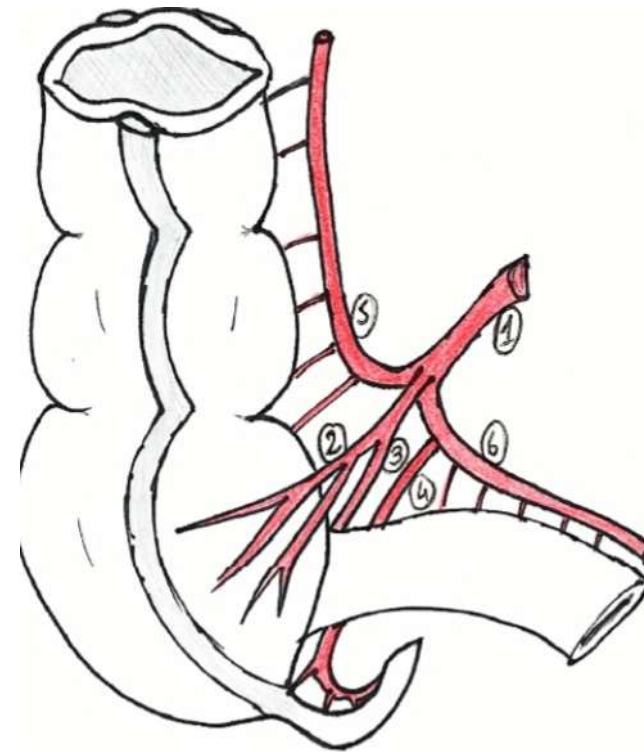


Acute Appendicitis

Dima batarseh

introduction

- The appendix is a true diverticulum at the end of the cecum
- It is supplied by the appendiceal artery, which is a terminal branch of the ileocecal artery (End ARTERY)



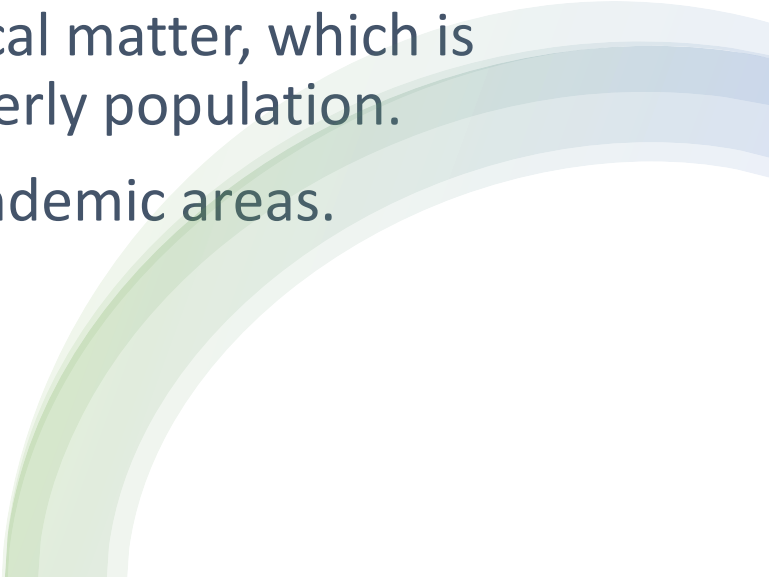
- 1- Ileocolic artery
- 2- Anterior cecal artery
- 3- Posterior cecal artery
- 4- Appendicular artery
- 5- Ascending branch
- 6- Descending branch

