ROCKWOOD

IMAGING CENTER MRI SAFETY AND PREGNANCY

Purpose: The following information is provided to pregnant patients and/or personnel to facilitate their decision whether or not to undergo diagnostic MRI or work in the MRI environment.

Policy: Pregnant patients can undergo MRI scans at any stage of pregnancy if, in the opinion of the attending radiologist and the referring physician, the risk-benefit ratio to the patient warrants that the study be performed. It should be documented in the radiology report or the patient's medical record that:

1. The information received from the MRI study cannot be acquired via alternative non-ionizing studies, and
2. The information received from the MRI scan is needed to potentially affect that care of the patient and/or fetus during the pregnancy, and
3. The referring physician does not feel that it is prudent to delay diagnostic data until after the patient is no longer pregnant.
4. Gadolinium-based contrast agents should not be routinely given to pregnant patients. Rather, a risk-benefit assessment should be discussed between the patients, the attending radiologist and the referring physician.
5. Pregnant patients undergoing MRI will provide written informed consent to document that they understand the potential risks/benefits of the MRI procedure, know the available alternatives and that they wish to proceed with MRI.

Rockwood Imaging Center pregnant personnel: Pregnant health care workers are permitted to work in and around the MRI environment throughout all stages of their pregnancy. This includes but is not limited to positioning patients, scanning, archiving, injecting contrast, entering the scan room in response to an emergency, etc. **Pregnant workers are not to remain within the bore or the MRI scan room during actual scanning and data acquisition**.

General information: MRI uses a powerful magnetic field and computers to create images of the body. The magnetic field aligns protons that are present in nearly all of the body's tissues. Radio waves then cause these protons to produce signals that are picked up by a receiver within the MRI scanner and then sent for computer processing to derive anatomic information of the body.

In general, there is no known risk of performing MRI on pregnant patients. However, the risks are not well defined. MRI has been used without known or significant side effects during the second and third trimester pregnancies for many years. Historically, MRI has been used sparingly during the first trimester of pregnancy. MRI studies on pregnant patients are generally performed to address very important clinical problems or suspected abnormalities. Generally, MRI is safer for the fetus than imaging with x-rays.

Current radiology practices discourage the use of gadolinium-based contrast agents during pregnancy because their safety for the fetus has not been proven. While available evidence suggests that it is unlikely that these contrast agents have an adverse effect on the developing fetus, they should not be used routinely but should be reserved for serious clinical problems or emergencies.

Breast Feeding and Gadolinium Contrast: If a patient is breast-feeding an infant during the period of a scheduled MRI exam that requires gadolinium contrast, it is recommended that the patient pump and save her breast milk since the injected contrast will pass into the breast milk. ***While the injected contrast takes about 24 hours to clear the body, it is recommended that breast-feeding not resume for 48 hours***.

**Adapted from ACR White Paper on MRI Safety, June 2002 and www.Radiologyinfo.com.*