

GUNDERSEN/LUTHERAN ULTRASOUND DEPARTMENT

POLICY AND PROCEDURE MANUAL

SUBJECT: Ultrasound for Inguinal Hernia
SECTION: Radiology Ultrasound
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APPROVED BY: _____
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Role of Ultrasound:

- To confirm the presence of a hernia
- To distinguish between inguinal vs femoral hernia
- If inguinal, to subclassify direct vs indirect
- To identify the content of the hernia (omental fat +/- bowel)
- Reducible vs non-reducible
- Is it symptomatic (focally tender or not)
- Identify alternative pathology

Equipment: Use a linear transducer 7-12MHz

Patient Position: Begin supine. If no hernia detected, reexamine erect.

To find the internal inguinal canal: Start from down at the common femoral vessels and work your way in a transverse plane superiorly until you reach the level above where the inferior epigastric vessels join the ext. iliac vein and artery.

- Turn the probe to go along the plane of the inguinal canal/inguinal ligament.
- Valsalva
- Watch for movement of omentum/or bowel within the canal or medial to it.
- If there is sliding down the canal this is usually an *indirect hernia* as it originates *lateral* to the epigastric vessels.
- If there is *medial* movement to the IEV then this is a *direct hernia* and it does not usually communicate with the inguinal canal.
- Check if the omentum/bowel is free to move back within the peritoneum (reducible hernia) or does it gets stuck (strangulated).

To find a femoral hernia: Scan transversely over common femoral vessels and look medial to the vessels when the patient strains.

- The lump will present lateral and caudal to the pubic ramus.

- With a hernia present, the common femoral vein will not expand as it normally should. As it pushes through the femoral canal, the hernia will compress the vein.

Images acquired

- Inguinal canal at rest and straining in 2 planes (Long axis is along plane of inguinal ligament. Transverse is perpendicular to the inguinal ligament)
- Femoral canal at rest and straining in 2 planes (Long axis along plane of femoral vein, transverse to femoral vein)
- Cine if positive for hernia
- Contralateral groin images are not required to document, but evaluate and document images if there are questions or confusion with the ipsilateral side