures

The clerkship phase of your education is all about hands-on experience with providing patient care and acquiring new skills. At times this will mean pushing your boundaries of competence in procedural skills. It is a fine line between pushing those boundaries and functioning beyond your level of competence. This is a matter of judgment on your part and you obviously must take into consideration patient safety issues. However, you must also be considerate of the concerns of other health care workers involved in the patient's care.

From time to time during your clerkship year of medical school you will be called upon to perform a patient procedure (e.g., arterial puncture, phlebotomy, Foley catheter insertion, drain removal, tracheostomy tube change, etc.) for which you may nor may not have had experience. Regardless, you should never feel pressured to perform a procedure that you do not feel you have had adequate experience or competence to perform without supervision. It is a sign of maturity and good professional judgment when you are able to recognize your limitations and know when to ask for help. Clerks come into their Surgery rotations with wide variation in skills and so it is important to inform the attending surgeon or resident that you would prefer to do this supervised.

You may encounter a situation where you do feel you have the competence to independently perform a procedure but an allied health care worker (e.g. nurse) disagrees. You will be farther ahead by respecting that individual's concern than engaging in conflict. Discuss this with the resident or staff surgeon before proceeding. If conflict arises that cannot be resolved at a local level please notify in Saskatoon, Dr. Trustin Domes, Director of Undergraduate Education for Surgery (966-5678) or Dr. Steven Pooler, Undergraduate Education Coordinator for Regina (766-6911).

Vacation/Leave Policy
Allocation of vacation time during surgery rotations follows the guidelines of the College of Medicine. You may take a maximum of 5 vacation days during your 6 weeks of General Surgery and none during your 2 weeks of surgery selective.

Saskatoon: All vacation requests must be approved by application to **Marilyn Baniak** in the Surgery Teaching Office a minimum of one month in advance of starting your surgery rotation.

Regina: All vacation requests must be submitted to **Jennifer Chobot** in the College of Medicine office a minimum of one month in advance of starting your surgery rotation.

Prince Albert: All vacation requests must be approved by Dr. Olsen and then forwarded to **Nicole Toutant** a minimum of one month in advance of starting your surgery rotation.

Absences
Please refer to the Syllabus for Phase D section: Instruction and Evaluation General Guidelines

Unexplained absences will be treated very seriously and considered unprofessional conduct. These absences may be reflected in the final grade and may constitute grounds for failure of the rotation, even if the composite grade for other aspects of the evaluation exceeds 50%. The department will have identified the appropriate person to contact. The Dean's office should be notified of any prolonged or unexpected absences.

Professionalism
As a student doctor, it is expected that you hold yourself to standards of conduct expected of all members of our profession. It is well to remember that you are "not learning a trade, but entering a profession".

As you rotate through surgery disciplines, in addition to assessing your knowledge and skills, we will also be judging your professionalism.

In essence, the basics of professionalism are quite easy to articulate. In return for professional autonomy, self-regulation and a recognition of their unique place in society, the public demands of physicians, accountability, ethical standards and an altruistic (altruism = putting the interests of the patient ahead of one's own) manner of delivering care. The Canadian Association of General Surgeons position statement of professionalism can be found here: https://www.cags-accg.ca/docs/Professionalism_CJS.pdf.

Specific Suggestions
- Be on time
- Your appearance should be clean, neat and professional
- Clean white lab coat, business or business casual dress when seeing patients in clinics or offices
- When wearing scrubs out of the OR, a clean white lab coat MUST be worn
- Be prepared
- Respect patient confidentiality
- Polite, respectful behavior at all times
- Appropriate language
- Attend lectures, seminars, rounds, etc.

Please refer to the professionalism section of the Phase D Syllabus for more specific details regarding this important topic.

What To Do If There Is A Problem
Students must have the opportunity to resolve any perceived problems. Problems should be first addressed at the most local level (e.g., a problem with ward duties should be taken up first with the resident). If it cannot be

resolved, then the student should take it up with the senior resident, attending physician, and if necessary, the site or selective coordinator.

Please contact the Department of Surgery Director of Undergraduate Education (966-5678 in Saskatoon or 766- 6911 in Regina) if problems are un-resolvable or too sensitive to deal with at the local level.

TEACHING SESSIONS

The Student as a Student

A major aspect of the clerkship is for clerks to act as junior physicians. However it is equally important that the student be able to do what is necessary to achieve the goals and objectives of the curriculum. Students must be free to attend scheduled teaching sessions (seminars, bedside teaching, etc.) without any perception on the part of attending surgeons or residents that the student is somehow shirking their duties. Students are responsible for informing their team members ahead of time when they will be away at teaching sessions. Students must be able to sign out to another team member so that they will not be disturbed during their teaching sessions.

Scheduled Teaching Activities

These will be dependent on the site and/or rotation. Schedules will be provided at the beginning of your rotation. The type of teaching session will vary and may include:

- Ward teaching rounds with an attending surgeon
- Outpatient teaching
- Seminars
- Divisional educational rounds
- Informal bedside and operating room teaching

Teaching Rounds

A schedule of formal teaching rounds will be provided for you at the beginning of your surgery rotation. All JURSIs are expected to attend all formal rounds, regardless of what rotation you are on. You should arrange for the Resident on call to cover for you while you are at formal teaching rounds. Exceptions should only be made for immediately life-threatening situations.

Where You Will Learn The Most

Surveys of clerks completing surgery rotations have stated that they learned the most by (ranked by most to least useful):

- evaluating acutely ill patients in the emergency dept.
- seeing patients in the ambulatory clinic with attending surgeons
- caring for patients and doing rounds with the residents on in-hospital patients
- assisting in the operating room

You are expected to attend ambulatory clinics with the surgeons on your assigned service.

- You should try to evaluate patients in the emergency department at every opportunity.
- In the operating room your experience will be strongest if you come prepared (know the patient, their disease, and the principles of the surgical treatment) and ask questions. It may occur that your help is needed in the OR even if you had planned on being in the clinic/office.

RESOURCES

Please note the following 3 RECOMMENDED TEXTBOOKS:

1. Lawrence PF: Essentials of General Surgery (5th ed). Baltimore, MD, Lippincott Williams & Wilkins, 2012
2. Lawrence PF: Essentials of Surgical Specialties (3rd ed). Baltimore, MD, Lippincott Williams and Wilkins, 2007

3. Lefor AT, Gomella LG: Surgery On Call (4th ed). New York, NY, Lange Medical Books, 2006

STUDENT ASSESSMENT

Feedback

In order for education to be meaningful, student must receive timely, specific feedback from their attending physicians, resident supervisors, and site/selective coordinator.

Attending physicians will provide structured feedback at both the halfway point and at the end of the rotation, based on information from both the attending physicians and residents.

Students will be given specific comments on areas of strength and areas where they require improvement regularly throughout their rotation, and this should come from both their resident and attending physicians. They should receive feedback after virtually every new case presentation, and about once per week for patients already admitted. Feedback should be given with respect to how the students are progressing in terms of the objectives for the rotation.

Evaluation of Student Performance

Evaluation of Performance Assessment

- Supervising residents and attending physicians will assess your core clinical skills, problem solving/clinical reasoning, knowledge base, personal/professional conduct, and communication/interpersonal skills (see attached form)
- It is the student's responsibility to obtain at least three preceptors before the end of the rotation. One evaluation may be from a senior (PGY3 or above) resident. Please have the preceptors that you have worked with the most complete your evaluation and give ample notice to your preceptor that you would like an evaluation completed for your rotation and try to schedule some time with your preceptor to go through the evaluation and bring the completed evaluation to the exit interview.
- The evaluations are scored and comprise 40% of your final surgery grade
- Oral Presentation skills will be assessed by a rubic for the Problem-based Surgery Seminars. Your performance will contribute 10% to your final grade.
- A summary of these evaluations will be provided at the completion of your clerkship

Evaluation of knowledge base will be determined by the NBME exam, which will contribute 25% to your final grade. For more information on this exam including sample questions please refer to:
http://www.nbme.org/Schools/Subject-Exams/Subjects/clinicalsci_surg.html

Clinical reasoning will be assessed by an oral examination where you will be presented standardized case scenarios of surgery related problems. Your performance will contribute 25% to your final grade.

Surgery Clerkship Encounter Log

You are required to document your patient encounters during your surgery I rotation. This form is to be completed accurately in one45.

How Can I Do Well On My Surgery Rotation?

You will do well if you follow the 3 As:

Available

- be available at all times and make sure people know where you are if you aren't available
- absence is very noticeable and is a strong influence on those completing your evaluations

Affable

- you are expected to work well with all members of the health care team

Able

- you can't learn everything in 8 weeks so concentrate your studies on problem solving focusing on differential diagnosis, evaluation and the principles of management rather than on procedural details
- evidence of independent learning will impress your evaluators and help you pass course examinations and the LMCC examination.

PATIENT CHARTS

The patient charts of the Attending Surgeons require the following information to be fully completed at all times:

When writing up an In-Patient Consult or Emergency sheet on a patient, you MUST include the date AND time of the consult on the consult sheet. If it is not included, we will be paging you for the information.

All In-Patient Consult sheets must have an addressograph or "sticky" label of the patients' information in the upper right hand corner. A hand-written name is not sufficient. We also require the telephone number to be written on the consult sheet as well. There is usually urgent follow up booked for many of these patients and if we have no phone number and no way to obtain one, we cannot book any follow up urgently.

When you see patients both in Emergency and as In-Patient consultations, we require the Emerg/In-Pt consult sheet. We would appreciate it if you would make a point of dropping them off in either the tray provided in the Resident Room by the ER or into our mail trays in Room 161, Ellis Hall on a daily basis.

Thank you for your attention to these matters.

SURGERY CLERKSHIP: Performing Patient Procedures

The clerkship phase of your education is all about hands-on experience with providing patient care and acquiring new skills. At times this will mean pushing your boundaries of competence in procedural skills. It is a fine line between pushing those boundaries and functioning beyond your level of competence. This is a matter of judgment on your part and you obviously must take into consideration patient safety issues. However, you must also be considerate of the concerns of other health care workers involved in the patient's care.

From time to time during your clerkship year of medical school you will be called upon to perform a patient procedure (e.g. Arterial puncture, phlebotomy, Foley catheter insertion, drain removal, tracheostomy tube change, etc.) for which you may or may not have had experience. Irregardless, you should never feel pressured to perform a procedure that you do not feel you have had adequate experience or competence to perform without supervision. It is a sign of maturity and good professional judgment when you are able to recognize your limitations and know when to ask for help. Clerks come into their Surgery rotations with a wide variation in skills and so it is important to inform the attending surgeon or resident that you would prefer to do this supervised. In the unlikely event that conflict arises please notify:

Marilyn Baniak, Undergraduate Education Coordinator (Clerkship)
Tel: 306.966-5678
Email: surgery.education@usask.ca

You may encounter a situation where you do feel you have the competence to independently perform a procedure but an allied health care worker (eg. nurse) disagrees. You will be farther ahead by respecting that individual's concerns than engaging in conflict. Discuss this with the resident or staff surgeon before proceeding. Whenever issues of conflict occur, please bring them to my attention.

Dr. T. Domes, Program Director
Undergraduate Education, Department of Surgery
University of Saskatchewan

BASIC ORDERS FOR SURGERY PATIENTS

One of the most critical documents in the health record. It is intended to convey to others very explicit instructions regarding the patients care. Therefore it is imperative that others are able to read and interpret your intentions. Order must be written with sufficient details to avoid misunderstanding.
There is no excuse for illegible, unclear, or inaccurate orders. AVOID CONTRIBUTING TO ERRORS!

The following are general guidelines for writing orders:

Physician/team responsible

Diagnosis/condition

Immediate plans

(some people like to use the DAVID M. mnemonic as an aid)

Diet

Activity

Vital signs/notification parameters

Investigations/Ins & Outs/Intravenous fluids

Drugs (include dose, route, frequency)

Miscellaneous
-special nursing care instructions (i.e., positioning, wound care, tubes/drains care)

EXAMPLE:
Admit to CTUA
Diagnosis: suspected appendicitis
Plan: for investigations and possible OR tonight
Diet: npo (non per os "nothing by mouth")
Activity: bedrest
Vital signs: temperature, blood pressure, and heart rate q4h (every 4 hours)
Investigations: CBC, urinarlysis, serum electrolytes, BUN, creatinine, abdominal ultrasound
Ins/outs: record urine output and nasogastric tube output q1h
Intravenous: 0.9%NaCl i.v. at 150 ml/h
Drugs: Morphine 5 mg iv q2h prn (5 mg intravenously every 2 hours as needed)
Gravol 25 mg iv q2h prn
Cefoxitin 1 gm iv q6h

SAMPLE OPERATIVE NOTE

Procedure:
-list title of procedure(s)
-you may use an illustration to highlight or clarify what was done

Surgeons:
-list attending first; senior resident; junior resident; medical student, etc.

Anesthesiologist:
-name and type of anaesthesia

Findings:
-brief description of pathology &/or procedure

Complications:
-list any intra-operative problems that those involved in postop care need to be aware of

Tubes/drains:
-what type of tube/drain and where was it placed

EBL (estimated blood loss):
-check with anaesthesia for their opinion (they estimate high and surgeons estimate low)

Disposition:
-where did the patient go for recovery (i.e., PACU or ICU)

SAMPLE OPERATIVE NOTE

Procedure: laparoscopic cholecystectomy & intraoperative cholangiogram

Surgeons: Dr. Keith (attending); Dr. Bahasadri; Dr. Lee, J. Bloe, Jursi

Anesthesia: Dr. Yip (general and epidural anesthesia)

Findings: acutely inflamed gallbladder; intraoperative cholangiogram was normal

Complications: iatrogenic common bile duct laceration primarily repaired

Tubes/drains: 10 mm JP drain to gallbladder fossa

EBL: 100 ml

Disposition: to PACU postop

PROGRESS NOTE

Progress notes record the patient's clinical course throughout their hospital stay. Noting the hospital day number, the postoperative day, or the days since injury is very helpful.

One format you may consider using is the SOAP note: Subjective (the patients complaint); Objective (the findings of physical exam and investigations); Assessment (your assessment of what you think is going on); Plan (what plan do you have for this patient particularly related to any new problem)

All notes & orders should be dated, timed, and signed. Your name should be legible and designated as JURSI.

SAMPLE PROGRESS NOTE #1

S) complaining of pain and swelling in her right ca

O) heart rate 95 bpm; BP 130/65; RR 16; T 37
Chest is clear to auscultation
Abdominal incision is healthy; abdomen is mildly tender throughout
Unilateral non-pitting edema (right leg) with positive Homan's sign; pedal pulses are 4/4 bilaterally

A) POD #5 right hemicolectomy now with right leg swelling and pain; suspect possib DVT

P) Doppler ultrasound to rule out right leg D

SAMPLE PROGRESS NOTE #2

S) feeling hungry; passed flat
O) vital signs are stable; abdomen slightly tender at surgical site only; good bow sounds
A) POD#3 Nissen fundoplication recovering well with t obviously complications; postop ileus has resolved
P) start clear fluids by mou

PROBLEM BASED SURGERY:

Seminar Schedule

The "Problem-Based Surgery Seminars" book for your Friday morning student-driven seminars can be found ONE45. You will attend these seminars when doing your 6 weeks of surgery.
The seminars will take place in Room 2652 Royal University Hospital unless otherwise stated.

2015	Session 1: 7:00 -8:00 a.m.	Student Leader	Faculty Supervisor	Session 2: 8:00 -9:00 a.m.	Student Leader	Faculty Supervisor
Jan. 9	CLR Npm`jckq			@_ai N_gl		
Jan. 16	Lcai K_qq			Altered Neurological Status		
Jan. 23	Ncpgmncp_rgtc A_pc			Postoperative Complications		
Jan. 30	Qfmai			Fluid, Lytes, Acid-base		
Feb. 6	Rp_sk_			Abdominal Mass		
Feb. 13	?`bmkgl_jU_jj$EpmgI K_qq			Abdominal Pain		
Feb. 20	E6 Fckmppf_ec			Perianal Problems		
Feb. 27	H_slbgac			Breast		
March 6	Afcqr N_gl $ Qfmprlcqq md @pc_rf			Lung Nodule		
March 13	Qu_jjmugle Bgddgasjrgcq $ N_gl			Leg Pain		
March 20	Rp_lqnj_lr			Urinary Complications		
March 27	Qapmr_j N_gl $ Qucjjgle			Skin & Soft Tissue Lesions		
April 3	Good Friday		XXXXXXXXXX	Good Friday		XXXXXXXXXX
April 10	CLR Npm`jckq			Non-healing Wounds		
April 17	Lcai K_qq			Back Pain		
April 24	?jrcpcb Lcspmjmega_j Qr_rsq			Perioperative Care		
May 1	Nmqrmncp_rgtc Amknjga_rgmls			Shock		
May 8	Djsgb* Jwrcq* ?agb @_qc			Trauma		
May 15	?`bmkgl_jK_qq			Abdominal Wall & Groin Mass		
May 22	?`bmkgl_jN_gl			GI Hemorrage		
May 29	Ncpg_l_j Npm`jckq			Jaundice		
June 5	@pc_qr			Chest Pain & Shortness of Breath		
June 12	Jsle Lmbsjc			Qu_jjmugle Difficulties & Pain		
June 19	Jce N_gl			Rp_lqnj_lr		

June 26	Urinary Complications			Scrotal Pain & Swelling		
July 3	Skin & Soft Tissue Lesions			Non-healing Wounds		
July 10	ENT Problems			Back Pain		
July 17	Neck Mass			Altered Neurological Status		
July 24	Perioperative Care			Postoperative Complications		
July 31	Shock			Fluid, Lytes, Acid-base		
Aug. 7	Trauma			Abdominal Mass		
Aug. 14	Abdominal Wall & Groin Mass			Abdominal Pain		
Aug. 21	GI Hemorrhage			Perianal Problems		
Aug. 28	Jaundice			Breast		
Sept. 4	Chest Pain & Shortness of Rest			Lung Nodule		
Sept. 11	Swallowing Difficulties & Pain			Leg Pain		
Sept. 18	Transplant			Urinary Complications		
Sept. 25	Scrotal Pain			Skin & Soft Tissue Lesions		
Oct. 2	ENt Problems			Non-healing Wounds		
Oct. 9	Neck Mass			Back Pain		
Oct. 16	Altered Neurological Status			Perioperative Care		
Oct. 23	Postoperative Complications			Shock		
Oct. 30	Fluid, Lytes, Acid Base			Trauma		
Nov. 6	Abdominal Mass			Abdominal Wall & Groin Mass		
Nov. 13	Abdominal Pain			GI Hemorrage		
Nov. 20	Perianal Problems			Jaundice		
Nov. 27	Breast			Chest Pain & Shortness of Breath		
Dec. 4	Lung Nodule			Swallowing Difficulties & Pain		
Dec. 11	Leg Pain			Transplant		

Schedule prepared and distributed by:
Marilyn Baniak, Surgery Teaching Office (B413 HSB)
Telephone: 966-5678
Fax: 966-2288

SMALL GROUP TEACHING

Problem Based Surgery Seminars

Overview of the Series

The series of small group sessions developed for the JURSI curriculum is centered on the case based format. During the session there will be a general overview given of the subject matter, which should be more of a review for the students, but there may be the introduction of some new material. The objectives are outlined in the handbook and are to form the core of the presentation. The attached cases have been carefully selected to then allow the integration and application of the now refocused and updated clinical knowledge.