epidemiology

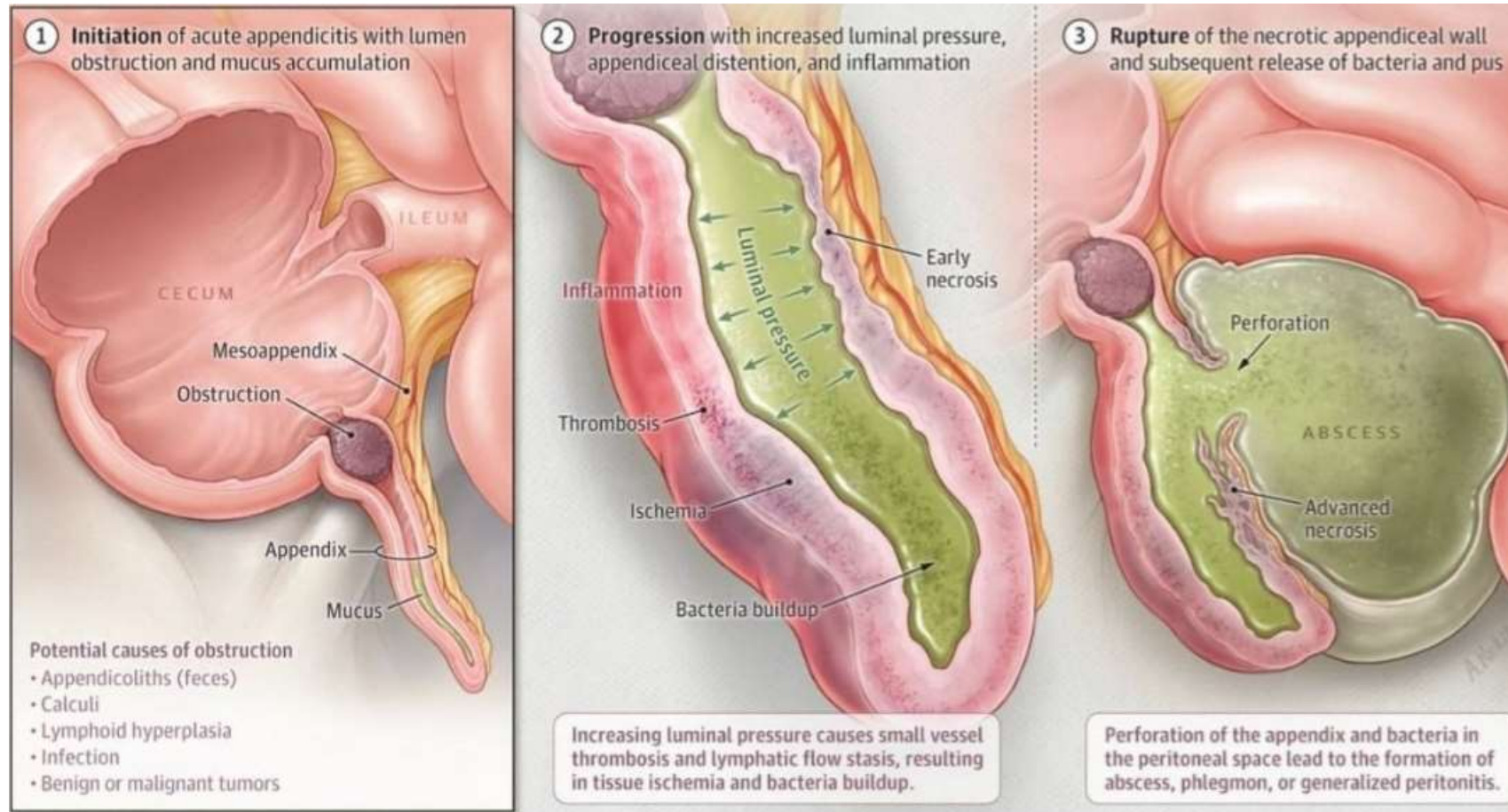
- the highest incidence for acute appendicitis is between the second and third decades of life, more specifically it is highest in ages between 10 and 19.
- Acute appendicitis is slightly higher in males.



