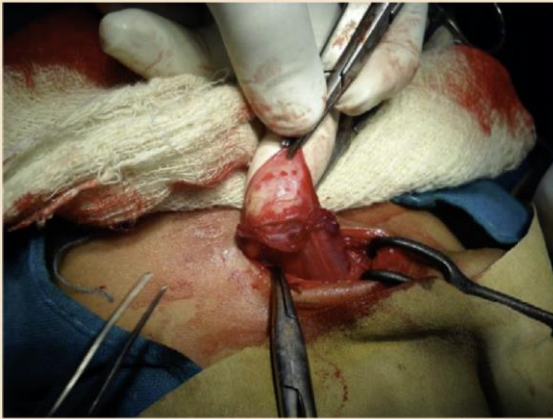
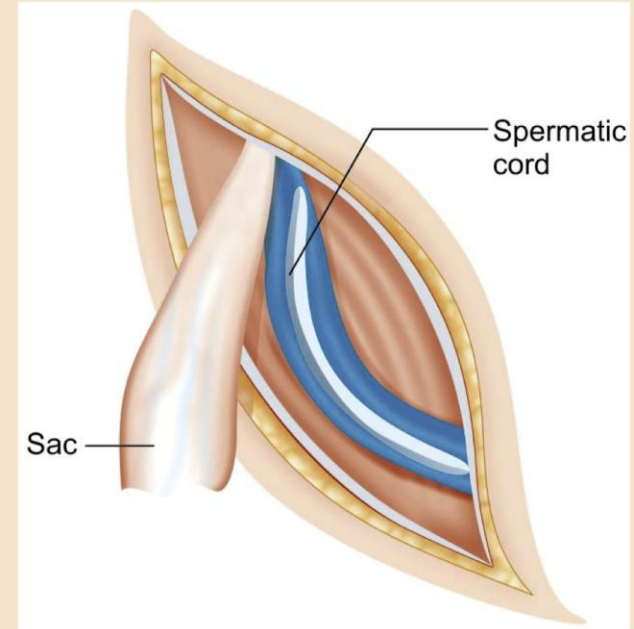


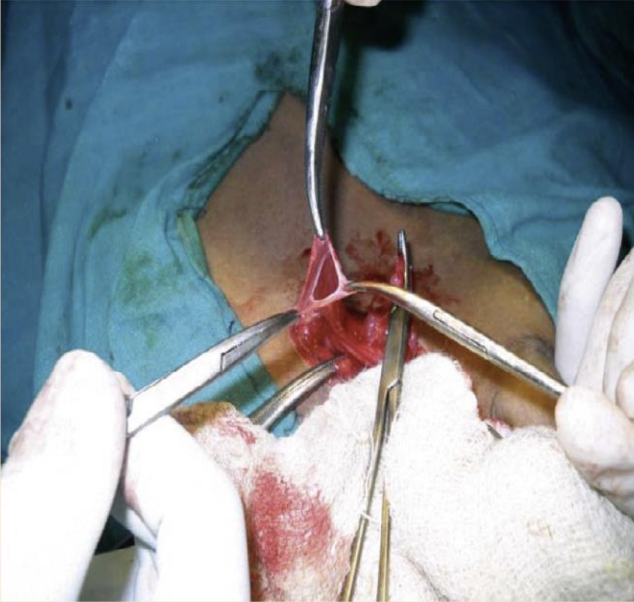
- ▲ In indirect hernia, the sac (pearly white structure lying on outer side of cord) is dissected from the cord structures (pampiniform plexus, vas deferens) and cremasteric muscle.
- ▲ During posterior dissection of sac, care must be taken to avoid injury to vas and spermatic artery.
- ▲ Large indirect sac extending upto the scrotum should not be dissected beyond the pubic tubercle due to increased risk of ischemic orchitis.



Sac is identified by its pearly white color

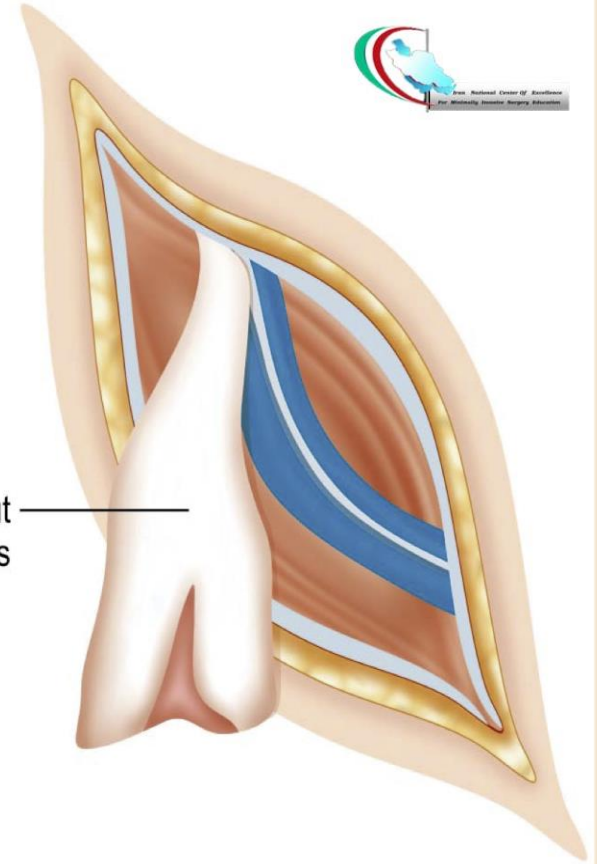


- ▲ Sac is opened, taking care not to injure any hernial contents (intestine or omentum).



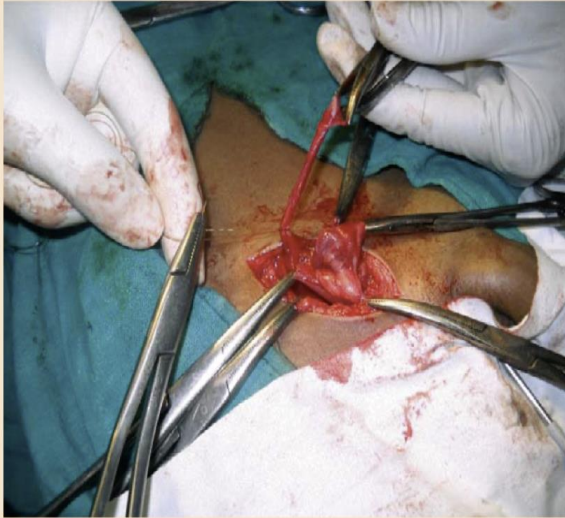
Sac is opened to look for any contents (intestine or omentum)

