



Catalan Clinical Audit  
Network for Quality Improvement  
in Radiotherapy

# QUATRO terminology

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Barcelona / 10-13 June 2023

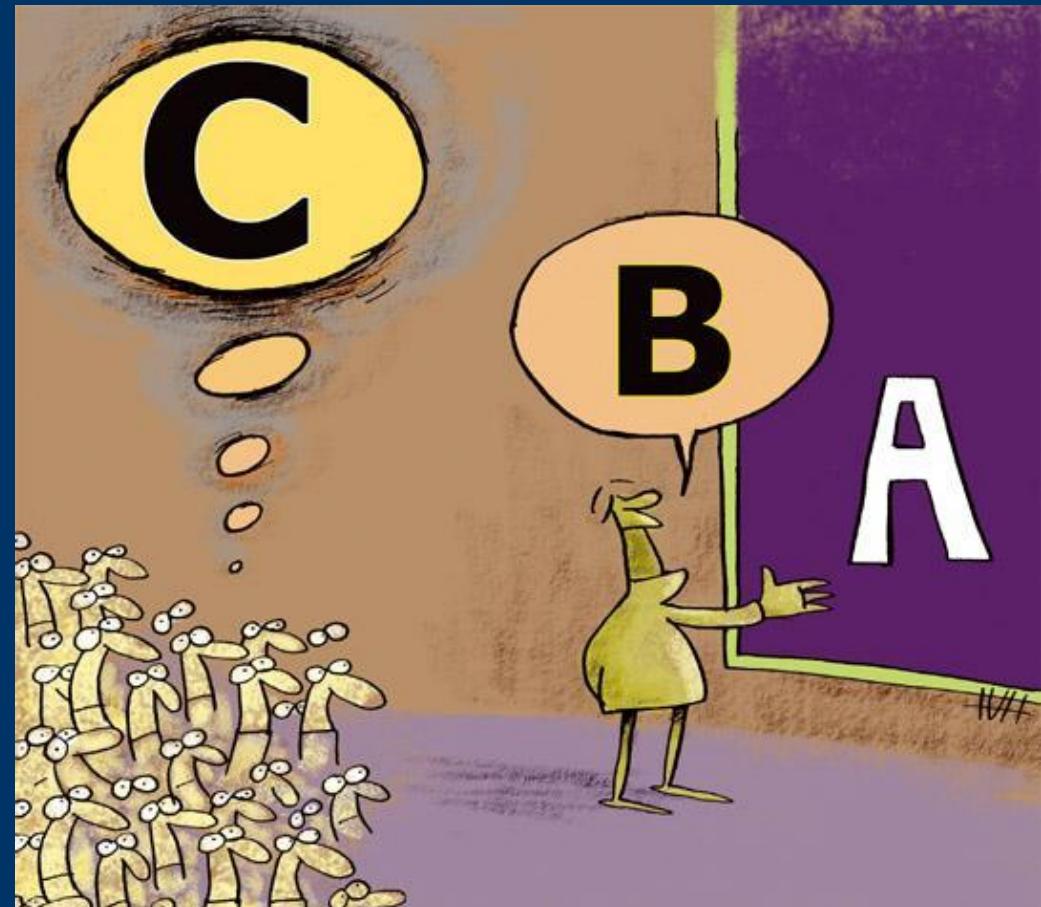


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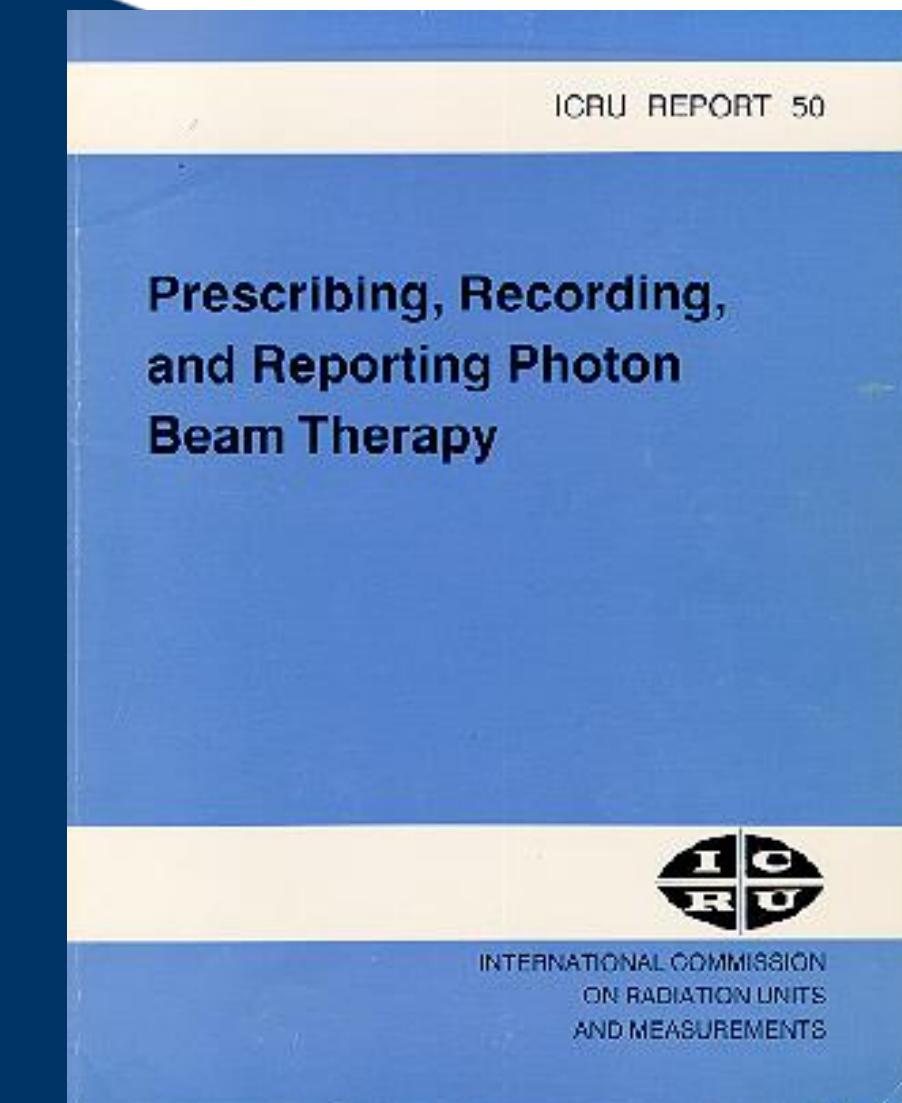
# ... a common language?



- Is needed for understanding
- Is essential for reporting

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- English is not everyone's mother tongue
- Different terms may have different meaning





# The report must be understandable to all!



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# Radiation Oncologists

Physicians practising radiation therapy must first be qualified as medical practitioners with a postgraduate training in radiation oncology

In some countries clinical oncologists trained in both radiation oncology and chemotherapy are common

