



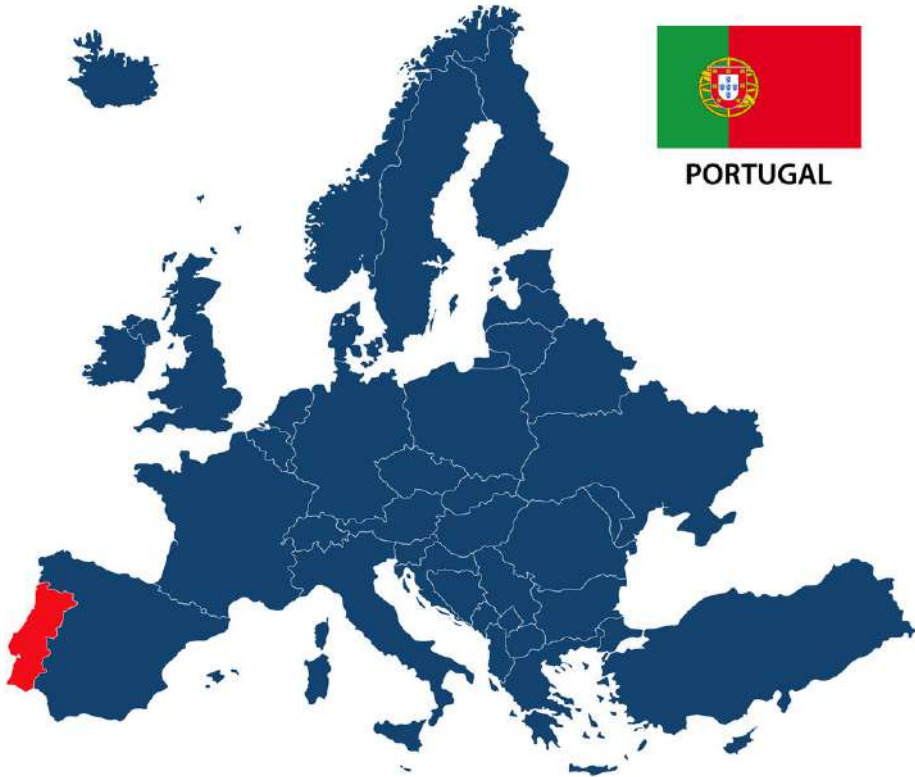
Celeste Oliveira

**Advancing practice:
European snapshot and future outlook**

#hello my name is...

Celeste Oliveira

Radiation Therapist - RTT



PORTUGAL



#hello my name is...

Celeste Oliveira

2018-2022: Researcher SAFE EUROPE project (ERASMUS+)

PATIENT
VOICE

Digital
SKILLS

Advanced Practice



SAFE Europe

Safe And Free Exchange of
EU Radiography Professionals
across Europe

Co-funded by the
Erasmus+ Programme
of the European Union



(Project Coordinator)



L-Università
ta' Malta



Polskie Towarzystwo Elektrodziagnostyki



www.safeeurope.eu



Co-funded by the
Erasmus+ Programme
of the European Union

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WP8 – ASSESSMENT OF ADVANCED PRACTICE FOR THERAPY RADIOGRAPHERS IN THE NATIONAL, EUROPEAN AND INTERNATIONAL CONTEXT

The aim of this work package is to identify the competencies required to practise advanced roles.

PAGE CONTENTS

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Advanced Practice in modern Radiation Oncology has been directly linked with improvement of cancer patients' quality of life with less morbidity and increased disease free survival. The TR is the professional with direct responsibility for treatment planning and treatment delivery in a safe environment as well as patient care and follow-up.

The scope of practice within the field of competencies of the TR is described by EFRS EQF benchmark document as well as IAEA's handbook for education of Radiation Therapists TCS-58, which according to these European and International publications should be attained by the academic / formal education at the European Qualifications Framework for level 6.

EFRS
EUROPEAN FEDERATION OF
RADIOGRAPHER SOCIETIES



Disclaimer



The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

PhD research



Disclosure

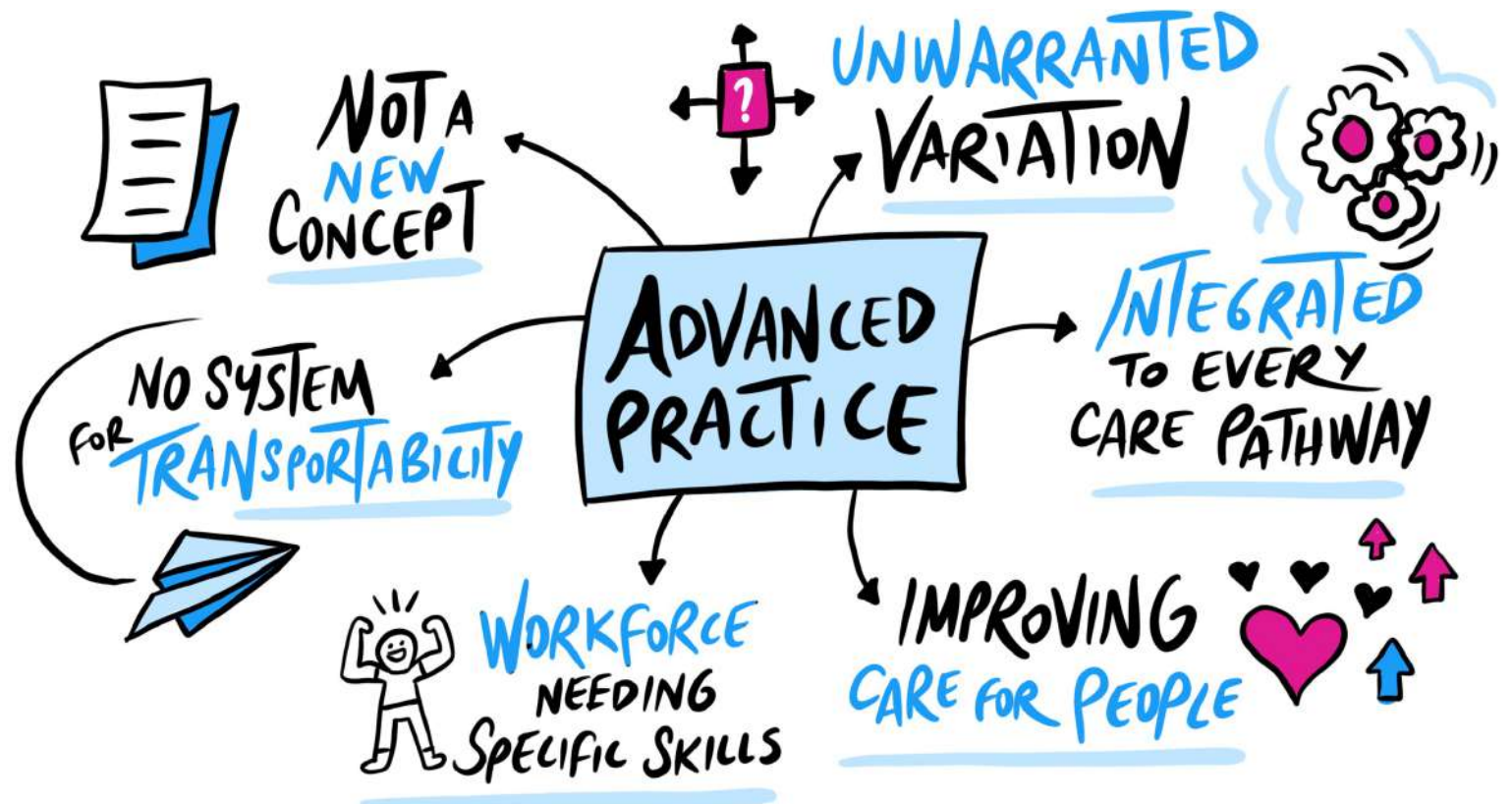
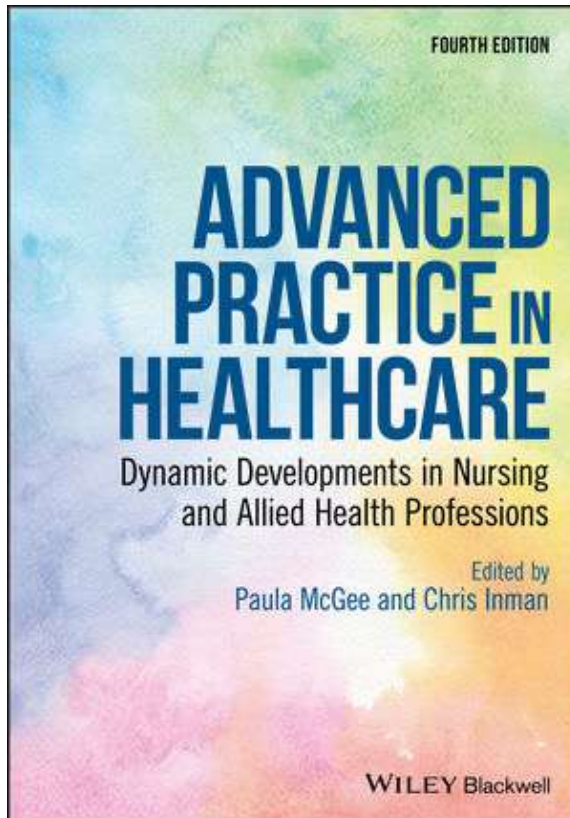
**I am not an... Advanced Practitioner
or Advanced RTT!**