Sac with or without
hernial contents

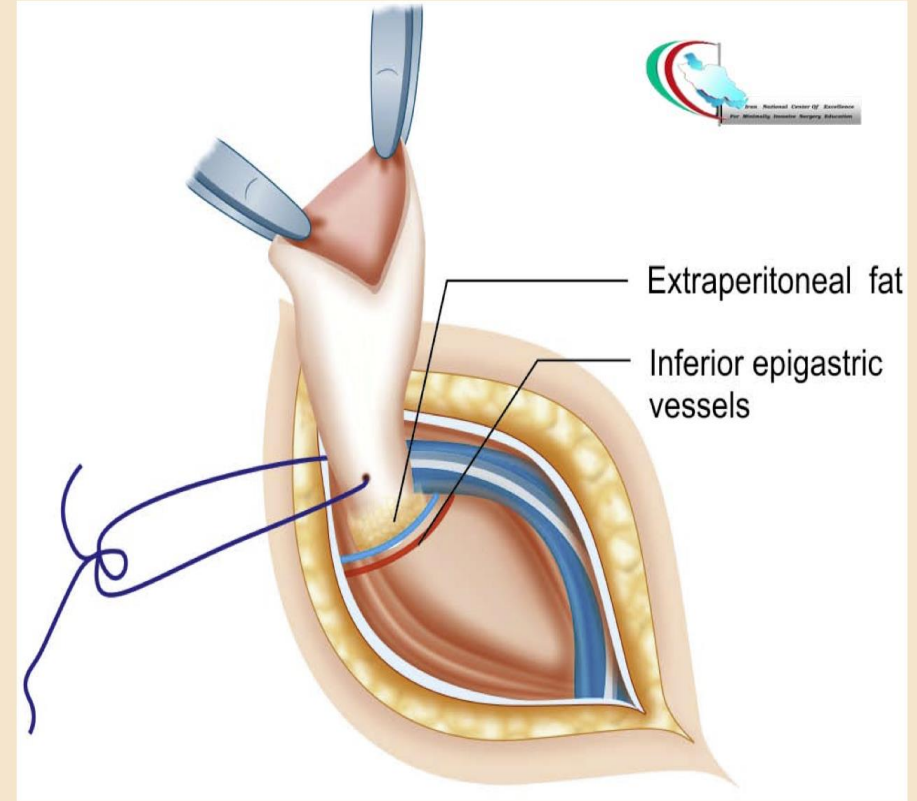


- ▲ Contents are reduced, sac is dissected upto the neck (extraperitoneal fat is seen and inferior epigastric vessels on the medial side).

Sac is ligated at the neck with absorbable suture.



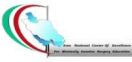
Sac is ligated at the neck



- ❖ Direct sacs should not be opened or ligated, but must be freed from transversalis fibers.
- ❖ In preperitoneal approach, sac is reduced but not ligated.
- ❖ In sliding hernia, sac is opened but no attempt should be made to dissect the contents from the sac, then the sac is inverted.
- ❖ Mobilizing the testis into the inguinal canal should be avoided to minimize the risk of testicular ischemic injury.



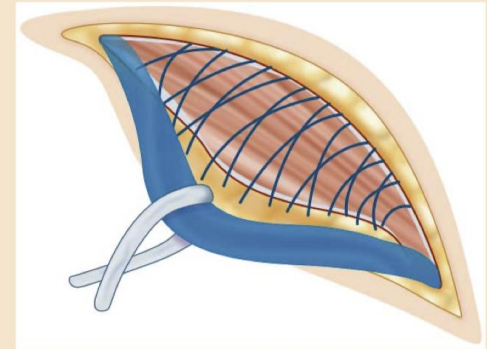
Primary tissue repair



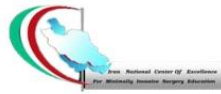
- ▲ Mostly abandoned due to high recurrence rates.
- ▲ Particularly indicated in strangulated inguinal hernia where mesh repair is contraindicated.
- ▲ Different approaches—

1. *Bassini repair*

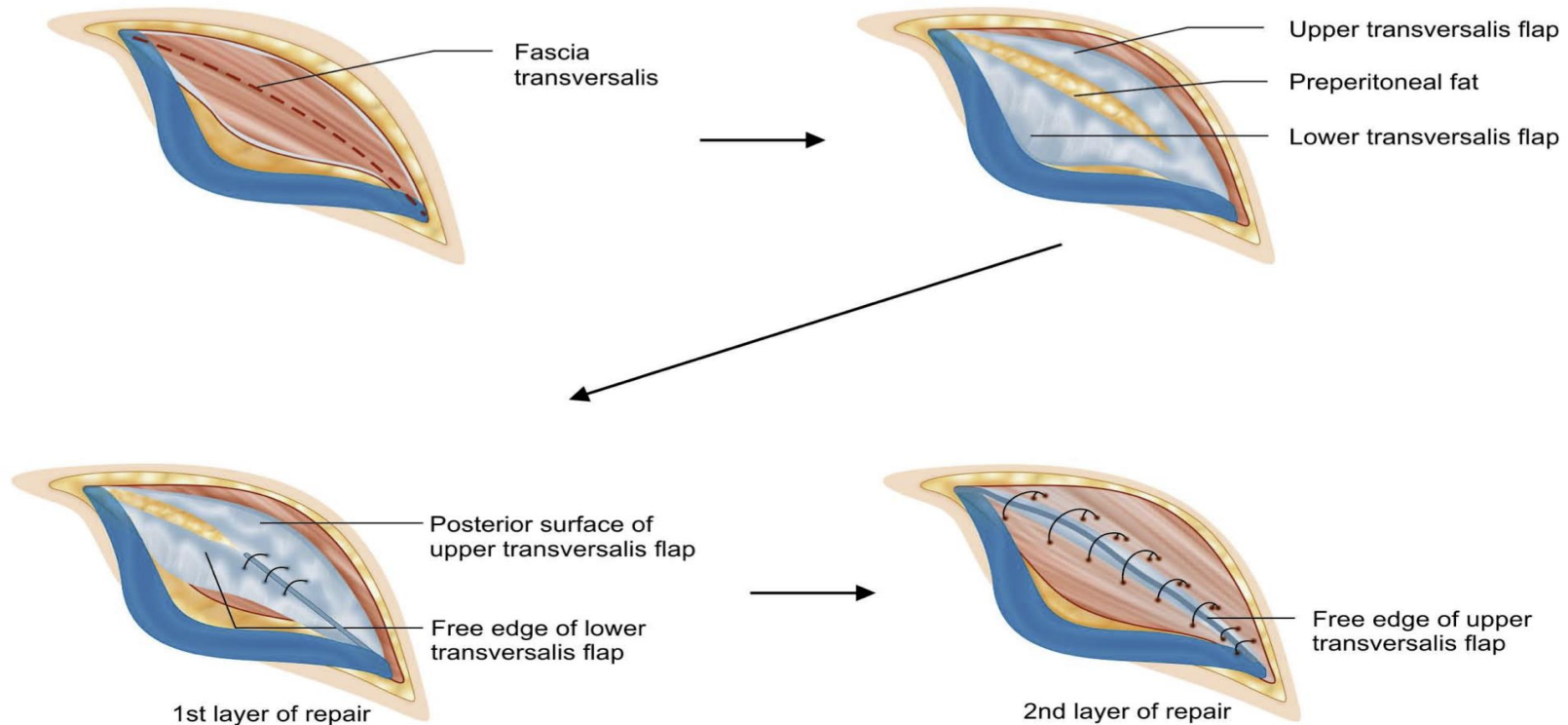
- ▲ Conjoint tendon is approximated to the inguinal ligament with the help of nonabsorbable suture (polypropylene)



2. Shouldice repair



- ▲ A multilayer repair of the posterior wall of the inguinal canal by continuous running suture technique.



- ▲ The 3rd layer brings together the conjoint tendon medially with the inguinal ligament laterally.
- ▲ The 4th layer brings together the anterior rectus sheath medially with the posterior aspect of the external oblique aponeurosis laterally.

3. McVay (Cooper's ligament) repair

- ▲ Is the only technique that repairs both inguinal and femoral hernia
- ▲ Edge of transversus abdominis is approximated to Cooper's ligament with nonabsorbable sutures.

