

**Cornell University MRI Facility (CMRIF)  
Policy and Procedures Manual**

Developed:	June 2007 (at WCM)
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Reviewed at Cornell University:	October 2020
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**TITLE: NONCONTRAST MRI AND PREGNANCY**

**POLICY STATEMENTS:**

The ACR standard for performing MRI scans states:

*"Present data have not conclusively documented any deleterious effects of MR imaging exposure on the developing fetus. Therefore, no special consideration is recommended for the first, versus any other, trimester in pregnancy. Nevertheless, as with all interventions during pregnancy, it is prudent to screen females of reproductive age for pregnancy before permitting them access to MR imaging environments. If pregnancy is established consideration should be given to reassessing the potential risks versus benefits of the pending study in determining whether the requested MR examination could safely wait to the end of the pregnancy before being performed."*

1. Cornell University will NOT scan 1<sup>st</sup> trimester subjects unless permitted by IRB and discussed with CMRIF director.
2. Patients in their second and third trimester may be scanned on a 1.5T or 3T MRI scanner. Informed written consent is not required as stated above.
3. Fetal MRI cases should be scanned on 3T MRI scanners for image quality purposes.

**PROCEDURE:**

When a pre-screened, consented pregnant subject presents for their MRI, the technologist will discuss the proposed imaging with the subject. The technologist will provide the ACR documentation concerning MRI in pregnancy to the patient. If the patient requests to speak to a physician, they should be instructed to contact the CMRIF director or a physician at Cornell Health.

If the patient is unaware of pregnancy status, then the technologist will confirm that the subject was properly consented regarding MRI safety during pregnancy including the theoretical risks. This discussion should be documented in the technologist's notes for the scan.

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**PREGNANCY SCREENING:**

If a subject is of childbearing age (11-55 years) and has no barrier to pregnancy such as: onset of menstruation within last 10 days, history of abstinence, history of bilateral tubal ligation or hysterectomy, and indicates on the questionnaire that she may be pregnant, screening for pregnancy must be done as outlined below.

1. **If the patient is 1-10 days into their menstrual cycle then no pregnancy testing is required.**
2. If the patient is within 11-24 days of their cycle then a beta hCG must be drawn. The CMRIF does not currently offer this form of testing. The subject must see an outside physician for blood work or Cornell Human Metabolic Research Unit. If the patient still wishes to complete the MRI, the CMRIF Director must be notified and the subject consented through an approved IRB.
3. If the patient is within 25 days or more of their cycle then a urine hCG test may be used to determine pregnancy. Results of the urine pregnancy test should be documented in the patient's chart.
  - a. If negative, the patient may proceed with the exam.
  - b. If positive, the patient will be informed and provided instructions to see their referring MD for pregnancy confirmation. If the patient still wishes to complete the MRI, the CMRIF director should be notified for discussion.

**RESPONSIBILITY:**

Technologist, CMRIF Director, Principal Investigators

**REFERENCES:**

American College of Radiology - Manual on Contrast Media, Version 5.0, pg. 48

Barkhof F, Heijhboer RJ, Algra PR. Inadvertent IV administration of gadopentetate diglumine during early pregnancy. AJR 1992; 158:1171.

Kanel et al. ACR Guidance Document on MR Safe Practices: 2013. JMRI 2013; 37:501–530

Shoenut JP, Semelka RC, Silverman R, Yaffe CS, Micflikier AB. MRI in the diagnosis of Crohn's disease in two pregnant women. J Clin Gastroenterol; 1993