Outpatient exams are available 7 days a week. Advanced imaging cases are scheduled 8 a.m.-2 p.m., Monday-Friday. Advanced imaging cases should request 3T. For consultation with a neuroradiologist, page 314-508-3767.

The Food and Drug Administration (FDA) has issued multiple Safety Communications regarding gadolinium-based contrast agents (GBCAs), including one on 7-27-2015 which includes the suggestion “To reduce the potential for gadolinium accumulation, health care professionals should consider limiting GBCA use to clinical circumstances in which the additional information provided by the contrast is necessary. Health care professionals are also urged to reassess the necessity of repetitive GBCA MRIs in established treatment protocols.” [http://www.fda.gov/Drugs/DrugSafety/ucm455386.htm](http://www.fda.gov/Drugs/DrugSafety/ucm455386.htm)

**BRAIN**

**MRI Brain W/O Contrast (CPT Code 70551)**
- **B01 Stereotactic** Protocol without Fiducials or Frame (Stealth or Gamma Knife)
- **B01F Stereotactic Protocol with Fiducials or Frame** (Stealth or Gamma Knife)
- **B02 General brain** (Indications: headache, acute trauma, shunt evaluation, stroke)
- **B09 Hyperacute Stroke** (ER and inpatients only, not an Allscripts choice)
- **B06 High Resolution Temporal Lobe** (chronic seizures, epileptic)
- **B05 MS** (known or suspected demyelination)
- **E09 IAC/lower cranial nerves** (focused posterior fossa protocol tinnitus/cholesteatoma/sensorineural hearing loss/acoustic neuroma/trigeminal neuralgia)
- **E09B IAC/lower cranial nerves** (posterior fossa plus whole brain)

**MRI Brain W and W/O Contrast (CPT Code 70553)**
- **B01 Stereotactic** Protocol without Fiducials or Frame (Stealth or Gamma Knife)
- **B01F Stereotactic Protocol with Fiducials or Frame** (Stealth or Gamma Knife)
- **B02 General Brain** (new seizure evaluation, infection, rule out mets, headache, stroke)
- **B03 3D Tumor//Perfusion** (for known brain tumor/metastatic disease, includes DTI, SWI & Stealth sequences)
- **B09 Hyperacute Stroke** (ER and inpatients only, not an Allscripts choice)
- **B06 High Resolution Temporal Lobe** (chronic seizures, epileptic, recommend 3T)
- **B12 Pituitary Protocol** (elevated prolactin levels/pituitary lesions/microadenoma)
- **B05 MS** (known or suspected demyelination, recommend schedule for 3T)
- **E09 IAC/lower cranial nerves** (focused posterior fossa protocol tinnitus/cholesteatoma/sensorineural hearing loss/acoustic neuroma/trigeminal neuralgia)
- **E09B IAC/lower cranial nerves** (posterior fossa plus whole brain)
MRI Brain W Contrast (CPT Code 70552)
• **B13 Mets/Screen** Evaluate for asymptomatic mets/screening protocol (typically for melanoma or lung cancer)
• **B01 Frameless Stereotactic** (Stealth or Gamma Knife, no frame or fiducials)
• **B01F Stereotactic with fiducials or frame** (Stealth or Gamma Knife)
• **E09 IAC** focused posterior fossa protocol

**BRAIN + (multiple CPT codes)**
Brain and Magnetic Resonance Angiogram (MRA) or Magnetic Resonance Venogram (MRV), without contrast (CPT Codes 70551, 70554)
• **B02A Brain plus circle of willis MRA** (Acute/subacute stroke or TIA)
• **B02B Brain plus MRV** (Headache, r/o sinus thrombosis)

Brain and Magnetic Resonance Angiogram (MRA) or Magnetic Resonance Venogram (MRV), with contrast (CPT Codes 70553, 70545)
• **B02A Brain plus circle of willis MRA** (Acute/subacute stroke or TIA)
• **B02B Brain plus MRV** (Headache, r/o sinus thrombosis)

Brain and Orbital or Face MRI, without contrast (CPT Codes 70551, 70540)
• **B05O Brain + Orbits for demyelination** or acute symptoms
• **E01S Brain + Orbits, Skull base, or Face for Tumor**

Brain and Orbital or Face MRI, without and with contrast (CPT Codes 70553, 70543)
• **B05O Brain + Orbits for demyelination** or acute symptoms
• **E01S Brain + Orbits, Skull base, or Face for Tumor**

