



Catalan Clinical Audit
Network for Quality Improvement
in Radiotherapy

Audit components

Clinical Audits in Radiation Oncology: Training for Auditors and Auditees

Day 1 (10/06/2025)

Aude Vaandering



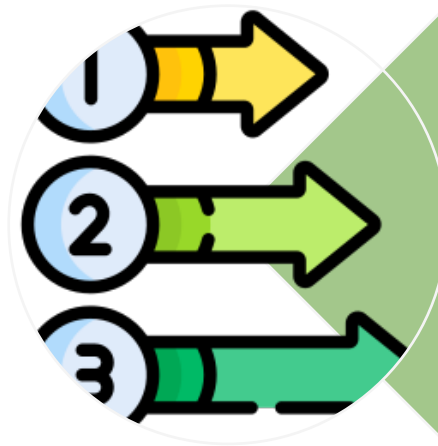
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Definition

What is a clinical audit?



Audit process

How are audits organized? What are the different steps involved in an audit?



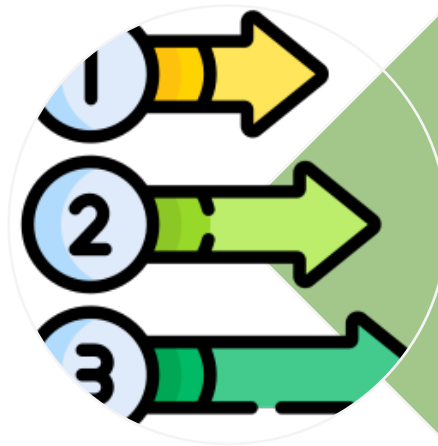
On-site audit methodology

How are the audits carried out? What do the auditors/auditees need to do?



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During the on-site audit, what are the different components that the auditors will focus on?

→ *More in depth discussions on Wednesday*

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Introduction

Audit structure for QUATRO missions

Audit part I: Infrastructure

Audit part II: Patient related procedures

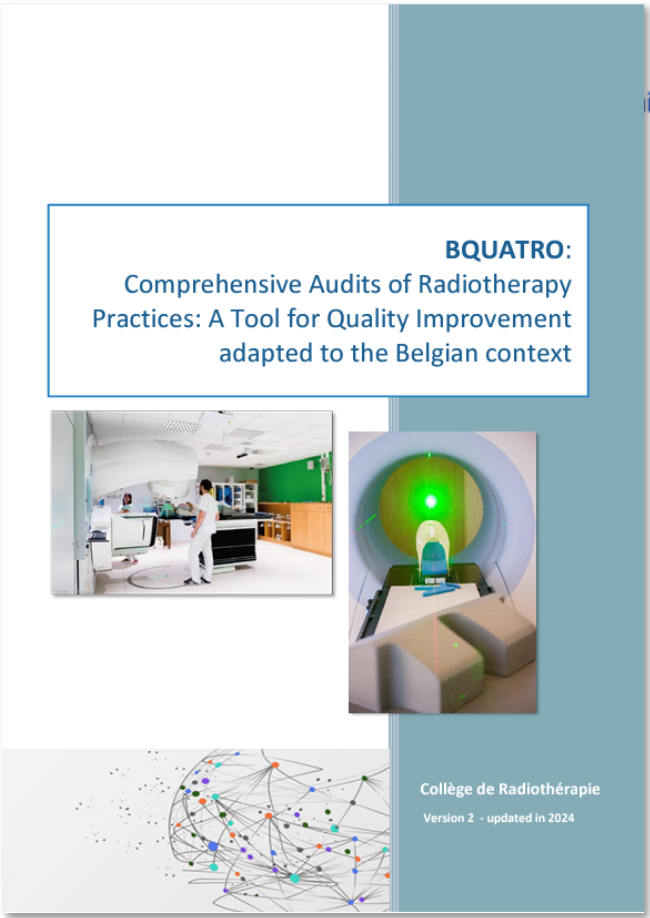
Audit part III: Equipment related procedures

Audit part IV: Quality and Safety management

Audit part V: Education and training programs

Appendices

During the on-site audit, what are the different components that the auditors will focus on?



