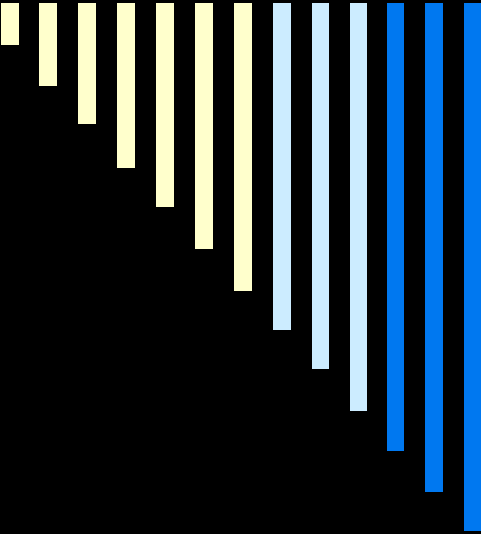
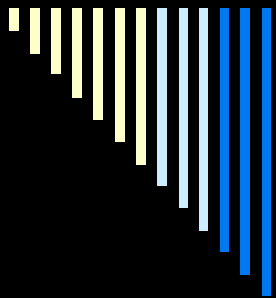



Totally Extraperitoneal Repair of hernia

R.K.Mishra





TEP

Totally Extra Peritoneal
Repair

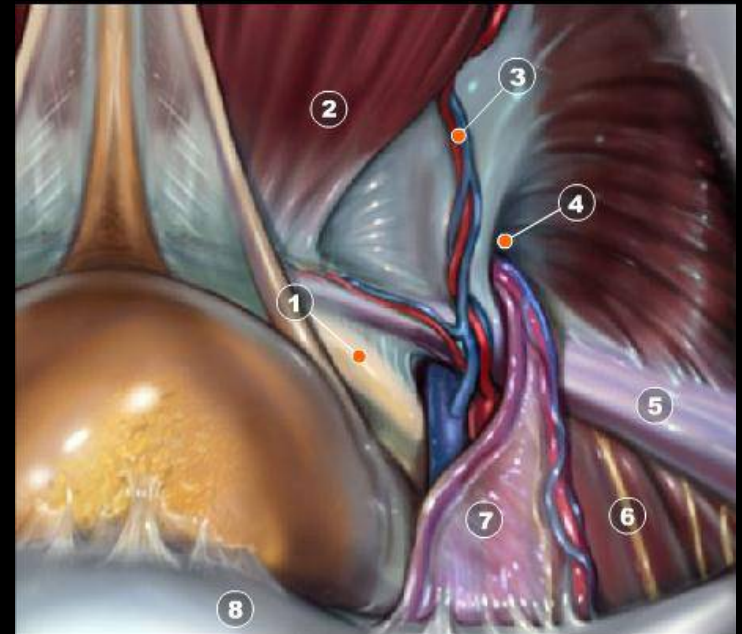


Anatomy

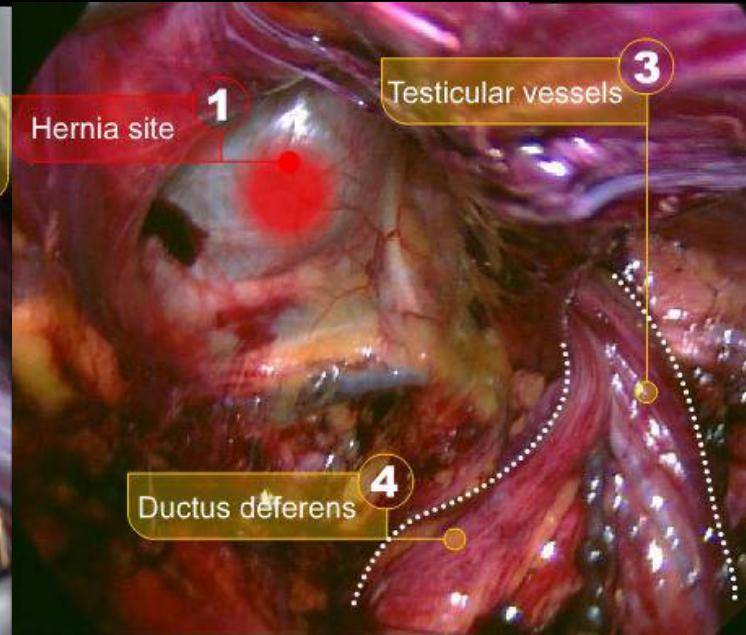
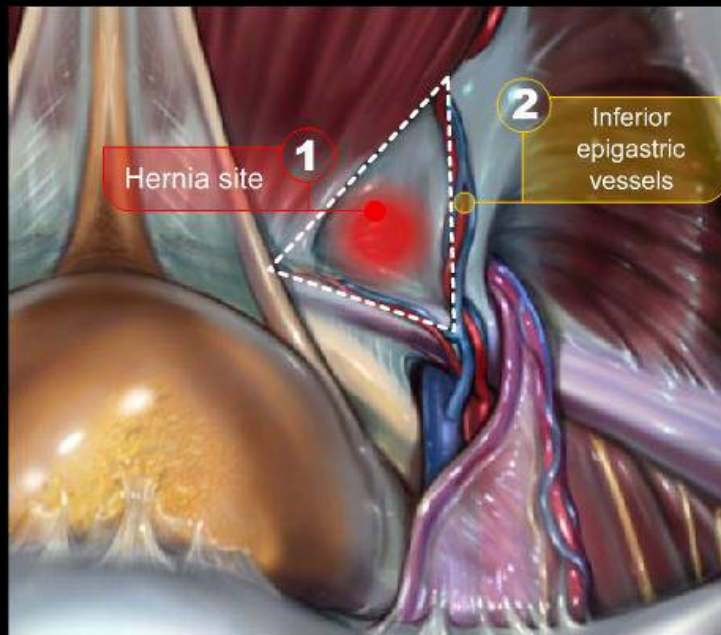
The inferior epigastric vessels constitute the main landmark.

The position of the iliac vessels should be noted to avoid injury.