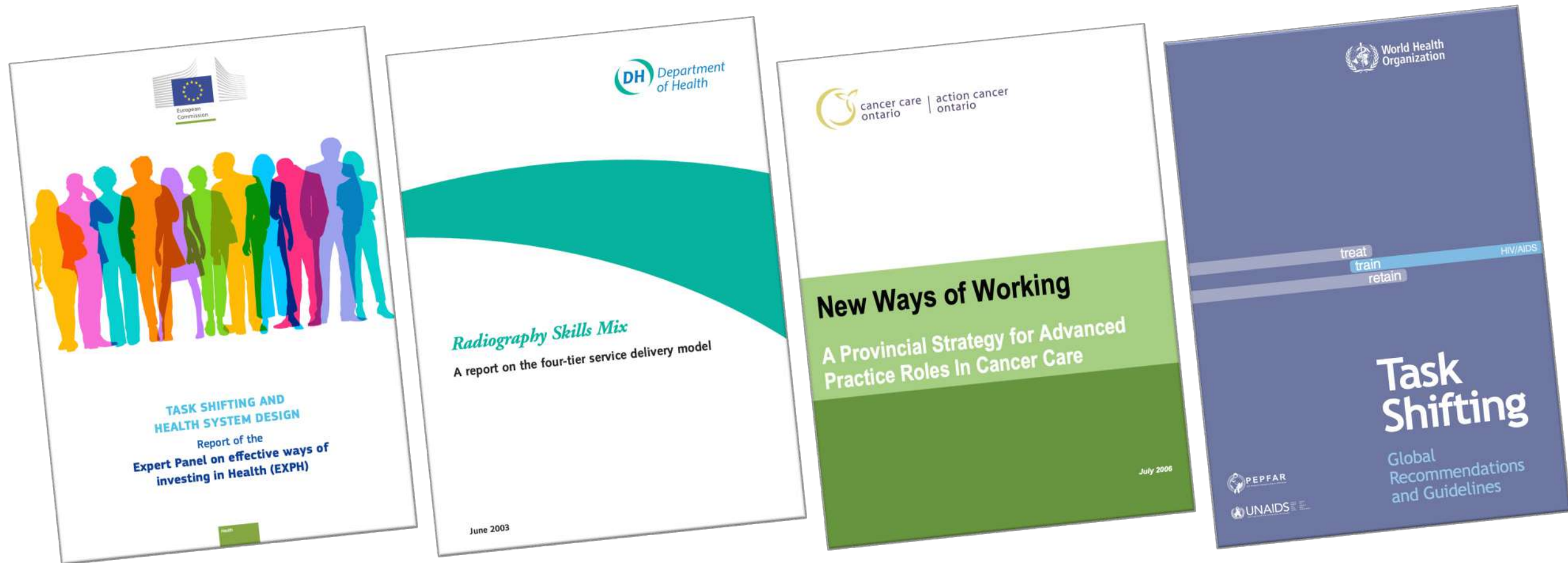
Advancing practice



What is AP?



AP drivers in healthcare



Why AP in Radiotherapy?



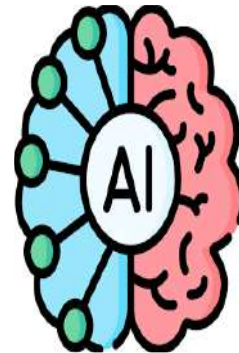
Cancer incidence & prevalence



Cancer survivorship & expectations

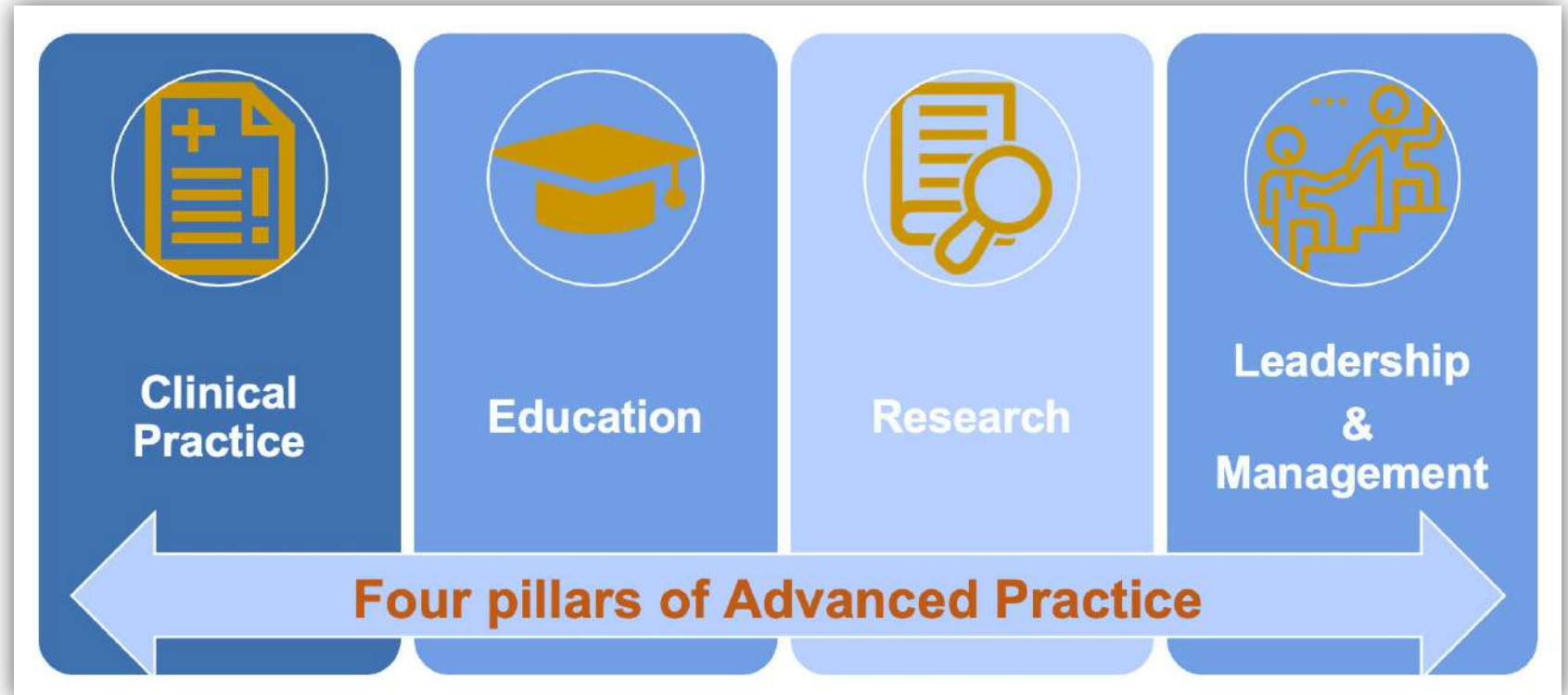
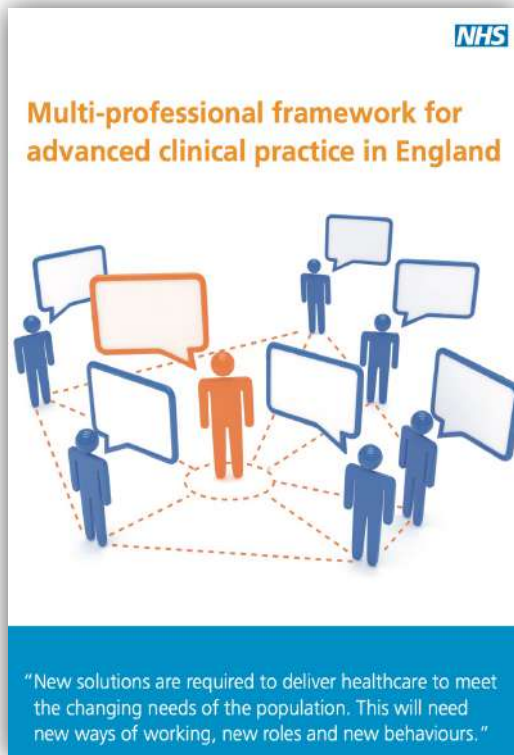


