

## Scrotum Protocol-US SCROTUM

### Add US ABD/RETROPER DUP ART IN/VEIN OUT LTD

**Patient Setup**-Have the patient perform the first 2 bullets in the room alone

- Place a rolled towel lengthwise between the upper thighs (as high as possible) under the scrotum
- Place a towel over the male genitalia not being examined and use a sheet to cover the patient's legs and abdomen/pelvic region. The scrotum should be the only area exposed for scanning.

Organ/ Order	Scan Plane	Landmarks Identified
<b>RT and LT Testicle with Median Raphe</b>	Transverse with Virtual convex	<ul style="list-style-type: none"> <li>• RT Testicle</li> <li>• Median Raphe</li> <li>• LT Testicle</li> </ul>
		<ul style="list-style-type: none"> <li>• RT Testicle</li> <li>• Median Raphe</li> <li>• LT Testicle</li> <li>• Color Doppler box covering both testicles</li> </ul>
	Transverse	• Epididymal Head
		• Epididymal Head with color Doppler
		• Superior Testicle
		• Mid Testicle
		• Mid Testicle with transverse measurement (at short axis of testicle)
		• Mid Testicle with Color Doppler & Spectral Analysis <ul style="list-style-type: none"> <li>○ Arterial and venous flow</li> </ul>
		• Inferior Testicle
	Sagittal	• Spermatic Cord
		• Epididymal head, body, and tail
		• Epididymal Head with AP measurement
		• Lateral Testicle
• Mid Testicle		
• Mid Testicle at mediastinum w/ AP & Length Measurement (long axis of testicle)		
• Medial Testicle		

### Normal Measurement Ranges

Structure	Area of Interest	Plane	Measurement	Comments
Scrotal Wall	Thickness of Wall	Transverse	2-8 mm	<ul style="list-style-type: none"> <li>• Use standoff pad or glob of gel to assist with getting measurements</li> </ul>
Epididymis	Head, Body & Tail	Sagittal	Head 10-12 mm Body 2-4 mm Tail 2-5 mm	<ul style="list-style-type: none"> <li>• Measurements represent anterior/posterior dimensions</li> </ul>
Testicle	Length	Sagittal	3-5 cm	<ul style="list-style-type: none"> <li>• Use virtual convex or dual screen if the entire testicle cannot be seen</li> </ul>
	Height (A/P)	Sagittal*	2-3 cm	<ul style="list-style-type: none"> <li>• *Some physicians may want this measurement in the transverse plane (Clarify before exam)</li> </ul>
	Width	TX	2-3 cm	<ul style="list-style-type: none"> <li>• Mid testicle</li> </ul>

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#### Tips

- You must **always** evaluate the **entire** organ **first** before you store an image
  - Use multiple focal zones
  - Make sure you look above and below the testicle for pathology (the entire scrotal sac should be evaluated)
  - Look for enlarged lymph nodes in the groin
  - Look for varicoceles or hernias in the area of the spermatic cord

#### Color Doppler

- Testis in general are low resistance—Low filter and low PRF, do not change settings once set
- Epididymis exhibits low to no flow in normal conditions
- Testicular, capsular centripetal and recurrent rami
  - Low resistance flow
  - broad systolic peaks & high diastolic flow
- Cremasteric and deferential
  - High resistance flow
  - Narrow systolic peaks & low diastolic flow

**Pathology** -If pathology is present you must document the pathology in its entirety, images should include:

- Gray scale sagittal and transverse images
- Gray scale sagittal and transverse images with 3 measurements (length, width and height)
- Color Doppler image document the presence of blood flow
- Spectral Doppler image document type and velocity of blood flow
- Special notes:
  - If a **varicocele** is suspected, store images prior to, during and post Valsalva maneuver
  - If a **mass** is suspected superiorly in the testicle, look for peristalsis---the mass may be herniated bowel
  - If you are **unable to locate testes** within the scrotal sac, look in the lower pelvis for them
  - If patient presents with **infertility**—add images of the seminal vesicles and vas deferens