



Sonographer Scanning Cheat Sheet: Thyroid US

Procedure Overview: A thyroid ultrasound assessment is performed to evaluate the thyroid and parathyroid parenchyma for nodules, enlargement, increased vascularity, and solid lesions. It is also used to evaluate the surrounding muscles in the neck.

Required Pre-Procedure Prep:

- Obtain patient verbal consent.
- Obtain a detailed patient history including, but not limited to symptoms, thyroid medication usage, and previous thyroid surgery.
- Patient will lay supine without a pillow to hyperextend his/her neck.

Proper Probe: Linear array probe with a frequency of 7-14MHz that has tri-duplex capabilities.

Protocol for Thyroid Ultrasound (76536)

This protocol aligns with the Mindray I-Works protocol: Imagen Thyroid

You may “Suspend” the protocol at any time to take additional images or handle pathology, then restart I-Works.

****Document pathology at END of exam**, with and without measurement in two planes, Sag and Trv measuring the length, height, & width. Be sure to also include images with and without color Doppler.

Document and measure up to **4 nodules total**, prioritizing nodules with the highest ACR TI-RADS suspicion score (points). If multiple nodules have similar suspicion levels, select the largest ones to complete the 4-nodule limit.

***Cine Clips** should be taken to help prove pathology and provide context for Remote Radiologists when appropriate. Please be mindful of not taking too many cine clips, just show what's most important.*

IMAGEN

1. Rt Transverse thyroid mid
2. Rt Transverse thyroid mid with measurement (width)
3. Rt Transverse thyroid with color Doppler
4. Rt Transverse thyroid superior
5. Rt Transverse thyroid inferior
6. Rt Sagittal thyroid mid
7. Rt Sagittal thyroid mid with measurements (length and height)
8. Rt Sagittal thyroid mid with color Doppler
9. Rt Sagittal thyroid lateral
10. Rt Sagittal thyroid medial
11. LT Transverse thyroid mid
12. LT Transverse thyroid mid with measurement (width)
13. LT Transverse thyroid with color Doppler
14. LT Transverse thyroid superior
15. LT Transverse thyroid inferior
16. LT Sagittal thyroid mid
17. LT Sagittal thyroid mid with measurements (length and height)
18. LT Sagittal thyroid mid with color Doppler
19. LT Sagittal thyroid lateral
20. LT Sagittal thyroid medial
21. TRV Isthmus
22. Trv Isthmus w/measurement (A/P measurement)
23. Right and left thyroid dual image in transverse using extended field of view

Anatomy	Normal Measurements
Thyroid Lobe Length	4 to 6 cm
Thyroid Lobe Height	1.3 to 1.8 cm
Thyroid Lobe Width	1.0 to 2.5 cm
Isthmus	< 6 mm

Common Pathologies

- Multinodular Goiter which appears as an enlarged thyroid gland with multiple nodules. Document if the nodules' composition is solid, complex, or cystic and its echogenicity is hyperechoic, heterogeneous, or hyperechoic.
- Graves' Disease and Hashimoto's Thyroiditis which commonly present with homogeneous, coarse, hypoechoic thyroid parenchyma with hypervascularity throughout the gland. Graves' Disease is linked to hyperthyroidism and Hashimoto's Thyroiditis commonly presents with hypothyroidism.
- Thyroid Carcinoma which appears with a taller-than-wider presentation, microcalcifications, irregular borders, and internal vascularity.
- Thyroid Cyst anechoic with round borders, through transmission, no color flow. Define as complex or cystic based off internal echogenicity

Assigning Thyroid Imaging Reporting and Data System (TI-RADS)

- Reading radiologist will be responsible for assigning the finalized TI-RADS level and follow-up/procedure recommendations.

American College of Radiology Thyroid Imaging Reporting and Data System (ACR TI-RADS™)