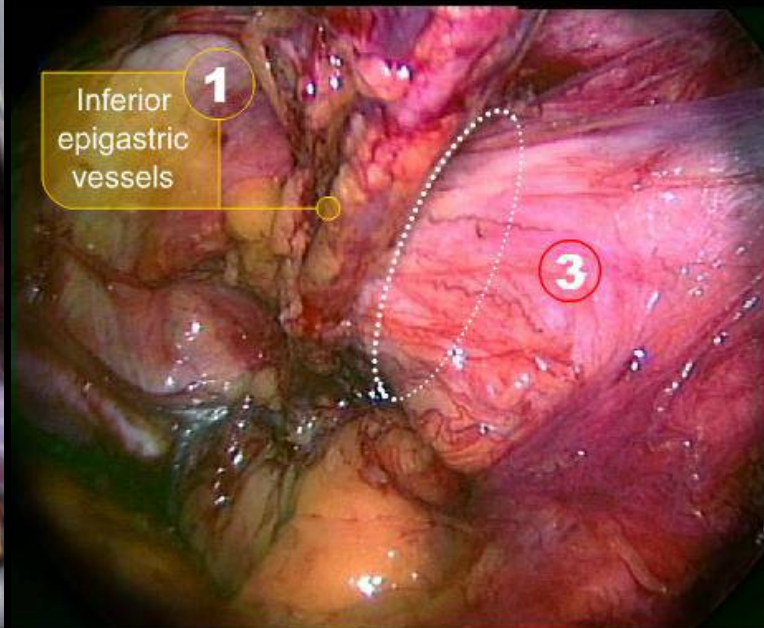
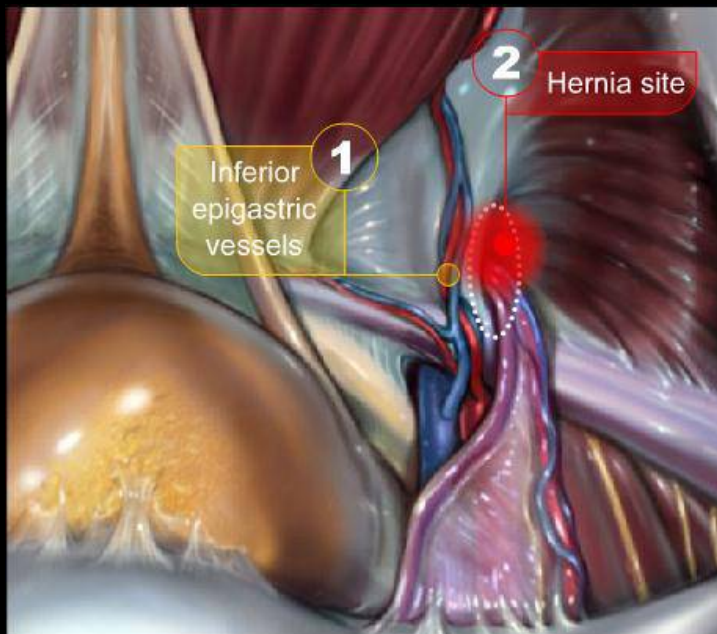
1. Pectineal ligament
2. Rectus abdominis muscle
3. Epigastric vessels
4. Internal ring
5. Iliopubic tract
6. Cutaneous nerves on psoas muscle
7. Urogenital fascia
8. Reflected peritoneum



