

TRA-MINW

Scrotal Ultrasound Protocol

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****NOTE for all examinations:**

1. If documenting possible flow in a structure/mass, all color/Doppler should be accompanied by a spectral gate for waveform tracing
2. CINE clips to be labeled:
 - MIDLINE structures: “right to left” when longitudinal and “superior to inferior” when transverse
 - RIGHT/LEFT structures: “lateral to medial” when longitudinal and “superior to inferior” when transverse****each should be 1 sweep, NOT back and forth****

Note: In addition to below, if a palpable abnormality is the indication for imaging, this area should be directly imaged and documented

FIRST set of images on ALL Scrotal Ultrasounds:

1. Midline side by side grayscale
2. Midline side by side color

Testes:

-Measure size

Provide following images at least:

- Longitudinal: medial, central, lateral
- Transverse images: superior, mid and inferior

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-If indication is elevated tumor markers, microlithiasis, retroperitoneal adenopathy, provide CINE transverse and longitudinal of both testes

-If any abnormality (such as: focal mass, diffuse heterogeneity, microlithiasis): provide CINE

-If a testis is not located in the scrotum, evaluate the inguinal region

NOTE: No CINE required for normal testicle absent these indications.

-Color and Spectral Doppler:

→Attempt to document arterial and venous waveforms for each testis on all examinations; MUST be documented if formally billed as a “DUPLEX” study

If DUPLEX study: document reason for difficulty if unable to provide adequate images

→Arterial and venous waveforms should be documented as separate tracings (i.e., not on the same image)

***Extra time should be spent documenting both venous and arterial waveforms if the indication is pain or the testicle is abnormal.*

*****MUST provide color images on all examinations that show:**

1. Side-by-side midline views which show vascularity of both testicles together (i.e., with same settings) – *this should be part of first set of images on ALL scrotal US (see beginning of document)*

2. At least 2 images of each testicle separately with **identical** Doppler settings to evaluate symmetry of flow

Low-flow detection settings (low PRF, high gain color) should be used to document testicular blood flow and transducer frequency should be optimized for maximum Doppler sensitivity while maintaining adequate penetration.

If flow cannot be demonstrated on color Doppler, power Doppler, if available, should be used to increase flow sensitivity

Epididymis:

-Longitudinal: to include as much of the entire epididymis as possible

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-Transverse: images through each head, body and tail

-Measure cysts

-Evaluate vascularity: at least 2 images with identical Doppler settings to evaluate symmetry of flow

Hydrocele:

-Document presence and size (trace, small, moderate, large)

-Evaluate complexity of fluid and presence of septations

-If complex: provide CINE

Spermatic Cord Vessels - Varicocele evaluation:

-Evaluate the vessels in the spermatic cord pampiniform plexus on **all** patients

-*Generally* accepted definition of varicocele (NOTE: This may vary between radiologists)

→ Vessel measures ≥ 3 mm at rest

-In **all** patients (*even if veins appear normal*): Representative images and measurements of largest veins on each side. Provide side-by-side images:

→ Grayscale: at rest and with Valsalva

→ Color: at rest and with Valsalva

-Add CINE as necessary

***If varicocele is present, *ideally* would obtain additional images showing the following (if technically possible/based on patient status). *This is not required but does help the radiologist confirm the diagnosis:*

1. Demonstrate compressibility (or lack thereof) of dilated veins

2. Use Doppler to document direction of flow with Valsalva (i.e., does it continue to go in appropriate direction OR is there flow reversal?)

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Scrotal Wall:

-Evaluate skin thickness

Inguinal Region:

-To be evaluated only if this corresponds to palpable area of concern or if indication specifically requests evaluation for hernia in addition to scrotal contents

-See separate HERNIA protocol for details