

Subject: Neck MRA (70547, 70548, 70549)		Original Effective Date: 12/13/17
Policy Number: 610	Revision Date(s): 11/6/18	
Review Date: 12/13/17, 12/13/18		

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DESCRIPTION OF PROCEDURE/SERVICE/PHARMACEUTICAL

A Magnetic Resonance Angiography (MRA) is a noninvasive procedure that enhances certain anatomic views of vascular structures. This procedure complements traditional angiography, and allows reconstruction of the images in different planes and removal of surrounding structures, leaving only the vessels to be studied.

RECOMMENDATIONS

Duplex ultrasound is the study of choice for initial evaluation of the majority of clinical scenarios involving the vasculature of the neck.

Aneurysm or Dissection

- For evaluation of a known or suspected aneurysm or dissection
- For evaluation of head trauma in a patient with closed head injury for suspected carotid or vertebral artery dissection.

Embolism or other occlusions

- For evaluation of suspected embolism or thrombus of the neck
- For evaluation of known or suspected vasculitis (e.g. Takayasu's arteritis)
- For evaluation of new TIA or Stroke

Fistula

- For evaluation of known or suspected arteriovenous malformation

Stenosis

- For evaluation of known or suspected stenosis as identified on arterial Doppler studies, with 70+ occlusion estimated.
- For technically limited Doppler study with tortuous vessels or aberrant direction of flow in the carotid or vertebral arteries.

Tumors

- Differentiate between vascular and nonvascular tumors
- Carotid body tumors (paragangliomas) known or suspected and prior ultrasound or other imaging has been done.
- Pulsatile neck mass, if warranted after ultrasound.

Evaluate hemorrhage or trauma

- To evaluate the source of hemorrhage
- To evaluate the vascular compromise due to trauma

Congenital

- To evaluate congenital disorders of the blood vessels involving the neck

Pre/Post Procedural

- Pre-operative/ Pre procedural evaluation when blood vessel detail is needed.
- Post-operative/Post-procedural for routine recommended follow up or for potential post-operative complications.
- A repeat study may be needed to help evaluate a patient's progress after treatment procedure intervention or surgery. The reason for the repeat study and that it will affect care must be clear.

Combination

- Neck MRA with Brain MRI and Brain MRA for evaluation of new TIA (transient ischemic attack) or stroke after duplex Doppler ultrasound of neck.
- Neck MRA with Brain MRI and Brain MRA for evaluation of pulsatile tinnitus (pulsing thump or whoosh heard in ear by the patient)

ADDITIONAL CRITICAL INFORMATION

The above medical necessity recommendations are used to determine the best diagnostic study based on a patient's specific clinical circumstances. The recommendations were developed using evidence based studies and current accepted clinical practices. Medical necessity will be determined using a combination of these recommendations as well as the patient's individual clinical or social circumstances.

- Tests that will not change treatment plans should not be recommended.
- Same or similar tests recently completed need a specific reason for repeat imaging.

REFERENCES USED FOR DETERMINATIONS

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4. UpToDate, Spontaneous cerebral and cervical artery dissection: Clinical features and diagnosis, <https://www.uptodate.com/contents/spontaneous-cerebral-and-cervical-artery-dissection-clinical-features-and-diagnosis?source=machineLearning&search=carotid%20artery%20dissection&selectedTitle=1~59§ionRank=1&anchor=H95541778#H95541778>

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6. Provenzale JM, Sarikaya B. Comparison of test performance characteristics of MRI, MR angiography, and CT angiography in the diagnosis of carotid and vertebral artery dissection: a review of the medical literature. *AJR Am J Roentgenol* 2009; 193:1167.
7. Bachmann R, Nassenstein I, Kooijman H, et al. High-resolution magnetic resonance imaging (MRI) at 3.0 Tesla in the short-term follow-up of patients with proven cervical artery dissection. *Invest Radiol* 2007; 42:460.
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	Description
70547	MR (Magnetic Resonance Imaging) Angiography Neck without contrast)
70548	MR (Magnetic Resonance Imaging) Angiography Neck with contrast)
70549	MR (Magnetic Resonance Imaging) Angiography Neck without and with contrast)