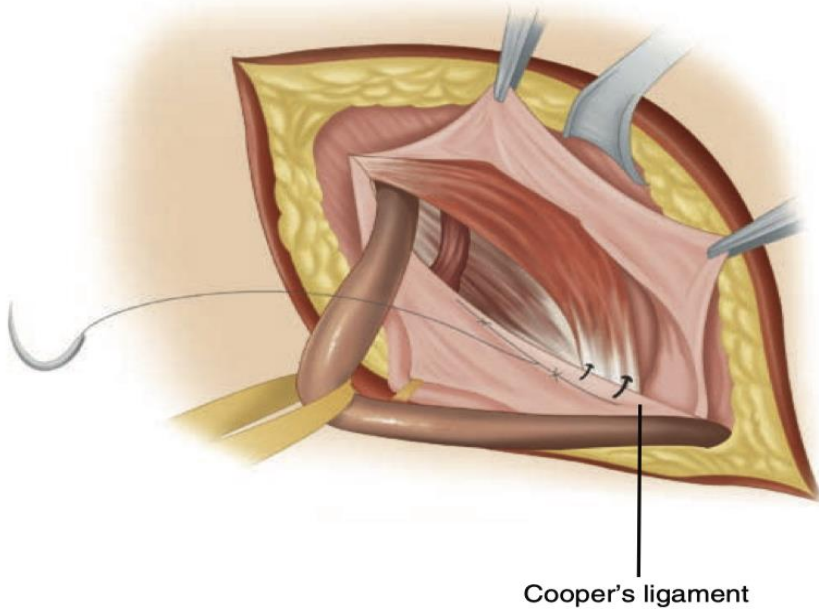


Figure 37-17. McVay Cooper's ligament repair.



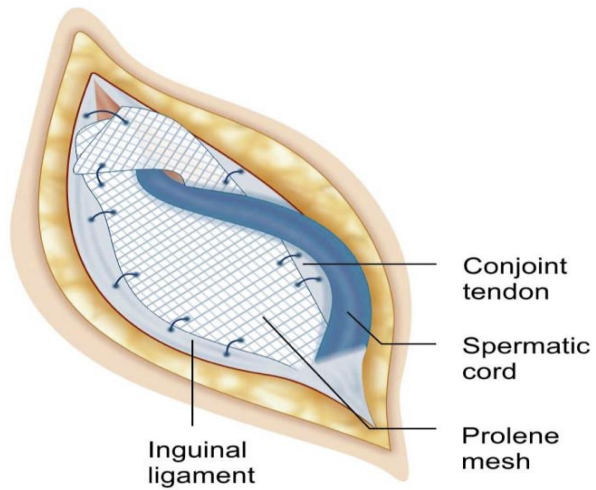
Tension-free repair

- ▲ Placement of a synthetic mesh prosthesis avoids any tension during repair—Therefore very few chances of recurrence.
- ▲ Different types of tension free repair—

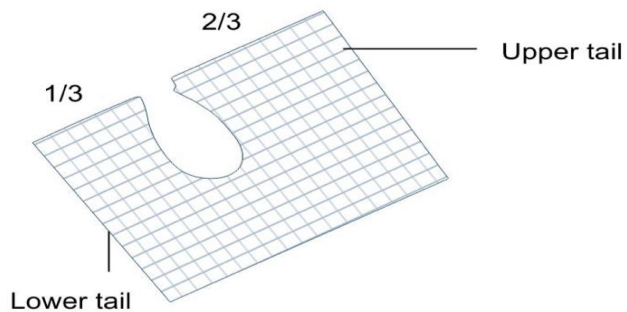
1. *Lichtenstein repair*

A piece of polypropylene mesh is placed over the floor of inguinal canal.

- ▲ Mesh is sutured to the
 - Fascia overlying the pubic tubercle, inferiorly.
 - Conjoint tendon, medially.
 - Inguinal ligament, laterally.
- ▲ Mesh is slit at the level of internal ring, the two limbs are crossed around the spermatic cord, thus creating a new internal ring.



Polypropylene mesh (6"x3")



Lichtenstein tension free repair (prolene mesh is placed over the fascia transversalis)

Laparoscopic approach

- ▲ This approach is based on the principle of preperitoneal approach.
 - ▲ Particularly indicated in bilateral and recurrent inguinal hernias.
 - ▲ 2 techniques :
 - TAPP
 - TEP
- } Final target is same (preperitoneal space), but initial access is different



Laparoscopic approach

- ❖ The indications for laparoscopic inguinal hernia repair are similar to those for open repair
- ❖ Most surgeons would agree that the endoscopic approach to:
bilateral or recurrent inguinal hernias is superior to the open approach
- ❖ If a hernia patient is scheduled to undergo another laparoscopic procedure without gross contamination, such as prostatectomy



Laparoscopic approach

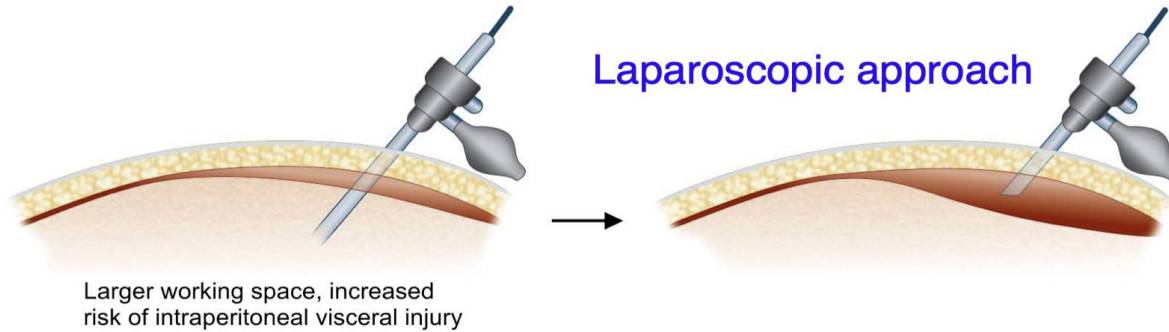
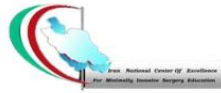
- **Contraindications include:**

- 1) Coagulopathy
- 2) Severe cardiopulmonary disease
- 3) Precluding induction of general anesthesia and pneumoperitoneum

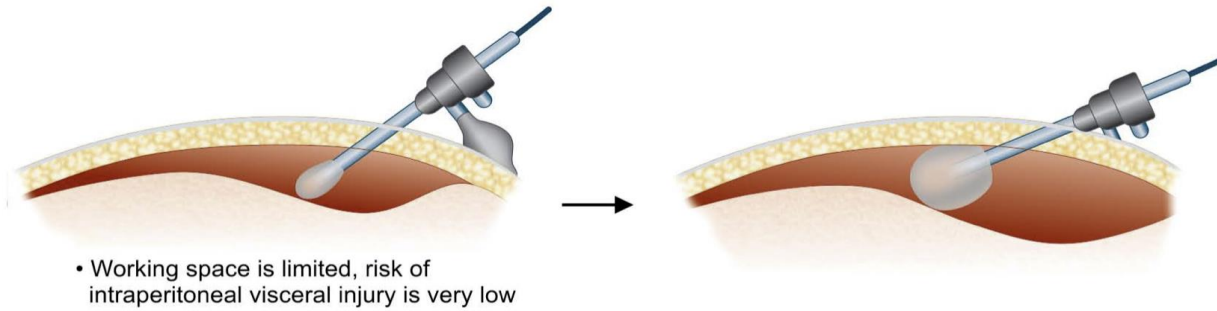
- Previous preperitoneal repair is a **relative contraindication** along with the presence of a large incarcerated inguinal hernia



In TAPP repair, the preperitoneal space is accessed after entering into the peritoneal cavity



In TEP repair, the preperitoneal space is created using a balloon dissector.



