AmeriHealth Caritas Louisiana

National Imaging Associates, Inc.*	
Clinical guidelines **PELVIS CTA (Angiography)**	**Original Date: July 2008**
CPT Codes: 72191	**Last Revised Date: April 2022~~21~~**
Guideline Number: NIA_CG_038	**Implementation Date: January 2023~~32~~**

INDICATIONS FOR PELVIS CT Angiography / CT Venography (CTA/CTV) - when both the abdomen and pelvis are involved (or suspected to be), should be ordered as Abdomen/Pelvis CTA (CPT Code: 74174)

For evaluation of known or suspected vascular disease[1]
~~(Eren, 2010)~~

- For pelvic extent of known large vessel diseases (abdominal aorta, inferior vena cava, superior/inferior mesenteric, celiac, splenic, renal or iliac arteries/veins), e.g., aneurysm, dissection, arteriovenous malformations (AVMs), fistulas, intramural hematoma, and vasculitis
- Evidence of vascular abnormality seen on prior imaging studies
- For suspected pelvic extent of aortic dissection
- Evaluation of known or suspected aneurysms limited to the pelvis or in evaluating pelvic extent of aortic aneurysm[2-4] ~~(Khosa, 2011; Uberoi, 2011; Wanhainen, 2019)~~
    - Known or suspected iliac artery aneurysm **AND** equivocal or indeterminate Doppler ultrasound results
    - If repeat Doppler ultrasound is indeterminate
    - Suspected complications of known aneurysm as evidenced by clinical findings such as new onset of pelvic pain
- Follow-up of iliac artery aneurysm:
    - Every three years for diameter 2.0 – 2.9 cm
    - Annually for 3.0-3.4 cm if Doppler ultrasound is inconclusive
    - If > 3.5 cm, < six-month follow-up (and consider intervention)[4] ~~(Wainhainen, 2019)~~
- Suspected retroperitoneal hematoma or hemorrhage: to determine vascular source of hemorrhage, in setting of trauma, tumor invasion, fistula or vasculitis, otherwise CT/MR abdomen and pelvis (rather than CTA/MRA) may be sufficient and the modality of choice for diagnosing hemorrhage[5] ~~(Ioannou, 2018)~~

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- For evaluation of suspected pelvic vascular disease or pelvic congestive syndrome when findings on ultrasound are indeterminate (MR or CT venography may be used as the initial study for pelvic thrombosis or thrombophlebitis)[6, 7] ~~(Bookwalter, 2019; Knuttinen, 2015)~~
- For evaluation of venous thrombosis in the inferior vena cava[8] ~~(Aw-Zoretic, 2016)~~
- Venous thrombosis if previous studies have not resulted in a clear diagnosis[9] ~~(Hanley, 2018)~~
- Vascular invasion or displacement by tumor (Conventional CT or MRI also appropriate)[10, 11] ~~(Certik, 2015; Smillie, 2015)~~
- For evaluation of suspected mesenteric ischemia/ischemic colitis (can approve CTA/MRA abdomen and pelvis)[12] ~~(ACR, 2018)~~

Other vascular indications

- For suspected May-Thurner Syndrome (iliac vein compression syndrome) (can include abdomen CTA)[13, 14] ~~(Al-Nouri, 2011; Kalu, 2013)~~
- Lower gastrointestinal hemorrhage: Active bleeding in a hemodynamically stable patient or non-localized intermittent bleeding as an alternative to Tc-99m RBC scan when colonoscopy did not localize the bleeding, is contraindicated, or unavailable[15, 16] ~~(Clerc, 2017; Karuppasamy, 2021)~~
- For evaluation of erectile dysfunction when a vascular cause is suspected and Doppler ultrasound is inconclusive[17] ~~(Shindel, 2018)~~
- For patients with fibromuscular dysplasia (FMD), a one-time vascular study of the abdomen and pelvis[18] ~~(Kadian-Dodov, 2016)~~ so should be Abdomen/Pelvis CTA (CPT 74174)
- For patients with vascular Ehlers-Danlos syndrome or Marfan syndrome recommend a one-time vascular study of the abdomen and pelvis so should be Abdomen/Pelvis CTA (CPT 74174)
- For Loeys-Dietz vascular imaging every two years (include abdomen CTA)[19] ~~(Chu, 2014)~~
- For spontaneous coronary artery dissection (SCAT) at time of coronary arteriography (includes CTA abdomen)[20] ~~(Crousillat, 2020)~~ so should be Abdomen/Pelvis CTA (CPT 74174)

Pre-operative evaluation[21, 22]

