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# Inguinal Hernias

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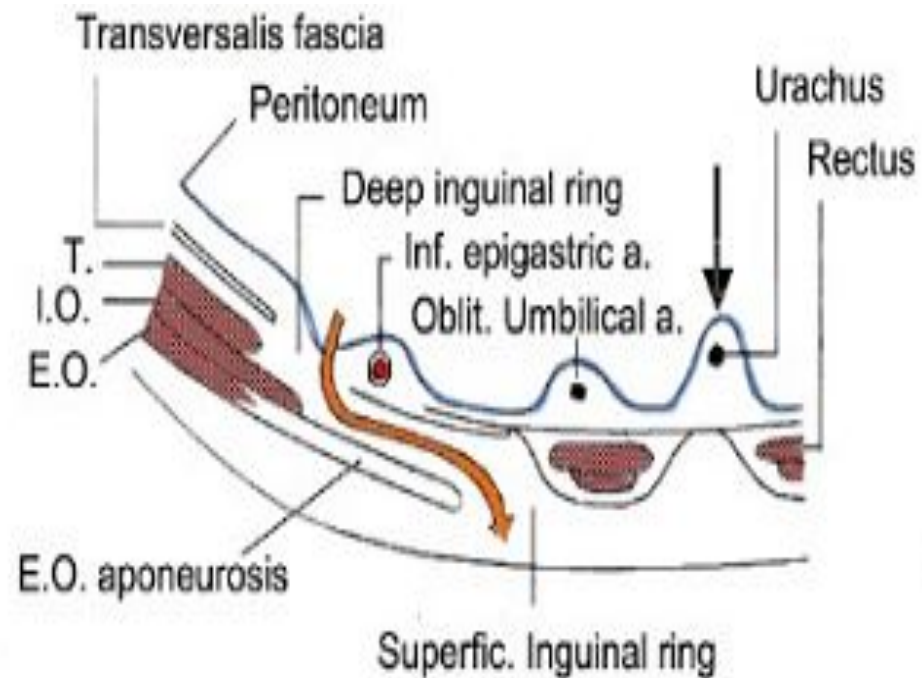
# Warm up

- Indirect inguinal hernias are caused by weakness of the transversalis fascia **FALSE**
- Direct inguinal hernias are often more bilateral than indirect **TRUE**
- **Definition**
  - Protruding viscus beyond covering of the cavity in which it is normally contained



# Anatomy

- Inguinal Canal
  - *Post* – transversalis fascia
  - *Anterior* – internal & external obliques
  - *Roof* – Conjoint Tendon, transverse abdominis & internal oblique
  - *Floor* – inguinal ligament



# Types

- >♂ (descent of testes)
- **Indirect**
  - due to patent processus vaginalis, 70% all inguinal hernias
  - Lateral to inferior epigastric vessel
- **Direct**
  - weakness posterior wall, can be often B/L
  - Medial to inferior epigastric vessel



