

Unleashing the potential of RTTs in Neuro-oncology: evidence and status of Advanced Practice

**SIMPÓSIO DE IMAGEM MÉDICA
E RADIOTERAPIA**

Neuroimagiologia e Intervenção Terapêutica

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Disclaimer



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Safe And Free Exchange of
EU Radiography Professionals
across Europe

Co-funded by the
Erasmus+ Programme
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Context

SAFE EUROPE project: Work Package 8

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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.



1. Systematic literature review



2. Survey (European level)



3. Interviews (Key-stakeholders)

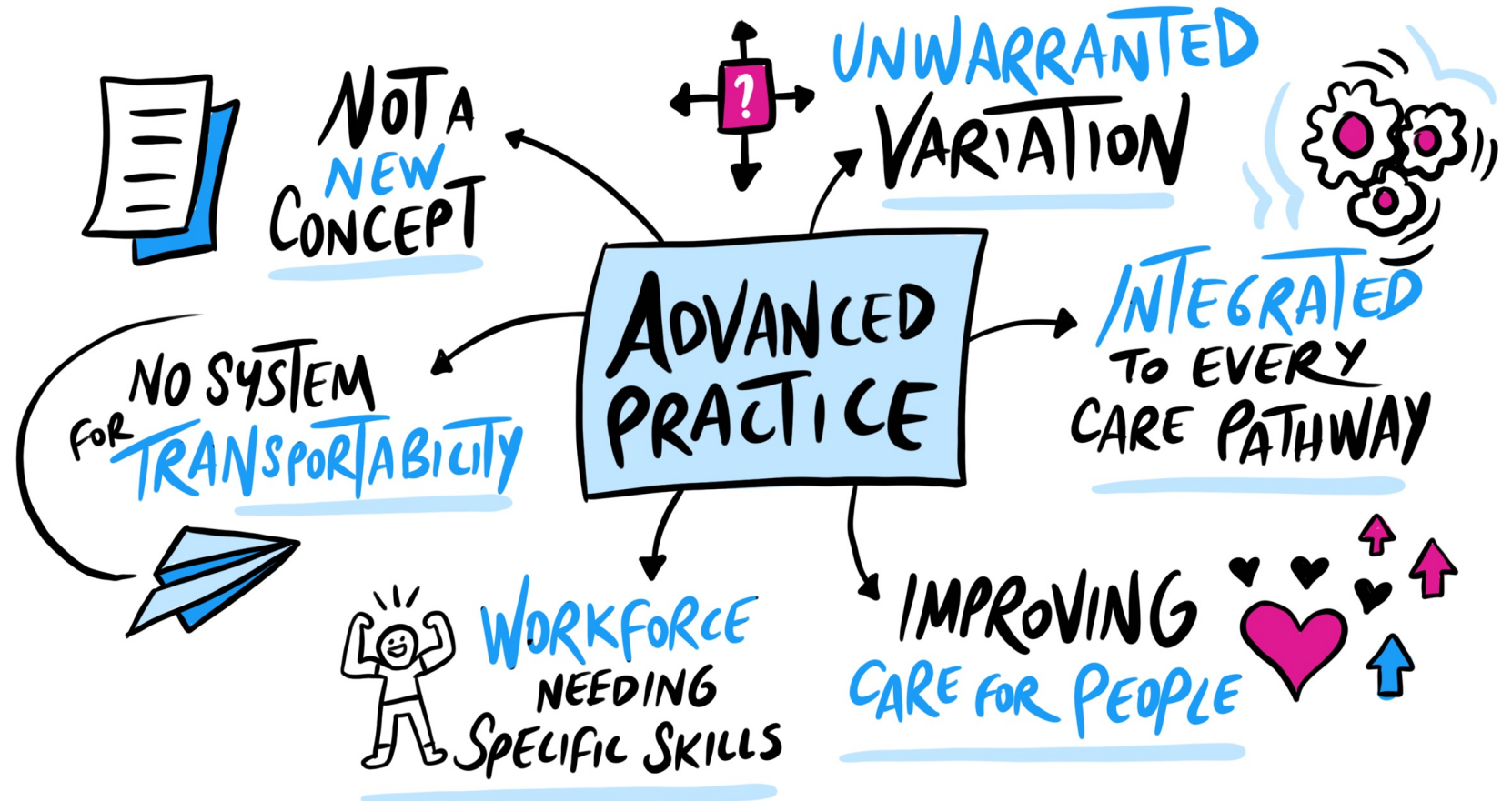
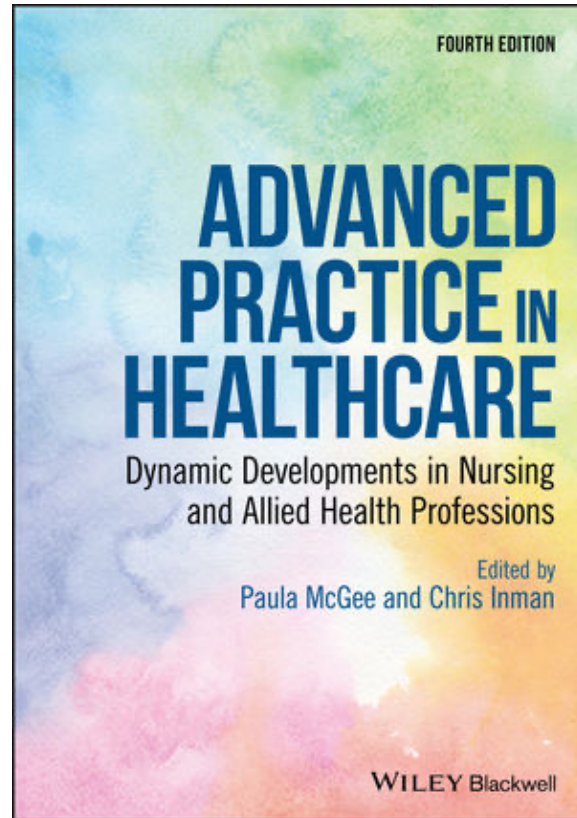


