

<b>Subject: Abdomen/Pelvis CTA, (74174)</b>		<b>Original Effective Date: 12/13/17</b>
<b>Policy Number: MCR: 636</b>	<b>Revision Date(s): 11/27/18</b>	
<b>Review Date: 12/13/17, 12/13/18, 12/10/19</b>		

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**DESCRIPTION OF PROCEDURE/SERVICE/PHARMACEUTICAL**

Computed Tomographic Angiography (CTA) is an X-ray imaging scan in which iodine containing contrast material is injected into a vein to obtain detailed images of vascular structures. These images are electronically processed to remove surrounding non-vascular anatomy, so that only the arteries or veins of interest are displayed. The vascular images can be reconstructed and rotated in different planes. CTA can sometimes replace or can be used to supplement conventional invasive catheter angiography.

Recommendations

Duplex ultrasonography is frequently the study of choice for initial evaluation and surveillance for many clinical scenarios involving the vasculature of the abdomen and pelvis.

Aneurysm/Dissection

- For evaluation of a known or suspected aneurysm and ultrasound was indeterminate
- For follow up evaluation of an aortic aneurysm and repair is being considered (generally aneurysms  $\geq$  5.5cm)
- For evaluation of a known aneurysm and having new symptoms (E.g. pain)
- For evaluation of known or suspected dissection
- For follow up of an Endograph repair in the immediate post op period and for surveillance.

Embolism or other occlusions

- For evaluation of suspected embolism or thrombus of the abdomen (E.g. hepatic or renal vein thrombosis)
- For evaluation of known or suspected vasculitis (e.g. Takayasu's arteritis)

### Fistula/AVM

For evaluation of known or suspected arteriovenous malformation or fistula

### Stenosis

- For evaluation of known or suspected vascular disease
- For evaluation of ischemic colitis
- For evaluation of mesenteric ischemia/angina (ultrasound can be attempted)
- For evaluation of renovascular hypertension with any of the following:
- Failure of three (3) or more anti-hypertensive medications at optimal dosing. (Ultrasound can be attempted. Abdominal CTA alone is the preferred study)
- Acute elevation of creatinine after initiation of an angiotension converting enzyme inhibitor (ACE inhibitor) or angiotension receptor blocker (ARB).
- Asymmetric kidney size noted on ultrasound.
- Onset of hypertension in a person younger than age 30 without any other risk factors or family history of hypertension.
- New onset of hypertension after age 55 (>160/100).
- Acute rise in blood pressure in a person with previously stable blood pressures.
- Flash pulmonary edema without identifiable causes.
- Malignant hypertension.

### Differentiate between vascular and nonvascular tumors

To evaluate for vascular invasion or displacement by tumor

### Evaluate hemorrhage or trauma

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

### Congenital

To evaluate congenital disorders of the blood vessels involving the abdomen

### Other

For evaluation of a vascular abnormality seen on other imaging and additional clarification is required

### Pre/Post Procedural

- Pre-operative/ Pre procedural evaluation when blood vessel detail is needed. (E.g. preoperative evaluation prior to endovascular repair)
- Post-operative/Post-procedural for routine recommended follow up or for potential post-operative complications. (E.g. postoperative follow up after endovascular repair. Typically performed at 1-3 months, 6 months, and 1 year postoperative)
- 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

Chest CTA and Abdomen/Pelvis CTA is appropriate for evaluation for possible TAVR (Transcatheter Aortic Valve Replacement)

**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. Willmann JK, Baumert B, Schertler T, Wildermuth S, et al. Aortoiliac and Lower Extremity Arteries Assessed with 16–Detector Row CT Angiography: Prospective Comparison with Digital Subtraction Angiography. *Radiology* 2005;236:1083-1093 and 1094-1103
2. Godshall, C.J. (2005). Computed tomographic angiography allows accurate planning of the setting and technique of open and percutaneous vascular interventions. *The American Journal of Surgery*, 190(2), 218-220. doi:10.1016/j.amjsurg.2005.05.015.
3. Rybicki FJ, Bucklye O, Yucel EK, et al, Expert panel on vascular imaging, ACR appropriateness criteria-claudication-suspected vascular etiology, accessed at [http://www.acr.org/SecondaryMainMenuCategories/quality\\_safety/app\\_criteria/pdf/Vascular/ClaudicationDoc9.aspx](http://www.acr.org/SecondaryMainMenuCategories/quality_safety/app_criteria/pdf/Vascular/ClaudicationDoc9.aspx).
4. Lin, P.H. (2009). Assessment of aortic pathology and peripheral arterial disease using multidetector computed tomographic angiography. *Vascular and Endovascular Surgery*, 42(6), 583-598. doi: 10.1177/1538574408320029
5. Shih, M.C., & Hagspiel, K.D. (2007). CTA and MRA in mesenteric ischemia: Part 1, role in diagnosis and differential diagnosis. *American Journal of Roentgenology*, 188, 452-461. Retrieved from <http://www.ajronline.org/content/188/2/452.full.pdf+html>
6. Stavropoulos, S.W., Clark, T.W., Carpenter, J.P., Fairman, R.M., Litt, H., Velazquez, O.C. . . . Baum, R.A. (2005). Use of CT angiography to classify endoleaks after endovascular repair of abdominal aortic aneurysms. *Official Journal of the Society of International Radiology*, 16(5), 663-667. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/15872321>
7. Liu, P.S., & Platt, J.F. (2010). CT angiography of the renal circulation. *Radiol Clin North Am.* 48(2), 347-65. doi: 10.1016/j.rcl.2010.02.005.
8. Angeliki Theodoropoulou, Ioannis E Koutroubakis Ischemic colitis: Clinical practice in diagnosis and treatment *World J Gastroenterol* 2008 December 28; 14(48): 7302-7308.
9. Willmann JK, Wildermuth S, Pfammatter T, et al, Aortoiliac and renal arteries: prospective intra-individual comparison of contrast enhanced three-dimensional MR angiography and multi-detector row CT angiography, *Radiology*, 2003; 226:798-811.
10. Lee SS, et al. Hepatic arteries in potential donors for living related liver transplantation: evaluation with multi-detector row CT angiography, *Radiology*, 2003; 227:391-399.

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74174	CT (Computed Tomography) Angiography Abdomen/Pelvis without and with contrast)
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