GENERAL SURGERY INTRODUCTION

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MD
GENERAL AND MINIMALLY INVASIVE SURGERY
MRCS

Abdominal Pain

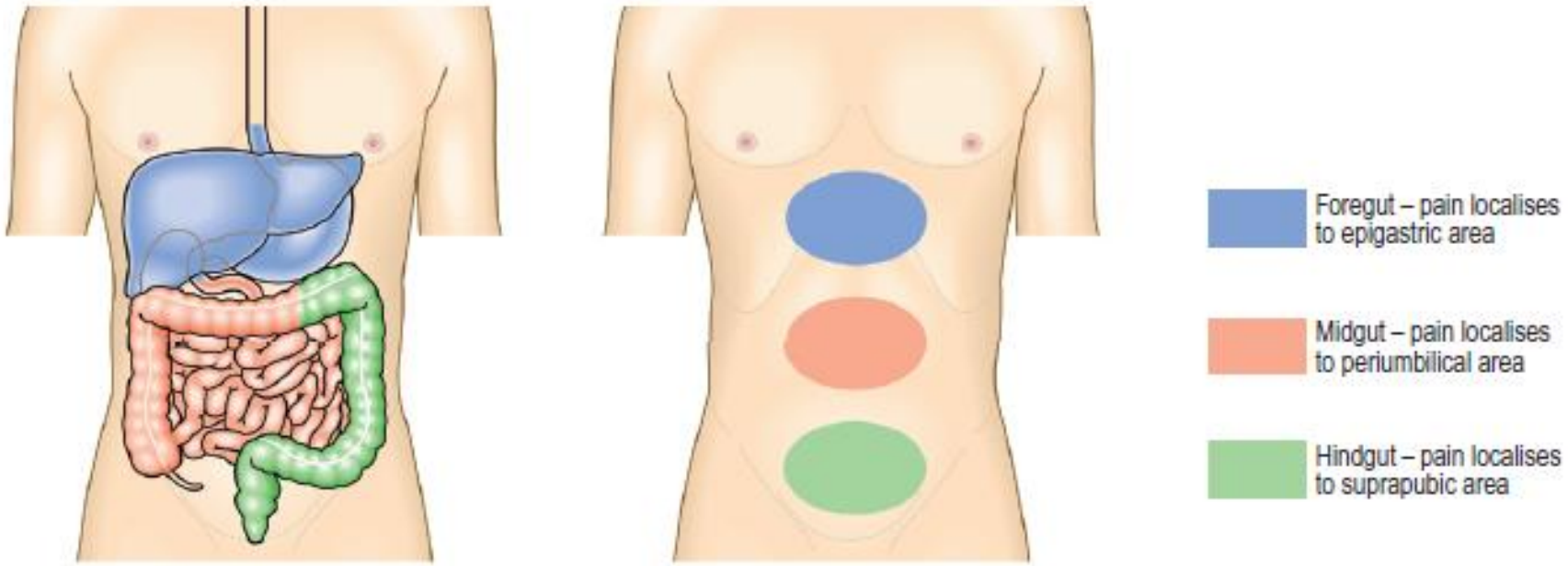


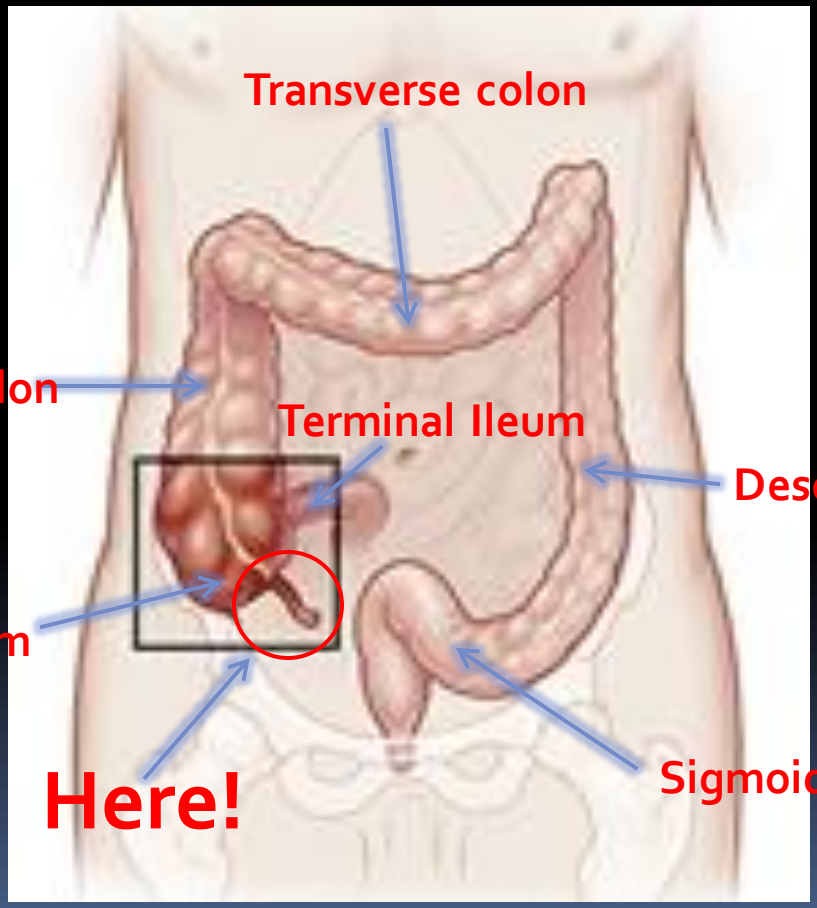
Fig. 8.5 Abdominal pain. Perception of visceral pain is localised to the epigastric, umbilical or suprapubic region, according to the embryological origin of the affected organ.

Acute Appendicitis

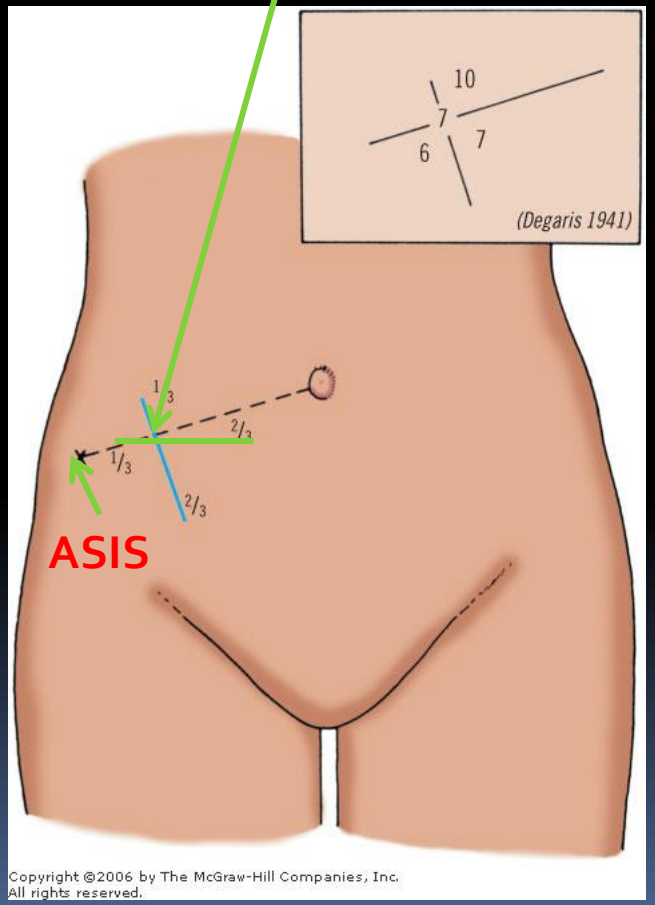
- Appendicitis is common- **7-9% lifetime risk**
- Mostly young people but can present at any age.
- Delay in diagnosis/management causes significant morbidity-
- Usually clinical diagnosis- not reliant on imaging
- Has classic presentation but often presents atypically- it is a common pitfall!