Advanced Practice in modern Radiation Oncology has been directly linked with improvement of cancer patients' quality of life with less morbidity and increased disease free survival. The TR is the professional with direct responsibility for treatment planning and treatment delivery in a safe environment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

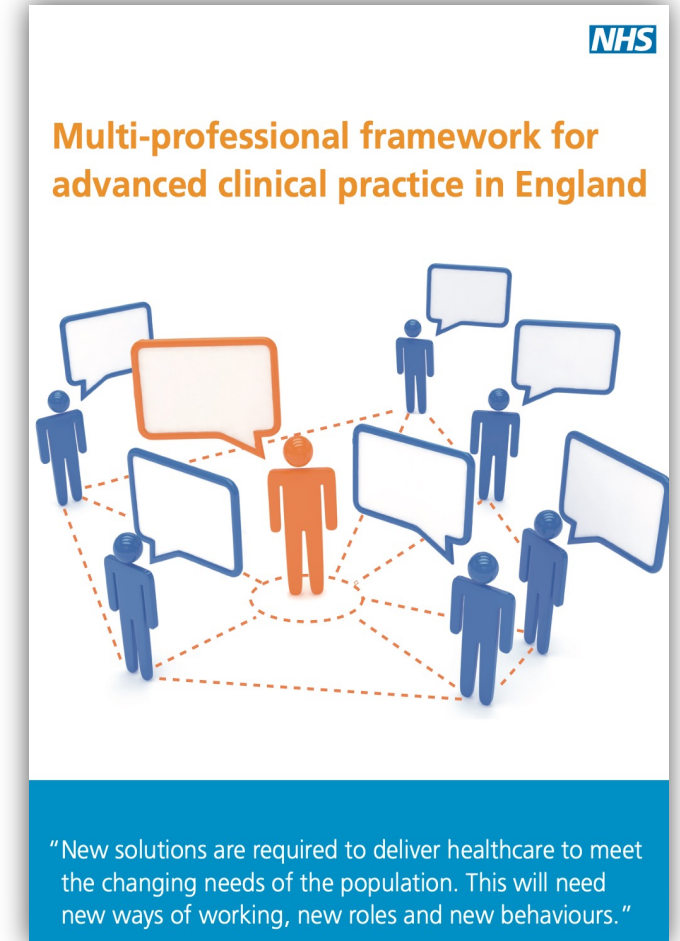
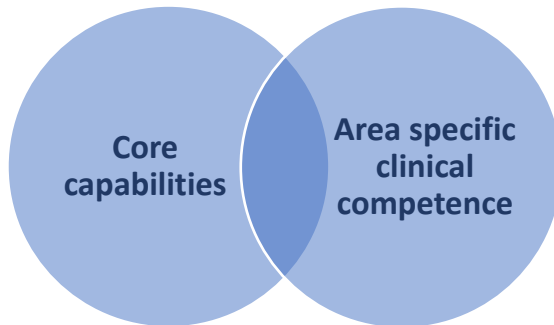
The scope of practice within the field of competencies of the TR is described by EFRS EQF benchmark document as well as IAEA's handbook for education of Radiation Therapists TCS-58, which according to these European and International publications should be attained by the academic / formal education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

