

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

**DISCLAIMER**

*This Molina Clinical Review (MCR) is intended to facilitate the Utilization Management process. It expresses Molina's determination as to whether certain services or supplies are medically necessary, experimental, investigational, or cosmetic for purposes of determining appropriateness of payment. The conclusion that a particular service or supply is medically necessary does not constitute a representation or warranty that this service or supply is covered (i.e., will be paid for by Molina) for a particular member. The member's benefit plan determines coverage. Each benefit plan defines which services are covered, which are excluded, and which are subject to dollar caps or other limits. Members and their providers will need to consult the member's benefit plan to determine if there are any exclusion(s) or other benefit limitations applicable to this service or supply. If there is a discrepancy between this policy and a member's plan of benefits, the benefits plan will govern. In addition, coverage may be mandated by applicable legal requirements of a State, the Federal government or CMS for Medicare and Medicaid members. CMS's Coverage Database can be found on the CMS website. The coverage directive(s) and criteria from an existing National Coverage Determination (NCD) or Local Coverage Determination (LCD) will supersede the contents of this Molina Clinical Review (MCR) document and provide the directive for all Medicare members.*

**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**

1. UpToDate, 2018. Evaluation of carotid artery stenosis. [https://www.uptodate.com/contents/evaluation-of-carotid-artery-stenosis?search=mra%20neck&source=search\\_result&selectedTitle=1~150&usage\\_type=default&display\\_rank=1](https://www.uptodate.com/contents/evaluation-of-carotid-artery-stenosis?search=mra%20neck&source=search_result&selectedTitle=1~150&usage_type=default&display_rank=1)
2. American College of Radiology. (2014). ACR Appropriateness Criteria® Retrieved from <https://acsearch.acr.org/list>.
3. Miller, J.C., Greenfield, A.J., Cambria, R.P., & Lee, S.I. (2008). Aortic aneurysms. Journal of the American College of Radiology, 5(5), 678-681. doi: 10.1016/j.jacr.2008.01.016.
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&sectionRank=1&anchor=H95541778#H95541778>

5. Pelkonen O, Tikkakoski T, Luotonen J, Sotaniemi K. Pulsatile tinnitus as a symptom of cervicocephalic arterial dissection. *J Laryngol Otol* 2004; 118:193.
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.
8. 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.
9. Lee VH, Brown RD Jr, Mandrekar JN, Mokri B. Incidence and outcome of cervical artery dissection: a population-based study. *Neurology* 2006; 67:1809.

**CODING INFORMATION:** THE CODES LISTED IN THIS POLICY ARE FOR REFERENCE PURPOSES ONLY. LISTING OF A SERVICE OR DEVICE CODE IN THIS POLICY DOES NOT IMPLY THAT THE SERVICE DESCRIBED BY THIS CODE IS COVERED OR NON-COVERED. COVERAGE IS DETERMINED BY THE BENEFIT DOCUMENT. THIS LIST OF CODES MAY NOT BE ALL INCLUSIVE.

	<b>Description</b>
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)