Anatomy

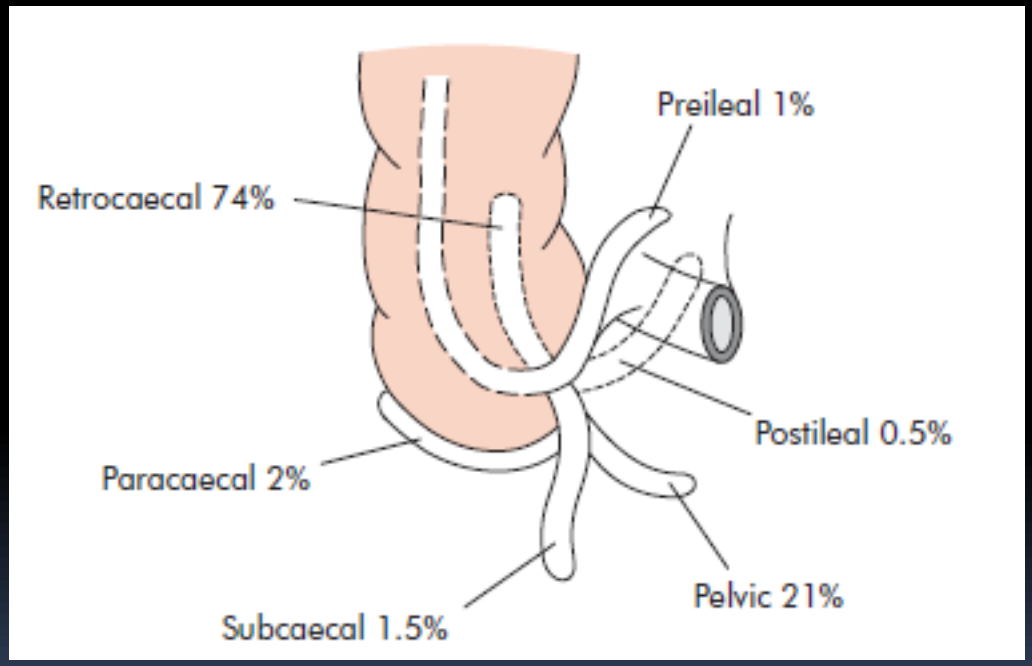
1. The Appendix is…



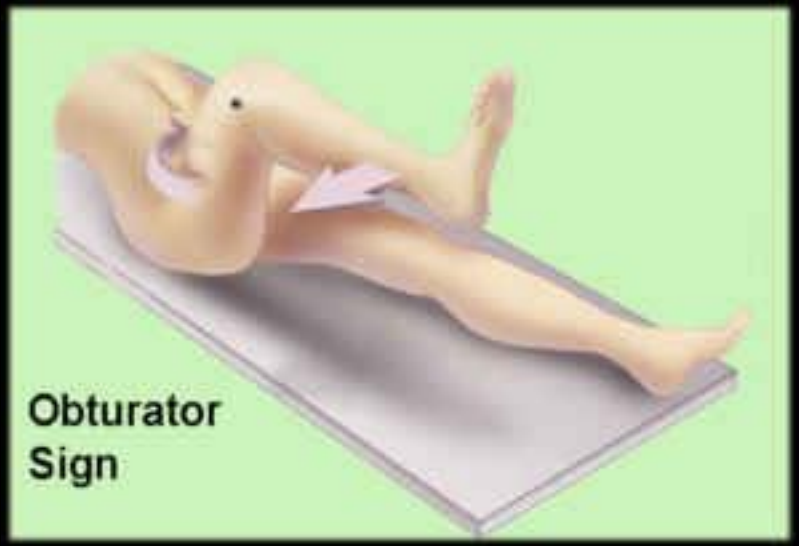
2. McBurney's Point

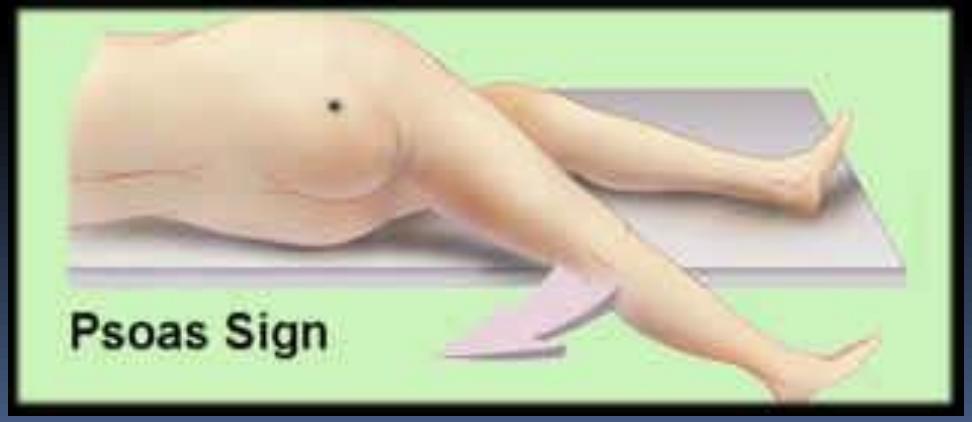


Anatomy


Preileal 1%
Retrocaecal 74%
Postileal 0.5%
Paracaecal 2%
Pelvic 21%
Subcaecal 1.5%

Symptoms


Obturator
Sign


Psoas Sign

Investigation

Preoperative Investigations		
	Routine	Full blood count
		Urinalysis
	Selective	Pregnancy test
		Urea and electrolytes
		Supine abdominal radiograph
		Ultrasound of the abdomen/pelvis
		Contrast-enhanced CT scan of the abdomen

Diagnostic Scoring

- Diagnosis is essentially clinical;
- A number of clinical and laboratory-based scoring systems have been devised to assist diagnosis.
- The most widely used is Alvarado score.

Source: *Bailey & Loves Short Practice of Surgery 25th ed*

The Alvarado (MANTRELS) Score

	Score
Symptoms	
• **M**igratory RIF pain	1
• **A**norexia	1
• **N**ausea and vomiting	1
Signs	
• **T**enderness (RIF)	2
• **R**ebound tenderness	1
• **E**levated temperature	1
Laboratory	
• **L**eucocytosis	2
• **S**hift to the left (segmented neutrophils)	1
TOTAL	10

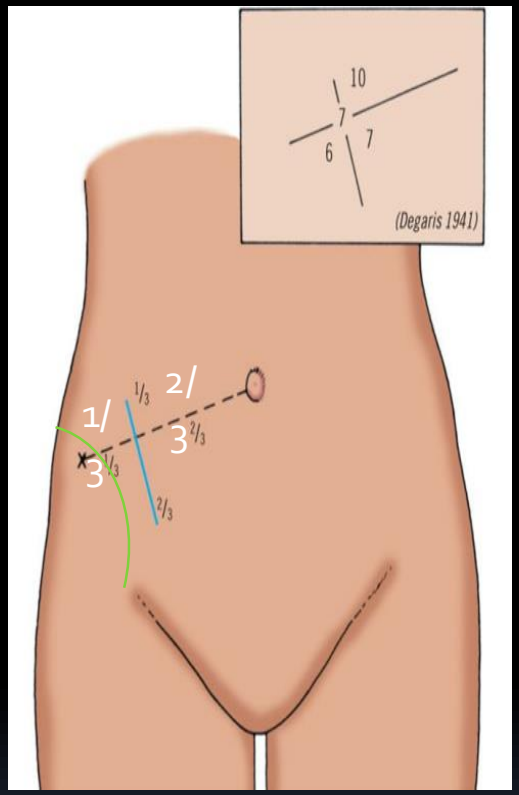
1-4: Very unlikely
5-6: Possible
7-8: Very probable
9-10: Definite

- < 5 is strongly against a diagnosis of appendicitis
- **7 or more is strongly predictive of acute appendicitis**
- In patients with an equivocal score of 5 or 6, abdominal USG or contrast-enhanced CT scan is used to further reduce the rate of negative appendicectomy

