


<b>Name of Policy:</b> <u>MRI Thermal Burn Prevention</u> <b>Policy Number:</b> 3364-135-151 <b>Department:</b> Radiology <b>Approving Officer:</b> Director, Radiology – UTMC <b>Responsible Agent:</b> Assistant Professor & Deputy Clinical Service Chief <b>Scope:</b> Radiology	  <b>Effective Date:</b> 10/01/2024 Initial Effective Date: 08/01/2018
<input type="checkbox"/> New policy proposal <input type="checkbox"/> Minor/technical revision of existing policy <input type="checkbox"/> Major revision of existing policy <input checked="" type="checkbox"/> Reaffirmation of existing policy	

**(A) Policy Statement**

It is the policy of the MRI Department to take precautions and maintain a safe environment in relation to preventing thermal burns during MRI procedures.

**(B) Purpose of Policy**

Prevent incidence of thermal burning during operation of the magnet.

**(C) Scope**

Magnetic Resonance (MR) imaging is considered to be a relatively safe diagnostic modality. However, certain factors may cause excessive heating resulting in burn injuries to patients undergoing MR procedures.

**(D) Procedure**

1. All unnecessary or unused electrically conductive materials external to the patient should be removed from the MR system prior to performing the MR procedure.
2. Prepare the patient for MR procedure by ensuring that there are no unnecessary metallic objects contacting the patient’s skin.
3. Insulating material should be placed between the patient’s skin and transmit RF coil that is used for the MR procedure.
4. Electrically conductive materials that must remain with the patient, within the bore of the MR scanner during imaging, should be prevented from making contacting with the patient by placing thermal and /or electrical insulation between the material and the patient.
5. Position electrically conductive material to avoid conductive loops and “cross points.” The electronically conductive material should exit down the center of the MR system bore as close to the center of the bore as possible.
6. Do not position electronically conductive materials across an external metallic prosthesis or similar device that is in direct contact with the patient.
7. Patients should be instructed not to cross their arms or legs to avoid large caliber skin loops.
8. Closely monitor the patient during the MR procedure. If the patient reports sensations of heating or other unusual sensation, discontinue the MR procedure immediately and perform a thorough assessment of the situation.
9. Use only electrically conductive devices, equipment, accessories and materials that have been thoroughly tested and determined to be safe for MR procedures.
10. Follow specific MR safety criteria and recommendations for implants made from electrically-conductive materials.

<b>Approved by:</b>		<b>Review/Revision Date:</b>
<u>/s/</u> Nathan Egbert, MD Assistant Professor & Deputy Clinical Service Chief	_____ Date	08/01/2018 10/01/2021 10/01/2024
<u>/s/</u> Ryan Landis, BSRT (R)(CT) Director, Radiology	_____ Date	Next Review Date: 10/01/2027