A systematic review of advanced practice of TRs/RTTs: roles and capabilities

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Isabel Bravo PhD, Ricardo Khine PhD, Helen McNair PhD

Disclaimer

SAFE EUROPE Project

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Polskie Towarzystwo Elektroradiolog

Contents

- ❑ Context
- ❑ Advanced practice setting
- ❑ Systematic literature review
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- ❑ Discussion
- ❑ Summary

Context

WP8 – ADVANCED PRACTICE

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

EFRS
EUROPEAN FEDERATION OF RADIOGRAPHER SOCIETIES

- ✓European standard
- ✓Access & quality to care
- ✓Professionals mobility

UNIVERSIDADE DE VIGO

art

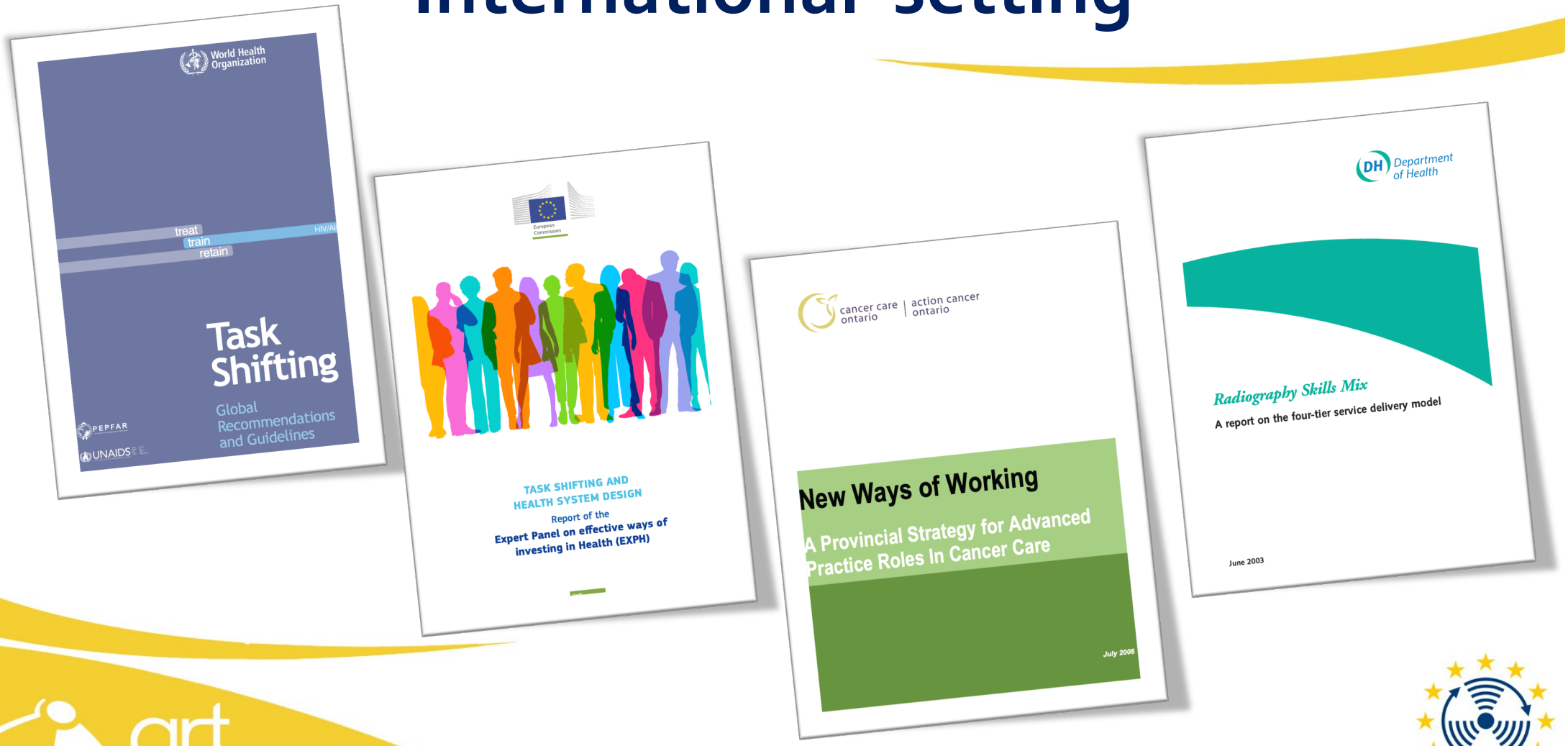
Setting the scene…

- No EU regulation
- Professional identity & titles
- Scope & evidence-based practice
- Education programmes & levels
- Professional boundaries & MDT

Why a practice change?