INDIRECT INGUINAL HERNIA



DIRECT INGUINAL HERNIA

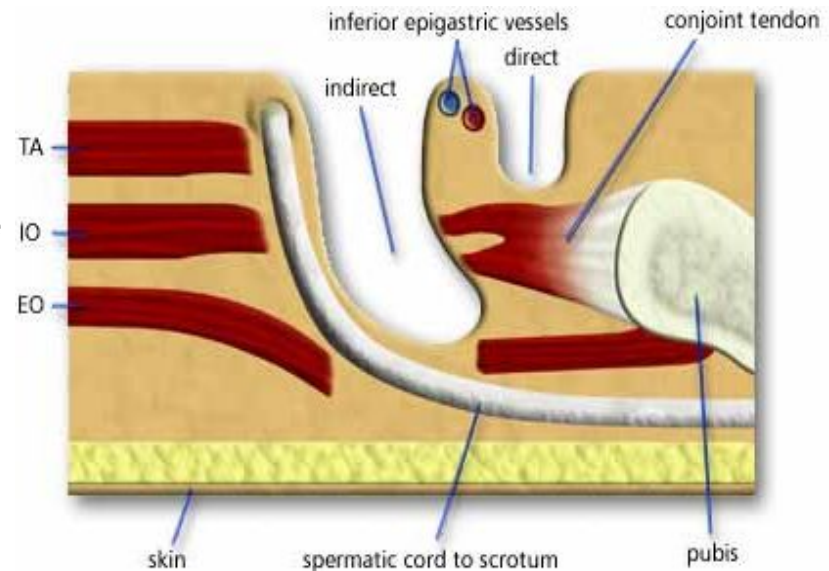
# Types

## ■ Pantaloon

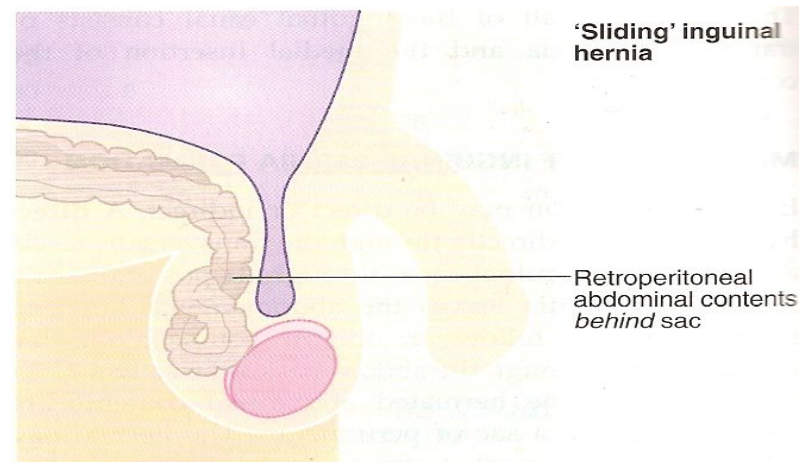
- Indirect & direct at same time
- Tend to be in the elderly

## ■ Sliding

- Sometimes retroperitoneal structure slides down posterior abdo wall & herniates into inguinal canal taking along overlying peritoneum with it



Combination of indirect and direct hernias, with two sacs separated by the inferior epigastric vessels



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# Types

## ■ Incarcerated

- A chronically irreducible hernia which is not strangulated

## ■ Strangled

- Tends to occur with indirect hernias.
  - Hernia contents become constricted by the narrow deep ring or they twist.
  - Venous return obstructed, swelling appears, arterial obstruction & infarction soon follows.
  - Associated with Sx & Sx of bowel obstruction & peritonitis
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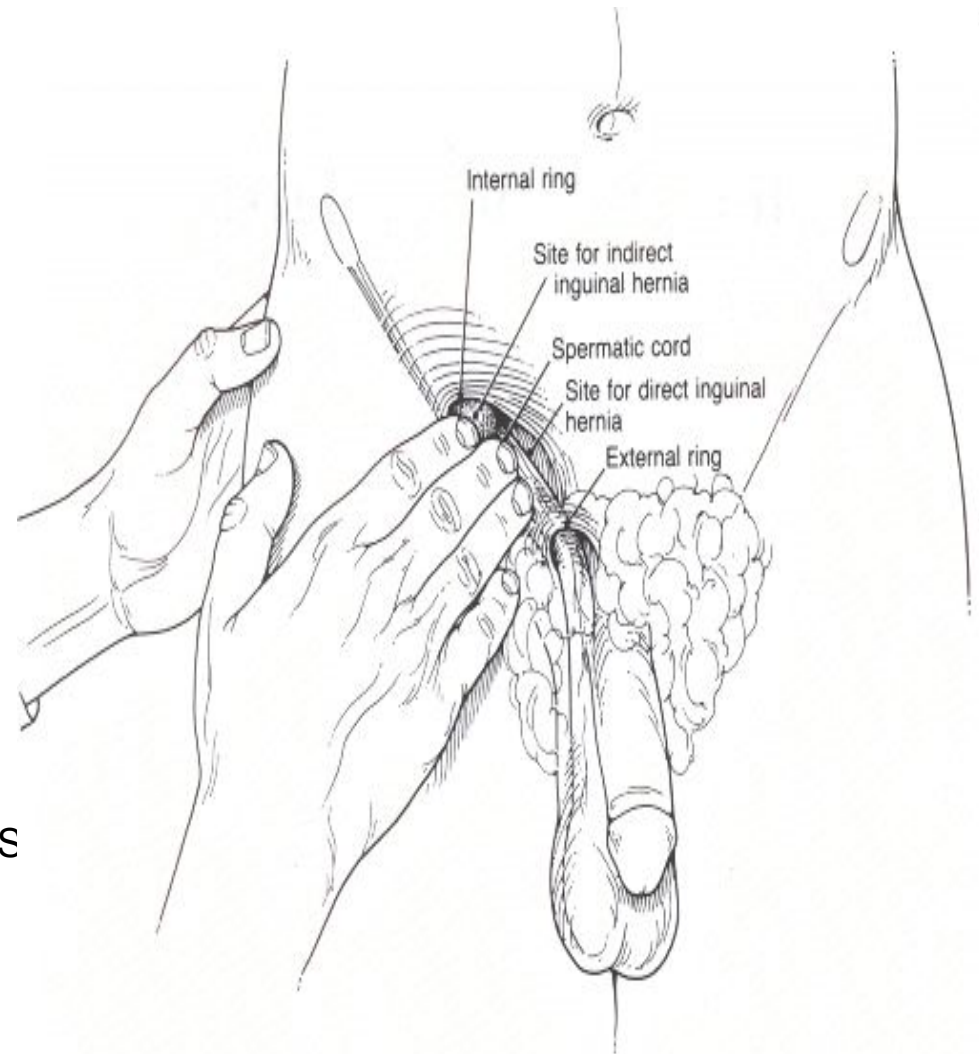
# Inguinal Hernias