Staff recruitment & retention



Technology evolution & Artificial Intelligence

AP definition



What are AP roles in RT?

Roles performed by practitioners with several years of experience and additional education.

Level of practice: high degree of autonomy & complex decision making.

Core capabilities & area specific clinical competence to practice across 4 pillars.

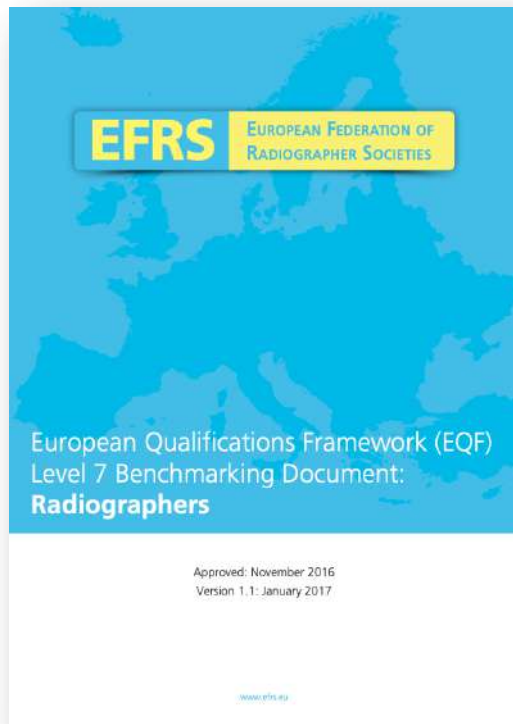
Not performed at entry-level!



ature medicine

AI-guided cancer radiotherapy

European Benchmarking



Contents lists available at [ScienceDirect](http://www.sciencedirect.com)

Technical Innovations & Patient Support in Radiation Oncology

journal homepage: www.elsevier.com/locate/tipsro



Benchmarking guideline

The European Society of Radiotherapy and Oncology (ESTRO) European Higher Education Area levels 7 and 8 postgraduate benchmarking document for Radiation Therapists (RTTs)



Mary Coffey*, Michelle Leech, on behalf of the ESTRO Radiation Therapist Committee