- Increase ageing population & cancer incidence
- Radiotherapy & workforce demands
- Advances in technologies & techniques
- Improve patient satisfaction & maximize system efficiency
- Career pathways & progression options
- Recruitment, job satisfaction & retention

International setting



What is Advanced Practice?

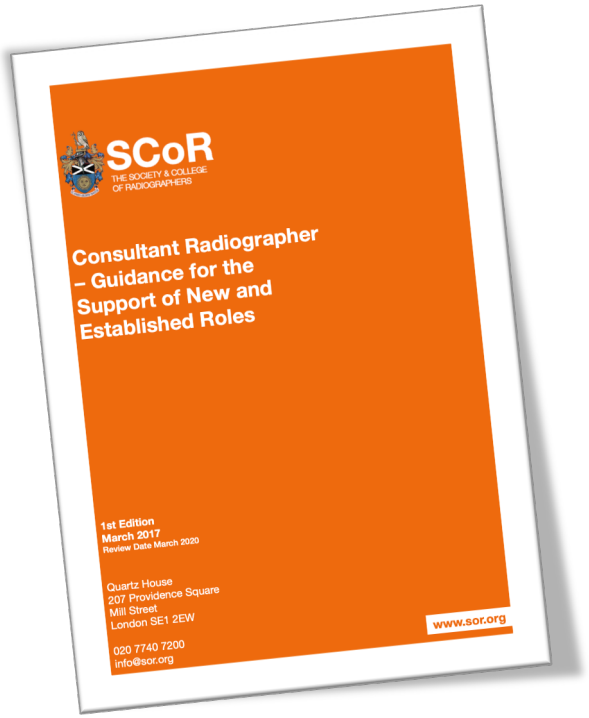
Literature

Jurisdictions

Disciplines

European setting

UK setting


SCoR
THE SOCIETY & COLLEGE OF RADIOGRAPHERS
Consultant Radiographer – Guidance for the Support of New and Established Roles
1st Edition
March 2017
Review Date March 2020
Quartz House
207 Providence Square
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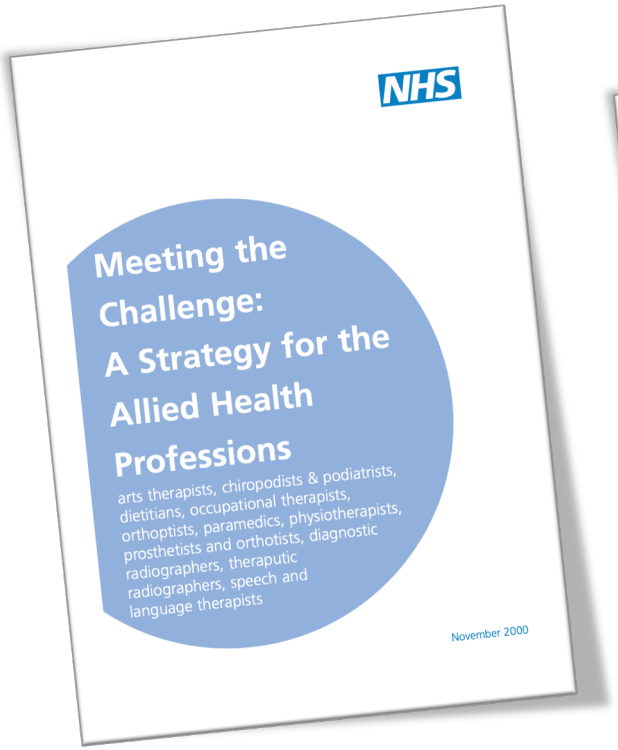
info@sor.org
www.sor.org

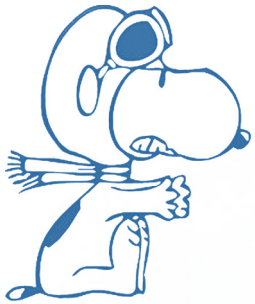

NHS
Meeting the Challenge: A Strategy for the Allied Health Professions
arts therapists, chiropodists & podiatrists, dietitians, occupational therapists, orthoptists, paramedics, physiotherapists, prosthetists and orthotists, diagnostic radiographers, therapeutic radiographers, speech and language therapists
November 2000


THE COLLEGE OF RADIOGRAPHERS
CLINICAL IMAGING AND ONCOLOGY
Learning and Development Framework for Clinical Imaging and Oncology
THE SOCIETY OF RADIOGRAPHERS

