

Authorisation Number

Institute of Radiotherapy:

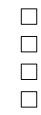
Date of Clinical Audit:

Auditors:

Radiation Oncologist SRO: Medical Physicist SGSMP: Radiotherapist SVMTRA:

In addition:

Who is leading the audit?



Participants of the audited institution:

Radiation Oncologist/s:
Medical Physicist/s:
Radiotherapist/s:
In addition:

Abbreviations/Explanations:

Y: Yes N: No N/A: not applicable

IMPORTANT: If items are not evaluated, please state this clearly under 'Comments'

PLEASE NOTE, THAT ANSWERS/FINDINGS ARE CONFIDENTIAL!

1. Patient identification:

		ΥΝ ΝΑ	Comments
1.	The patient identification process is clear and documented in the QM manual.		
1.1.	How is a patient identified at RT start and on a daily basis? (multiple answers possible)		
1.1.1	Gender?		
1.1.2	Date of birth?		
1.1.3	Patient identification number?		
1.1.4	Photograph ID (face)?		
1.1.5	Photograph of treatment fields/patient positioning?		
1.1.6	Others (please specify under ,Comments')		

2. Tumor diagnosis and staging:

		ΥΝ ΝΑ	Comments
2.	Tumor diagnosis and staging is complete for treatment decision.		
2.1.	Clinical history is documented in the patient chart.		
2.2.	Physical examination (eg. tumor region) is documented in the patient chart.		
2.3.	Pathology reports are in the patient chart.		
2.4.	Relevant radiological reports are in the patient chart.		
2.5.	Relevant laboratory reports are in the patient chart.		
2.6.	Reports of relevant endoscopic procedures are in the patient chart.		
2.7.	Tumor stage (eg. TNM, FIGO) is documented in the patient chart.		
2.8.	Performance status (eg. WHO, Karnofsky, ECOG) is documented in the patient chart.		

3. RT indication and treatment decision:

		ΥΝ ΝΑ	Comments
3.	RT indication and treatment decision are reasonable and justified.		
3.1.	Curative treatment decision is based upon interdisciplinary tumor boards.		
3.2.	Palliative treatment decision is based upon interdisciplinary tumor boards.		
3.3.	Are written treatment protocols available for most common clinical situations (CS)?		
3.3.1	If yes, please specify CS (or tumor entities) under 'Comments'		
3.4.	Are national/international guidelines in use?		
3.4.1	If yes, please specify under 'Comments'		
3.5.	Are treatment protocols regularly reviewed?		
3.5.1	If yes, please specify the frequency of review under 'Comments'		
3.6.	Are benefits and risks explained to the patient?		
3.6.1	If yes, please specify 'How?' under ,Comments'		
3.7.	Does a formal consent and agreement form exist in the patient chart?		
3.7.1	Does the patient receive a copy?		

4. Organisation:

		ΥΝ ΝΑ	Comments
4.1.	A quality management (QM) documentation is available.		
4.1.1	The QM documentation is adapted at least once a year.		
4.1.2	If yes, please specify the time intervall under ,Comments		
4.2.	The responsibilities of each co-worker are clear and documented in the QM manual.		
4.3.	The coverage for absences of radiation oncologist/medical physicist/RTT is secured.		
4.4.	There is a 24 hour service available in case of emergencies (written 'Dienstplan'/duty roster for MD available).		
4.5.	Is there a possibility for the patient to have an appointment with a nurse?		

4.6.	Is there a possibility for the patient to have an appointment with a medical physicist?	
4.7.	Is there a possibility for the patient to have an appointment with a psychooncologist?	
4.8.	Continuous education of co-workers is guaranteed.	
4.8.1	If yes, please specify under comments	

5. Dose prescription:

	Prescription	ΥΝ ΝΑ	Comments
5.1.	The process of ,dose prescription' is clear.		
5.2.	The process of ,dose prescription' is documented in the QM manual.		
5.3.	All necessary RT dose informations (eg. single dose, total dose, fractionation scheme, beam modality/energy, bolus etc.) are documented.		
5.3.1	Please describe under ,Comments', how this is done.		
5.4.	The prescription is signed by the radiation oncologist.		
5.4.1	The prescription is double-checked (4-eyes- principle).		
5.5.	The process of 'treatment alterations' is clearly defined.		
5.6.	Please describe under 'Comments', how treatment alterations will be handled.		