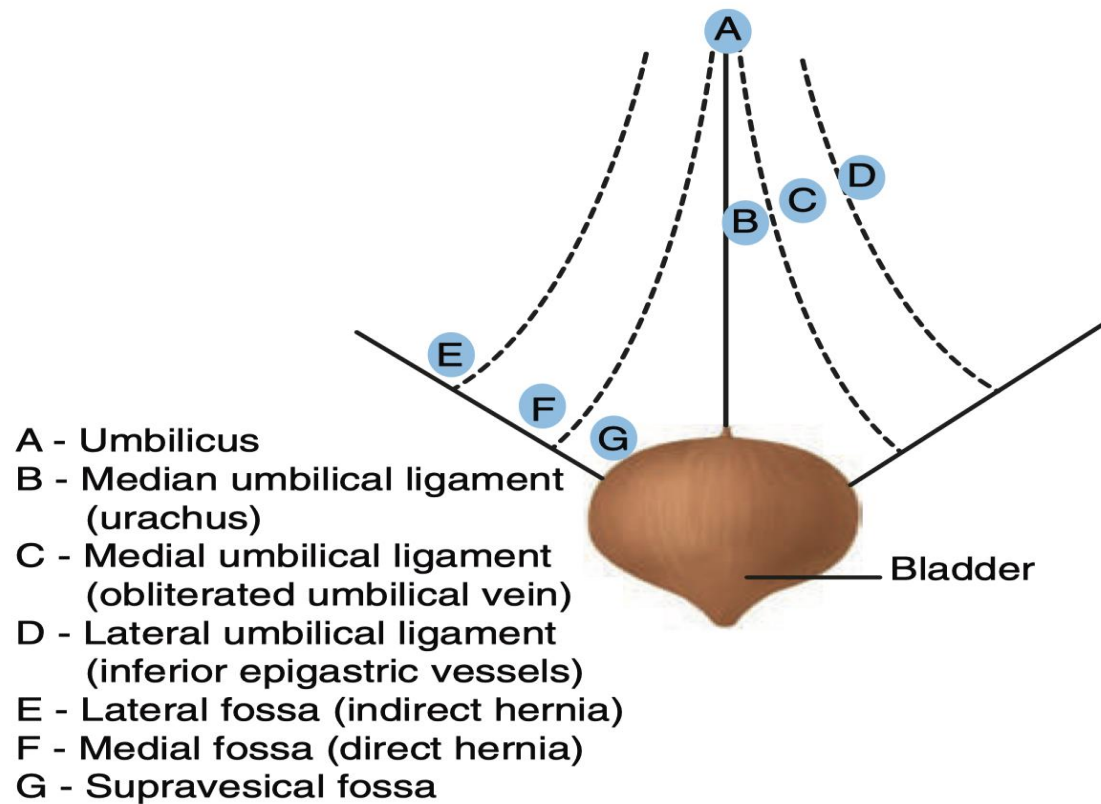


Figure 37-4. Posterior view of intraperitoneal folds and associated fossa: *A.* Umbilicus. *B.* Median umbilical ligament. *C.* Medial umbilical ligament (obliterated umbilical vein). *D.* Lateral umbilical ligament (inferior epigastric vessels). *E.* Lateral fossa (indirect hernia). *F.* Medial fossa (direct hernia). *G.* Supravesical fossa. (*Modified*