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What is Advanced Practice?



Advanced Practice (AP) definition



Why AP roles in Radiotherapy?

Cancer incidence & prevalence

Cancer survivorship & expectations

Staff recruitment & retention

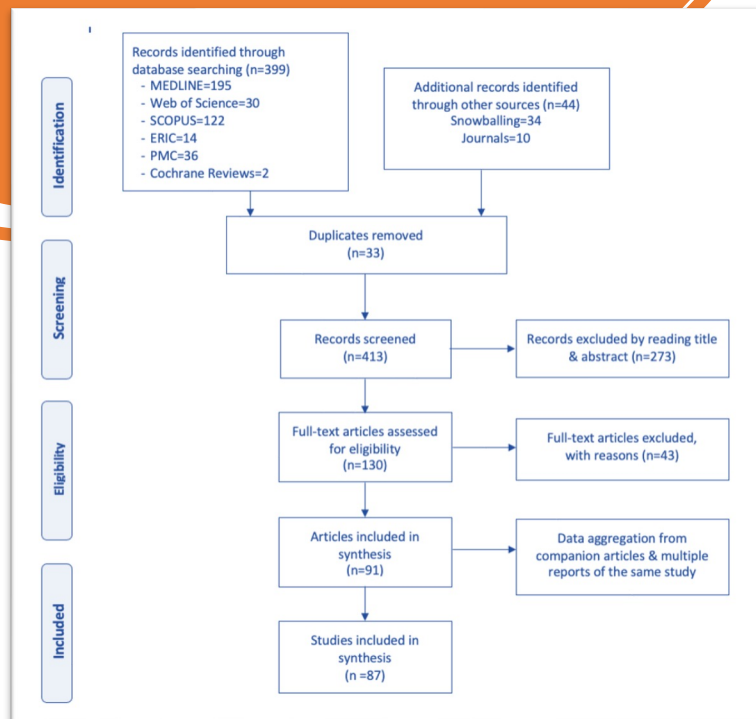
Technology & Artificial Intelligence



nature medicine

AI-guided cancer radiotherapy

Systematic literature review



Establish

- International baseline of evidence on AP in Radiotherapy

Identify

- AP roles, activities, tasks amongst RTTs

Capture

- Impact on clinical, organizational and professional outcomes



PRISMA

TRANSPARENT REPORTING OF SYSTEMATIC REVIEWS

Section/topic	#	Checklist item	Information reported		Line number(s)
			Yes	No	
ADMINISTRATIVE INFORMATION					
Title					
Identification	1a	Identify the report as a protocol of a systematic review	<input type="checkbox"/>	<input type="checkbox"/>	
Update	1b	If the protocol is for an update of a previous systematic review, identify as such	<input type="checkbox"/>	<input type="checkbox"/>	
Registration	2	If registered, provide the name of the registry (e.g., PROSPERO) and registration number in the Abstract	<input type="checkbox"/>	<input type="checkbox"/>	
Authors					
Contact	3a	Provide name, institutional affiliation, and e-mail address of all protocol authors; provide physical mailing address of corresponding author	<input type="checkbox"/>	<input type="checkbox"/>	
Contributions	3b	Describe contributions of protocol authors and identify the guarantor of the review	<input type="checkbox"/>	<input type="checkbox"/>	
Amendments	4	If the protocol represents an amendment of a previously completed or published protocol, identify as such and list changes; otherwise, state plan for documenting important protocol amendments	<input type="checkbox"/>	<input type="checkbox"/>	
Support					
Sources	5a	Indicate sources of financial or other support for the review	<input type="checkbox"/>	<input type="checkbox"/>	
Sponsor	5b	Provide name for the review funder and/or sponsor	<input type="checkbox"/>	<input type="checkbox"/>	
Role of sponsor/funder	5c	Describe roles of funder(s), sponsor(s), and/or institution(s), if any, in developing the protocol	<input type="checkbox"/>	<input type="checkbox"/>	
INTRODUCTION					
