Surgery Clerkship Meds’ 2021
Asynchronous Learning Curriculum

(DRAFT) Updated August 4, 2020

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Orientation

Required Resources:

1. ACCESS Surgery Online Textbook Collection
2. You Tube Videos
3. Elentra

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Mandatory Content:

- Catheter Insertion –
  - WATCH: Urinary Catheterization (by Dr. Keith Rourke)
    ▪ http://www.cua.org/en/canucc

- LHSC Donning and Doffing -
  - WATCH: Donning
    ▪ https://www.youtube.com/watch?v=C6eJ6ufYLBw
  - WATCH: Doffing
    ▪ https://www.youtube.com/watch?v=6otkW4miLHU

- Scrubbing, Gowning, and Gloving by Surgical Infection Society -
  - WATCH: Surgical Dress
    ▪ https://youtu.be/Fmqtmb3h1IM
  - WATCH: Water-based Scrub
    ▪ https://youtu.be/pPfaUUiFjo
    ▪ Note: Brushes are not Used in London
  - WATCH: Waterless Scrub
    ▪ https://youtu.be/3Pf9vclkJTQ
  - WATCH: Common Errors
    ▪ https://youtu.be/NvjZKx_pUfo
  - WATCH: Gown and Glove
    ▪ https://youtu.be/BTeibg50_R8
  - WATCH: Self-Gown and Glove
    ▪ https://youtu.be/tvxQZRzHlqU
- WATCH: Maintaining Sterility
  - [https://youtu.be/g3VSnSdZQZk](https://youtu.be/g3VSnSdZQZk)

**- Suturing and Knot Tying –**
The below videos are located under the Surgery Clerkship Course in Elentra (Resources/Videos)

- WATCH: Introduction
- WATCH: Loading the Needle
- WATCH: Simple Interrupted 2 Bite
- WATCH: Instrument Tie
- WATCH: Simple Interrupted 1 Bite
- WATCH: Horizontal Mattress
- WATCH: Vertical Mattress
- WATCH: Intracuticular
- WATCH: Two-Handed Ties
- WATCH: One-Handed Ties

**Optional Content:**

- READ: Introduction to the Operating Room

**Bonus Content:**
Cardiac Surgery

Required Resources:

1. Introduction to Cardiac Surgery - LHSC Cardiac Surgery Clerk package
2. CTSnet - Introduction to the Cardiac Surgery OR and Cardiopulmonary Bypass
3. UptoDate – PDF Documents in Elentra

Contacts for Questions:

Faculty Instructor: Dr. Dave Nagpal
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Mandatory Content:

- **Coronary Artery Disease –**
  - READ: Trauma 1: Initial Evaluation – ASE/ASC Curriculum
  - READ: Trauma 2: Diagnosis & Management – ASE/ASC Curriculum
  - WATCH: Trauma Whiteboard Talk for Rural Physician by U of T

  *Epidemiology, Symptoms and Presentation, and Investigations*
  - READ: Chronic Coronary Syndrome: Overview of Care (PDF1)

  *Treatment – Medical/PCI/CABG*
  - READ: Chronic Coronary Syndrome: Indications for Revascularization (PDF2)
  - READ: Revascularization in patients with stable coronary artery disease: Coronary artery bypass graft surgery versus percutaneous coronary intervention (PDF3)
  - READ: CTSnet - Dr. Taggart lecture “CABG is the Best Therapy for Severe CAD”

- **Valvular Disease –**

  *Aortic Stenosis*
  *Epidemiology and Investigations*
  - READ: Natural History of Thoracic Aortic Aneurysms: Indications for Surgery, and Surgical Versus Nonsurgical Risks
  - READ: Indications and imaging for aortic surgery: Size and other matters
- READ: Clinical Manifestations and Diagnosis of Aortic Stenosis in Adults (PDF 4)

Treatment
- READ: Indications for Valve Replacement for Aortic Stenosis in Adults (PDF 5)
- READ: Choice of Intervention for AS (PDF 6) (BONUS – Not Required)

Mitral Regurgitation
Epidemiology and Investigations
- READ: Clinical Manifestations and Diagnosis of Chronic MR (PDF 7)

Treatment
- READ: Management of Chronic Primary Mitral Regurgitation (PDF 8)

- Heart Failure –

Systolic and Diastolic HF
- READ: Epidemiology and Causes of Heart Failure (PDF 9)

Therapeutic Spectrum of HF (GDMT, device, surgical, advanced therapeutic options)
- READ: Overview of the Management of HF with reduced EF in Adults (PDF 10)
- READ: Orthotopic Heart Transplantation

- Thoracic Aortic Aneurysmal Disease –
- READ: Aortic Dissection (Dr. John Elefteriades)
  ▪ International Emergency Medicine Education Project
- READ: Management of Acute Aortic Dissection (PDF 11)
- READ: CTSnet - Dr. Arie Blitz - Surgery for Type A Dissection (BONUS – Not Required)

Optional Content:

- Mechanical Circulatory Support/ECMO –
  - READ: Temporary MCS for Cardiogenic Shock – CJC Review Article (PDF 12)
  - READ: VV and VA ECMO for pulmonary and cardiopulmonary failure (PDF 13)
- **Hypertrophic Obstructive Cardiomyopathy** –
  - READ: [medical, interventional, and surgical therapy](#) (PDF 14)
  - READ: [CTSnet - Transaortic Septal Myectomy](#)

- **Pericardial Disease** –
  - READ: Mayo Clinic Proceedings
    - [Pericardial Disease: Diagnosis and Management](#)
  - READ: Progress in CV Disease - Surgical Management of Pericardial Diseases (PDF 15)
  - READ: [CTSnet - Subxiphoid pericardial window](#)

- **Arrythmia** –
  - READ: [uptodate - Overview of Atrial Fibrillation](#) (PDF 16)
  - READ: [uptodate - Surgical ablation to prevent recurrent atrial fibrillation](#) (PDF 17)
  - READ: [CTSnet - Evolution of the MAZE procedure](#)

- **Cardiovascular Critical Care** –
  - READ: Inotropes and Vasopressors
    - [uptodate - Use of vasopressors and inotropes](#) (PDF 18)
  - READ: RV Failure
    - [uptodate - Right heart failure: Causes and management](#) (PDF 19)
  - READ: post-operative care
    - [uptodate - Postoperative complications among patients undergoing cardiac surgery](#) (PDF 20)

**Bonus Content:**

- READ: [The Past 50 Years of Cardiovascular Surgery, by Drs. Cooley and Frazier](#)
- READ: [Resources for residents in Cardiothoracic Surgery](#) by TSRA
General Surgery

Required Resources:

1. ACCESS Surgery Online Textbook Collection
2. American College of Surgeons/Surgical Education Modules for Medical Students
3. SAGES Laparoscopic Surgical Video Library

Contacts for Questions:

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Mandatory Content:

- Acute Presentations –

Trauma
A topic that is near and dear to the heart of every surgeon, trauma is at the top of this list for good reasons. The two readings are well written pieces from Marc De Moya, a very bright trauma surgeon and the chief of trauma at the Medical College of Wisconsin. The whiteboard talk here is actually GREAT. It is aimed at rural emergency room physicians with little trauma experience... a lot like clinical clerks... and comes from a very thoughtful ER group out of the University of Toronto.

- READ: Trauma 1: Initial Evaluation – ASE/ASC Curriculum
- READ: Trauma 2: Diagnosis & Management – ASE/ASC Curriculum
- WATCH: Trauma Whiteboard Talk for Rural Physician by U of T

Appendicitis
There’s no more common surgical emergency than appendicitis! The chapter in the acute care surgery textbook is a very reasonable overview and, although we are biased, the screencast of Appendicitis vs Diverticulitis has almost everything a clerk needs to know about BOTH diseases. Finally, this very short SAGES video gives a great step-by-step explanation of the most common emergency surgical procedure in North America at a level intended for medical students.

- READ: Acute Care Surgery - Chapter 7 – Acute Appendicitis
- WATCH: Appendicitis vs Diverticulitis by Rob Leeper
- WATCH: SAGES – Laparoscopic Appendectomy
Cholecystitis
The two readings focus on two different aspects of biliary disease. They are both from the Acute care surgery textbook and the first focuses strictly on trouble within the gall bladder aka “acute chole” while the second deals with all the various troubles that can occur in the bile duct…. Choledocholithiasis, biliary pancreatitis, etc. Rather than a video of a simple lap chole, this unit’s video is a great whiteboard talk that covers the breadth of biliary disease from one of our favorite Youtube medical illustrators/explainers.