# Clinically qualified RT medical physicists

A clinically qualified radiotherapy physicist should have at least:

- University degree
- One year post-grad studies in medical physics
- Two years full time clinical training





# Radiation therapy technologists (RTT)

**Wide variation of terminology (and tasks):**

- **Radiation therapists, radiotherapists, therapist-radiographers and manipulateurs**

**Typical tasks:**

- **Operation of treatment units**
- **Operation of imaging equipment for planning**
- **Creation of treatment plans under supervision**

**Have daily contact with patients and as such can detect problems early**

**Increasing role in complex treatment delivery and verification**





# Workload related terminology

APPENDIX II: REMARKS ON THE CONSISTENCY OF THE TERMINOLOGY USED IN RADIOTHERAPY ..... 110

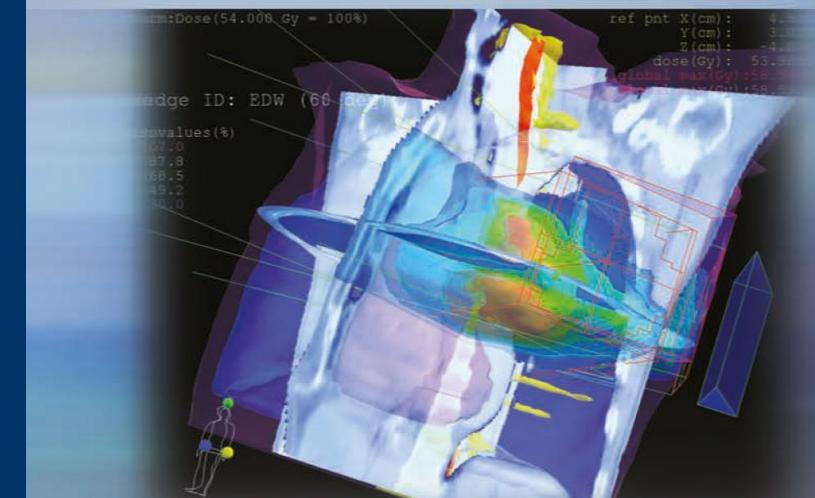
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## Comprehensive Audits of Radiotherapy Practices: A Tool for Quality Improvement