Rationale	6	Describe the rationale for the review in the context of what is already known	<input type="checkbox"/>	<input type="checkbox"/>	
Objectives	7	Provide an explicit statement of the question(s) the review will address with reference to participants, interventions, comparators, and outcomes (PICO)	<input type="checkbox"/>	<input type="checkbox"/>	

Baseline of evidence

Role evaluation & development

- Single-role at single-centre

Task congruence

- RTTs vs MDs performance

Role implementation & insights

- Feasibility studies

Educational programmes

- Competency packages and in-house training



AP roles in Radiotherapy by...

Clinical areas
of practice

Site-specific

Scope of practice

Palliative

Brachytherapy

Paediatric

Breast

Prostate/Urology

Head & Neck
Lung

Neuro-oncology

Advanced Practice

Image review

On-treatment review

Pre-treatment

Drugs prescribing

Information & support

Clinical education

Practice development

Clinical research

Follow-up & survivorship

Advanced Activities

7 Dimensions



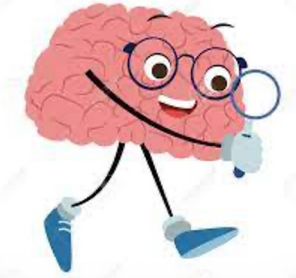
27 Subdimensions



Activities e.g.



Neuro-oncology findings



Palliative care

Coleman 2009
Duffton 2021
Harnett 2018&2019
Rozanec 2017&2021
Wong 2021

Brain

Blyth 2000
Job 2017&2018

MSCC & neurological symptoms

Fitzpatrick 2020
Goldfinch 2016
Lacey 2015



Radical

Duffton 2021



Technical Innovations & Patient Support in Radiation Oncology 17 (2021) 102–107



Contents lists available at [ScienceDirect](#)

Technical Innovations & Patient Support in Radiation Oncology

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



Research article

Diversity in radiation therapist/therapeutic radiographer (RTT) advanced practice (AP) roles delivering on the four domains

Aileen Duffton*, Karen Moore, Aoife Williamson

Department of Radiotherapy, Beatson West of Scotland Cancer Centre, Glasgow, UK



Journal of Radiotherapy in Practice

Journal of Radiotherapy in Practice 2001
2, 85–90
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Original Article

An innovative approach to palliative care within a radiotherapy department

C. M. Blyth, J. Anderson*, W. Hughson*, A. Thomas*

Department of Clinical Oncology, Western General Hospital, Edinburgh, UK; *Faculty of Health Sciences, Queen Margaret University College, Edinburgh, UK

