Name of Policy: Quality Control of MRI Equipment  
Policy Number: 3364-135-145  
Department: Radiology  
Approving Officer: Interim Chairman, Radiology  
Chief Executive Officer - UTMC  
Responsible Agent: Director, Radiology  
Scope: Radiology  
Effective Date: 10/01/2018  
Initial Effective Date: 9/12/2014  

New policy proposal  
Major revision of existing policy  
Minor/technical revision of existing policy  
Reaffirmation of existing policy

(A) Policy Statement

Magnetic resonance imaging (MRI) scanners shall have routine quality control (QC) performed to include daily and/or weekly MRI technologist QC, an annual evaluation by a certified medical physicist, and routine preventative maintenance by a service provider.

(B) Purpose of Policy

To ensure the equipment is operating in a safe manner for both the patient and operator(s) and is producing high quality images.

(C) Procedure

1) QC by the MRI technologist will be performed in accordance with American College of Radiology (ACR) MRI Quality Control Manual.

2) An annual evaluation by a certified medical physicist will be performed in accordance with the ACR MRI Quality Control Manual and Joint Commission requirements. A report will be prepared to summarize the results of the evaluation and any corrective action needed. The evaluation will include at a minimum the following test:
   a. Image uniformity for all clinically used volume RF coils
   b. Signal-to-noise for all clinically used RF coils
   c. Slice thickness accuracy
   d. Slice positioning and alignment accuracy
   e. High contrast resolution
   f. Low contrast resolution
   g. Geometric accuracy
   h. Magnetic field homogeneity
   i. Artifact evaluation

3) Regular preventative maintenance will be performed by Biomedical Engineering or a trained service provider.

4) Documentation of all QC activities will be maintained.
### Approved by:

/s/  
Haitham Elsamaloty, MD  
Interim Chairman & Professor, Radiology  

/s/  
Daniel Barbee, RN, BSN, MBA  
Chief Executive Officer - UTMC  

### Review/Revision Date:

10/12/2015  
10/1/2018  

Next Review Date: 10/1/2021  

### Policies Superseded by This Policy:
