04-70540-21

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Reviewed 07/26/18

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Subject: Magnetic Resonance Angiography (MRA) Abdomen and Pelvis

THIS MEDICAL COVERAGE GUIDELINE IS NOT AN AUTHORIZATION, CERTIFICATION, EXPLANATION OF BENEFITS, OR A GUARANTEE OF PAYMENT, NOR DOES IT SUBSTITUTE FOR OR CONSTITUTE MEDICAL ADVICE. ALL MEDICAL DECISIONS ARE SOLELY THE RESPONSIBILITY OF THE PATIENT AND PHYSICIAN. BENEFITS ARE DETERMINED BY THE GROUP CONTRACT, MEMBER BENEFIT BOOKLET, AND/OR INDIVIDUAL SUBSCRIBER CERTIFICATE IN EFFECT AT THE TIME SERVICES WERE RENDERED. THIS MEDICAL COVERAGE GUIDELINE APPLIES TO ALL LINES OF BUSINESS UNLESS OTHERWISE NOTED IN THE PROGRAM EXCEPTIONS SECTION.

DESCRIPTION:

Magnetic resonance angiography (MRA) is a noninvasive imaging technology, which generates images of the arteries that can be evaluated for evidence of stenosis, occlusion or aneurysms. MRA is used to evaluate the arteries of the abdominal aorta and the renal arteries. A contrast agent (gadolinium) may be used with MRA for better visualization and may be used in individuals who have a history of contrast allergy and who are at high risk of kidney failure.

POSITION STATEMENT:

Documentation Requirements

Documentation containing the medical necessity of the magnetic resonance angiography (MRA) of the abdomen and pelvis and imaging results (e.g., images, clinical reports) should be maintained in the member's medical record. Documentation may be requested as part of the review process.

Magnetic resonance angiography (MRA) of the abdomen and pelvis **meets the definition of medical necessity** for the following:

Indications for Abdomen MRA:

For evaluation of known or suspected abdominal vascular disease

- 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), and fistulas, intramural hematoma, and vasculitis.
- Evidence of vascular abnormality seen on prior imaging studies.

- Evaluation of suspected or known aortic aneurysm**:
    - Suspected or known aneurysm > 2.5 cm AND equivocal or indeterminate ultrasound results; OR
    - Prior imaging (e.g., ultrasound) demonstrated aneurysm > 2.5 cm in diameter; OR
    - Suspected complications of known aneurysm as evidenced by signs/symptoms such as new onset of abdominal or pelvic pain.
- To determine the vascular source of retroperitoneal hematoma or hemorrhage when CTA is contraindicated.
- Suspected renal vein thrombosis in member with known renal mass.
- Evaluation of mesenteric ischemia/ischemic colitis.
- Venous thrombosis if previous studies have not resulted in a clear diagnosis.
- Vascular invasion or displacement by tumor.
- Evaluation of hepatic blood vessel abnormalities (e.g., aneurysm, hepatic vein thrombosis, stenosis post-transplant) after Doppler ultrasound has been performed (to clarify or further evaluate ultrasound findings).
- Evaluation of splenic artery aneurysm.
- Kidney failure or renal insufficiency if initial evaluation performed with ultrasound is inconclusive.
- Evaluation of known or suspected renal artery stenosis or resistant hypertension demonstrated by any of the following:
    - Unsuccessful control after treatment with three (3) or more anti-hypertensive medication at optimal dosing.
    - 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 member 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 member with previously stable blood pressures.
    - Flash pulmonary edema without identifiable causes.
    - Malignant hypertension.

Pre-operative evaluation

- Evaluation prior to interventional vascular procedures for luminal patency versus restenosis due to conditions such as atherosclerosis, thromboembolism, and intimal hyperplasia.
- Pretransplant evaluation of either liver or kidney.

Post-operative or post-procedural evaluation

- Evaluation of endovascular/interventional abdominal vascular procedures for luminal patency versus restenosis due to conditions such as atherosclerosis, thromboembolism, and intimal hyperplasia.