Inverted Y & 5 triangles

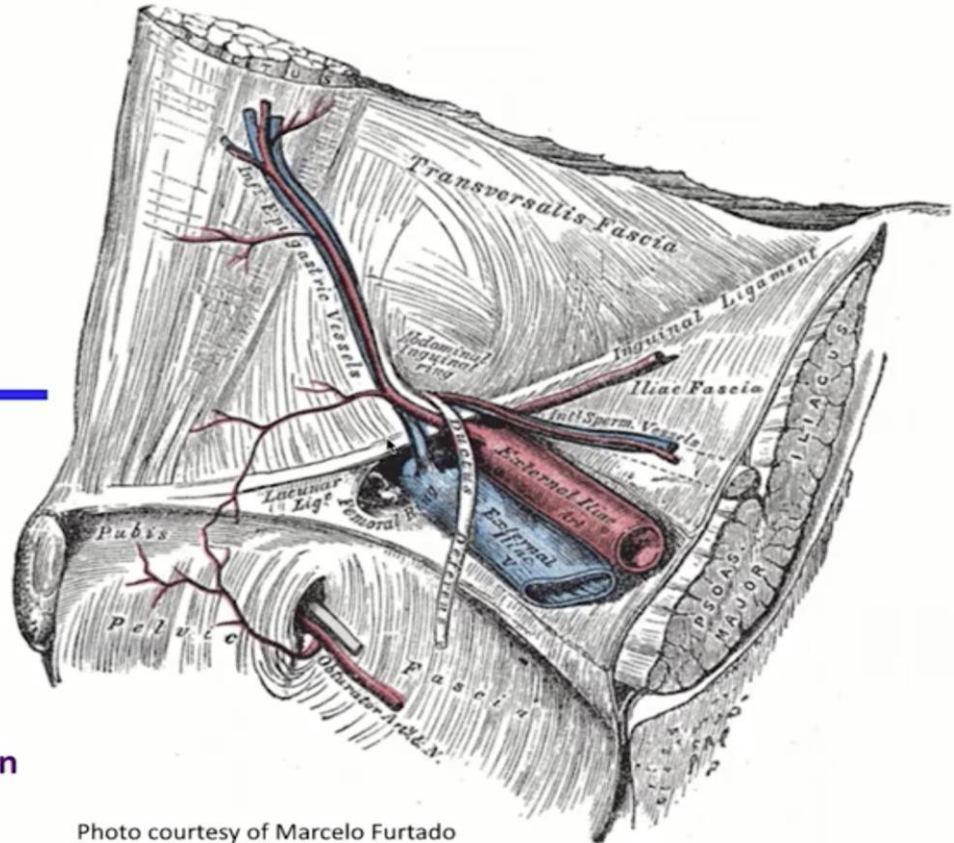
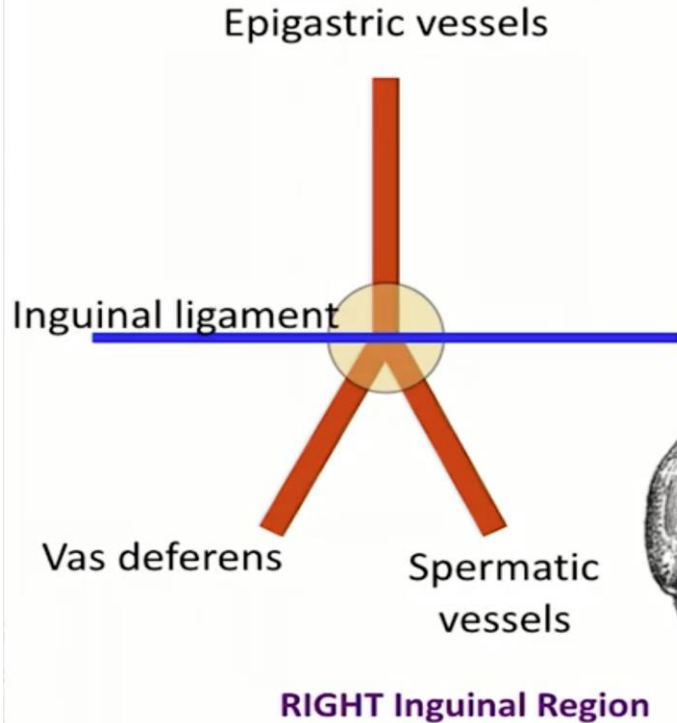
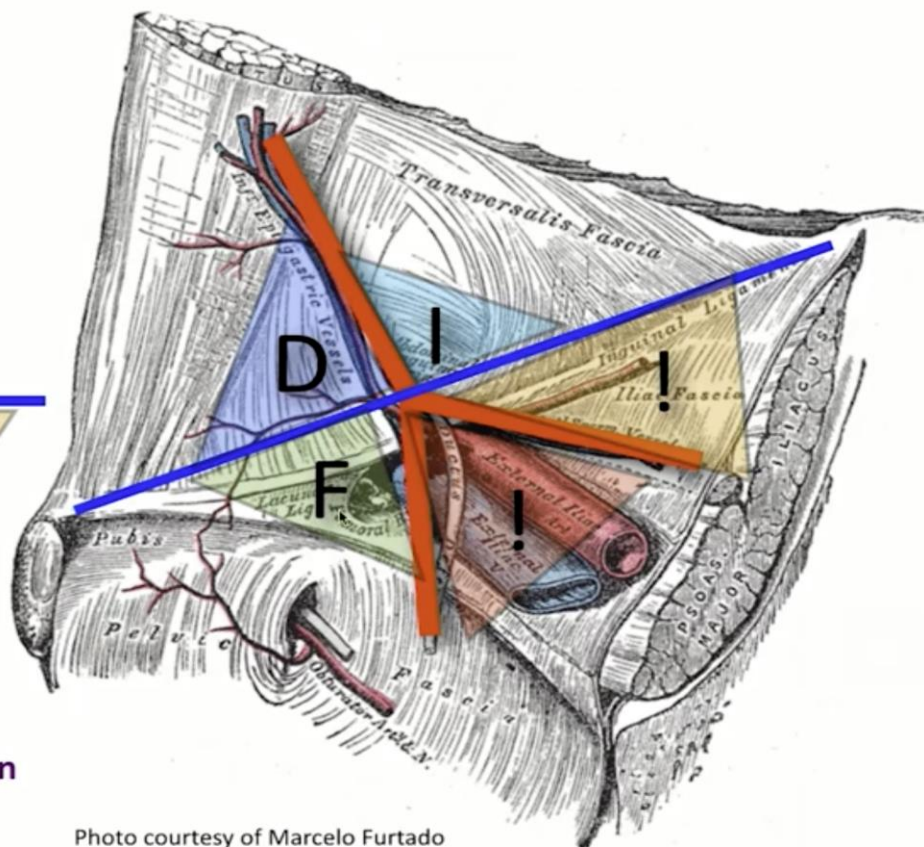
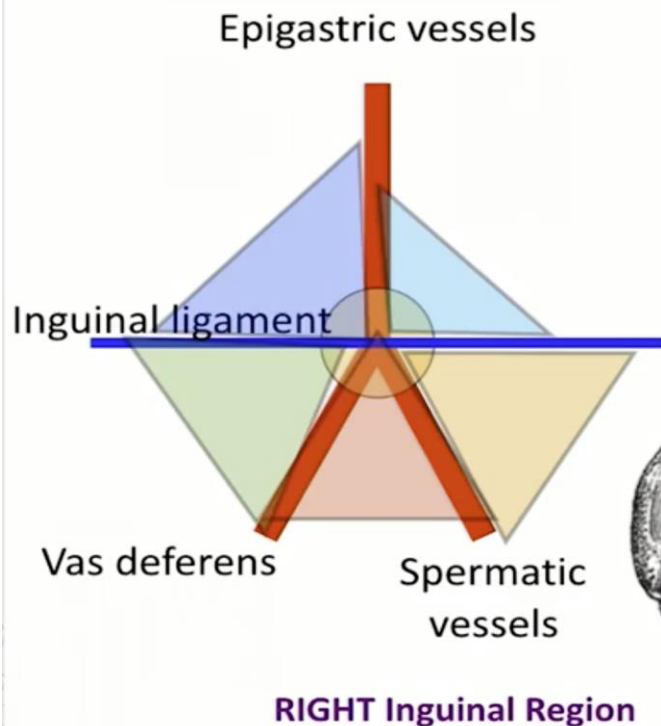
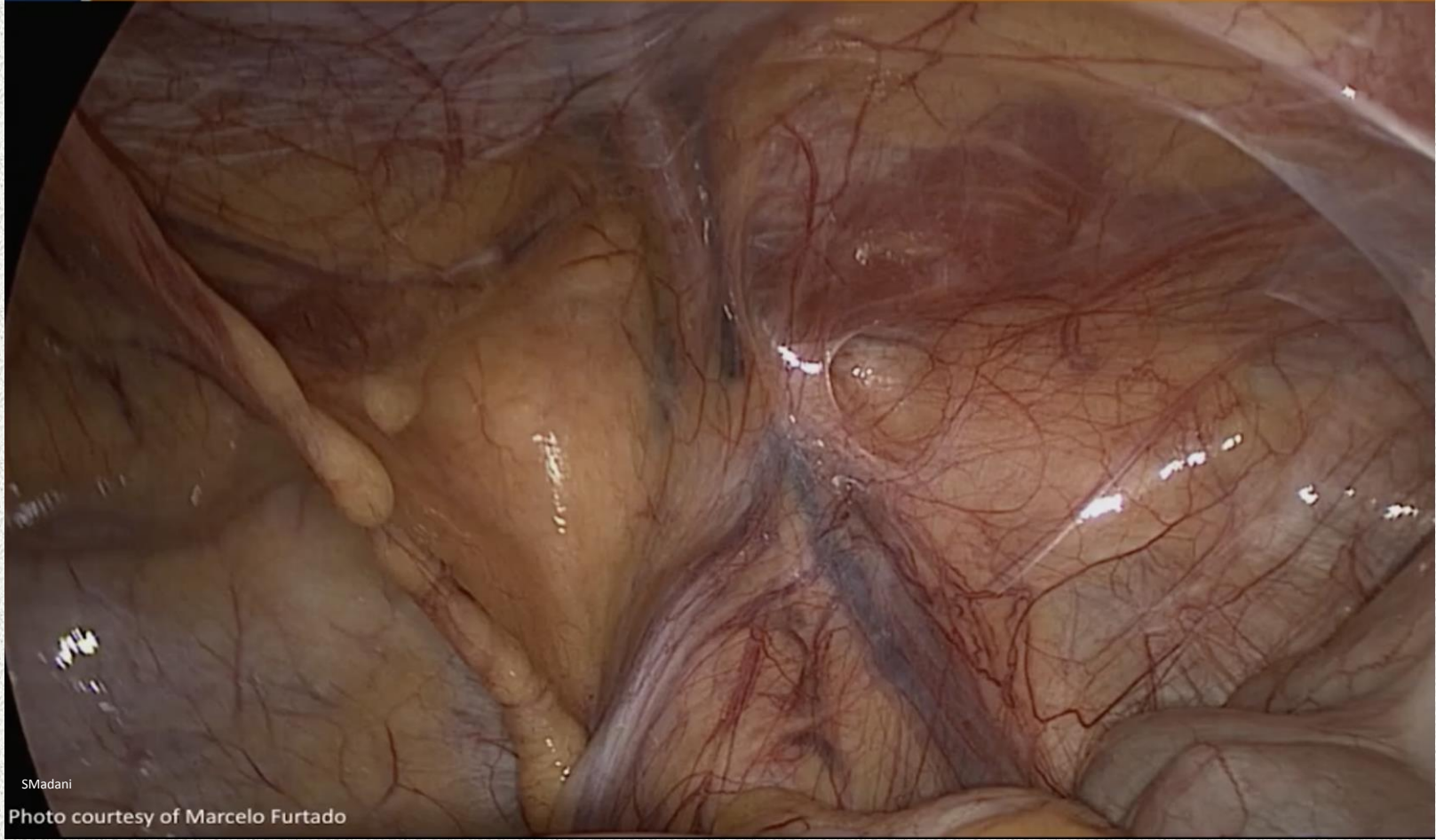


