

	Carotid		
	Reviewed:	Date: 1/4/2022	
	Revised:	Date: 1/4/2022	

PURPOSE

Practice parameter for the performance of diagnostic ultrasound of the extracranial system (carotid arteries)

SUPPORTIVE DATA

- Obtain a written, verbal, or electronic order from provider
- Verify that written orders are scanned into Epic
- Previous relevant imaging procedures

INDICATIONS

Indication for a carotid ultrasound include but are not limited to:

- Evaluation of patients with hemispheric neurologic symptoms, including stroke, transient ischemic attack and amaurosis fugax.
- Evaluation of patients with a cervical bruit.
- Evaluation of pulsatile neck masses.
- Preoperative evaluation of patients scheduled for major cardiovascular surgical procedures.
- Evaluation of nonhemispheric or unexplained neurologic symptoms.
- Follow-up of patients with proven carotid disease.
- Evaluation of postoperative patients following cerebrovascular revascularization, including carotid endarterectomy, stenting or carotid to subclavian bypass.
- Intraoperative monitoring of vascular surgery.
- Evaluation of suspected subclavian steal syndrome.
- Evaluation for suspected carotid artery dissection, arteriovenous fistula or pseudoaneurysm.
- Patients with carotid reconstruction after ECMO (extracorporeal membrane oxygenation) bypass.

CONTRAINDICATIONS

- There are no absolute contraindications.

EQUIPMENT LIST

- Real-time ultrasound scanner with transducer of appropriate frequency

- Gel
- Towels
- Patient gown (if applicable)

SAFETY

- Universal precautions for bodily fluids should be observed as per hospital protocol.
- All ultrasound carts are annually checked and are up to date with all state and manufacturer guidelines.
- Exams will be prioritized according to ordering status (STAT, ASAP or Routine)

PATIENT PREPARATION

- None

PROCEDURE

1. Check provider's orders for reason for exam and any comments.
2. Review report of patient's most recent ultrasound, relevant imaging or relevant labs if applicable.
3. Start exam in Epic
4. Verify patient by 2 patient identifiers (name, DOB, wristband).
5. Process should be explained to patient.
6. Have patient change into gown if appropriate
7. Perform imaging procedure
8. End exam in Epic

IMAGING PROCEDURE

A normal ultrasound of the carotid arteries will aim to include the following views:

1. Sag Prox CCA
2. Sag Distal CCA w/ Prox ECA
3. Sag Distal CCA w/ Prox ECA w/ color
4. Sag Distal CCA w/ Prox ICA
5. Sag Distal CCA w/ Prox ICA w/ color
6. Doppler Proximal CCA velocity
7. Doppler Distal CCA velocity
8. Doppler Proximal ECA velocity
9. Doppler entire ICA to locate highest velocity
10. Doppler ICA in second location
11. Vertebral velocity to determine flow direction

12. Repeat on other side.
13. Document Brachial BP on both arms
14. Listen for and document bruits
15. Document pathological findings with all appropriate additional views to include color doppler and/or pulsed wave doppler

DOCUMENTATION

1. Written, verbal, or electronic order from provider
2. The worksheet and images need to be scanned into PACS under appropriate exam and put online.
3. Ultrasound images should be labeled with anatomy imaged and orientation (SAG or TRANS)
4. All images are submitted with above documentation for dictation and stored in PACS
5. For all STAT, ER and Urgent Care ultrasound exams, call radiologist for preliminary report to give to ordering provider
6. If it is between 2200 - 0700, submit exam along with proper documentation to teleradiology

REFERENCE

- Approved by Pharmacy and Therapeutics Board on 08/14/2020
- Approved by Medical Executive Team on 09/11/2020
- Approved by Medical Director, Dr. Muneer Desai, on 08/20/2020
- Approved by Radiology Protocol Committee on 3/9/2020
- [ACR Practice Parameters Resolution 28 \(2016\)](#)

References

Reference Type	Title	Notes
Documents referenced by this document		
Referenced Documents	ACR Practice Parameters Resolution 28 (2016)	