Subject: Magnetic Resonance Angiography (MRA) Abdomen and Pelvis

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:

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.
- Diagnosis or follow-up of visceral artery aneurysm.
- Evidence of vascular abnormality seen on prior imaging studies and limited to the abdomen.
• Evaluation of suspected or known aortic aneurysm**:
  o Suspected or known aneurysm > 2.5 cm AND equivocal or indeterminate ultrasound results; OR
  o Prior imaging (e.g., ultrasound) demonstrated aneurysm > 2.5 cm in diameter; OR
  o 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 or from other causes.

• Evaluation of suspected acute mesenteric ischemia/ischemic colitis when CTA is contraindicated.

• Suspected chronic mesenteric ischemia.

• 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 transjugular intrahepatic portosystemic shunt (TIPS) when Doppler ultrasound indicates suspected complications.

• Kidney failure or renal insufficiency if initial evaluation performed with ultrasound is inconclusive.

• Evaluation of known or suspected renal artery stenosis or resistant hypertension in the setting of normal renal function or impaired renal function unrelated to recent medication demonstrated by any of the following:
  o Unsuccessful control after treatment with three (3) or more (> 2) anti-hypertensive medication at optimal dosing
  o Acute elevation of creatinine after initiation of an angiotension converting enzyme inhibitor (ACE inhibitor) or angiotension receptor blocker (ARB)
  o Asymmetric kidney size noted on ultrasound
  o Onset of hypertension in a member younger than age 30 without any other risk factors or family history of hypertension
  o Significant hypertension (diastolic blood pressure > 110 mm Hg) in a young adult (i.e., younger than 35 years) suggestive of fibromuscular dysplasia
  o Diagnosis of a syndrome with a higher risk of vascular disease, such as neurofibromatosis, tuberous sclerosis and Williams’ syndrome
  o New onset of hypertension after age 55
  o Acute rise in blood pressure in a member with previously stable blood pressures
  o Flash pulmonary edema without identifiable causes
  o Malignant hypertension
  o Bruit heard over renal artery and 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
• Imaging of the deep inferior epigastric arteries for surgical planning (breast reconstruction surgery), include pelvic MRA.

Post-operative/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., pseudoaneurysms related 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) or abdominal extent of iliac artery aneurysms. Routine, baseline study (post-op/intervention) is warranted within 1-3 months
  o Asymptomatic at six (6) month intervals, for one (1) year
• 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 2.0 cm. 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 aneurysm (AAA) is accurately made by ultrasound. Ultrasound can detect and size AAA, with the advantage of being relatively inexpensive, noninvasive and not require iodinate contrast. The limitations are that overlying bowel gas can obscure findings and the technique is operator dependent.

**Indications for pelvis MRA:**

Evaluation of known or suspected pelvic vascular disease
• 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), and fistulas, intramural hematoma, and vasculitis
• Evidence of vascular abnormality seen on prior imaging studies.
• Suspected pelvic extent of aortic dissection
• Evaluation of known or suspected aneurysm limited to the pelvis or in evaluating pelvic extent of aortic aneurysm**:
  o Known or suspected iliac artery aneurysm AND equivocal or indeterminate Doppler ultrasound results and contraindication to CTA; OR
  o If repeat Doppler ultrasound is indeterminate; OR
  o 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 and if stable follow yearly. If >3.5 cm, < six (6) month follow-up (and consider intervention)
• Retroperitoneal hematoma or hemorrhage when an underlying neoplasm is suspected and prior imaging is inconclusive
• Evaluation of suspected pelvic vascular disease when findings on ultrasound are indeterminate (MR or CT venography (CTV) may be used as the initial study for evaluating pelvic thrombosis or thrombophlebitis)

• Evaluation of venous thrombus in the inferior vena cava

• Venous thrombosis if previous studies have not resulted in a clear diagnosis

• Vascular invasion or displacement by tumor (conventional CT or MRI also appropriate)

• Pelvic vein thrombosis or thrombophlebitis

• Suspected May-Thurner Syndrome (iliac vein compression syndrome)

• Chronic mesenteric ischemia assess with CTA unless contraindicated.

Pre-operative evaluation

• 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.

Post- operative or post-procedural evaluation

• Evaluation of post-operative complications of renal transplant allograft.

• 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) and iliac arteryaneurysms. 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 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
  o If stable, then annual imaging.

• >3.5 cm: greater likelihood of rupture
  o <6 month follow up
  o Consider intervention.
**BILLING/CODING INFORMATION:**

CPT Coding:

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<thead>
<tr>
<th>Code</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>72198</td>
<td>Magnetic resonance angiography, pelvis, with or without contrast material(s)</td>
</tr>
<tr>
<td>74185</td>
<td>Magnetic resonance angiography, abdomen, with or without contrast material(s)</td>
</tr>
</tbody>
</table>

**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.

<table>
<thead>
<tr>
<th>Documentation Table</th>
<th>LOINC Codes</th>
<th>LOINC Time Frame Modifier Code</th>
<th>LOINC Time Frame Modifier Codes Narrative</th>
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<tbody>
<tr>
<td>Physician history and physical</td>
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<td>18805-2</td>
<td>Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim</td>
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<td>Attending physician progress note</td>
<td>18741-9</td>
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<td>Plan of treatment</td>
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<td>Radiology reason for study</td>
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<td>Radiology comparison study date and time</td>
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<td>Radiology-impression</td>
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<td>Radiology study-recommendation (narrative)</td>
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<td>Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim</td>
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**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), (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:**


**COMMITTEE APPROVAL:**

This Medical Coverage Guideline (MCG) was approved by the Florida Blue Medical Policy & Coverage Committee on 02/27/20.

**GUIDELINE UPDATE INFORMATION:**

<table>
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<tr>
<td>12/15/13</td>
<td>New Medical Coverage Guideline.</td>
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<tr>
<td>01/01/15</td>
<td>Review. Added indications for abdomen and pelvic MRA; vascular disease, pre-operative and post-operative or post-procedure evaluation. Updated references.</td>
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<tr>
<td>04/15/15</td>
<td>Annual review. No change to position statement. Revised description and updated references.</td>
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<tr>
<td>08/15/18</td>
<td>Revision; revised position statements (abdomen and pelvis). Updated references.</td>
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<tr>
<td>03/15/20</td>
<td>Review/revision. Expanded criteria for evaluation of known or suspected abdominal vascular disease, pre-operative evaluation/post-operative or post-procedural evaluation. Updated references.</td>
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