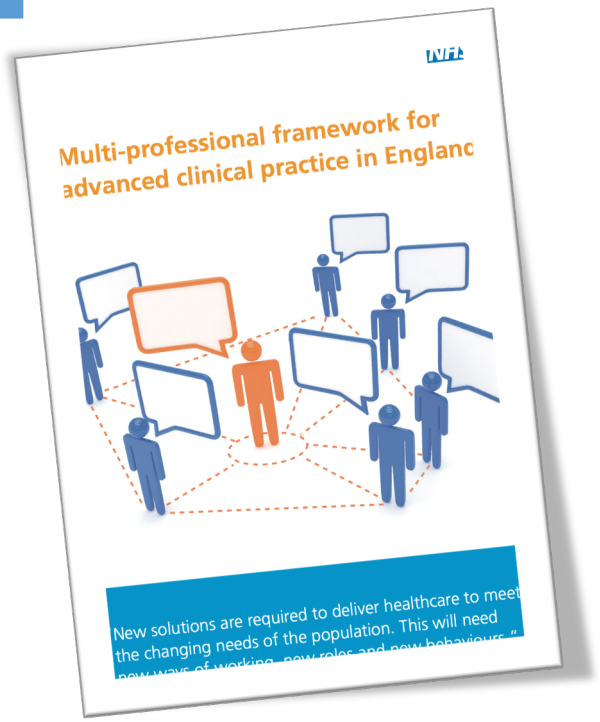
Advance Practice definition

Experienced HC practitioner

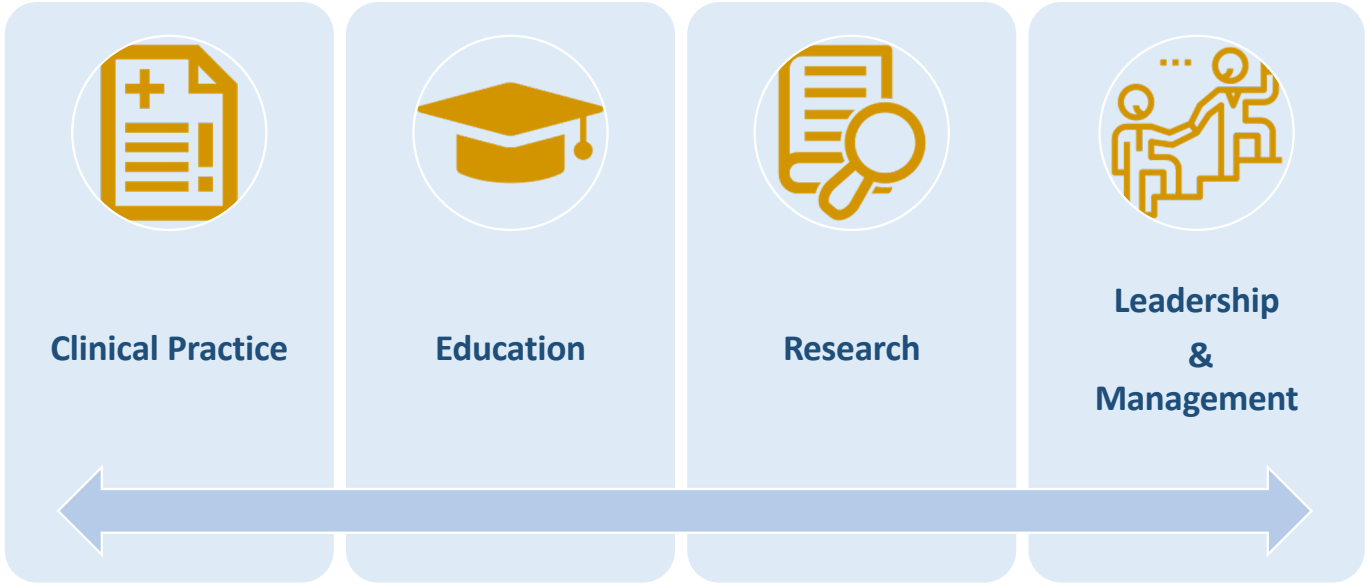
High autonomy & complex decision making



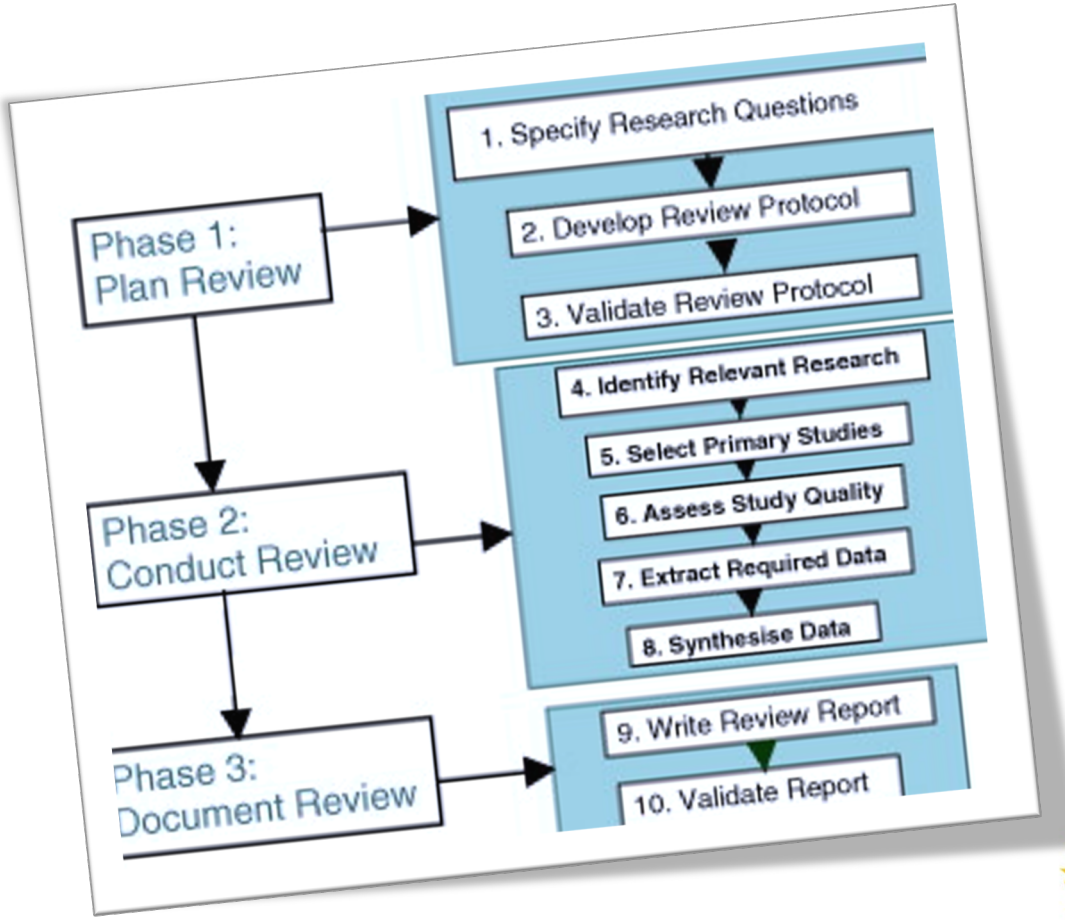
Master's level or equivalent



Pillars of Advanced Practice



Systematic literature review



Review question

Which roles have developed in the advanced practice of radiotherapy?

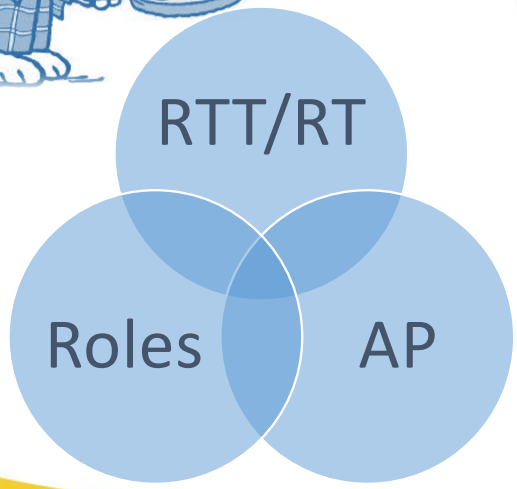
Review protocol

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

PRISMA-P 2015

PROSPERO [CRD42020177103]

Search Strategy



PICO framework

Inclusion Criteria	Search terms
RTT profession	Professional titles EU[a,1,2]
	Radiographer
	Therapeutic radiographer
	Radiotherapist
	Radiation Therapist
	RTT
	Radiation therapy technician
	Radiological technologist
	Radiological technician
	Radiology technologist
	Radiology technician
	Eletroradiology technician
	Medical X-ray technician
Radiotherapy	Radiotherapy
	Radiation therapy
	Therapeutic radiography
	Radiation oncology
	Brachytherapy

Advanced Practice	Advanced practice
	Advanced scope
	Role extension
	Role expansion
	Role development
	Role advancement
	Expert practice
Advanced practitioner	Advanced practitioner
	Consultant
	Specialized (also -ised)
	Specialist
	Enhanced
	radiographer-led
	therapist-led

Scope of practice (practise- verb) BrE/ AmE
Roles
Skills
Tasks
Capabilities
Responsability
Autonomy
Accountability

