EORTC RTQA Facility Questionnaire

I. Administrative Data

Name of person submitting this questionnaire | Function

Email address | Phone

Institution

Address

City | Post code

Country

EORTC No | Enter 0 if you don't have it yet

Phone

Hospital/Department website

Reasons for filling the questionnaire

Are satellite radiotherapy units associated with your main institution?

Comment

Status of Department | Public | University | Private

Other, please describe

Is your center presently involved in clinical trials

Responsible contact persons at your site

	Name	Email	Phone
Main contact			
Radiation Oncologists			
GU			
GYN			
Lung			
H&N			
Brain			
Breast			
Other			
Medical Physicists			
GU			
GYN			
Lung			

H&N			
Brain			
Breast			
Other			

Staffing level

(fulltime equivalent - FTE)

Number of FTE radiation oncologists	
Number of radiation oncologists in training	
Number of FTE medical physicists	
Number of medical physicists in training	
Number of FTE dosimetrists or equivalent	
Number of dosimetrists in training	
Number of FTE radiation technologists (excluding those above)	
Number of radiation technologists in training	
Number of radiation technologists per treatment unit present at the time of treatment	

Patient workload

Number of new patients* treated per year	
Number of retreated patients** per year	

* Definition of new patient: patient receiving the first radiation treatment (with either radical or palliative intent) for a certain tumor in your department.

** Definition of retreated patient: patient receiving second or more radiation treatment for a certain tumor that was treated before (with RT) in the same department (a boost should not be considered as a retreated patient; treatments at > 1 target volume at the same time with a separate set-up can be counted as > 1).

II. Data Acquisition for Treatment Planning

(a) Computed Tomography

Scanner access

Manufacturer			
Model			

Relevant QA / Comment

(b) Magnetic Resonance Imaging

Scanner access

Manufacturer			

Model

Relevant QA / Comment

(c) Positron Emission Tomography

Scanner access PET PET/CT

Manufacturer

Model

On site cyclotron

Relevant QA / Comment

(d) Simulation Units

	Most advanced unit	Additional unit	Additional unit	Additional unit
Type of unit				
Manufacturer				
Model				
Year of installation				

Virtual simulation

Relevant QA / Comment

III. 3D Treatment Planning and R&V System

a) External beam

Number of treatment planning systems

	Most advanced TPS	Additional TPS	Additional TPS	Most advanced Record and Verify
Manufacturer				
Model and software version				
Year of last update				
Number of working stations				
Stereotactic RadioSurgery (SRS)				
Stereotactic Body Radiotherapy (SBRT)				

Algorithms available

Type A: primarily based on electronic path			
Type B: models that in an approximate way consider changes in lateral electron transport (e.g. CC, AAA)			
Monte Carlo			
Other			

What proportion of your radical patients gets a CT-based treatment plan %

DVH calculation Cumulative Differential

Ability to sum dose plans

Export of DRR to verification system

Relevant QA / Comment

b) Brachytherapy

Number of brachyterapy planning systems

	Most recent Brachytherapy TPS	Additional TPS
Manufacturer		
Model		
Software Version		
Year of installation		

Relevant QA / Comment

IV. Patient Immobilisation and Verification

1) Manufacturer/Model	for Breast	
2)	for Prostate	
3)	for H&N	
4)	for Lung (thorax)	
If developed "in house", please, describe		

Stereotactic frame used

Perform frameless SRS

Verification

Patient Set-up

Laser

Reflectors / IR camera

Orthogonal kV imager

Verification by

EPID detector

CT Cone beam CT

MRI

kV imager

Film

Ultrasound

Respiratory gating

Tumor tracking

Robotic couch

Other

Frequency of field position verification

Comment

V. Treatment Delivery

Number of external treatment units

LinAc Tomotherapy VERO Cyber Knife Gamma Knife Co-60

	Most Advanced Unit	Additional Unit*	Additional Unit*	Additional Unit*
Unit Type				
Manufacturer				
Model				
Year of Installation				
Number of similar units				
Photon Energy lowest/highest (MV)	/	/	/	/
Electron				

Energy lowest/highest (MeV)	/	/	/	/
Stereotactic RT				
Fractionated stereotactic RT				
Stereotactic Radiosurgery (SRS)				
IMRT				
VMAT				
MLC				
MLC resolution at isocenter (mm)				
IGRT				
Average number of patients/day				

*from newer to older

Relevant QA / Comment

Brachytherapy Treatment Units

	Most advanced	Additional	Additional
Manufacturer			
Model			
Year of Installation			
Average number of patients/month			

After-loading System

HDR PDR LDR

Permanent Seed implant

Relevant QA / Comment

VI. Quality Assurance

Periodicity of QA

	Photon output (cGy/MU)	Equipment used
Daily		
Weekly		
Monthly		

Yearly		

	Photon energy (MV)	Equipment used
Daily		
Weekly		
Monthly		
Yearly		

	Photon homogeneity (flatness and symmetry)	Equipment used
Daily		
Weekly		
Monthly		
Yearly		

Electron Output		times per	month
Electron Energy		times per	month
Electron Homogeneity (flatness and symmetry)		times per	month
Mechanical alignment		times per	month
(e.g.: imaging and isocenter co-incidence, mlc position, ...)			
Treatment equipment checks		times per	month

Calibration Point

Low energy photons		Gy in		cm depth at		cm SSD
High energy photons		Gy in		cm depth at		cm SSD

Type of ion chamber used for beam calibration	
Type of electrometer used for beam calibration	
Are chambers/electrometers calibrated in a reference laboratory	
Water phantom	
Use of films	
Independent MU calculation check (double MU calculation)	
How do you measure actual dose distribution?	
Periodicity of measuring actual dose distribution	

Relevant QA / Comment

Frequency of treatment review			
Compensation for treatment interruption on		Other	
Has your site participated in external IMRT credentialing			

Does your TPS transfer plans to your phantom for QA?

Relevant QA / Comment

Beam Output Audit (BOA)

BOA is mandatory and has to be submitted along with the Facility Questionnaire.

Year of last audit	Highest photon energy	Lowest photon energy	Electrons
National			
International			
Private company			
Others			