Pathophysiology

- obstruction of its lumen, such obstruction can be caused by either one of the following
 - Lymph hyperplasia, which is common in children
 - Tumors or fibrosis or fecal matter, which is seen typically in the elderly population.
 - Parasitic infections in endemic areas.
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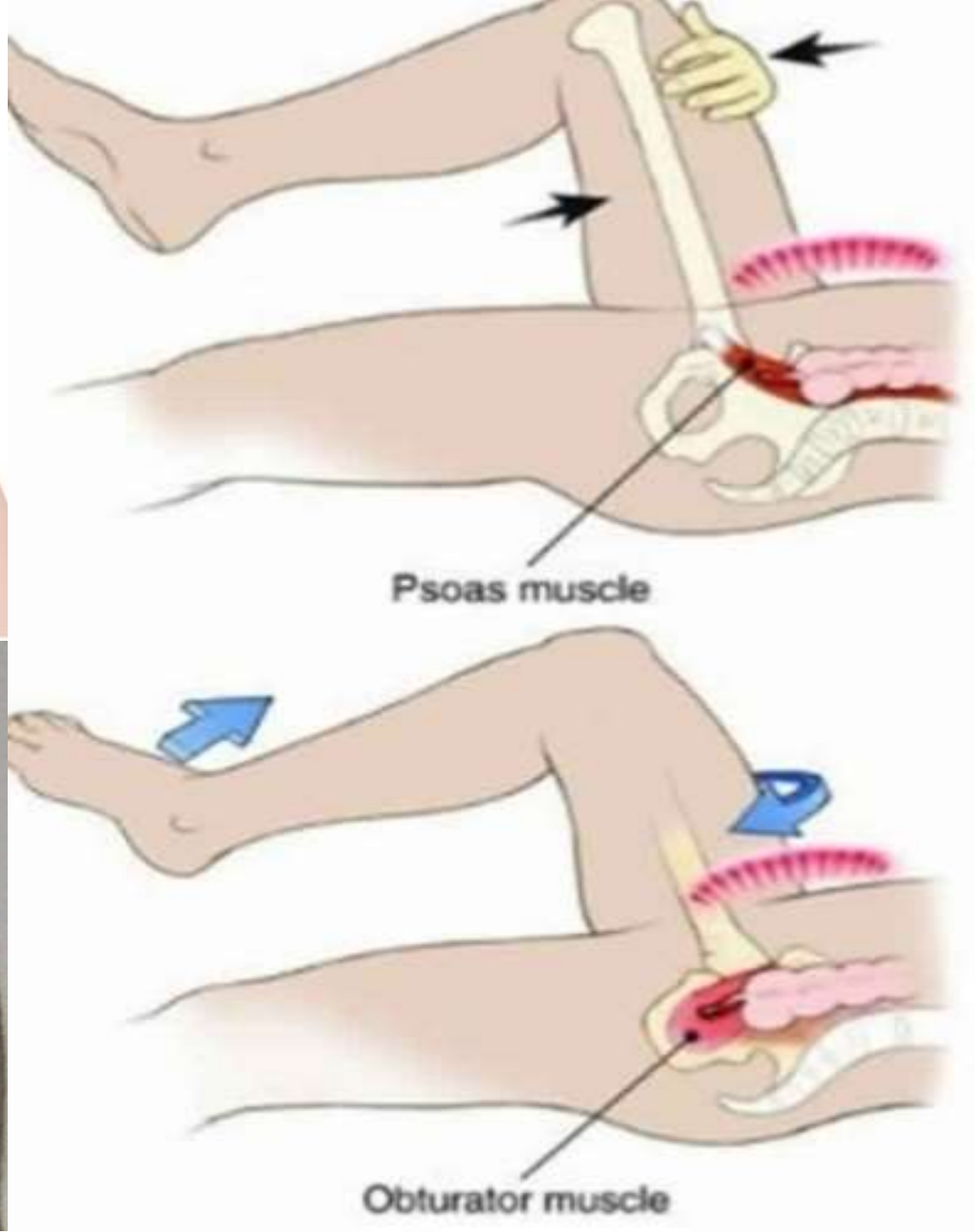
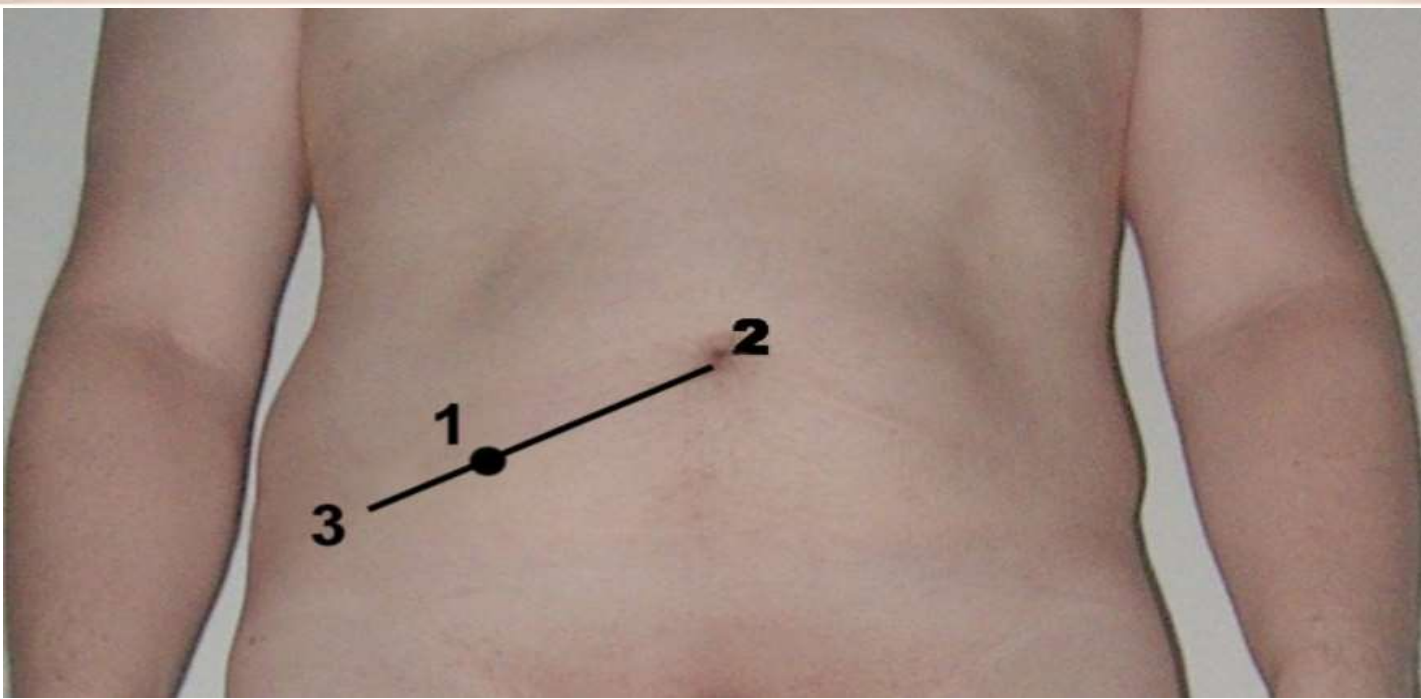
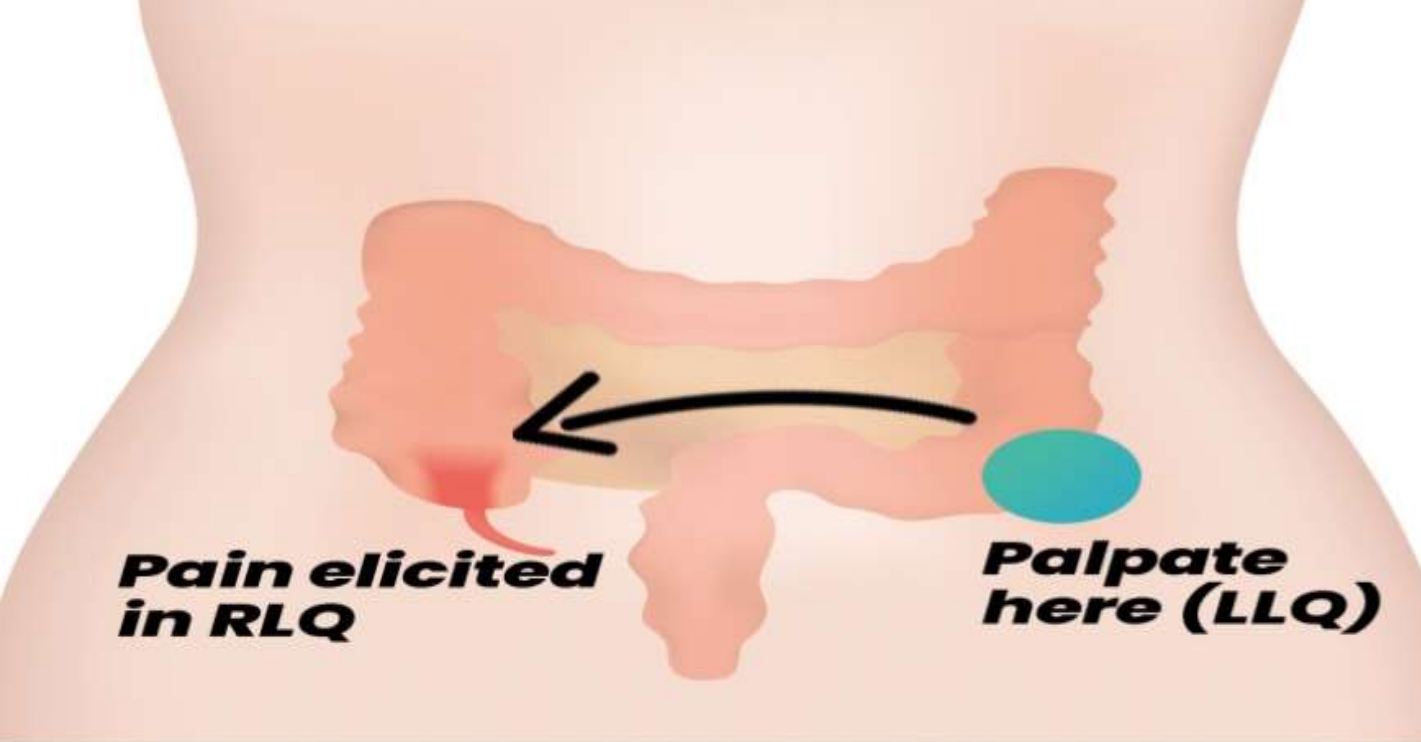
Pathophysiology