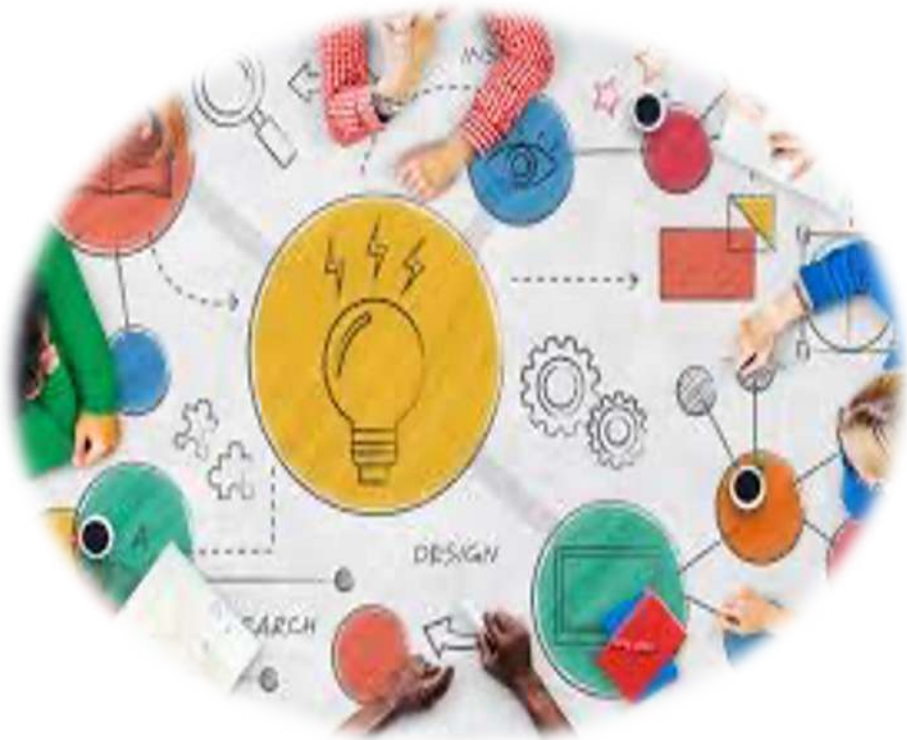
Aims

To assess
Advanced Practice
roles amongst
TR/RTTs

To identify
educational gaps
for this advanced
level practice



Research phases



Stakeholder interviews

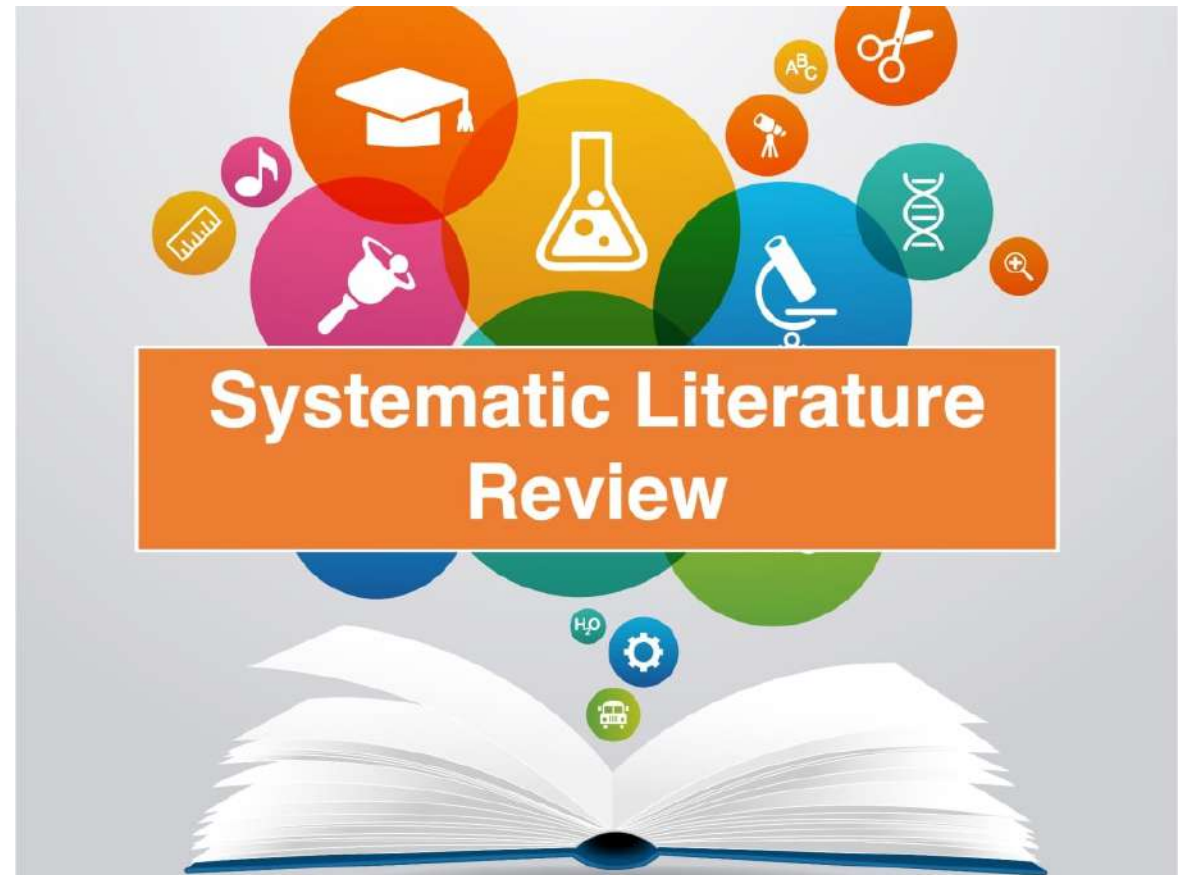


European survey



Systematic literature review

Phase I



Aim & objectives



Establish

International baseline of evidence on
AP in Radiotherapy



Identify

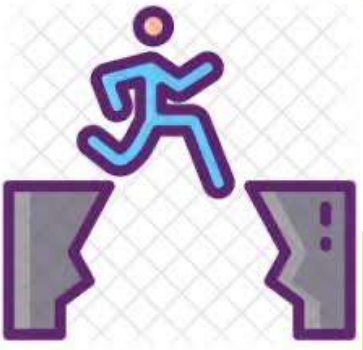
AP roles, activities/tasks amongst
TR/RTTs



Capture

Impact on clinical, organizational and
professional outcomes

Research challenges



Barriers

- **Definition of Advanced Practice**
 - Concept & evolution of AP roles
- **Cross-country comparison**
 - Terminology & healthcare settings
- **Cross-study comparison**
 - Study methodologies: real-world evidence

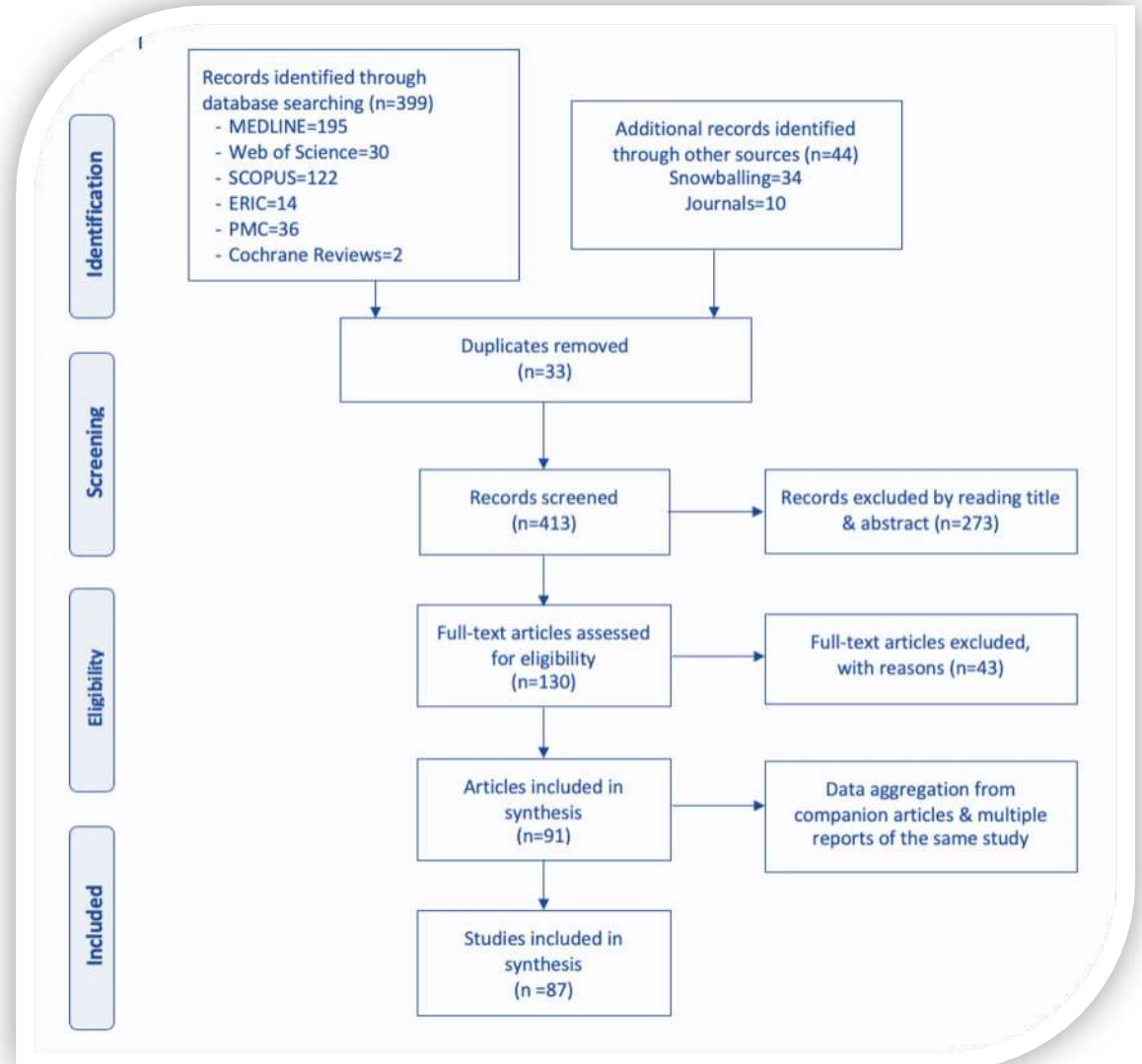


Enablers

- Comprehensive systematic literature review & AP adoption
- Research team with different professional & educational backgrounds
- RT expert panel with different roles & countries
- Different tools used to appraise included studies