Quality Assurance Team for Radiation Oncology (QUATRO)



Second Edition



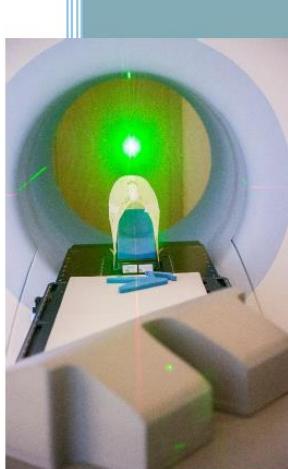
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# Workload related terminology

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**BQUATRO:**  
Comprehensive Audits of Radiotherapy  
Practices: A Tool for Quality Improvement  
adapted to the Belgian context



Collège de Radiothérapie  
Version 2 - updated in 2024



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# QUATRO/BQUATRO – Appendix II

## Patient

Patient is an individual with one or more cancers.

## Cancer case

Cancer case is a new cancer registered, possibly several different cancers in a single individual (synchronous or metachronous).

## Primary cancer

The original or the first tumor in the body. One individual may have more than one primary cancers (synchronous or metachronous).



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## Treatment or course of treatment:

Treatment is a course of radiotherapy made of a number of sessions, treating a given cancer.

An additional irradiation at a distance from the primary (e.g. prophylactic cranial irradiation in small cell lung cancer) could be considered a different course of treatment (additional workload).

## Treatment session

Treatment session is synonymous with a fraction. One irradiation session comprises one or more fields on one or more target volumes concerning the same patient (time slot at a treatment machine).



# QUATRO/BQUATRO – Appendix II

## Treatment plan

Treatment plan is at least a 2D distribution of doses.

## Treatment field

Treatment field is a single radiation beam. Each beam orientation may include more than one field size. Auditors need to determine what definition is used.

## Shift

Shift is normal working hours for a given professional class. A department might be open for longer daily hours and therefore use successive shifts for the personnel.

## Workload

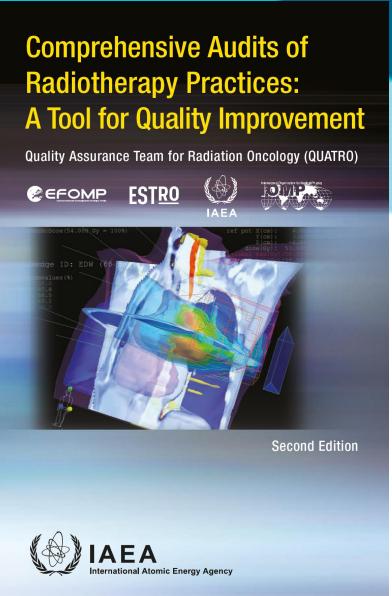
Workload of a radiotherapy department is determined by the number of treatments per FTE of a professional group.





# QUATRO – Appendix III

## REMARKS ON THE ENUMERATION OF PATIENTS AND CANCER CASES



### Catchments area

Are the numbers of cancer cases derived from:

- the entire country or region?
- all the hospitals affiliated to the major hospital being audited or only the audited institution?

### Source of information

Do the cancer cases include both clinical and pathological

diagnoses or only the latter?

### Management

Do the cancer cases include patients who may have been  
simply sent home for terminal care; or only those  
treated?

Or are the cases recorded only those who have  
received RT?

### Skin cancer: Inclusions/exclusions

Do these cases include all cases of skin cancer or are only malignant melanomas included?

Are all cases of Kaposi Sarcoma (AIDS and HIV negative) included?

### Counting

It is usual to count a patient with synchronous or metachronous cancer at a second primary site as a second case.

In some institutions, the development of metastases subsequent to the primary management is recorded as a further case.