This series of educational seminar is student lead – where one student is charged with responsibility of both topic presentation as well as leading the clinical discussion surrounding the cases. This is an excellent opportunity for students to teach each other and to develop group-working skills. The faculty member is there to assist with the process.

Role of the Faculty Preceptor

There is a tendency for faculty to view themselves as the primary teacher in most settings. Within this small group setting, the students are charged with this function, the physician role then becomes that of a facilitator, closely monitoring the activity but rarely intervening unless required. The faculty assigned should endeavor to complete the following:

- Review in advance the subject matter and clinical cases that are the assigned material
- Meet with the student prior to the presentation to discuss the students approach to the topic (easily done by phone)
- Carefully monitor the session – assisting the presenter with issues of time management and possible problems with disruptive behavior
- Ensure that the objectives of the group session are met
- Provide feedback to both the small group as well as the student presenter

Role of the student presenter

- **Prior to the day of the seminar**
  - Planning for the session includes pre-reading all of the clinical cases and then doing some further research on the topic – subsequently developing a 10 - 15 minute seminar on the area to be discussed.
  - Meet with or discuss the seminar with the faculty involved
  -
- **Day of the Seminar**
  - **General introduction to the audience is very important** – this is where you cover the following:
    - Who you are? Your name, year in medical school and what rotation you are one
  - **Welcome guests** – this is where you introduce the faculty member – who may not be known by all of the students with just a little bit of background. Such as, I would like to welcome Dr. Smith who is a general surgeon at the SPH site, and is kindly going to be our facilitator for this session. Thank you for coming today Dr. Smith. At this point, I would like each of us to introduce ourselves to Dr. Smith. Additionally, if there are visiting students or other people attending, you may introduce them at this point as well. Such as, this is Susan Short, a 4th year medical student from the U of C doing an elective in surgery here at the University Hospital under Dr. Hall.

- **Give an Overview of the Seminar** – which includes the title, what you are to cover, and how you expect the audience to participate with the case development. For example, the JURSI seminar today is on Complex Wounds – There is a lot of material to go through and I would like the session to end on time at 1400 - - it is now 1300. I will first go over an overview of the topic to both refresh your current knowledge and to perhaps add some additional information which I have found to be helpful during the development of this talk.

- **Explain how you want your fellow students to participate during the session.** For example - The overview material is on electronic media and

you may / may not – follow along on your computers, however, for the clinical cases, I would prefer that you do not use your laptops for the searching of information, but we apply the knowledge we have just reviewed, to answer the case questions. I would like all students to participate in the development of the answers and perhaps to do this we can go around the room to give all a chance to participate.

So once you have established both the nature of the session and the ground rules that are to be followed, begin the session. Take care to try to accomplish the following:

- Attention to time
- Pace yourself – stopping at the end of each segment to see if there are any questions and to perhaps ask a member of the audience to reflect back to you one of the important points you just discussed
- During the case presentations – to focus attention of the students they should perhaps close their lap tops and interact with the rest of the class – using the computer to only look at important slides or pictures that come with the case.
- Try to involve all members equally – do not keep going to one member for all of the answers
- Use the board at the front of the room to help consolidate things like differential diagnosis, laboratory tests and possible treatments.
- Do not be afraid to question the students after they give an answer. Such as, yes, an x-ray of the hand is important in this case, but may I ask you the reason why you want one – or perhaps, is there any simpler, more accessible tests before getting a CT scan?
- The facilitator is there to assist with this process – so if you are having difficulty or need assistance, just ask

- At the end of the session, always present an overview of what you considered to be the important points, ask if anyone has any questions or comments, and if they do not, perhaps ask each member to tell you something that they learned or appreciated during the session.
- Finally, thank your guests.
-

Role of the members of the small group teaching sessions

- To read ahead – all of the educational material listed for the seminar

- To participate in the discussion – with an understanding that there may be various levels of learners within the room and consideration given for the teaching component for each participant.

Remember – when giving a presentation always try to give enough information about who you are, what is the topic, who is in the audience, how the session will be given and the general timings. In this way, if the Dean of Medicine drops by in on the session – he / she will quickly be able to understand not only the teaching method but the professional manner in which it is to be delivered.

Best of luck and the Department of Surgery welcomes your participation within the teaching program.

PROBLEM BASED SURGERY

Seminar Rubric

Performance Element	Unacceptable Performance (4/10)	Developing Competency (6/10)	Competency Achieved (8/10)	Excellent Performance (10/10)
Preparation	No effort to contact faculty preceptor, late for presentation, completely unprepared [ ]	Attempt to contact faculty but no active communication achieved, arrives on time but not prepared for the presentation [ ]	Faculty contacted prior to presentation, arrives early to set up presentation and adequately prepared [ ]	Faculty contacted prior to presentation, arrives early to set up presentation, exceptional preparation apparent [ ]
Delivery	No eye contact, disengaged, poor use of audio-visual technology [ ]	Cursory eye contact, developing engagement, basic use of audio-visual technology [ ]	Eye contact obtained, engaged, appropriate use of audio-visual technology [ ]	Strong delivery of presentation with excellent use of eye contact and audio-visual technology [ ]
Organization & Content	Poor organization, lack of logic and sequence, content doesn't match objectives, inaccurate information presented, no use of evidence [ ]	Loose organizational structure, objectives not completely covered, little use of evidence [ ]	Good organizational structure with clear introduction, body and conclusions with adequate overview of objectives and use of evidence [ ]	Presentation is clear, logical, very well organized and has a strong introduction, body and conclusion with excellent coverage of objectives and use of evidence [ ]
Interaction	No introduction of faculty preceptor or members of the small group, lack of courtesy to group, ignores comments and questions, no interaction identified [ ]	Incomplete introduction of faculty preceptor or members of the small group, minimal interaction and involvement of students and faculty member [ ]	Introduces faculty preceptor and students, encourages interaction during presentation, utilizes faculty member effectively [ ]	Introduces faculty preceptor and students, excellent interaction achieved between content, students, and faculty member [ ]

COMMENTS:

Score _____/40

_____

Code: 7929#

_____

Date: _____

JURSI signature_____

Topic:_____

Faculty supervisor signature_____

**** This is now going to be 10% of your final grade.**

PROBLEM BASED SURGERY SEMINAR Topics

The Department of Surgery wishes to recognize the
Association for Surgical Education
for their kind permission to use their document
Manual of Surgical Objectives - 4th Edition
as the foundation for this document**.**

TABLE OF CONTENTS

Abdominal Masses

Assumptions
The student is familiar with the normal location, size and consistency of the abdominal viscera.

***Student Seminar Leader*: Conduct a 30 minute seminar to meet the following objectives:**

Objectives

1. Describe the causes of hepatomegally
   - Discuss the role of liver function testing, radionucleotide imaging, ultrasound and CT scanning in the evaluation.
   - Discuss the most frequently encountered benign hepatic tumors and their management.
   - Discuss the most frequently encountered malignant hepatic tumors and their management.
   - Discuss the role of liver biopsy in the diagnosis and the available techniques.

2. Describe the causes of splenomegaly.
   - Discuss the most common signs and symptoms associated with hypersplenism.
   - Compare and contrast hypersplenism with an enlarged and normal sized spleen.
   - Discuss the role of splenectomy in the treatment of hypersplenism.
   - Discuss the consequences of hyposplenism. How can these be diminished?
   - Discuss the short and long term complications associated with surgical removal of the spleen.

3. Describe the differential diagnosis of a pancreatic mass.
   - Discuss the most useful diagnostic studies.
   - Discuss the relationship of the pancreatic duct to the common bile duct and how this may impact diagnosis and treatment of pancreatic lesions.
   - Discuss the indications and techniques of biopsy of the pancreas.
   - Discuss the management of cystic lesions of the pancreas.
   - How do you differentiate a pseudocyst from a cystadenoma or true cyst?
   - Which patients need surgery and when?
   - What are the major complications of pancreatic necrosis and pseudocyst formation?

4. Describe the most frequently encountered retroperitoneal masses.
   - Discuss the appropriate imaging studies and work up for these tumors.
   - Discuss the most frequently encountered lymphomas and their treatment
   - Discuss the most common retroperitoneal sarcomas and their management.

5. Describe the evaluation and management of abdominal aortic aneurysms.
   - Discuss appropriate imaging studies for aneurysms.
   - Discuss which patients need angiograms.
   - Discuss the relationship of aortic aneurysms to other vascular aneurysms.
   - Discuss how to determine which patients need surgical repair of the aneurysm.
   - Discuss the risks of surgical treatment and the risks of the aneurysm left untreated.

6. Describe the tumors most frequently associated with abdominal carcinomas and omental metastasis.

***Student Seminar Leader*: Lead the participants through a discussion of each of the following problem(s). Pose associated questions to individual seminar participants.**

***Seminar Participant*: Review each of these cases and be prepared to answer the questions posed.**

Problems

1. A 32-year-old woman presents with abdominal pain and a RUQ mass. She is on birth control pills, has known gallstones and a past history of hepatitis B infection.
   - What is the most appropriate diagnostic work-up?
   - How do you differentiate an adenoma of the liver from hepatocellular carcinoma?
   - Does the presence or absence of cirrhosis impact your therapeutic decisions?
   - Do you remove an asymptomatic gallbladder with stones?

2. A 45-year-old alcoholic man admitted with a week of nausea and vomiting. Evaluation reveals a mass in his epigastrium which is tender. Ultrasound shows a 7 cm cystic mass.
   - What is the differential diagnosis?
   - Does the patient need antibiotics therapy for a pseudocyst?

Why/why not?
- What is the initial management of this patient?
- How do you decide if he needs operative therapy and when is the appropriate timing?
- What are the treatment options for drainage of a pseudocyst?

3. An 82-year-old man is brought to the ER with hypotension, back pain and a known history of aortic aneurysm.
   - What are the initial management priorities for this patient?
   - What, if any, diagnostic studies should be performed?
   - What is the expected mortality rate if this represents a rupture of the aneurysm?
   - What are the major complications associated with aneurysm rupture and repair?

Abdominal Pain

Assumptions

Students understand: the anatomy and relationships of various abdominal viscera; the normal structure and function of various abdominal viscera and their associated organ systems; the physiology of pain perception and how to apply this to differentiating visceral, somatic and referred pain patterns involved in abdominal pathology. Students have a basic understanding of the pathophysiology of inflammation, neoplasia, ischemia and obstruction.

Student Seminar Leader: Conduct a 30 minute seminar to meet the following objectives:

Objectives

1. Develop a differential diagnosis for various patients presenting with acute abdominal pain. Differentiate based on:
   - location: RUQ, epigastric, LUQ, RLQ, LLQ
   - symptom complex: examples: periumbilical pain localizing to RLQ, acute onset left flank pain with radiation to the testicle etc.
   - age: pediatric, adult, geriatric
   - associated conditions: pregnancy, immunosuppression (AIDS, transplant, chemotherapy/radiation therapy)

2. Explain the rationale for utilizing various diagnostic modalities in the evaluation of abdominal pain.
   - Laboratory: CBC, amylase, electrolytes, BUN, creatinine, glucose, urinalysis, beta-HCG, liver profile.
   - Diagnostic imaging: flat and upright abdominal radiographs, upright chest x-ray, abdominal ultrasonography, CT scan of abdomen and pelvis, GI contrast

radiography, angiography, IVP

- Special diagnostic/interventional techniques: upper endoscopy, procto-sigmoidoscopy, colonoscopy, laparoscopy.

3. Discuss the presentation, diagnostic strategy, and initial treatment of patients presenting with common or catastrophic abdominal conditions.
   - acute appendicitis
   - cholecystitis/biliary colic/ choledocholithiasis/ cholangitis
   - pancreatitis
   - peptic ulcer disease with and without perforation
   - gastroesophageal reflux
   - gastritis/duodenitis
     diverticulitis
   - inflammatory bowel disease
   - enterocolitis
   - small bowel obstruction: incarcerated hernia, adhesions, tumor
   - colon obstruction: volvulus, tumor, stricture
   - splenomegaly/splenic rupture
   - mesenteric ischemia
   - leaking abdominal aortic aneurysm
   - gynecologic etiologies: ectopic pregnancy, ovarian cysts (torsion, hemorrhage, rupture) tubo-ovarian abscess, salpingitis, endometriosis
   - genito-urinary etiologies: UTI, pyelonephritis, ureterolithiasis, testicular torsion

4. Discuss the common non-surgical conditions that can present with abdominal pain *Examples: MI, pneumonia, pleuritis, hepatitis, gastroenteritis, mesenteric adenitis, sickle cell crisis, DKA, herpes zoster, nerve root compression*.

5. Compare and contrast acute appendicitis in young adults, the very young, very old, and pregnant women. Discuss issues relevant to presentation, diagnosis, treatment, complications etc. *Example: perforation risk*.

6. Discuss the diagnosis and treatment of abdominal problems with particular relevance to the pediatric population. Include: neonates, infants, children, adolescents. Be able to list the abdominal problems, characteristic of each group, and outline diagnostic and intervention strategies for:
   - Congenital: hernias, malrotation, midgut volvulus
   - Hirschsprung's disease
   - Pyloric Stenosis
   - Intussuception
   - Meckel's diverticulitis
   - Child abuse

7. Discuss unique causes of abdominal pain in patients who are immune-suppressed and the implication on treatment and outcomes. *Examples: neutropenic enterocolitis, CMV enterocolitis, bowel perforation, acalculous cholecystitis, acute graft rejection*.

8. Discuss the approach to patients with common abdominal problems with emphasis on indications for surgical consultation, indications/contraindications to surgery, complications of disease and intervention, and expected outcomes. *Examples: laparoscopy vs. laparotomy; complication rates of emergent vs. elective surgery, perforated vs. non-perforated colon cancer; complications: intra-abdominal abscesses, fistulae, bleeding, anastomotic disruption.*

8. Describe the normal bacterial flora of the GI, GU and GYN systems and compare to pathologic infections.
   - Discuss appropriate antibiotic therapy where indicated in various conditions manifesting with abdominal pain.

10 Discuss the approach to patients with postoperative abdominal pain. Contrast findings in non-operative patients with regards to:
   - presentation
   - examination
   - differential diagnosis
   - intervention strategies

Student Seminar Leader: Lead the participants through a discussion of each of the following problem(s). Pose associated questions to individual seminar participants.

Seminar Participant: Review each of these cases and be prepared to answer the questions posed.

Problems

1. A 14-year-old boy is seen in the Emergency Room with a 12 hour history of abdominal pan. He awoke this morning with a vague "stomach ache" and did not feel like eating breakfast. This afternoon he complained of more severe pain on the right side of his abdomen. Abdominal examination reveals moderate tenderness maximally on the right side of the abdomen and in the right flank. Laboratory findings show Hb 15.1 and hematocrit 48. WBC count is 12,500 with 50 segs, 27 bands, 15 leukocytes, 6 monocytes, 1 eosinophil. Urinalysis was normal except for 10-15 WBC's and 5-10 RBC's/HPF.

- What is the most likely diagnosis?
- What other diagnoses should be considered?
- Are there any atypical findings in this case? Can they be explained?
- Are there any further diagnostic tests that should be done?
- How would you manage this patient?
- Are there alternatives to your proposed treatment?
- What are some of the other causes of acute abdominal pain? Do all these entities require surgical intervention?
- Outline your approach to the evaluation and management of a patient with acute abdominal pain.

2. A 72-year-old obese diabetic female presents to the office with a 3-day history of steady lower abdominal pain, fever, and urinary frequency. Recently, she has noted alternating periods of diarrhea and constipation. Prior history includes a prior hysterectomy, and appendectomy. Office exam reveals an obese female in moderate distress with a temperature of 102°F. Marked local tenderness is noted in the left lower quadrant and suprapubic area without guarding or rebound. There is the suggestion of a mass in this area. Rectal exam shows marked tenderness in the left pelvic area.

   - What is the probable diagnosis in this patient and what should be done to manage her?
   - If she would respond to non-operative management with resolution of pain, disappearance of mass, and resolution of her fever, what dietary and medication regimens would you advise for her long term?

     Two days after admission, she in fact does not improve. She complains of severe lower abdominal pain and is found to have bilateral lower quadrant tenderness with guarding and rebound. Her WBC count increases from 12,500 on admission to 18,800 with 20% bands.

   - What do you think has happened? Would you order any tests to confirm this suspicion?

- Do you think an operation should be performed? If so what kind of procedure is indicated?
- Which antibiotics are indicated?
- Discuss abdominal wound management in cases such as this.
- What postoperative complications might one anticipate?

Abdominal Wall & Groin Masses

Assumptions
The student understands the anatomic relationships of the abdominal wall musculature fascia.

Student Seminar Leader: Conduct a 30 minute seminar to meet the following objectives:
Objectives

1. Discuss the differential diagnosis of inguinal pain, mass or bulge.
   - consider hernia, adenopathy, muscular strain

2. Describe the anatomic differences between indirect and direct hernias.

3. Discuss the relative frequency of indirect, direct and femoral hernias by age and gender.

4. Discuss the clinical conditions that may predispose to development of inguinal hernia.

5. Discuss the indications, surgical options, and normal post-operative course for:
   - inguinal hernia repair
   - femoral hernia repair

6. Define and discuss the clinical significance of incarcerated, strangulated, reducible and Richter's hernias.

7. Discuss the differential diagnosis of an abdominal wall mass.
   - consider desmoid tumors, neoplasm, hernia, adenopathy, and rectus sheath hematoma.

