Quality and Safety Initiatives for Radiation Oncology in Europe: different approaches, united view.

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ESTRO president
State-of-the-art Radiation Therapy

treatment preparation

imaging → delineation → planning → pre-treatment dosimetry

treatment delivery

per-treatment dosimetry → treatment → image registration & correction → imaging
European map of resource availability
Every cancer patient in Europe will have access to state of the art radiation therapy, as part of a multi-disciplinary approach where treatment is individualised for the specific patient’s cancer, taking account of the patient’s personal circumstances.

are the quality management strategies and initiatives sufficiently aligned amongst European countries?
European Union legislation

Directive 2013/59/Euratom

BSS Council directive: basic safety standards for protection against the dangers arising from exposure to ionising radiation

The updated Directive broadens the application to the whole range of radiation sources and categories of exposure: occupational, medical, public and environmental.

It covers the protection of: workers, the public and patients, and focuses on reporting, analysing and learning from near misses, incidents, accidents.
Radiotherapy Quality Indicators

- YES: 10; 36%
- NO: 7; 25%
- 5; 18%
- 6; 21%

Who collects them at national level?

Courtesy N. Jornet, Barcelona
## Clinical Audits in European countries

<table>
<thead>
<tr>
<th>Country</th>
<th>National Clinical Audit System</th>
<th>Who runs the audits</th>
<th>Mandatory?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>NO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Belgium</td>
<td>YES (QUATRO), within Belgian Cancer Plan from 2010</td>
<td>The College for Radiotherapy-Oncology</td>
<td>YES</td>
</tr>
<tr>
<td>Denmark</td>
<td>YES</td>
<td>By tumour site societies</td>
<td>NO</td>
</tr>
<tr>
<td>France</td>
<td>NO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Germany</td>
<td>YES</td>
<td>National Scientific Oncology Societies</td>
<td>NO (needed to be certified in Oncology)</td>
</tr>
<tr>
<td>Italy</td>
<td>NO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Netherlands</td>
<td>YES</td>
<td>Run by NVRO + compulsory independent accreditation (NIAZ; JCI)</td>
<td>YES – otherwise insurance companies can deny contracting</td>
</tr>
<tr>
<td>Spain</td>
<td>NO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sweden</td>
<td>NO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UK</td>
<td>YES</td>
<td>IPEM, NCP, RTTQA Dosimetry audit network</td>
<td>NO</td>
</tr>
</tbody>
</table>

*Courtesy N. Jornet, Barcelona*
Comprehensive Audits of Radiotherapy Practices: A Tool for Quality Improvement
Quality Assurance Team for Radiation Oncology (QUATRO)

External and independent Processes and structure

J. Izewska et al., R&O 2017
QUATRO audits in Belgium: 

devlopment of a 
Quality Managers’ tool 

endorsed by the IAEA!
ACCIIdental and unintended exposures in RADiotherapy


“Member States shall ensure that all reasonable steps to reduce the probability and the magnitude of accidental or unintended doses of patients from radiological practices are taken (...) and stipulates that the main emphasis in accident prevention should be on the equipment and procedures in radiotherapy.”

analysis - picture of implementation - recommendations - consensus

Report 181 Commission's Radiation Protection series
http://www.accirad.eu
adverse events reporting

Courtesy J. Malicki, Poznan
http://www.accirad.eu
ROSEIS

Radiation Oncology Safety Education & Information System

- within ESTRO: **wider platform** for sharing and exchanging information
- **repository** for anonymous reports of near misses and error events, submitted from existing local or national reporting systems
- identifies **best practices and gaps in development** of reporting, facilitates learning from the experience of others
- provides **educational material**
- supports a **prospective risk analysis** approach

*Implementation of the EU Directive:* supporting, reporting and learning, both integrated in a European and International platform
Main recommended components for Quality and Risk Management in Radiotherapy

1. Update national **legislations**
2. Deploy **methodology** for quality and risk management
3. Disseminate **information** on risk management
4. Provide **training** in risk management and safety culture
5. Inform **patients** and the **public** to increase trust in the health care system
6. Stimulate **Clinical Audits**
7. Perform **regulatory inspections** by national authorities

J. Malicki at al, R&O 2018
ESTRO as a facilitator for the harmonisation of RT quality and safety standards

- **Evidence** and **tools** to support resources and measure quality
- **Guidelines** for evidence-based radiotherapy in oncology
- **Training** to harmonise radiotherapy practice and to enhance Quality Management and Risk Management
- **Information** on quality and safety of radiotherapy
- **Proactive action**
  - Collaborate in **safety reporting** and implement **risk learning systems**, contribute to its development and dissemination
  - Participate to **Quality Audits** and promote **Quality Indicators**
- **Collaboration** with international organisations and institutions (HERCA, COCIR, IAEA)
ESTRO, an overarching organization, aims to align – by guiding and supporting – without overruling.

ESTRO is dedicated to take up its role in facilitating European harmonization, within a framework of international collaboration.
Thanks to

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the ESTRO

the Belgian College for Physicians in Radiotherapy-Oncology

The IAEA

Thank you for your attention!