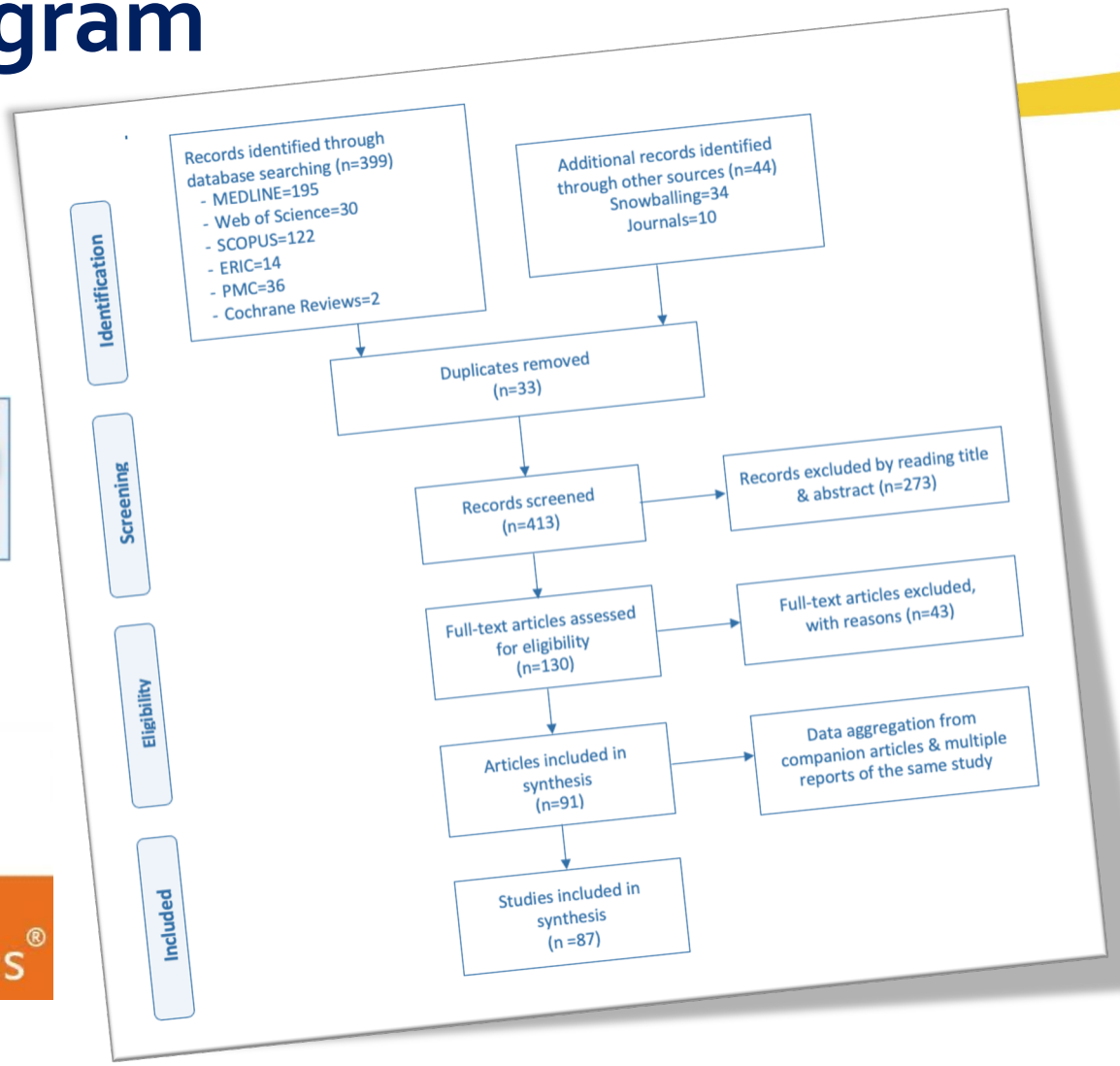
1 Couto JG, McFadden S, Bezzina P, McClure P, Hughes C. An evaluation of the educational requirements to practise radiography in the European Union. Radiography August 2017

2 European Federation of Radiography Societies (EFRS). EFRS definition of a radiographer and List of National Titles (updated 2017)

Eligibility

Inclusion criteria	Exclusion criteria
Focus on advanced practice	Focus on traditional practice (entry-level)
Focus on radiotherapy	Focus on radiology, nuclear medicine, diagnostic or interventional radiography
Focus on TRRs/TRs	Focus on other RT staff or allied health care professionals
Peer-reviewed articles	Position paper, discussion paper, benchmarking documents
Original, review, case report	Non-systematic literature reviews (scoping review, narrative review...)
English publications	Editorials, commentaries, letters to the editor…