- READ: Acute Care Surgery – Chapter 15 – Acute Cholecystitis
- READ: Acute Care Surgery – Chapter 16 – Biliary Obstruction
- WATCH: Acute Cholecystitis Whiteboard Talk by A. Hasudungan

Diverticulitis
Once again, the chapter on diverticulitis from the acute care surgery textbook is solid and, if you haven’t watched the screencast on appendicitis vs diverticulitis yet then now is the time. The diverticulitis talk from Hasudungan is great and the video of a laparoscopic sigmoid colectomy, produced by Steve Wexner who is one of the nation’s best colorectal surgeons, is really well done and explains the operation beautifully.

- READ: Acute Care Surgery – Chapter 8 - Diverticulitis
- WATCH: Appendicitis vs Diverticulitis by Rob Leeper
- WATCH: Diverticular Disease Whiteboard Talk by A. Hasudungan
- WATCH: SAGES & Steve Wexner – Lap Sigmoid Colectomy

Pancreatitis
Schwartz textbook of surgery is a real classic and they cover the pancreas well. Focus on the pancreatitis section here and save your malignant pancreas reading for later. Once again we have two great talks covering both acute and chronic pancreatitis from A. Hasudungan on youtube that are very helpful in understanding these two distinct diseases.

- READ: Schwartz Surgery – Chapter 33 – Pancreas > Pancreatitis Section
- WATCH: Acute Pancreatitis Whiteboard Talk by A. Hasudungan
- WATCH: Chronic Pancreatitis Whiteboard Talk by A. Hasudungan

Peptic Ulcer Disease
Free air!!!! It’s a great phrase to hear on call for general surgery and peptic ulcer disease is a classic cause. Schwartz chapter gives a great historical and current perspective on ulcer disease while Hasudungan comes through again with a neat physiology overview on H. pylori. The SAGES link is a screencast of a really nice and comprehensive talk on peptic ulcer disease with a great, detailed review of all the surgical options for the surgery keener.

- READ: Schwartz Surgery – Chapter 26 Stomach > Peptic Ulcer Section
- WATCH: H. pylori Whiteboard Talk by A. Hasudungan
- WATCH: SAGES – Surgery for Peptic Ulcer Disease

Perianal Disease
It isn’t very exciting but it’s awfully common….. perianal disease from anorectal sepsis to hemorrhoid disease to fissure are a common complaint for any general practitioner. This
unit’s reading covers the topic well from the American College of Surgeons curriculum. The hand drawn whiteboard talks by Hasudungan I think are really important to help understand the anatomy of the various perianal diseases.

- **READ:** [Perianal Problems – ASE/ACS Curriculum](#)
- **WATCH:** [Anorectal Sepsis Whiteboard Talk by A. Hasudungan](#)
- **WATCH:** [Hemorrhoid Disease Whiteboard Talk by A. Hasudungan](#)

**GI Bleeding (Upper & Lower)**

Although so much of GI bleeding is managed acutely by the gastroenterology service at LHSC, these are very important concepts for anyone working in general surgery. The ACS chapter is a good start and we have two different whiteboard talks with our favorite Youtube explainer covering upper GI bleeding while a guest Youtuber R. Patwari does a nice job with lower GI bleeds.

- **READ:** [GI Bleeding – ASE/ASC Curriculum](#)
- **WATCH:** [Upper GI Bleeding Whiteboard Talk by A. Hasudungan](#)
- **WATCH:** [Lower GI Bleeding Whiteboard Talk by R. Patwari](#)

**Bowel Obstruction (Small & Large)**

Bowel obstructions are a very common consult to receive on general surgery. There are very specific and major differences in how we think about and approach small versus large bowel obstructions and the ACS textbook covers them each well in back to back chapters. Once again the brilliant Youtube explainer A. Hasudungan does a great job with a whiteboard talk covering both topics.

- **READ:** [Acute Care Surgery – Chapter 9 – Small Bowel Obstruction](#)
- **READ:** [Acute Care Surgery – Chapter 10 – Large Bowel Obstruction](#)
- **WATCH:** [Bowel Obstruction Whiteboard Talk by A. Hasudungan](#)

**Ischemic Gut**

GI tract ischemia is a scary diagnosis. The chapter from the Acute Care Surgery textbook covers the approach quite well and this screencast from CRASH! Medical’s vascular surgery section covers the topic comprehensively.

- **READ:** [Acute Care Surgery – Chapter 13 – Mesenteric Ischemia](#)
- **WATCH:** [Mesenteric Ischemia – CRASH! Medical Review Series](#)

- **Benign Surgical Problems –**

  **Hernia (groin & ventral)**

- **READ:** [Abdominal Wall & Groin Hernias – ASE/ACS Curriculum](#)
- **WATCH:** [Anatomy of the Inguinal Canal](#)
- **WATCH:** [Laparoscopic Inguinal Hernia Repair](#)
- **WATCH:** [Open Inguinal Hernia Repair](#)
Inflammatory Bowel Disease
- WATCH: IBD Whiteboard Talk by A. Hasundungan

Bariatric surgery
- WATCH: Zollingers Video Atlas - Laparoscopic Sleeve Gastrectomy

- Malignant Surgical Problems –

Colon and Rectal Cancer
- WATCH: Colon Cancer Whiteboard Talk by A. Hasundungan
- WATCH: Laparoscopic Right Colectomy in Zollinger’s Atlas of Surgery

Pancreatic Cancer
- WATCH: Pancreatic Anatomy Whiteboard Talk by A. Hasundungan
- READ: Pancreas (Adenocarcinoma Section) – Current Dx and Tx

Breast Cancer
- READ: Breast Disease - ACS/ASE Curriculum
- READ: Breast – Current Dx & Tx by Doherty

Gastric Cancer
- READ: Stomach (Anatomy & Carcinoma Section) - Current Dx & Tx

Liver Tumors (Mets, HCC, FNH/Adenoma)
- READ: ...

- Approaches and Common Scenarios –

Approach to Shock
There might be no more important topic for ANY physician working in acute care than shock. The American College Curriculum chapter is once again done by the brilliant Marc De Moya and covers the issues well. The screen cast from our local surgeons is OK but the seminar they will teach you on it later is DYNAMITE!

- READ: Shock – ASE/ACS Curriculum

Approach to Post-operative Problems
Sadly these post-operative concerns are most often fielded by junior residents nowadays. None the less, you will all be junior residents before you know it! The chapter from the ACS curriculum is good and the podcast from U of A’s “Surgery 101” is quite a nice one to listen to while driving back and forth to the hospital.

- READ: Post-Operative Care – ASE/ACS Curriculum
- LISTEN: Post-Operative Complications – Surgery101 from U of A
Approach to Jaundice
- READ: Jaundice – ASE/ACS Curriculum
- WATCH: Liver Anatomy & Vasculature Whiteboard Talk by A. Hasundungan

- General Topics –

Surgical Nutrition
- WATCH: Surgical Nutrition Module
  ▪ Located in Elentra under Teaching Materials

Trauma Evaluation and Management (TEAM)
- READ: TEAM Manual
  ▪ Located in Elentra under Resources

Optional Content:

Bonus Content:
Pediatric General Surgery

Required Resources:

1. Operative Pediatric Surgery
2. APSA STEPS teaching resources https://eapsa.org/continuing-education/early-career/steps-toolbox/ (each topic has excellent summary slides + MCQ’s at end)
3. Pediatric Surgery Primer (put pdf link here)

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Mandatory Content:

- Common Neonatal Surgical Emergencies –

Approach to Pediatric Bowel Obstructions
This is a VERY important topic which is why it is listed first! The differential diagnosis for pediatric bowel obstructions represent several life threatening conditions. YOU CAN SAVE A LIFE if you recognize these and promptly refer to a pediatric surgeon! BEWARE OF THE BABY WHO VOMITS GREEN BILE!!

- WATCH: http://surgery101.org/podcast/approach-to-pediatric-bowel-obstruction/ (excellent brief overview for subsequent topics)

Malrotation +/- Volvulus
This is a KEY topic to understand and most importantly, recognize as a physician! If the entire midgut volvulizes, you only have 6 hours before all of the bowel has died and the baby will either die or can never eat and remain TPN dependent forever. Not only can you save a life by promptly recognizing this condition, you can save a LIFETIME!

