

SNAPSHOT QUESTIONNAIRE

Please provide the following information for:

“SD” dd/mm/yyyy
“MO” mm/yyyy

1. Departmental QA activities

1.1 Was there a QA committee meeting held during “MO”	Yes	No
1.2 If yes, how many attendees?	RO	
	MP	
	RTT	
1.3 How many, if any, near incidents or accidents were reported during “MO”?		
1.4 How many, if any, adverse events occurred which required reporting to a national authority during “MO”?		
1.5 Was any internal auditing performed during “MO”?	Yes	No
1.6 Was there any participation in dosimetry audits during “MO”?	Yes	No
1.7 How many continuing professional development activities (CPD) were organized in the department during “MO”?		
1.8 How many staff members benefitted from the CPD activities referred to in 1.7?	RO	
	MP	
	RTT	
1.9 Were there any emergency procedures during “MO” as a result of an acute failure of equipment or systems that could have affected the safety of staff or patients?	Yes	No

2 Machine treatment delivery and QC activities

For all operational EBRT units in your facility, please provide the following information for “SD”:

2.1 How many EBRT units were used to treat patients on “SD”?	
2.2 How many EBRT units were non-operational (this may have been due to a lack of commissioning, catastrophic failure, routine maintenance, lack of staff or any other reason)?	
2.3 How much time in minutes was spent overall performing EBRT machine QC?	

For every modality, please indicate whether any of the following quality control procedures listed below was performed on any of the operational equipment installed in the facility. (*Note that if some procedures are performed quarterly in your institution, there is a possibility that none of the options will be checked against these procedures*):

Equipment	QC Procedure	Performed on "SD"	Performed during "MO"	N/A
Orthovoltage or superficial Yes No	Output constancy or measurement (field or traceable instrument) for reference field			
	Interlocks and warnings			
	Audiovisual systems			
	Mechanical fixtures			
	Filter interlocks			
	Timer/monitor chamber end error			
	Timer/monitor chamber accuracy			
	Backup Timer/monitor chamber			
	Timer/monitor chamber linearity			
	HVL constancy			
Cobalt teletherapy Yes No	Output constancy or measurement (field or traceable instrument) for reference field			
	Output constancy or measurement (field or traceable instrument) for non-reference field(s)			
	Interlocks and warnings			
	Audiovisual systems			
	Localizing lasers			
	Optical distance indicator			
	Source position			
	Mechanical and radiation isocentre coincidence			
	Light-radiation field coincidence			
	Field size indicator			
	Gantry angle indicator			
	Collimator angle indicator			
	Couch mechanical indicators			
	Cross hair centering			
	Latching of accessories			
	Emergency procedures			



Linear accelerator high energy photons Yes No	Output constancy or measurement (field or traceable instrument) for reference field			
	Output constancy or measurement (field or traceable instrument) for non-reference field(s)			
	Interlocks and warnings			
	Audiovisual systems			
	Localizing lasers			
	Optical distance indicator			
	Beam quality (energy)			
	Beam flatness or symmetry			
	Mechanical and radiation isocentre coincidence			
	Light-radiation field coincidence			
	Field size indicator			
	MLC (e.g. leaf position, travel, speed, alignment)			
	Gantry angle indicator			
	Collimator angle indicator			
	Couch mechanical indicators			
	Cross hair centering			
	Latching of accessories			
	Emergency procedures			
	kV/MV image quality			
	kV/MV image artifacts and spatial distortion			
	kV/MV imager mechanical checks (collision interlocks, movement calibration, isocentre check, alignment)			
Linear accelerator electrons Yes No	Output constancy or measurement (field or traceable instrument) for reference field			
	Beam quality (energy)			
	Beam flatness or symmetry			
Simulator Yes No	Localizing lasers			
	Optical distance indicator			
	Field size indicator			
	Gantry angle indicator			
	Collimator angle indicator			
	Couch mechanical indicators			
	Cross hair centering			
	Focus-axis indicator			
	Focus-image distance			
	Light-radiation field coincidence			
	Interlocks and warnings, including collision systems			
	Audiovisual systems			
	Mechanical and radiation isocentre coincidence			
	Radiography/fluoroscopy system incl. generator			
	Image processing			
	Image repeat and reject analysis			
	Image quality			



IAEA

International Atomic Energy Agency

CT (simulation) Yes No	Geometric accuracy related to the couch			
	Localizing lasers			
	Integrity of image transfer to planning systems			
	HU/CT number constancy			
	Image quality			
Record and verify system Yes No	Integrity of information transfer			
Dosimetry measurement equipment	Local comparison of field instruments with reference standard			
	Check source measurements of ionization chambers			
	Linearity, leakage, recombination measurements			
Individual patient aids and accessories	Routine quality control of manufactured devices e.g. shielding blocks.			

