

INPATIENT & ER PATIENT MRI EXAMINATIONS

PURPOSE

- To standardize the ordering and performance of MR examinations and to ensure the appropriateness and triage of MR examinations performed on inpatients and ER patients.
- This policy was initiated and approved by the Hospital Administration and Medical Executive Committees.

MRI NORMAL HOURS OF OPERATION

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Riverside	7:00 am to 7:30 pm	7:00 am to 7:30 pm	7:00 am to 3:30 pm	7:00 am to 3:30 pm	7:00 am to 7:30 pm	7:00 am to 7:30 pm	7:00 am to 7:30 pm
Southside	7:00 am to 7:30 pm	7:00 am to 7:30 pm	7:00 am to 7:30 pm	7:00 am to 7:30 pm	7:00 am to 7:30 pm	7:00 am to 7:30 pm	on call
Clay	7:00 am to 7:30 pm	7:00 am to 7:30 pm	7:00 am to 7:30 pm	7:00 am to 7:30 pm	7:00 am to 7:30 pm	8:00 am to 12:00 pm	8:00 am to 12:00 pm
St Johns	7:00 am to 5:30 pm	7:00 am to 5:30 pm	7:00 am to 5:30 pm	7:00 am to 5:30 pm	7:00 am to 5:30 pm	on call	on call

MRI ON-CALL HOURS

- Defined as hours outside of the times listed above when the MR technologist must be called in.
- St Vincents observed holidays are treated as on-call hours.

ORDERING OF INPATIENT MRI EXAMS DURING NORMAL HOURS

- The following are approved indications for an MR examination on an inpatient during normal hours and do not require radiologist approval:
 - Neurologic Conditions
 - 1) Further evaluation of stroke or suspected stroke
 - 2) Suspected meningitis/encephalitis, brain abscess, epidural abscess or subdural empyema
 - 3) Determine chronicity of intracranial hemorrhage
 - 4) Determine whether questionable hemorrhage on CT is real
 - 5) First-time seizure
 - 6) Suspect acute multiple sclerosis or other demyelinating process
 - 7) Follow-up brain tumor (requires an acute change in neurological status)
 - 8) Post op brain lesion resection (within 24-48 hours to assess for residual neoplasm)

- 9) Suspect intracranial neoplasm or AVM underlying intraparenchymal hemorrhage
- 10) Suspect diffuse axonal injury
- 11) MR venography for suspected dural sinus thrombosis
- 12) Further evaluation of orbital asymmetry, proptosis, ophthalmoplegia or vision loss
- Spine Conditions
 - 1) New or progressive myelopathy, radiculopathy or stenosis
 - 2) Suspected epidural abscess and/or spondylodiscitis
 - 3) Suspected acute multiple sclerosis, other demyelinating process or acute inflammatory process
 - 4) Suspected spinal cord compression, ischemia or traumatic injury
 - 5) Suspected spinal instability (ligamentous injury)
 - 6) Follow-up spine tumor (requires acute change in neurological status)
- Abdomen/Pelvis Conditions
 - 1) MRCP for suspected biliary obstruction, choledocholithiasis or cholecystitis
 - 2) Pregnant patient with equivocal examination for appendicitis or other acute abdominopelvic condition
- Musculoskeletal Conditions
 - 1) Suspected osteomyelitis, septic arthritis or soft tissue abscess
 - 2) Suspected acute hip fracture when CT is equivocal
- Vascular Conditions (when CTA is contraindicated)
 - 1) Suspected acute aortic dissection or aortitis
 - 2) Suspected renal artery stenosis
 - 3) Suspected mesenteric ischemia
 - 4) Suspected portal vein thrombosis
 - 5) Suspected hemodynamically significant arterial stenosis or occlusion in lower extremity arteries
- All other indications require a radiologist approval and provider to radiologist discussion before the examination will be performed. The indication INP Other must be selected from the drop-down list under Reason for Exam. The indication and name of the radiologist who approved the examination must be noted in the Other Reason for Exam section of the order.
- All inpatient MR examinations require the use of the INP prefix followed by one of the above indications from the drop-down list under Reason for Exam. Additional indication/history should be entered in the Other Reason for Exam section of the order.
- Proper documentation regarding the appropriateness of the examination must be in the patient's chart.