6. Patient positioning/immobilization; data acquisition

		YN NA	Comments
6.1.	The process of ,patient positioning/immobilization' is clear.		
6.2.	The process of ,patient positioning/immobilization' is documented in the QM manual.		
6.3.	In patients with planning CT the scan area is defined by the responsible radiation oncologist.		
6.4.	Appropriate immobilization devices are available.		
6.4.1	If yes, please specify under 'Comments'		
6.5.	Standard operating procedures (SOPs) for patient positioning/immobilization for most common clinical situations are available and in the QM manual.		
6.5.1	If yes, please specify under 'Comments'		
6.6.	Patients for stereotactic radiotherapy/radiosurgery have a separate SOP for positioning/immobilization		
6.6.1	If yes, please specify differerences under 'Comments'		
6.7.	The field(skin) marking procedure/process is clear.		
6.7.1	How are fields marked? Please specify under ,Comments'		
6.7.2	How are marks maintained during treatment? Please specify under ,Comments'		
6.7.3	How are marks documented for RTTs? Please specify under ,Comments'		
6.8.	The field(skin) marking procedure/process is documented in the QM manual.		
6.9.	The simulation is done by fluoroscopic simulator CT simulator vi	rtual sim	
6.9.1	What has been done to optimize patient dose? Please specify under 'Comments'		
6.9.2	Are dose optimisation protocols available?		
6.9.3	An exposure chart (kV and mAs) is available.		
6.10.	The simulation process is clear.		
6.11.	The simulation process is documented in the QM manual.		
6.12.	The data transfer from imaging to planning is clear.		
6.12.1	The data transfer is manual automatic		
6.13.	The institute has a CT dedicated for planning.		
6.14.	There is a possibility for 4D CT scans.		
6.14.1	If yes, please specify under 'Comments' for which clinical situations 4D CT scans are used.		

7. Treatment planning:

	Treatment planning	ΥΝ ΝΑ	Comments
7.1.	The process of ,treatment planning' is clear.		
7.2.	The process of ,treatment planning' is documented in the QM manual.		
7.3.	Treatment planning guidelines/protocols for the most common clinical situations (CS) are available.		
7.3.1	If yes, please specify under 'Comments' for which CS		
7.4.	According to treatment planning, are national/international guidelines in use?		
7.4.1	If yes, please specify under 'Comments'		
7.5.	Tumor volume delineation will be done by the radiation oncologist.		
7.5.1	Are tumor volumes delineated for curative (local radical) RT?		
7.5.2	Are tumor volumes delineated for palliative RT?		
7.5.3	Following target volumes (ICRU50&62) are delineated:		
	PTV only (please specify under 'Comments' situations where no PTV is delineated)	PTV only	
	GTV/CTV in appropriate situations (please specify under 'Comments')		
7.6.	OAR are done or checked by the radiation oncologist.		
7.7.	Additional images (MRI, PET-CT) are fusioned for target definition.		
7.7.1	If yes, please specify clinical situations under 'Comments'		
7.8.	The process of 'image fusion' is clear and in the QM manual.		
7.9.	Dose constraints for organs-at-risk are used for planning/plan comparison. Please specify under 'Comments' for the most common clinical situations or give reference of source data.		
7.10.	Please specify for which clinical situations a 2D/2D+ or manual dose calculation will be used		
7.11.	The treatment plan is checked. Please specify under 'Comments' 'by whom' and 'how'		
7.12.	Is there a planning review meeting?		
7.13.	If yes, please specify under 'Comments'.		
7.14.	The process of data transfer from planning to delivery is clear.		
7.15.	The process of data transfer from planning to delivery is documented in the QM manual.		