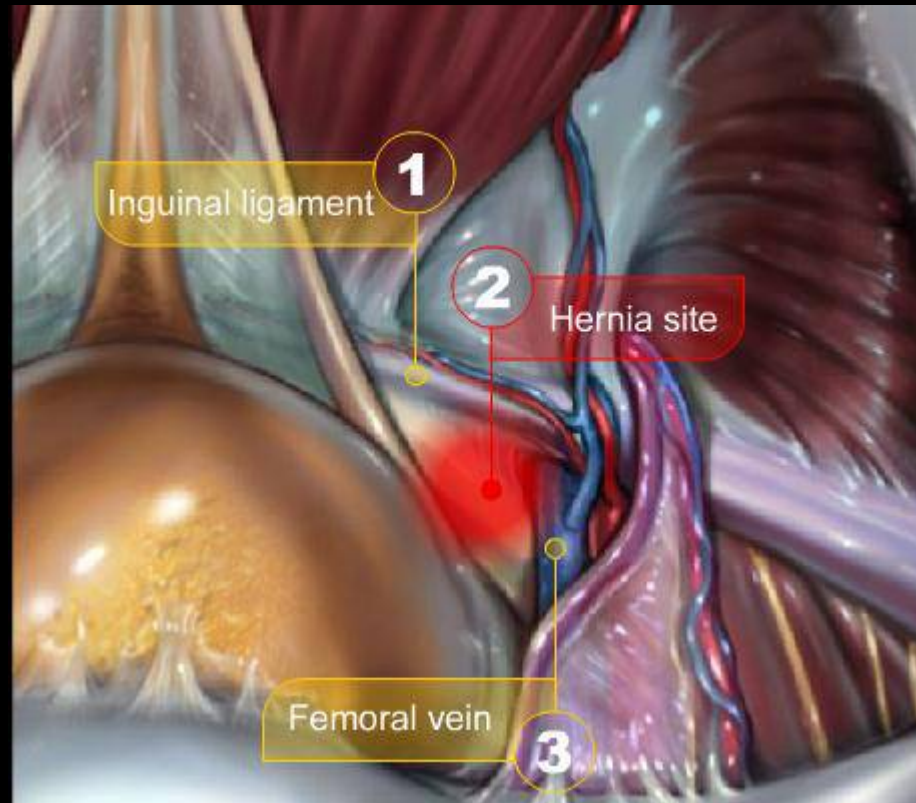
Anatomy Direct Hernia



Anatomy Indirect Hernia

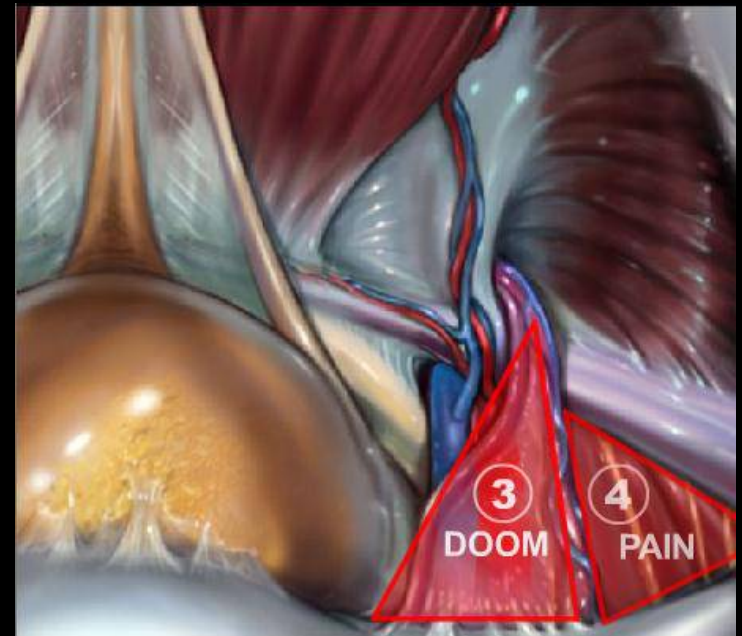


Anatomy Femoral Hernia



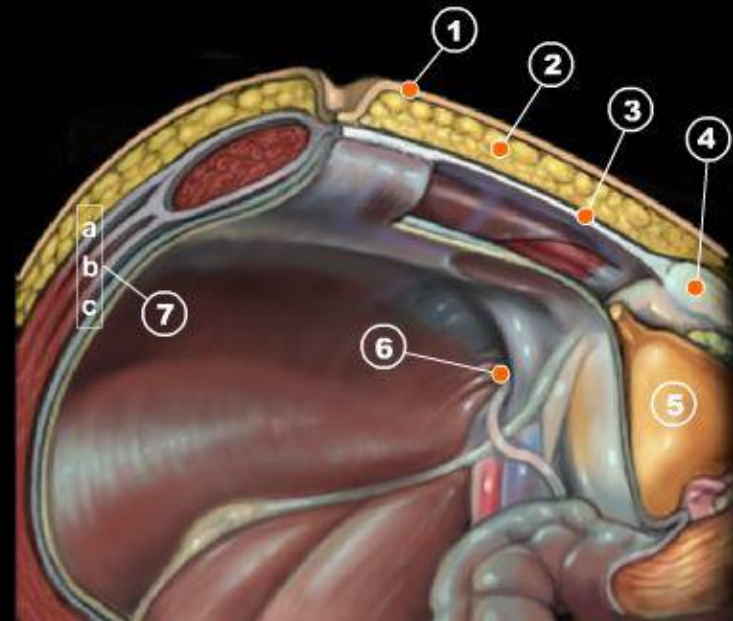
Danger Area

1. The Triangle of Pain: Potential for nerve injury or entrapment.
2. The Triangle of Doom: Potential injury to the great vessels.
3. Femoral vessels
4. Cutaneous nerves

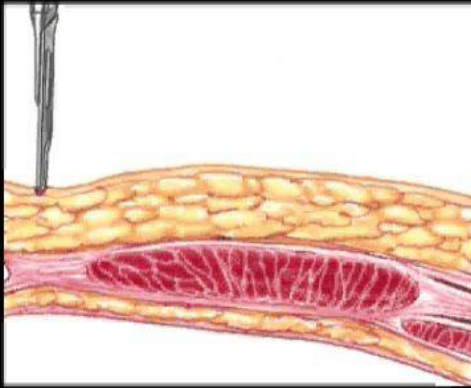


3D Anatomy

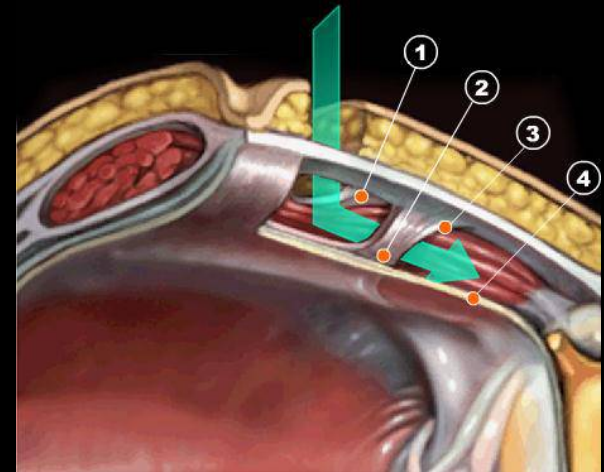
1. Skin
2. Fatty tissue
3. Linea alba
4. Pubic symphysis
5. Urinary bladder
6. Internal ring
7. Muscles of the abdominal wall:
 - a) External oblique muscle
 - b) Internal oblique muscle
 - c) Transversus abdominis muscle



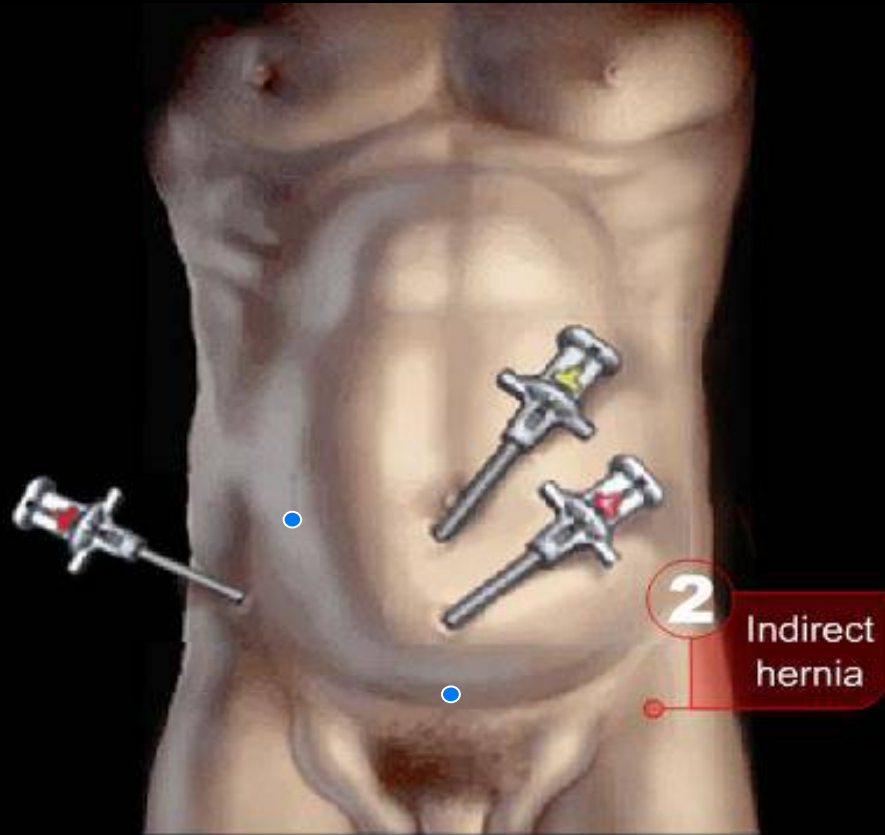
3D Anatomy



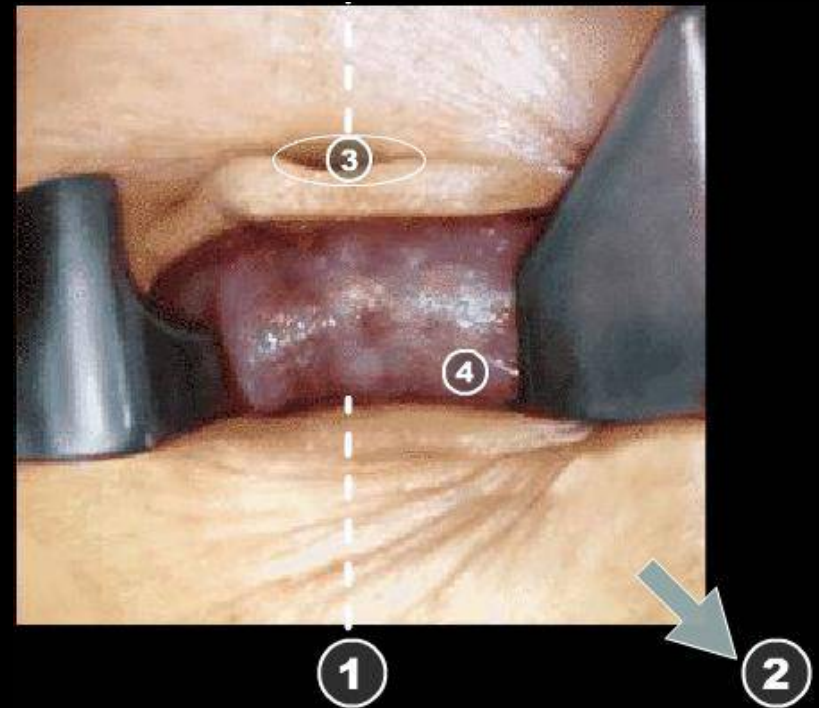
1. Incised anterior layer of rectus sheath
2. Posterior layer of rectus sheath
3. Arcuate line
4. Peritoneum