## ■ Examination

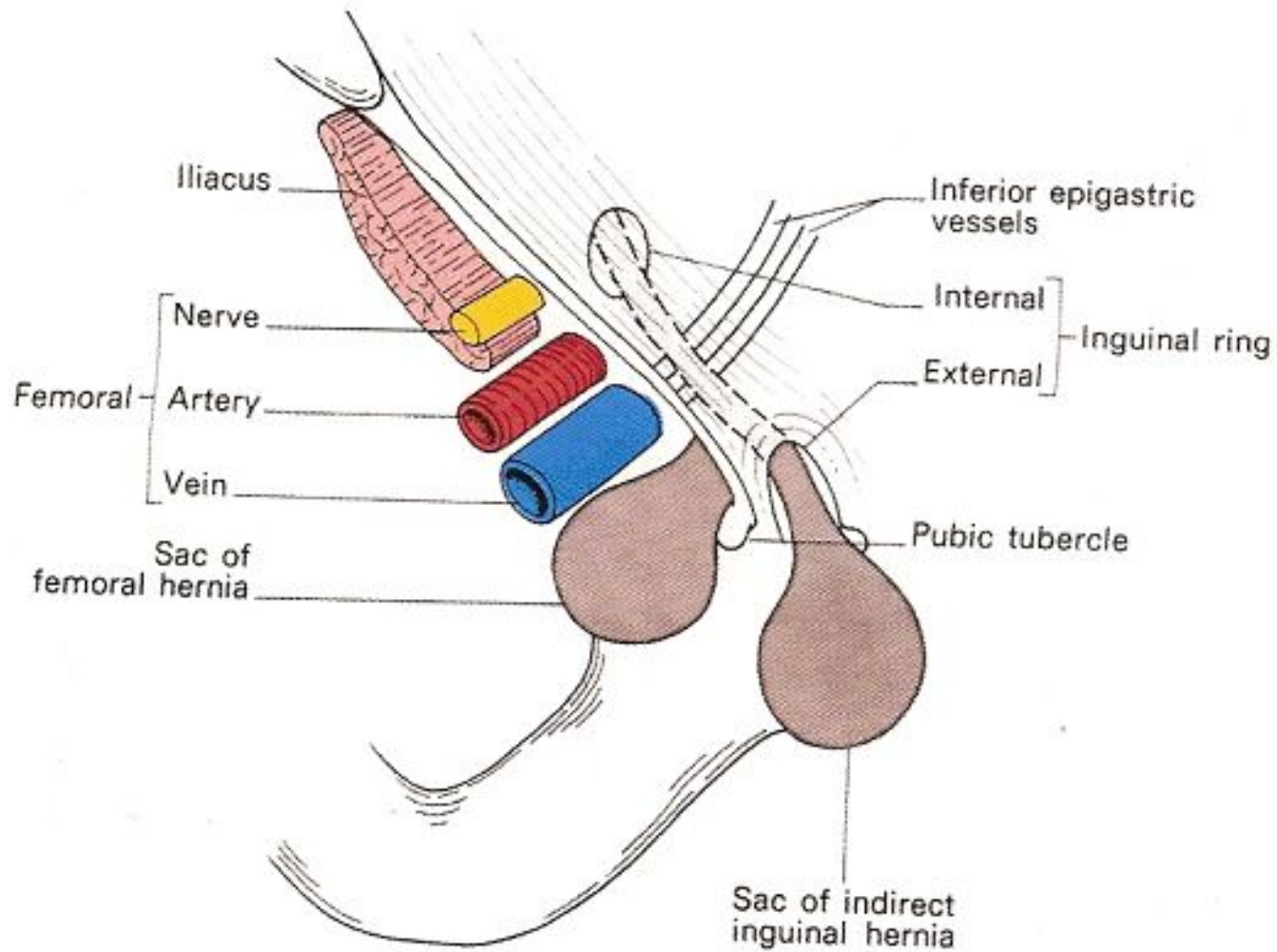
- Supine & standing
- Palpate landmarks
- Ask pt to cough
- Characteristics of lump
  - Reducible / compressible
  - Pulsatile, expansile
  - Hot, tender
  - Smooth, irregular
  - Soft, hard
  - Cough impulse