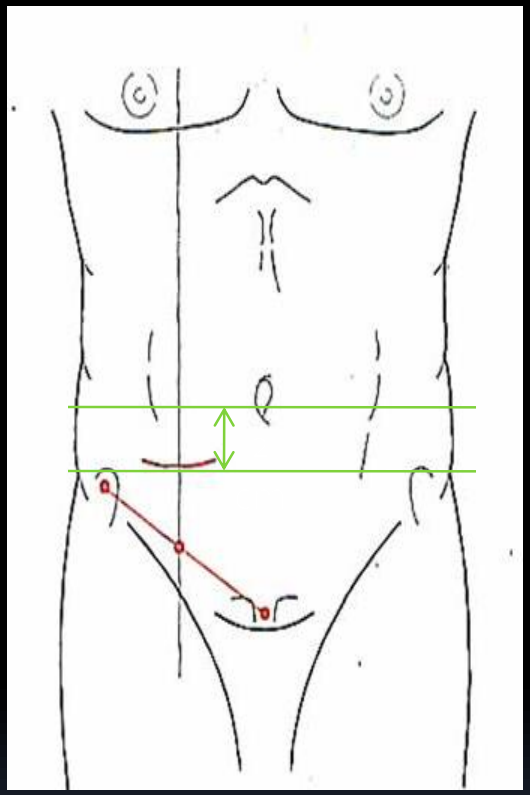
Treatment

- Intravenous fluids
- Appropriate antibiotics
- Appendicectomy

Conventional Appendicectomy



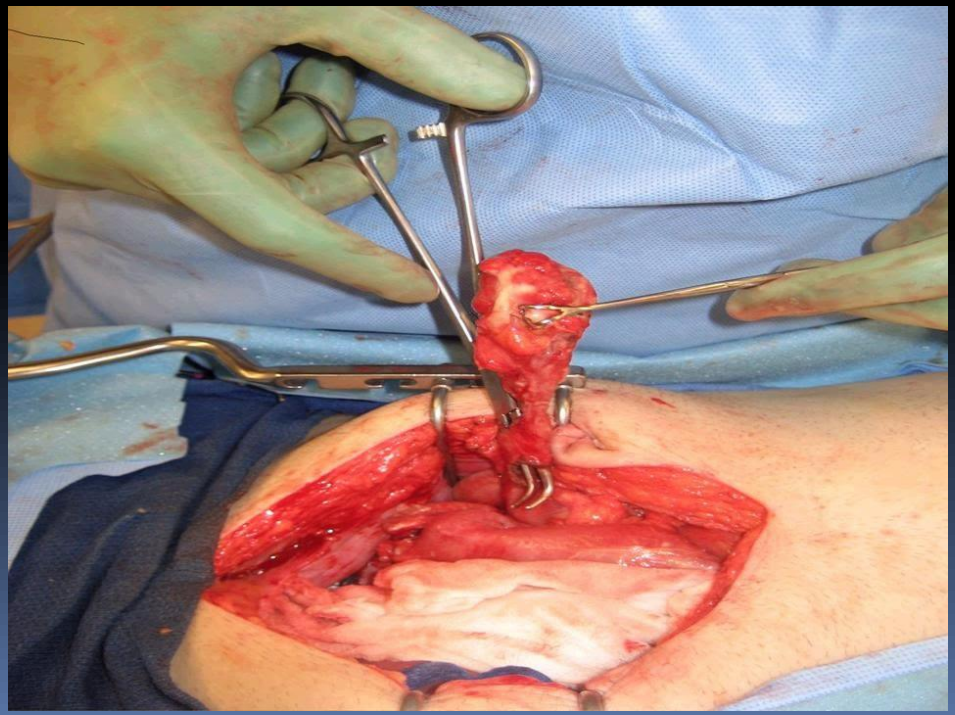
Gridiron incision : right angles to a line joining the ASIS to the umbilicus. Centred on McBurney's point



Lanz incision : 2 cm below the umbilicus centred on the mid-clavicular-midinguinal line

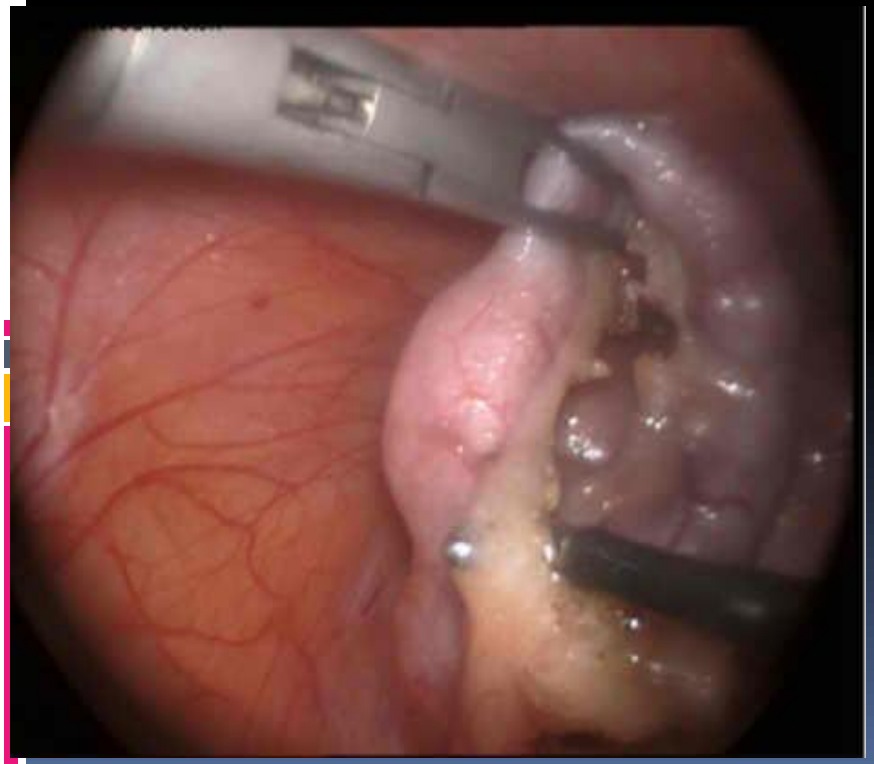
Appendicectomy - Open

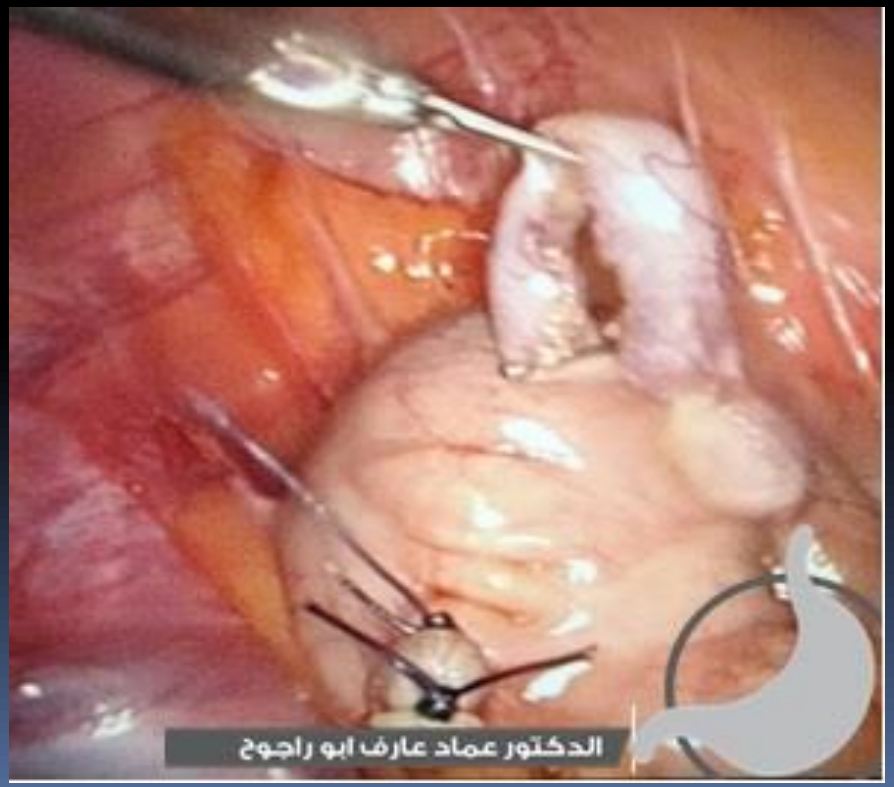
- Longer recovery, risk of hernia & adhesions, can't see pelvic structures as well



Appendicectomy - Laparoscopic

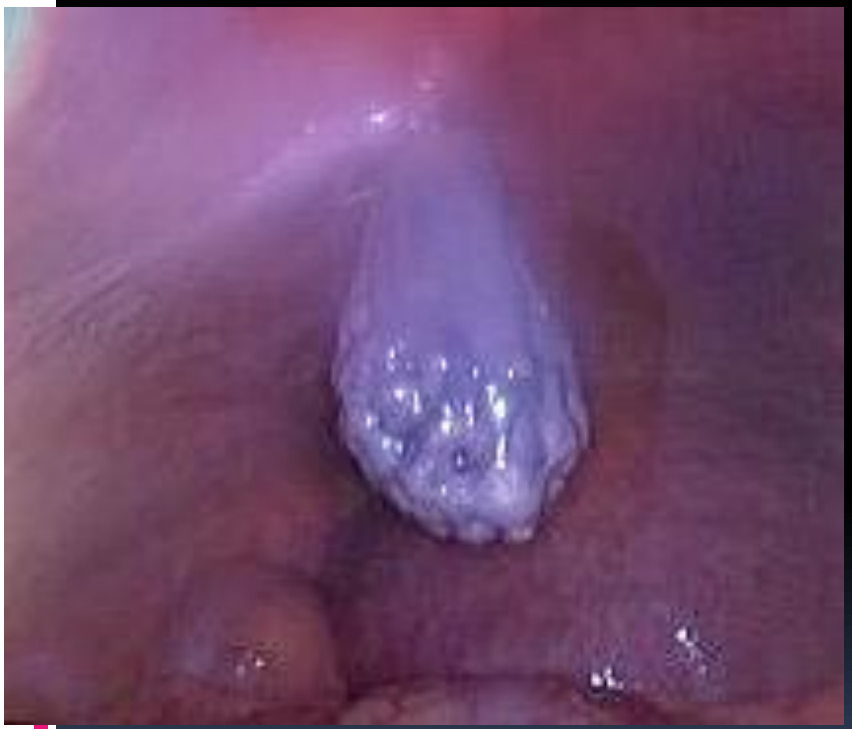
- "Keyhole" surgery
- Lower complication rate, quicker recovery