- Evaluation of post-operative complications (e.g., pseudoaneurysmsrelated to surgical bypass grafts, vascular stents and stent-grafts in the peritoneal cavity).
- Follow-up for post-endovascular repair (EVAR) or open repair of abdominal aortic aneurysm (AAA). Routine, baseline study (post-op/intervention) is warranted within 1-3 months.
    - Asymptomatic at six (6) month intervals, for two (2) years
    - Symptomatic/complications related to stent graft – more frequent imaging may be needed.
- Follow-up study may be needed to help evaluate a member'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.

**Abdominal aneurysms and general guidelines for follow-up

The normal diameter of the suprarenal abdominal aorta is 3.0 cm and that of the infrarenal is 2.0cm. Aneurysmal dilatation of the infrarenal aorta is defined as diameter >/= 3.0 cm or dilatation of the aorta >/= 1.5x the normal diameter. Initial evaluation of abdominal aortic aneurysn (AAA) is accurately made by ultrasound. Ultrasound can detect and size AAA, with the advantage of being relatively inexpensive, noninvasive and not require iodinate contrast1. The limitations are that overlying bowel gas can obscure findings and the technique is operator dependent.

Indications for Pelvis MRA:

For evaluation of known or suspected pelvic vascular disease

- 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), and fistulas, intramural hematoma, and vasculitis.
- Evidence of vascular abnormality seen on prior imaging studies.
- Suspected pelvic extent of aortic dissection.
- Evaluation of suspected or known aortic aneurysm limited to the pelvis or in evaluating pelvic extent of aortic aneurysm**:
    - Suspected or known iliac artery aneurysm > 2.5 cm AND equivocal or indeterminate ultrasound results; OR
    - Prior imaging (e.g., ultrasound) demonstrating iliac artery aneurysm > 2.5 cm in diameter; OR
    - Suspected complications of known aneurysm as evidenced by clinical findings such as new onset of pelvic pain.
    - Follow-up of iliac artery aneurysm: Six (6) month if between 3.0-3.5 cm and if stable follow yearly. If >3.5 cm, < six (6) month follow-up (and consider intervention).
- Suspected retroperitoneal hematoma or hemorrhage (to determine vascular source of hemorrhage in setting of trauma, tumor invasion, fistula or vasculitis; otherwise CT is sufficient for diagnosis).
- Evaluation of suspected pelvic vascular disease when findings on ultrasound are indeterminate.
- Venous thrombosis if previous studies have not resulted in a clear diagnosis.
- Vascular invasion or displacement by tumor.

- Pelvic vein thrombosis or thrombophlebitis.

Pre-operative evaluation

- Evaluation of interventional vascular procedures for luminal patency versus restenosis due to conditions such as atherosclerosis, thromboembolism, and intimal hyperplasia.

Post- operative or post-procedural evaluation

- 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 peritoneal cavity).
- Follow-up for post-endovascular repair (EVAR) or open repair of abdominal aortic aneurysm (AAA). Routine, baseline study (post-op/intervention) is warranted within 1-3 months.
    - Asymptomatic at six (6) month intervals, for two (2) years.
    - Symptomatic/complications related to stent graft – more frequent imaging may be needed.
- Follow-up study may be needed to help evaluate a member'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.

**Follow-up of asymptomatic incidentally detected iliac artery aneurysms

- <3.0 cm: rarely rupture, grow slowly, follow-up not generally needed.
- 3.0-3.5 cm: followed up initially at 6 months
    - If stable, then annual imaging.
- >3.5 cm: greater likelihood of rupture
    - <6 month follow up
    - Consider intervention.

BILLING/CODING INFORMATION:

CPT Coding:

72198	Magnetic resonance angiography, pelvis, with or without contrast material(s)
74185	Magnetic resonance angiography, abdomen, with or without contrast material(s)

REIMBURSEMENT INFORMATION:

Refer to section entitled **POSITION STATEMENT**.

Re-imaging or additional imaging due to poor contrast enhanced exam or technically limited exam is the responsibility of the imaging provider.

LOINC Codes:

The following information may be required documentation to support medical necessity: physician history and physical, physician progress notes, plan of treatment and reason for magnetic resonance angiography (MRA) of the abdomen and pelvis.