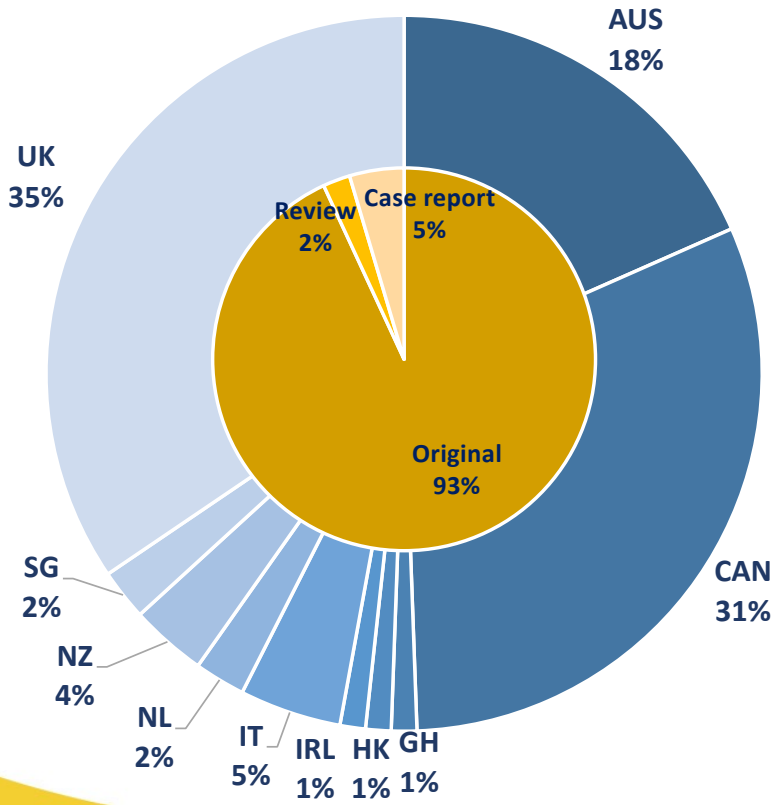
PRISMA flow diagram

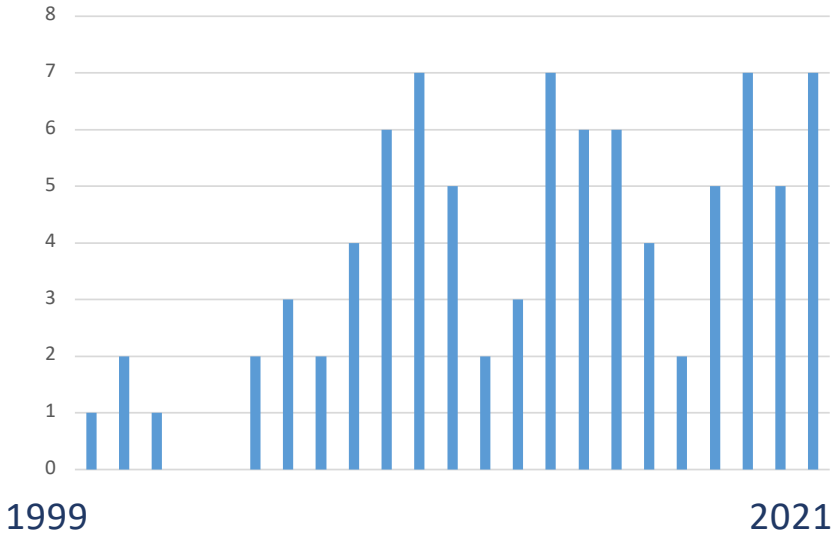


Data extraction & synthesis

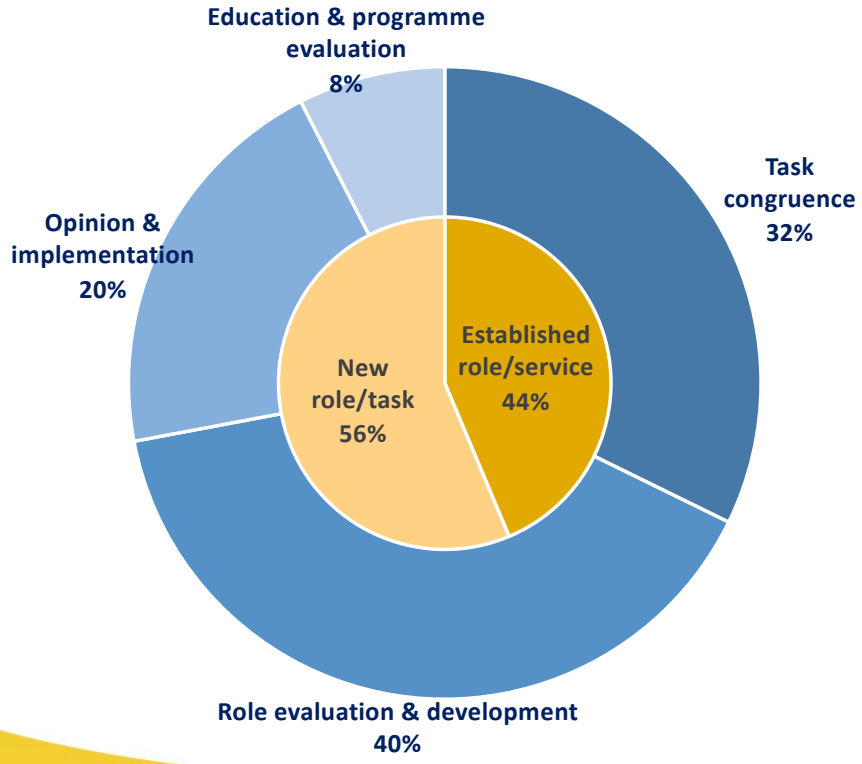
- ✓References management
- ✓Quality appraisal
- ✓Data extraction forms
- ✓Thematic analysis
- ✓Validation of advanced roles