8. Describe the potential sites for abdominal wall hernias.
   - consider incisional, umbilical, inguinal, femoral, Spigelian, and epigastric

- differentiate diastasis recti from abdominal hernia

9. Compare the natural history and treatment of umbilical hernia in children and adults

10. Describe clinical factors contributing to the development and repair of an incisional hernia.

11. Outline the management of an abdominal wall desmoid.

Student Seminar Leader: Lead the participants through a discussion of each of the following problem(s). Pose associated questions to individual seminar participants.

Seminar Participant: Review each of these cases and be prepared to answer the questions posed.

Problem

A 62-year-old male presents with a two month history of intermittent pain and bulging in the left inguinal region. A reducible hernia is noted on exam.

- What further data should be obtained from the patient's history and physical exam?
- What are the management options?
- What are the risks of operative and non-operative management?
- What is the usual post-operative course and physical findings?

Asymptomatic Patient with Positive Test

Assumptions
The student understands the concepts of test sensitivity, specificity, false negative and false positive rates, positive and negative predictability, and prior probability.

Student Seminar Leader: Conduct a 30 minute seminar to meet the following objectives:

Elevated PSA

Objectives
1. Understand the significance of the PSA and its implications for screening,

diagnosis, and follow-up.
2. What is the sensitivity and specificity of the PSA for detecting prostatic cancer.
3. Discuss the use of the PSA in screening healthy adults.
4. When should it be used?
5. How often should it be done?

Student Seminar Leader: Lead the participants through a discussion of each of the following problem(s). Pose associated questions to individual seminar participants.

Seminar Participant: Review each of these cases and be prepared to answer the questions posed.

Problem
A 50-year-old man is referred for your evaluation. On routine screening with his internist he was found to have an elevated PSA. He wants to know what to do now.

- What more do you need to know about this patient?
- Discuss the differential diagnosis.
- What are the indications for prostate biopsy?
- What is the role of ultrasound in the evaluation?

Prostate Nodule

Objectives
1. Understand the significance of a prostate nodule, its differential diagnosis, evaluation, and treatment.
   - Discuss the differential diagnosis
   - Discuss the evaluation of a nodule
   - Role of ultrasound
   - Role of biopsy
   - Different biopsy techniques
2. Discuss the staging of cancer of the prostate.
3. Discuss treatment options for cancer of the prostate.

Problem
On routine exam for rectal bleeding you find a 0.5 cm hard nodule on the left lobe of the patient's prostate. The patient is a 75-year-old gentleman with mild coronary artery disease who is compensated on medication.
- How would you evaluate this patient?

- Pathology reveals an adenocarcinoma; what are the next steps?

Gallstones

Objectives

1. Understand the natural history of symptomatic and asymptomatic gallstone disease.
2. Define "symptomatic" in context of gallstone disease.
3. Discuss the available literature on the natural history of asymptomatic gallstones.
4. Discuss the indications for cholecystectomy.
5. Discuss the options, pros and cons, for treatment of gallstones:
   - cholecystectomy
   - dissolution therapy
   - watchful waiting
6. Discuss impact of associated medical conditions on the decision to treat gallstones.
7. Discuss the association of cancer of the gallbladder and gallstones.

Problem

A 70-year-old woman is referred by her internist for evaluation of gallstones. She has a history of nausea and heartburn for the past 6 months not specifically related to meals or time of day. A UGI was normal and an ultrasound shows multiple calculi, with normal size duct and she has normal LFT's.

- What do you recommend?
- Does your recommendation change if she has Type II diabetes mellitus?
- What if she had a single stone 3.5 cm in size?
- What if the patient were a 55-year-old man?

Carotid Bruit

Objectives

1. Understand the significance of a carotid bruit found in an asymptomatic person and how and when to further evaluate it.
2. What is the significance of a bruit?
3. What are the symptoms of carotid disease?
4. How should a patient with a carotid bruit be evaluated?
5. What are the available treatments for carotid disease and what are their indications?

Problem

On your exam to evaluate an 80-year-old gentleman for rest pain of his right foot you discover a left carotid bruit. He has a history of Type II diabetes mellitus and mild hypertension for which he takes an oral hypoglycemic agent and an ACE inhibitor. He is right handed and denies any history of headache, dizziness, difficulty speaking, visual disturbance, etc. It is clear that he will need something done for his rest pain. What do you do about the carotid bruit?

- What points in the history do you need to know?
- What studies should be done?
- What are the indications for operative intervention?
- What is the best timing for the operation if it is indicated?

Hypercalcemia

Objectives

1. Discuss and understand calcium homeostasis.
2. Understand the symptoms and signs of acute and chronic hypercalcemia.
3. Discuss the differential diagnosis of hypercalcemia.
4. Discuss the evaluation and management of hypercalcemia.

Problem

While evaluating a 60-year-old woman for epigastric pain, you receive a serum calcium of 11 mg/dl. She has a long history of epigastric discomfort for which she takes antacids. She also has mild hypertension for which she takes hydrochlorthiazide and on your exam you find a small rubbery mass in the LUQ of her breast.

- What are the possible causes of her hypercalcemia?
- What other history and physical findings would you like to know?
- What is the next step?
- Would you proceed differently if she was known to have peptic ulcer disease?

Incidental Mass on Computer tomography

Objectives

1. Discuss the differential diagnosis of incidental masses of:
   - Adrenal gland
   - Liver
   - Kidney
2. Discuss the further evaluation of the mass

Back Pain

Assumptions

1. Students have a working knowledge of musculoskeletal anatomy of the spine.
2. Students have a basic understanding of disease spread neoplastic, infectious).

Student Seminar Leader: Conduct a 30 minute seminar to meet the following objectives:

Objectives

1. Elicit history and physical exam finding that permits a focused evaluation of back pain. Incorporate a detailed neuromuscular assessment.

2. Describe the key manifestations of various back pain syndromes. Consider: acute vs. chronic, age and gender, occupational & recreational risk factors.

3. Recognize radicular pain symptoms (herniated disc) and correlate neurologic findings with neuroanatomic level of disease.

4. Develop a differential diagnosis, initial evaluation and treatment strategies for:
   - herniated disc
   - spondylosis/spondylolisthesis
   - scoliosis
   - osteoporosis & degenerative disc disease
   - primary & metastatic tumors of the spine
   - infectious: osteomyelitis, epidural and paraspinal abscess
   - traumatic (musculoskeletal strain, vertebral fractures/dislocation → cord injury)
   - retroperitoneal sources (aortic aneurysm, GU sources, pancreatic disease).

5. Discuss the use of diagnostic studies available for evaluation of back and leg pain. Include spine radiographs, CT scan, MRI, bone scan, myelography, angiography.

6. Discuss the indications for surgical consultation and treatment in problems addressed above.

7. List potential complication of surgery on the spine as well as unique concerns for perioperative management and rehabilitation/recovery.

Student Seminar Leader: Lead the participants through a discussion of each of the following problem(s). Pose associated questions to individual seminar

participants.

Seminar Participant: Review each of these cases and be prepared to answer the questions posed.

Problems

1. A 42-year-old woman bends over to pick up a large potted plant and drops to the ground with severe pain in the lower back. In the ER she is in obvious distress and describes a sharp pain radiating down her right buttock and leg.
   - What other questions would you like to ask regarding her history?
   - What other findings do you expect on physical examination?
   - What, if any, diagnostic tests are indicated?
   - What would be your initial management options?
   - Would your approach differ if she had numbness of the lateral leg and diminished DTRs? Loss of bowel and bladder control?

2. A 68-year-old man presents with back pain and weight loss. He notes a decline in physical activity over the past 4-5 months associated with a boring constant pain in his mid-back. He considers himself otherwise healthy and hasn't seen a physician in 3 years.
   - What else do you want to know?
   - What is the significance of night pain associated with back pain?
   - What if his exam revealed only an enlarged prostate with a palpable mass in the right lobe?
   - What if his exam revealed a firm mass in the epigastrium that was non-pulsatile?
   - What would your diagnostic approach be in each circumstance?
   - What are your options for pain relief? Treatment?

Breast Problems

Assumptions

Student understands benign changes within the breast and their relevance to breast cancer surveillance. Student understands the topographic and structural anatomy of the breast. Student understands the hormonal changes that effect the breast.

Student Seminar Leader: Conduct a 30 minute seminar to meet the following objectives:

Objectives

1. Develop a differential diagnosis for a 20-year-old patient with breast mass and a 45-year-old patient with breast mass. Consider benign vs. malignant, abscess.

2. Describe the diagnostic work-up and sequence:
   - Discuss importance of the patient's history: estimated duration of illness, nipple discharge, breast cancer risk factor assessment.
   - Discuss physical findings to look for.
   - Discuss in-office procedures for evaluation and treatment (FNAC, needle aspiration, incision & drainage, core needle biopsy) and their diagnostic/therapeutic implications.
   - Discuss the importance of such breast imaging studies as ultrasound and mammography.

3. Discuss the diagnosis and management of the patient with an abnormal mammogram (consider microcalcifications).

4. Discuss the rationale for management with specific emphasis on:
   - Clinical staging of breast CA
   - The various possible malignant, pre-malignant, and benign pathology results (including hormonal receptor analysis, tumor DNA analysis).
   - The follow-up for patient with a benign lesion (alterations in lifestyle, imaging studies, cancer risk).
   - The role of incision and drainage and antibiotics in breast abscess treatment.
   - Current recommendations for screening mammography.
   - Therapeutic options for the patient with breast CA.
   - role of surgery/when to consult a surgeon for further diagnosis & treatment
   - role of radiotherapy
   - role of chemotherapy (adjuvant or neoadjuvant)
   - role of hormonal therapy
   - surgical options including reconstruction

Student Seminar Leader: Lead the participants through a discussion of each of the following problem(s). Pose associated questions to individual seminar participants.

Seminar Participant: Review each of these cases and be prepared to answer the questions posed.

Problems

1. A 35-year-old pregnant patient was referred by her obstetrician for a right upper outer quadrant breast lump. The patient has a positive family history of breast CA.
   - What pertinent questions regarding patient's history and current symptoms should be asked?
   - What diagnostic tests are the best options for this patient?
   - What is the most likely diagnosis?
   - What special considerations should be given to a pregnant patient considering biopsy?

2. A 65-year-old woman was referred to the surgeon from her family practitioner with skin dimpling in the lower outer quadrant of her left breast.
   - What pertinent questions regarding patient's history and current symptoms should be asked?
   - What diagnostic tests are the best options for this patient?
   - What is the most likely diagnosis?
   - What are the pros and cons of modified radical mastectomy vs. lumpectomy and radiation therapy?

Chest Pain and Shortness of Breath

Assumptions

The student will have an understanding of chest and cardiac anatomy and physiology including esophageal motility. The student should be able to interpret chest radiographs and ECG's.

Student Seminar Leader: Conduct a 30 minute seminar to meet the following objectives:

Objectives

1. Describe the causes, diagnosis, and treatment of spontaneous pneumothorax.
   - Discuss the risks of pneumothorax which could prove life-threatening.
   - Discuss the underlying pulmonary pathology you might expect to find.
   - Discuss the role of: observation, tube thoracostomy, chemical sclerosis, and surgical management of this condition.
   - Discuss the likelihood of recurrence and occurrence on the opposite side.

2. Describe the common etiologies for hemothorax
   - Discuss an appropriate diagnostic evaluation for a patient with

hemothorax.

- Discuss the appropriate management of blood in the pleural cavity.
- Which patients need an operation?
- What are the risks in leaving the blood in the chest?
- Discuss the most common non-traumatic causes of hemothorax.

3. Describe the presentations, etiologies and management of pulmonary embolus.
   - Discuss the predisposing factors which may lead to PE.
   - Discuss the electrocardiographic changes which might be seen and how they might be distinguished from those of myocardial infarct.
   - Discuss the main points in the diagnostic evaluation of PE.
   - Discuss management options:
   - Who needs anticoagulation with heparin?
   - Who needs lytic therapy?
   - Who needs vena caval filter protection?
   - Discuss the indication for open thoracotomy and pulmonary embolectomy to treat massive embolism.

4. Describe the presentation, etiology and management of acute thoracic aortic dissection.
   - Discuss initial medical vs. surgical management.
   - Discuss the goals of medical management and the role of beta-blockers and blood pressure control.
   - Discuss the usual sites of dissection within the proximal aorta and how the location affects prognosis and management.
   - Discuss issues as they relate to: aortic valve competence, distal re-entry site of the dissection, presence of hemothorax.
   - Discuss the primary risks associated with surgical repair of the dissected aorta (hemorrhage, paraplegia, stroke, MI, visceral ischemia in abdomen).

5. Describe the usual presenting symptoms and etiology of esophageal rupture.
   - Discuss the most common causes of rupture.
   - Discuss the sites within the esophagus most frequently perforated.
   - Discuss the risks of untreated perforation.
   - Discuss the indications for surgical management of esophageal perforation.
   - Which patients may be safely managed non-operatively?
   - Discuss the treatment priorities in treating most esophageal perforations.
   - Discuss the relationship of underlying esophageal disease to treatment options in the management of perforation.

6. Describe the common presenting symptoms associated with gastro-esophageal reflux.
   - Discuss the relationship of reflux to chronic asthma and aspiration.
   - Discuss the appropriate diagnostic work-up of patients with suspect reflux. What is the role of barium swallow, endoscopy, manometry, 24 hour pH testing?
   - Discuss the evaluation of dysphagia.
   - Discuss the treatment of esophageal stricture. What are the risks of dilation?
   - Discuss Barrett's esophagus and its implications.
   - What are the risks of malignancy?
   - ho needs surgical management and which procedure (antireflux or resection) is needed?
   - Discuss surgical options for reflux (consider abdominal or thoracic; laparoscopic vs. open; partial vs. complete wrap).
   - Discuss the pathophysiology and treatment of achalasia and diffuse esophageal spasm.

7. Describe the clinical findings, symptoms, and etiology of empyema.

- Discuss the clinical situations likely to be associated with formation of an empyema.
- Discuss the usual organisms isolated in culture.
- Discuss the management options for treating empyema and the differences in management of empyema in children.
- Discuss the surgical options in the management of empyema.

Student Seminar Leader: Lead the participants through a discussion of each of the following problem(s). Pose associated questions to individual seminar participants.

Seminar Participant: Review each of these cases and be prepared to answer the questions posed.

Problem

1. A 52-year-old man presents with upper chest and back pain and dyspnea of 3 hours' duration.
   - What are the important points in the medical history (risk factors, family and previous history)?
   - What are the important parts of the physical exam that may help secure a diagnosis?

- How will you differentiate cardiac ischemia from aortic root dissection?
- Why might cardiac ultrasound be important?
- What is the initial management of his thoracic dissection: if he's stable? If he has an 800 cc. hemothorax on the left? If he's in cardiogenic shock due to aortic insufficiency?

2. A 26-year-old man presents to the ER with a 2 day history of productive cough and about 3 hours of right sided chest pain and shortness of breath.
   - What is the differential diagnosis?
   - What are the important issues in this past and family history?
   - What is the diagnostic evaluation for this condition?
   - What is the treatment if CXR shows 30% collapse of the right lung with a small amount of fluid in the right costophrenic angle?
   - What do you do if after 4 days of chest tube suction he still has air leak from the lung?
   - What is the likely surgical treatment for failed conservative management?

3. A 47-year-old woman has chest pain after eating dinner at home 4 hours following upper GI endoscopy for dilatation of her achalasia.
   - What is the presumed diagnosis?
   - What is the best means of making the diagnosis?
   - What is the appropriate management? Under what circumstances might you manage this non-operatively?
   - What might be an appropriate management for a small perforation at the GE junction with minimal soiling?

Ear and Nose Problems

Assumptions

The student understands the anatomy, function and physiology of the organs and tissues of the head and neck.

Student Seminar Leader: Conduct a 30 minute seminar to meet the following objectives:

Objectives

1. Discuss the differential diagnosis of ear pain (otalgia).
   - consider infection, trauma, neoplasm, inflammation, vascular
   - contrast etiologies in children *versus* adults

2. Discuss the diagnosis, treatment and complications of acute and chronic otitis

media.
- include indications for myringotomy tube placement

3. Outline the evaluation of a patient presenting with hearing loss;
   - differentiate between conductive and sensorineural hearing loss
   - identify treatable causes.

4. Outline the evaluation of a patient presenting with tinnitus
   - describe the potential etiologies and management

5. Describe the risk factors, diagnosis and management of epistaxis.
   - describe the indications and techniques for nasal packing.

6. Discuss the causes and mechanisms of chronic rhinitis/rhinorrhea
   - outline the evaluation and management of chronic rhinitis.

7. Describe the indications for tonsillectomy.

8. Outline the evaluation of a patient with salivary gland mass.
   - describe the potential etiologies
   - describe the common tumors of the salivary gland and their management.

9. Discuss the potential etiologies of oral cavity pain.
   - include inflammation, infection, neoplasm

Student Seminar Leader: Lead the participants through a discussion of each of the following problem(s). Pose associated questions to individual seminar participants.

Seminar Participant: Review each of these cases and be prepared to answer the questions posed.

Problem

1. A 55-year-old woman presents a swelling in the parotid area.
   - What additional data should be obtained from the patient's history?
   - What findings should be looked for on physical exam?
   - What is the initial testing and management plan?

2. A 77-year-old woman presents with ongoing nasal bleeding.
   - What additional data should be obtained from the patient's history and physical exam?
   - What is the initial management?

Fluid, Electrolyte and Acid Base Disorders

Fluids and Electrolytes

Assumptions
The student understands: the distribution of fluids and electrolytes in the body compartments; the role of the kidneys in regulating fluid and electrolyte balance; the basic physiology and biochemistry of the process of respiration.

Student Seminar Leader: Conduct a 30 minute seminar to meet the following objectives:

Objectives

1. List the normal range of Na^+, K+, HCO_3^-, Cl^- in serum and indicate how these ranges change in perspiration, gastric juice, bile and ileostomy contents.