8. Mould room and beam modification devices:

		ΥΝ ΝΑ	Comments
8.1.	Are standard blocks in use?		
8.2.	The process of 'block production' is clear.		
8.3.	The process of ,block production' is documented in the QM manual.		
8.4.	Please specify under 'Comments' for which clinical situations blocks are used.		
8.5.	How are blocks designed? Please specify under 'Comments'.		
8.6.	How are blocks verified? Please specify under 'Comments'.		
8.7.	Are 'beam modifiers' other than blocks or MLC used? If yes, please specify under 'Comments'.		

9. Treatment delivery:

	Teletherapy	ΥΝ ΝΑ	Comments
9.1.	The process of 'treatment delivery' is clear.		
9.1.1	Who is present during the first RT? Please specify		
9.2.	The process of 'treatment delivery' is documented in the QM manual.		
9.3.	How will it be secured that positioning for treatment is identical with planning? Please specify		
9.4.	The process of patient positioning at the treatment machine is clear.		
9.5.	The process of respiratory-gated treatments is clear.		
9.6.	How will the data transfer from planning to the treatment machine be secured? Please specify		
9.7.	The process of in-vivo-dosimetry is clear.		
9.7.1	If done, in-vivo-dosimetry is checked by a medical physicist.		
9.7.2	In-vivo-dosimetry is performed. If yes, please speci- fy under 'Comments' for which CS		
9.8.	Is IGRT used?		
9.8.1	Cone-beam CTs are performed. If yes, please specify under 'Comments' for which CS		
9.9.	How many RTTs are working on a linear accelera- tor?	Number:	

9.10.	Verification images are checked by a radiation on-	
	cologist.	
9.10.1	Is there a protocol for IGRT practice/use?	
-		
9.11.	There are clinical controls by a radiation oncologist	
	during the treatment phase.	
9.11.1	If yes, please specify frequency and circumstances	
	of controls under ,Comments'	
9.12.	Documentation of side effects is standardized.	
9.12.1	If yes, please specify scoring system under 'Com-	
	ments'	
9.13.	Is there a review of the applied dose during and at	
9.13.		
	the end of the radiotherapy? If yes, how will this be	
	done? Please specify under 'Comments'	
9.14.	The documentation of the RT will be stored for 20	
0.14.		
	years.	
9.15.	Regular follow-up checks will be done in patients	
	with a curative intent.	
9.15.1	If yes, please specify under 'Comments'	
3.13.1		
9.16.	The process of an emergency irradiation is clear.	
0.10.		

10. Institutional and device-specific QA:

		ΥΝ ΝΑ	Comments
10.1.	Responsibilities for QA are clearly defined.		
10.2.	The QA of the linac is according SGSMP recommendation nr. 11		
10.3.	The process of QA of diagnostic modalities (eg. CT) is clear.		
10.4.	Are doses of diagnostic procedures documented and integrated into the prescribed RT dose?		
10.5.	Is there additional QA for special RT techniques?		
10.5.1	If yes, please specify under 'Comments'		
10.6.	In case of special RT techniques is there a patient- specific QA?		
10.6.1	If yes, please specify under 'Comments'		
10.7.	The process is clearly defined, if QA measurements are out of tolerance.		
10.8.	How is QA itself controlled? Please specify under ,Comments		
10.9.	Is there a QA of the RT planning system?		
10.10.	The institution takes part in the yearly comparative measurements of SGSMP.		
10.11.	QA procedures are documented in the QA manual.		

11. Critical incidents:

		ΥΝ ΝΑ	Comments
11.1.	There is a critical incident reporting system (CIRS) in place.		
11.1.1	If yes, please specify under ,Comments' which system will be used		
11.2.	How many incidents have been reported last year?	Number:	
11.3.	The responsibilities in reporting critical incidents are clear.		
11.4.	An institutional review process of critical incidents is in place.		
11.4.1	If yes, please specify the process under 'Comments'.		
11.5.	How will critical incidents be handled within the institution? Please specify under 'Comments'		
11.6.	Have all institutional co-workers access to the CIRS?		
11.7.	Will registrable incidents be reported to the BAG? (Does the institution know, which incidents are registrable?)		
11.8.	Which devices for radiation protection are in use?		
11.9.	The process of a medical emergency is clear.		