- READ: Intestinal Rotation Abnormalities (Chapter 41)
Esophageal Atresia and Tracheoesophageal Fistula (EA+/TEF)
Like most neonatal surgical conditions, EA+TEF occurs in 1 in 5000 babies. In London, we see several EA+TEF babies a year. Understanding the embryology helps you understand the types of EA and how we fix them.

- READ: Esophageal Atresia (Chapter 24)
  - https://accesssurgery-mhmedical-com.ezproxy.sjhc.london.on.ca/content.aspx?bookid=959&sectionid=53539591
- READ: Esophageal Atresias
  - https://eapsa.org/apsa/media/Documents/STEPS/STEPS_TEF.pdf
- WATCH: Thoracoscopic Tracheoesophageal Fistula Repair
  - https://www.youtube.com/watch?v=KawAKgS3hg8&t=34.5s (this video shows a thoracoscopic repair which most surgeons don't do but allows you to see the anatomy better than open video)

Intestinal Atresias
Intestinal atresia can occur anywhere along the GI tract although most common is duodenal atresia (1 in 5000 births) or small bowel atresia. Colonic and rectal atresias are extremely rare.

Atresia is Latin for ‘a missing piece’ of bowel. The location of the obstruction will determine the type of vomiting non bilious (before the ampulla of Vater) vs bilious (after the ampulla of Vater) and whether abdominal distention is present (proximal obstruction = no distention vs distal obstruction = ++ distention). A thorough history and physical examination are key to diagnosing these conditions.

- READ: Intestinal Atresia (Chapter 42)
- READ: Intestinal Atresia
  - https://eapsa.org/apsa/media/Documents/STEPS/STEPS_Intestinal_Atresia.pdf
- WATCH: Intestinal Atresia and Stenosis
  - https://www.youtube.com/watch?v=7481ok2xsbl
Hirschsprung’s Disease
Hirschsprung’s disease represents an important pediatric surgical condition. It also occurs in 1 in 5000 babies. It was named after Harold Hirschsprung, who was a Danish pediatrician in the late 1800’s, who first described it. However, he believed that the issue was the dilated proximal colon. We later realized that it was the aganglionic distal colon which was the source of these babies’ distal bowel obstruction. A **cardinal sign is failure to pass meconium in the first 24 hrs of life** (90-95% of term babies will do this normally).

- **READ:** Hirschsprung Disease  

- **LISTEN:** Hirschsprung’s Disease  

- **WATCH:** Pull-Through Procedure for Hirschsprung’s Disease  
  - [https://www.youtube.com/watch?v=nxeEkO1xf7c](https://www.youtube.com/watch?v=nxeEkO1xf7c)

- **WATCH:** Laparoscopic Assisted Pull Through for Hirschsprung’s Disease  
  - [https://www.youtube.com/watch?v=iwr8Kc4QVnw](https://www.youtube.com/watch?v=iwr8Kc4QVnw) (short surgery video)

Imperforate Anus
Another important neonatal surgical condition and usually easy to diagnose....BUT you have to fully examine the baby or you will miss it! This is also part of the VACTERL syndrome so be sure to rule out any vertebral, cardiac, EA+TEF, renal or limb anomalies too!

- **READ:** Anorectal Malformations (Chapter 53)  

- **READ:** Imperforate Anus  
  - [https://eapsa.org/apsa/media/Documents/STEPS/STEPS_Imperforate_Anus.pdf](https://eapsa.org/apsa/media/Documents/STEPS/STEPS_Imperforate_Anus.pdf)

- **WATCH:** Lap Pull Through for Imperforate Anus  
  - [https://www.youtube.com/watch?v=2NrwAScRWMs&t=626s](https://www.youtube.com/watch?v=2NrwAScRWMs&t=626s)

Necrotizing Enterocolitis
NEC remains a life-threatening condition for some of our youngest and tiniest NICU babies. Although many NEC babies never require surgery, others require multiple interventions such as urgent bedside drain, urgent laparotomy for necrotic bowel resection or elective laparotomy for stricture resection.

- **READ:** Necrotizing Enterocolitis (Chapter 46)
Pyloric Stenosis

Pyloric stenosis is a frequent neonatal surgical condition, with pyloromyotomy being the most common emergency neonatal surgery. Since this is a gastric outlet obstruction, these babies present with worsening NONBILIOUS, and usually projectile, emesis (unlike the majority of neonatal obstructions describe above who present with bilious emesis).

- READ: Pyloric Stenosis
  - https://accesssurgery-mhmedical-com.ezproxy.sjhc.london.on.ca/content.aspx?bookid=959&sectionid=53539608
- READ: Pyloric Stenosis
  - https://eapsa.org/apsa/media/Documents/STEPS/STEPS-Pyloric_Stenosis.pdf
- LISTEN: Pyloric Stenosis
- WATCH: Pyloromyotomy
  - https://www.youtube.com/watch?v=GICHybVAIDs

- Common Pediatric Surgical Emergencies –

Trauma (blunt and penetrating)

Trauma remains the most common cause of death in children and teenagers and is usually completely preventable. The TEAM manual covers the important ATLS principles regarding assessment and management of an acutely injured child and adult. Trauma is also covered under General Surgery section.

- READ: TEAM Course Manual (Located in Elelntra)
- READ: Abdominal Trauma (Chapter 81)
**Intussusception**
Intussusception usually occurs in babies 6mo – 18mo. Early diagnosis and management is important to prevent bowel necrosis and rarely, death, if untreated.

- **READ:** Intussusception (Chapter 45)
  - https://accesssurgery-mhmedical-com.ezproxy.sjhc.london.on.ca/content.aspx?bookid=959&sectionid=53539613
- **LISTEN:** Pediatric Intussusception
- **WATCH:** Intussusception
  - https://www.youtube.com/watch?v=CEeqJ3_gGsE

**Incarcerated Inguinal Hernias**
The inguinal area is part of the abdominal exam! Always take down the diaper and carefully examine children's groins since an incarcerated inguinal hernia remains the most common cause of bowel obstruction in babies and children.

- **READ:** Hernias of the Inguinal Region (Chapter 36)
  - https://accesssurgery-mhmedical-com.ezproxy.sjhc.london.on.ca/content.aspx?bookid=959&sectionid=53539604

**Pediatric Appendicitis**
This is similar to adult appendicitis, although children under 5 years of age often perforate immediately and can present with atypical symptoms.

- **READ:** Appendicitis
- **LISTEN:** Pediatric Appendicitis

**Meckel’s Diverticulum**
- **LISTEN:** Meckel’s Diverticulum
- **WATCH:** Laparoscopic Resection of Meckel’s Diverticulum in Children
  - https://www.youtube.com/watch?v=Gg6Er3ef6fc
- Common Pediatric Elective Surgical Conditions –

**Inguinal Hernias**

Inguinal hernia repair remains the most common elective pediatric surgical procedure. Although presentation is similar to adults (i.e., reducible mass in the groin), repair is very different — NO MESH! Remember — pediatric inguinal hernias are indirect while adult hernias are direct.

- **READ:** Hernias of the Inguinal Region (Chapter 36)  

- **LISTEN:** Inguinal Hernias  

**Umbilical Hernias**

Umbilical hernias are another common type of hernia in children. Luckily, 85% of umbilical hernias will resolve spontaneously by 5 years of age.

- **READ:** Umbilical and Supraumbilical Disease (Chapter 35)  

- **LISTEN:** Umbilical Hernias  

**Optional Content:**

**Congenital Diaphragmatic Hernia**

With the liberal use of prenatal ultrasound, most CDH’s are diagnosed prior to birth. However, despite many advances in neonatal intensive care, survival in Canada remains at 80%. Consider this diagnosis in a baby with immediate respiratory distress after birth.

- **READ:** Diaphragmatic Hernias and Eventration (Chapter 33)  

- **WATCH:** Congenital Diaphragmatic Hernia Repair  
  ▪ [https://www.youtube.com/watch?v=r8f1N0pT-vw](https://www.youtube.com/watch?v=r8f1N0pT-vw)
Abdominal Wall Defects *(omphalocoele and gastroschisis)*
Although both of these conditions involve defects in the abdominal wall, they differ in many aspects i.e. maternal demographics, appearance of the abdomen, amount of herniated viscera, associated anomalies etc. Management is also important and very different for both.