ORDERING OF INPATIENT MRI EXAMS DURING ON-CALL HOURS

- Only truly emergent MR examinations that will immediately affect patient management will be performed during on-call hours.
- The following are approved indications for on-call examination:

- Spinal cord compression
- Pregnant patient with equivocal examination for appendicitis or other acute abdominopelvic condition
- Other indications which will immediately affect/alter patient management
- The following are examples of inappropriate indications for on-call MR examinations:
 - Routine evaluation of suspected stroke, meningitis/encephalitis and brain tumor
 - Spine conditions other than cord compression
 - Suspected osteomyelitis, septic arthritis or soft tissue abscess
 - Any examination for surgical planning in which the surgery will not be performed immediately after the MR. A next morning surgery is not an acceptable indication for an on-call hours MR examination.
- All other indications require a radiologist approval and provider to radiologist discussion.
- All inpatient MR examinations require the use of the INP prefix followed by one of the above inpatient indications from the drop-down list under Reason for Exam. Additional indication/history should be entered in the Other Reason for Exam section of the order.
- Proper documentation regarding the appropriateness of the examination must be in the patient's chart.
- The MR technologist is only to be called in by radiology staff (technologist, radiology assistant, radiologist or manager).

ORDERING OF ER PATIENT MRI EXAMS DURING NORMAL AND ON-CALL HOURS

- During normal hours of operation, only MR Brain w/o Contrast can be ordered by an ER attending for evaluation of stroke-like symptoms without obtaining radiologist approval.
- All other MRIs performed during normal hours and all MRIs performed during on-call hours require an ER attending to radiologist discussion.
- All ER patient MRI examinations require the use of the INP prefix followed by one of the above inpatient indications from the drop-down list under Reason for Exam. Additional indication/history should be entered in the Other Reason for Exam section of the order.
- The name of the radiologist who approved the examination must be placed in the order comments.
- The MR technologist is only to be called in by radiology staff (technologist, radiology assistant, radiologist or manager).

PROCESS FOR CALLING IN THE MRI TECHNOLOGIST ON-CALL HOURS

- If an on-call inpatient or ER MRI examination is approved by a radiologist, someone from radiology (usually the CT technologist) will contact the MR technologist who is on call.
- If the technologist is called in, he/she will call the RN taking care of the patient to make sure the EMR safety form has been completed. If the patient cannot fill out the form, the RN will contact the POA or family member speaking for patient and document who this was and the

contact number of him/her on the EMR safety form. This safety form must be reviewed by the MR technologist and the RN prior to the technologist coming in to make sure patient can have the examination.

- If the patient qualifies for the examination from a safety standpoint, the technologist will communicate with the RN his/her ETA and if the patient needs pre-medication.
- If the patient does not qualify from a safety standpoint, the technologist will communicate this with the RN (make sure to document the RN's name) and inform him/her to notify the ordering clinician as to why the patient does not qualify for the MR.

SCANNING OF ACTIVE IMPLANTS DURING ON-CALL HOURS

- Patients with active implants (pacemakers, defibrillators, cardiac event recorders, deep brain / spinal / peripheral nerve stimulators, cochlear implants, etc) can be scanned during on-call hours, however it is the responsibility of the ordering provider to arrange for the device vendor and nursing to be present for the examination (if applicable to the specific implant).
- Active implants require pre scanning research by the MR technologist and manufacturer representative presence (in many instances).
- When considering the approval of any MR examination after hours, the radiologist must question the ordering clinician and review any prior imaging in PACS for the presence of any active implants.