2. List at least four endogenous factors that affect renal control of sodium and water excretion.

3. List at least six symptoms or physical findings of dehydration.

4. List and describe the objective ways of measuring fluid balance.

5. List the electrolyte composition of the following solutions:
   - normal (0.9%) saline.
   - 1/2 normal saline
   - 1/3 normal saline
   - 5% dextrose in water
   - Ringer's lactate

6. In the following situations, indicate whether serum Na, K, $HC0_3$, Cl and blood pH will remain stable (0), rise considerably (++), rise moderately (+), fall moderately (-), or fall considerably(--):
   - excessive gastric losses
   - small intestine fistula
   - biliary fistula

- diarrhea

7. In the following situations, indicate whether serum and urine Na, K, $HC0_3$, Cl and osmolality will remain stable (0), rise considerably (++), rise moderately (+), fall moderately (-), or fall considerably (--):
   - acute tubular necrosis
   - dehydration
   - inappropriate ADH secretion (SIADH)
   - diabetes insipidus
   - congestive heart failure

8. Describe the possible causes, appropriate laboratory studies needed, and treatment of the following conditions:
   - hypernatremia
   - hyponatremia
   - hyperkalemia
   - hypokalemia
   - hyperchloremia
   - hypochloremia

9. Describe the concept of a "third space" and list those conditions that can cause fluid sequestration of this type.

Acid Base Balance

Objectives

1. List the physiological limits of normal blood gases.

2. List the factors that effect oxygen delivery and consumption.

3. Indicate the mechanisms, methods of compensation, differential diagnosis, and treatment of the following acid base disorders:

   - acute metabolic acidosis

   - acute respiratory acidosis

   - acute metabolic alkalosis

   - acute respiratory alkalosis

Student Seminar Leader: Lead the participants through a discussion of each of the following problem(s). Pose associated questions to individual seminar participants.

Seminar Participant: Review each of these cases and be prepared to answer the questions posed.

Problem

A 60-year-old 70 kg. male has a long standing history of peptic ulcer disease. Two weeks ago he began to vomit several times a day. The vomitus often contained undigested food and was free of bile. The pain abdominal x-ray demonstrated a very distended stomach.

- What would be high on your list in the differential diagnosis?
- What type of acid base disorder would you expect to find in a patient with gastric outlet obstruction?
- What electrolyte abnormalities would you expect to see in this patient?
- Describe features of physical examination that would fit in with the acid base and electrolyte abnormalities
- Write orders for this patient to correct the abnormalities.

Gastrointestinal Hemorrhage

Assumptions
Student understands the anatomy (including blood supply) and physiology of the gastrointestinal tract, to include the esophagus, stomach, small bowel, colon, and ano-rectum.

Student Seminar Leader: Conduct a 30 minute seminar to meet the following objectives:

Objectives

1. Outline the initial management of a patient with an acute GI hemorrhage.
   - Discuss indications for transfusion, fluid replacement, and choice of fluids.

2. Differentiate upper vs. lower GI hemorrhage
   - Discuss history and physical exam abnormalities.
   - Discuss diagnostic studies.

3. Discuss the differences in evaluation and management of the patient presenting with:
   - hematemesis
   - melena
   - hematochezia
   - guaiac positive stool

4. Discuss medical vs. surgical management for:
   - peptic ulcer
   - variceal hemorrhage
   - Mallory-Weiss tear
   - gastric ulcer (benign vs. malignant)
   - Meckel's diverticulum
   - intussusception
   - diverticulosis
   - ulcerative colitis
   - colon cancer
   - rectal cancer
   - hemorhoids
   - AV malformation

Student Seminar Leader: Lead the participants through a discussion of each of the following problem(s). Pose associated questions to individual seminar participants.

Seminar Participant: Review each of these cases and be prepared to answer the questions posed.

Problems

For each of the following problems, answer the following questions:

- What further data should be obtained from the patient's history?
- What physical exam findings would you look for?
- What work-up would you recommend (include laboratory tests and

diagnostic interventions)?
- What is your differential diagnosis?
- What therapy or treatment would you recommend?

1. A 25-year-old, otherwise healthy medical student presents with acute abdominal pain, nausea without vomiting, and bright red blood per rectum.

2. A 65-year-old man presents with hypotension and bright red blood and clots per rectum. Two months ago he had a similar episode of massive bleeding for which he did not seek medical advice.

3. A 62-year-old woman is referred with chronic anemia.

Jaundice

Assumptions
Student understands the mechanisms for production, excretion, and metabolism of bile and can recall the anatomy of the hepatobiliary system.

Student Seminar Leader: Conduct a 30 minute seminar to meet the following objectives:

Objectives

1. Describe the differential diagnosis of a patient with jaundice.
   - Discuss, prehepatic, intrahepatic (both non-obstructive) and posthepatic (obstructive) etiologies.
   - Discuss painful vs. non-painful
   - Discuss benign vs. malignant
   - Discuss inflammatory vs. non-inflammatory

2. List & explain justification for the diagnostic modalities used in the evaluation of a patient with jaundice, to include limitations, relative costs and potential risks.
   - Discuss importance of the patient's history: estimated duration of illness, associated symptoms (pain and its characteristics), and risk factors.
   - Discuss important physical exam findings:
   - hepatomegaly
   - palpable mass
   - Courvoisier's sign
   - Murphy's sign
   - scleral icterus
   - abdominal tenderness

- lymphadenopathy
- Charcot's triad
- Reynold's pentad

3. Explain the rationale for using these diagnostic tests in the evaluation of a patient with jaundice. What is the significance of abnormalities?
   - liver function tests
   - other laboratory tests and their indications (including hepatitis profile, peripheral blood smear, Coombs tests, etc.)
   - hepatobiliary imaging procedures (ultrasound, CT scan, ERCP, PTHC, HIDA scan).

4. Discuss the management principles (to include initial treatment; role and timing of surgery; and, if necessary, timing of appropriate consultation) of:
   - cholecystitis
   - choledocholithiasis
   - cholangitis
   - cholangiocarcinoma
   - hepatic abscess
   - pancreatic CA
   - periampullary CA
   - hepatic CA
   - autoimmune hemolysis
   - hepatitis
   - hematobilia
   - periampullary duodenal diverticulum

Student Seminar Leader: Lead the participants through a discussion of each of the following problem(s). Pose associated questions to individual seminar participants.

Seminar Participant: Review each of these cases and be prepared to answer the questions posed.

Problem

A 52-year-old woman with a previous history of hepatitis B is diagnosed with symptomatic gallstones but refuses elective cholecystectomy. Four years later she presents with jaundice.

- What further data should be obtained from the patient's history?
- What findings should be looked for on physical examination?
- What lab tests should be ordered?

- What diagnostic tests should be ordered?
- What diagnosis is at the top of your differential list?

Leg Pain

Assumptions
Students understand the anatomy of the lower extremities and the physiology of the clotting cascade.

Student Seminar Leader: Conduct a 30 minute seminar to meet the following objectives:

Objectives

1. Describe atherosclerosis, its etiology, prevention and sites of predilection.
   - Discuss the intimal injury that characterizes the process and how that injury impacts therapy and prevention.

2. Describe the differential diagnosis of hip, thigh, buttock, and leg pain associated with exercise.
   - Discuss neurological vs. vascular etiologies of walking induced leg pain.
   - Discuss musculoskeletal etiologies.
   - Discuss the relationship of impotence to the diagnosis.

3. Describe the pathophysiology of intermittent claudication.
   - Discuss the diagnostic work-up of chronic arterial occlusive disease.
   - Discuss the role of segmental Doppler studies and arteriography.
   - Discuss the medical management of arterial occlusive disease.
   - Discuss risk factors associated with arterial occlusive disease.
   - Discuss operative and nonoperative interventions for aortoiliac, femoropopliteal and distal vascular occlusion.

4. Describe the pathophysiology of ischemic rest pain.
   - Discuss evaluation and management of rest pain.
   - Discuss the role of anticoagulation in peripheral vascular disease.
   - Discuss the indications for amputation and choice of amputation level.

5. Describe the etiologies and presentation of acute arterial occlusion.
   - Discuss embolic vs. thrombotic occlusion.
   - Discuss signs and symptoms of acute arterial occlusion (the "P's")
   - Discuss the medical and surgical management.
   - Discuss the complications associated with prolonged ischemia and

revascularization.
- Discuss the diagnosis and treatment of compartment syndrome.

6. Describe the differential diagnosis, location, appearance and symptoms of leg ulcers due to:
   - arterial disease and venous stasis disease
   - neuropathy
   - infection and malignancy

7. Describe the differential diagnosis of the swollen leg.
   - Discuss how to differentiate lymphedema from venous stasis.
   - Discuss painful vs. non-painful swelling.

8. Discus the presentation of and risk groups for bony tumors.

9. Describe the factors that lead to venous thrombosis and embolism.
   - Discuss the usual locations for thrombosis.
   - Discuss differing implications of deep and superficial venous thrombophlebitis.
   - Discuss the common invasive and noninvasive diagnostic tests for DVT.
   - Discuss methods for DVT prophylaxis and identify high-risk patients.
   - Discuss the risks, benefits and available options for anticoagulation and thrombolysis.
   - Discuss the signs, symptoms, diagnostic evaluation and treatment of pulmonary embolism.

10. Describe the diagnosis, work-up and management options for symptomatic varicose veins and venous ulcers.
    - Discuss the physical exam and tests for venous valvular competence.
    - Discuss the role of venography, ultrasound and plethysmography.
    - Discuss medical vs. surgical management.
    - Discuss the role of stripping, sclerosis, laser ablation.

Student Seminar Leader: Lead the participants through a discussion of each of the following problem(s). Pose associated questions to individual seminar participants.

Seminar Participant: Review each of these cases and be prepared to answer the questions posed.

Problems

1. A 57-year-old businessman presents with symptoms of crampy calf pain when walking 500 feet.
   - What pertinent medical history must be evaluated?
   - What are the key elements to the physical exam?
   - What laboratory studies and diagnostic tests are indicated?
   - How will you decided if this patient needs medical or surgical management?

2. An 82-year-old woman with chronic atrial fibrillation is sent in from a nursing home after the sudden onset of a painful, dusky, cool left leg and foot. She is unable to feel you touch her toes.
   - What is your differential and likely diagnosis?
   - What are your treatment and evaluation priorities?
   - How do you manage this patient surgically?
   - Is any long term treatment necessary to prevent recurrence?

Lung Nodule

Assumptions
Student has reviewed lung anatomy and normal physiology. Student is familiar with TNM classification of lung neoplasms.

Student Seminar Leader: Conduct a 30 minute seminar to meet the following objectives:

Objectives

1. Create an algorithm for the evaluation of a patient with a lung nodule on chest x-ray.

2. Discuss the common risk factors and clinical symptoms of lung cancer.

3. Describe the role of surgery in lung cancer.
   a) Describe pulmonary function tests and values that are predictive of severe risk of pulmonary complications following thoracic surgery.
   b) Identify conditions that preclude curative surgical resection for lung cancer.

4. List the most common sources of malignant metastases to the lungs.

5. Compare and contrast the management and prognosis of metastatic vs. primary lung malignancies.

6. Describe the most common diagnostic procedures used to evaluate pulmonary and mediastinal lesions.

7. List the common tumors of the anterior, posterior and superior mediastinum.

8. List the common chest wall tumors.

Student Seminar Leader: Lead the participants through a discussion of each of the following problem(s). Pose associated questions to individual seminar participants.

Seminar Participant: Review each of these cases and be prepared to answer the questions posed.

Problem
On a routine chest x-ray of a 65-year-old 30 pack per year smoker, a discrete 2 cm. nodule is found in the right upper lobe.

- List diagnostic possibilities including neoplastic and non-neoplastic lesions.
- Write orders for diagnostic tests in order of priority.
- Write orders for the tests needed to determine if the patient is a suitable operative candidate.
- Describe the operative and ancillary treatments assuming the nodule was a non small-cell and undifferentiated neoplasm.
- Outline alternative treatment plans under the following conditions:
- patient had previously known soft tissue sarcoma of the extremity
- multiple lymph nodes found on CT scan of mediastinum
- patient found to have poor pulmonary function
- patient has hoarseness
- Outline a follow-up care plan if the patient had a lobectomy for non small-cell lung carcinoma.
- Compare and contrast the treatment plans and prognosis if the lesion were tuberculosis or sarcoidosis

Neck Mass

Assumptions
The student has an understanding of head & neck anatomy, embryology, and thyroid/ parathyroid physiology and can perform a competent head and neck physical exam.

Problem Based Surgery Seminars - Neck Mass

Student Seminar Leader: Conduct a 30 minute seminar to meet the following objectives:

Objectives

1. Describe the neck masses commonly presenting in childhood.
   - Discuss the embryologic origin of these lesions and the anatomic implications to consider when resecting them.

2. Describe the signs, symptoms & etiologies of inflammatory neck masses.
   - Discuss Ludwig's angina and why it may be life-threatening.
   - What is appropriate treatment for cervical adenitis?
   - Discuss the evaluation of suspected tuberculous adenitis.

3. Describe the most common neoplastic neck masses and their origin.
   - Discuss the role of fine-needle cytology, open biopsy, CT scan, MRI, thyroid scan, and nasopharyngeal endoscopy in the diagnostic work up of a neck mass.
   - Discuss the relationship of smoking and alcohol abuse to squamous cell cancers.
   - Discuss the evaluation and differential diagnosis of a patient with a thyroid nodule.
   - Discuss the common thyroid malignancies, their cell of origin and their management. Which has the best prognosis? The worst? Which is associated with MEN syndrome?
   - Discuss the relationship of radiation exposure to thyroid malignancy.
   - Which malignancies frequently metastasize to the neck? How is the metastatic nodal disease managed and how does this differ based on the origin of the primary?

4. Discuss the common non-neoplastic thyroid diseases that could present as a mass.
   - Discuss the symptoms associated with hyperthyroidism and discuss treatment options.
   - Discuss diagnosis and management of thyroiditis.

Student Seminar Leader: Lead the participants through a discussion of each of the following problem(s). Pose associated questions to individual seminar participants.

Seminar Participant: Review each of these cases and be prepared to answer

the questions posed.

Problems

1. A 27-year-old presents with a discrete 1.5 cm. thyroid nodule.
   - Discuss the relevant points in the medical history.
   - Describe the specific features of the mass to be evaluated on physical exam.
   - What is the appropriate diagnostic evaluation of an asymptomatic nodule?
   - Discuss how fine needle aspiration cytology is performed.
   - Describe the possible results of FNA and how they would be managed.
   - Discuss the potential complications of thyroidectomy.

2. A 5-year-old presents with a tender 2 cm. swelling over his mid-anterior neck.
   - What is your differential diagnosis?
   - What is the embryologic origin of the thyroglossal duct?
   - What are the key elements of the surgical strategy for its removal?
   - How does the presentation differ from that of branchial cleft cyst?

3. A 68-year-old smoker presents with hoarseness, cough and a new 2 cm nontender neck mass in his left neck.
   - Describe the important elements of the history for this patient.
   - What are the key elements of your physical exam?
   - Why might he be hoarse and how might that impact treatment and prognosis?
   - What is the surgical management of laryngeal squamous cell cancer?
   - How would the finding of a 2 cm. mass on chest x-ray change your evaluation?
   - What is the association between squamous cell cancers of the head and neck and lung cancer?

Altered Neurologic Status

Assumptions

Students understand basic central and peripheral neurological anatomy and function, including: cross sectional anatomy, histology, gross anatomy, and sensory/motor endpoints.

Student Seminar Leader: Conduct a 30 minute seminar to meet the following objectives:

Objectives

1. Describe the physiology of intracerebral pressure (ICP) and cerebral perfusion pressure (CPP), including the effects of blood pressure, ventilatory status, and fluid balance on ICP and CPP.
   - Recognize the Cushing reflex and its clinical importance (brain herniation).

2. Discuss the diagnosis and management of the patient with headaches.
   - Describe the signs, etiology and treatment of intracranial hemorrhage (subarachnoid hemorrhage and intracerebral hemorrhage).
   - Describe the relative incidence and location of the most common brain tumors, their clinical manifestations, their diagnosis, and general treatment strategies.
   - Differentiate brain abscesses from tumors, and discuss the treatment of intracranial infections.

3. Describe the evaluation and management of a patient with an acute focal neurologic deficit.

4. Differentiate TIA, RIND, and CVA.
   - Differentiate anterior vs. posterior circulation symptoms.
   - Outline the diagnostic tests and monitoring of carotid occlusive disease, including role of angiography and noninvasive methods.
   - Discuss medical vs. surgical management of carotid artery disease.

5. Describe the signs, symptoms, and treatment of common peripheral nerve entrapment syndromes, as well as other nerve injuries.

6. Describe the presentation and management of hydrocephalus.
   - Compare and contrast adult and pediatric hydrocephalus.

7. Discuss the role of surgery in the management of pain, movement, and seizure disorders.

Student Seminar Leader: Lead the participants through a discussion of each of the following problem(s). Pose associated questions to individual seminar participants.

Seminar Participant: Review each of these cases and be prepared to answer the questions posed.

Problems

1. A 60-year-old patient presents with transient monocular blindness.
   - How will you evaluate this patient's neurologic status?
   - Describe the importance of a fundoscopic exam.
   - Develop a differential diagnosis, evaluation and treatment plan.
   - What are the risks of carotid endarterectomy?

2. A 38-year-old arrives in your office complaining of a severe headache.
   - What historical and physical findings are important?
   - When would you order a CT scan?
   - When to obtain a neurosurgical consult (emergent or "routine")?

3. A 45-year-old arrives in your office with complaints of numbness, tingling, and weakness in the (dominant) right hand.
   - How would you proceed with your history, physical examination, and diagnostic evaluation?
   - What lesions are possible? How do you differentiate and treat them?

Non-Healing Wounds

Assumptions
Student will review and understand the fundamental principles of wound healing and the physiologic sequelae of diabetes and malnutrition.

Student Seminar Leader: Conduct a 30 minute seminar to meet the following objectives:

Objectives

1. Define "non-healing".

2. Discuss a differential diagnosis, evaluation, and treatment of a patient with:
   - non-healing lower extremity wound
   - non-healing wound of the torso, or body area other than the lower extremity

3. Describe the pathophysiology involved for each of the diagnostic possibilities.
   - Consider: pressure, ischemia, infection, malignancy, and foreign body.

Student Seminar Leader: Lead the participants through a discussion of each of the following problem(s). Pose associated questions to individual seminar participants.

Seminar Participant: Review each of these cases and be prepared to answer the questions posed.