## ■ Surface landmarks

- ASIS & pubic tubercle – inguinal ligament lies b/w
- Deep ring 2cm above midpoint of inguinal ligament
- Mid inguinal point is  $\frac{1}{2}$  way b/w ASIS & pubic symphysis – femoral artery
- Superficial ring is 2cm above & medial to pubic tubercle







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# Investigations

- Underlying diseases such as chronic respiratory problems, constipation, urinary issues
- Herniography
  - Not commonly used – dye into peritoneum
- CT – rare hernias



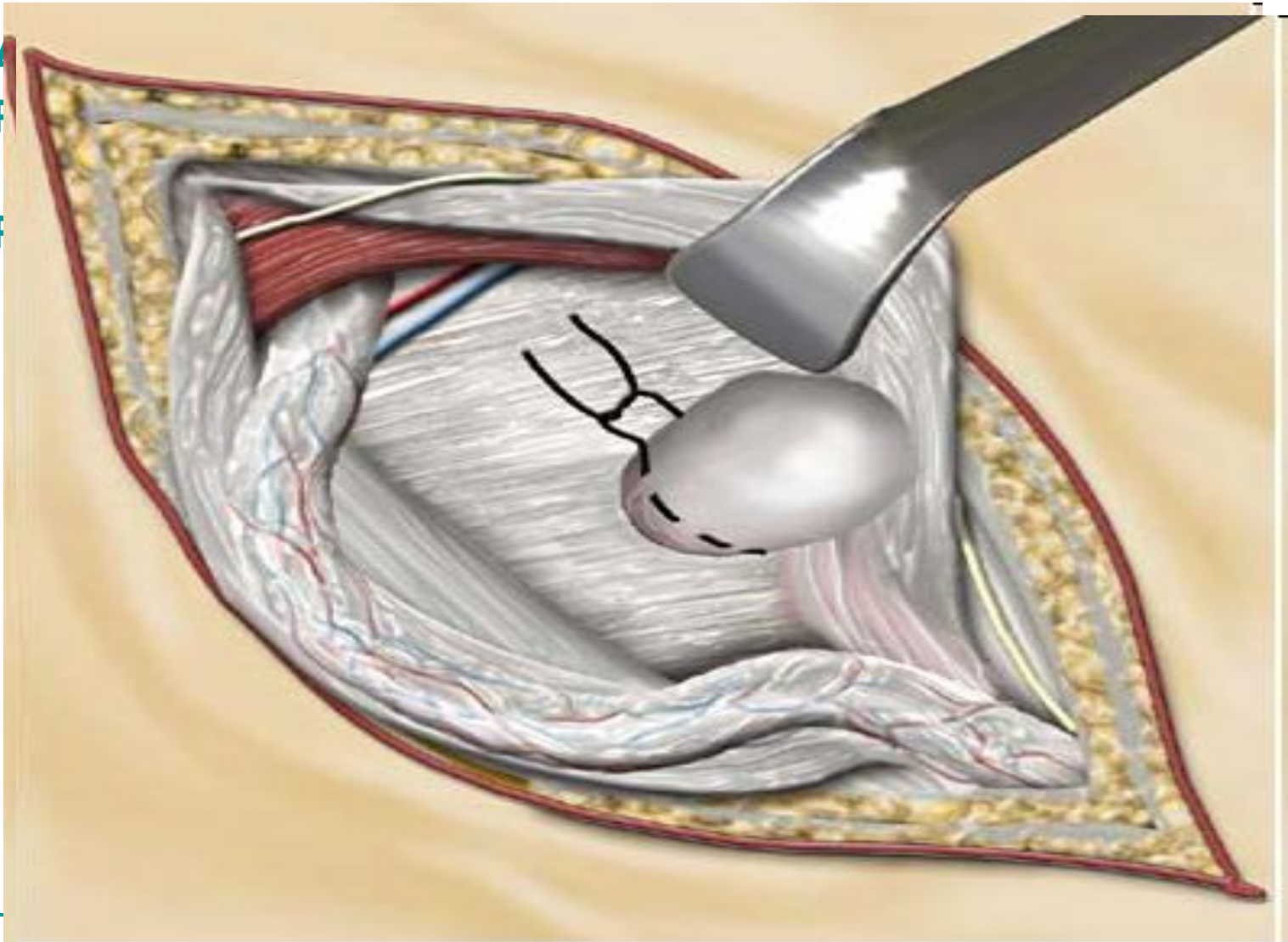
# Management & Indications for Surgery



# Open Inguinal Repair

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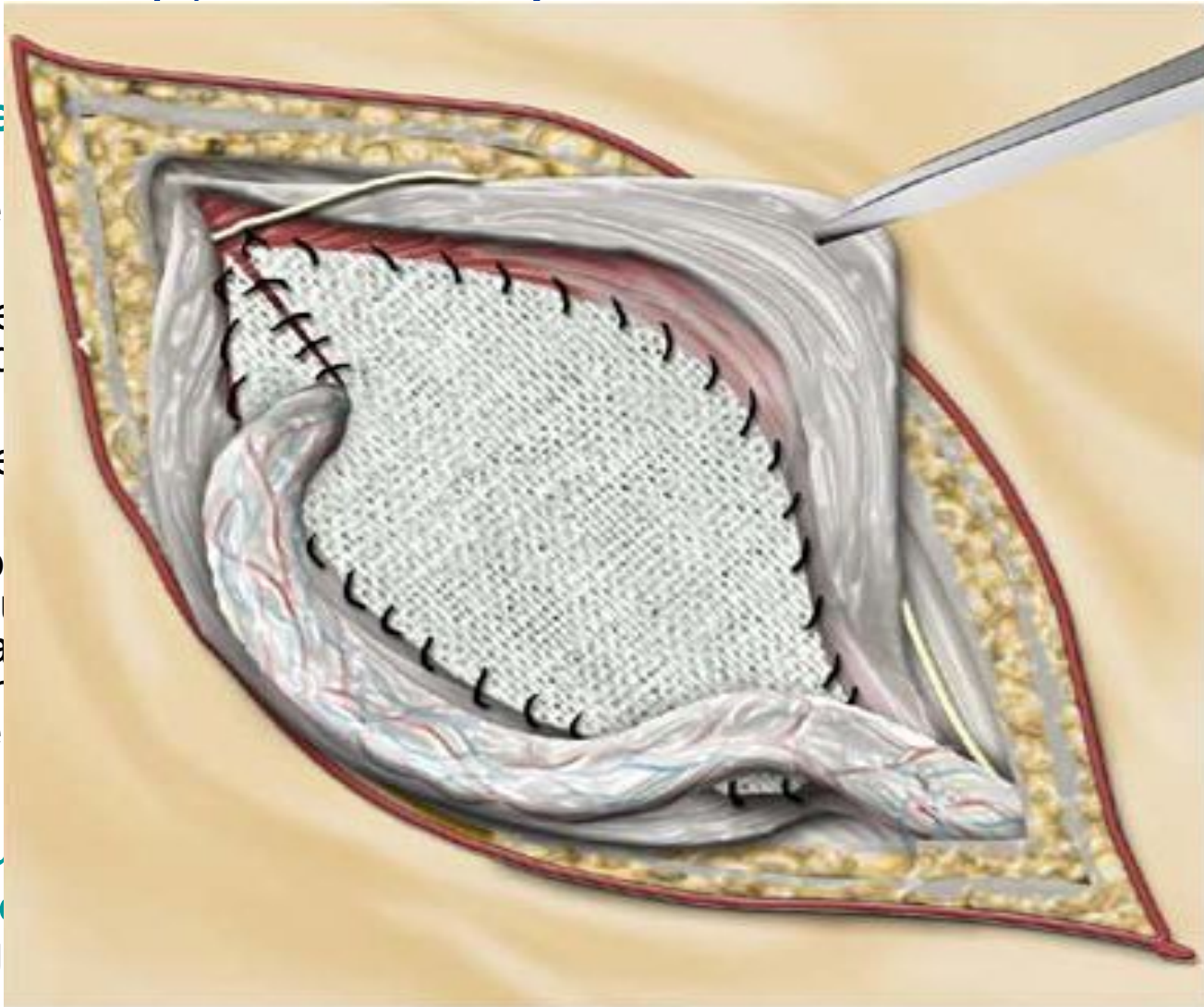
# Open Inguinal Repair