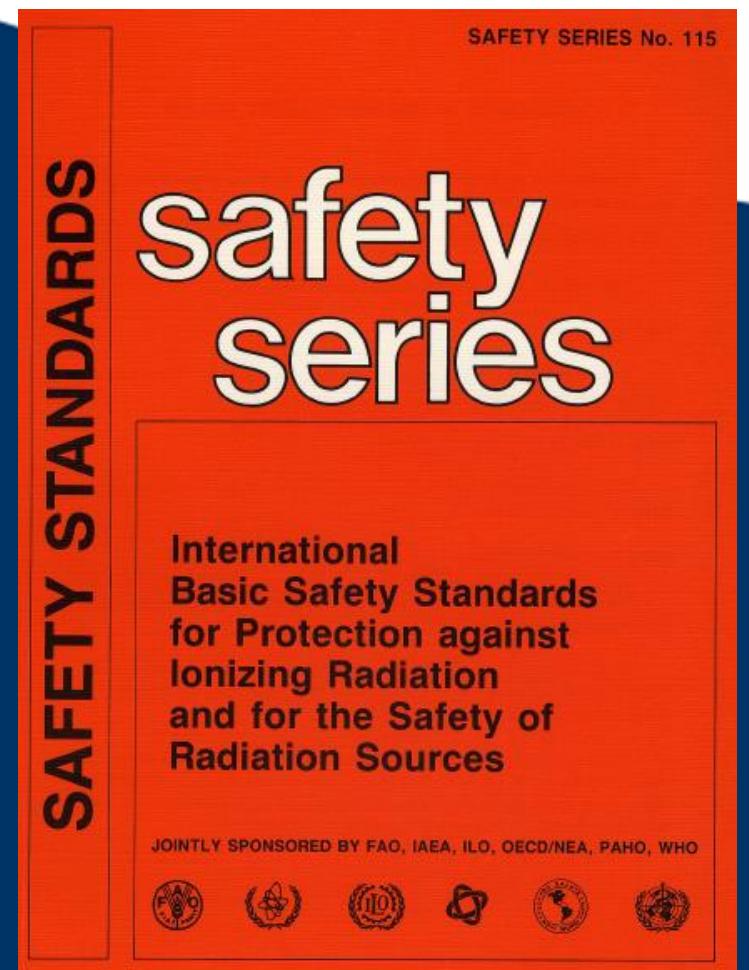
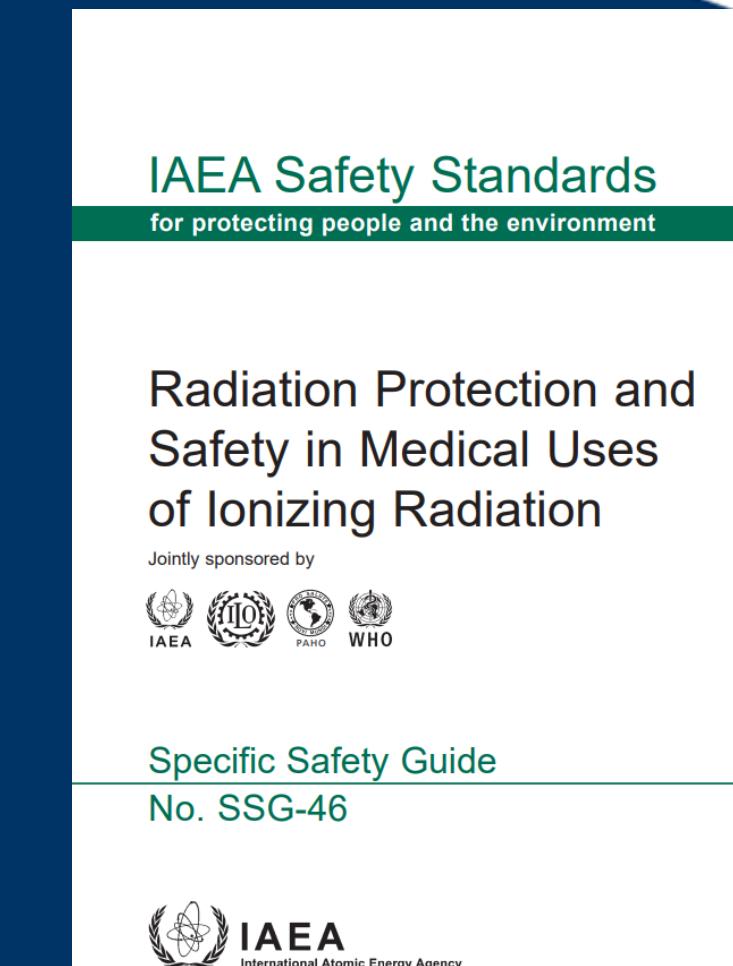