Photo courtesy of Marcelo Furtado

Inverted Y & 5 triangles



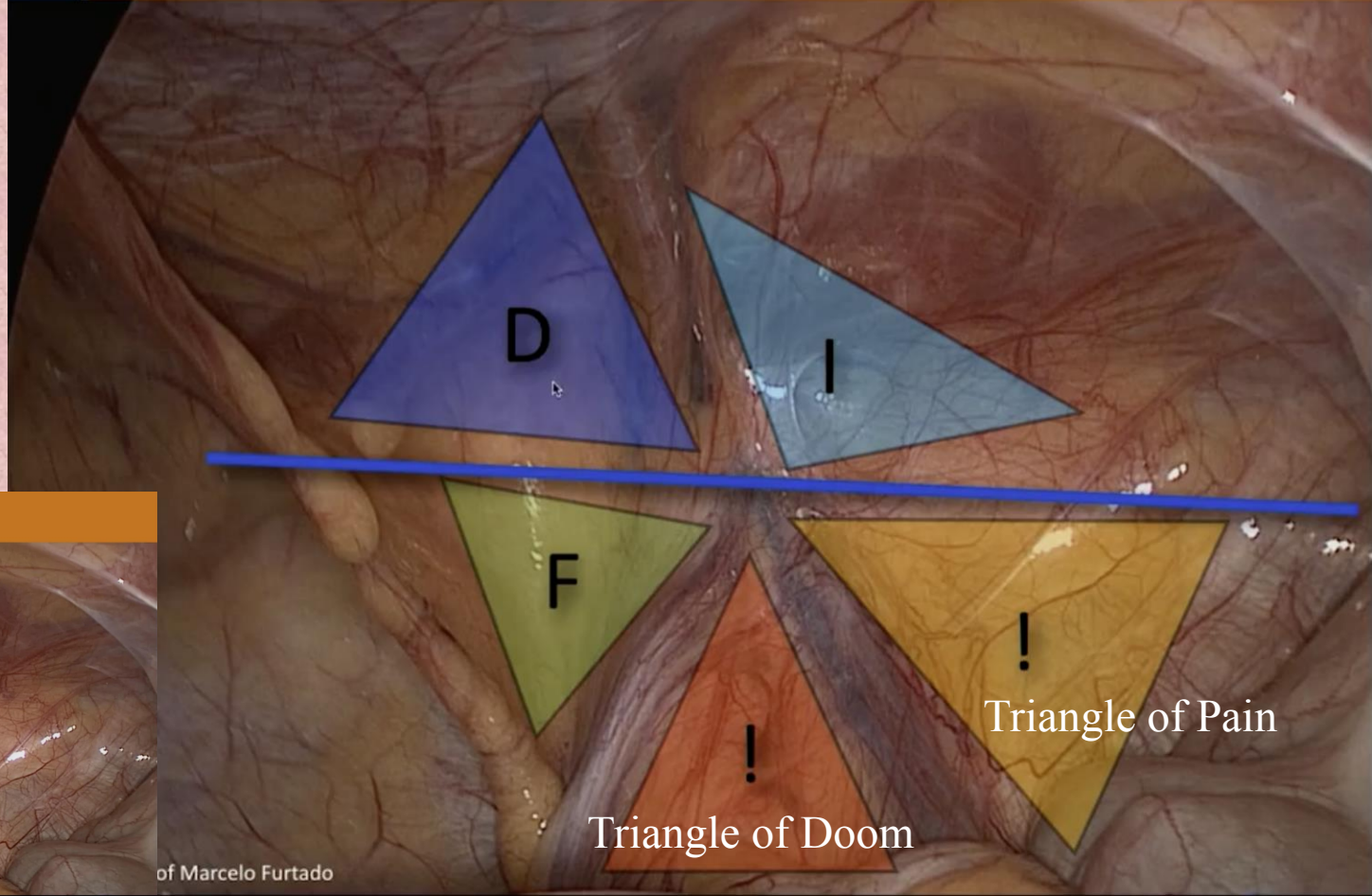
Inverted Y & 5 triangles



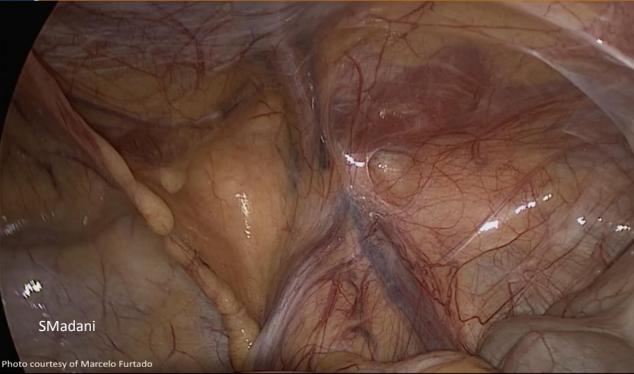
SMadani

Photo courtesy of Marcelo Furtado

Inverted Y & 5 triangles



Inverted Y & 5 triangles



TAPP



Photo courtesy of Marcelo Furtado

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TAPP

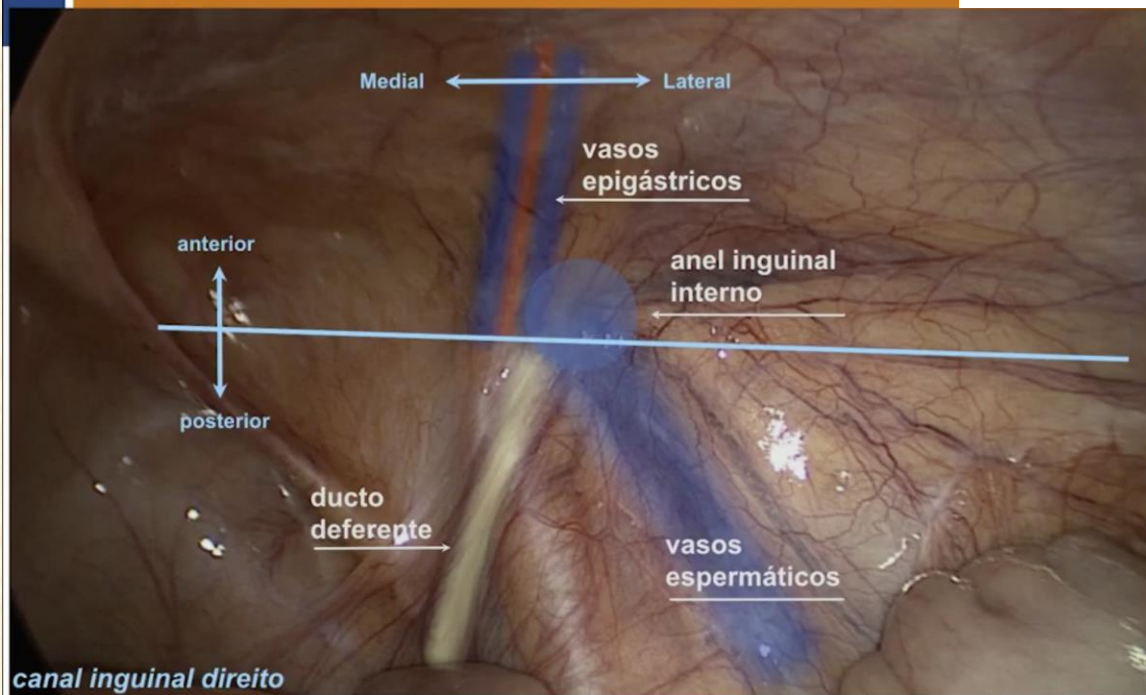
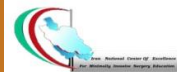