- Introduction
- Audit structure for QUATRO missions
- Audit part I: Infrastructure
- Audit part II: Patient related procedures
- Audit part III: Equipment related procedures
- Audit part IV: Quality and Safety management
- Audit part V: Education and training programs
- Appendices

- Introduction
- Audit structure
- Audit part I: Infrastructure
- Audit part II: Patient related procedures
- Audit part III: Equipment related procedures
- Audit part IV: Quality management system
- Audit part V: Communication management
- Audit part VI: Radiation protection of staff and population
- Audit part VII: RTT roles and responsibilities
- Appendices

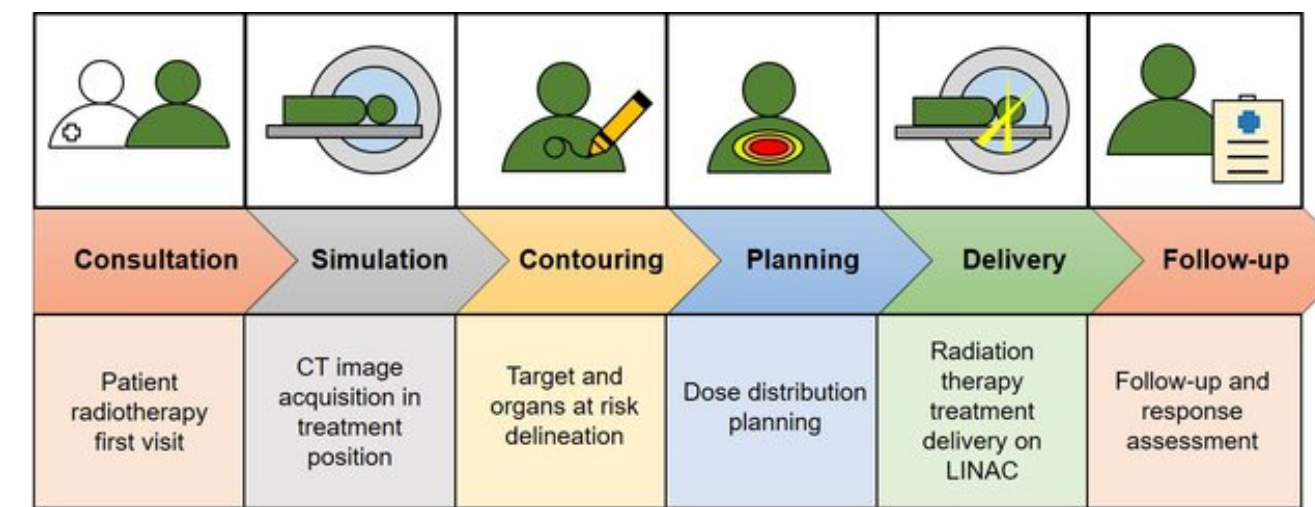
Part I: Infrastructure

- **Patient demographic:** *number of patients treated, types of cancer treated, % curative treatments*
- **Structure of the department:** *working hours, overall structure of the premises, organization of the workspaces*
- **Equipment resources:** *Type of equipment (LINACs, software, dosimetric equipment...), maintenance, age and condition of equipment,*
- **Personnel:** *staffing levels per professional group, staff organization, minimum number of staff during treatment hours, emergency radiation service, ...*
- **Workload:** *Number of treatments/staff, repartition of workload...*

Part II: Patient procedures

- Patient assessment
- Access to diagnostic procedures
- Multidisciplinary Medical Approach
- Practice guidelines
- Research & Clinical trials
- Patient information and consent
- Treatment preparation and image acquisition infrastructure
- Simulation procedures
- Simulation workflow
- Generation of target volume and OAR delineations

- Treatment prescription
- Treatment planning
- Pre-treatment checks
- Patient identification on a daily basis
- Patient set up and set up verification
- Treatment delivery
- Professional behaviour
- Documentation of treatment summary
- Patient follow-up