12. Brachytherapy: (not applicable)

	HDR Brachytherapy (not applicable)	ΥΝ ΝΑ	Comments
	Please specify under comments for what organ site(s) HDR BT is used (eg. GYN, H&N, GI, Prostate, Breast, Lung, Skin, Soft tissue)		
12.1	The process in case of emergency inside the HDR suite/op theatre (radioactive source handling and patient) is clear		
12.2	The process in case of emergency inside the HDR suite/op theatre (radioactive source handling and patient) is documented in the QM manual		
12.3	The process in case of emergency outside an the HDR suite/op theatre (personnel) is clear		
12.4	The process in case of emergency outside the HDR suite/op theatre (personnel) is documented in the QM manual		
12.5	The process for repeated safety drills for HDR are clear		
12.6	Repeated safety drills include practical exercises.		
12.7	The process of 'treatment delivery' for interstitial HDR brachytherapy is clear		
12.8	The process of 'treatment delivery' for interstitial HDR brachytherapy is documented in the QM manual		
12.9	The process of 'treatment delivery' for intracavitary HDR brachytherapy is clear		
12.10	The process of 'treatment delivery' for intra- cavitary HDR brachytherapy is documented in the QM manual		
12.11	Please specify positioning control in different BT applications under comments		
12.12	The process for anesthesia/analgesia is clear		
12.12.1	Please specify under comments for what organ site(s) anesthesia/analgesia is used (eg. GYN, H&N, GI, Prostate, Breast, Lung, Skin, Soft tis- sue)		
12.13	The process for dose prescription/calculation is clear and documented in the QM manual		
12.13.1	What prescription guidelines are used (ICRU etc), please specify under comments		
12.13.2	Does the responsible physician see and sign the dose calculation?		
12.13.3	Does the responsible physicist see and sign the dose calculation?		
12.13.4	Is there cross checking of the dose calculation?		
12.14	The process for in-vivo dosimetry is clear, if used		
12.14.1	If done, in-vivo-dosimetry is checked by a medical physicist		

12.14.2	If in-vivo-dosimetry is done, please specify for what organ site(s) under comments	
12.15	The process for reporting and recording the HDR brachytherapy treatment is clear	
12.16	The process for asepctic conditions for the insertion of needles, applicators/cylinders in HDR brachytherapy is clear	

	LDR Brachytherapy (not applicable)	ΥΝ ΝΑ	Comments
	Please specify under comments for what organ site(s) LDR BT is used		
12.17	The process in case of emergency inside the LDR suite/op theatre (radioactive source handling, per- sonnel and patient) is clear		
12.18	The process in case of emergency inside the LDR suite/op theatre (radioactive source handling, per- sonnel and patient) is documented in the QM manual		
12.19	The process of 'treatment delivery' for interstitial LDR brachytherapy is clear		
12.20	The process of 'treatment delivery' for interstitial LDR brachytherapy is documented in the QM manual		
12.21	How is positioning control done? Please specify under comments		
12.22	The process for dose prescription/calculation is clear		
12.22.1	Does the responsible physician see and sign the dose calculation?		
12.22.2	Does the responsible physicist see and sign the dose calculation?		
12.22.3	Is there cross checking of the dose calculation?		
12.23	What prescription guidelines are used (ICRU etc), please specify under comments		
12.24	The process for in-vivo dosimetry is clear, if used		
12.24.1	If done, in-vivo-dosimetry is checked by a medical physicist		
12.24.2	If in-vivo-dosimetry is done, please specify for what organ site(s) under comments		
12.25	The procedure for ensuring there is no source loss during treatment is clear		
12.26	The process for ensuring there is coordination in scheduling treatment between LDR brachytherapy and teletherapy units is clear, if used		
12.27	The process for reporting and recording the LDR brachytherapy treatment is clear		
12.28	The process for aseptic conditions for the insertion of needles, applicators/cylinders in LDR brachytherapy is clear		