# Accident

**Any unintended event, including:**

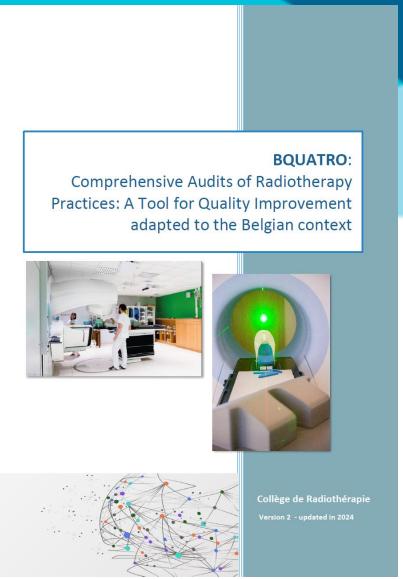
- **operating errors,**
- **equipment failures or**
- **other mishaps,**

**the consequences or potential  
consequences of which are not  
negligible  
from  
the point of view of protection or  
safety.**



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# Checklists (BQUATRO)

The reviewed items will be scored as being either:

- **existent\***,
- **in the process of being implemented**,
- **non-existent** or
- **not applicable**.

## CHECKLIST 1. Patient Assessment

Items to be reviewed by the auditor	YES	In progress	NO	N/A
Does the hospital possess an electronic medical record (EMR) system?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If yes, is the radiotherapy department integrated within this system?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If no, does the radiotherapy department have access to all relevant clinical data/records?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



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\*The term “existent” pertains to a process/element that is formally/officially organized within the department.



## Checklists (BQUATRO)

Subsequent to each checklist, the auditors will also provide a **global score** defining the level at which the department has met the criteria set out in the checklist:

**COMPLIANT:** the department meets all criteria set out in the checklist & the auditors have no recommendation on issue.

**PARTIALLY COMPLIANT:** the department needs to address a few elements; the auditors emit some minor recommendations that would allow department to improve practice.

**NON-COMPLIANT:** the department needs to address a few major elements; the auditors emits some major recommendations that will improve practice.

Overall Score	Compliant	Partially compliant	Non-compliant
Is patient assessment properly carried out by the radiotherapy department?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Commendations/Recommendations			



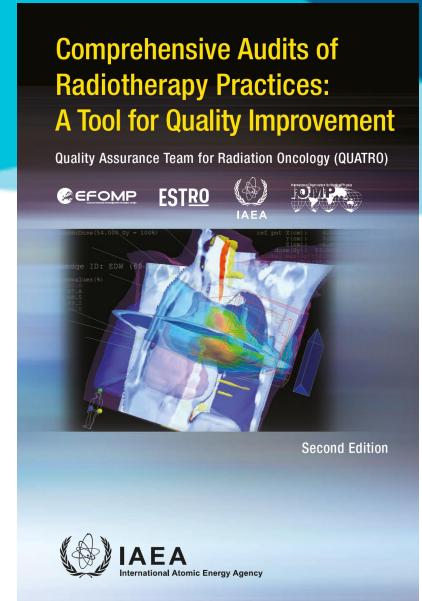


# Checklists (QUATRO)

Comment on the quality and timeliness of services:					
<b>Overall assessment:</b> 1—Poor, 2—Needs major improvement, 3—Needs minor improvement, 4—Appropriate		1	2	3	4
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

TABLE 1. DESCRIPTORS OF ITEMS UNDER REVIEW AND ASSESSMENT CRITERIA

Descriptor	1	2	3	4
Frequency	None of the time	Some of the time	Most of the time	All of the time
Processes and practices	Poor	Needs major improvement	Needs minor improvement	Appropriate
Policies and procedures	Not developed	Started	Advanced/in progress	Appropriate
Resources (capital, human, educational)	Poor	Needs major improvement	Needs minor improvement	Appropriate
Overall assessment	Poor	Needs major improvement	Needs minor improvement	Appropriate