Clinical Practice



**Patient
assessment
& consenting**



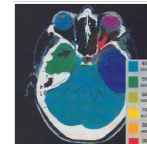
**Patient
information
& follow-up**



**Pharmacological
intervention**



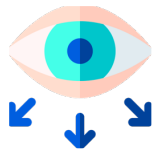
**Patient
referral
& orders**



**Advanced
planning
& simulation**

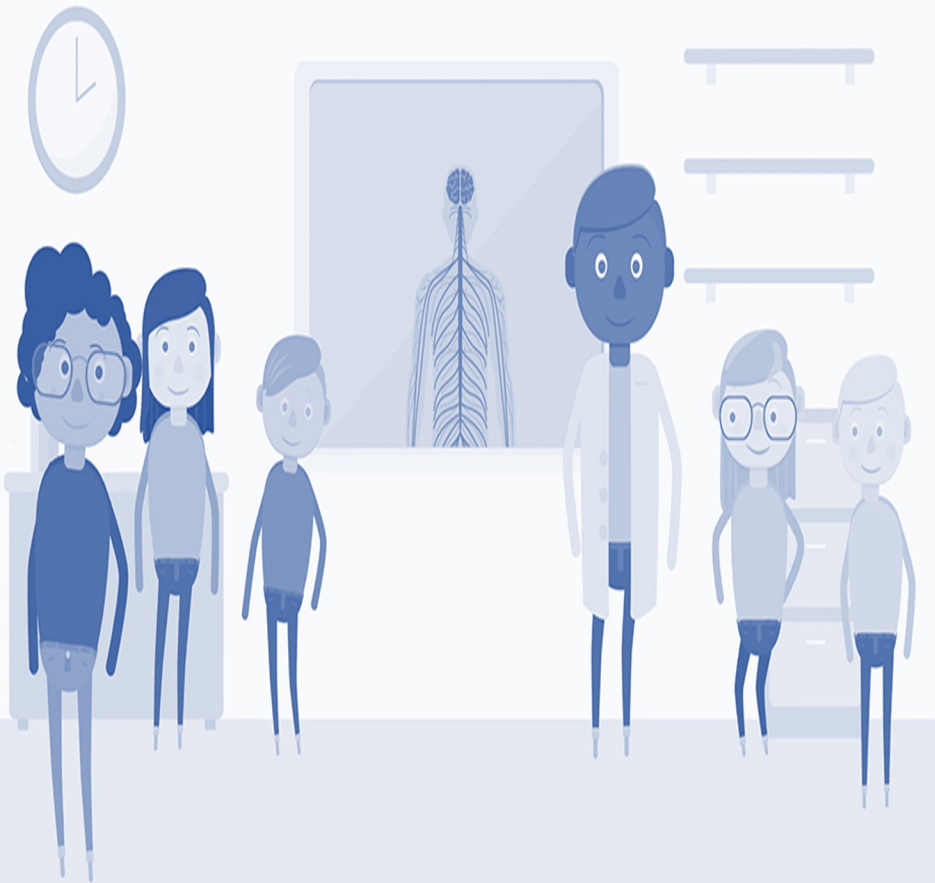


**Treatment
prescription
(Palliative care)**



**Supervision of
complex cases**

Education



**Mentorship for MSc
students & specialist
registrars**



**Lecturer to
undergraduate students**



**Lead training for
complex techniques**

Research



**Lead service improvement
& research**



**Lead implementation of new
technology/ programmes**



**Co-investigator in
clinical trials**



**Reviewer for
peer review journals**

Leadership & Management



**Responsible
for local RT
protocols**

On target 2:
updated guidance for image-guided
radiotherapy
Radiotherapy Board



**National RT
protocols**



**Radiotherapy
research group**



**Staff
recruitment**



**National
working
groups**







**Maintain national &
international profile**

AP roles in Neuro-oncology

IMPACT



Impact		Examples
Higher service efficiency		Efficient patient throughput, workflow optimisation
Expedited access to care		Effective referral triage, timely access to treatment, reduction in waiting times
Streamlined palliative care		Continuity of care, holistic care
Maintenance of quality		Consistency in practice