Photo courtesy of Marcelo Furtado

TAPP

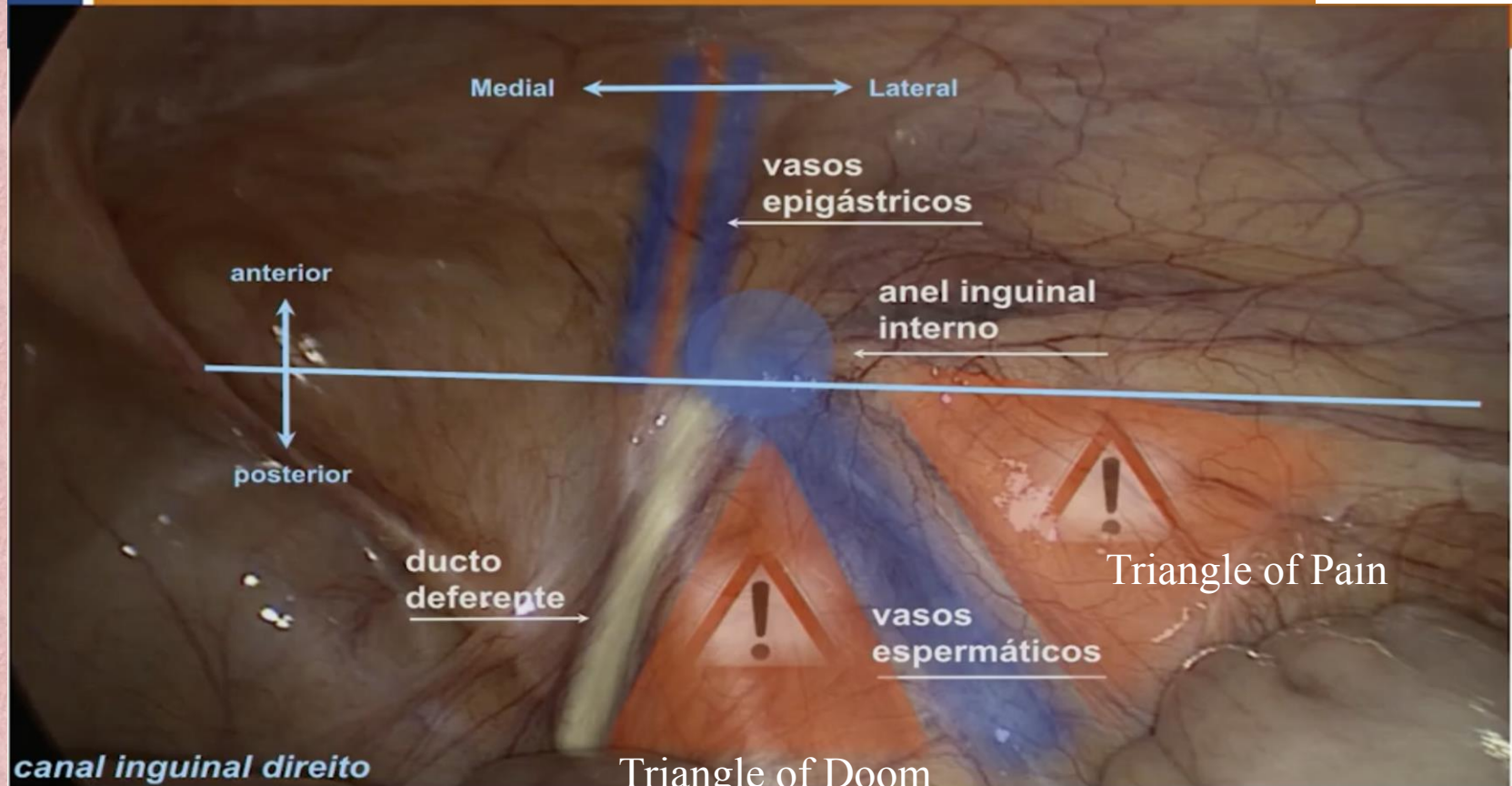
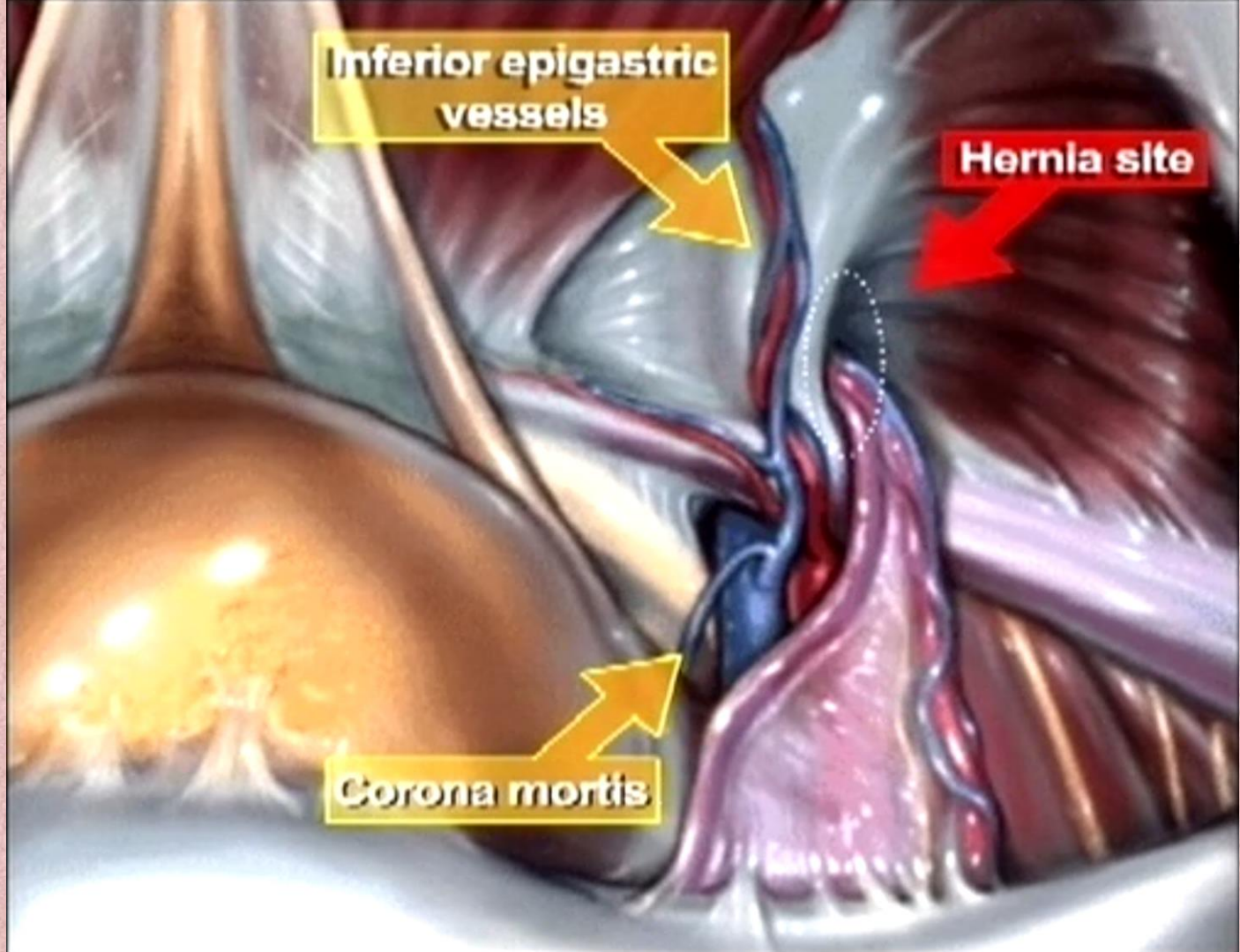