- **READ:** Abdominal Wall Defects: Omphalocoele and Gastrochisis

- **READ:** Abdominal Wall Defects
  - [https://eapsa.org/apsa/media/Documents/STEPS/STEPS_ABD_Wall_Defects.pdf](https://eapsa.org/apsa/media/Documents/STEPS/STEPS_ABD_Wall_Defects.pdf)

- **LISTEN:** Omphalocoele

- **LISTEN:** Gastrochisis

- **WATCH:** Omphalocoele versus Gastrochisis
  - [https://www.youtube.com/watch?v=KZhoiwMU0Lc](https://www.youtube.com/watch?v=KZhoiwMU0Lc)

Meconium Ileus
Another cause of neonatal bowel obstruction, meconium ileus results in a baby with cystic fibrosis due to extremely sticky and inspissated meconium.

- **READ:** Meconium Ileus (Chapter 43)

- **WATCH:** Cystic Fibrosis and Meconium Ileus
  - [https://www.youtube.com/watch?v=MEkCZ8b7Emo](https://www.youtube.com/watch?v=MEkCZ8b7Emo)

Failure to Thrive Requiring Feeding Tube Placement
Pediatric surgeons see many children for failure to thrive and need for gastrostomy tube insertion.

- **READ:** Gastrointestinal Tract Feeding Access

- **WATCH:**
  - [https://www.youtube.com/watch?v=0JrJd9pLhjM&t=301s](https://www.youtube.com/watch?v=0JrJd9pLhjM&t=301s)
Chest Wall Deformities (pectus excavatum and pectus carinatum)
Pectus excavatum and pectus carinatum occur frequently in children and teenagers, especially boys (1 in 300).

- **READ:** Pectus Excavatum (Chapter 17)
- **READ:** Pectus Carinatum and other Deformities of the Chest Wall (Chapter 18)
- **LISTEN:** Pectus Deformities

Biliary Disease (gallstones, cholecystitis)
In the past, most North American children had pigmented stones due to hemolytic anemias. Unfortunately, there is now an increasing prevalence of cholesterol stones in children and teenagers due to a high fat diet and increasing obesity. It is important that children tend to present with atypical symptoms compared with adults.

- **READ:** Gallbladder Disease
- **WATCH:** Laparoscopic Cholecystectomy
  - [https://www.youtube.com/watch?v=ybe2pEC1Dms](https://www.youtube.com/watch?v=ybe2pEC1Dms)

Cystic Lung Lesions (CPAM, pulmonary sequestration)
Pediatric surgeons cover conditions all over the body and in all age groups. As such, we often assess babies and children with congenital cystic lung lesions.

- **READ:** Congenital Lung Malformations
- **WATCH:** Pediatric VATS Lobectomy for CCAM
  - [https://www.youtube.com/watch?v=2lodXAN3P2E](https://www.youtube.com/watch?v=2lodXAN3P2E)
Solid Tumours of Childhood (neuroblastoma, Wilms, hepatoblastoma, rhabdomyosarcoma)

Last, but not least, malignancies do occur in children. Although solid malignant tumours are rare, it is important for physicians to recognize red flags and ensure prompt referral to pediatric surgeons and oncologists. Neuroblastomas and nephroblastomas (Wilms) are the 2 most common types. Neuroblastoma is still the most common solid abdominal tumour of childhood.

- READ: Neuroblastoma (Chapter 89)

READ: Nephroblastoma – Wilms Tumor (Chapter 88)

Bonus Content:
Neurosurgery

Required Resources:

2. You Tube Videos

Contact for Questions:

Faculty Instructor: Dr. Mel Boulton
Email Address: Mel.Boulton@lhsc.on.ca

Mandatory Content:

- READ: Neurosurgery (Chapter 38)  

- Neurological Examination -
  - WATCH: Cranial Nerve Examination  
    ▪ [https://www.youtube.com/watch?v=CUSMz18U3jQ](https://www.youtube.com/watch?v=CUSMz18U3jQ)
  - WATCH: Motor, Sensory, and Reflex Examination  
    ▪ [https://www.youtube.com/watch?v=5ob5uJmgZOs](https://www.youtube.com/watch?v=5ob5uJmgZOs)

- Neuroanatomy -
  - WATCH: Neuroanatomy Made Ridiculously Simple  
    ▪ [https://www.youtube.com/watch?v=gyX5ao5ScjE](https://www.youtube.com/watch?v=gyX5ao5ScjE)

- Cranial Trauma -
  - WATCH: Overview of Traumatic Brain Injury  
    ▪ [https://www.youtube.com/watch?v=i7GidKRUzrY](https://www.youtube.com/watch?v=i7GidKRUzrY)

- Spinal Emergencies -
  - WATCH: Spinal Trauma  
    ▪ [https://www.youtube.com/watch?v=E8oy5WkR1lc](https://www.youtube.com/watch?v=E8oy5WkR1lc)

- Neuro-oncology -
  - WATCH: Tumors of the Nervous System  
    ▪ [https://www.youtube.com/watch?v=ykRB06F39zU](https://www.youtube.com/watch?v=ykRB06F39zU)
  - WATCH: Treatment Strategies for Meningiomas  
    ▪ [https://www.youtube.com/watch?v=hlj0SgOVZnk](https://www.youtube.com/watch?v=hlj0SgOVZnk)
- **WATCH:** Glioma Resection  
  ▪ [https://www.youtube.com/watch?v=jXWPbGmZK8M](https://www.youtube.com/watch?v=jXWPbGmZK8M)
- **WATCH:** 2-Minute Neuroscience: Brain Tumors  
  ▪ [https://www.youtube.com/watch?v=pBSncknENRc](https://www.youtube.com/watch?v=pBSncknENRc)

- **Hydrocephalus** -  
  - **WATCH:** 2-Minute Neuroscience: Hydrocephalus  
    ▪ [https://www.youtube.com/watch?v=JLNI2upLi7I](https://www.youtube.com/watch?v=JLNI2upLi7I)

- **Neurovascular** -  
  - **WATCH:** Intracranial Aneurysm Causes  
    ▪ [https://www.youtube.com/watch?v=rjYjrONc0Ys](https://www.youtube.com/watch?v=rjYjrONc0Ys)
  - **WATCH:** Brain Aneurysms: The Basics  
    ▪ [https://www.youtube.com/watch?v=e-vl7SNUcRw](https://www.youtube.com/watch?v=e-vl7SNUcRw)

**Optional Content:**

**Bonus Content:**
Ophthalmology

Required Resources:

1. Website: https://timroot.com/videos/

Contact for Questions:

Faculty Instructor: Dr. Sapna Sharan
Email Address: Sapna.Sharan@lhsc.on.ca

Mandatory Content:

- WATCH: Anatomy of Eye
  ▪ https://timroot.com/anatomy
- WATCH: History and Physical of Eye
  ▪ https://timroot.com/history
- WATCH: Slit Lamp Exam
  ▪ https://timroot.com/slit
- WATCH: Common Eye Infections
  ▪ https://timroot.com/common-eye-infections
- WATCH: Eye Trauma
  ▪ https://timroot.com/trauma

Optional Content:

- WATCH: Neuro-Ophthalmology (1 and 2)
  ▪ https://timroot.com/neuro-ophthalmology
- WATCH: Introduction to Glaucoma
  ▪ https://timroot.com/introduction-to-glaucoma
- WATCH: Retina Basics
  ▪ https://timroot.com/retina-basics
- WATCH: Pediatric Ophthalmology
  ▪ https://timroot.com/pediatric-ophthalmology
- WATCH: Eye Exam Tricks in Tricky Patients
  ▪ https://timroot.com/eye-exam-tricks

Bonus Content:
Orthopaedic Surgery

Required Resources:

1. Virtual Curriculum Orthopaedic Handbook
2. [https://www.orthobullets.com](https://www.orthobullets.com)
3. [http://www.orthopaedicsone.com](http://www.orthopaedicsone.com)
4. [https://radiopaedia.org](https://radiopaedia.org)
5. ACCESS Surgery Online Textbook Collection: Current Diagnosis and Treatment in Orthopedics

Contact for Questions:

