*National Imaging Associates, Inc.	
Clinical guidelines **PELVIS CTA (Angiography)**	**Original Date: July 2008**
CPT Codes: 72191	**Last Revised Date: March 2023**
Guideline Number: NIA_CG_038	**Implementation Date: January 2024**

GENERAL INFORMATION

- *It is an expectation that all patients receive care/services from a licensed clinician. All appropriate supporting documentation, including recent pertinent office visit notes, laboratory data, and results of any special testing must be provided. If applicable: All prior relevant imaging results and the reason that alternative imaging cannot be performed must be included in the documentation submitted.*
- *Where a specific clinical indication is not directly addressed in this guideline, medical necessity determination will be made based on widely accepted standard of care criteria. These criteria are supported by evidence-based or peer-reviewed sources such as medical literature, societal guidelines and state/national recommendations.*

INDICATIONS FOR PELVIS CT Angiography / CT Venography (CTA/CTV)

IMPORTANT NOTE

When vascular imaging of the aorta and both legs, i.e., CTA aortogram and runoff is desired (sometimes incorrectly requested as Abd/Pelvis CTA & Lower Extremity CTA Runoff)**, only one authorization request is required, using CPT Code 75635 Abdominal Arteries CTA.** This study provides for imaging of the abdomen, pelvis, and both legs. The CPT code description is CTA aorto-iliofemoral runoff; abdominal aorta and bilateral ilio-femoral lower extremity runoff**.**

When separate requests for CTA abdomen and CTA Pelvis are encountered for processes involving both the abdomen and pelvis (but do NOT need to include legs/runoff), they need to be resubmitted as a single Abdomen/Pelvis CTA, using CPT Code 74174 (to avoid unbundling). Otherwise, the exam should be limited to the appropriate area (i.e., Abdomen OR Pelvis) that includes the area of concern.

Evaluation of known or suspected pelvic vascular disease
Abdominal Aortic Aneurysm (AAA) (needs to be resubmitted as CTA Abdomen and Pelvis unless there is a specific finding limited to the pelvis)

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Other vascular abnormalities seen on prior imaging studies limited to the pelvis:

- Initial evaluation of inconclusive vascular findings on prior imaging
- Follow-up of known visceral vascular conditions in the pelvis (such as aneurysm, dissection, compression syndromes, arteriovenous malformations (AVMs), fistulas, intramural hematoma, and vasculitis)
- Vascular invasion or displacement by tumor (conventional CT or MRI also appropriate)[1]
- For known iliac vascular disease, e.g., aneurysm, dissection, arteriovenous malformations (AVMs), and fistulas, intramural hematoma, and vasculitis[2-4] when ultrasound is inconclusive (See background for ultrasound screening intervals). CTA/MRA rather than CT/MRI is needed for non-aortic disease when ultrasound is inconclusive.[5]
- Suspected complications of known aneurysm as evidenced by clinical findings such as new onset of pelvic pain

Vascular ischemia or hemorrhage needs to be resubmitted as CTA Abdomen and Pelvis unless there is a specific finding limited to the pelvis)

For patients at increased risk for vascular abnormalities (CTA or MRA): (needs to be resubmitted as CTA Abdomen and Pelvis unless there is a specific finding limited to the pelvis)

Venous

- For evaluation of suspected pelvic vascular disease or pelvic congestive syndrome when findings on ultrasound are indeterminate (MR or CT venography (CTV) may be used as the initial study for pelvic thrombosis or thrombophlebitis)[6, 7]
- For unexplained lower extremity edema (typically unilateral or asymmetric) with negative or inconclusive ultrasound[8]
- For evaluation of venous thrombosis in the inferior vena cava[9]
- Venous thrombosis if previous studies have not resulted in a clear diagnosis[10]
- Vascular invasion or displacement by tumor (Conventional CT or MRI also appropriate)[1, 11]
- For suspected May-Thurner Syndrome (iliac vein compression syndrome) (can include abdomen CTA)[12, 13]

Other vascular indications

- For evaluation of erectile dysfunction when a vascular cause is suspected and Doppler ultrasound is inconclusive[14]

Other Indications

Further evaluation of indeterminate findings on prior imaging (unless follow up is otherwise specified within the guideline):

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- For initial evaluation of an inconclusive finding on a prior imaging report that requires further clarification
- One follow-up exam of a prior indeterminate MR/CT finding to ensure no suspicious interval change has occurred. (No further surveillance unless specified as highly suspicious or change was found on last follow-up exam)

Pre-operative evaluation[15, 16]