Documentation Table	LOINC Codes	LOINC Time Frame Modifier Code	LOINC Time Frame Modifier Codes Narrative
Physician history and physical	28626-0	18805-2	Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim
Attending physician progress note	18741-9	18805-2	Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim
Plan of treatment	18776-5	18805-2	Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim
Radiology reason for study	18785-6	18805-2	Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim
Radiology comparison study-date and time	18779-9	18805-2	Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim
Radiology comparison study observation	18834-2	18805-2	Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim
Radiology-study observation	18782-3	18805-2	Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim
Radiology-impression	19005-8	18805-2	Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim
Radiology study-recommendation (narrative)	18783-1	18805-2	Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim

PROGRAM EXCEPTIONS:

Coverage for the radiology services referenced in this guideline performed and billed in an outpatient or office location will be handled through the BCBSF Radiology Management program for select products. The National Imaging Associates (NIA) will determine coverage for these services for select products. Refer to the member's contract benefits.

Federal Employee Plan (FEP): FEP is excluded from the National Imaging Associates (NIA) review; follow FEP guidelines.

Medicare Advantage products

The following Local Coverage Determination (LCD) was reviewed: Magnetic Resonance Angiography (MRA), (L29218 and L34372) located at fcso.com.

The following National Coverage Determination (NCD) was reviewed: Magnetic Resonance Angiography, (220.3) and Magnetic Resonance Imaging (MRI), (220.2) located at cms.gov.

DEFINITIONS:

No guideline specific definitions apply.

RELATED GUIDELINES:

Magnetic Resonance Angiography (MRA) Brain (Head), 04-70540-18
Magnetic Resonance Angiography (MRA) Chest, 04-70540-20
Magnetic Resonance Angiography (MRA) Extremity (Upper and Lower, 04-70540-22
Magnetic Resonance Angiography (MRA) Neck, 04-70540-19
Magnetic Resonance Angiography (MRA) Spinal Canal, 04-70540-23

OTHER:

None applicable.

REFERENCES:

1. American College of Radiology ACR Appropriateness Criteria®: Radiologic Management of Mesenteric Ischemia, Last review date: 2016.
2. ACR-NASCI-SPR Practice Guideline for the Performance of Body Magnetic Resonance Angiography (MRA), Revised 2015.
3. Desjardins B, Dill KE, Flamm SD et al. ACR Appropriateness Criteria® pulsatile abdominal mass, suspected abdominal aortic aneurysm. International Journal of Cardiovascular Imaging 2013; 29(1): 177-183.
4. Schwope RB, Alper HJ, Talenfeld AD et al. MR angiography for patient surveillance after endovascular repair of abdominal aortic aneurysms. American Journal of Roentgenology 2007; 188(4): W334-W340.
5. Soulez G, Pasowicz M, Benea G et al. Renal artery stenosis evaluation: diagnostic performance of gadobenate dimeglumine-enhanced MR angiography--comparison with DSA. Radiology 2008; 247(1): 273-285.
6. National Imaging Associates, Inc. MR Angiography Abdomen, 2018.
7. National Imaging Associates, Inc. MR Angiography Pelvis, 2018.
8. Shih MC & Hagspiel KD. CTA and MRA in mesenteric ischemia: part 1, Role in diagnosis and differential diagnosis. American Journal of Roentgenology 2007; 188: 452-461.
9. Shih MP, Angle JF, Leung DA et al. CTA and MRA in mesenteric ischemia: part 2, normal findings and complications after surgical and endovascular treatment. American Journal of Roentgenology 2007; 188: 462-471.

COMMITTEE APPROVAL:

This Medical Coverage Guideline (MCG) was approved by the Florida Blue Medical Policy & Coverage Committee on 07/26/18.

GUIDELINE UPDATE INFORMATION:

12/15/13	New Medical Coverage Guideline.
01/01/15	Review. Added indications for abdomen and pelvic MRA; vascular disease, pre-operative and post-operative or post-procedure evaluation. Updated references.
04/15/15	Annual review. No change to position statement. Revised description and updated references.
08/15/18	Revision; revised position statements (abdomen and pelvis). Updated references.