**ADVANCED IMAGING: Volumetric**
Brain + Volumetric (3D) post processing, without contrast (CPT Codes 70551, 76377)
• **A06 Volumetric Brain MRI** (Memory loss/dementia/Alzheimer’s disease/normal pressure hydrocephalus, old trauma)
• **B01A Advanced Stereotactic** (Stealth with DTI, MPRAGE, resting state fMRI & tracts 3d processing)
• **B05V MS** (known or suspected demyelination, with 3D processing)
• **B06V High Resolution Temporal Lobe** (chronic seizures, epileptic, with 3D post processing)

Brain + Volumetric (3D) post processing, without and with contrast (CPT Codes 70553, 76377)
• **A06 Volumetric Brain MRI** for memory loss/dementia/Alzheimer’s disease/normal pressure hydrocephalus
• **B01A Advanced Stereotactic** (Stealth with DTI, perfusion, MPRAGE, resting state fMRI & tracts 3d processing)
• **B05V MS** (known or suspected demyelination, with 3D processing)
• **B06V High Resolution Temporal Lobe** (chronic seizures, epileptic, with 3D post processing)

**ADVANCED IMAGING: Functional**

**Brain + Volumetric (3D) post processing, without contrast (CPT Codes 70551, 76377)**

• **B01A Advanced Stereotactic** (Stealth with DTI, MPRAGE, resting state fMRI & tracts 3d processing)

**Brain + Volumetric (3D) post processing, without and with contrast (CPT Codes 70553, 76377)**

• **B01A Advanced Stereotactic** (Stealth with DTI, perfusion, MPRAGE, resting state fMRI & tracts 3d processing)

**Task and resting state functional MRI and tractography, without contrast (CPT Codes 70551, 70554, 76377)**

• **A03** Default testing is motor finger tap, language word generation, and resting state, with corticospinal tracts and arcuate fasciculus. Other testing requires special requests coordinated with neuroradiology assistant or fellow. Includes non-contrast brain MRI.

**Task and resting state functional MRI and tractography, without and with contrast (CPT Codes 70553, 70554, 76377)**

Default testing is motor finger tap, language word generation, and resting state, with corticospinal tracts and arcuate fasciculus. Other testing requires special requests coordinated with neuroradiology assistant or fellow.

• **A03** Task and Rest fMRI, tracts, and Stealth post contrast
• **A03B** Task and Rest fMRI, tracts, and post contrast Stealth and Perfusion

**ADVANCED IMAGING: Spectroscopy**

• **A01 Spectroscopy and non-contrast Brain MRI** (CPT Codes 76390, 70551)
• **A01 Spectroscopy and Brain MRI with and without contrast** (CPT Codes 76390, 70553)

**ADVANCED IMAGING: Cerebrospinal Fluid (CSF) Flow Study**

• **A04 CSF Flow** Study with Cine Flow and TrueFISP Please consult with neuroradiology regarding specific clinical question prior to precertification. Coding will be based upon the clinical question and may include:
  
  - **Brain MRI without contrast** (CPT Code 70551)
  - **Cervical Spine MRI without contrast** (CPT Code 72141)
  - **Brain MRI with and without contrast** (CPT Code 70553)
  - **Cervical Spine MRI without and with contrast** (CPT Code 72156)
ADVANCED IMAGING: Brachial Plexus

**S01 MRI Brachial Plexus**  To evaluate for mass lesions, entrapment or denervation. Please specify right or left. Please consult with neuroradiology regarding specific clinical question prior to precertification. Coding will be based upon the clinical question. Evaluation of roots requires a cervical spine MRI, cords and trunks are best visualized with a chest MRI.

- Chest MRI without contrast (CPT Code 71550)
- Chest MRI without and with contrast (CPT Code 71552)
- Cervical Spine MRI without contrast  (CPT Code 72141)
- Cervical Spine MRI without and with contrast  (CPT Code 72156)

ADVANCED IMAGING: MR Myelography

**S07 MR Myelogram**  Typical indication is CSF leak, chronic spinal headache. For spinal and/or cisternal MR myelography with intrathecal gadolinium, please contact 3rd floor radiology at BJH to coordinate scheduling with the fluoroscopic procedure (314-362-7113). Exam will consist of a pre-contrast MRI, a fluoroscopic guided lumbar puncture with injection of intrathecal gadolinium, and a post-contrast MRI. Coding will depend upon the specific clinical question, but may include:

- Fluoroscopic lumbar puncture and injection (CPT Codes 77003, 62284)
- Brain MRI without and with contrast (CPT Code 70553)
- Cervical Spine MRI without and with contrast  (CPT Code 72156)
- Thoracic Spine MRI without and with contrast (CPT Code 72157)
- Lumbar Spine MRI without and with contrast  (CPT Code 72158)