## ■ Procedure

- Incise the skin & subcutaneous tissue
- The external oblique muscle is identified
- The inguinal canal is exposed
- A patch of mesh is placed over the defect

## ■ Closure

## ■ Post-operative care



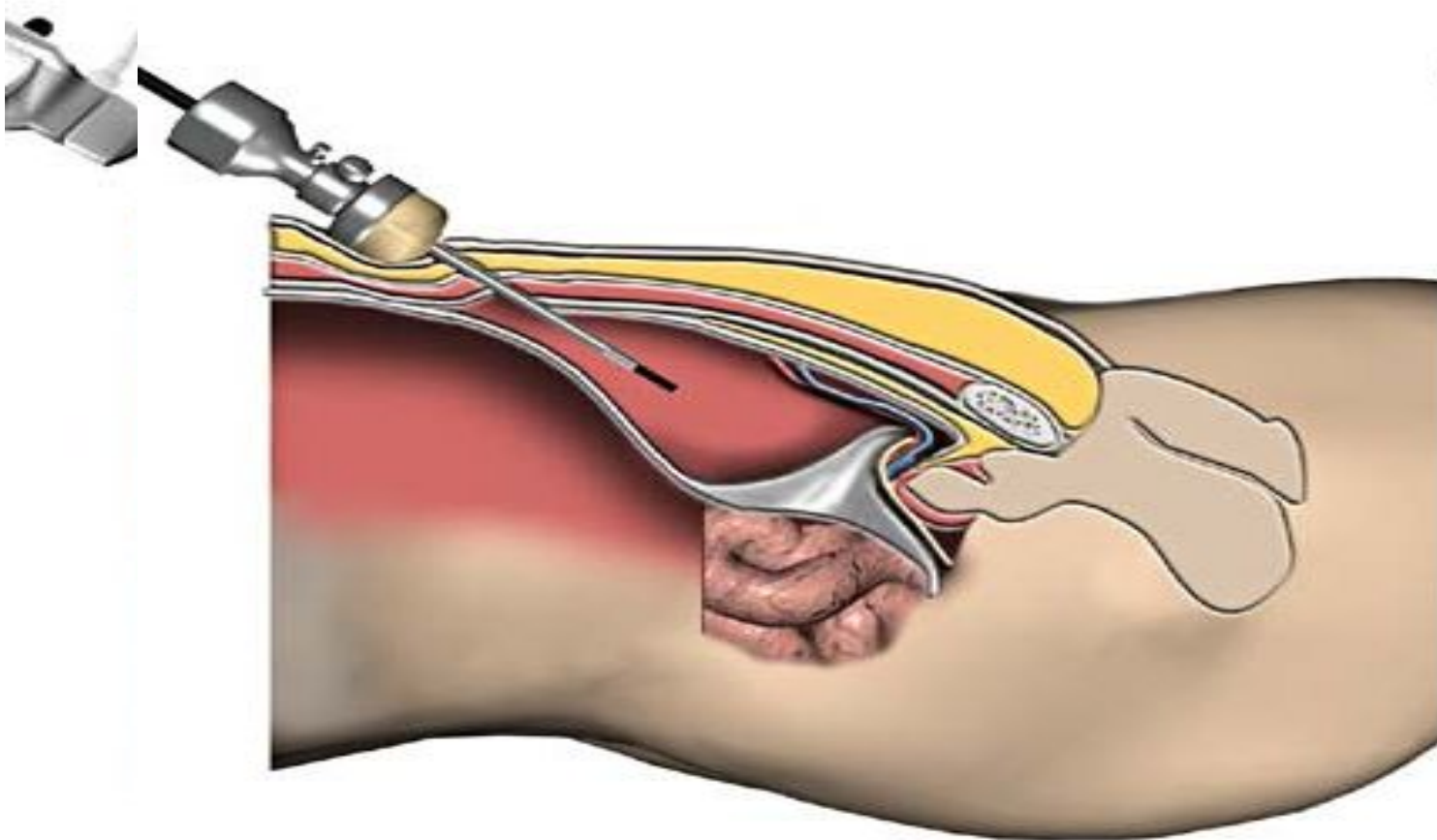
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# Laparoscopic