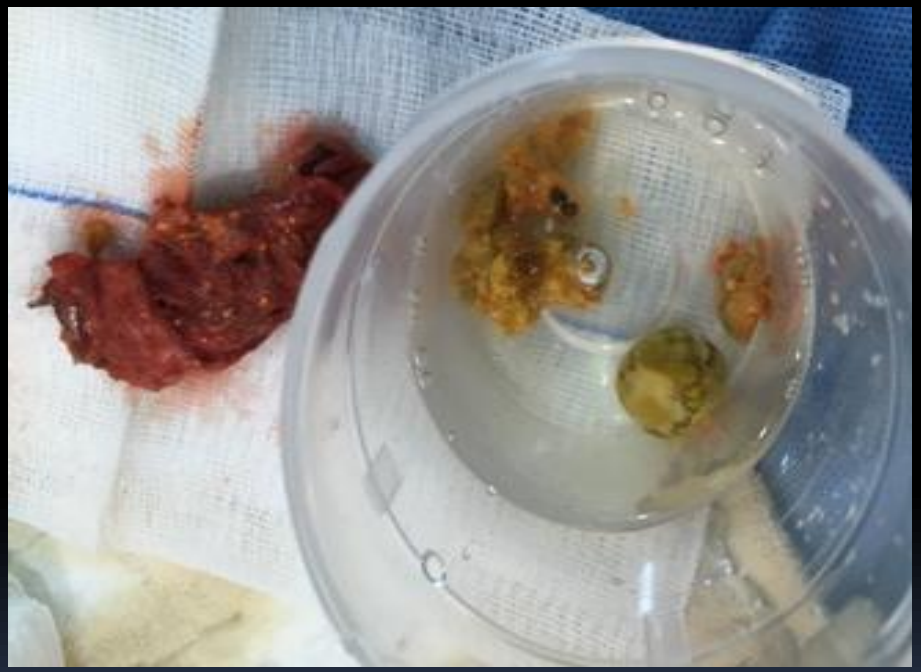




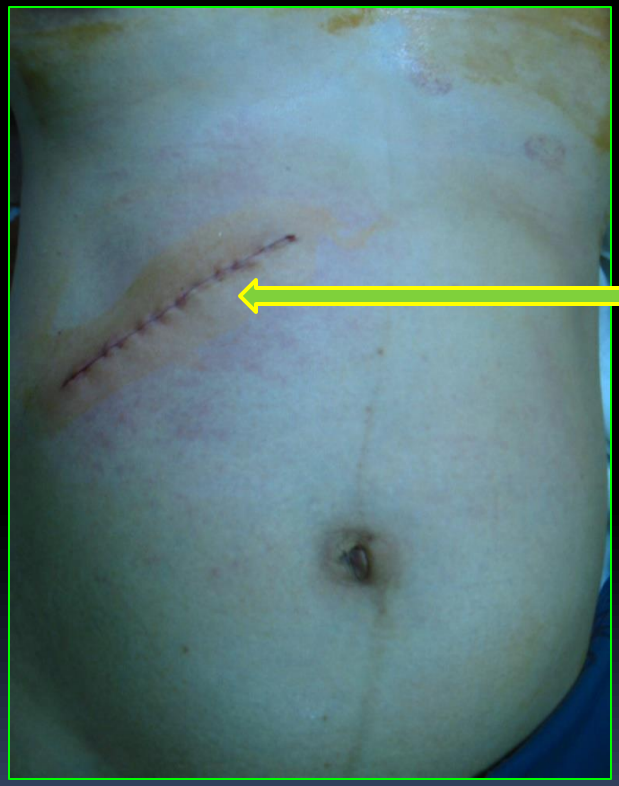

OPERATING ROOM
"Ever see gallstones like that before?"