Port Position



Creation of Plane

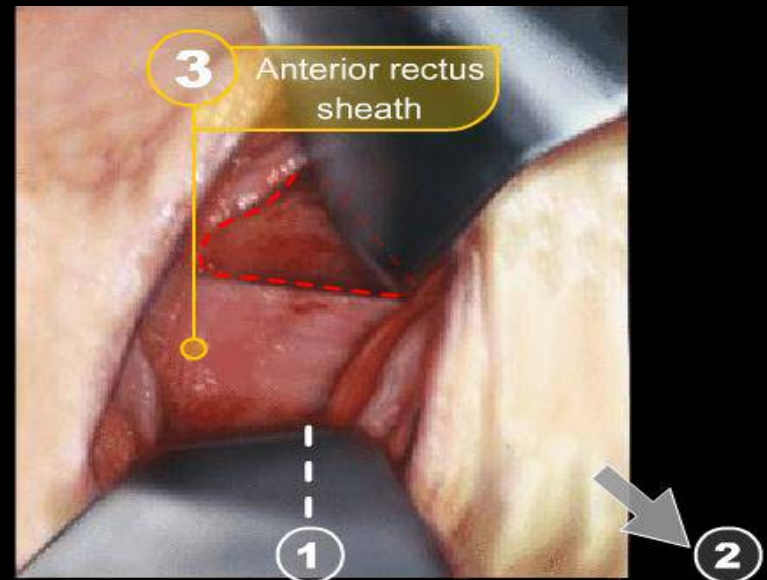
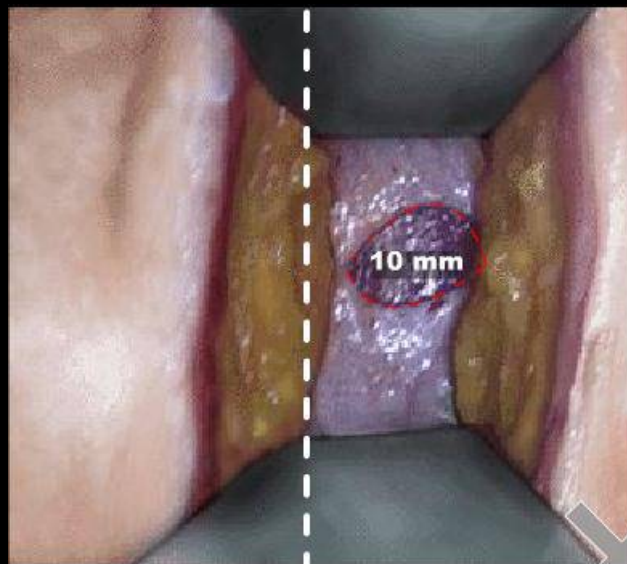


15 mm skin incision inferior to the umbilicus, slightly towards the side of the hernia.

- 1. Midline
- 2. Hernia



Creation of Plane



Incise anterior sheath, extending 10 mm to hernia side.

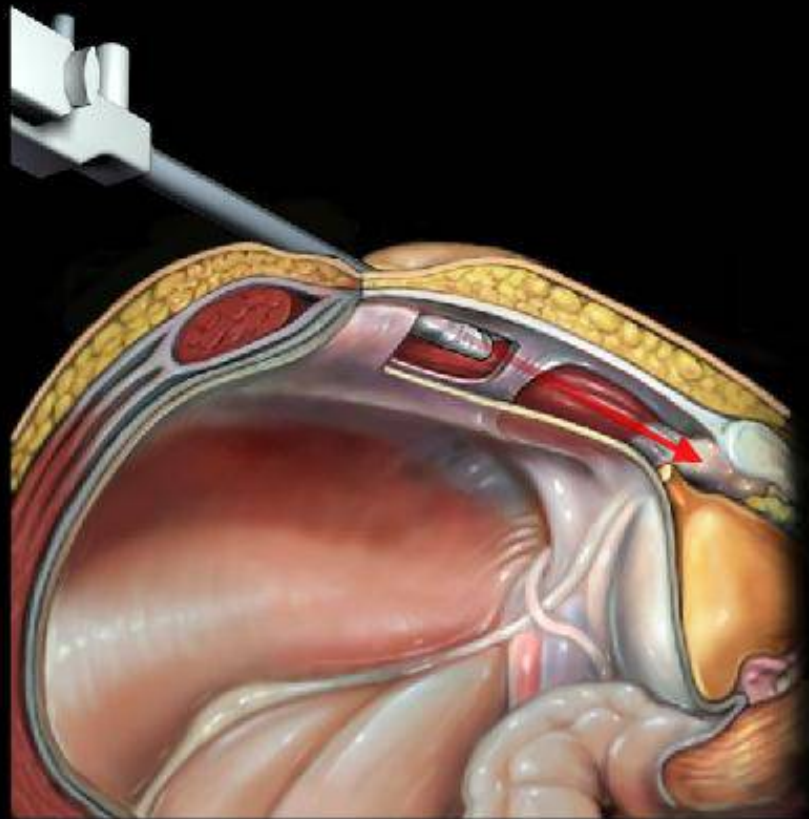
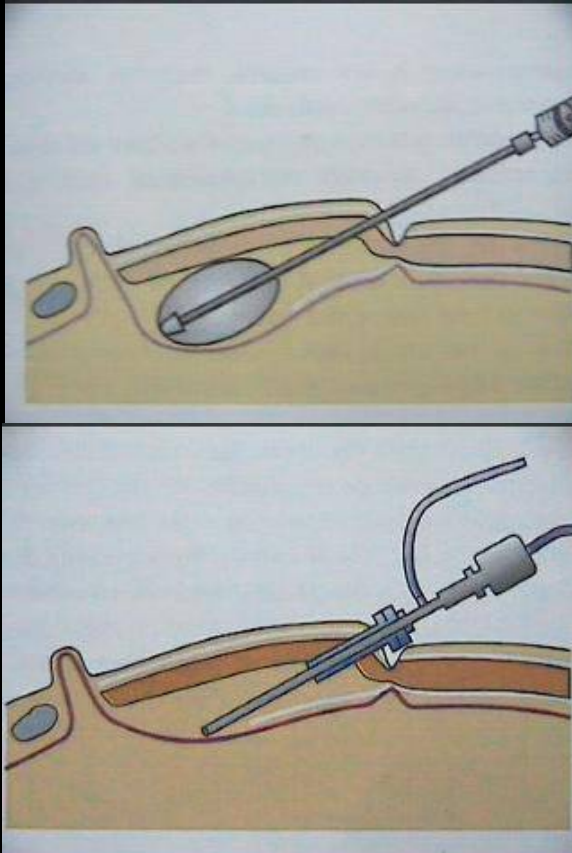
1. Midline