Faculty Instructors: Drs. Deb Bartley (VH) & Ted Vasarhelyi (UH)

Email Address: debra.bartley@lhsc.on.ca & Edward.Vasarhelyi@lhsc.on.ca

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Mandatory Content:

- **Trauma** -
  - **READ:** Virtual Curriculum Orthopaedic Handbook (pdf) (Pages 18-20, 24-38)
  - **READ:** General Considerations in Orthopaedic Surgery (Chapter 1)
    - [https://accesssurgery-mhmedical-com.ezproxy.sjhc.london.on.ca/content.aspx?bookid=675&sectionid=45451707](https://accesssurgery-mhmedical-com.ezproxy.sjhc.london.on.ca/content.aspx?bookid=675&sectionid=45451707)
  - **READ:** Musculoskeletal Trauma Surgery (Chapter 2)

- **Fractures – General Principles** -
  - **READ:** Describing a Fracture (an approach)
- Orthopaedic Emergencies -

- READ: Multiple Long Bone Fractures and Unstable Pelvic Fractures
  AKA Polytrauma Patient Evaluation

- READ: Open Fractures

- READ: Septic Joint
  ▪ [https://www.orthobullets.com/trauma/1058/septic-arthritis--adult](https://www.orthobullets.com/trauma/1058/septic-arthritis--adult)

- READ: Compartment Syndrome (Leg)

- READ: Compartment Syndrome (Forearm)

- READ: Hip Dislocation

- Selected Fractures -

  **Humerus Fractures**
  - READ: Proximal Humerus
    ▪ [https://www.orthobullets.com/trauma/1015/proximal-humerus-fractures](https://www.orthobullets.com/trauma/1015/proximal-humerus-fractures)
  - READ: Humeral Shaft
    ▪ [https://www.orthobullets.com/trauma/1016/humeral-shaft-fractures](https://www.orthobullets.com/trauma/1016/humeral-shaft-fractures)

  **Olecranon Fractures**
  - READ: Olecranon Fractures
    ▪ [https://www.orthobullets.com/trauma/1022/olecranon-fractures](https://www.orthobullets.com/trauma/1022/olecranon-fractures)

  **Wrist Fractures**
  - READ: Distal Radius Fractures
    ▪ [https://www.orthobullets.com/trauma/1027/distal-radius-fractures](https://www.orthobullets.com/trauma/1027/distal-radius-fractures)
  - READ: Scaphoid Fracture
Pelvic Fractures
- READ: Pelvic Fractures

Hip Fractures
- READ: Femoral Neck Fracture
- READ: Intertrochanteric Fracture
  ▪ [https://www.orthobullets.com/trauma/1038/intertrochanteric-fractures](https://www.orthobullets.com/trauma/1038/intertrochanteric-fractures)
- READ: Subtrochanteric Fracture

Tibial Plateau Fractures
- READ: Tibial Plateau Fractures
  ▪ [https://www.orthobullets.com/trauma/1044/tibial-plateau-fractures](https://www.orthobullets.com/trauma/1044/tibial-plateau-fractures)

Ankle Fractures
- READ: Ankle Fractures
  ▪ [https://www.orthobullets.com/trauma/1047/ankle-fractures](https://www.orthobullets.com/trauma/1047/ankle-fractures)

- Spine —
- READ: Lower Extremity Spine and Neuro Exam
- READ: Spinal Cord Anatomy
- READ: Thoracolumbar Fracture-Dislocation
- READ: Cervical Spine Trauma Evaluation
- READ: Low Back Pain
- READ: Cauda Equina Syndrome
  ▪ [https://www.orthobullets.com/spine/2065/cauda-equina-syndrome](https://www.orthobullets.com/spine/2065/cauda-equina-syndrome)
- READ: Lumbar Disc Herniation
  ▪ [https://www.orthobullets.com/spine/2035/lumbar-disc-herniation](https://www.orthobullets.com/spine/2035/lumbar-disc-herniation)

- READ: Cervical Myelopathy
  ▪ [https://www.orthobullets.com/spine/2031/cervical-myelopathy](https://www.orthobullets.com/spine/2031/cervical-myelopathy)

- READ: Cervical Radiculopathy

- READ: Lumbar Spinal Stenosis
  ▪ [https://www.orthobullets.com/spine/2037/lumbar-spinal-stenosis](https://www.orthobullets.com/spine/2037/lumbar-spinal-stenosis)

- READ: Adult Pyogenic Vertebral Osteomyelitis

- **Arthroplasty**

  - READ: Arthroplasty
    ▪ Virtual Curriculum Orthopaedic Handbook (Pages 44-48)

- **Sports**

  - READ: Sports Medicine
    ▪ Virtual Curriculum Orthopaedic Handbook (Pages 49-60)

- **Paediatric Orthopaedics**

  - READ: Paediatrics
    ▪ Virtual Curriculum Orthopaedic Handbook (Pages 39-43)

  - READ: Elbow Fractures in Children

  - READ: More Reading Resources
    ▪ [https://www.orthobullets.com/topic/dashboard?id=4&specialty=4&expandLeftMenu=true](https://www.orthobullets.com/topic/dashboard?id=4&specialty=4&expandLeftMenu=true)

  - READ: Pediatric Orthopaedic Surgery (Chapter 10)

  - READ: Pediatric Orthopaedic Society of North America Study Guide – You will find short summaries on a variety of topics including those outlined in the Handbook
Optional Content:

Bonus Content:
Otolaryngology – Head & Neck Surgery

Required Resources:

1. Learn ENT App:  http://learnent.ca/login
2. American Academy of Otolaryngology–Head & Neck Surgery  
   http://entnet.org
4. YouTube Videos

Contact for Questions:

Faculty Instructor:  Dr. Kathryn Roth

Email Address:  Kathryn.Roth@sjhc.london.on.ca

Welcome to OTO-HNS clerkship on-line. This specialty deals with both the medical and the surgical aspects of disease in the Head & Neck region. It is a complex area of anatomy, and an interesting blend of Pediatrics, Primary Care, Geriatrics and Surgery – all rolled into one great specialty. From a surgical perspective, otolaryngologists are skilled in microsurgery (as with Neuro-otology or microvascular anastomosis for free flaps), facial plastic surgery, endoscopic skills for both diagnosis and treatment, and all of this in miniature version too (Pediatric OTO-HNS!).

The materials included have been vetted and endorsed by the Canadian Society of Otolaryngology – Head & Neck Surgery or the American Academy of Otolaryngology – Head & Neck Surgery. These materials are free, open access, and readily available on-line.

- LearnENT App –
If you only do one thing on this list, make it the LearnENT app! Sign-up as a learner and you will be emailed your account access verification or respond to the invite from Dr. Roth. You will have a basic approach to Otolaryngology in your pocket at all times, and can refer back to these materials as needed. This is fun and up-to-date!

This App will give you access to Virtual Clinics with case studies and diagnostic approaches to common problems in Ear, Nose, Throat specialty. (see below for list of recommended Virtual Clinic modules)

Free Download to your phone from the App Store or sign-up on your computer:  http://learnent.ca/login.
** In the Learn ENT app under Reference Material → Fundamentals: You will find relevant Anatomy, History, and Physical Exam findings (including videos of each component of the Head & Neck exam).

You can create notes within the app, and create electronic flashcards if this is one of your study techniques.

**Mandatory Content:**

- **Physical Examination** –


- **WATCH:** AAO-HNSF The ENT Exam Episode 1: The Ear Exam (9 mins)
  - [https://www.youtube.com/watch?v=2js72BYjZAw](https://www.youtube.com/watch?v=2js72BYjZAw)

- **WATCH:** AAO-HNSF The ENT Exam Episode 2: The Oral Cavity & Neck Exam (10 mins)
  - [https://www.youtube.com/watch?v=u6Kx8J-9yek](https://www.youtube.com/watch?v=u6Kx8J-9yek); Always use a separate headlight and try to use 2 tongue depressors, that will improve your view of the oropharynx and lateral aspect of the tongue. Never forget that palpation of the neck bilaterally is a part of a proper Thyroid exam too.