3 Daily overview of all patient-specific activities for “SD” (unless otherwise specified):

3.1 How many patients received external beam radiotherapy (Note that if all equipment was under repair, then it is possible that no patients were treated)?		
3.2 How much total time in hours was spent treating these patients?		
3.3 How many shifts were necessary to treat these patients?		
3.4 Was there at least one radiation oncologist available in the department while the patients were being treated?	Yes	No
3.5 Was there at least one medical physicist available in the department while the patients were being treated?	Yes	No
3.6 What is the minimum number of radiation therapy technologists that were in attendance during patient treatment?		
3.7 How many patients were treated using a clinical markup only, i.e. there was no pre-treatment imaging?		
3.8 How many patients were treated using a 2D technique?		
3.9 How many patients were treated using a 2.5D technique?		
3.10 How many patients were treated using a 3D technique?		
3.11 How many patients were treated using an IMRT technique?		
3.12 How many patients who were scheduled for treatment on “SD” were not treated due to equipment failure or scheduled maintenance?		
3.13 How many patients who were scheduled for treatment on “SD” were not treated due to a clinical condition, e.g. a treatment break was authorized because of a radiation side effect.		
3.14 How many patients who were scheduled for treatment on “SD” failed to present for treatment?		
3.15 How many independent MU/time checks for non-IMRT treatment plans were performed?		
3.16 How many pre-treatment patient-specific quality control procedures were performed on treatment plans?	3DCRT	
	IMRT	
	electrons	
3.17 How many devices (that were manufactured for individual patients) underwent a quality check, e.g. shielding blocks or compensators?		
3.18 How many multidisciplinary review meetings (tumour boards) were held the week of “SD”?		
3.19 How many comprehensive new patient planning conferences were held the week of “SD” in order to collectively design the treatment plans?		
3.20 How many attendees participated in the new patient planning conference(s)?	RO	
	MP	
	RTT	
3.21 How many interdisciplinary film review conferences (QA round or treatment planning round) were held the week of “SD”?		

4 Patient treatment quality control procedures on a specified day

Randomly select 10 patients who were scheduled for treatments on “SD” and from their treatment charts please provide the following information about their treatment (these can be patients treated on different machines or on one machine but the selection should be typical of the daily workload):

Please check this box if no patients were treated on this day and then ignore all the questions below:				
4.1 How many of the 10 patients had portal imaging on “SD”?				
4.2 How many of the 10 patients’ portal images were approved by a radiation oncologist on “SD”?				
4.3 How many of the 10 patients received an on-treatment clinical assessment on “SD”?				
4.4 How many of the 10 patients’ treatment charts were reviewed/checked on “SD”?				
4.5 How many of the 10 patients received in vivo dosimetry on “SD”?				
4.6 Treatment techniques used for the 10 patients (provide the number of patients receiving each technique and the total number of fields treated per technique):		No. of patients	No. of fields	
	IMRT		N/A	
	3DCRT			
	2D			
	2.5 D			
1D (manual calc)				
4.7 For how many of the 10 patients was the radiation oncologist in attendance at the treatment unit during setup and treatment on “SD”?				
4.8 For how many of the 10 patients was the medical physicist in attendance at the treatment unit during setup and treatment on “SD”?				
4.9 How many of the 10 patients had individualized immobilization devices?				
4.10 How many of the 10 patients had a radiation prescription that was not signed by a radiation oncologist?				
4.11 Please provide the number of patients with the following treatment disease site (the total number must be 10):	<i>Lung</i>			
	<i>Head& neck</i>			
	<i>Colorectal</i>			
	<i>Breast</i>			
	<i>GYN</i>			
	<i>Other</i>			
4.12 Indicate the treatment intent for these 10 patients	Palliative			
	Curative			