

# OpenSided MRI Gadolinium Consent Form

What is gadolinium and what is its use in clinical medicine?

Gadolinium is a paramagnetic metal ion. Paramagnetic ions, such as gadolinium, tend to move into magnetic fields. This trait makes paramagnetic ions such as gadolinium useful for Magnetic Resonance Imaging (MRI) and Magnetic Resonance Angiography (MRA). Gadolinium is approved for use with MRI as a contrast agent to provide a clearer picture of body organs and tissues. It is also used for MRA, another imaging procedure.

Gadolinium-containing contrast agents are manufactured by a chelating process, a procedure in which large organic molecules form a stable complex around the gadolinium. The chelate reduces the chances of toxicity that could result from exposure to free gadolinium. This stable complex is eliminated via the kidneys ~ patients with normal functioning kidneys.

## **Painful Condition Affecting Kidney Failure Patients Increases Risk Of Death**

*ScienceDaily (Oct. 2, 2007)* - A painful and debilitating condition that affects patients with kidney failure may be more common than previously believed and appears to be strongly associated with prior exposure to certain contrast agents used in imaging studies. In addition, individuals with this syndrome -- called nephrogenic systemic fibrosis (NSF) -- appear to have a significantly increased risk of dying. The findings are published in the journal *Arthritis & Rheumatism*.

## **Study Results**

Among 186 study participants, 25 (13 percent) were determined to have NSF based on the presence of at least two of the three skin findings. Examination of skin biopsy samples from five study participants supported the examination-based diagnosis of NSF in each. Electronic medical records were available for 90 participants; 17 of those had a skin examination consistent with NSF, all but one with documented prior exposure to gadolinium. The investigators were particularly surprised to find that 48 percent of participants with skin changes of NSF died within two years of their examination. Among participants without NSF, the death rate was 20 percent, which would be expected among patients with advanced kidney failure undergoing long-term hemodialysis treatment.

This study demonstrates a definite and very strong association between exposure to gadolinium containing contrast and the subsequent development of NSF, states an associate clinical professor of Medicine at Harvard Medical School.

## **Informed Consent**

This information has been provided to properly inform the patient of the possible risks associated with the administering of Gadolinium to a patient with decreased renal function, so the patient can make an informed decision based off the learned risks.

Signature \_\_\_\_\_

Date \_\_\_\_\_