- **WATCH:** AAO-HNSF The ENT Exam Episode 3: The Face & Nose Exam (12 mins)
  - [https://www.youtube.com/watch?v=oNBrUpKAd_U](https://www.youtube.com/watch?v=oNBrUpKAd_U)

- **WATCH:** AAO-HNSF The ENT Exam Episode 4: The Nasopharynx & The Larynx Exam (5.5 mins)
  - [https://www.youtube.com/watch?v=Q6Uz1qYwGl4](https://www.youtube.com/watch?v=Q6Uz1qYwGl4); Anatomy is viewed via the Nasopharyngoscope; patient is seated and facing the examiner. Bottom of screen is Anterior, left on the screen is the Right Vocal Cord.

**Challenge:** Review the intrinsic and extrinsic muscles of the larynx, their muscle movements, and innervation. Be clear about what anatomical boundaries constitute the Supraglottis, Glottis, Subglottis of the Larynx.
Additional Viewing for Further Understanding (all available on YouTube)

- **WATCH:** Vocal Cord Anatomy in 2 minutes  
  ▪  [https://www.youtube.com/watch?v=PGx0-ljYhkl](https://www.youtube.com/watch?v=PGx0-ljYhkl): Normal Vocal Cord/Laryngeal Anatomy (Quick Medic, published 2017, propofology.com; Images from: [www.voicedoctor.net](http://www.voicedoctor.net))

Anatomy is viewed from the perspective of a supine patient (as when a patient is lying down for intubation or laryngoscopy in the OR). Presents clear labelling of the important laryngeal structures.

- **WATCH:** Examination of the Larynx & Pharynx; From the New England Journal of Medicine, Clinical Medicine series, published 2014, (duration 11 mins)  
  ▪  [https://www.youtube.com/watch?v=2ZDC4nQNjRs](https://www.youtube.com/watch?v=2ZDC4nQNjRs)

Reviews indications for nasopharyngoscopy. Shows indirect laryngoscopy with a warmed dental mirror and headlight (this is done rarely now in clinic). Shows excellent views of Flexible Nasopharyngoscopy and includes stroboscopy to slow down and better visualize the vocal cord (also called vocal folds) wavelike movement via the column of air pushed up from the lungs and lower airway. Labelled anatomy and additional maneuvers for obtaining better views of the hypopharynx (also called piriform sinus) while scoping.

- **WATCH:** Thyroid Status Examination – OSCE guide; Geeky Medics, published 2015, (duration 6.5 mins)  
  ▪  [https://www.youtube.com/watch?v=ziaYBkgEZNu](https://www.youtube.com/watch?v=ziaYBkgEZNu)

Goes into a bit more detail with the Thyroid Gland examination, including clinical ways to examine for signs of hyper or hypothyroidism, in addition to palpation of the Thyroid for nodules.

**Challenge:** Review the underlying physiologic mechanisms of hyperthyroidism by reviewing the TSH feedback loop.

- **Review of Primary Care Otolaryngology –**

  Go to:  [https://www.entnet.org/](https://www.entnet.org/)

- **READ:** AAO Position Statement: Tracheostomy Recommendations During Covid-19 Pandemic
This is a timely reading and will help you understand the risk of aerosol generating procedures during the coronavirus outbreak. For additional resources and guidelines pertaining to Otolaryngology management during Covid in Canada see:

- **READ:** Intro to Clinical Rotation and Physical Exam (This is common advice for preparation and rounds (Chapter 1)

- **READ:** Presenting on Rounds (useful suggestions that can be used beyond OTO-HNS) (Chapter 2)

- **READ:** ENT Emergencies (Chapter 3)

- **READ:** Rhinology, Nasal Obstruction, and Sinusitis Chapter 8

### Optional Content:

**Recommended Readings from Primary Care Otolaryngology Handbook (ebook):**

- **READ:** Chapter 6 – Dizziness (and includes particle repositioning manoeuver)
  - https://user-vvhbxcd.cld.bz/AAO-HNSF-Primary-Care-Otolaryngology-Handbook

- **READ:** Chapter 14 – Thyroid Cancer
  - https://user-vvhbxcd.cld.bz/AAO-HNSF-Primary-Care-Otolaryngology-Handbook

- **READ:** Chapter 15 – Head & Neck Cancer
• **https://user-vvhbxcd.cld.bz/AAO-HNSF-Primary-Care-Otolaryngology-Handbook**

• **From the Learn ENT app**, the following **Virtual Clinic modules** will give you a breadth of the specialty (and avoid overlapping with the other material from the Primary Care in Otolaryngology manual discussed previously):

*Please note that both Dr. Butter and Dr. Roth are able to monitor your usage of the app and completion of the modules.*

**Head & Neck Surgery:**  Salivary Gland Mass  
Approach to Neck Masses  
Consider also: Facial Nerve Paralysis

**Laryngology:**  Hoarseness  
Upper Airway Obstruction

**Otology:**  Acute Otitis Media

**Pediatric Otolaryngology:** Laryngeal Foreign Body  
Pediatric Respiratory Distress  
Consider also: Tonsillitis

**Rhinology:**  Epistaxis  
Consider also: Acute Complicated Sinusitis

*Test yourself with **Question Bank Sub Specialty**, you can submit your answers and receive feedback.*

**Bonus Content:** *Test yourself with Question Bank Sub Specialty, you can submit your answers and receive feedback.*
Pediatric Otolaryngology – Head & Neck

Mandatory Content:

- READ: Pediatric Otolaryngology (Chapter 17)
  ▪ [https://user-vvbxcd.cld.bz/AAO-HNSF-Primary-Care-Otolaryngology-Handbook](https://user-vvbxcd.cld.bz/AAO-HNSF-Primary-Care-Otolaryngology-Handbook)

- Congenital Lesions of the Head and Neck -
  Children can have congenital or acquired lesions of the head and neck. The chapter below examines all of this. We recommend reading about lesions of embryonic origin ie. brachial cleft anomalies. The short podcast provides a practical approach to common congenital neck masses in children.

  - READ: Head and Neck Lesions
  
  - LISTEN: Congenital Neck Masses
  
  - WATCH: Sistrunk Procedure
    ▪ [https://www.youtube.com/watch?v=0oxhRpSq850](https://www.youtube.com/watch?v=0oxhRpSq850)

- Obstructive Sleep Apnea in Children -
  The most common reason that children usually undergo tonsillectomy and adenoidectomy has changed. Where once children frequently had this procedure for recurrent tonsillitis, it is now much more common for sleep-disordered breathing (SDB) or obstructive sleep apnea (OSA) to be the primary indication. OSA in children can be similar to OSA in adults, but there are very important differences.

  It is useful to learn about criteria for tonsillectomy in the case of recurrent tonsillitis, and this is reviewed in the podcast below as well.

  - READ: Indications for Adenotonsillectomy
  
  - LISTEN: Tonsillectomy
  
  - WATCH: Tonsillectomy and adenoidectomy using electrocautery Technique
    ▪ [https://www.youtube.com/watch?v=IFYGidWMq3E](https://www.youtube.com/watch?v=IFYGidWMq3E)
- Acute Otitis Media and Otitis Media With Effusion (Otology/Pediatric Otolaryngology) -

Acute otitis media (AOM) is what is usually meant when someone says they have an “ear infection”. AOM indicates there is fluid in the middle ear space and acute signs of infection (fever, pain). There are guidelines that indicate which children may benefit from antibiotic therapy for AOM. Contrast this to Otitis Media with Effusion (OME), which is a related but different entity, where there is non-infected fluid in the middle ear space. Both AOM and OME may lead to conductive hearing loss, but OME will never benefit from antibiotic therapy. Over 90% of OME will resolve spontaneously within 3 months. If it does not, or patients meet threshold number of ear infections, myringotomy and tympanostomy tube insertion may be recommended.

- **READ:** Otitis Media  
- **LISTEN:** Acute Otitis Media  
- **WATCH:** Ear Tubes (Placement, Removal, Replacement)  
  ▪ [https://www.youtube.com/watch?v=TohJhfHTp3s](https://www.youtube.com/watch?v=TohJhfHTp3s)

**Optional Content:**

**Bonus Content:**
Pathology

Required Resources:

1. Pathology Case Modules (Located in Elentra)

Contact for Questions:

Faculty Instructor: Dr. Mariamma Joseph

Email Address: Mariamma.Joseph@lhsc.on.ca

Mandatory Content:

Pathology Case Conference: This is a self-directed learning activity included in the Pathology Clerkship. Our faculty members have developed six case based self-directed teaching modules specifically on oncologic pathology integrating clinical and pathology aspects of common cancers. This learning activity would enhance your skills in understanding of various segments of a surgical pathology report including frozen section, gross pathology, microscopic description, ancillary tests, synoptic report and diagnosis.