Methods

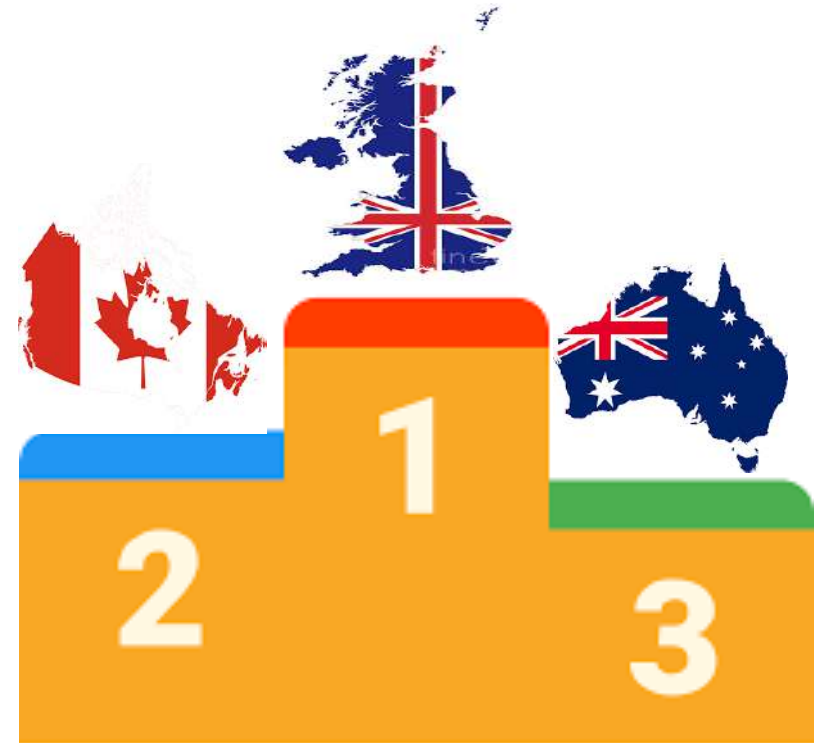
- ✓ PRISMA protocol
- ✓ Data extraction & synthesis
- ✓ Thematic analysis
 - Validation by RT expert panel



Findings



87

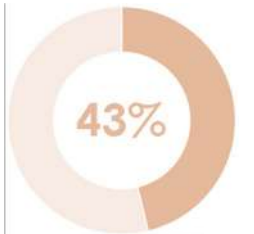


Findings



Role evaluation & development

- Single-role research at single-centre study



Task congruence

- TR/RTTs vs MDs performance



Role implementation & stakeholders' insights

- Feasibility studies



Educational programmes



Findings



Job titles

Countries

Advanced Practice RTT
Clinical Specialist RTT
Advanced Practitioner



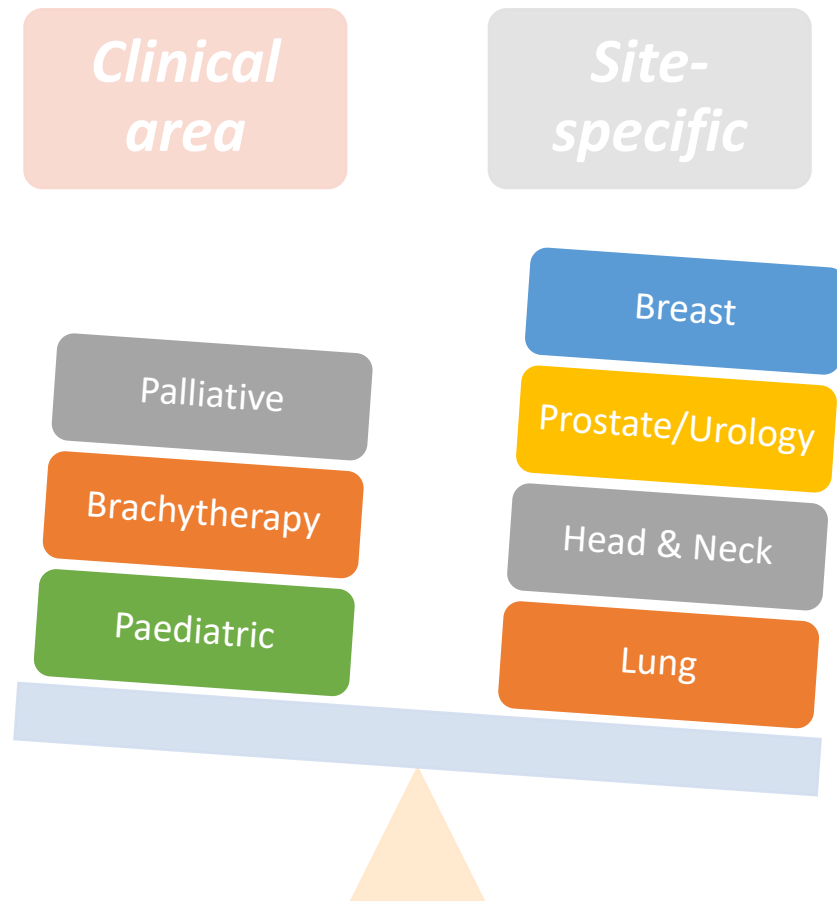
Advanced Therapeutic
Radiographer



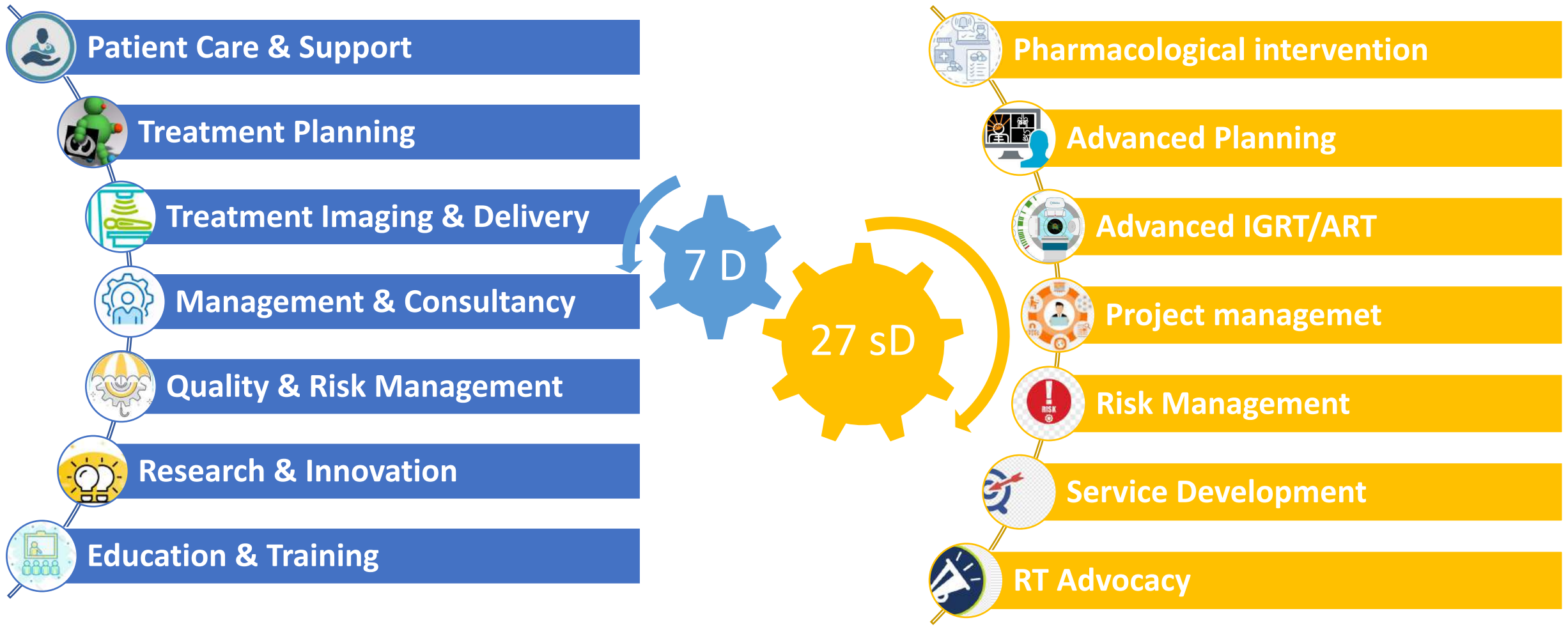
Radiation Therapy
Advanced Practitioner



AP roles by...



