

# Robotic Inguinal Hernia Repair

*Abdominal Core Health Quality Collaborative Quality Improvement Summit*

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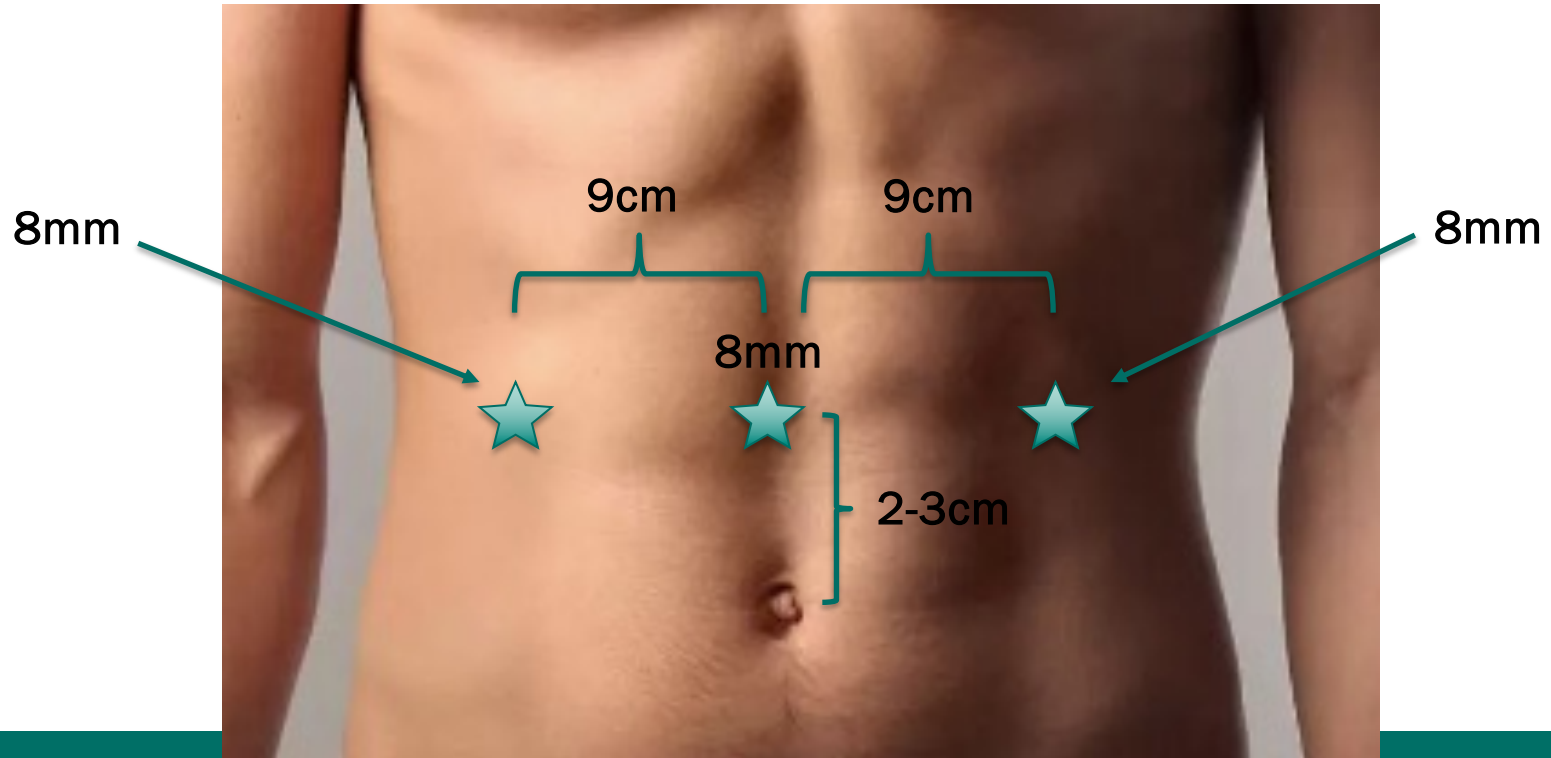
*Milwaukee, Wisconsin*