By the end of these sessions, students will:
  a. Study a variety of commonly encountered cancer cases in a CPC format and learn how to read a pathology report.
  b. Develop an appropriate management strategy based on pTNM staging and clinical situation.

- READ: Pathology Case Modules in Elentra
  Case Module 1: Patient with Anemia
  Case Module 2: Abnormal Breast Mass
  Case Module 3: Abnormal Digital Rectal Examination (DRE)
  Case Module 4: Patient with Atypical Pigmented Skin Lesion
  Case Module 5: Patient with a Neck Mass
  WATCH: https://youtu.be/9agKhpsL68Q

Case Module 6: Patient with Hemoptysis

Optional Content:
Bonus Content:
Plastic and Reconstructive Surgery

Required Resources:

2. PowerPoint Presentations by Drs. T. DeLyzer, A. Grant, and B. Richards (Elentra)
3. McMaster University Education Tool
4. YouTube Videos

Contact for Questions:

Faculty Instructor: Dr. Aaron Grant
Email Address: Aaron.Grant@lhsc.on.ca

Mandatory Content:

- Burns and Pressure Ulcers -

  *Burns*
  - **READ:** Burns PowerPoint Presentation (Dr. T. DeLyzer)
  - **READ:** Acute Flame Burns (McMaster University)
  - **WATCH:** Burns 101 (University of Washington Regional Burns Centre)
    - https://www.youtube.com/watch?v=vVFQNJhChNU

  *Ulcers*
  - **READ:** Cutaneous Ulcers (McMaster University)
  - **READ:** Pressure Ulcers Resource
    - https://www.physio-pedia.com/Pressure_Ulcers
  - **WATCH:** Pressure Sores
    - https://www.physio-pedia.com/Pressure_Ulcers
- Skin Cancer –
  - READ: Skin Benign and Malignant Lesions Presentation (Dr. A. Grant)
  - READ: Skin Lesions (McMaster University)
  - WATCH: Punch Biopsy Technique (John Hopkins)

- Hand and Facial Fractures -
  **Hand**
  - READ: Hand Fracture Presentation (Dr. B. Richards)
  - READ: Describing X-rays and Splinting (McMaster University)
  - WATCH: Hand Examination OSCE Guide
    ▪ [https://www.youtube.com/watch?v=sypBEG9F6uU](https://www.youtube.com/watch?v=sypBEG9F6uU)

  **Facial Fractures**
  - READ: Facial Trauma (McMaster University)

**Optional Content:**

**Bonus Content:**
Thoracic Surgery

Required Resources:

1. Canadian Thoracic Society (CTS):
2. https://www.ctsnet.org/videos
3. YouTube Videos

Contact for Questions:

Faculty Instructor: Dr. Mehdi Qiabi
Email Address: Mehdi.Qiabi@lhsc.on.ca

Mandatory Content:

- Lung and Mediastinum –

  - REVIEW: Lungs and Mediastinum Anatomy
    ▪ Posterior and superior mediastinum (12 min): https://youtu.be/2P0IlBe2xR4
    ▪ Lungs and airways (7 min): https://youtu.be/ewtPkB4dwDk
    ▪ Mechanics of breathing (6 min): https://youtu.be/u4W3s2USw9w
    ▪ Pleural membranes (5 min): https://youtu.be/Ceya8KXu9xg
    ▪ In vivo anatomy (3 min): https://youtu.be/Unl4WHhOYEU

  - READ: Work-up of Lung Nodules/Masses (Dr. M. Qiabi)
    ▪ https://www.dropbox.com/preview/Public/Clerks%20Teaching/Workup%20of%20Lung%20Nodules%20%20clerks%2012%20PDF.pdf?role=personal
    Including focused H & P, review of system, and what to order

  - WATCH: VATS Right Lower Lobectomy for Lung Cancer (Dr. M. Qiabi, 17 min)
    ▪ https://youtu.be/IYDNj6fL2nk

  - WATCH: Cervical Mediastinoscopy (Dr. M. Qiabi, 9 min)
    ▪ https://youtu.be/hNVAUafHXbA
- WATCH: Bullectomy and Talc Poudrage (Dr. M. Qiabi, 4 min)
  ▪  https://youtu.be/OAfc.IAMI9Y

- Esophagus and Stomach –

  - REVIEW: Anatomy of Esophagus and Stomach
    ▪  The Oesophagus (Esophagus) – Clinical anatomy (15 min): https://youtu.be/BZ0JBiPeek8
    ▪  Oesophagus & Stomach – Abdomen | Lecturio (24 min): https://youtu.be/yoS3C3QpA5w
  - WATCH: Work-up of Esophagogastric Tumors (Dr. M. Qiabi, 8 min, EGD, Staging laparoscopy and Feeding J-tube insertion
    ▪  https://youtu.be/v_alojECn7k
      Including focused H & P, review of system, and what to order
  - WATCH: Diagnosis and Management of GERD and Hiatal hernias (Dr. M. Qiabi, 35 min)
    ▪  https://youtu.be/hCqVPTxJ_U8
  - WATCH: Diagnosis and Management of Achalasia (Dr. M. Qiabi, 8 min)
    ▪  https://youtu.be/e5cGyYx5-po

Optional Content:

1. Minimally Invasive Esophagectomy (Dr. K. Irshad, 18 min, https://youtu.be/1cBnwflJoac)
2. Right superior segmentectomy by VATS (Dr. M. Qiabi, 27 min, https://youtu.be/36qXCeQYZEM)

Bonus Content:
Urology

Required Resources:

6. Western University Clerkship Handbook with Urology Learning Objectives, including Common Conditions
7. Urological Presentations in Elentra

Contact for Questions:

Faculty Instructor: Dr. Nicholas Power
Email Address: Nicholas.Power@lhsc.on.ca

Mandatory Content:

-Prostate –

- REVIEW: Anatomy of Prostate

Benign Prostatic Hyperplasia (BPH)

- READ: AUA Website: Review the BPH learning objectives and content as well as Case Study 1 and 2
- LISTEN: CUA Website: Listen to the BPH podcast

Prostate Cancer

- READ: AUA Website: Review the Prostate Cancer/PSA learning objectives and contact as well as Case Study 1 and 2
- LISTEN: CUA Website: Listen to the Prostate Cancer Podcast
- **Infections and Incontinence** –

**Urinary Tract Infections (UTI) - Pediatric and Adult**
- READ: AUA Website: Review the UTI learning objectives and content for both Pediatric and Adult UTI as well as the Case Study under Adult, UTI
- LISTEN: CUA Website: Listen to the UTI Podcast and watch the video on how to properly insert a Foley catheter under sterile conditions

**Urinary Incontinence**
- READ: AUA Website: Review the Prostate Disorders and Voiding Dysfunction (under Urologic Emergencies) learning objectives and content as well as the Case Study
- LISTEN: CUA Website: Listen to the Urinary Incontinence Podcast
- READ: Review the Prostate Disorders and Voiding Dysfunction Presentation in Elentra under Surgery Clerkship – Teaching Materials

- **Stones** -

**Stone Disease**
- READ: AUA Website: Review the Kidney Stone learning objectives and content as well as Case Study
- LISTEN: CUA Website: Listen to the Stones Podcast under Urinary Calculi
- READ: Review the Urinary Stones Disease Presentation in Elentra under Surgery Clerkship – Teaching Materials

- **Penis and Testicles** -

**Erectile Dysfunction**
- READ: AUA Website: Review the Erectile Dysfunction learning objectives and content as well as Case Study 1 and 2
- LISTEN: CUA Website: Listen to the Erectile Dysfunction Podcast

**Testicular Torsion**
- READ: AUA Website: Review the Acute Scrotum learning objectives and content as well as the Case Study
- LISTEN: CUA Website: Listen to the Scrotal Conditions Podcast
- WATCH: Scrotal Examination by Dr. Trevor Schuler
- READ: Review the Testicular Torsion Presentation in Elentra under Surgery Clerkship – Teaching Materials
- Urological Oncology and UroTrauma/Emergencies –

