


<b>Name of Policy:</b> <u>Reinstating Clinical use After Equipment Repairs</u> <b>Policy Number:</b> 3364-134-112 <b>Department:</b> Radiation Oncology <b>Approving Officer:</b> Chief Executive Officer - UTMC Clinical Service Chief, Radiation Oncology <b>Responsible Agent:</b> Technical Manager, Radiation Oncology <b>Scope:</b> Radiation Oncology	
<b>Effective Date:</b> 3/1/2021 Initial Effective Date: 12/1/2017	
<input type="checkbox"/> New policy proposal <input type="checkbox"/> Major revision of existing policy	
<input type="checkbox"/> Minor/technical revision of existing policy <input checked="" type="checkbox"/> Reaffirmation of existing policy	

**(A) Policy Statement**

Radiation Oncology equipment repair, maintenance, and upgrades will be evaluated by a QMP prior to being clinically used for patient imaging or treatment.

**(B) Purpose of Policy**

To provide guidelines for bringing the linear accelerator, or PET/CT unit back online after any repair, maintenance, or software/hardware upgrades.

**(C) Procedure**

1. After any repair, maintenance, or software/ hardware upgrade that may affect the output of the linear accelerators, or quality of imaging equipment, a QMP must be notified to assess if any measurements or control tests need to be done prior to bringing the unit back online for clinical use. The QMP will evaluate the state of the machine, output, and other clinical and imaging parameters and/or verify constancy of the beam output or of imaging parameters before re-accepting the unit as clinically functional.
2. When a problem arises with the linac, the therapist will initiate a call to the in-house bio-med engineer and to the medical physicist to report the problem. A work order will be generated for the manufacturer through bio-med.
3. An email will be generated and sent to a pre-defined group including manufacturer representative, physicists, therapists, engineers, and department manager, delineating the problem to keep everyone apprised of the machine status.
4. If the repair is minor and will be made by bio-med (such as changing the motor on an MLC leaf or light bulbs, etc.), the bio-med engineer will report his assessment and repairs to a physicist which will in turn bring the machine back on line. The physicist will notify therapists when the machine is ready to return to service for clinical use. After hours, the QMP will contact either the lead therapist or department manager via “after hours” numbers provided or by written communication at the console.
5. If the repair requires a Varian engineer’s time on the machine, the engineer, upon checking the status of the accelerator and determining what repairs are required, will contact the physicist to discuss plans for measurement/verification of the output parameters after repair.
6. If the physicist has to make any measurement prior to clinical use of the machine, the accelerator will not go online for clinical use until it is cleared by the physicist. The physicist will notify the therapists when the machine is cleared to return to service.
7. Field service reports will be copied to bio-med, physics and department manager.
8. The above procedure applies to any repair; maintenance, including PM; or upgrade that may affect the machine parameters such as beam output, flatness, symmetry or anything that may affect patient dose.