*March 23, 2024*

# Procedure review

- Have patient void within 1 hour prior to surgery or place foley
- Tuck both arms
- Enter laparoscopically → Veress needle in LUQ (Palmer's point)
- Optiview 5mm trocar 2-3cm above the umbilicus in the midline
- 8mm robotic trocars 9cm lateral to supraumbilical port
  - Right and left mid clavicular lines
- Exchange 5mm trocar for 8mm robotic trocar

# Procedure review



# Procedure review

- Place patient in steep Trendelenburg (15-20 degrees)
  - Watch for small bowel/colon to fall away
- Have patient cart set to pelvic anatomy
  - Left or right depending on where the system is relative to the patient
- Target camera to midline/supraumbilical port

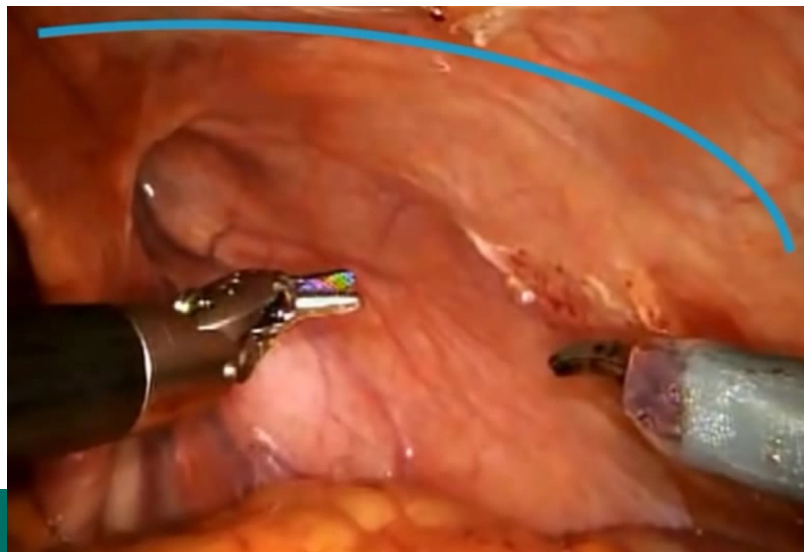
# Instruments

- Camera in the middle (0 degree)
  - Keeps the plane flat, allows you to zoom in straight to Cooper's ligament
- Left hand – fenestrated bipolar
  - Forced bipolar if a revision or removal of plug/patch
- Right hand – monopolar scissors
  - Exchange for mega needle driver/suture cut