- REVIEW: The anatomy of the kidney, ureters, bladder, and testicle for the three types of cancer (Renal, Bladder, and Testicular Carcinoma)
- READ: Review Urological Oncology Presentation in Elentra
- READ: AUA Website: Review the Hematuria and Urologic Emergencies learning objectives and content, as well as the Case Studies
- LISTEN: CUA Website: Hematuria and Genitourinary Trauma podcast

Optional Content:

Bonus Content:
Pediatric Urology

Required Resources:

1. Schulich VOD Platform: https://vod.schulich.uwo.ca/
3. You Tube: http://www.youtube.com

Contact for Questions:

Faculty Instructor: Dr. Peter Wang

Email Address: Peter.Wang@lhsc.on.ca

Mandatory Content:

- Genitourinary Anatomy –

The objectives of this module are the following:
  • Describe bladder anatomy
  • Describe scrotal and testicular anatomy
  • Describe penile anatomy

  - READ: Anatomy of the Genitourinary Tract (Chapter 1) - Review of Anatomy for Bladder, Testicle, Scrotum, and Penis
    • https://accesssurgery.mhmedical.com/content.aspx?sectionid=241658590&bookid=2840&Resultclick=2#1171177394

- Acute Scrotum in Children –

The objectives of this module are the following:
  • Describe an approach to an acute scrotum in the pediatric population.
  • Describe the surgical approach to testicular torsion

  - WATCH: Review video for an approach to a pediatric patient presenting with an acute scrotum
    • https://vod.schulich.uwo.ca/media/GU_PEDSUROL_AS2020_2/1_g238b1wh
- **READ:** The Acute Scrotum (Chapter 61) - for a surgical approach to testicular torsion

- **The Foreskin –**

The objectives of this module are the following:
- Describe an approach to conditions of the foreskin in the pediatric population
- Describe the diagnosis and management of paraphimosis
- Describe the approach to performing a circumcision

- **WATCH:** Review video for an approach to conditions of the foreskin including physiological and pathological phimosis, balanoposthitis and paraphimosis.
  ▪ [https://vod.schulich.uwo.ca/media/GU_PEDSUROL_PHIMOSIS2020_3/1_vnc61gke](https://vod.schulich.uwo.ca/media/GU_PEDSUROL_PHIMOSIS2020_3/1_vnc61gke)

- **READ:** Circumcision (Chapter 63) - for a surgical approach, postoperative care, and potential complications to a dorsal slit, which may be required in the acute presentation of pathological phimosis leading to urinary retention; and for a circumcision (focus on the sleeve technique)

- **Undescended Testicles –**

The objectives of this module are the following:
- Describe a diagnostic approach to undescended testicles
- Describe the management of undescended testicles
- Describe the approach to performing an inguinal orchidopexy

- **WATCH:** Review video for an approach to the diagnosis and management of undescended testicles.
  ▪ [https://vod.schulich.uwo.ca/media/GU_PEDSUROL_UDT2020_1/1_3dcpza7o](https://vod.schulich.uwo.ca/media/GU_PEDSUROL_UDT2020_1/1_3dcpza7o)

- **READ:** Open Inguinal Orchidopexy and Complications (Chapter 62)
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**Surgery Clerkship Virtual Learning Curriculum**

- **WATCH:** Review video for the surgical approach to an open inguinal orchidopexy
  - [https://vod.schulich.uwo.ca/media/WANG+Open+Inguinal+Orchidopexy/1_9u7k41s7](https://vod.schulich.uwo.ca/media/WANG+Open+Inguinal+Orchidopexy/1_9u7k41s7)

**Vesicoureteral Reflux**

The objectives of this module are the following:
- Describe a diagnostic approach to vesicoureteral reflux
- Describe the management of vesicoureteral reflux
- Describe the approach to performing an intravesical and extravesical ureteral reimplantation.

- **WATCH:** Review video for an approach to the diagnosis and management of vesicoureteral reflux
  - [https://vod.schulich.uwo.ca/media/GU_PEDSUROL_VUR2020_5/1_f2gyzyv7](https://vod.schulich.uwo.ca/media/GU_PEDSUROL_VUR2020_5/1_f2gyzyv7)
- **READ:** Vesicoureteral Reflux (Chapter 66) – for a surgical approach to treat vesicoureteral reflux
- **WATCH:** Review video for an intravesical ureteral reimplantation
  - [https://youtu.be/RBO27mmWB88](https://youtu.be/RBO27mmWB88)
- **WATCH:** Review video for a robotic extravesical ureteral reimplantation
  - [https://vod.schulich.uwo.ca/media/Robotic+Extravesical+Reimplant/1_7txn0xc5](https://vod.schulich.uwo.ca/media/Robotic+Extravesical+Reimplant/1_7txn0xc5)

**Enuresis**

The objectives of this module are the following:
- Describe a diagnostic approach to enuresis
- Describe the management of enuresis

- **WATCH:** Review video for an approach to enuresis in children
  - [https://vod.schulich.uwo.ca/media/GU_PEDSUROL_ENURESIS2020_4/1_6ynd8vra](https://vod.schulich.uwo.ca/media/GU_PEDSUROL_ENURESIS2020_4/1_6ynd8vra)

**Optional Content:**

**Bonus Content:**

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Vascular Surgery

Required Resources:

1. Vascular Combat Manual Courtesy of Gore Medical (in Elentra)
2. YouTube Channel “Houston Methodist DeBakey CV Education”
3. Western University Clerkship Handbook with Vascular Surgery Learning Objectives, including Common Conditions
4. Aneurysm and Carotid Disease Presentation (in Elentra)

Contact for Questions:

Faculty Instructor: Dr. Adam Power
Email Address: Adam.Power@lhsc.on.ca

Mandatory Content:

- Introduction -
  - READ: Chapter 1: History and Physical Examination (Combat Manual)
  - READ: Chapter 2: Common Prescribed Medications
  - READ: Chapter 3: Noninvasive Imaging
  - WATCH: Lower Extremity Arterial Anatomy
    ▪  https://www.youtube.com/watch?v=SLKJZe4w0iI

- Abdominal Aortic Aneurysm -
  - WATCH: Open AAA Repair
    ▪  https://www.youtube.com/watch?v=kzBqzZ0y998
  - WATCH: Endovascular Management of AAA
    ▪  https://www.youtube.com/watch?v=377Bs_Roe3Y

- Peripheral Arterial Disease -
  - READ: Chapter 9: Peripheral Arterial Disease (Combat Manual)
  - WATCH: Femoral-Peroneal Bypass
    ▪  https://www.youtube.com/watch?v=z9T9DZB6C0g
  - WATCH: Femoral-Popliteal Bypass
    ▪  https://www.youtube.com/watch?v=7r4UE5Pi2xA
  - WATCH: Wires, Catheters, and Stents
    ▪  https://www.youtube.com/watch?v=DUwR4d-LI70
- **Amputations** –
  - **READ:** Chapter 16: Amputations (Combat Manual)
  - **WATCH:** Amputations
    - [https://www.youtube.com/watch?v=6C3MOgZNWSo](https://www.youtube.com/watch?v=6C3MOgZNWSo)

- **Compartment Syndrome** –
  - **READ:** Chapter 20: Compartment Syndrome (Combat Manual)
  - **WATCH:** Compartment Fasciotomy
    - [https://www.youtube.com/watch?v=AYlcxypkZ4w](https://www.youtube.com/watch?v=AYlcxypkZ4w)

- **Carotid Artery Occlusive Disease** –
  - **READ:** Chapter 12: Carotid Artery Occlusive Disease (Combat Manual)
  - **WATCH:** Carotid Endarterectomy (Part 1 and 2)
    - [https://www.youtube.com/watch?v=wZ8PzhwmSXQ](https://www.youtube.com/watch?v=wZ8PzhwmSXQ)
    - [https://www.youtube.com/watch?v=E_wWpRKBy4w](https://www.youtube.com/watch?v=E_wWpRKBy4w)

**Optional Content**

- **WATCH:** Thoracoabdominal Exposure for Anatomy (rarely see)
  - [https://www.youtube.com/watch?v=HEL0o7dbM_g](https://www.youtube.com/watch?v=HEL0o7dbM_g)

- **READ:** Chapter 19: Venous Disease (Combat Manual)
  - **WATCH:** Treatment of Venous Reflux
    - [https://www.youtube.com/watch?v=AwdjL2bakHI](https://www.youtube.com/watch?v=AwdjL2bakHI)

**Bonus Content:**