2. Hernia

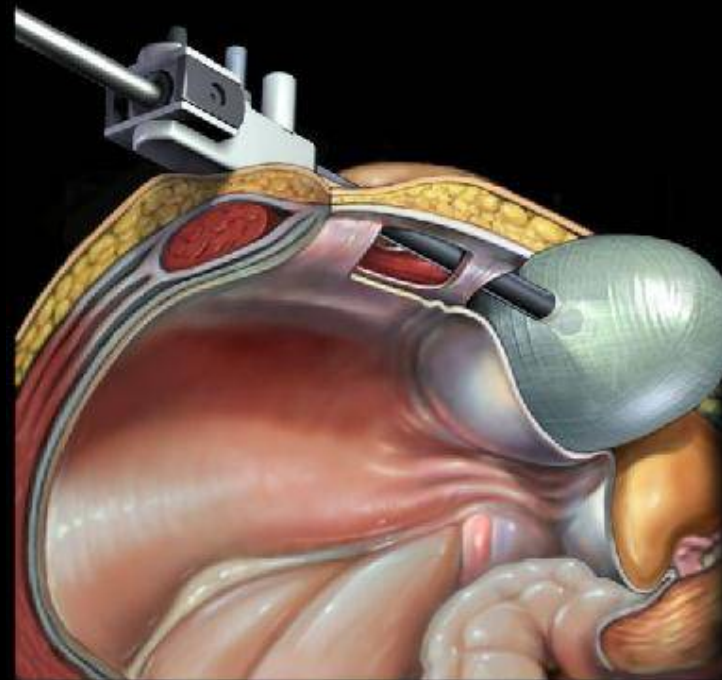
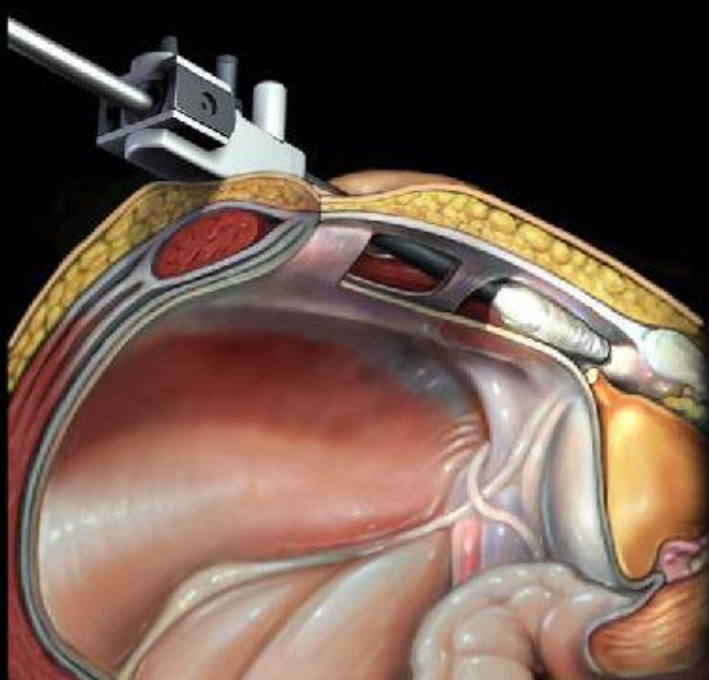