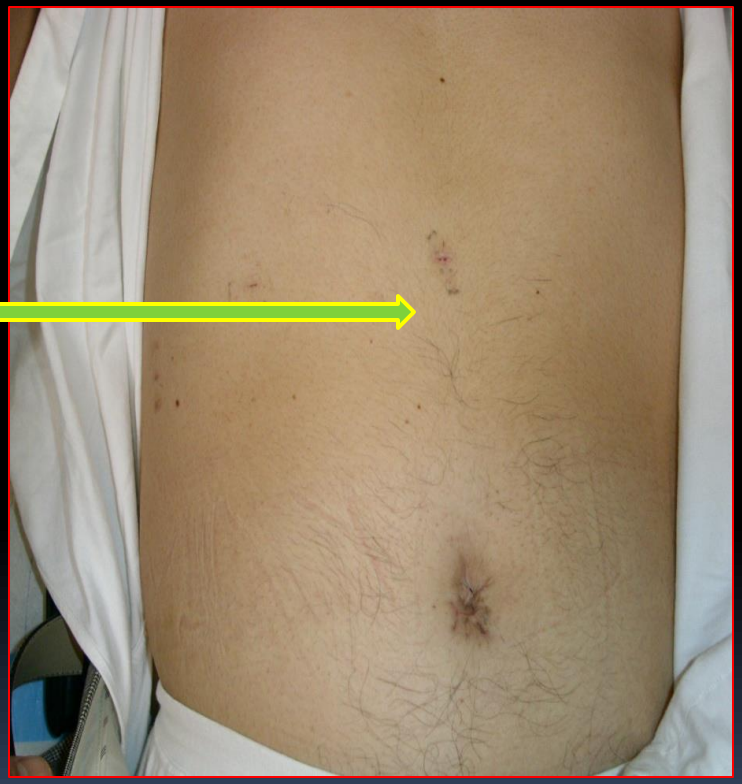
Cholelithiasis

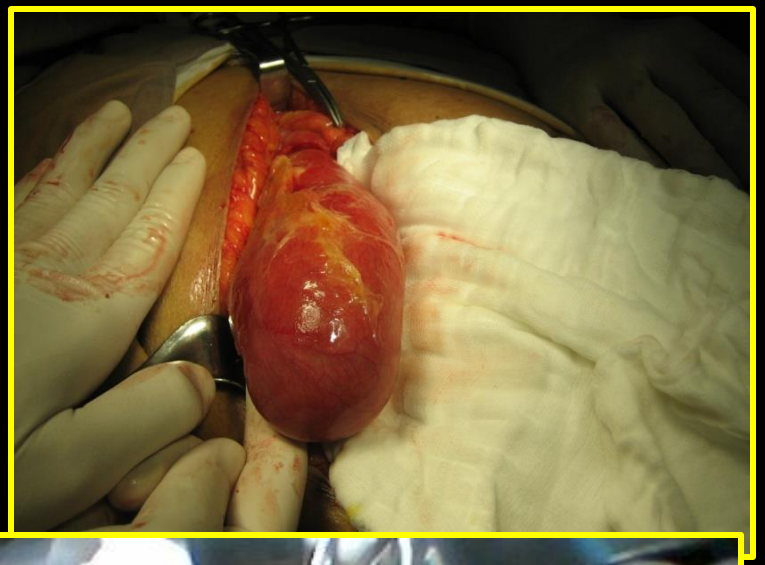


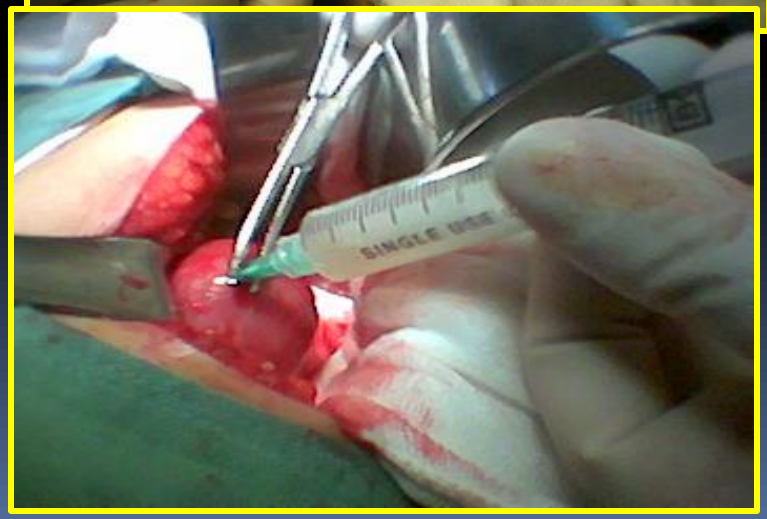


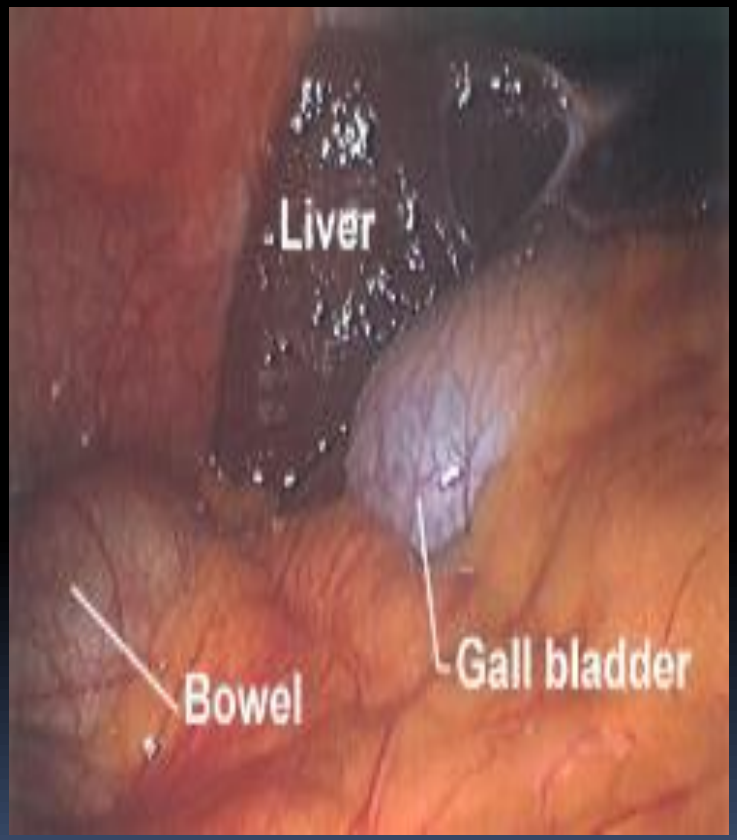
Laparoscopic vs. Open Cholecystectomy

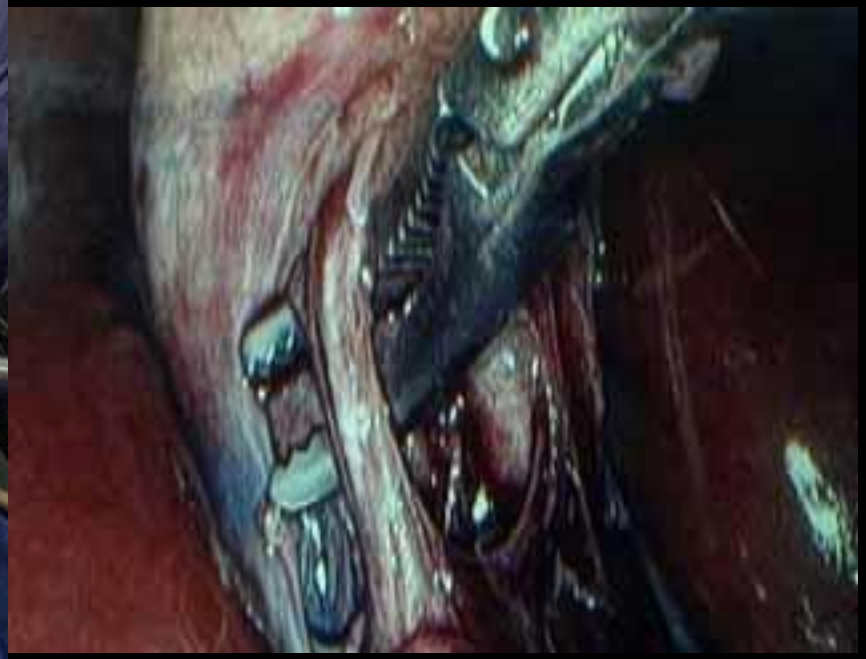


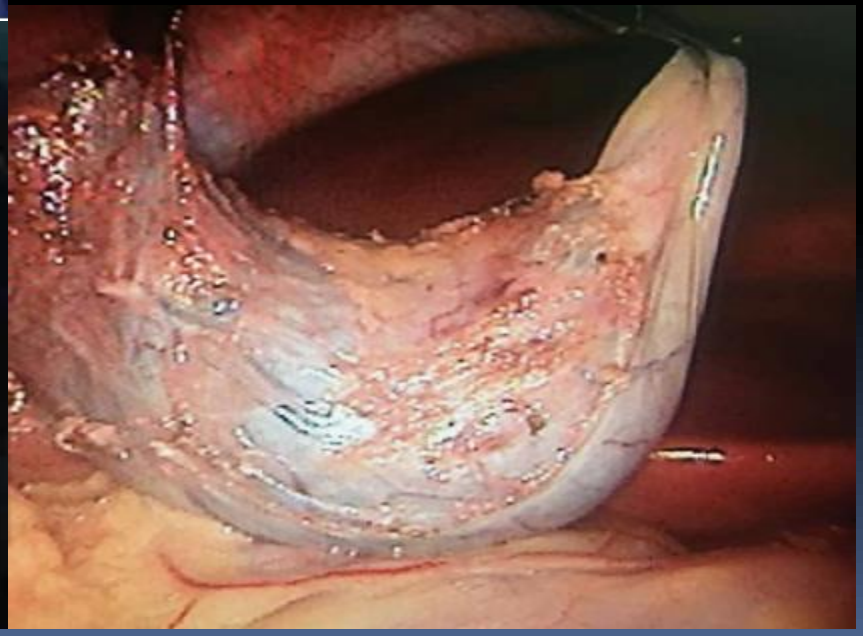







Liver
Bowel
Gall bladder





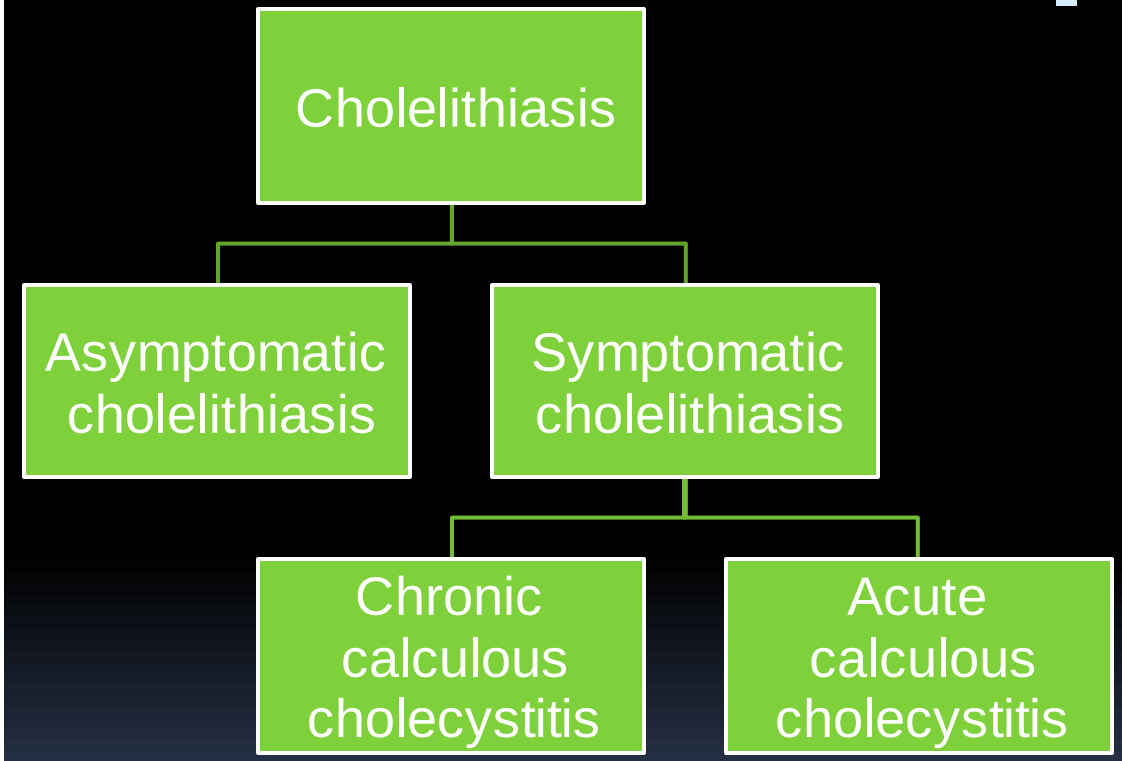
Cholelithiasis

- Formation represents failure to maintain bile components (cholesterol, Ca, bile pigments) in a solubilized state
- Majority of those with stones are asymptomatic
- 1-2% of asymptomatic individuals develop symptoms per year
- Approx 65% of asymptomatic patients remain symptom free after 20 years