- Evaluation of interventional vascular procedures prior to endovascular aneurysm repair (EVAR), or for luminal patency versus restenosis due to conditions such as atherosclerosis, thromboembolism, and intimal hyperplasia
- Imaging of the deep inferior epigastric arteries for surgical planning (breast reconstruction surgery), if abdomen CTA is also needed, resubmit as abdomen and pelvis CTA[16]
- Prior to uterine artery embolization for fibroids (MRA preferred)[17]
- Prior to solid organ transplantation when vascular anatomy is needed

Post-operative or post-procedural evaluation

- Evaluation of post-operative complications of renal transplant allograft[18]
- Evaluation of endovascular/interventional vascular procedures for luminal patency versus restenosis due to conditions such as atherosclerosis, thromboembolism, and intimal hyperplasia
- Evaluation of post-operative complications, e.g., pseudoaneurysms related to surgical bypass grafts, vascular stents, and stent-grafts in the pelvis
- Follow-up for post-endovascular repair (EVAR) or open repair of abdominal aortic aneurysm (AAA)[5] or abdominal extent of iliac artery aneurysms. **CT preferred** unless MRA/CTA is needed for procedural planning or to evaluate complex anatomy.(Needs to be resubmitted as CTA Abdomen and Pelvis unless there is a specific finding limited to the pelvis)

When Pelvis CTA is requested in combination with Chest CTA, the Pelvis CTA needs to be resubmitted as an Abdomen/Pelvis CTA (see Abdomen/Pelvis CTA Guidelines for approvable combo indications)

BACKGROUND

Computed tomographic angiography (CTA) is used in the evaluation of many conditions affecting the veins and arteries of the pelvis or lower extremities. It is not appropriate as a screening tool for asymptomatic patients without a previous diagnosis.

OVERVIEW

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CT/MRI and acute hemorrhage: MRI is not indicated. MRA/MRV is rarely indicated for evaluation of intraperitoneal or retroperitoneal hemorrhage, particularly in the acute setting.

CT is the study of choice due to its availability, speed of the study and less susceptibility to artifact from patient motion. Advances in technology have allowed conventional CT to not just detect hematomas but to also identify the source of acute vascular extravasation. In special cases, finer vascular detail to assess the specific vessel responsible for hemorrhage may require the use of CTA. CTA in diagnosis of lower gastrointestinal bleeding is such an example.[19] MRA/MRV can be utilized in non-acute situations to assess vascular structure involved in atherosclerotic disease and its complications, such as vasculitis, venous thrombosis, vascular congestion, or tumor invasion. Although some of these conditions may be associated with hemorrhage, bleeding is usually not the primary reason why MRI/MRA/MRV is selected for the evaluation. A special condition where MRI may be superior to CT for evaluating hemorrhage is to detect an underlying neoplasm as the cause of bleeding.[20]

Follow-up of asymptomatic, incidentally detected iliac artery aneurysms: The definition of an iliac artery aneurysm (IAA) is dilatation to more than 1.5 times its normal diameter; in general, a common iliac artery ≥ 18 mm in men and ≥ 15 mm in women; an internal iliac artery (IIA) > 8 mm is considered aneurysmal.

Iliac aneurysm ultrasound screening intervals:

- Aneurysm size 2.0 -2.9 cm, every 3 years
- Aneurysm size 3.0-3.4 cm, annually
- Aneurysm size > 3.5 cm, every 6 months[5]