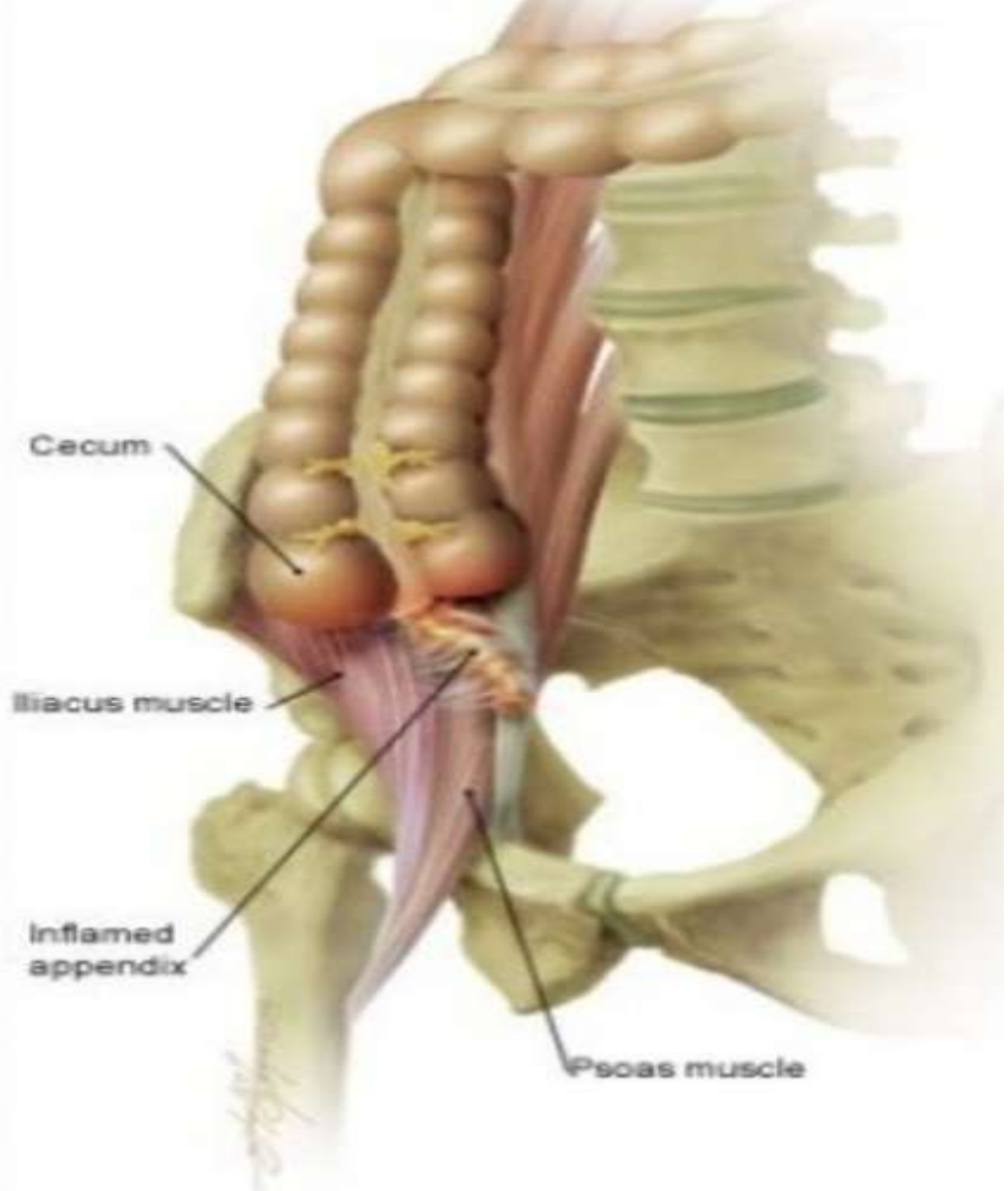


Pain

- The increase in intraluminal pressure and ischemia will stimulate visceral afferent T8-T11 nerve carrying periumbilical pain. When perforation and necrosis occur, this will affect parietal peritoneum forming somatic sharp well localized pain.
 - And thus, the history often presents with periumbilical pain as a first sign followed by migrating pain fever nausea and vomiting
 - Atypical presentations include malaise, loss of appetite, indigestion, diarrhea and flatulence.
- 