Advanced activities



Impact of AP



**Higher service
efficiency**



**Maintain
quality
standards**



**Improved
patient
satisfaction**



**Enhanced
patient
experience**



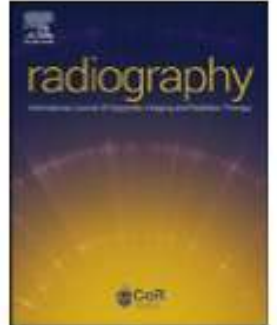
**Increased job
satisfaction**



Contents lists available at ScienceDirect

Radiography

journal homepage: www.elsevier.com/locate/radi



Systematic Review

Advanced practice roles of therapeutic radiographers/radiation therapists: A systematic literature review

C. Oliveira ^{a, b, *}, B. Barbosa ^{a, b, c}, J.G. Couto ^d, I. Bravo ^c, R. Khine ^{e, f}, H. McNair ^{e, g}

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^b Escola Internacional de Doutoramento, Universidad de Vigo, Circunvalación Ao Campus Universitario, 36310, Vigo, Pontevedra, Spain

^c Medical Physics, Radiobiology Group and Radiation Protection Group, IPO Porto Research Centre (CI-IPOP), Instituto Português de Oncologia do Porto (IPO Porto), R. Dr. António Bernardino de Almeida 865, 4200-072, Porto, Portugal

^d Radiography Department, Faculty of Health Sciences, University of Malta, Msida, MSD2080, Malta

^e European Federation of Radiographer Societies, PO Box 30511, Utrecht, 3503, AH, Netherlands

^f School of Health Care and Social Work, Buckinghamshire New University, Buckinghamshire, United Kingdom

^g The Royal Marsden NHS Foundation Trust, Radiotherapy and the Institute of Cancer Research, Surrey, SM2 5PT, United Kingdom



Phase II



European survey

Phase III



Objectives



Investigate

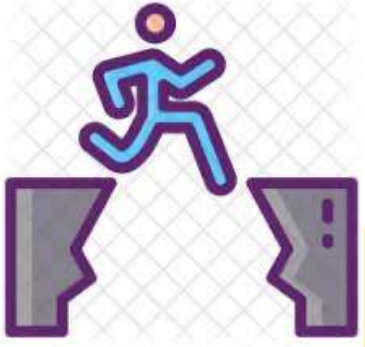
**Current and future AP roles
in RT across Europe**



Identify

**Educational gaps for this
advanced level practice
across Europe**

Research challenges



Barriers

- **Ethics approval**
- **Survey & interview design**
- **Recruitment & sampling**
 - Survey population & stakeholder groups
- **Data analysis**
 - Survey data & Interview data



Enablers

- Ethics committee
- Tool design based on previous phases
- Clear definition of the survey population & targeted recruitment for stakeholder groups
- Survey descriptive statistics & cross coding

Methods



Self-designed survey



Pre-test: content validity

- 5 RT experts



Pilot study: test-retest reliability

- 5 APs/RTTs



Self-designed interview guides



Semi-structured interviews

- 2 pilot interviews



One interviewer (1:1) & English

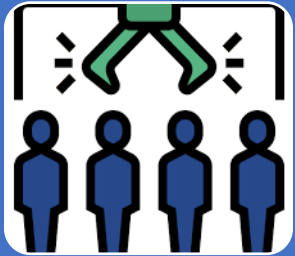


Audio & video recording

Recruitment & sampling



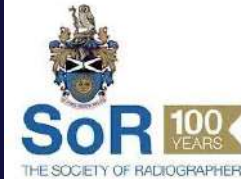
Survey dissemination
Interview recruitment



Convenience sampling
Purposive sampling



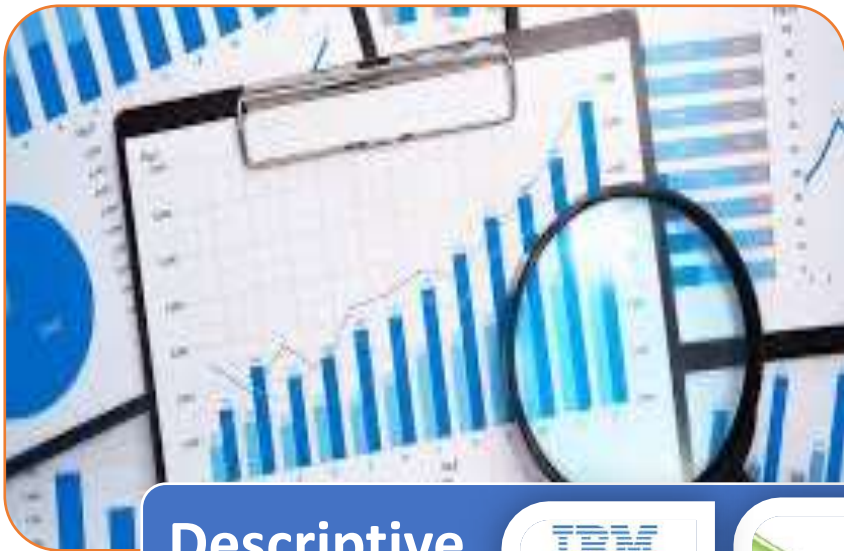
Online (1:1)



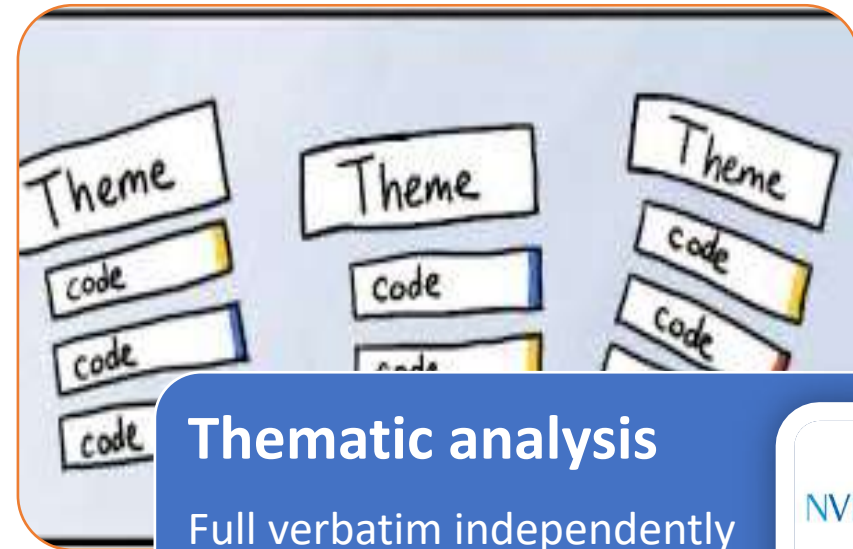
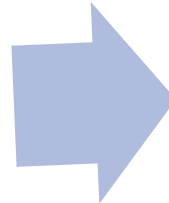
SAFE Europe
Safe And Free Exchange of
EU Radiography Professionals
across Europe



Data analysis



**Descriptive
statistics**



Thematic analysis

Full verbatim independently
transcription

Member checking by interviewees

Cross-coding (1 vs 3 coders)