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REFERENCES

1. Čertík B, Třeška V, Moláček J, Šulc R. How to proceed in the case of a tumour thrombus in the inferior vena cava with renal cell carcinoma. *Cor et Vasa*. 2015/04/01/ 2015;57(2):e95-e100. doi:https://doi.org/10.1016/j.crvasa.2015.02.015
2. Thakur V, Inampudi P, Pena CS. Imaging of mesenteric ischemia. *Applied Radiol* 2018;47(2):13-18.
3. Harvin HJ, Verma N, Nikolaidis P, et al. ACR Appropriateness Criteria(®) Renovascular Hypertension. *J Am Coll Radiol*. Nov 2017;14(11s):S540-s549. doi:10.1016/j.jacr.2017.08.040
4. American College of Radiology. ACR Appropriateness Criteria® Noncerebral Vasculitis. American College of Radiology (ACR). Updated 2021. Accessed November 20, 2022. https://acsearch.acr.org/docs/3158180/Narrative/
5. Wanhainen A, Verzini F, Van Herzeele I, et al. Editor's Choice - European Society for Vascular Surgery (ESVS) 2019 Clinical Practice Guidelines on the Management of Abdominal Aorto-iliac Artery Aneurysms. *Eur J Vasc Endovasc Surg*. Jan 2019;57(1):8-93. doi:10.1016/j.ejvs.2018.09.020
6. Bookwalter CA, VanBuren WM, Neisen MJ, Bjarnason H. Imaging Appearance and Nonsurgical Management of Pelvic Venous Congestion Syndrome. *Radiographics*. Mar-Apr 2019;39(2):596-608. doi:10.1148/rg.2019180159
7. Knuttinen MG, Xie K, Jani A, Palumbo A, Carrillo T, Mar W. Pelvic venous insufficiency: imaging diagnosis, treatment approaches, and therapeutic issues. *AJR Am J Roentgenol*. Feb 2015;204(2):448-58. doi:10.2214/ajr.14.12709
8. Hoshino Y, Machida M, Shimano Si, et al. Unilateral Leg Swelling: Differential Diagnostic Issue Other than Deep Vein Thrombosis. *Journal of General and Family Medicine*. 2016;17(4):311-314.
9. Aw-Zoretic J, Collins JD. Considerations for Imaging the Inferior Vena Cava (IVC) with/without IVC Filters. *Semin Intervent Radiol*. Jun 2016;33(2):109-21. doi:10.1055/s-0036-1583207
10. Hanley M, Steigner ML, Ahmed O, et al. ACR Appropriateness Criteria(®) Suspected Lower Extremity Deep Vein Thrombosis. *J Am Coll Radiol*. Nov 2018;15(11s):S413-s417. doi:10.1016/j.jacr.2018.09.028
11. Smillie RP, Shetty M, Boyer AC, Madrazo B, Jafri SZ. Imaging Evaluation of the Inferior Vena Cava. *RadioGraphics*. 2015/03/01 2015;35(2):578-592. doi:10.1148/rg.352140136
12. Shammas NW, Jones-Miller S, Kovach T, et al. Predicting Significant Iliac Vein Compression Using a Probability Scoring System Derived From Minimal Luminal Area on Computed Tomography Angiography in Patients 65 Years of Age or Younger. *J Invasive Cardiol*. Jan 2021;33(1):E16-e18.
13. Kalu S, Shah P, Natarajan A, Nwankwo N, Mustafa U, Hussain N. May-thurner syndrome: a case report and review of the literature. *Case Rep Vasc Med*. 2013;2013:740182. doi:10.1155/2013/740182
14. Shindel AW, Brandt WO, Bochinski D, Bella AJ, Leu TF. Medical and Surgical Therapy of Erectile Dysfunction. In: Feingold KR, Anawalt B, Boyce A, et al, eds. *Endotext*. MDText.com, Inc. Copyright © 2000-2021, MDText.com, Inc.; 2000.

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15. American College of Radiology. ACR Appropriateness Criteria® Abdominal Aortic Aneurysm: Interventional Planning and Follow-up. American College of Radiology. Updated 2017. Accessed November 16, 2022. https://acsearch.acr.org/docs/70548/Narrative/
16. American College of Radiology. ACR Appropriateness Criteria® Imaging of Deep Inferior Epigastric Arteries for Surgical Planning (Breast Reconstruction Surgery). American College of Radiology. Updated 2022. Accessed November 16, 2022. https://acsearch.acr.org/docs/3101591/Narrative/
17. Maciel C, Tang YZ, Sahdev A, Madureira AM, Vilares Morgado P. Preprocedural MRI and MRA in planning fibroid embolization. *Diagn Interv Radiol*. Mar-Apr 2017;23(2):163-171. doi:10.5152/dir.2016.16623
18. Bultman EM, Klaers J, Johnson KM, et al. Non-contrast enhanced 3D SSFP MRA of the renal allograft vasculature: a comparison between radial linear combination and Cartesian inflow-weighted acquisitions. *Magn Reson Imaging*. Feb 2014;32(2):190-5. doi:10.1016/j.mri.2013.10.004
19. Clerc D, Grass F, Schäfer M, Denys A, Demartines N, Hübner M. Lower gastrointestinal bleeding-Computed Tomographic Angiography, Colonoscopy or both? *World J Emerg Surg*. 2017;12:1. doi:10.1186/s13017-016-0112-3
20. Abe T, Kai M, Miyoshi O, Nagaie T. Idiopathic Retroperitoneal Hematoma. *Case Rep Gastroenterol*. Sep 11 2010;4(3):318-322. doi:10.1159/000320590

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POLICY HISTORY

Date	Summary
March 2023	• Redirected vascular requests for abdomen alone or pelvis imaging alone to resubmit as abdomen and pelvis CTA required unless condition limited to pelvis • Other vascular abnormalities: clarified indication for non-aortic vascular conditions • Transplant: added section • General Information moved to beginning of guideline with added statement on clinical indications not addressed in this guideline • Added statement regarding further evaluation of indeterminate findings on prior imaging • Aligned sections across body imaging guidelines
April 2022	• Removed follow-up intervals for EVAR and AAA since Abdomen Pelvis CTA is usually appropriate study

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Reviewed / Approved by NIA Clinical Guideline Committee

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