Steps of TEP

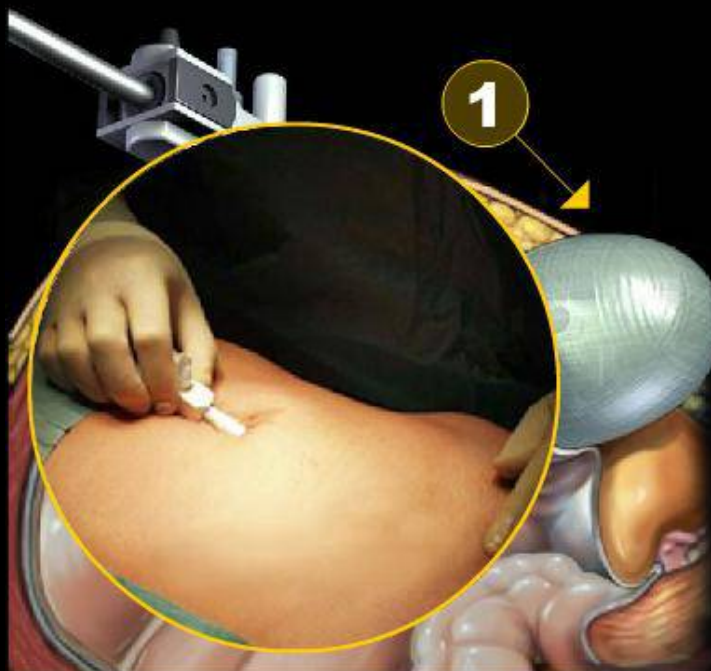
Approach to pre-peritoneal space



Balloon Dilatation



Balloon Dilatation

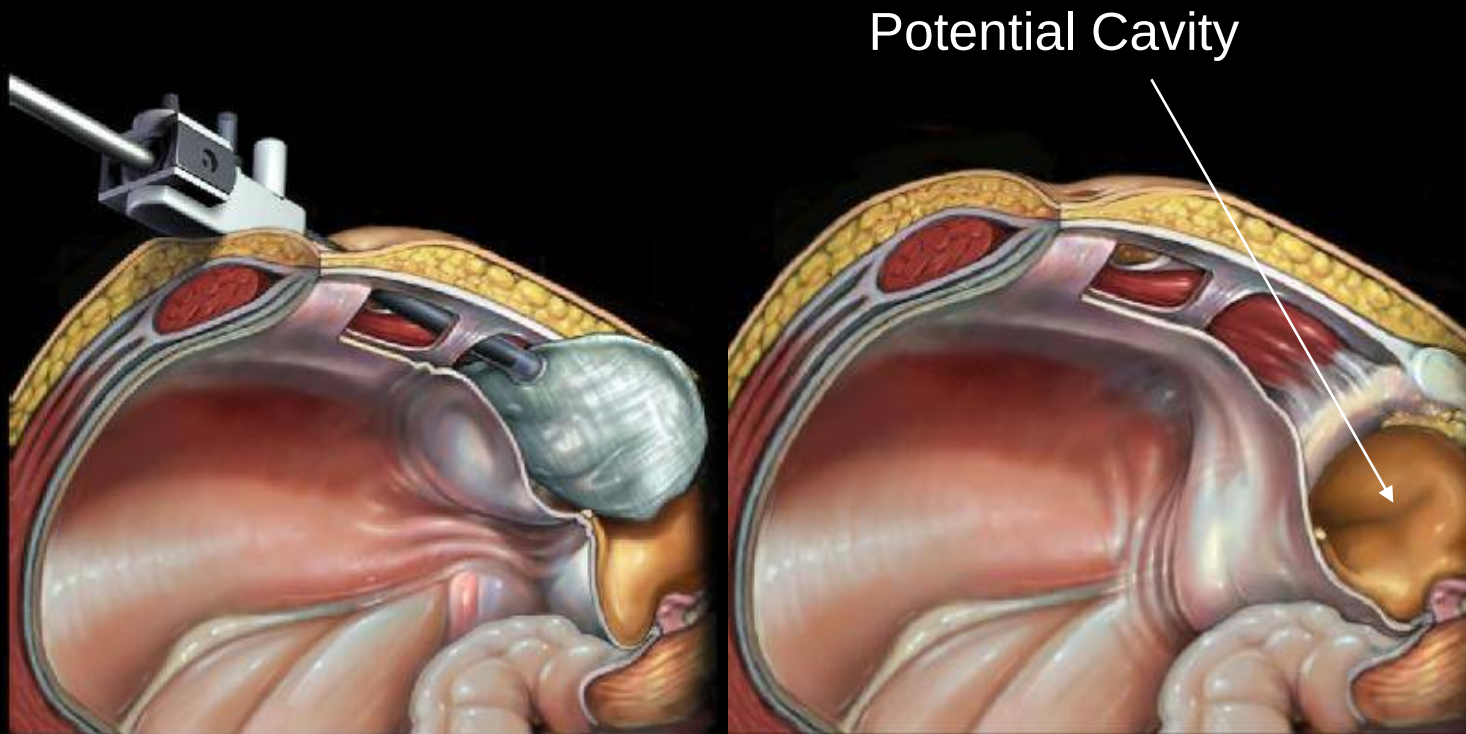


Left hand directs balloon inflation

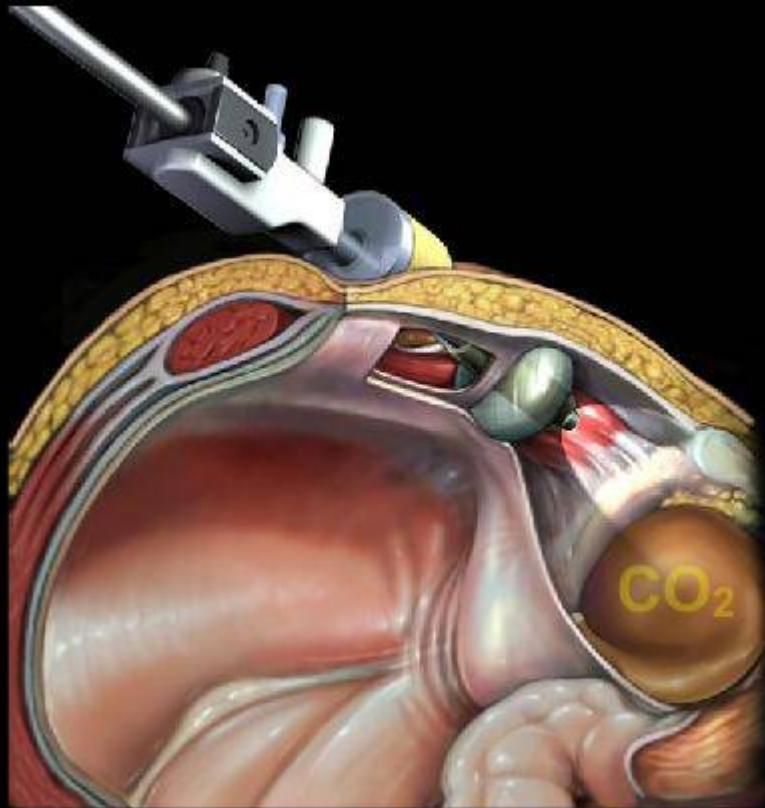
1. The surgeon's left hand guides the balloon into position.