"Braun & Clarke" steps

NVIVO

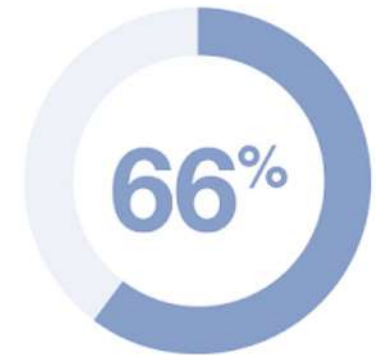
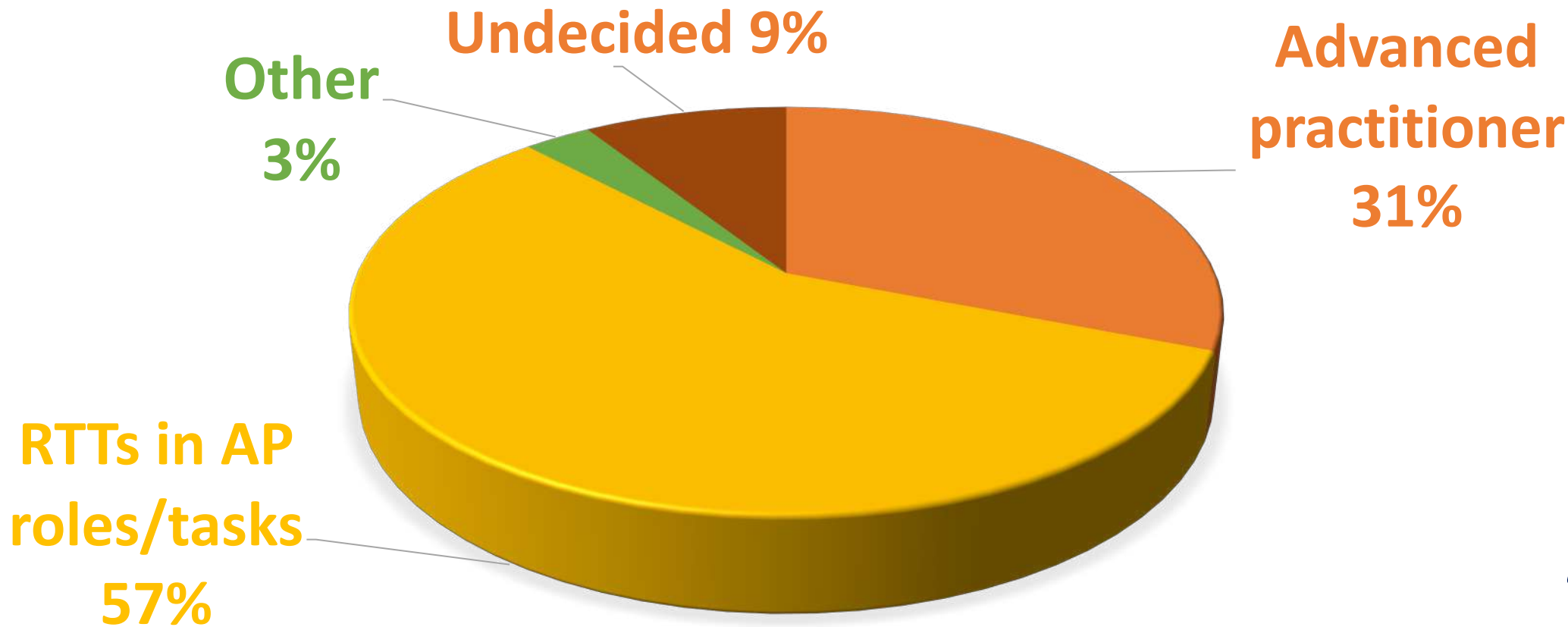
Working practice



189



21



Informal practice

Job titles



**TR/RTTs working in AP roles
or advanced activities**



Advanced practitioners

Survey findings



Tumour-site



- ☐ Prostate
- ☐ Breast
- ☐ Head & Neck



Clinical areas



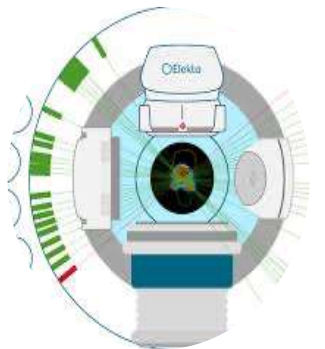
- ☐ Palliative care
- ☐ Practice development
- ☐ Brachytherapy



Activities



- ☐ IGRT/ART
- ☐ Patient information
- ☐ Patient assessment & management



Survey findings



Knowledge areas



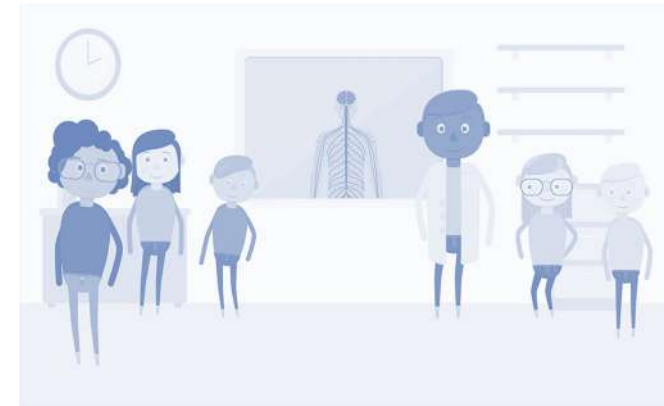
- ☐ IGRT/ART
- ☐ Multimodal imaging & technologies
- ☐ Advanced treatment planning



Advanced skills



- ☐ Leadership
- ☐ Management
- ☐ Clinical-site/specialty expertise



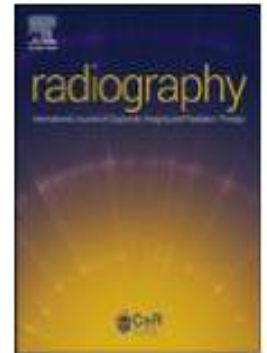
Gaps



Contents lists available at ScienceDirect

Radiography

journal homepage: www.elsevier.com/locate/radi



Advanced practice roles amongst therapeutic radiographers/radiation therapists: A European survey



C. Oliveira^{a, b}, B. Barbosa^{a, b, c}, J.G. Couto^d, I. Bravo^c, C. Hughes^e, S. McFadden^e,
R. Khine^{f, g}, H.A. McNair^{f, h, *}

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^b Escola Internacional de Doutoramento, Universidad de Vigo, Circunvalación ao Campus Universitario, 36310 Vigo, Pontevedra, Spain

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^d Radiography Department, Faculty of Health Sciences, University of Malta, Msida, MSD2080, Malta

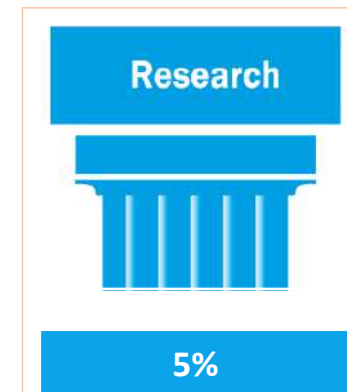
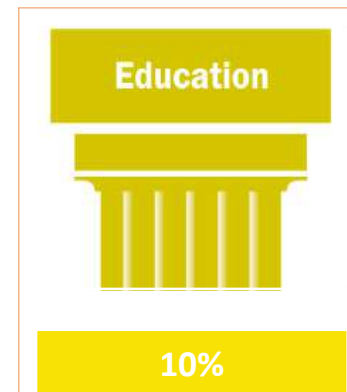
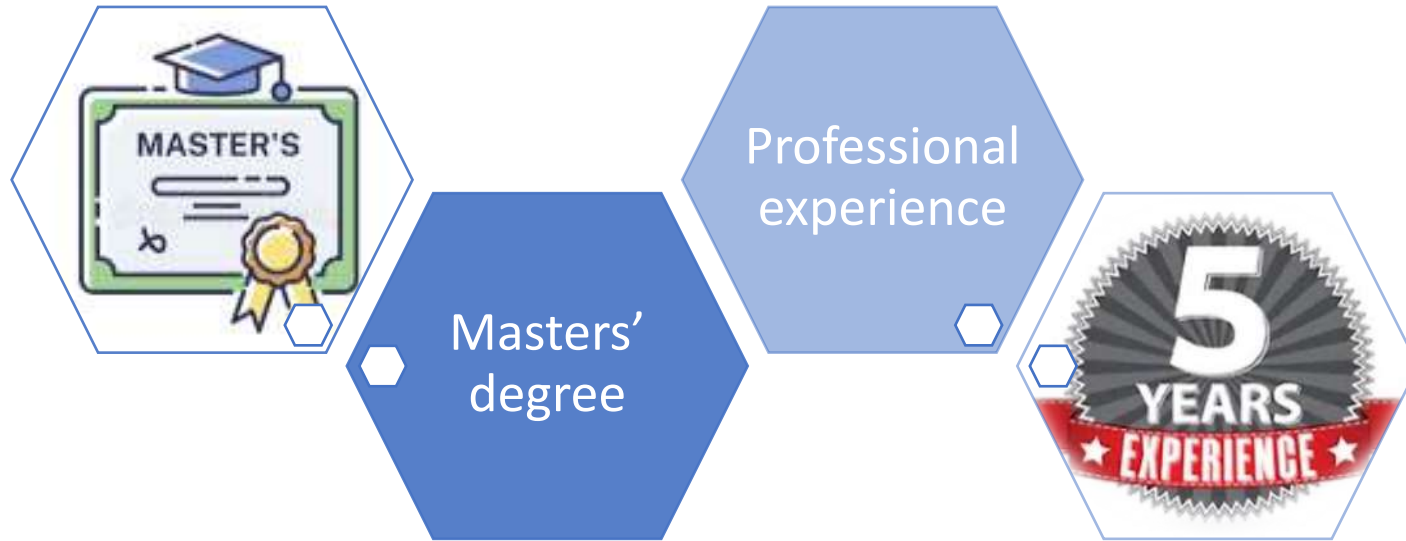
^e School of Health Sciences, Ulster University, Shore Road Newtownabbey Co, Antrim, BT37 0QB, United Kingdom