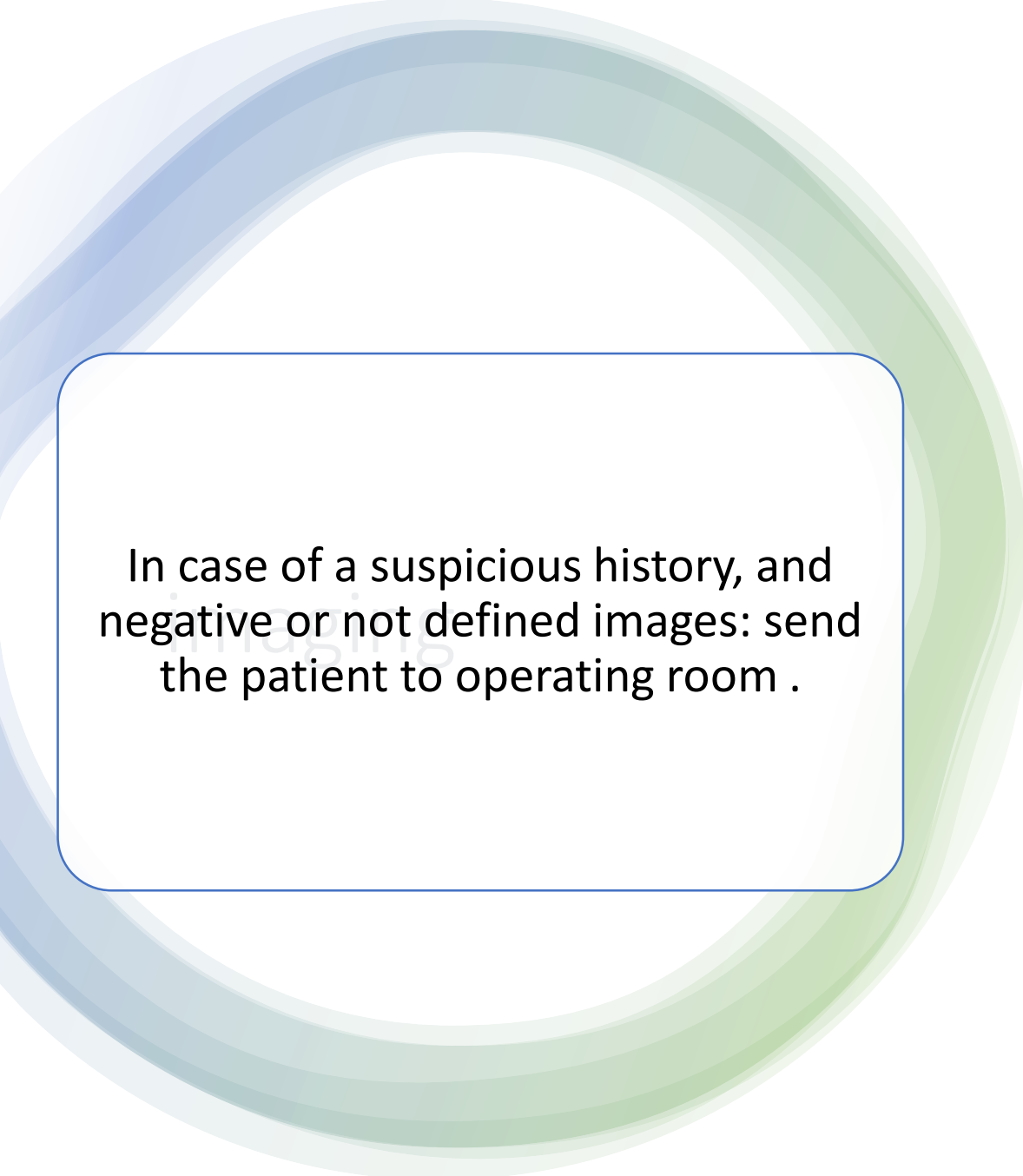
Psoas sign



investigations

- Elevated CRP, WBC > 10k
- Alvarado score:
- 0-3: unlikely to be appendicitis
- 4 or more: should be evaluated for appendicitis.
- No single investigation will confirm or rule out appendicitis completely.

Alvarado score	
Feature	Score
Migration of pain	1
Anorexia	1
Nausea	1
Tenderness in right lower quadrant	2
Rebound pain	1
Elevated temperature	1
Leucocytosis	2
Shift of white blood cell count to the left	1
Total	10



In case of a suspicious history, and negative or not defined images: send the patient to operating room .

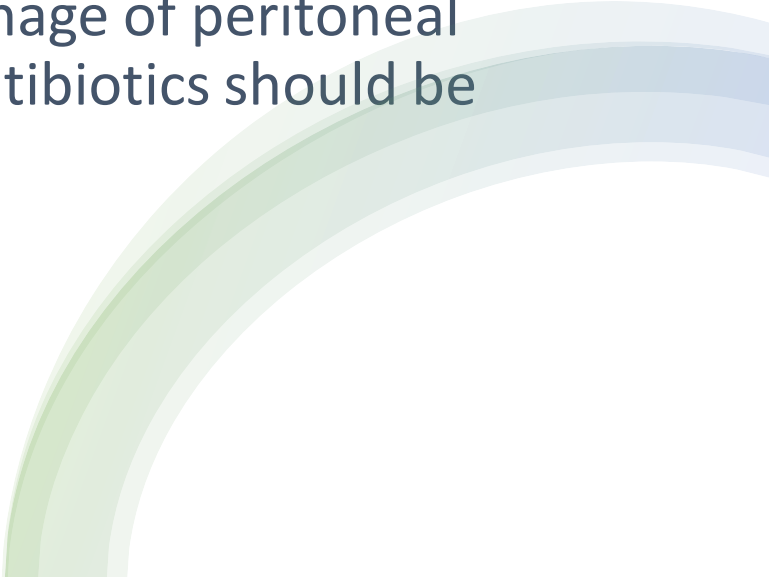
X-ray: not useful because the pathology is limited to soft tissues

U/S : most accurate finding is an appendiceal diameter $> 6\text{mm}$, but it is operator dependent and requires experience.

CT with contrast: diameter $> 6\text{mm}$, wall thicker than 2 mm , obstructed lumen, fat stranding, appeniceal wall enhancement, and appendicolith.



