

## Guidelines for the Management of the Post-Operative (Post-Op) Patient Referred for an MRI Examination

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There is often confusion regarding the issue of performing a magnetic resonance imaging (MRI) examination during the post-operative period in a patient with a metallic implant or device. Studies have supported that, if the metallic object is a “passive implant” (i.e., there is no electronically-activated component or power source associated with the operation of the device) and it is made from nonferromagnetic material, the patient may undergo an MRI exam *immediately* after implantation using an MR system operating at 3-Tesla or less. In fact, there are several reports that describe placement of vascular stents, coils, filters, and other metallic implants using MR-guided procedures that include the use of high-field-strength (1.5- and 3-Tesla) scanners. Additionally, a patient or individual with a nonferromagnetic, passive implant is allowed to enter the MRI environment associated with a scanner operating at 3-Tesla or less immediately after the implantation of the device.

Notably, for a passive implant that does not state a “wait” period in the *Instructions for Use* (IFU) or MRI labeling, there is no need to delay the MRI examination for the patient.

For patients with implants that are “weakly magnetic” but rigidly fixed or otherwise anchored in the body (e.g., orthopedic implants or other devices), these patients may undergo MRI immediately after implantation of the device.

For an implant or device that exhibits magnetic qualities, it may be necessary to wait a period of six weeks after implantation before performing MRI. For example, certain intravascular and intracavitary coils, stents, and filters designated as “magnetic” become firmly incorporated into tissue a minimum of six weeks following placement. In these cases, retentive or counter-forces provided by tissue ingrowth, scarring, granulation, or other mechanisms serve to prevent these objects from presenting risks or hazards to patients or individuals with respect to movement or dislodgement associated with magnetic field interactions (i.e., force and torque).

Of course, the information above pertains to magnetic field interactions (i.e., force and torque) and further consideration must be given to MRI-related heating for the implant or device.

**Special Note:** If there is any concern regarding the integrity of the tissue with respect to its ability to retain the implant or object in place or the implant cannot be properly identified, the patient or individual should not be exposed to the MRI environment.

## SUPPORTING REFERENCES

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