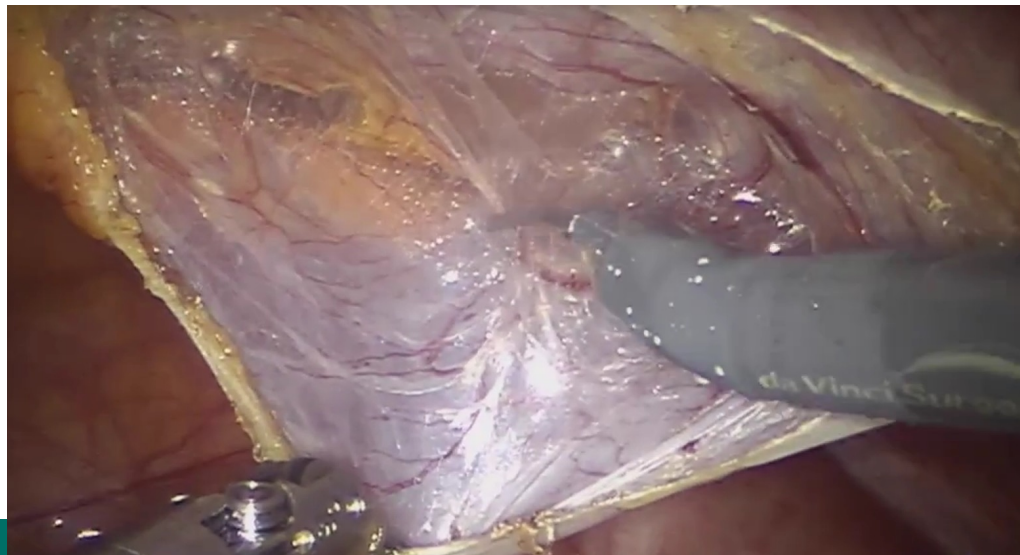
# Robotic TAPP

- Primary steps of the operation:
  - Incise peritoneum ASIS to medial umbilical ligament



# Robotic TAPP

- Primary steps of the operation:
  - Identify avascular plane and create peritoneal flap



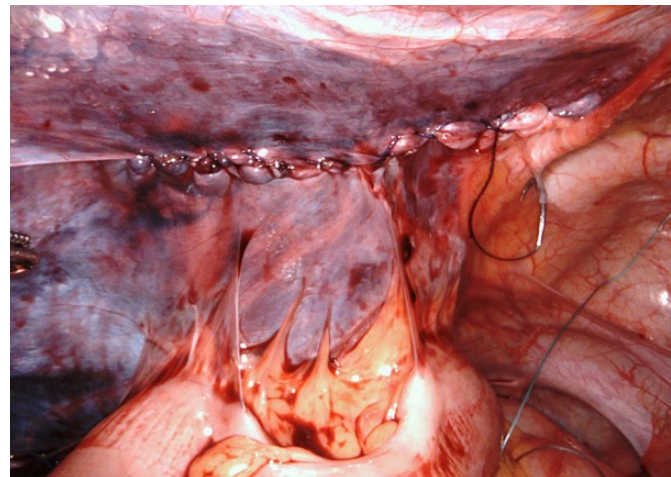
# Robotic TAPP

- Primary steps of the operation:
  - Identify Cooper's ligament and pubic symphysis medially



# Robotic TAPP

- Primary steps of the operation:
  - Dissect hernia sac free from spermatic cord
  - Ensure peritoneal flap inferior enough for mesh placement
  - Place mesh in pre-peritoneal space, ensuring appropriate medial coverage
  - Suture peritoneum closed, close any peritoneal holes



# Robotic TAPP


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<https://doi.org/10.1007/s00464-020-07449-z>



EDITORIAL



## Ten golden rules for a safe MIS inguinal hernia repair using a new anatomical concept as a guide

Christiano Claus<sup>1</sup>  · Marcelo Furtado<sup>2</sup> · Flavio Malcher<sup>3</sup> · Leandro Totti Cavazzola<sup>4</sup> · Edward Felix<sup>5</sup>

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- Steps for obtaining the critical view of the myopectineal orifice
  - Indirect, direct and femoral triangles

# Robotic TAPP

- Rule #1:

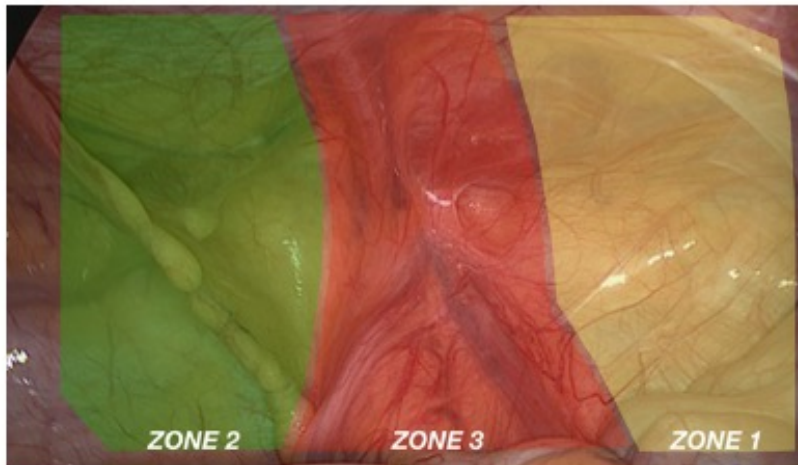
- Incise the peritoneum at least 4cm above the deep inguinal ring
- Flap should extend from ASIS to medial umbilical ligament