Types of Gallstones

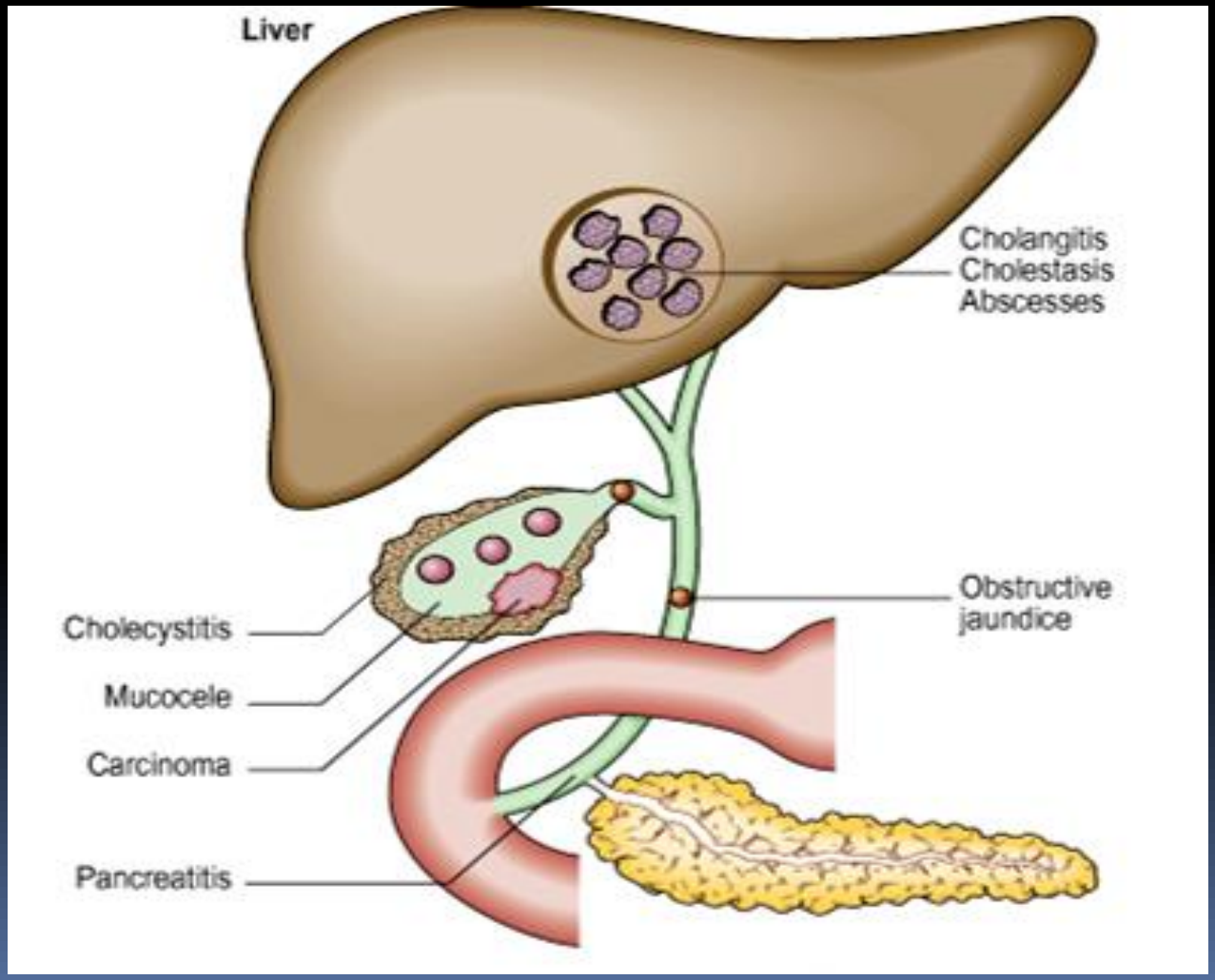
- Mixed (80%)
- Pure cholesterol (10%)
- Pigmented (10%)
  - Black stones (contain Ca bilirubinate, a/w cirrhosis and hemolysis)
  - Brown stones (a/w biliary tract infection) are more common in southeast Asia, where biliary parasites, including *Clonorchis sinensis, Opisthorchis viverrini, and Ascaris lumbricoides, are endemic.*

Spectrum of Gallstone Disease



- Symptomatic cholelithiasis can be a herald to:
  - Biliary colic
  - acute cholecystitis
  - chronic cholecystitis

Cholelithiasis



Clinical prsentations

- Asymptomatic Gallstones
- Biliary colic
- Acute Cholecystitis
- Hydrops of the Gallbladder
- Mirizzi syndrome
- Empyema of the gallbladder
- Choledocholithiasis
- Cholangitis
- Gallstone ileus
- Acalculous cholecystitis
- Oriental Cholangio-hepatitis

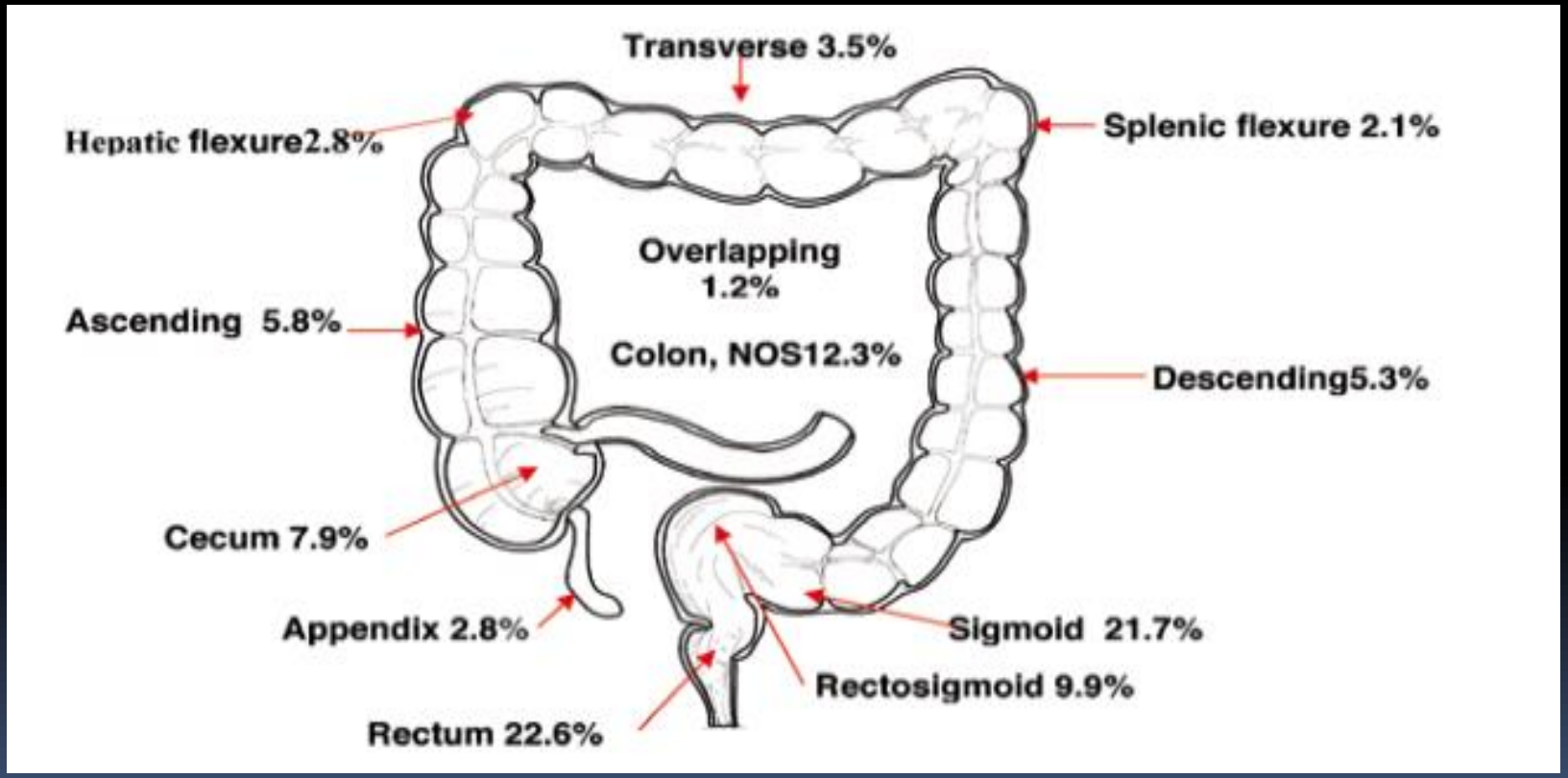
COLORECTAL CANCER

Colorectal Cancer

- Colorectal cancer (CRC) is the second most common cancer in Jordanian adults.
- Leading cancer incidence in Jordan.
- Globally 800,000 new CRCs occur each year, accounting for 10% of all incident cancers with 450,000 deaths/year

Shomaf, M. (2015)

Distribution of Colorectal cancer by topography ,Jordan - 2012



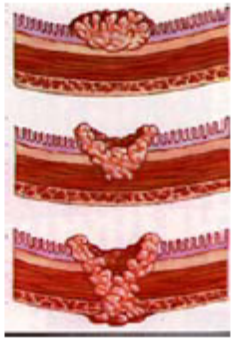
ETIOLOGY

- Environmental & dietary factors
- Male sex
- Excessive BMI
- Red meat ,animal fat, smoking and alcohol
- Protective effect of dietary fiber
- Low folate consumption
- Family history of colorectal cancer
- Personal history of colorectal cancer, ovary, endometrial, breast
- Neoplastic polyps
- IBD
- **Hereditary Conditions (FAP, HNPCC)**

Symptoms of Colorectal Cancer

- A change in bowel habits
- Bright red or dark blood in the stool
- Stools that appear narrower or thinner than usual
- Discomfort in the abdomen, including frequent gas pains, bloating, fullness, and cramps
- Unexplained weight loss, constant tiredness, or unexplained anemia (iron deficiency)

5 yr survival after curative resection of CRC



	T1N0M0	Stage I	80-95%
	T2N0M0		
	T3N0M0	Stage II	70-75%
Node +	TxN1M0	Stage III	30-65%
Distant Mets	TxNxM1	Stage IV	<5%

Colon Cancer Preventions

- Colon cancer can be prevented and cured through early detection
- Changing your eating habits(more fiber and less fats)
- Don't smoke and drink less