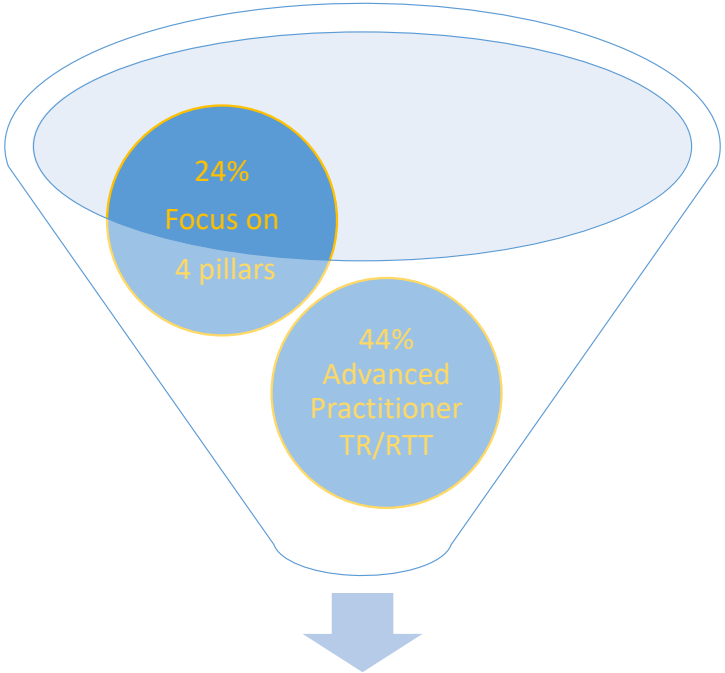
Results: 87 studies





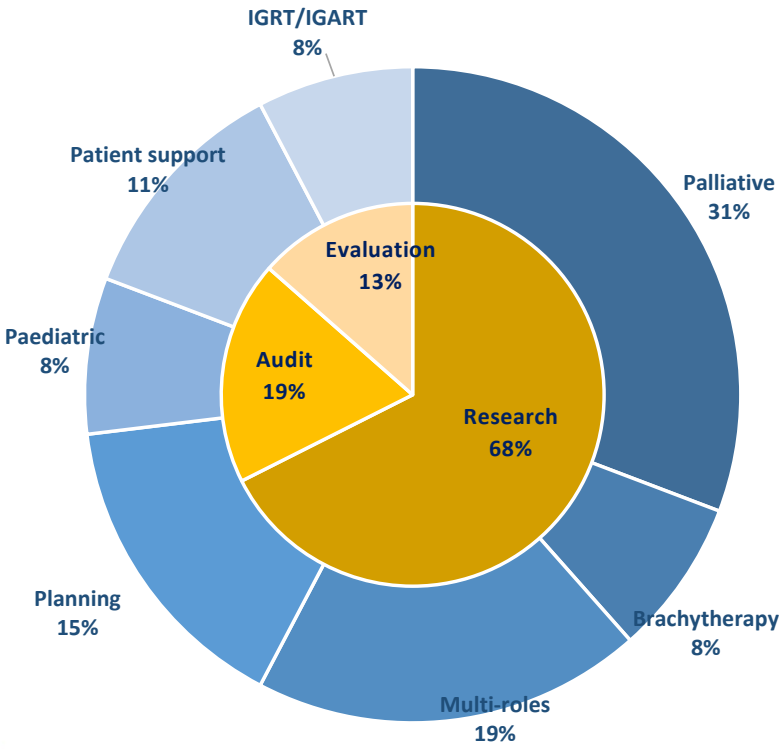
Results: 87 studies

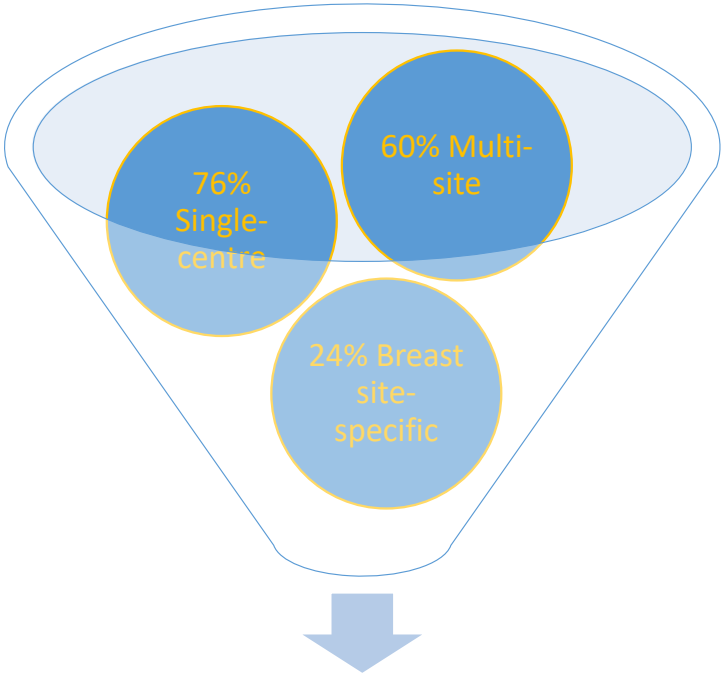




