MR Safety Manual



In the acute care setting, "Code Purple" refers to an incoming patient with a suspected stroke. Because time is critical to these patients, a whole body CT topogram is performed immediately after the head CT exam while the patient is still on the CT scanner bed. The head CT and the whole body topogram are then reviewed by an MR Radiologist to confirm quickly that the patient may safely undergo the MR procedure.

Periodically, to expedite a pending MR procedure, a referring physician may order a whole body CT topogram rather than screening x-rays. Although such a topogram may be used to clear the chest, abdomen, and pelvis, *the topogram of the head is INADEQUATE for clearing the patient's orbits*. Head x-rays (i.e., two identical Water's views, same projection, not tilted) must still be ordered for review by the MR Radiologist.



If an MR Radiologist does not authorize the exam for a particular patient:

- For inpatients, the MR technologist or operations assistant (as directed by the technologist) should make a note in the Progress Notes and notify the patient's nurse that the scan could not be performed.
- For outpatients, the MR technologist or operations assistant (as directed by the technologist) should notify the referring physician that the scan could not be performed.

Emergent Patients

Emergent patients and their accompanying non-MR personnel may be screened only one time, *provided the screening is completed by the MR technologist*. **There are no exceptions.**

Non-Patient Screening

Individuals who are not patients (such as patient family members, ancillary staff, or service engineers) who must access Zone III or IV may be screened only once, provided the screening is completed by an MR technologist. **There are no exceptions.**

PREGNANCY-RELATED ISSUES

Pregnant Health Care Practitioners

Pregnant health care practitioners are permitted to work in and around the MR environment throughout their entire pregnancies. However, while they may position



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patients, inject contrast, and enter the MR scanner room in response to an emergency, they should **not** remain in Zone IV during actual data acquisition or scanning.

Pregnant Patients

Current data have not conclusively confirmed detrimental health effects of MR imaging to the developing fetus. Therefore no special consideration is recommended for the first (versus any other) trimester. Nonetheless, women of childbearing age should be screened for pregnancy prior to MR imaging.

A pregnancy test is required only if the following criteria are met:

- The patient has not undergone a hysterectomy.
- The patient is unsure of her pregnancy status.
- The exam will require the use of gadolinium (Gd)-based contrast.

If the patient is pregnant, consideration should be given to reassess the potential risks versus benefits of the pending study in determining whether the requested MR exam could safely wait until the end of the pregnancy.

Breast Imaging

Breast MR is not performed on pregnant women.

All Imaging Other than Breast

Pregnant patients can undergo an MR scan at any stage of the pregnancy *provided an MR Radiologist determines the risk-benefit ratio warrants the study*. Accordingly, if the patient is pregnant, the MR technologist must contact **an MR Radiologist** to verify the appropriateness of the exam and to determine if the technologist should proceed with the study. The radiologist should confer with the referring physician and document the following in the Radiology report or the patient's medical record:

- The information requested from the MR study cannot be acquired via nonionizing means (i.e., ultrasonography);
- The data are needed to potentially affect the care of the patient or fetus during the pregnancy; and
- The referring physician does not feel it is prudent to wait until the patient is no longer pregnant to obtain these data.

Although written consent is not required, the technologist must review the pending procedure and discuss the risks and benefits of exam. Again, *current data have not definitively proven any negative health effects of MR imaging to the developing fetus. Furthermore, not having the exam may present risk because pathology may go undiagnosed without the MR study.*