Problems

1. You are asked to evaluate a 75-year-old man with diabetes who has a 2 cm ulcer just on the sole of his foot at the level of the metatarsal heads. He has 4+/4+ femoral pulses bilaterally as well as strong popliteal pulses, but no pulses below this. He has decreased sensation over his feet to the ankle bilaterally.

2. You are asked to consult on a 60-year-old paraplegic with a persistent draining ulcer over the left ischial tuberosity. He has been paraplegic for 30 years following a car accident. The ulcer has been present for 3 months and does not seem to be getting smaller.

3. A 70-year-old woman comes to your office for help with an ulcer on her right leg. It has been there ever since she bumped her leg a month ago. It is slowly enlarging but not particularly painful. The ulcer is punched out and located just below her right medial malleolus. The base is granulated and the edges are sharply demarcated and a little tender. Her lower leg shows brawny induration around the ulcer with discoloration of the skin of the lower leg over the distal third. She tells you that she had a swollen leg after one of her deliveries and she had to be on some kind of medication for her blood for months afterwards. Since then her leg swells when she is on it for a long time and it aches. She gets sores like this fairly easily with minimal trauma and it takes longer and longer for them to go away. She also notes that she has been told she has "low blood" but doesn't know any more than that.

   For each of these cases:

   - What further data should be obtained from the patient's H & P?
   - What diagnostic tests should be performed?
   - What treatment would you recommend?

Perianal Problems

Assumptions

The student knows the basic anatomy of the anal canal and rectum and is familiar with the basics of the mechanism of defecation.

Student Seminar Leader: Conduct a 30 minute seminar to meet the following objectives:

Objectives

1. Develop a differential diagnosis for a patient with perianal pain. (Be sure to include benign, malignant and inflammatory causes).

2. Discuss the characteristic history findings for each of the above including:
   - character and duration of complaint
   - presence or absence of associated bleeding
   - relationship of complaint to defecation

3. Describe physical exam findings for each diagnosis. Indicate in which part of exam (external, digital, anoscopic or proctoscopic) these findings are identified.

4. Discuss treatment plan for each diagnosis listed in objective one, including non-operative interventions and role and timing of surgical interventions.

Student Seminar Leader: Lead the participants through a discussion of each of the following problem(s). Pose associated questions to individual seminar participants.

Seminar Participant: Review each of these cases and be prepared to answer the questions posed.

Problems

A 25-year-old man presents with the sudden onset of perianal pain.
- list specific questions to be included in the history.
- discuss how your differential might change if the patient has AIDS.
- discuss how your differential might change if the patient is 62 with a history of a 10 lb weight loss.

Perioperative Care

Assumptions

The student can perform a complete history and physical examination. The student will review pharmacology of common anesthetic medications, antibiotics, and pain control agents. The student can integrate the physiology of cardiovascular, pulmonary, gastrointestinal, renal, hepatic, endocrine and nervous system function. The student is familiar with carbohydrate, protein and fat metabolism and the role of vitamins/minerals in health and disease.

Student Seminar Leader: Conduct a 30 minute seminar to meet the following objectives:

Objectives

Preoperative Assessment

1. Describe features of a patients clinical history that influence surgical decision making. Consider: known diseases, risk factors, urgency of operation, medications etc.

2. Discuss tools that may assist in preoperative risk assessment. Consider laboratory studies, imaging studies etc. Include the following:
   - Pulmonary (example: exercise tolerance, pulmonary function testing)
   - Cardiovascular (ASA classification, Goldman criteria, echocardiography, thallium studies, Doppler).
   - Renal (Bun/Cr, dialysis history).
   - Metabolic (nutritional assessment, thyroid function).

3. Compare and contrast anesthetic risk factors. Consider the following variables:
   - Age: neonates to geriatrics
   - Urgency of intervention:
   - emergent versus elective surgery
   - associated conditions: pregnancy, diabetes, COPD, vavular or ischemic heart disease, cerebral/peripheral vascular disease, renal insufficiency etc.

4. Discuss history, physical and laboratory findings utilized in nutritional assessment. Be familiar with the most common forms of nutritional & deficiency disorders. Consider: protein-calorie malnutrition, chronic alcoholism, iron and B12 deficiencies, malabsorption syndromes and requirements of the morbidly obese.
   - Discuss disease states and surgical interventions at high risk for nutritional impairment.
   - Discuss the advantages and disadvantages of nutritional support.
     - compare and contrast enteral vs. parenteral administration

complications.
- methods of determining requirements and assessing response.

Perioperative Assessment

1. Discuss the components of informed consent as it applies to surgical interventions (procedures, transfusions etc.)
   - Discuss documentation of consent in the medical record.
   - Discuss the rationale for documentation in the medical record.
   - Describe the components of an operative or procedure note, postoperative orders, a postoperative note.

2. Describe the indications and efficacy of various monitoring techniques.
   - Compare & contrast invasive vs. noninvasive.
   - Consider the following: vital signs, I&O, arterial lines, pulse oxymetry, ABG, ECG, Swan Ganz, CVP, ICP etc.

3. Discuss conditions that potentially interfere with fluid and electrolyte homeostasis in the peri-operative period, and describe strategies for replacement/monitoring.
   - Example: effects of bowel preparation, NPO status, NG drainage, dialysis, operative losses, etc.

4. Describe factors that might impair coagulation or increase risk of bleeding.
   - Describe the various blood component therapies available.
   - Discuss the indications, risks and benefits of transfusion therapy.
   - Consider: packed cells vs. whole blood, FFP, platelets, cryoprecipitate, albumin
   - Discuss alternatives to allogeneic blood transfusion and their appropriate use. Include: autologous donation, hemodilution, iron/erythropoetin therapy, and modification of transfusion trigger.

5. Discuss risk factors for alcohol withdrawal syndromes. Consider prevention strategies.

Postoperative Assessment

1. List the conditions necessary for discharge of a patient to home or to the floor following a general or spinal anesthetic.

2. Understand the pharmacological action, benefits, risks, and side effects of various pain control agents.

- Compare and contrast: parenteral vs. enteral agents and describe the role of epidural and nerve blocks in pain management.

3. Describe the expected outcome of an uncomplicated surgical procedure. Discuss a normal post-operative course for various common operations. Consider:
   - Time to recovery, order of recovery of digestive function (stomach, small bowel, colon) etc.
   - Characteristics of a healing surgical wound.
   - Impact of various incisions on recovery.
   - Functional abilities and disabilities acutely and chronically.
   - Nutritional and fluid needs and options for replacement.
   - Potential complications: prevention strategies.
   - Patient support systems and options for post hospital care.

4. Describe criteria for admission of a patient to an ICU or special care unit following surgery.
   - Compare and contrast post-operative courses of patients undergoing Whipple procedure, coronary artery bypass, multiple trauma with craniotomy, laparotomy and orthopedic injuries.
   - List criteria for weaning a patient from the ventilator post-operatively.

Student Seminar Leader: Lead the participants through a discussion of each of the following problem(s). Pose associated questions to individual seminar participants.

Seminar Participant: Review each of these cases and be prepared to answer the questions posed.

Problems

1. A 65-year-old man is undergoing a left total knee replacement. He has a history of adult onset diabetes, a previous myocardial infarction and smokes 1 pack of cigarettes daily.
   - What type of preoperative assessment is indicated?
   - What postoperative problems must you anticipate?
   - What postoperative orders would you write?
2. A 24-year-old male with chronic renal failure undergoes placement of a prosthetic dialysis shunt in his right arm. Blood loss is 50 cc. His hemoglobin values are 7.0 gm/dl pre-op and 5.8 gm/dl post-op.
   - When should he be dialyzed perioperatively? Why?
   - Is a blood transfusion indicated? Discuss pros and cons of transfusion. Are there alternatives to transfusion?

3. A 7-week-old infant is admitted with vomiting, weight loss and dehydration. He will require surgery for diagnosed pyloric stenosis.
   - What issues must be addressed preoperatively?
   - What concerns are there for infants undergoing anesthesia that differ from adults?
   - Compose postoperative orders.

Post-operative Complications

Assumptions

The student understands that prevention is the best form of management for postoperative complications; is knowledgeable about the normal physiology of the cardio-respiratory, gastrointestinal, renal, immunological, neurological, and circulatory systems; and understands the alterations in physiology which are produced by surgical stress.

Student Seminar Leader: Conduct a 30 minute seminar to meet the following objectives:

Objectives

1. Describe the differential diagnosis of a patient having postoperative fever. For each entity, discuss the clinical manifestations, appropriate diagnostic work-up, and management:
   - Within 24 hours - response to surgical trauma; atelectasis; necrotizing wound infections.
   - Between 24 and 72 hours:
   - pulmonary disorders (atelectasis, pneumonia)
   - catheter related complications (IV-phlebitis, Foley-UTI)
   - After 72 hours:
   - infectious (UTI, pneumonia, wound infection, deep abscess, anastomotic leak, prosthetic infection, acalculous cholecystitis, parotitis)
   - noninfectious (deep vein thrombosis)
   - Intraoperative - malignant hyperthermia

2. Discuss the following wound complications in terms of predisposing risk factors (patient condition, type of operation, technique), as well as their recognition, treatment, and prevention:
   - hematoma and seroma
   - wound infection

- dehiscence
- incisional hernia

3. Discuss the various causes of respiratory distress and respiratory insufficiency that may occur in the postoperative patient. For each complication, describe the etiology, clinical presentation, management, and methods of prevention:
   - atelectasis
   - pneumonia
   - aspiration
   - pulmonary adema
   - ARDS
   - pulmonary embolism (including deep venous thrombosis)
   - fat embolism

4. Discuss the diagnostic work-up and treatment of oliguria in the postoperative period. Include pre-renal, renal, and post-renal causes (including urinary retention).

5. Discuss the possible causes of hypotension which may occur in the postoperative period. For each etiology describe its pathophysiology and treatment:
   - hypovolemia
   - sepsis
   - cardiogenic shock - including postoperative myocardial infarction, fluid overload, arrhythmias, pericardial tamponade.
   - medication effects

6. Describe the management of postoperative chest pain and arrhythmias.

7. Describe factors which can lead to abnormal bleeding postoperatively, and discuss its prevention and management:
   - Surgical site - inherited and acquired factor deficiencies, DIC, transfusion reactions, operative technique.
   - Gastroduodenal (i.e. stress ulcerations)

8. Discuss disorders of alimentary tract function following laparotomy which may produce nausea, vomiting, and/or abdominal distension:
   - paralytic ileus
   - acute gastric dilatation
   - intestinal obstruction
   - fecal impaction

9. Discuss precipitating factors and treatment of the following postoperative metabolic disorders:
   - hyperglycemia
   - adrenal insufficiency
   - thyroid storm

10. Discuss external gastrointestinal fistulas:
   - contributing factors
   - management

11. Describe the factors which can give rise to alterations in cognitive function postoperatively, as well as their evaluation and treatment:
   - hypoxia
   - perioperative stroke
   - medication effects
   - metabolic and electrolyte abnormalities
   - functional delirium
   - convulsions

Student Seminar Leader: Lead the participants through a discussion of each of the following problem(s). Pose associated questions to individual seminar participants.

Seminar Participant: Review each of these cases and be prepared to answer the questions posed.

Problem

A 74-year-old woman undergoes an emergency resection of her sigmoid colon with a descending colostomy for diverticulitis. The next morning she is febrile to 38.9° C, is breathing at 25 breaths per minute, and has passed 100 cc. of concentrated urine in the past 8 hours.

- What are the possible sources of her fever?
- What steps would you undertake to investigate the possible cause of this fever?
- What is the most likely cause of this patient's oliguria?
- How would you initially manage this patient's low urine output (be specific).

Scrotal Pain and Swelling

Assumptions
The student knows the anatomy of the scrotal contents. The student is familiar with the embryologic development and descent of the testicle.

Student Seminar Leader: Conduct a 30 minute seminar to meet the following objectives:

Objectives

1. Generate a list of potential diagnoses for the patient who presents with pain or a mass in the scrotum.
   - Discuss testicular vs. extratesticular origins
   - Discuss benign vs. malignant causes
   - Discuss emergent vs. nonemergent causes

2. List history and physical exam findings that will help you differentiate etiologies. Be sure to discuss the following issues:
   - pain - presence, absence, onset, severity
   - palpation - distinguish testicular from extratesticular (adnexal) mass
   - effect of Valsalva maneuver
   - transillumination

3. Discuss the diagnostic algorithm for scrotal swelling and/or pain.

4. Discuss the staging and treatment of testicular cancer.

5. Discuss treatment of non-malignant causes of scrotal swelling and/or pain.

6. Discuss diagnosis and treatment of the undescended testicle (be sure to consider age of diagnosis).

Student Seminar Leader: Lead the participants through a discussion of each of the following problem(s). Pose associated questions to individual seminar participants.

Seminar Participant: Review each of these cases and be prepared to answer the questions posed.

Problem

1. A 35-year-old man presents with a new mass in his left hemiscrotum.
   - What findings on history and physical exam would help you determine if this is a mass in the testicle?
   - What lab tests would you order if there is a mass in the testicle?
   - If you think the mass is malignant what diagnostic and therapeutic intervention would you recommend to the patient?

2. A 15-year-old boy presents with severe pain in his scrotum.
   - Discuss how the history and physical exam might help you to differentiate between torsion and epididymitis.

Shock

Assumptions
Student understands the physiologic principles that govern normal blood pressure and hemodynamic homeostasis.

Student Seminar Leader: Conduct a 30 minute seminar to meet the following objectives:

Objectives

1. Define shock.

2. Differentiate the signs, symptoms, and hemodynamic features of shock:
   - hemorrhagic
   - cardiogenic
   - septic
   - neurogenic
   - anaphylactic

3. Discuss priorities and specific goals of resuscitation for each form of shock:
   - Define goals of resuscitation
   - Defend choice of fluids
   - Discuss indications for transfusion
   - Discuss management of acute coagulopathy
   - Discuss indications for invasive monitoring
   - Discuss use of inotropes, afterload reduction in management

4. Discuss priorities in resuscitation (ABC's).

Student Seminar Leader: Lead the participants through a discussion of each

of the following problem(s). Pose associated questions to individual seminar participants.

Seminar Participant: Review each of these cases and be prepared to answer the questions posed.

Problem

1. A 68-year-old male is admitted to the Emergency Department after a motor vehicle crash in which he was a restrained driver. He was reported to have had a blood pressure of 90/60 mm Hg at the scene after a prolonged extrication. The windshield was reportedly broken and he has a large head laceration as well as an obvious right hip dislocation. He complains of chest and abdominal pain on physical examination.

   · What work-up would you recommend? Include diagnostic and laboratory testing.
   · How would you rule in/out:
   · hemorrhagic shock
   · cardiogenic shock
   · cardiac tamponade
   · neurogenic shock
   · Describe your management and endpoints of resuscitation.

2. An 18-year-old female becomes hypotensive and unresponsive in the x-ray suite during a computer tomography (CT) scan. The scan is being performed to evaluate pelvic pain.
· Describe your management strategy.

Skin and Soft Tissue Lesions

Assumptions
The student understands gross anatomy and histology of the soft tissue structures.

Student Seminar Leader: Conduct a 30 minute seminar to meet the following objectives:

Objectives

1. Describe the commonly used local anesthetics.

- Discuss the advantages and disadvantages of epinephrine in the local anesthetic.
- Discuss special precautions needed on the digits.
- Discuss safe dosage ranges of the common anesthetics and the potential toxicities of these drugs.

2. Describe the common benign skin lesions and their treatment (papillomas, skin tags, subcutaneous cysts, lipomas).

3. Describe the characteristics, typical location, etiology and incidence of basal cell and squamous skin cancers.
   - Discuss the relationship to solar irradiation, ethnicity, previous tissue injury, & immunosuppression.
   - Discuss the characteristics of malignant skin lesions which distinguish them from benign lesions.
   - Discuss the appropriate treatment of small and large basal and squamous cancers and their prognosis.

4. Describe the characteristics, typical locations, etiology and incidence of malignant melanoma.
   - Discuss the relationship of melanoma to benign nevi and characteristics which help differentiate them.
   - Discuss risk factors for melanoma. What are the lesions which have high potential for malignant transformation?
   - Discuss the various types of melanoma and prognosis for each type.
   - Discuss the relationship of size and thickness to prognosis.
   - Discuss the usual treatment for cutaneous melanoma including margins, depth and lymph node management including sentinel node mapping.

5. Describe the incidence, etiology, epidemiology and classification for soft tissue sarcomas.
   - Discuss the differences in frequency and cell type between childhood and adult sarcomas.
   - Discuss the features which differentiate benign from malignant soft tissue tumors.
   - Discuss staging and how the stage impacts prognosis for these tumors.
   - Discuss the potential role and extent of surgery in their treatment; chemotherapy? radiation? immunotherapy?
   - Discuss the relationship of Kaposi's sarcoma to HIV infection and the implications for the patient's management.

Student Seminar Leader: Lead the participants through a discussion of each

of the following problem(s). Pose associated questions to individual seminar participants.

Seminar Participant: Review each of these cases and be prepared to answer the questions posed.

Problems

For each of these patients, explain the necessary history to be obtained, develop a differential diagnosis and indicate which is most likely, describe characteristic findings to be evaluated by physical exam, and discuss the appropriate diagnostic work-up.

1. An 8-year-old boy with a 6 cm. soft tissue mass in the anterior thigh.

2. A 32-year-old woman with a tender, dark, erythematous skin lesion on her upper back.

3. A 45-year-old deeply tanned blonde woman with an irregular raised pigmented lesion on her shoulder.

4. A 75-year-old bald man with an erythematous nodule with keratotic crust on the scalp.

Swallowing Difficulty and Pain

Assumptions
Students will review anatomy, physiology, and pathophysiology of the swallowing mechanism. It is assumed that the students will have this knowledge and apply it to the clinical situation.

Student Seminar Leader: Conduct a 30 minute seminar to meet the following objectives:

Objectives

1. Define dysphagia and odynophagia.

2. Describe the differential diagnosis for a patient with dysphagia/odynophagia.
   - Motility Disorder
   - neurologic disorders

- motor disorders
- Extrinsic obstruction/compression
- Intrinsic obstruction
  - neoplasm
  - inflammation
  - foreign body
  - inflammation/infections

3. Compare and contrast the history, presentation, physical findings, and laboratory findings for these different conditions.