SCREENING GUIDELINES

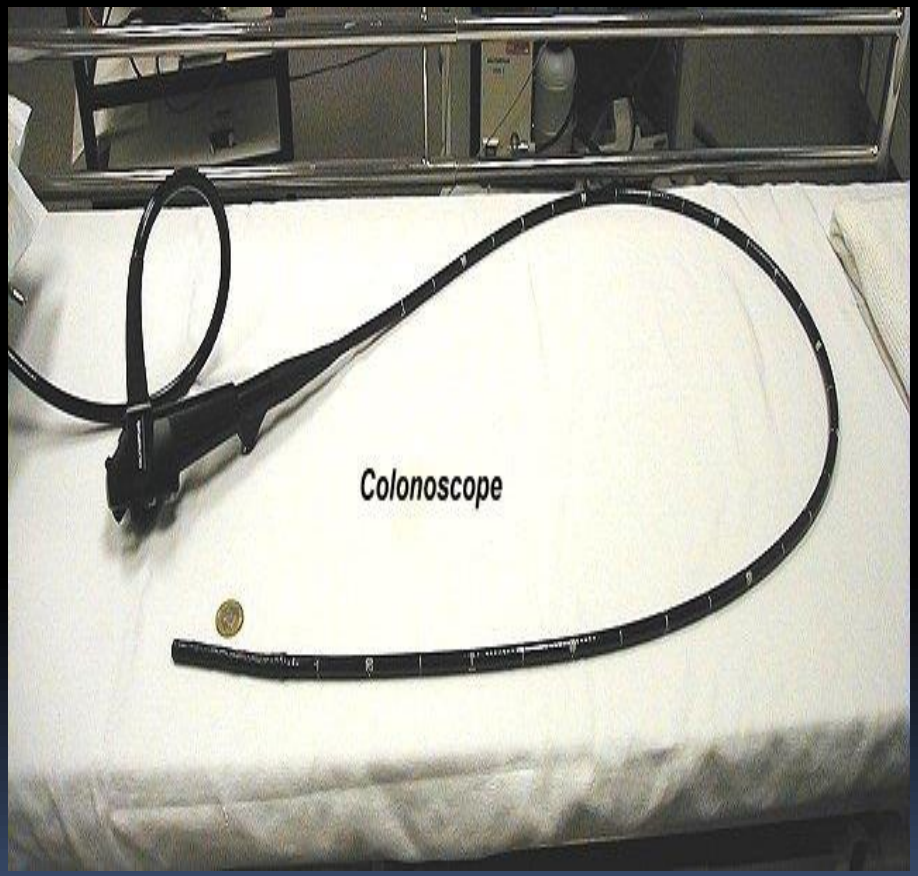
- Screening for asymptomatic men and women at age 50, using a menu of screening options.
- Mortality rates have been declining for the past 2 decades, largely attributable to the contribution of screening to prevention and early detection.

Recommended CRC screening tests

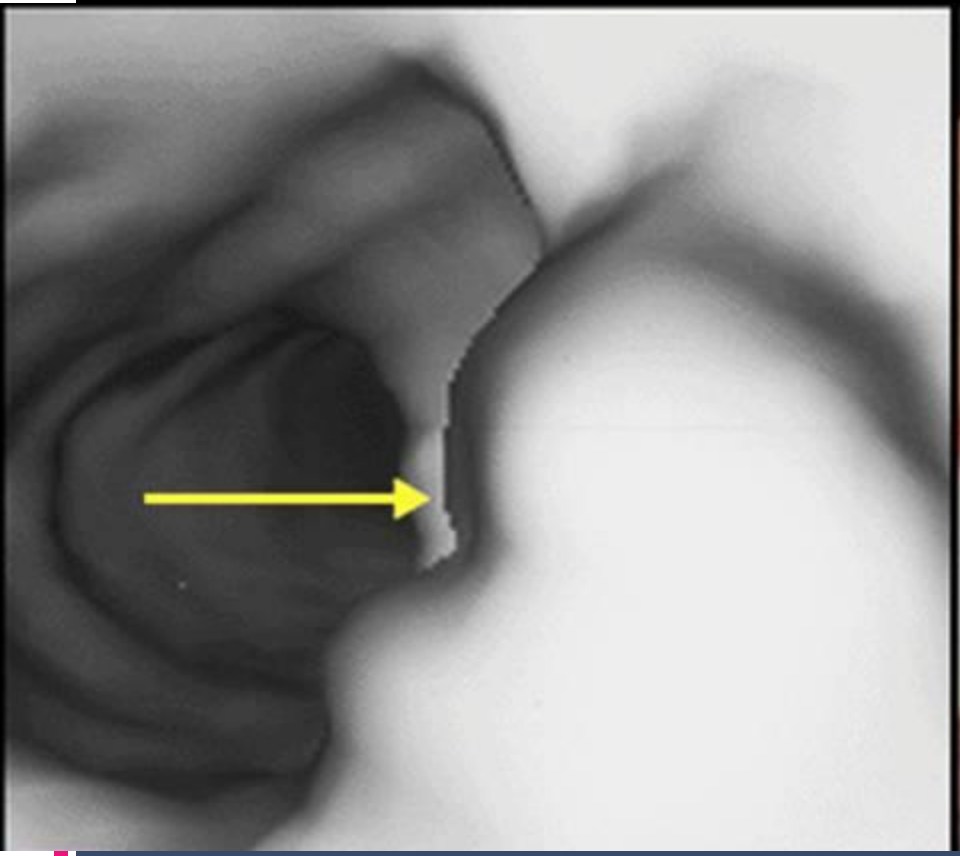
1. Annual high-sensitivity gFOBT or FIT, following the manufacturer's recommendations for specimen collection
2. FSIG every 5 years
3. Colonoscopy every 10 years
4. Double-contrast barium enema every 5 years
5. CT colonography every 5 years.

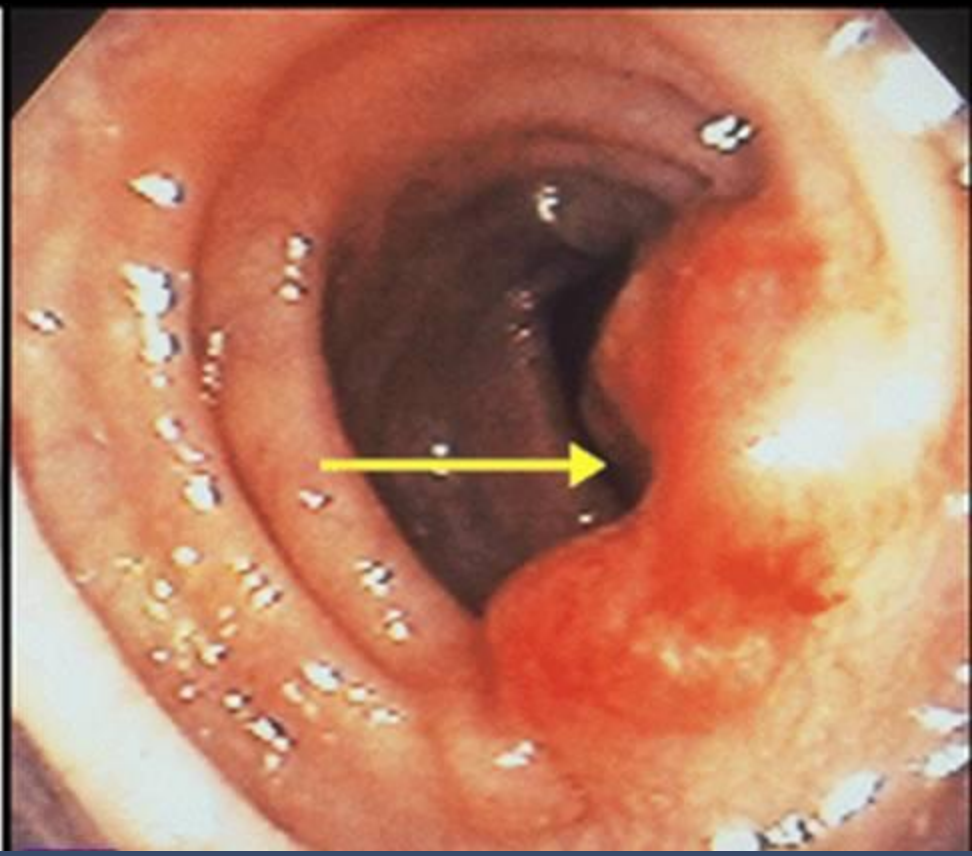
Stool DNA testing, which also was among the recommended options in the 2008 update, is no longer commercially available for screening.