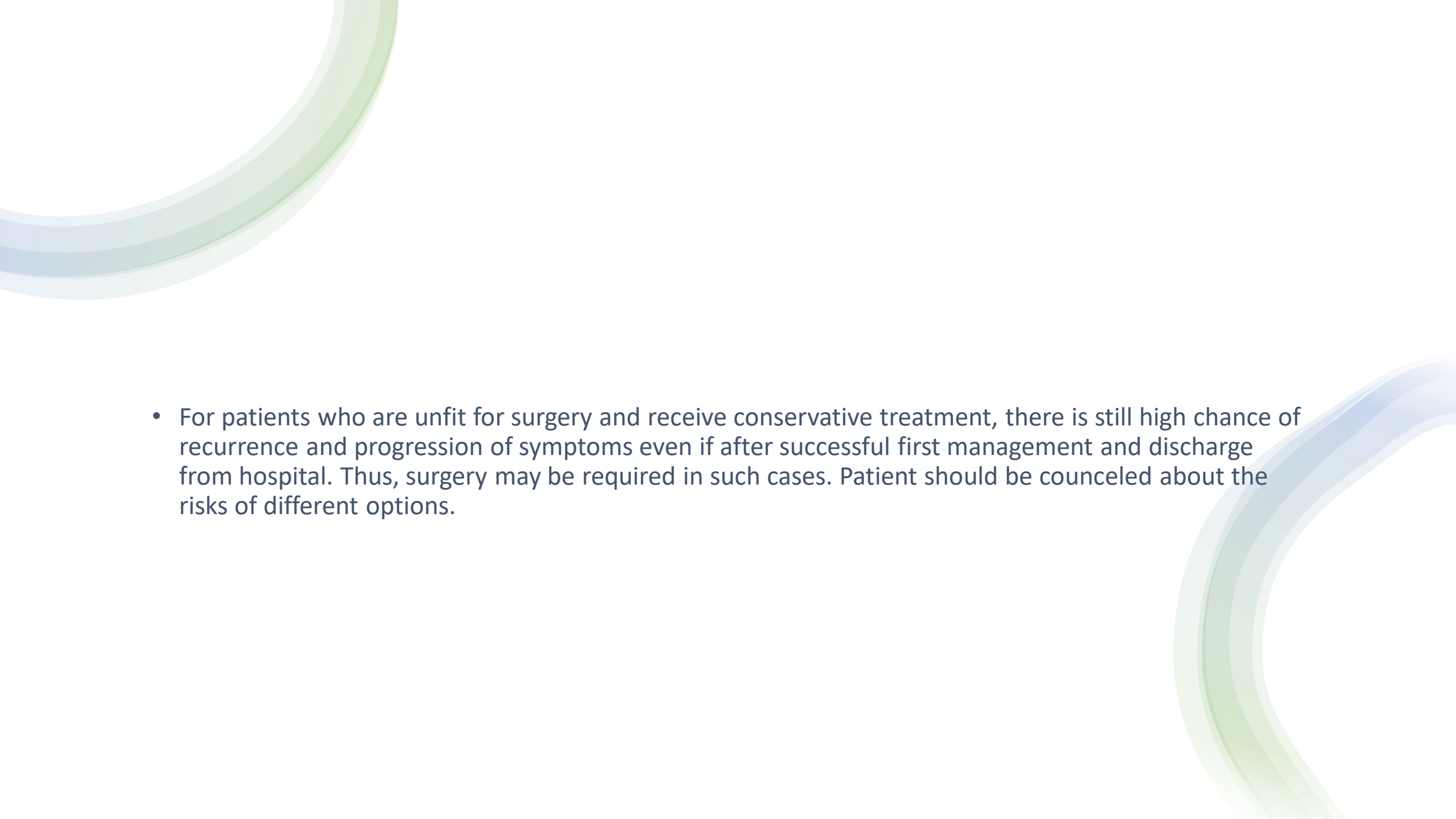
management

- the main role is for surgical management.
 - For non perforated appendicitis and stable patients: surgery in 12 hours, during which the patient should receive IV fluids for hydration, analgesics and antibiotics.
 - If perforated appendix or the patient was unstable” emergency appendectomy should be performed with drainage of peritoneal cavity. Hydration and antibiotics should be given before surgery.
- 



Peri-appendicular abscess

- Surgery is risky due to the high risk of infection spreading and injury to adjacent structures which could end up with fistula formation.
 - IV antibiotics and drainage are recommended. If conservative management failed, surgery may be necessary.
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- The slide features decorative curved lines in shades of green and blue, positioned in the top-left and bottom-right corners. The text is centered in the middle of the slide.
- For patients who are unfit for surgery and receive conservative treatment, there is still high chance of recurrence and progression of symptoms even if after successful first management and discharge from hospital. Thus, surgery may be required in such cases. Patient should be counseled about the risks of different options.