Part II: Chart review

Examples of typical treatments of common cancer cases are to be requested for a review and analysis by the auditors (+- 10 patient charts)

- Review of typical treatments (are the charts complete, are treatment, prescriptions in line with recommendations...)
- All auditors should participate in this chart review



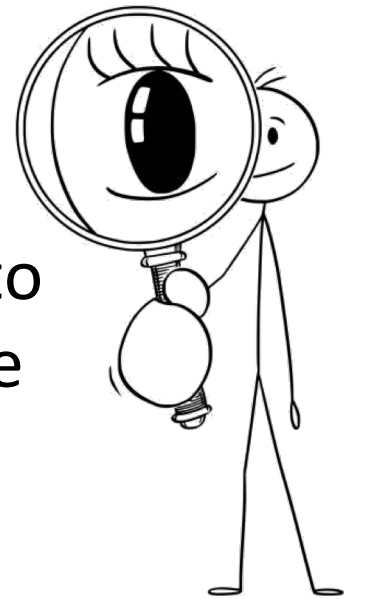
Part III: Equipment procedures

- Imaging equipment
- Treatment equipment
- Setup/immobilisation equipment
- Treatment planning and QC equipment
- Dosimetry equipment
- IT safety



Equipment QA and QC procedures

- The purpose of this part of the audit is to get an overview of the quality assurance processes, procedures and records to assess whether all appropriate quality controls are properly implemented.
- In QUATRO, this includes dosimetric measurements





Part IV: Quality management system



- General aspects of the Quality management system

- Document management system
- Quality indicators
- Process management
- Organizational chart
- Personnel's tasks and responsibilities
- Resource management (human and equipment)

→ *Includes Continuous Professional development*

- Risk management
- Breakdown management
- Patient satisfaction and experience
- Audits

* **B-QUATRO**

Part VI: Communication ^{* B-QUATRO}



Aim is to evaluate information dissemination within and outside of the RT department

- Record keeping and documentation (clinical, medical physics).
- Across disciplines, access to hospital and physician records.
- Horizontally (between staff members with the same function) and vertically (between senior and junior staff members),
- Between different areas of the radiotherapy process,
- Between shifts when applicable.
- Formal and informal meetings

RTT Roles and responsibilities ^{*} B-QUATRO

RTTs are the professionals who operate the equipment and interact with patients daily. Their actions directly impact:

- **Patient safety**
- **Treatment accuracy**
- **Workflow efficiency**

→ However, their training and competencies highly vary in the world and within Europe

→ Because of this, their roles and responsibilities must be audited.

CHECKLIST 41. RTT roles and responsibilities

Items to be reviewed by the auditor	YES	In progress	NO	N/A
Is there an orientation program for newly hired RTTs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If yes, please comment on the orientation program (length, content, clinical trainer, exams...)				
Do RTTs formally participate in equipment selection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do RTTs participate in training by the vendor upon arrival of new equipment/software	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is there sufficient time allotted to RTTs for equipment/software training?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments on training of RTTs relative to new				

Radiation protection ^{*} B-QUATRO

CHECKLIST 40. Radiation protection of staff and population

Items to be reviewed by the auditor	YES	In progress	NO	N/A
Is the RPO involved in the periodic radiation protection (RP) controls carried out in the radiotherapy department?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments on radiation protection controls				
Are the recommendations and corrective actions emitted by the RP control followed up on by the department?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is training in radiation protection regularly provided to the department staff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
By whom?				
Can staff easily access personal dose monitoring values (dosimeter values)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is there a procedure for handling overexposure of staff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Features of the (B)QUATRO audit



- **Comprehensive:** the audit aims to assess ALL aspects of the RT service (!!! But remains a snapshot)
- **Peer reviewed:** audit is performed by professionally active colleagues → constructive
- **External and independent:** absence of conflict of interest and objectivity
- **Multidisciplinary:** team approach
- **Oriented** towards processes and practice: ! Observational skills

Any Questions?