ADVANCED IMAGING: Spinal magnetic resonance angiography (MRA)

**S06 Spinal MRA**  Typical indication is progressive myelopathy with cord abnormality diagnosed on MRI. Spinal MRA should be reserved for those patients for whom a catheter angiogram (the gold standard) is not appropriate. Coding will depend upon the specific clinical question, but may include:

- Spinal angiography (CPT Code 72159)
- Cervical Spine MRI without and with contrast  (CPT Code 72156)
- Thoracic Spine MRI without and with contrast (CPT Code 72157)
- Lumbar Spine MRI without and with contrast  (CPT Code 72158)

ENT - HEAD & NECK

**Orbits, Face or Neck without contrast (CPT Code 70540)**

- **E01 Orbits** A high resolution exam to include the orbits and optic pathways. (Indications include Graves’ disease, eye swelling, exophthalmus/proptosis, optic neuritis, optic nerve lesion/tumor/infection, diplopia/double vision, visual field defect, evaluation of any of the upper cranial nerves).
- **E02 Soft Tissue Neck** A survey exam imaging from above the orbits to the thoracic inlet. (Indications include infection, neck mass, vocal cord paralysis, adenopathy, known...
or suspected lesion in thyroid or parathyroid.)

**Orbits, Face or Neck without and with contrast (CPT Code 70543)**

- **E01 Orbits** A high resolution exam to include the orbits and optic pathways. (Indications include Graves’ disease, eye swelling, exophthalmus/proptosis, optic neuritis, optic nerve lesion/tumor/infection, diplopia/double vision, visual field defect, evaluation of any of the upper cranial nerves).
- **E03 Face and paranasal sinuses** A high resolution exam of the face and sinuses. (Indications include sinusitis, sinonasal cancer, known or suspected lesion in parotid gland, oropharynx, nasopharynx, tongue or floor of mouth.)
- **E02 Soft Tissue Neck** A survey exam imaging from above the orbits to the thoracic inlet. (Indications include infection, neck mass, vocal cord paralysis, adenopathy, known or suspected lesion in thyroid or parathyroid.)

**SPINE**

- **S02 Cervical Spine without contrast** (CPT Code 72141)
- **S02 Cervical Spine without and with contrast** (CPT Code 72156)
- **S08 Flexion-Extension Cervical Spine without contrast** (CPT Code 72141)
- **S08 Flexion-Extension Cervical Spine without and with contrast** (CPT Code 72156)
- **S03 Thoracic Spine without contrast** (CPT Code 72146)
- **S03 Thoracic Spine without and with contrast** (CPT Code 72157)
- **S04 Lumbar Spine without contrast** (CPT Code 72148)
- **S04 Lumbar Spine without and with contrast** (CPT Code 72158)
- **S05A Total Spine without contrast (cord compression screening)** (CPT Codes 72141, 72146, 72148)
- **S05A Total Spine without and with contrast (cord compression screening)** (CPT Codes 72156, 72157, 72158)
- **S05B Total Spine without contrast (2+ hour exam)** (CPT Codes 72141, 72146, 72148)
- **S05B Total Spine without and with contrast (2+ hour exam)** (CPT Codes 72156, 72157, 72158)

**MAGNETIC RESONANCE ANGIOGRAPHY (MRA)**

- **M03C MRA Circle of Willis** (Suspected aneurysm, TIA/stroke)
- **M03W MRA with whole brain coverage** for arteriovenous malformation (AVM)
  - MRA Brain without contrast (CPT Code 70554)
  - MRA Brain with contrast (CPT Code 70546)

- **M01 Neck MRA** for carotid stenosis or bruit
- **M01D Neck MRA** for TIA/stroke, with dissection protocol

  - MRA Neck without contrast (CPT Code 70547)
  - MRA Neck with contrast (CPT Code 70549)
  - MRA Neck without and with contrast (CPT Code 70546)
For further information about specific exams or diagnosis, please refer to the American College of Radiology Appropriateness Criteria or page 314-508-3767 for direct consultation with a neuroradiologist.  
http://www.acr.org/Quality-Safety/Appropriateness-Criteria

This Ordering Guide is also available online, with hyperlinks to specific protocols. To access this guide online, please go to:  
https://docs.google.com/document/d/1aixZT1ofDmqVKNSyZ0mxJ3p4GRMe7-vMt5iMOQjW3sc/edit?usp=sharing