4. Discuss the diagnostic modalities available, how they are used, and how they relate to the normal swallowing mechanism.

5. Describe the options for management of these conditions.

6. Discuss indications for operative vs. non-operative management when appropriate.

7. For those problems where operative intervention is appropriate, discuss the procedures available and discuss their pros and cons.

Student Seminar Leader: Lead the participants through a discussion of each of the following problem(s). Pose associated questions to individual seminar participants.

Seminar Participant: Review each of these cases and be prepared to answer the questions posed.

Problems

1. An 80-year-old gentleman presents with a history of trouble swallowing. For about a year he has noted he has trouble swallowing when he eats, regurgitates undigested food, and his family complains that his breath smells bad. He has no pain and has been in good health otherwise given his age. On exam he is thin, without masses in his neck, chest is clear; his abdomen is soft and there are no masses.
   - What are the differential diagnoses?
   - What is the next step?
   - What test should be done, in what order, and why?

2. You are asked to evaluate a 61-year-old man who presents with difficulty

swallowing. It has been coming on for about 4 months and progressively getting worse. He has a past history of a lot of indigestion and heartburn. He also notes that food would come up in the back of his throat sometimes when he would lie down and he would have a sour taste in his mouth and sometimes even cough. This got better about 8-12 months ago and then he started having trouble swallowing a few months later. He smokes 1 PPD of cigarettes and drinks a couple of beers with dinner. Exam is unremarkable except for barrel chest.

- What is the differential diagnosis?
- How would you evaluate this patient?
- What are the treatment options for benign esophageal stricture?
- What are the treatment options for carcinoma of the esophagus?

3. A 53-year-old patient presents with a history of difficulty swallowing for years. More recently she is having increasing trouble swallowing, and has been regurgitating undigested food. Exam is unrevealing, but on chest film there is an air fluid level seen behind the heart in the mid chest.
   - Describe a differential diagnosis and diagnostic evaluation.
   - Discuss the management options for a patient with achalasia.
   - Discuss the management of a patient with paraesophageal hernia.

Transplantation

Assumptions

The student has a basic understanding of the immune system and its role in the response to foreign antigens. The student should also have an understanding of the anatomy and physiology of the renal, pancreatic, hepatic, pulmonary and cardiac organ systems.

Student Seminar Leader: Conduct a 30 minute seminar to meet the following objectives:

Objectives

1. Describe the common organs and tissues currently being transplanted:
   - Discuss issues of living related and unrelated vs. cadaveric donation.
   - Discuss acceptable and exclusionary criteria for donation by organ system.
   - Discuss the criteria for establishing brain death for the purposes of organ donation.
   - Discuss potential ethical issues as they relate to organ donation.
   - Define autograft, allograft, xenograft, orthotopic and heterotopic as they

relate to transplantation.

2. Describe the common immunosuppressive agents used for transplantation.
   - Discuss the mechanisms of action and major side effects of steroids, cyclosporine, mycophenylate, azathioprine, FK-506, antithymocyte globulin and OKT-3 (monoclonal antibodies).
   - Discuss the relation of ABO compatibility to organ transplantation.
   - Discuss the signs, symptoms, and pathophysiology of rejection and define:
     - hyperacute rejection
     - accelerated acute rejection
     - acute rejection
     - chronic rejection
   - Discuss common infectious complications of immunosuppression and their prevention and management.
   - Discuss the relationship of immunosuppression to risk of malignancy and identify the common malignancies associated with immunosuppression.

3. Describe common organ preservation techniques and their limitations for currently transplanted organs and tissues.
   - Discuss the optimal and maximum preservation time for renal, pancreas, liver and cardiac transplants.

4. Describe the most common conditions leading to transplantation, eligibility, the results (patients and graft survival), major complications of and long term outcome for:
   - renal transplantation
   - pancreas transplantation
   - liver transplantation
   - cardiac transplantation
   - lung transplantation

Student Seminar Leader: Lead the participants through a discussion of each of the following problem(s). Pose associated questions to individual seminar participants.

Seminar Participant: Review each of these cases and be prepared to answer the questions posed.

Problems

1. A 25-year-old suffers a severe brain injury in a motor vehicle accident and is

being evaluated as a potential organ donor.
- How will you determine brain death?
- What tests will need to be performed to determine the patient's eligibility as a donor? What tests are needed for which organs being considered?
- What are the potential organs and tissues for donation?
- How and when should the patient's relatives be approached to discuss donation?

2. A 32-year-old woman would like to donate one of her kidneys to her 25-year-old brother with end-stage diabetic renal failure:
   - What immunologic evaluation is necessary to determine compatibility?
   - What is the appropriate work up for the donor to determine acceptability?
   - What is the benefit of living related donation vs. cadaver transplantation?
   - How do you insure the rights of the donor to willingly donate without pressure from family members?
   - What are the risks and morbidity the donor needs to understand?

Trauma

Assumptions

The student understands the basic physiology of the circulatory system and changes that occur due to shock. The student will review the pertinent anatomy of the organ systems discussed in the trauma chapter.

Student Seminar Leader: Conduct a 30 minute seminar to meet the following objectives:

Objectives

1. Describe the priorities and sequence of a trauma patient evaluation (ABC's).

2. Describe the four classes of hemorrhagic shock and how to recognize them.

3. Describe the appropriate fluid resuscitation of a trauma victim.
   - Discuss choice of IV access.
   - Discuss the choice of fluid and use of blood components.
   - Discuss the differences between adult and pediatric resuscitation.

4. Discuss the types, etiology and prevention of coagulopathies typically found in patients with massive hemorrhage.

5. Describe the appropriate triage of a patient in a trauma system.
   - Discuss how trauma system is organized in your state.

- Discuss the importance of mechanism of injury on management and triage decision making.

6. Describe the diagnostic evaluation, differences between blunt and penetrating mechanisms of injury and the initial management of:
   - Closed head injury (consider Glasgow Coma Scale, ICP, subdural hematoma, epidural hematoma, diffuse axonal injury, basilar skull fractures & CSF leaks).
   - Spine injury (consider mechanism of injury, level of injury, use of steroids, immobilization, neuro exam, management of shock)
   - Thoracic injury (consider hemo/pneumothorax, tension pneumothorax, tamponade, pulmonary contusion, massive air leak, widened mediastinum, flail chest)
   - Abdominal injury (consider role of physical exam, ultrasound, CT, peritoneal lavage, operative vs. non-operative management of liver and spleen injury, which patients need urgent laparotomy, management of hematomas).
   - Urinary injury (consider operative vs. non-operative renal injury, ureteral injury, intraperitoneal and extraperitoneal bladder injury, urethral trauma, when not to place a Foley, candidates for cystogram, relationship to pelvic fracture).
   - Orthopedic injury (consider open vs. closed fractures, compartment syndromes, concepts of immobilization (splinting, internal fixation), treatment of patients with pelvic fractures, hemorrhage control, commonly associated vascular injuries).

7. Describe early management of a major burn.
   - Discuss estimation of total body surface burn and burn depth.
   - Discuss fluid resuscitation, choice of fluid and monitoring for adequacy of resuscitation (rule of 9's, differences in pediatric and adult management).
   - Discuss options for topical antimicrobial therapy.
   - Discuss inhalation injury, CO poisoning and triage of patients to burn centers.
   - Discuss the basic principles of wound coverage, skin grafting, and timing.
   - Discuss the assessment and need for escharotomy.

8. Describe the effects of trauma on the individuals' ability to return to full health and employment.

9. Discuss the role of physical therapy, occupational therapy, speech therapy and other rehabilitation services in the patient's recovery.

10. Discuss the economic impact of traumatic injury and disability.

11. Describe the recognition of suspected child abuse and domestic violence presenting as trauma and the physician's role in reporting.

12. Describe the importance of careful documentation in the medical record for traumatic injury and the basic concepts of a "trail of evidence" in victims of assault.

Student Seminar Leader: Lead the participants through a discussion of each of the following problem(s). Pose associated questions to individual seminar participants.

Seminar Participant: Review each of these cases and be prepared to answer the questions posed.

Problems

1. A 75-year-old man, unrestrained driver, is brought in after a single car accident. He is awake, groaning and responsive. BP 120, P 90, R 28. He complains of abdominal, chest and left shoulder pain, has no lacerations or obvious deformities and no evidence of head injury. He is immobilized on a backboard and is in cervical collar.
   - What are the pertinent elements of his medical history?
   - What are your principal differential diagnoses based on his presentation?
   - Can he be in shock with a normal blood pressure?
   - How will you evaluate his chest pain?
   - How will you evaluate his abdominal pain?
   - What are your management priorities if he has obvious blood in the abdomen and acute ischemic changes on his EKG? How might you improve his cardiac risk?

2. A 65-year-old woman is brought in after being removed from a house fire 45 minutes ago. She is semiconscious and groaning and complains of chest, abdomen and lower extremity pain. BP 120, P 90, R 24. Exam reveals 2nd and 3rd degree burns over all of her body except her back and buttocks.
   - What are your treatment priorities?
   - How do you assess for inhalation injury and if present, how do you treat it?
   - What will you use for fluid resuscitation, via what route and how much will you give over what time frame?

- What is the rule of 9's?
- What would you do if the patient has no palpable radial pulse and an ischemic looking hand?
- How do you assess adequacy of resuscitation?
- How will you manage the pain for this patient? The wounds?

Urinary Complications

Assumptions
The student understands the anatomy and embryology of the urinary tract system.

Student Seminar Leader: Conduct a 30 minute seminar to meet the following objectives:

Objectives

1. Describe the potential etiologies of hematuria.
   - Consider age, presence of pain, character of bleeding trauma, etc.
   - Consider occult vs. gross hematuria.

2. Discuss the diagnostic modalities available for evaluation of hematuria including cost, risks, indications and limitations.
   - Consider CT, cystoscopy, IVP, ultrasound, cystourethrogram, and retrograde pyleography.

3. Describe the staging and management of renal cell carcinoma, transitional cell carcinoma and bladder carcinoma.

4. Discuss the risk factors for composition of, and management of renal and ureteral calculi.

5. Discuss the clinical presentation of renal and ureteral calculi.

6. Discuss the etiologies and diagnostic evaluation of a patient with dysuria.

7. Outline the etiologies and work-up of a patient with pneumaturia.

8. Outline the evaluation and treatment options for patients with urinary incontinence.

9. Outline the initial evaluation of patients presenting with urinary frequency, nocturia, urgency or urinary retention.

- Consider pertinent H & P, and diagnostic tests including prostate ultrasound.

Vomiting, Diarrhea, Constipation

Assumptions

Student understands the anatomy, embryology and physiology of the gastrointestinal tract.

Student Seminar Leader: Conduct a 30 minute seminar to meet the following objectives:

Vomiting

Objectives

1. Discuss in general, the differential diagnosis for a patient with emesis.
   - Consider timing and character of the emesis and associated abdominal pain.
   - Contrast etiologies in infants, children and adults.
   - Contrast dysmotility vs. ileus vs. mechanical obstruction.

2. Describe the clinical presentation and etiologies of gastric outlet obstruction.

3. Describe the types of neoplasms that occur in the stomach and discuss diagnosis and prognosis for each.

4. Discuss the principles of curative and palliative surgery for patients with gastric neoplasm.

5. Discuss the diagnosis and management of obstructive ulcer disease.

6. Describe the signs and symptoms of small bowel obstruction.

7. Describe the common etiologies of mechanical small bowel obstruction.

8. Describe the pathology and relative frequency of malignant and benign small bowel neoplasms.

9. Discuss the potential complications and management of small bowel obstruction.

10. Outline the initial management of a patient with mechanical small bowel obstruction, including laboratory tests and x-rays.

11. Contrast the presentation and management of partial vs. complete small bowel obstruction.

12. Differentiate the signs, symptoms and radiographic patterns of paralytic ileus and small bowel obstruction.

Diarrhea

Objectives

1. Discuss the differential diagnosis of diarrhea in adults.
   - Consider chronicity, absence or presence of blood and associated pain.
   - Consider infectious causes.

2. Describe the presentation and potential complications of ulcerative colitis and Crohn's disease.

3. Contrast the pathology, anatomic location and pattern, cancer risk and diagnostic evaluation of ulcerative colitis and Crohn's disease.

4. Discuss the role of surgery in the treatment of patients with ulcerative colitis and Crohn's disease.

5. Discuss the clinical manifestations, risk factors, diagnosis and management of pseudomembranous colitis.

6. Outline the risk factors, presentation, diagnosis and management of ischemic colitis.

Constipation

Objectives

1. Discuss the potential etiologies of constipation in adults and children
   - Consider chronic vs. acute.

2. Describe the clinical presentation and etiologies of large bowel obstruction.

3. List the diagnostic methods utilized in the evaluation of potential large bowel

obstruction, including contraindications and cost effectiveness.

4. Outline the diagnosis and management of colonic volvulus, diverticular stricture, fecal impaction and obstructing colon cancer.

5. Outline the treatment of carcinoma located at different levels of the colon, rectum and anus. Include a discussion of the use of radiotherapy and chemotherapy for each.

6. Describe the postoperative follow-up of patients with colorectal carcinoma.

7. Discuss the staging and survival of patients with colorectal carcinoma.

8. Describe the presentation and treatment of acute and chronic colonic pseudo-obstruction.

Student Seminar Leader: Lead the participants through a discussion of each of the following problem(s). Pose associated questions to individual seminar participants.

Seminar Participant: Review each of these cases and be prepared to answer the questions posed.

Problems

1. A 54-year-old woman presents with a two day history of crampy abdominal pain followed by episodes of bilious emesis. She had previously undergone hysterectomy for treatment of cervical cancer.
   - What further data should be obtained from the patient's history?
   - What findings should be looked for on physical exam?
   - What laboratory tests should be ordered?
   - What is the initial management plan?
   - What diagnostic tests should be ordered?

2. A 72-year-old man presents with a two month history of gradually increasing constipation.
   - What further tests are indicated?
   - What findings would be suggestive of carcinoma?

3. A mass is palpable on rectal exam.
   - What further tests are indicated?

SUTURING

The Surgical Skills Laboratory is utilized by undergraduate and postgraduate trainees in the Colleges of Medicine, Dentistry, Nursing and Veterinary Medicine. Basic suturing skills and knowledge of suture products are taught to undergraduate medical students beginning in year 2 (ProSkills II) and continues with multiple refresher opportunities throughout the Clerkship years, including General Surgery, Emergency Medicine and Ob/Gyn rotations. Suture refresher courses and assessment is delivered to the students in the fall during the Pre-Clerkship phase. Dental students are scheduled into the lab on an individual basis in Year 3 as part of their Hospital Roster. Nurse Practitioner students also receive suturing training through the lab. Postgraduate trainees in the Core Surgery Program receive training in microsurgical techniques through the lab. Residents in Veterinary surgery also receive microsurgical training on request. All learners are encouraged to contact the lab to book time for extra practice of their basic skills.

Contact Surgical Skills Lab:

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B410 - Health Sciences Building
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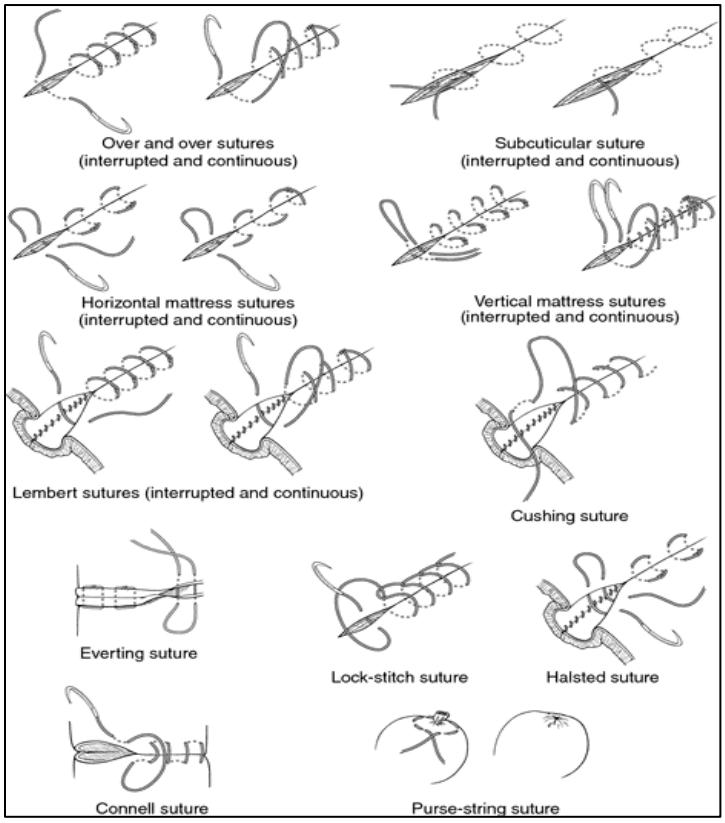

ORIENTATION TO GENERAL AND CARDIORESPIRATORY PHYSICAL THERAPY FOR SURGICAL JURSIS

1. General Physical Therapy Referrals:

Physical Therapy will work with the patient and the General Surgery team in maximizing the patient's goals, working together towards safe and effective discharge.

Indications when a Physical Therapy referral is appropriate:

Patients with changes from baseline levels in ambulation ability, strength, endurance, balance, and functional tasks (ex: bed mobility, transfers). Patients who are need of instruction regarding positioning, post-op splinting and/or pain modulation techniques.

Patients who require guidance regarding positioning, post-op splinting, and/or pain modulation techniques.

Patients who would benefit from a formal review of gait and mobility aides (cane, walker, crutches) including sizing and training in safe and effective use.

Patients who are deemed falls risk and require balance re-education and/or patient education.

Patients needing multi-disciplinary discharge planning. This may include patient education and family/caregiver training, continuity of care recommendations such as physical therapy services outside of acute care, home care services, Home First or perhaps alternate level of care.

2. Cardiorespiratory Physical Therapy (CRPT) referrals:

Patients undergoing thoracic and upper abdominal surgery are at greater risk of developing post-op respiratory complications. In the wake of surgery, or injury to the lungs, patients may require our help. Cardiorespiratory Physical Therapy is intended to mobilize or loosen secretions in the lungs and respiratory tract and improve oxygen up-take in the muscles.

Techniques commonly used may include:

Postural drainage
Chest percussion
Vibration
Assisted cough maneuvers
Deep breathing with controlled coughing exercises
Airway clearance device (Pep, IMT, etc.)