Photo courtesy of Marcelo Furtado

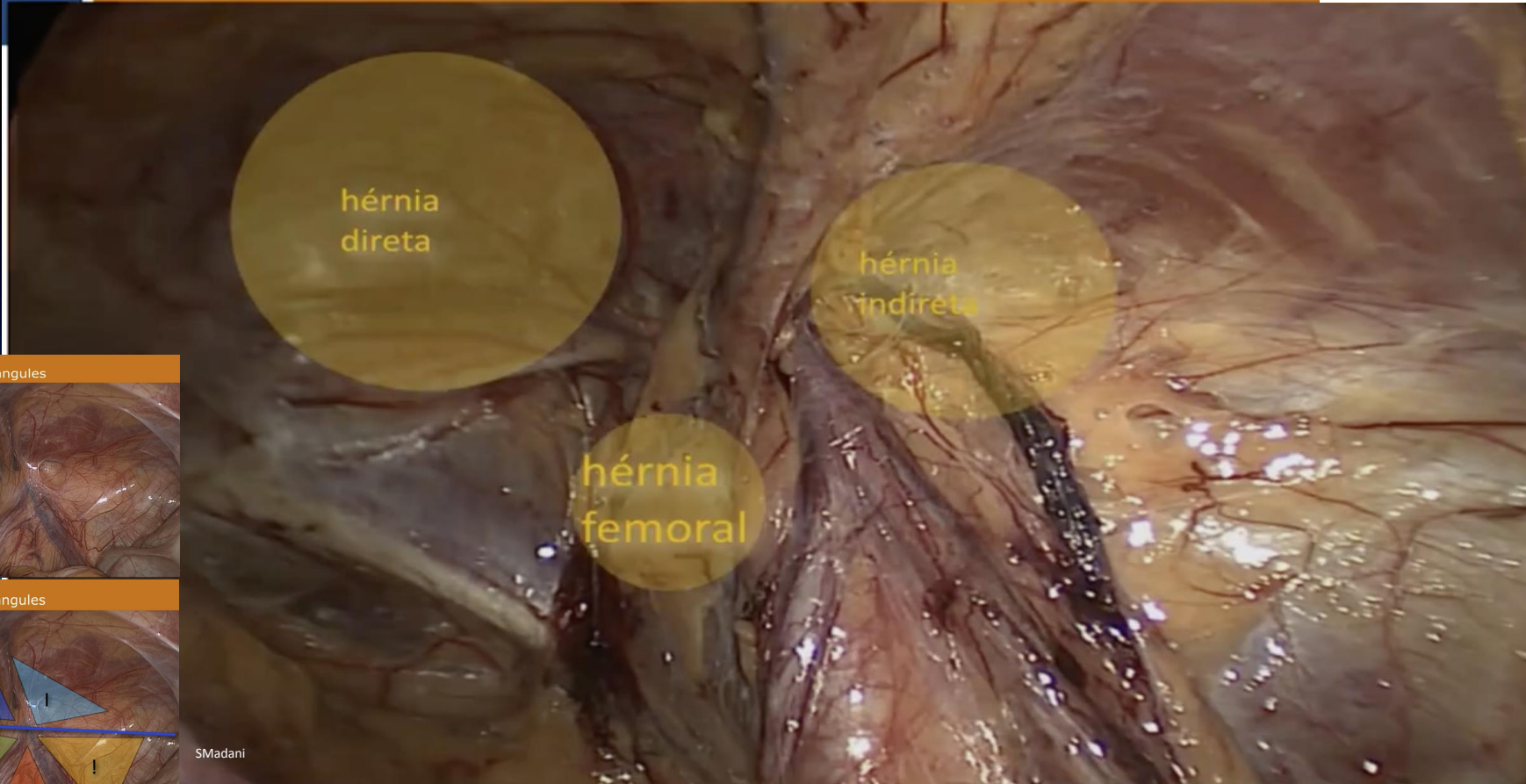
**Inferior epigastric
vessels**

Hernia site

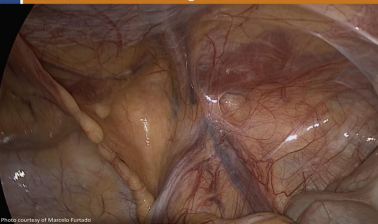
Corona mortis



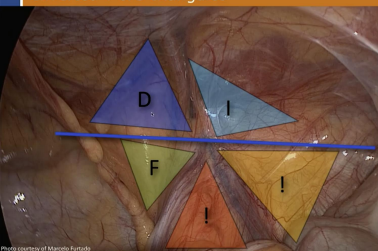
TAPP



Inverted Y & 5 triangles



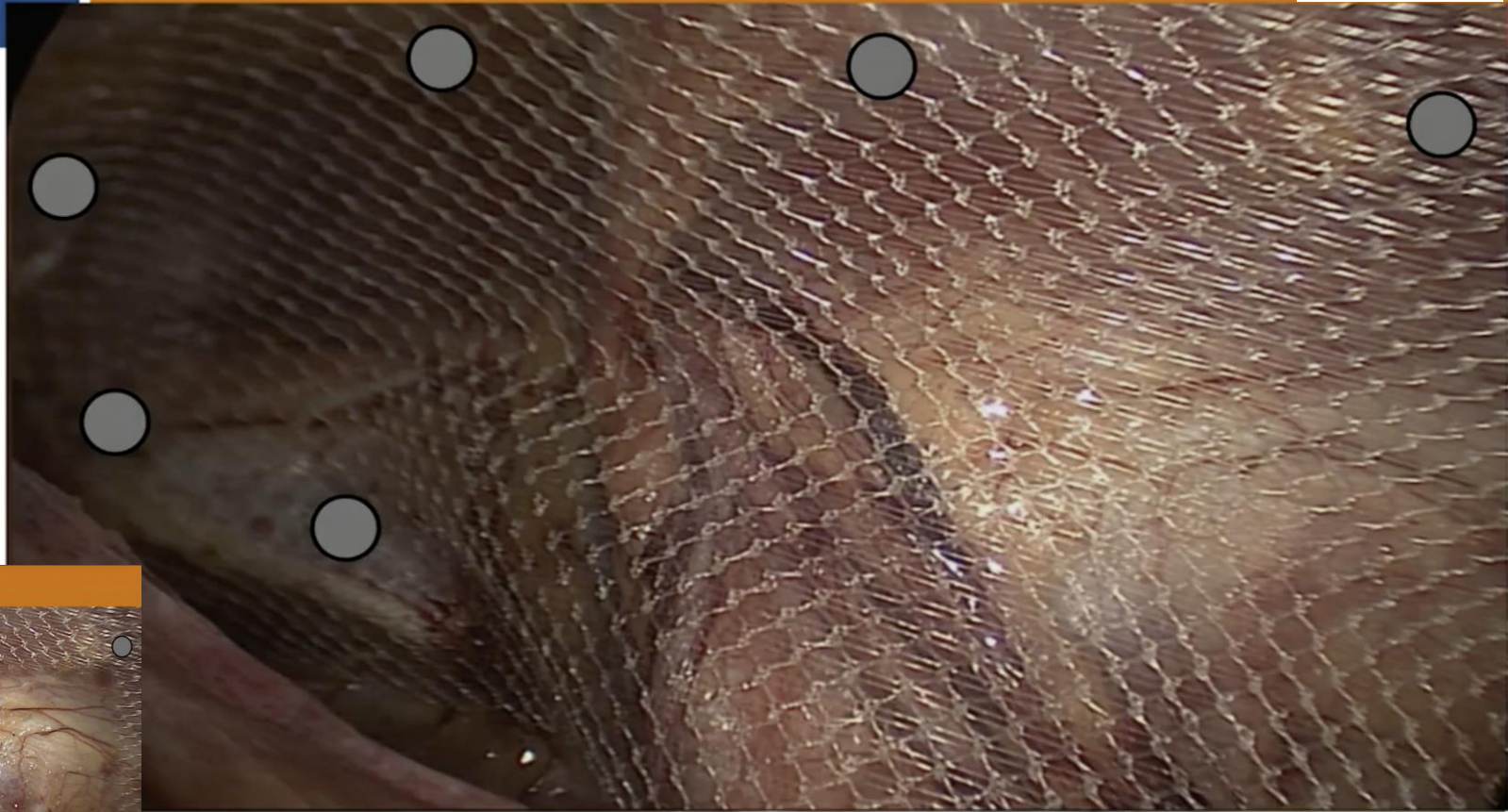
Inverted Y & 5 triangles



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TAPP



TAPP



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