European Survey

Assess

- Current AP roles and advanced activities amongst TR/RTTs' practice

Identify

- Educational gaps for this advanced level practice across Europe

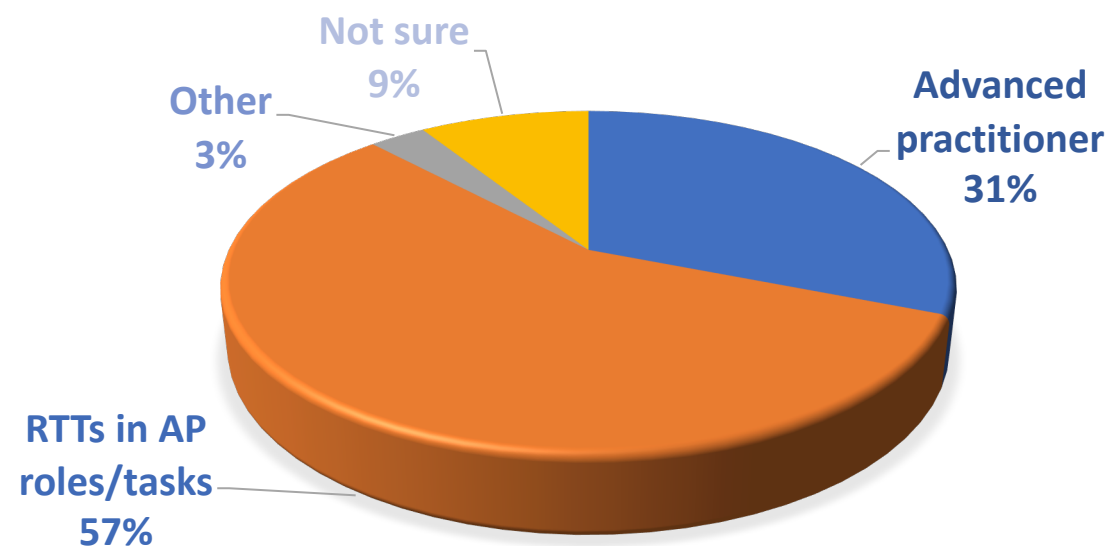


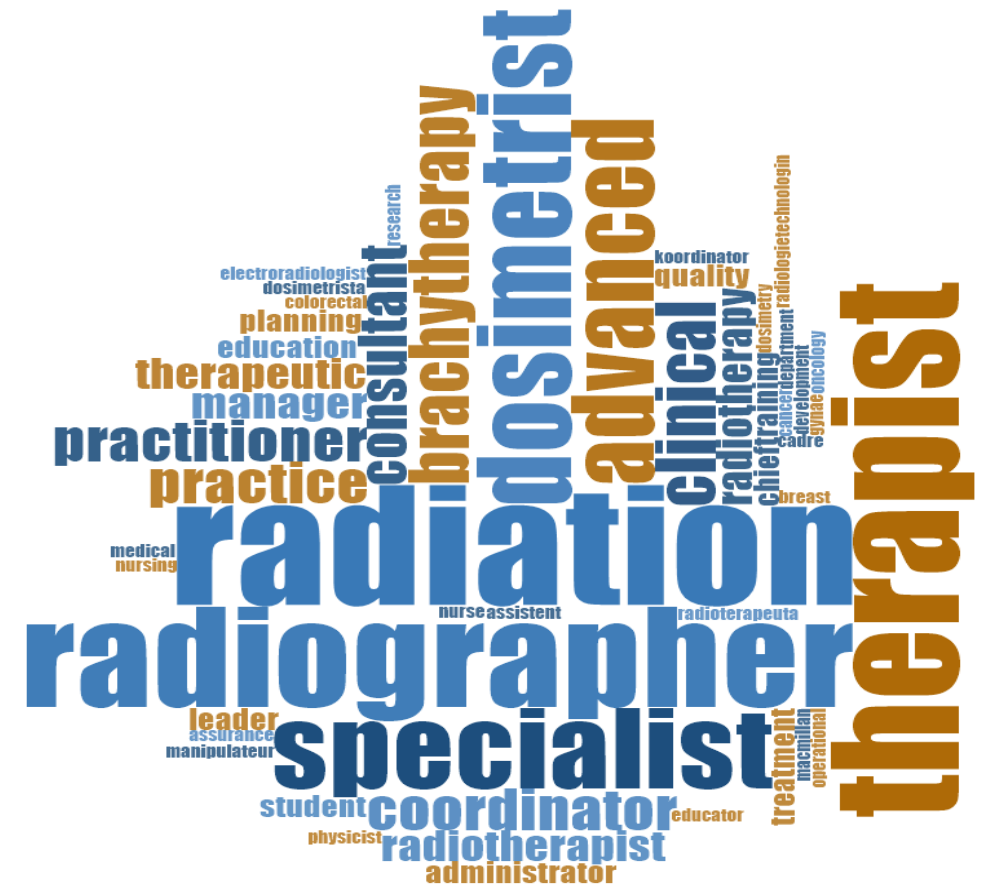
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Professional profile



Which definition best apply to your working practice level?