Indications when a CRPT referral is appropriate:

Patients who have secretion retention, with inability to clear secretions independently. Certain diseases foster retained secretions and benefit from regular CRPT. (Bronchiectasis, CF, Neuromuscular disease, etc)

Patients presenting with atelectesis and hypoventilation progressing to collapse /consolidation.

Patients who are immobile due to low activity tolerance or bedridden.

***With all CRPT referrals, our first line of treatment is to mobilize!! If patient is unable to do so, we will determine the next line of treatment.

Inappropriate referrals for CRPT would include:

Pulmonary edema, including ARDS, and CHF
Non-productive pneumonia/COPD
Simple pleural effusions, pneumothorax (with/without chest tubes)

3. Hours Of Service:

i) Monday to Friday 0800 - 1630

Weekends and Holidays Patients will be prioritized on a needs basis, new referrals will be seen as time allow.

ii) Do not hesitate to contact the therapist that is assigned to the ward to discuss the patient. Phone 655-2430 during regularly scheduled work hours or via Switchboard on weekends between 0800 -1630.

PROFESSIONALISM

Professionalism — connecting the past and the present and a blueprint for the Canadian Association of General Surgeons

Francis Christian, MD;* Dennis F. Pitt, MD;† James Bond, MEd, MD;¶ Patrick Davison, MD;‡ Anthony Gomes, MD;§ for the members of the Committee on Professionalism, Canadian Association of General Surgeons; with James Bond, Chair

Definition and explanation of terms

Merriam-Webster's Collegiate Dictionary defines professionalism as "the conduct, aims and qualities that characterize or mark a profession or a professional person."[1]

Within the context of the physician professional, there is a serious but largely unwritten understanding, both within the profession and among the public at large, that physicians must hold themselves up to high ethical and clinical standards.[2–5]

In essence, the basics of professionalism are quite easy to articulate. In return for professional autonomy, self-regulation and a recognition of their unique place in society, the public demands of physicians accountability, ethical standards and an altruistic manner of delivering care.[4–6]

Altruism, or the putting of the interest of patients and society consistently ahead of one's own, is the bedrock of professionalism for the physician and has been recognized as a key, unifying concept by several professional bodies.[7–11] Altruism has also been defined as going "above and beyond" one's call of duty.[12]

Historical perspectives and the current increased interest in codification

The different great ancient civilizations have all made clear attempts to define a code of conduct for the medical profession.[13–15]

The Oath of Hippocrates deriving from ancient Greece was required of all Western medical students on graduation until very recently in the latter half of the 20th century.[13,16] In ancient India, the surgeon-teacher Sushruta laid down a code of ethical and clinical conduct for his pupils embodied in an oath or promise that students had to undertake to graduate from his school of surgery.[17]

The Canadian physician William Osler made seminal contributions to the development of professionalism and to the promotion of medicine as a calling rather than a business.[18–21] Osler urged physicians to live and to treat patients by the golden rule and to practise medicine with compassion and competence.[22–24]

Although the ideals championed by William Osler have been recognized by generations of physicians as defining the basic tenets of professionalism, there has been a recent surge of interest in defining these principles anew for a new generation of doctors. Changing clinical guidelines for the practice of medicine,[25,26] differences in perceptions regarding physicians' financial expectations,[7,8,27–30] an evolving legal framework in the context of well-publicized medical errors and justifiably increased patient expectations[8,31,32] and the increasingly nebulous boundaries of the relation between physicians and the medical-surgical-commercial complex[33–35] have all had their part in shaping the current debate about professionalism for today's physician.

Increasingly, most such revisiting of the historical and contemporary

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obligations of the profession toward the public and toward one another has confirmed the basic validity of timeless values as espoused by the classical oaths and by such champions of professionalism as William Osler.[9,10,36–39] In 1903 Osler himself, with uncanny insight, predicted that these ideals would remain the same:

> The times have changed, conditions of practice altered and are altering rapidly, but the ideals which inspired our earlier physicians are ours today — ideals which are ever old, yet always fresh and new.[22]

These ideals have been reinterpreted for today's physicians in a manner that addresses the particular concerns arising from the progress of our science and art to the present time, but major medical societies, associations and licensing bodies continue to espouse principles and values similar to those that have guided past generations, thus linking the past with the present in a meaningful, practical way.[36–39]

Recognition of the importance of teaching professionalism

Even though medical students and residents read about and hear principles of professionalism described in various informal forums, evidence suggests that they tend to do as their teachers do and not as their teachers or forebears say.[40–42]

The contemporary medical student tends to become more cynical and less idealistic by his fourth medical year,[43] and students and residents react to belittling, harshness, negative role models and the pressures of overwork by incorporating those same behaviours into their lives and practices.[43]

The need to reflect and contemplate on one's own actions and the experiences of the patient, as advocated by William Osler, has been recognized as one of the key components of the teaching and learning of professionalism by students and residents.[43–45] Charon defines this component of learning as "the ability to acknowledge, absorb, interpret and act on the stories and plights of others."[46]

Recognizing the importance of providing positive role models and treating students humanely has been shown to significantly increase the chance of producing humane, compassionate physicians,[47] and much effort is now being expended to incorporate formal and informal teaching and assessment of professionalism in medical schools and hospitals around the world.[41,43]

Development of a code of professionalism for Canadian surgeons

In February 2006, the Canadian Association of General Surgeons (CAGS) Board of Directors tasked the Committee on Professionalism with preparing a position paper on professionalism for Canadian surgeons.

In the fall of 2006, after much discussion and critique, the Committee submitted its final drafts to the Board.

The Committee subsequently received comments and recommendations from the Board that were incorporated into the position statement.

We present the latter document here. After further comments have been received from the members of CAGS at large, the Board intends to approve an final version of the position statement for Canadian surgeons. This official version is intended to meet the needs of practising surgeons, residents and medical students.

CAGS position paper on professionalism and the general surgeon

Preamble

Whereas the interest of the patient is paramount to the surgeon and whereas the surgeon's contract with the public must make the surgeon's commitment to professionalism transparent and accessible, the Canadian Association of General Surgeons believes that a position paper on professionalism for the general surgeon will inform both the public and the profession alike and be a ready reference for students and residents.

Code of professionalism

Duty to consider first the well-being of the patient

The surgeon recognizes the patient's ultimate trust in accepting evaluation for and submission to an operation and will always put the interests of the patient above his or her own.

Doing right by the patient will always trump the business or pecuniary interests of the surgeon.

Respect for patient and clinical autonomy and providing the highest quality of care

The surgeon will keep abreast of the latest advances in the science and art of surgery, including advances in the basic sciences, in clinical research and in technology, and will seek to apply these to the care of his or her patients.

Patient confidentiality and dignity will always be maintained.

The surgeon will consistently advocate for societal and patient needs, including access to care, equitable distribution of care, quality of care and patient safety.

Patient autonomy in decision making for surgical care and clinical autonomy in advising patients about surgical care will be respected and maintained.

The adoption of new technology, partnership with industry and participation in research that benefits the patient

When new and potentially expensive technology is
surgeon will us
peer-reviewed criteria for its adop-

tion, independent of the influence of corporate promotion. When such technology is deemed the standard of care, the surgeon will discuss it with the patient; if the surgeon is unable to provide the technology, the patient must be taken into confidence and referred to a colleague, if appropriate.

The surgeon welcomes partnership with industry and acknowledges industry-led initiatives to improve patient care. However, such partnership must only be accepted in the best interests of the patient and must be open to public scrutiny.

The goal of all research, whether basic or applied, must be the benefit of patients.

All research will be conducted in a manner that conforms to the highest ethical standards.

Care without discrimination

The patient's ability to pay must not influence the surgeon's decision to care, and surgeons must provide high-quality care without discrimination.

The surgeon will avoid discrimination as to sex, ethnoracial background, sexual orientation, disability, religion and social status.

Working with other health care professionals as a team for the benefit of patients

Recognizing that good teamwork improves patient care, the surgeon must strive to work with courtesy, respect, kindness and a mutual spirit of learning with fellow physicians and nonphysicians. The surgeon will not disparage a referring physician to fellow surgeons, residents, students or patients.

Recognizing that we are role models for the students, residents and nurses who work with us, the surgeon will strive to communicate to them his or her knowledge and enthusiasm for the specialty as well as the principles of professionalism outlined in this document. The surgeon will treat students and residents with respect, kindness and courtesy.

Openness and honesty with the patient and disclosure of adverse events

The surgeon will disclose adverse events and medical errors and will be open and honest with the patient at all times.

Accountability to the courts, licensing bodies, peers and hospitals

The surgeon must be a law-abiding citizen, and adherence to this code of professionalism in no way excuses the surgeon from his or her obligations to such institutions as the professional licensing body, local research and ethics committees and appropriate government and law enforcement agencies.

Balance between professional and private life

Recognizing that a healthy and happy surgeon will most often translate to better care for patients, the surgeon will strive to find a balance between professional life, personal and family life and other interests.

Competing interests: None declared.

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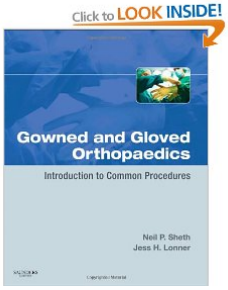
SURGERY CASE STUDIES

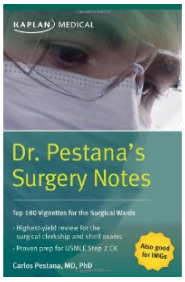
Resources

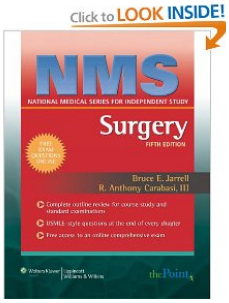
Health Sciences Library
Surgery – Case studies (Liu, Terrence H - RD34.T69 2004)

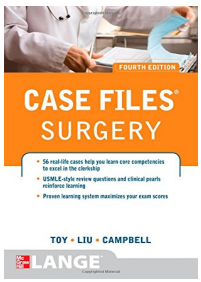
Internet References

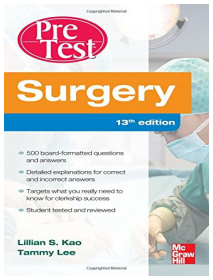
- www.surgical-tutor.org.uk/tutorial.htm - see Clinical Tutorial section – spectrum of cases including general surgery, plastics, vascular, head & neck, breast etc.
- www.entlink.net/education/cool - Clinical Otolaryngology OnLine – otolaryngology clinical cases
- www.orthospine.com/patient_cases/patient_cases.html - clinical cases on spinal problems
- http://www.mic.ki.se/MEDCASES.html - a database of medical resources from Karolinska Institute (Sweden)
- A copy of the Gowned and Gloved Orthopaedics is in the Ortho Planning Room, G114











ED2 REQUIREMENTS

Log: Surgery Log 2015-16

Competency list: Phase D Surgery Logging Requirements

Competency	notes	Items	Total Required	Achieved
Evaluate (focused history and targeted physical exam) of a new patient with a surgically oriented problem in the inpatient/outpatient setting		Evaluate (focused history and targeted physical exam) of a new patient with a surgically oriented problem in the inpatient/outpatient setting	1	0
Evaluate (focused history and targeted physical exam) of a review patient with a surgically oriented problem in the inpatient/outpatient setting		Evaluate (focused history and targeted physical exam) of a review patient with a surgically oriented problem in the inpatient/outpatient setting	1	0
Evaluate and manage postoperative fluid and electrolyte needs in the inpatient setting		Evaluate and manage postoperative fluid and electrolyte needs in the inpatient setting	1	0
Evaluate and manage postoperative pain in the inpatient setting		Evaluate and manage postoperative pain in the inpatient setting	1	0
Evaluate patients for non-infectious postoperative complications in the inpatient/outpatient setting		Evaluate patients for non-infectious postoperative complications in the inpatient/outpatient setting	1	0
Evaluate patients for infectious postoperative complications in the inpatient/outpatient setting		Evaluate patients for infectious postoperative complications in the inpatient/outpatient setting	1	0
Manage a patient's postoperative wound in the inpatient/outpatient setting		Manage a patient's postoperative wound in the inpatient/outpatient setting	1	0
Write daily progress note in the health record documenting an inpatient's hospital course		Write daily progress note in the health record documenting an inpatient's hospital course	1	0
Write a postoperative order in the health record		Write a postoperative order in the health record	1	0
Write a brief operative report in the health record		Write a brief operative report in the health record	1	0
Observe the process of informed consent		Observe the process of informed consent	1	0
Scrub, gown and glove for operations		Scrub, gown and glove for operations	1	0
Perform as a first or second assistant to operating surgeons		Perform as a first or second assistant to operating surgeons	1	0
Give an oral presentation of a patient problem-oriented surgical research topic to attending faculty and		Give an oral presentation of a patient problem-oriented surgical research topic to attending faculty and other members of the patient care team	1	0
Perform an observed history			1	0
Perform an observed Physical			1	0

NBME CLINICAL SCIENCES

Surgery Exam Sample

NBME Clinical Sciences - Surgery Exam
-100 MCQ's
-3hours (30 min of time has been added to accommodate the conversion of lab values to SI units)
-passing grade is 60%
-the following are some sample questions

SURGERY

General Principles	*1-5%*
Organ Systems	*95%-99%*
Immunologic Disorders	1%-5%
Diseases of the Blood and Blood-forming Organs	5%-10%
Diseases of the Nervous System and Special Senses	5%-10%
Cardiovascular Disorders	10%-15%
Diseases of the Respiratory System	10%-15%
Nutritional and Digestive Disorders	25%-30%
Gynecologic Disorders	5%-10%
Renal, Urinary, and Male Reproductive System	5%-10%
Disorders of Pregnancy, Childbirth, and the Puerperium	1%-5%
Disorders of the Skin and Subcutaneous Tissues	1%-5%
Diseases of the Musculoskeletal System and Connective Tissue	5%-10%
Endocrine and Metabolic Disorders	5%-10%
Physician Tasks	
Promoting Health and Health Maintenance	1%-5%
Understanding Mechanisms of Disease	20%-25%
Establishing a Diagnosis	45%-50%
Applying Principles of Management	25%-30%

1. A 52-year-old woman with glioblastoma multiforme in the frontal lobe tells her physician that she does not want operative treatment. She is mentally competent and understands that an operation is the only effective treatment of her tumor, and that without an operation she will die. She is afraid of the adverse effects of an operation and says she has lived a long and happy life. Two weeks later, she lapses into a coma, and her husband requests that the operation be carried out. Which of the following is the most appropriate consideration for her physician in deciding whether to operate?

   (A) Her age
   (B) Her husband's request
   (C) Her previously expressed wishes
   (D) Her quality of life
   (E) Medical indications for treatment

2. Ten years ago, a 60-year-old woman underwent an aortic valve replacement with a porcine heterograft. She now has shortness of breath with exertion. Examination and x-ray of the chest show evidence of congestive heart failure. Which of the following is the most likely explanation for these findings?

   (A) Degeneration of the valve
   (B) Development of an ascending aortic aneurysm
   (C) Development of mitral stenosis
   (D) Development of a ventricular septal defect
   (E) Embolus to the coronary circulation

3. A 42-year-old woman comes to the emergency department because of a 2-day history of intermittent lower abdominal pain and nausea and vomiting. She has not passed flatus or stool during this time. She describes the pain as waxing and waning. Initially, the vomitus was food that she had recently eaten, but it is now bilious; there has been no blood in the vomit. She underwent a hysterectomy 2 years ago for leiomyomata uteri. Vital signs are within normal limits. Examination shows a distended tympanitic abdomen with diffuse tenderness and no rebound. Bowel sounds are initially quiet but then become loud with the onset of pain. Abdominal x-rays show distended loops of bowel with air-fluid levels. Which of the following is the most likely mechanism of this patient's symptoms?

   (A) Chronic postoperative infection
   (B) Immunologic damage to the bowel wall due to exposure to occult antigens during the operation
   (C) Inflammatory reaction to suture material left inside the abdomen
   (D) Mechanical obstruction from implantation of leiomyomata uteri
   (E) Proliferation of fibroblasts forming scar tissue in the area of the operation

**** This is now going to be 25% of your final grade.**

4. A 4-year-old boy is brought to the physician by his parents because of a 4-month history of difficulty running and frequent falls. His parents report that his calves have been gradually increasing in size during this period. Examination shows diffusely enlarged muscles of the calves and lumbar lordosis. Sensation is intact. He has difficulty arising from a supine position. Which of the following is the most likely diagnosis?

    (A) Duchenne muscular dystrophy
    (B) Juvenile rheumatoid arthritis
    (C) Lumbosacral radiculopathy
    (D) Rhabdomyosarcoma
    (E) Spina bifida

5. An 18-year-old man is brought to the emergency department 10 minutes after he sustained a stab wound to his chest. On arrival, he is unresponsive to painful stimuli. His pulse is 130/min, respirations are 8/min and shallow, and palpable systolic blood pressure is 60 mm Hg. He is intubated and mechanically ventilated, and infusion of 0.9% saline is begun. After 5 minutes, his pulse is 130/min, and blood pressure is 70/40 mm Hg. Examination shows a 2-cm wound at the left sixth intercostal space at the midclavicular line. There is jugular venous distention. Breath sounds are normal. The trachea is at the midline. Heart sounds are not audible. Which of the following is the most likely cause of these findings?

    (A) Bronchial disruption
    (B) Hemothorax
    (C) Myocardial infarction
    (D) Pericardial tamponade
    (E) Tension pneumothorax

6. A 70-year-old man is admitted to the hospital for elective coronary artery bypass grafting. On the day of his operation, an asymptomatic carotid bruit is found. Which of the following is the most appropriate immediate next step in diagnosis?

    (A) Duplex scan of the neck
    (B) CT scan of the head
    (C) PET scan of the brain
    (D) MRI of the brain
    (E) Cerebral angiography

7. Ten days after admission to the hospital because of acute pancreatitis, a 56-year-old man with alcoholism develops chills and temperatures to 39.4°C (103°F). Examination shows a tender abdomen with hypoactive bowel sounds. Which of the following is the most likely diagnosis?

