INDICATIONS FOR DIAGNOSTIC ARTERIOGRAPHY

Purpose: To define the indications for diagnostic arteriography procedures.

Policy: Angiography is an invasive technique used to visualize the vessels. Arteries, veins and lymphatics are seen by fluoroscopy after they are opacified with contrast agents. A list of procedures with standard indications follows. Occasionally, these procedures may be indicated for exceptional reasons other than those included in this document.

Carotid Arteriography

1. Cerebrovascular insufficiency. Indication based on symptoms: stroke, transient ischemic attack, amaurosis fugax where other causes such as hemorrhage, tumor etc. have been excluded. Noninvasive testing is not required for surgical or medical management.
2. Symptomatic patients with inconclusive or contradictory noninvasive testing results.
3. Asymptomatic patients with severe stenosis or ulcerated plaque by noninvasive study when confirmation is needed for medical or surgical management.
4. Suspected carotid dissection
5. Diagnosis and evaluation of vascular trauma
6. Diagnosis and evaluation of head and neck tumors
7. Diagnosis and evaluation of carotid aneurysms.

Vertebral Arteriography

1. Episodic dizziness, vertigo, unsteadiness, or ataxia.
2. Brainstem or cerebral infarction
3. Other symptoms compatible with vertebrobasilar insufficiency
4. In conjunction with carotid Arteriography, to evaluate for intracranial occlusive disease and collateral flow.
5. Diagnosis and evaluation of subclavian steal
6. Diagnosis and evaluation of head and neck tumors.
7. Diagnosis and evaluation of vascular malformation.
8. Diagnosis and evaluation of vascular trauma.

External Carotid Arteriography

1. Diagnosis and evaluation of suspected tumors
2. Diagnosis and evaluation of recurrent epistaxis or trauma.
3. Diagnosis and evaluation of vascular malformations, vasculitis, and other primary vascular abnormalities.
4. Evaluation for potential arterial bypass or to evaluate previous arterial bypass.

**Cerebral Arteriography**

1. Diagnosis and evaluation for intracranial tumors.
2. Evaluation of intracerebral hemorrhage, including trauma.
3. Diagnosis and evaluation of primary vascular abnormalities, including aneurysms, vascular malformations, occlusive disease.
4. Evaluation of suspected intracranial occlusive disease or to assess collateral flow.
5. Post operative evaluation of surgical or neurointerventional procedures.

**Spinal Arteriography**

1. Diagnosis and evaluation of spinal and spinal cord tumors.
2. Diagnosis and evaluation of vascular malformations.
3. Diagnosis and evaluation of spinal trauma.
4. Preoperative evaluation prior to aortic or spinal surgery.

**Pulmonary Arteriography**

1. Suspected pulmonary embolus when ventilation-perfusion scan cannot be performed.
2. High probability ventilation-perfusion scan when there is contraindication to antiocoagulation.
5. Low probability ventilation-perfusion scan in a patient with a high clinical suspicion of pulmonary embolus.
6. Diagnosis and evaluation of suspected chronic pulmonary embolus.
7. Diagnosis and evaluation of other suspected pulmonary abnormalities, such as vasculitis, congenital and acquired anomalies, tumor encasement, and vascular malformations.

**Bronchial Arteriography**

1. Diagnosis and evaluation of hemoptysis
2. Diagnosis and evaluation of suspected congenital cardiopulmonary anomalies.
3. Assessment of distal pulmonary artery circulation (by shunting) in patients who are potential candidates for pulmonary thromboendarterectomy.

**Aortography**

1. Diagnosis and evaluation of intrinsic abnormalities, including transaction, dissection, aneurysm, occlusive disease, aortitis and congenital abnormality.
2. Evaluation of aorta and its branches prior to selective studies.

**Abdominal Visceral Arteriography**

1. Acute or chronic gastrointestinal hemorrhage.
2. Diagnosis and evaluation of intra-abdominal tumors.
3. Diagnosis and evaluation of penetrating and solid organ trauma.
4. Diagnosis and evaluation of portal hypertension and varices.
5. Diagnosis and evaluation of chronic or acute intestinal ischemia.
6. Diagnosis and evaluation of primary vascular abnormalities, including aneurysms, vascular malformations, occlusive disease, or vasculitis.
7. Pre and post operative evaluation of portosystemic shunts.

**Renal Arteriography**

1. Diagnosis and evaluation of renal tumors
2. Diagnosis and evaluation of renovascular occlusive disease.
3. Diagnosis of renal vascular trauma.
4. Diagnosis of primary vascular abnormalities, including aneurysms, vascular malformation and vasculitis.
5. Evaluation of hematuria of unknown cause.
6. Pre operative evaluation for solid organ transplantation.

**Pelvic Arteriography**

1. Diagnosis and evaluation of gastrointestinal or genitourinary bleeding.
2. Diagnosis and evaluation for therapy for retroperitoneal or pelvic bleeding due to trauma, malignancy or other causes.
3. Diagnosis and evaluation of male impotence caused by arterial occlusive disease.
4. Diagnosis and evaluation of atherosclerotic aortoiliac disease.
5. Diagnosis and evaluation of primary vascular abnormalities, including aneurysms, vascular malformations and vasculitis.

**Extremity Arteriography**
1. Diagnosis and evaluation of atherosclerotic vascular disease, including aneurysms, emboli, occlusive disease, and thrombosis.
2. Diagnosis and evaluation of other primary vascular abnormalities including vascular malformations, vasculitis, entrapment syndrome, thoracic outlet syndrome etc.
3. Diagnosis and evaluation of vascular trauma.
4. Diagnosis and evaluation of tumors
5. Preoperative planning for reconstructive surgery.