

Zones and Access Controls

MRI Safety Zones:

There are many risks to patients and non-patients, alike, when untrained, unscreened, or unauthorized persons are within the controlled access areas of the MRI suite. Medstar Washington Hospital seeks to conform to the four-zone principles laid out in the ACR Guidance Document on MR Safe Practices: 2013, described below:

Zone I: This region includes all areas that are freely accessible to the general public. This area is typically outside the MRI environment itself and is the area through which patients, health care personnel and other employees of the MR site access the MR environment.

Zone II: This area is the interface between the publicly accessible, uncontrolled Zone I and the strictly controlled III and IV. Typically, patients are greeted in Zone II and are not free to move throughout Zone II at will, but rather are under the supervision of MR personnel. It is in Zone II that the answers to MR-screening questions, patient histories, medical insurance, etc.

Zone III: This area is the region in which free access by unscreened non-MR personnel or ferromagnetic objects or equipment can result in serious injury or death as a result of interactions between the individuals or equipment and the scanner particular environment. Access to Zone III is to be strictly restricted, with access to regions within it controlled by, and entirely under the supervision of MR personnel. No persons should enter Zone III unescorted.

Zone IV: This area is synonymous with the MR scanner magnet room, i.e., the physical confines of the room within the MR scanner is located. Zone IV by definition, will always be located within Zone III, as it is the MR magnet and its associated magnetic field that generated the existence of Zone III. Zone IV should be clearly marked as being potentially hazardous.

Note: The two MRI locations located at 1B34 (3T MRI) and 4B17 (Cardiac MRI) are located directly on hallways. Persons entering these two areas have direct access to the entire imaging suite. It is for this reason, we have intentionally escalated the area beyond the entrance to these areas to zone III to enhance safety precautions.

The functions normally carried out in zone II (e.g. patient registration, medical insurance, etc.) are performed in either Washington Heart or the Main MRI department. The technologist will review the safety questionnaire prior to escorting the patient into zone III.

MRI Access Controls:

Due to the hazards associated with MRI, only MRI safety trained or supervised persons – who have successfully undergone the appropriate screening by Level 2 MR Safety Trained individuals are permitted within the MRI areas that include Zones III and IV.

All persons within this area are to have been screened (individuals and any belongings), and/or directly supervised by MR safety trained persons.

No person is permitted entry into the controlled access areas without they and their belongings being screened for MR safety.

All doorways into the controlled access area(s) are to be access restricted with keys/badge access provided only to persons who have been successfully completed MR Safety training. Within the controlled access area(s), access to the MRI Scanner Rooms, themselves, shall only be given to Level 2 MR Safety Trained persons, including in emergent situations.