^f European Federation of Radiographer Societies, Utrecht, Netherlands

^g School of Health Care and Social Work, Buckinghamshire New University, Buckinghamshire, United Kingdom

^h The Royal Marsden NHS Foundation Trust, Radiotherapy and the Institute of Cancer Research, Surrey, SM2 5PT, United Kingdom

Mix findings



Interview findings

14 Advanced Practitioners/
RTTs working in AP roles

6 Managers

7 Educators/Students

4 Professional bodies

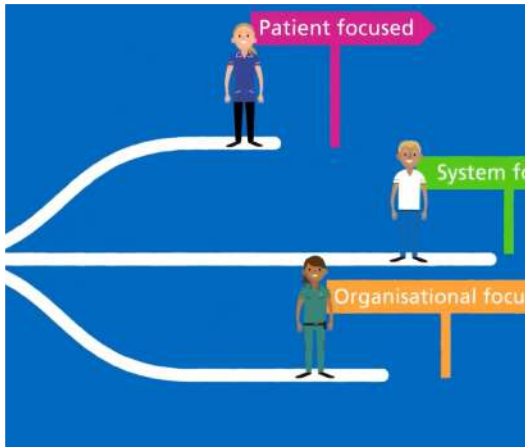
2 Regulatory bodies



4-30 practice years as RTT
2-16 practice years as AP
MSc RT/other (& PhD)

Interview findings

AP drivers & outcomes



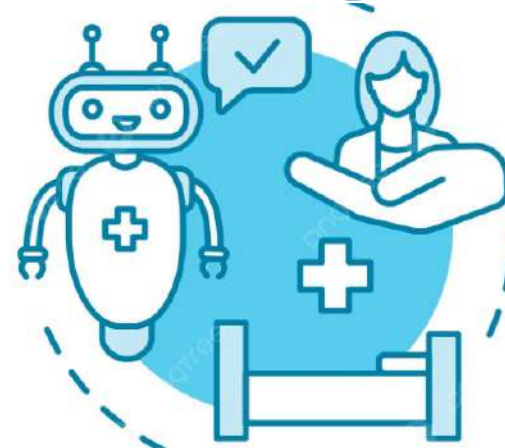
- Clinical
- Professional
- Organizational

AP challenges & enablers



- **Governance & role development**
- **Workforce & organization**
- **Practice across 4 pillars**
- **Education & training**

Current vs future AP



- **Clinical practice**
- **Education**
- **Leadership & management**
- **Research**

Becoming & being advanced practitioner



- Development of competence & capability
- Professional maturity
- Challenging professional boundaries
- Pioneering innovation

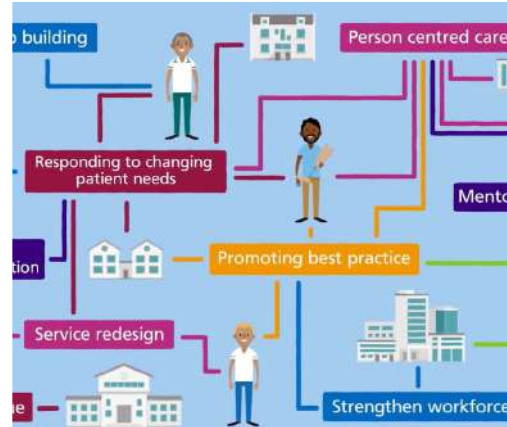
AP challenges

Governance & role development



- AP roles clarity
- Job titles & job descriptions
- Job plan
- Recognition & compensation
- Appraisals & AP impact

Workforce & organization



- Role acceptance
- Professional boundaries
- Task-shifting
- Recruitment & retention
- Staff motivation

Practice across 4 pillars



- Awareness of importance 4 pillars
- Time for non-clinical pillars
- Staff confidence
- Research skills & culture
- Management support
- Workload

Education & training



- Education harmonisation
- RT-specific masters
- Leadership training
- International barriers:
 - Geographical & linguistic
 - Costs & study leave
 - Unawareness



We didn't decide if the therapists are going to be an extension of the machine or an extension of the doctor. And I think that when you want to be an advanced RTT, you need to be an extension of both.
AP13 CH



Our roles as RTTs will probably change... from bench to bedside...from research to practice. That's where an advanced practitioner can help out.
S1 BE



I worked many years like dosimetrist, but I wasn't recognized, and I wasn't evaluated.
PB4 IT

Future AP roles

Clinical practice



“Adapters”

Holistic care & community

Leadership & management



Case/care manager

Radiation protection officer

Education



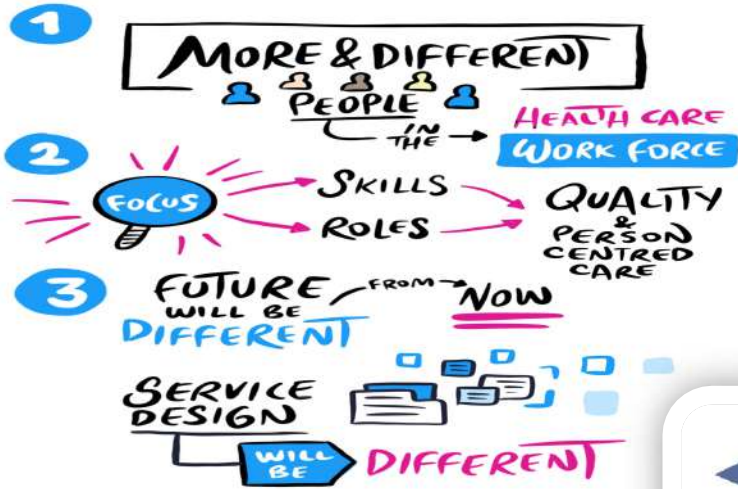
Clinical academic

Research



AI expert

Future directions



FEEDBACK



Peers



Service users



Families



Carers



Take home message

- ✓ Importance of AP regulation to protect patients & professionals across Europe.
- ✓ Educational & training gaps exist across Europe (MSc in RT/AP).
- ✓ All pillars should be included in masters' programmes (including leadership).
- ✓ An advanced RTT should work across all 4 pillars (including research).





All participants!!!

External experts: Filipa Sousa (BE), Francesca Cavallo (IT), Kate Laverty (NIR),
Philipp Scherer (AT), Rita Simões (ENG), Jéssica Rodrigues (PT)

SAFE EUROPE consortium (partners & experts) & ***SoR***



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