- Rule #2:

- Dissection should follow the peritoneal plane
- Avoid exposing the transversalis muscle → more bleeding and risk of injury to the inferior epigastric vessels and nerves

# Robotic TAPP

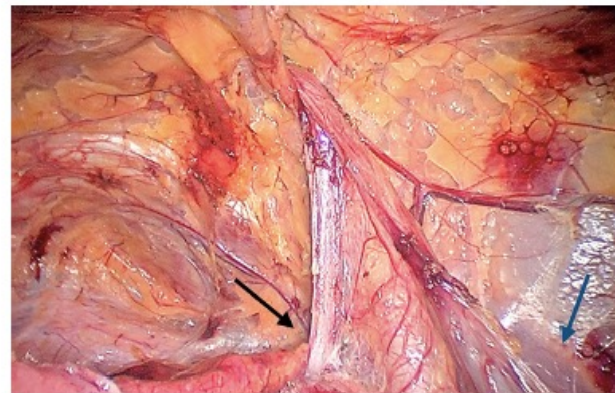
- Start the dissection in Zone 1 or Zone 2
- Zone 3 → hardest zone and most variable anatomy



**Fig. 2** (Right groin) Three zones of dissection of pre-peritoneal space following the tactical proposal for standardization of MIS techniques

# Robotic TAPP

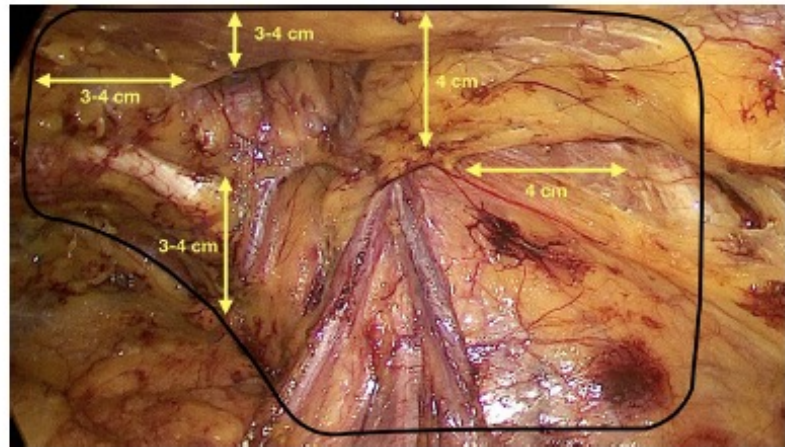
- Rule #3:
  - Dissection should extend to pubic symphysis and at least 2cm below the pubis in Zone 2
    - Keeps mesh from being lifted by distended bladder
- Rule #4:
  - External iliac vein should be visible to avoid missing a femoral hernia
- Rule #5:
  - Dissect peritoneum inferiorly to where vas deferens crosses the external iliac vein



**Fig.6** (Right groin) Inferior dissection in Zones 1 and 3 should extend until the identification of the iliopsoas muscle (blue arrow) happens and the crossing of the vas deferens over the external iliac vein is reached (black arrow) (Color figure online)

# Robotic TAPP

- Rule #6:
  - Transect hernia sac in large inguino-scrotal hernias
- Rule #7:
  - Evaluate for a cord lipoma
- Rule #8:
  - Placement of large pre-peritoneal mesh (15 x 10cm) to cover the MPO with 3-4cm of overlap