Removal of Balloon



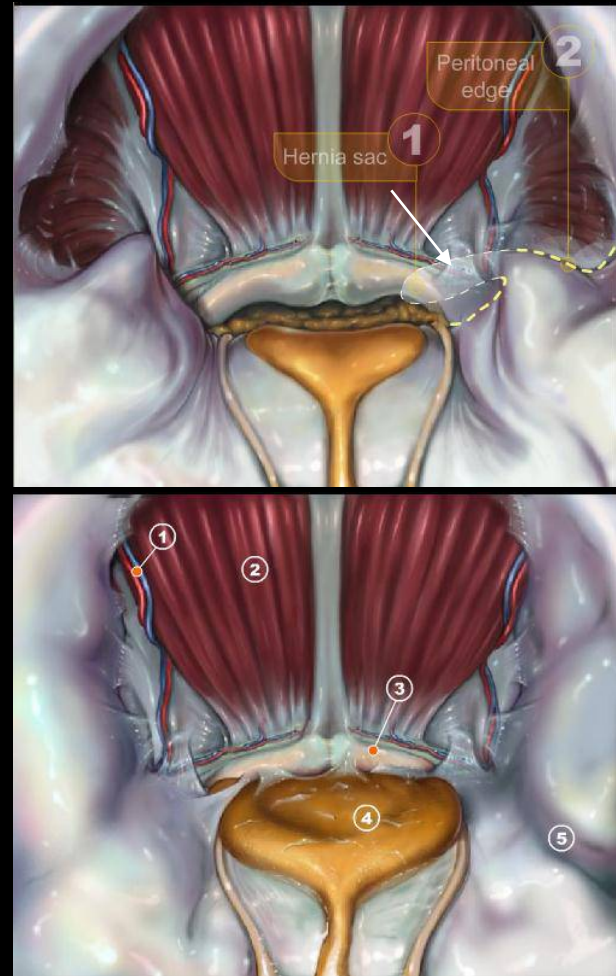
Insufflation



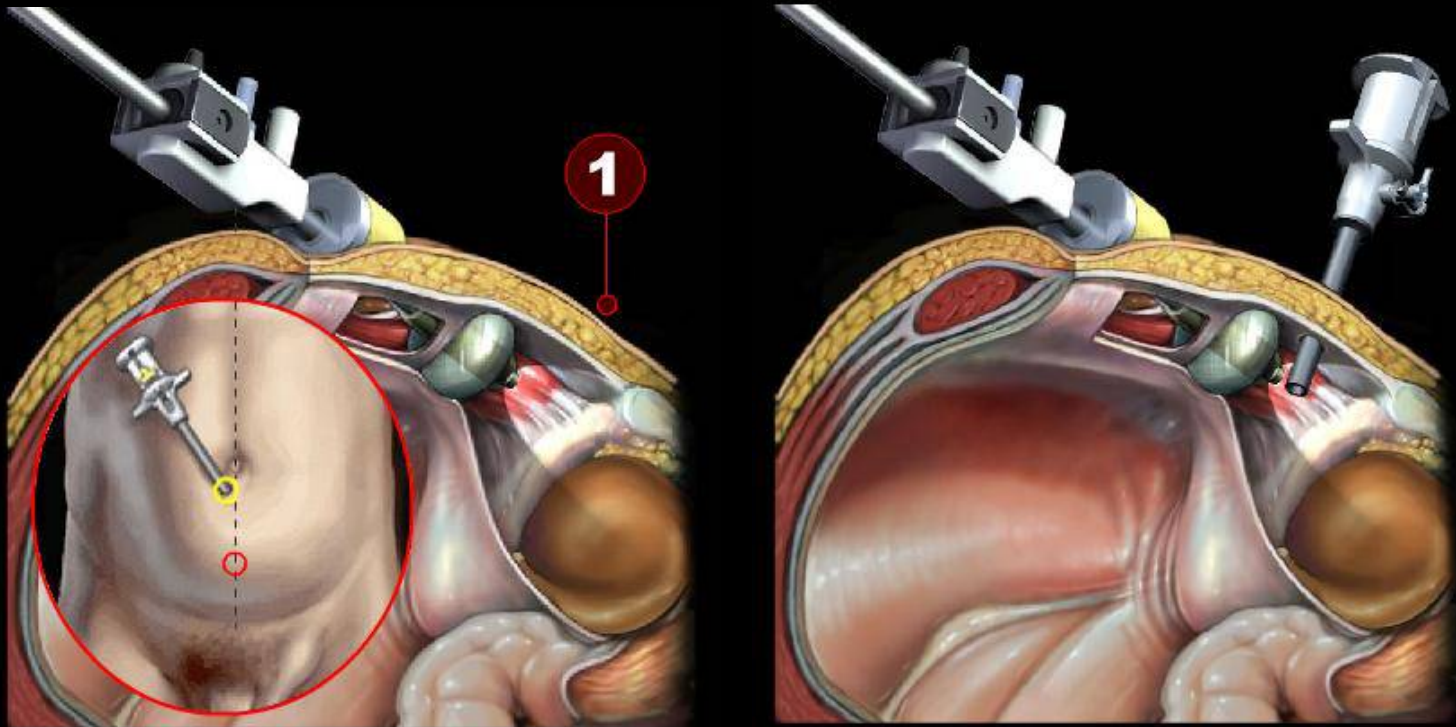
View after insufflation

Internal view after balloon removal

1. Inferior epigastric vessels
2. Rectus abdominis muscle
3. Pubic symphysis
4. Urinary bladder
5. Collapsed peritoneum



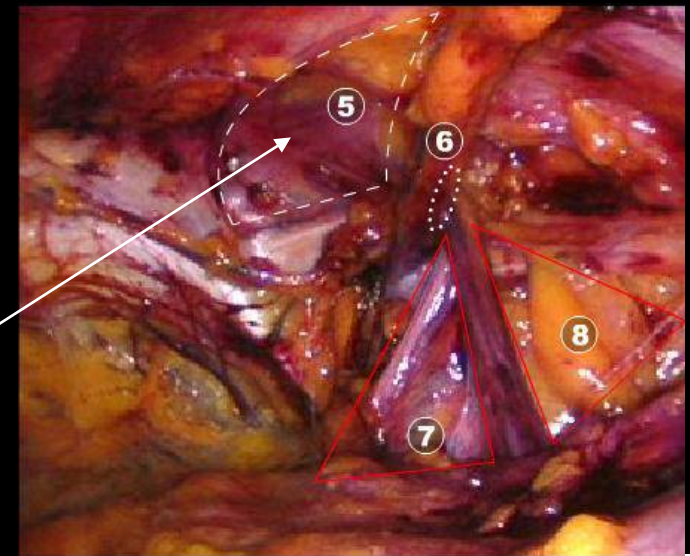
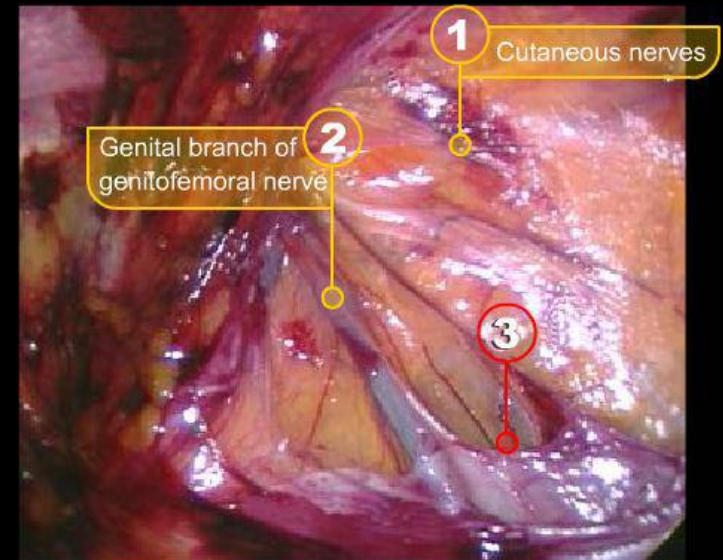
Secondary Ports