    (A) Pancreatic abscess
    (B) Pancreatic insufficiency
    (C) Perforated duodenal ulcer
    (D) Retroperitoneal hemorrhage
    (E) Splenic vein thrombosis

8. A 24-year-old nulligravid woman is brought to the emergency department after a syncopal episode at work. She has had progressively severe cramps in the lower abdomen over the past 6 hours. She has had spotty vaginal bleeding for 2 days; her last menstrual period began 7 weeks ago. She is diaphoretic and anxious. Her temperature is 37°C (98.6°F), pulse is 130/min, respirations are 26/min, and blood pressure is 80/60 mm Hg. Examination shows blood in the vaginal vault and diffuse abdominal tenderness; there is pain with cervical motion. Which of the following is the most appropriate next step in management?

    (A) Intravenous administration of fluids
    (B) Intravenous administration of broad-spectrum antibiotics
    (C) Transfusion of O-negative blood
    (D) Transfusion of type-specific blood
    (E) Culdocentesis

9. A 52-year-old man comes to the physician because of a 5-month history of pain in his left knee that is exacerbated by walking long distances. There is no history of trauma. He has hypertension well controlled with enalapril. His job does not require carrying heavy loads. He is 180 cm (5 ft 11 in) tall and weighs 95 kg (210 lb); BMI is 29 kg/m^2. His pulse is 82/min and regular, respirations are 16/min, and blood pressure is 130/82 mm Hg. Examination of the left knee shows mild crepitus with flexion and extension; there is no effusion or warmth. X-rays of the knees show narrowing of the joint space in the left knee compared with the right knee. Which of the following is most likely to improve this patient's symptoms?

    (A) High-impact aerobics program
    (B) Weight loss program
    (C) Daily colchicine prophylaxis
    (D) Daily shark cartilage supplementation
    (E) Daily vitamin D supplementation

10. A previously healthy 32-year-old man comes to the emergency department because of a 3-day history of pain and swelling of his right knee. Two weeks ago, he injured his right knee during a touch football game and has had swelling and bruising for 5 days. One week ago, he underwent extraction of a molar for severe dental caries. He is sexually active with one male partner and uses condoms consistently. HIV antibody testing was negative 3 months ago. His temperature is 38.6°C (101.5°F), pulse is 100/min, and blood pressure is 120/60 mm Hg. Examination of the right knee shows warmth, erythema, and a joint effusion. Flexion and extension of the right knee are severely limited. An x-ray of the knee confirms the joint effusion. Which of the following is the most appropriate next step in diagnosis?

    (A) Venous Doppler ultrasonography
    (B) Bone scan
    (C) MRI of the knee
    (D) Arthroscopic exploration of the knee
    (E) Arthrocentesis

11. A 57-year-old woman with inoperable small cell carcinoma of the lung has had lethargy, loss of appetite, and nausea for 1 week. She received radiation therapy 2½ years ago. She has stable angina pectoris controlled with nitrates. Her pulse is 68/min, respirations are 16/min, and blood pressure is 118/72 mm Hg. There is no jugular venous distention, and skin turgor is normal. She is oriented to person and place but not to time. Laboratory studies show:

Serum	
Na^+	128 mEq/L
Cl^-	100 mEq/L
K^+	4.2 mEq/L
HCO_3^-	24 mEq/L
Urea nitrogen	11 mg/dL
Glucose	92 mg/dL
Creatinine	0.8 mg/dL
Osmolality	270 mOsmol/kg H_2O
Urine	
Na^+	78 mEq/L
Osmolality	310 mOsmol/kg H_2O

An x-ray of the chest shows a mass in the right upper lobe of the lung that is unchanged from an x-ray taken 3 months ago. Which of the following is the most likely explanation for these findings?

(A) Compulsive water drinking
(B) Congestive heart failure
(C) Hypothyroidism
(D) Surreptitious use of diuretics
(E) Syndrome of inappropriate secretion of ADH (vasopressin)

12. A 3799-g (8-lb 6-oz) female newborn is born by cesarean delivery because of a breech presentation. Apgar scores are 7 and 9 at 1 and 5 minutes, respectively. Initial examination shows a palpable clunk when the left hip is abducted, flexed, and lifted forward. Posterior pressure on the flexed hip elicits a similar clunk. The remainder of the examination shows no abnormalities. Which of the following is the most likely diagnosis?

(A) Congenital hip dysplasia
(B) Legg-Calvé-Perthes disease
(C) Osgood-Schlatter disease
(D) Osteogenesis imperfecta
(E) Slipped capital femoral epiphysis

13. A previously healthy 72-year-old man comes to the physician because of decreased urinary output during the past 2 days; he has had no urinary output for 8 hours. Examination shows suprapubic fullness and an enlarged prostate. His serum urea nitrogen concentration is 88 mg/dL, and serum creatinine concentration is 3.5 mg/dL. Which of the following is the most appropriate next step in management?

(A) Ultrasonography of the prostate
(B) Ultrasonography of the kidneys
(C) CT scan of the abdomen
(D) Bladder catheterization
(E) Intravenous pyelography

14. A 3-year-old boy is brought to the emergency department because of a 2-week history of persistent cough and wheezing. His mother states that his symptoms occur when he laughs or runs. He has not had any other symptoms, and no one else at home is sick. Three weeks ago, he had an episode of choking and coughing while eating dinner. His temperature is 37.6°C (99.7°F), pulse is 90/min, respirations are 20/min, and blood pressure is 70/45 mm Hg. Expiratory wheezes are heard on the right with normal airflow. The remainder of the examination shows no abnormalities. His symptoms do not improve after administration of nebulized albuterol. An expiratory chest x-ray shows hyperinflation of the right lung; there is no mediastinal or tracheal shift. Which of the following is the most likely diagnosis?

(A) Asthma
(B) Foreign body aspiration
(C) Laryngotracheobronchitis (croup)
(D) Psychogenic cough
(E) Tension pneumothorax

15. Two hours after undergoing a right hepatic lobectomy, a 59-year-old woman has a distended abdomen. Her pulse is 120/min, and blood pressure is 100/60 mm Hg. Which of the following is the most likely cause of these findings?

(A) Deficiency of factor III
(B) Deficiency of factor VII
(C) Deficiency of factor XII
(D) Deficiency of platelets
(E) Poor mechanical hemostasis

16. Three days after undergoing elective laparoscopic cholecystectomy for cholelithiasis, a 42-year-old woman has the onset of hematomas at all surgical sites. She was treated for deep venous thrombosis 3 years ago but was not taking any medications at the time of this admission. Results of preoperative laboratory studies were within the reference range. Prior to the operation, she received heparin and underwent application of compression stockings. Her initial postoperative course was uncomplicated. Her only medication is ibuprofen. She is 163 cm (5 ft 4 in) tall and weighs 87 kg (192 lb); BMI is 33 kg/m^2. Her temperature is 37.3°C (99.2°F), pulse is 94/min, respirations are 16/min, and blood pressure is 112/74 mm Hg. Examination shows mild hematomas at all surgical sites. The abdomen is soft and nontender. There is no organomegaly. Bowel sounds are normal. Laboratory studies show:

Hemoglobin	10.3 g/dL
Hematocrit	30%
Leukocyte count	12,000/mm^3
Platelet count	45,000/mm^3

Which of the following is the most likely cause of this patient's current findings?

(A) Acute intermittent porphyria
(B) Heparin-induced thrombocytopenia
(C) Hypersplenism
(D) Inhibition of cyclooxygenase
(E) von Willebrand disease

17. Two days after undergoing surgical repair of a ruptured abdominal aortic aneurysm, a 67-year-old man requires increasing ventilatory support. He remains intubated and is being mechanically ventilated at an F_{IO_2} of 0.6 and a positive end-expiratory pressure of 7.5 cm H_2O. He has chronic obstructive pulmonary disease. He had a myocardial infarction 2 years ago. His only medication is a sedative. He has smoked two packs of cigarettes daily for 40 years. He appears diaphoretic. His temperature is 38.1°C (100.6°F), pulse is 120/min, and blood pressure is 90/60 mm Hg; the ventilatory rate is 25/min. Examination shows jugular venous distention. Breath sounds are absent on the left. The trachea is shifted to the right. Pulse oximetry shows an oxygen saturation of 82%. Which of the following is the most appropriate next step in diagnosis?

(A) ECG
(B) Transthoracic echocardiography
(C) CT scan of the chest
(D) Needle aspiration of the left side of the chest

18. A previously healthy 62-year-old man comes to the physician because of a 2-month history of cough. He has smoked two packs of cigarettes daily for 40 years. Examination shows no abnormalities. An x-ray of the chest shows a 2.5-cm noncalcified pulmonary nodule in the right upper lobe. A CT scan of the chest confirms the x-ray findings. An x-ray of the chest obtained 1 year ago showed no abnormalities. Which of the following is the most appropriate next step in diagnosis?

(A) Measurement of serum calcium concentration
(B) Second x-ray of the chest in 6 weeks
(C) Ventilation-perfusion lung scans
(D) Bronchoscopy with transbronchial biopsy
(E) Median sternotomy

19. A 57-year-old woman comes to the physician for a routine follow-up examination. She has a 5-year history of hypertension treated with captopril. She has had a 6.8-kg (15-lb) weight gain since her last visit 1 year ago; she is 165 cm (5 ft 5 in) tall and currently weighs 72 kg (160 lb); BMI is 27 kg/m^2. Her temperature is 37°C (98.6°F), pulse is 88/min, respirations are 14/min, and blood pressure is 160/86 mm Hg. The lungs are clear to auscultation. Cardiac examination shows no abnormalities. The abdomen is soft and nontender with no palpable masses. Pedal pulses and sensation to pinprick are diminished bilaterally. Fasting serum studies show a total cholesterol concentration of 240 mg/dL and glucose concentration of 182 mg/dL. Which of the following is the most likely cause of these findings?

(A) Abnormal insulin secretion with insulin resistance
(B) Autoimmune β-cell destruction
(C) Excess glycogen breakdown
(D) Excess release of glucagon and catecholamines
(E) Insulin allergy

20. A 3-year-old girl is brought to the emergency department because of left leg pain after falling at preschool 2 hours ago. She has a history of fractures after minor trauma. She has consistently been at the 10th percentile for height and weight since birth. Examination shows blue sclerae. There is an obvious deformity of the left thigh. An x-ray shows a new fracture of the left femur and evidence of previous fracturing. Which of the following is the most likely cause of these findings?

(A) Child abuse
(B) Defective type I collagen
(C) Deficient sulfate ion transport
(D) Hypocalcemia
(E) Hypophosphatemia
(F) Vitamin D deficiency

Answer Form for Surgery Sample Questions

(Questions 1-20)

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JURSI Oral Examination

Surgery

**** This is now going to be 25% of your final grade.**

Student: **Date:**
Examiners: **Time:**

The objective of the oral examination is to evaluate the student's clinical reasoning/problem solving skills. This will be done by presenting a patient oriented problem in one of the following areas:

1. acute abdomen
2. appendicitis
3. biliary tract disea
4. breast problems
5. pulmonary embolism/DVT
6. GI hemorrhage
7. bowel obstruction
8. gastroesophageal reflux
9. shock
10. fluid & electrolyte management
11. principles of wound management
12. head & neck examination

They are to be evaluated on the following objectives:

1. obtain the relevant history
2. request pertinent information about the physical examination
3. discuss the differential diagnosis and justify the most likely diagnosis
4. request the appropriate investigations (lab, imaging, etc.)
5. discuss the management of the problem

Please document questions asked and quality of answers on the back of the sheet, then grade using the following criteria:

EVALUATE THE STUDENT'S PERFORMANCE IN THIS ORAL EXAM -evaluate based on your expectations of performance for a student at this level, not the level expected of a physician	**Check one grade***
EXCELLENT – above average	**95 [ ]** **85 [ ]**
SATISFACTORY – pass	**75 [ ]** **65 [ ]** **55 [ ]**
FAIL	**45 [ ]**

Filled out by Dr. _____ [ ]

JURSI EVALUATION

**** This is now going to be 40% of your final grade.**

University of Saskatchewan
S - Phase D Surgery

Evaluated By : evaluator's name
Evaluating : person (role) or moment's name (if applicable)
Dates : start date to end date

*indicates a mandatory response

COLLEGE OF MEDICINE PHASE D ROTATION
JURSI Surgery Experience

Faculty/Resident Evaluation of Student Performance

*Please place a check mark in the appropriate category. Your comments regarding strengths and/or weaknesses are helpful.
** Evaluation Descriptions can be found at the bottom.

	Fails to Meet		Meets		Exceeds
	1	2	3	4	5
Core Clinical Skills	○	○	○	○	○
Problem solving - clinical reasoning	○	○	○	○	○
Knowledge base	○	○	○	○	○

Professionalism

	Fails to Meet		Meets		Exceeds
	1	2	3	4	5
Attendance/ Punctuality	○	○	○	○	○
Communication/ Interpersonal Skills	○	○	○	○	○
Reliability	○	○	○	○	○
Appropriate Behavior and Attitudes	○	○	○	○	○
Confidentiality	○	○	○	○	○

THIS STUDENT EXCELS AT

THINGS TO WORK ON

GENERAL COMMENTS

Phase D Evaluation Descriptors

Core Clinical Skills
Interviewing skills and history taking

Appropriately apply use of open-ended and closed ended questions

Physical examination

Records and reports

Technical capabilities, perform procedures suitable to this level

Problem Solving - Clinical Reasoning
Information gathering - has an acceptable approach to patient management problems

Diagnosis - can support investigations (rationale)

Define and prioritize problem list

Understands relative importance of signs and symptoms in support of differential diagnosis

Knowledge Base
Fund of knowledge - including self education and current literature

Able to explain and justify approaches to patient management problems with reference to pathophysiology, pharmacology and various treatment options

Professional - personal conduct
Reliable, prompt, punctual and dependable

Shows curiosity and initiative

Participation is appropriate, volunteers

Communication and interpersonal skills

Establishes rapport and relates well to patient

Demonstrates respect for patient, families, colleagues and other health professionals

Speaks and writes clearly

Organizational skills and confidence

Works harmoniously with colleagues and other professionals

Expectations

Fails to meet expectations
Unacceptable performance

Frequent errors, improper procedures, endangers patient safety

Frequent unprofessional conduct

Meets expectations
Satisfactory to good performance with evidence of:
Acceptable to substantial knowledge base

Good understanding of relevant issues

Familiarity with relevant literature and techniques

Ability to organize, analyze and exam material in a critical and constructive manner

Exceeds Expectations
Excellent to superior performance with strong evidence of:
Comprehensive, incisive grasp of subject matter

Very good to exceptional capacity for creative and logical thinking

Ability to make insightful and sound critical evaluation

Excellent ability to organize, analyze, synthesize, integrate and express thoughts fluently

Fluid and accurate performance of procedures for this level

The following will be displayed on forms where feedback is enabled...
(for the evaluator to answer...)

*Did you have an opportunity to meet with this trainee to discuss their performance?
○ Yes
○ No

(for the evaluee to answer...)

*Did you have an opportunity to discuss your performance with your preceptor/supervisor?
○ Yes
○ No

FINAL JURSI GRADE SHEET

Oral Examination:	**25%**
N.B.M.E.:	**25%**
Clinical Evaluations by Preceptors:	**40%**
Problem-based Surgery Seminar (Rubric):	**10%**

To be completed by _____
On this form, you will be evaluating _____
For dates: _____ to _____

Final JURSI grade sheet

	Fails to meet Expectations	Meets Expectations	Exceeds Expectations
Core clinical skills	○	○	○
Problem solving − clinical reasoning	○	○	○
Knowledge base	○	○	○

PROFESSIONALISM

	Fails to meet Expectations	Meets Expectations	Exceeds Expectations
Attendance/ Punctuality	○	○	○
Communication/ interpersonal skills	○	○	○
Reliability	○	○	○
Appropriate behavior and attitudes	○	○	○
Confidentiality	○	○	○

Comments:

_____

_____

_____

_____

_____

_____

TEST EXAM RESULTS:

Oral

_____

Written

_____

Clinical Skills

_____

Other

_____

Overall

_____

The following will be displayed on forms where feedback is enabled...

(for the evaluator to answer...)

* Did you have an opportunity to meet with this trainee to discuss their performance?
- Yes
- No

(for the evaluee to answer...)

* Did you have an opportunity to discuss your performance with your preceptor/supervisor?
- Yes
- No

MID-ROTATION CARD

Mid-Rotation Feedback Card

Review of Performance - (to be completed by the attending/resident):

Name:_____

Rotation:_____

Category	Not observed	Below Expectations	Meeting Expectations	Exceeding Expectations
History & PE				
Knowledge				
Interest in learning				
Professionalism				
Oral communication				
Written notes				

The student's strengths:	Suggestions for improvement:

Student Signature: _____ **Date:**_____

Attending Signature:_____ **Date:**_____

Clerkship Director Signature:_____ **Date:**_____

Mid-Rotation Feedback Card

Review of Performance - (to be completed by the attending/resident):

Name:_____

Rotation:_____

Category	Not observed	Below Expectations	Meeting Expectations	Exceeding Expectations
History & PE				
Knowledge				
Interest in learning				
Professionalism				
Oral communication				
Written notes				

The student's strengths:	Suggestions for improvement:

Student Signature: _____ **Date:**_____

Attending Signature:_____ **Date:**_____

Clerkship Director Signature:_____ **Date:**_____

Please review learning objectives for this rotation before completing this assessment form. The learning objectives for this rotation can be found in ONE45 at http://www.medicine.usask.ca/medics/objectives.php

Student Instructions:

- Ask for frequent feedback from attendings & residents residents throughout the rotation.
- At mid-rotation ask your attending(s) & resident(s) resident(s) to complete this card.
- Return the completed card to the Surgery Teaching Office Teaching (Room B413 HSB 966-5678).

Student Instructions:

- Ask for frequent feedback from attendings & residents residents throughout the rotation.
- At mid-rotation ask your attending(s) & resident(s) resident(s) to complete this card.
- Return the completed card to the Surgery Teaching Office Teaching (Room B413 HSB 966-5678).

VACATION/EDUCATION LEAVE

Request Form

JURSI
APPLICATION FOR VACATION/LEAVE

NAME: _____

DATE(S) OF ANNUAL VACATION: _____

DEPARTMENT/ROTATION AT TIME OF VACATION: _____

APPROVED BY JURSI COORDINATOR: _____

OR

DATE(S) OF EDUCATIONAL LEAVE: _____

DEPARTMENT/ROTATION AT TIME OF LEAVE:_____

APPROVED BY JURSI COORDINATOR:_____

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