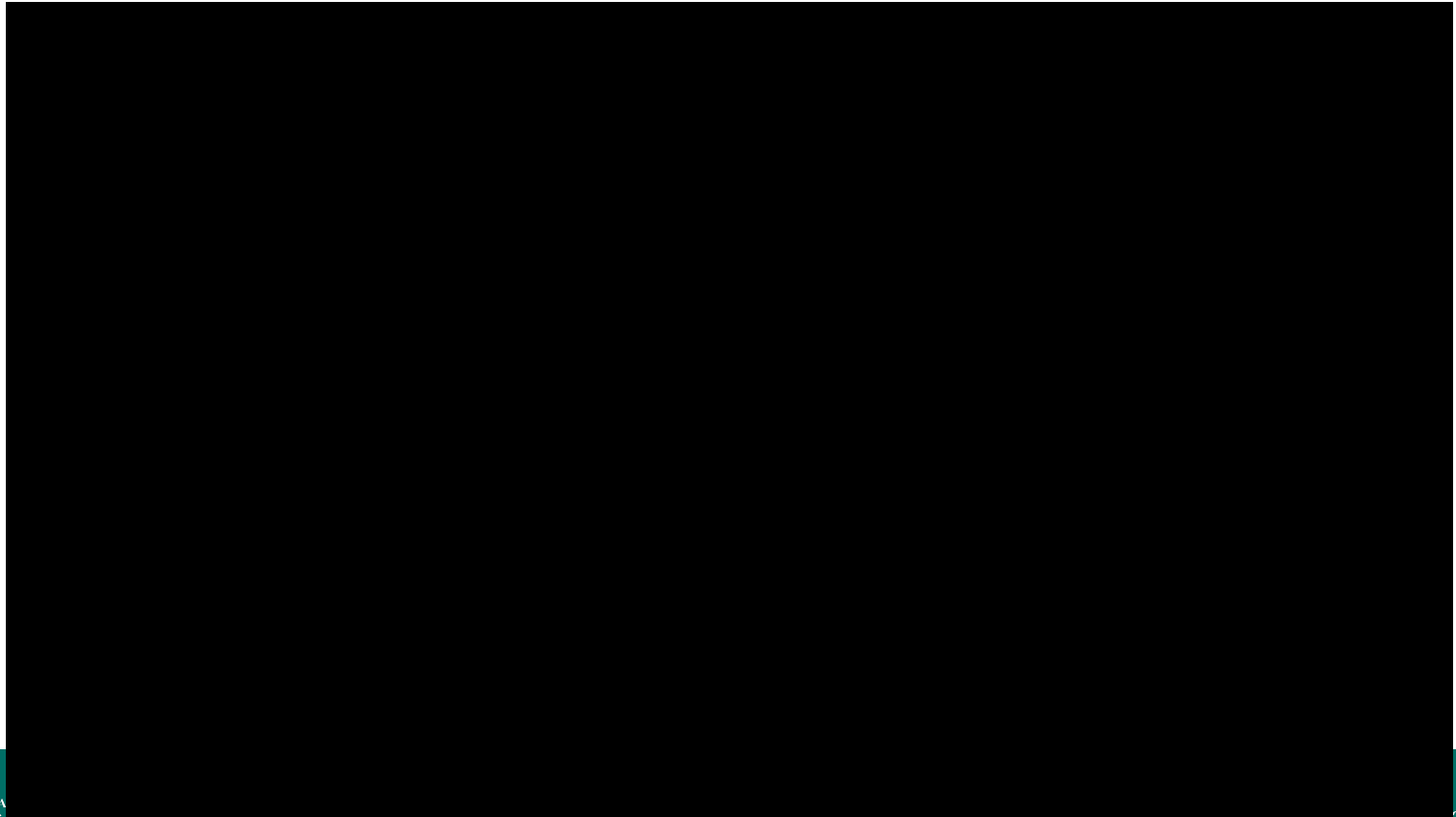


**Fig. 9** (Right groin) Schematic representation of the mesh positioning covering the MPO with minimum overlap of 3 cm

# Robotic TAPP

- Rule #9:
  - Mesh fixation is not necessary
  - If fixating mesh, three fixation points (Cooper's, high medial, high lateral)
- Rule #10:
  - Deflation under direct visualization (TEP)

# Robotic TAPP



# Thank you!