~~(ACR, 2017)~~

- 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) include abdomen CTA/MRA[22] ~~(ACR, 2017)~~
- Prior to uterine artery embolization for fibroids (MRA preferred)[23] ~~(Maciel, 2017)~~

Post-operative or post-procedural evaluation

- Evaluation of post-operative complications of renal transplant allograft[24] ~~(Bultman, 2014)~~
- 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
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- Follow-up for post-endovascular repair (EVAR) or open repair of abdominal aortic aneurysm (AAA) and iliac artery aneurysms typically needs to include abdominal imaging, therefore Abdomen Pelvis CTA would usually be the appropriate study [3, 21, 25] ~~(ACR, 2017; Chaikof, 2018; Uberoi, 2011)~~
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~~Routine, baseline study (post-op/intervention) is warranted within 1-3 months~~

~~Asymptomatic at six (6) month intervals, for one (1) year, then annually~~
~~Symptomatic/complications related to stent graft – more frequent imaging may be needed~~
~~Follow-up study may be needed to help evaluate a patient's progress after treatment, procedure, intervention or surgery. Documentation requires a medical reason that clearly indicates why additional imaging is needed for the type and area(s) requested.~~

Chest CTA and Abdomen CTA or Abdomen/Pelvis CTA combo

- For evaluation of extensive vascular disease involving the chest and abdominal cavities
- For preoperative or preprocedural evaluation, such as TAVR (transcatheter aortic valve replacement) or transcatheter venous ablation[21, 25] ~~(ACR, 2017; Ohana, 2015)~~
- Acute aortic dissection[26] ~~(Barman, 2014)~~
- Takayasu's arteritis[27] ~~(Keser, 2014)~~
- Marfan syndrome
- Loeys-Dietz syndrome
- Spontaneous coronary artery dissection (SCAD)
- Vascular Ehlers-Danlos syndrome
- Post-operative complications[28, 29] ~~(Bennet, 2017; Choudhury, 2017)~~
- Significant post-traumatic or post-procedural vascular complications

IMPORTANT NOTE: When encountering requests for Abd/Pelvis CTA & Lower Extremity CTA (Runoff) requests, these should be Abdominal Arteries CTA. Only one authorization request is required, using CPT Code 75635. This study provides for imaging of the abdomen, pelvis, and both legs and is the noninvasive equivalent to an "aortogram and run-off".

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

CT/MRI and acute hemorrhage: MRI is not indicated and MRA/MRV (MR Angiography/Venography) 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 also the source of acute vascular extravasation. In special cases, finer vascular detail to assess the specific source vessel responsible for hemorrhage may require the use of CTA. CTA in diagnosis of lower gastrointestinal bleeding is such an example ~~(Clerc, 2017)~~.[15]

MRA/MRV is often utilized in non-acute situations to assess vascular structure involved in atherosclerotic disease and its complications, vasculitis, venous thrombosis, vascular congestion, or tumor invasion. Although some of these conditions may be associated with hemorrhage, it 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 ~~(Abe, 2010)~~.[30]

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. Four types of isolated iliac aneurysms are classified by Reber. Suggested surveillance is extrapolated from AAA surveillance and can be done by Doppler ultrasound or CTA if hard to visualize by ultrasound ~~(Reber, 2001; Wainhanen, 2019)~~.[4, 31]

POLICY HISTORY

Date	Summary
April 2022	• **Removed follow-up intervals for EVAR and AAA since Abdomen Pelvis CTA is usually appropriate study** ~~No substantial changes~~
April 2021	• No substantial changes
May 2020	• Added important note for runoff requests and authorizations • Added note that abdominal CTA can be added when indicated • Removed iliac artery aneurysm size restriction of >2.5cm in diameter and changed to 'if repeat Doppler US is indeterminate • For retroperitoneal hematoma or hemorrhage, specified 'when an underlying neoplasm is suspected and prior imaging is inconclusive' • Added pelvic congestive syndrome; suspected May-Thurner Syndrome; erectile dysfunction when vascular cause is suspected and Doppler US inconclusive; post-operative complications of renal transplant allograft • Modified combo study from 'Chest CTA/Pelvis CTA' to 'Chest CTA and Abdomen CTA or Abdomen/Pelvis CTA combo'

	• Updated background information and references
June 2019	• Added evaluation of FMD, Vascular Ehlers-Danlos syndrome, Loetz-Dietz and SCAD • Added uterine artery embolization • Added combo studies

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~~**GENERAL INFORMATION**~~

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ADDITIONAL RESOURCES

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