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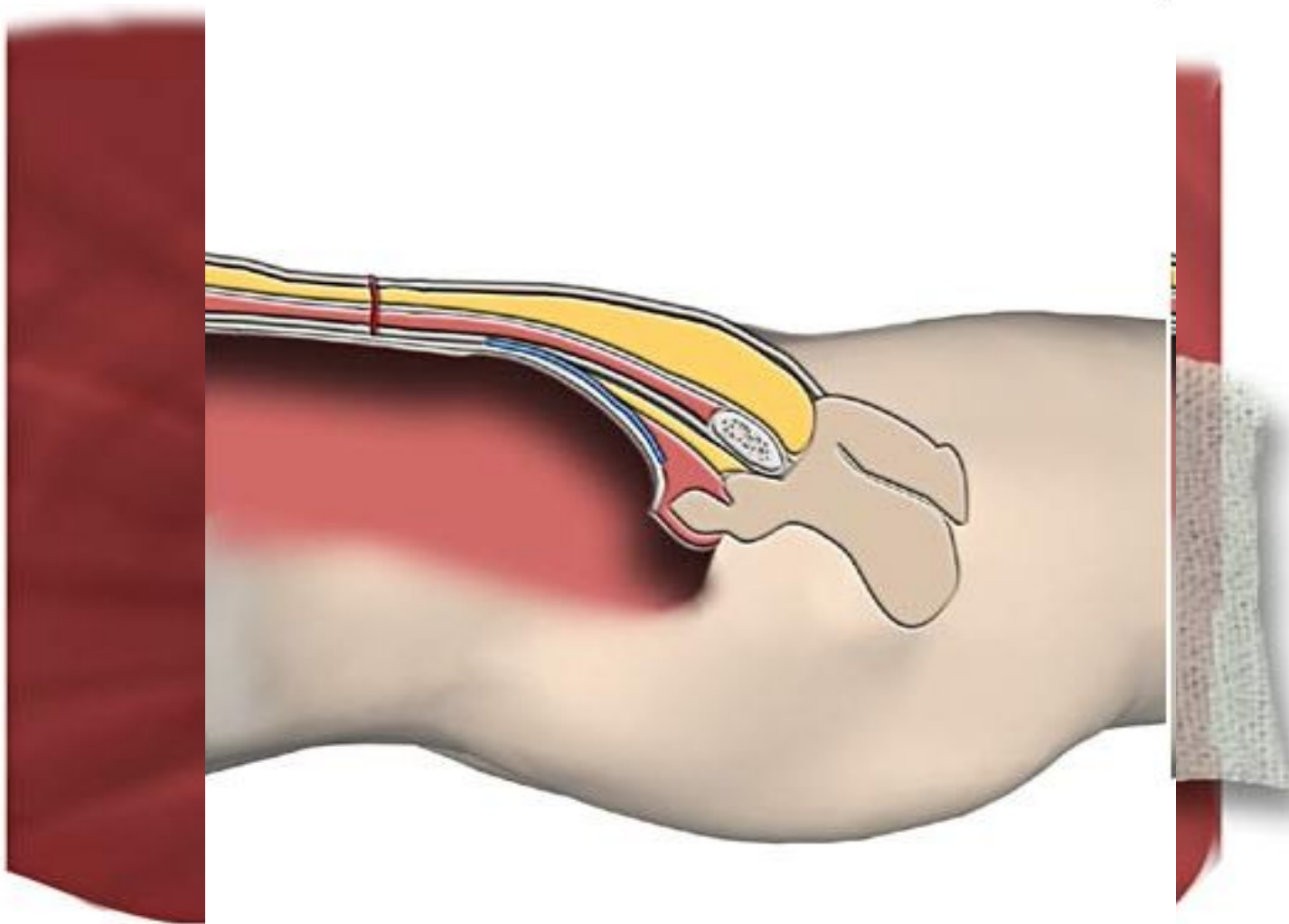
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# Laparoscopic

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# Complications of Op

- Infection
  - Bleeding
  - Recurrence
  - Urinary retention
  - Testicular atrophy
  - Neuropraxia / nerve entrapment
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