Sigmoidoscopy/Colonoscopy

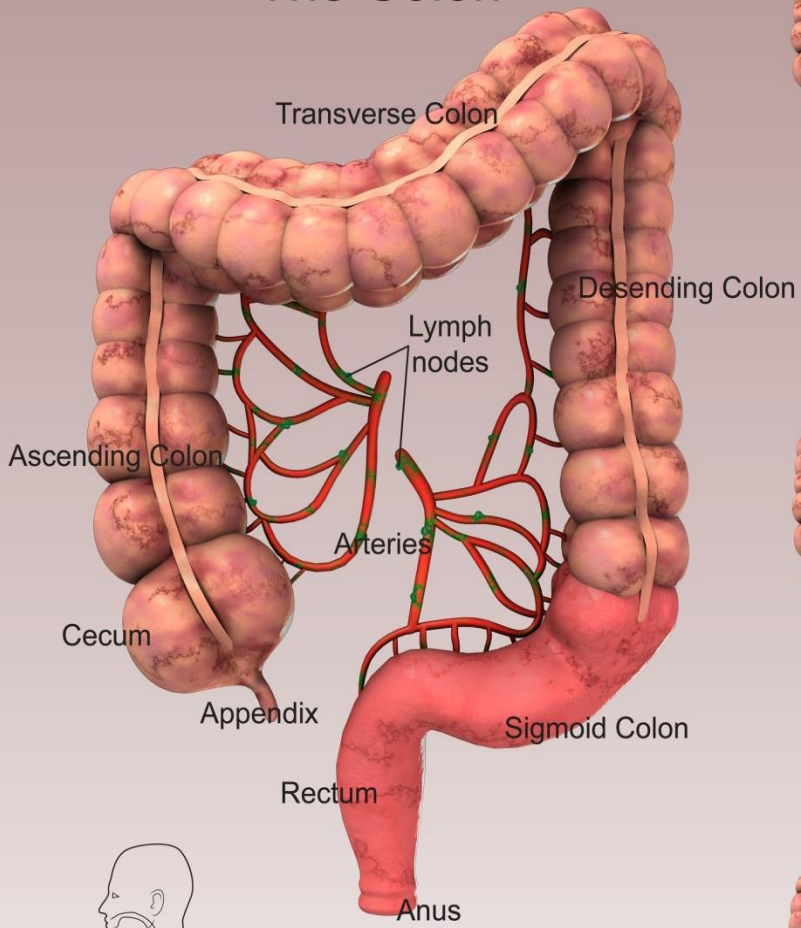


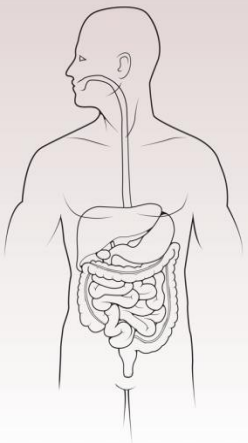
CT colonography

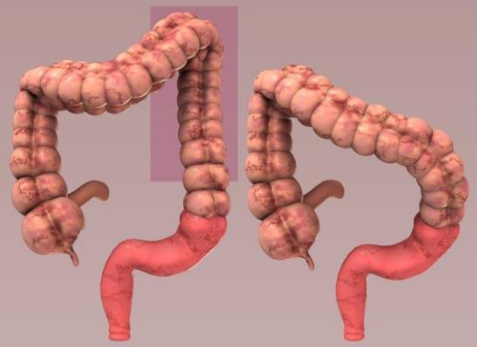




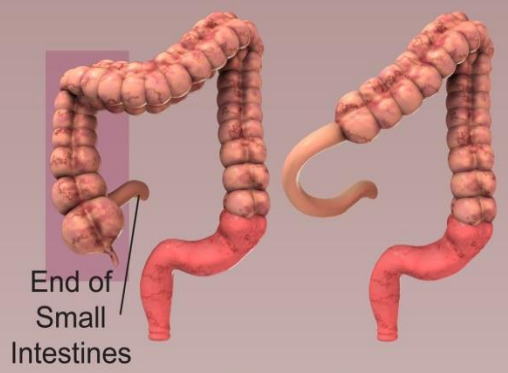
The Colon



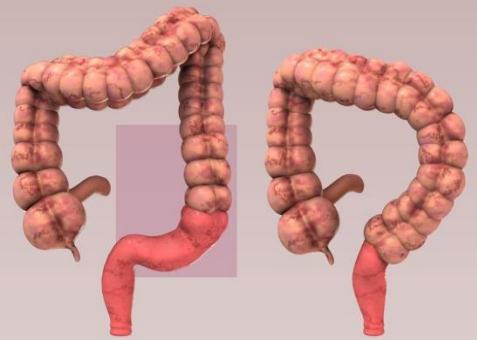




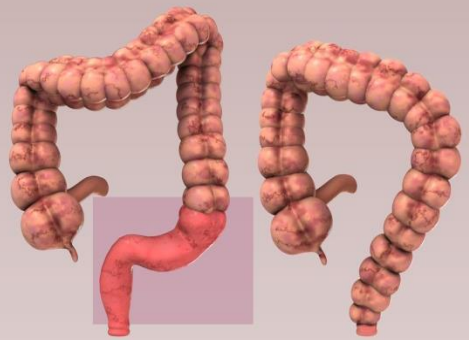
Left Colectomy



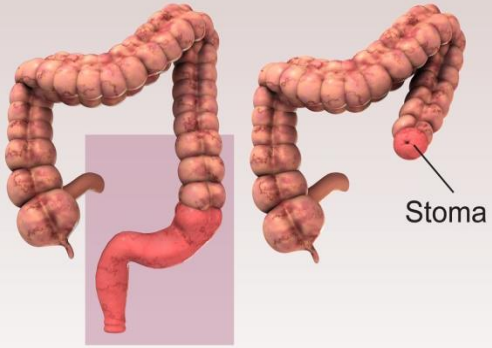
Right Colectomy



Sigmoid Colectomy

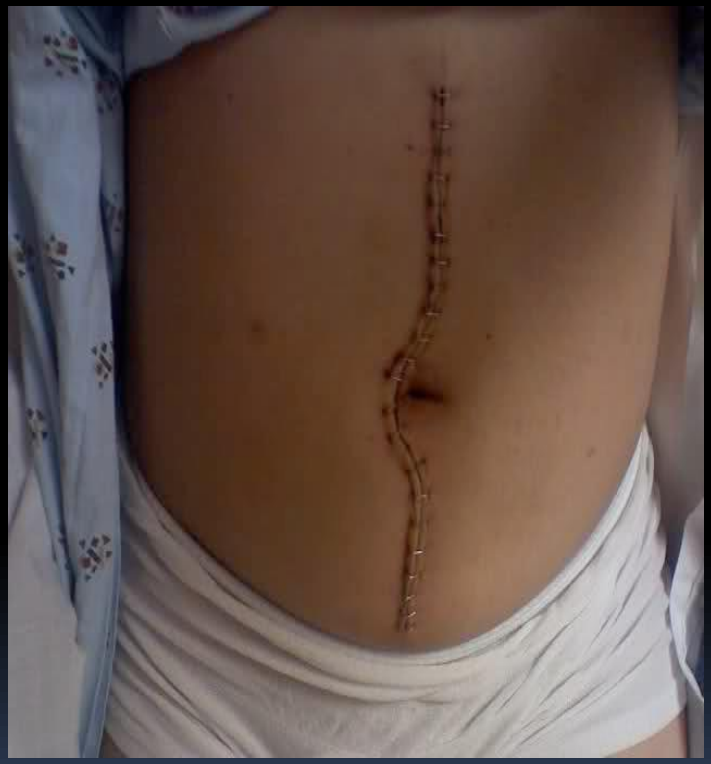


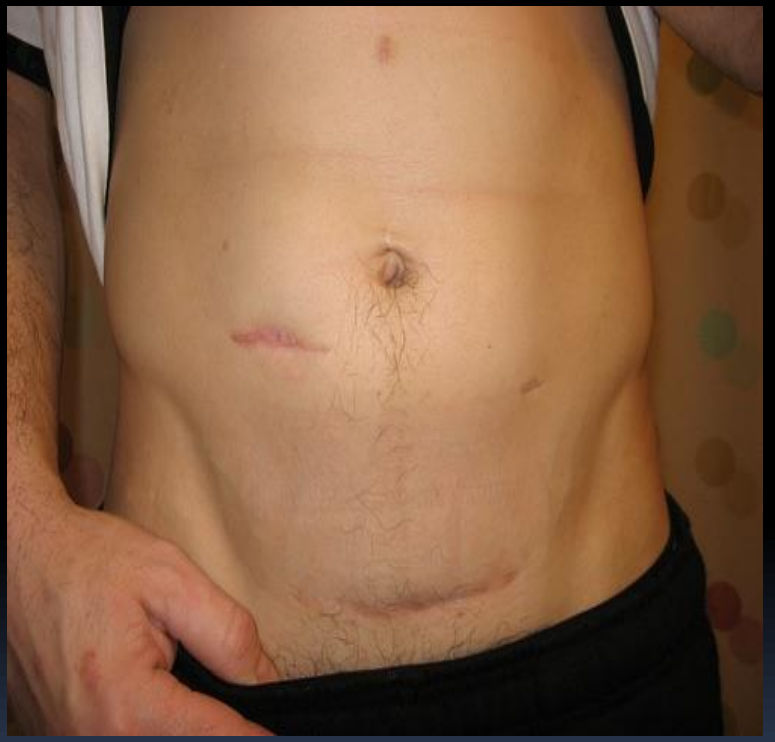
Low Anterior Resection



Abdominal Perineal Resection

Surgery





Thank you