# Checklists (BQUATRO)

## SPIDER WEB

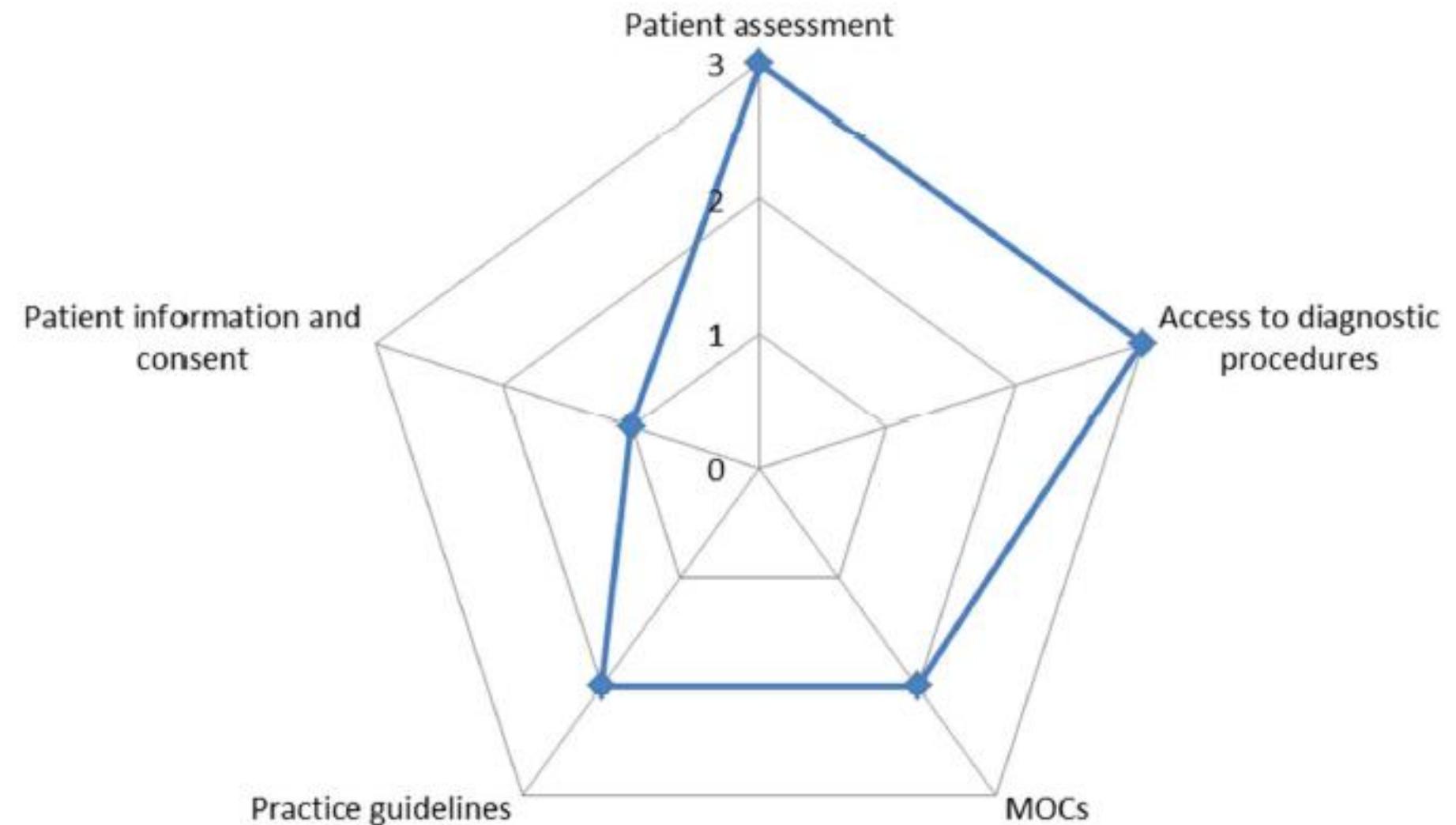
For easy visualization of:

- good performance
- areas of improvement



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### Diagnosis, staging and treatment decision





# Conclusions

**Terminology can vary significantly**

- between professions
- between institutions
- between countries
- between auditors and radiotherapy service

**The same terminology should be used by all parties!**

In order to avoid misunderstandings and misconceptions it is important for each audit to **clarify terms** (if they haven't already) and possibly **define them in the audit report**.





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