Current AP roles or activities



Site-specific



- ☐ Prostate
- ☐ Breast
- ☐ Head & Neck



Clinical area



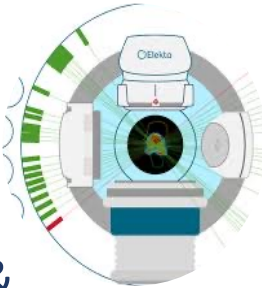
- ☐ Palliative care
- ☐ Practice development
- ☐ Brachytherapy



Activities



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



AP education & training



Knowledge areas



☐ IGRT/ART



☐ Multimodal imaging & technologies

☐ Advanced treatment planning

Advanced skills



☐ Leadership skills



☐ Management skills

☐ Clinical-site/specialty expertise



Gaps

Future roles

Technique/technology based

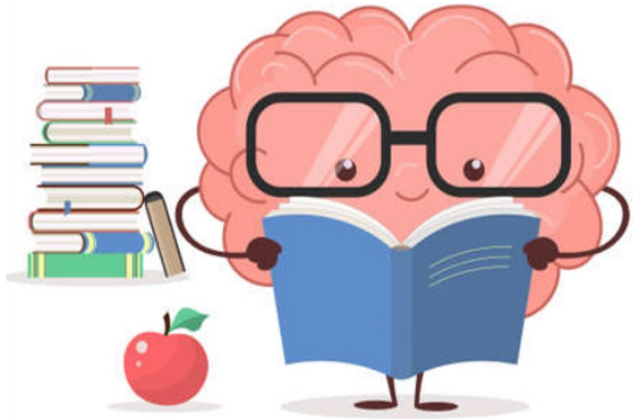
- SBRT, SGRT, ART, radiosurgery
- Proton therapy, MRI-LINAC
- Artificial Intelligence

Scope of practice based

- Case/care manager
- “Adapters”
- Clinical academic



Take home messages



The literature tell us...

Advanced RTTs supported by advanced education and professional experience practice at high level of **autonomy** and **complexity**.

The evidence supports AP roles in **Neuro-oncology**.

Dedicated **Palliative AP roles** are becoming more prevalent amongst RTTs.



The survey data show us...

Is urgent to support & regulate this level of practice to protect **patients & professionals!**

Palliative AP roles are the most reported clinical area apart from tumour site-specific roles.

The **4 AP pillars** should be included in the educational programmes.

An advanced RTT should **work across all 4 pillars!**

Publications



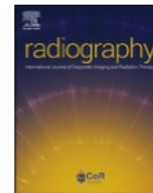
Radiography 28 (2022) 605–619



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

Radiography

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



Systematic Review

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

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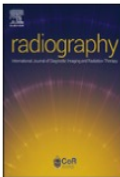
Radiography 29 (2023) 261–273



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Radiography

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

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Acknowledgments



SAFE EUROPE experts

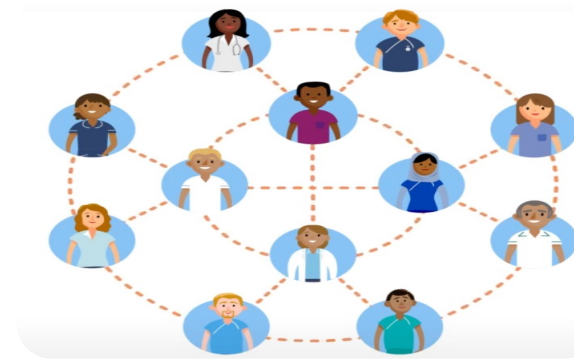
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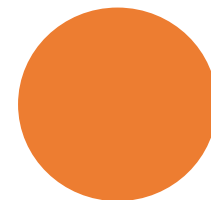


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