Clearing The Ring

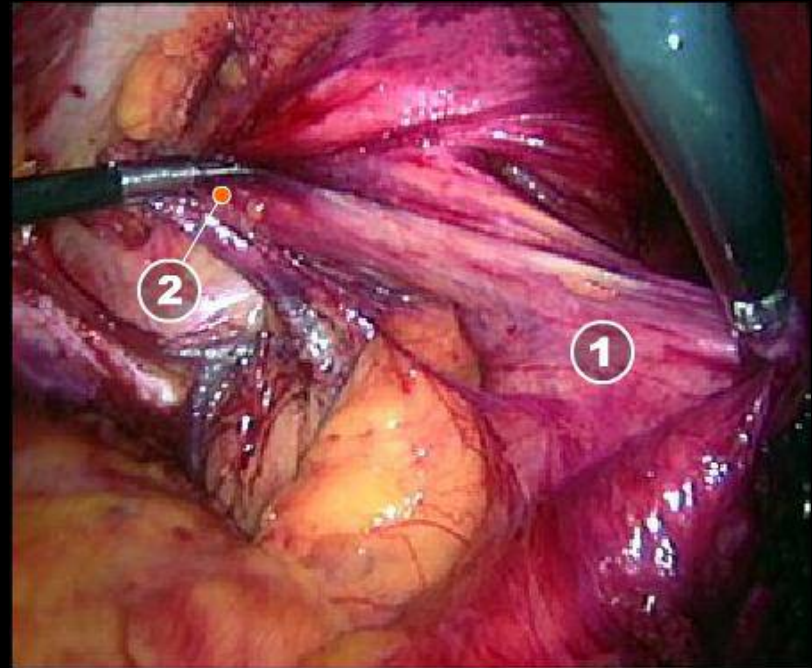
1. Cutaneous nerves
2. Genital branch of genitofemoral nerve
3. Peritoneum followed from lateral to internal ring
4. Peritoneum has been dissected down
5. Inguinal triangle
6. Internal ring
7. Femoral vessels in the Triangle of Doom
8. Cutaneous nerves in the Triangle of Pain

Direct Hernia



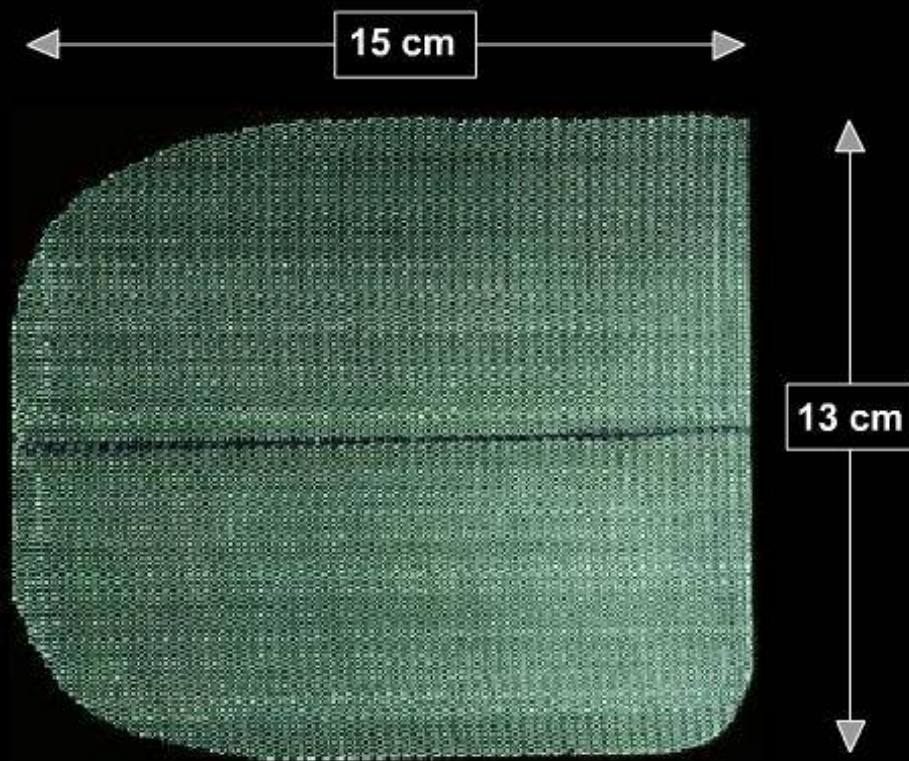
Clearing The Ring

1. Hernia sac
2. Internal ring



The Mesh

- polypropylene mesh (Prolene);
- mesh must be at least 15 by 13cm;
- 2 meshes are needed for bilateral hernias;
- a horizontal line is drawn on the mesh with a sterile marker pen to aid orientation.



Introduction of Mesh



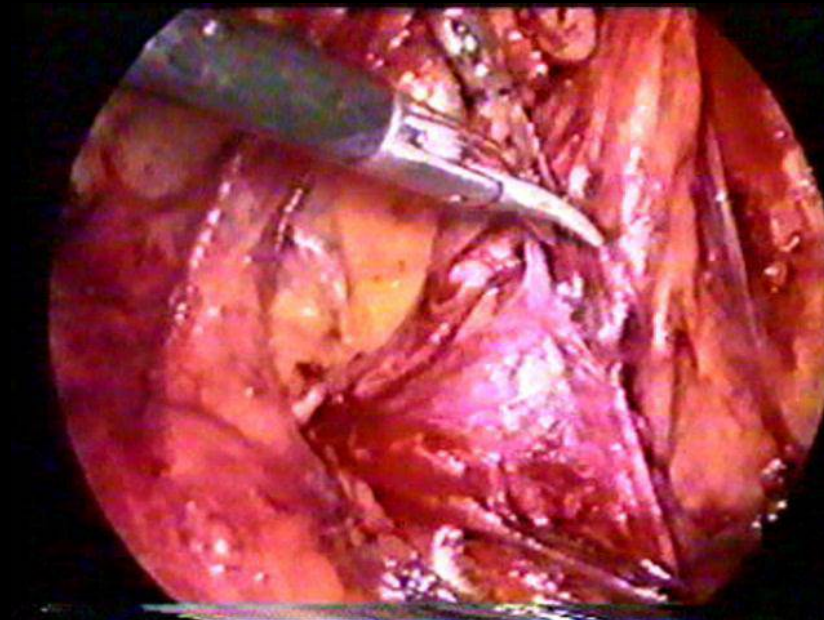
OPERATIVE PROCEDURE



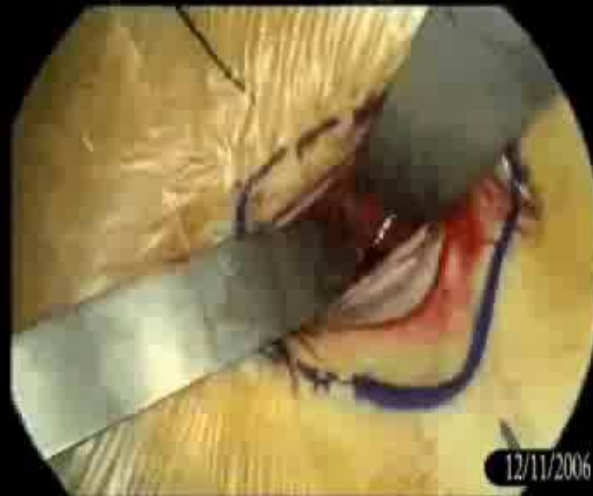
TEP



OPERATIVE PROCEDURE

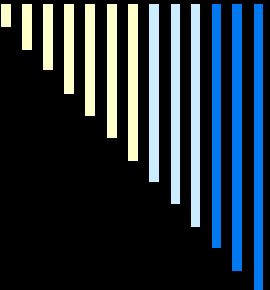


TEP Right Side



TEP Left Side





Thanks



Fellowship course Dubai 2007