Plethora of titles in use

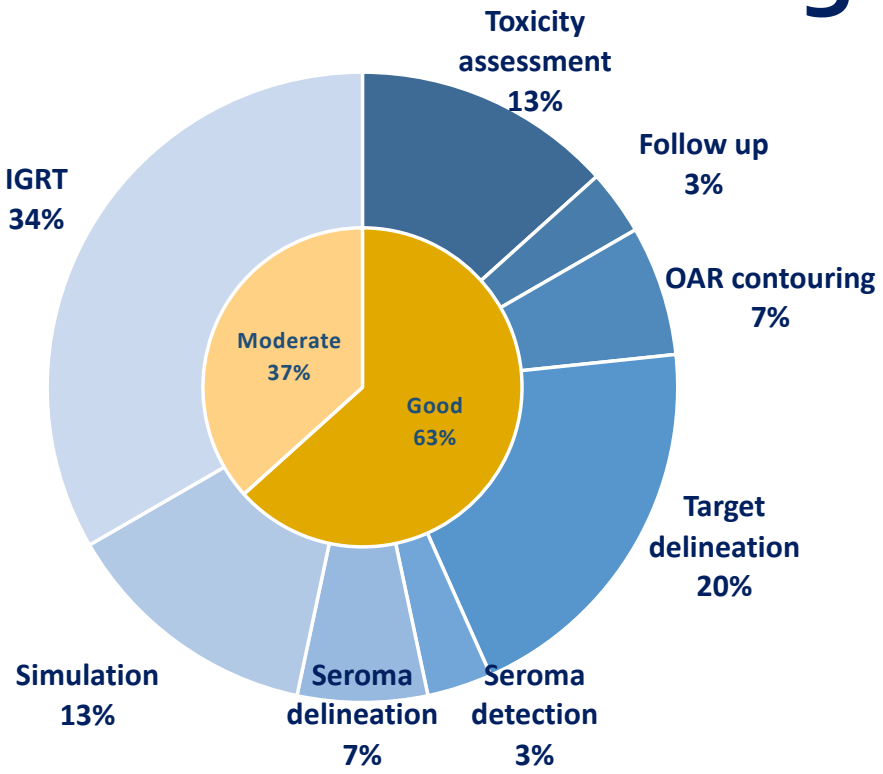
Role Evaluation & Development (37 studies)

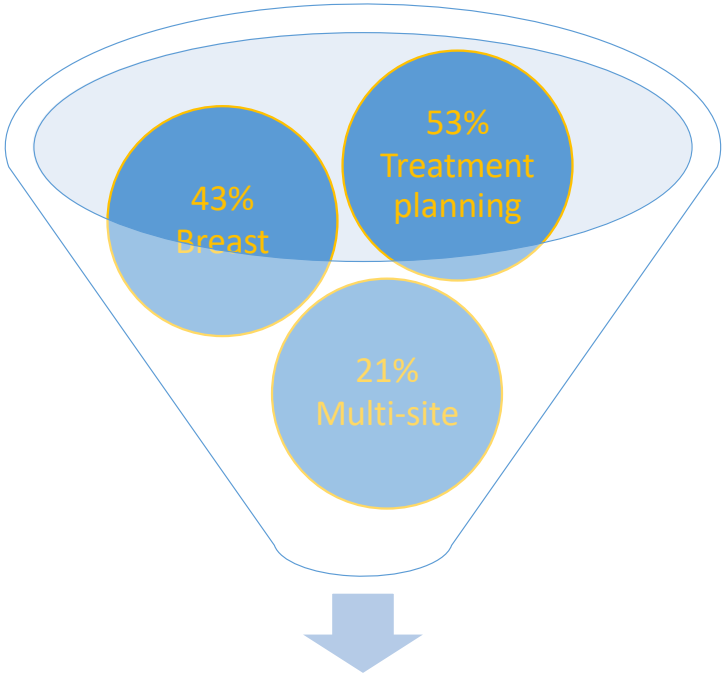




Majority focus on just 1 role

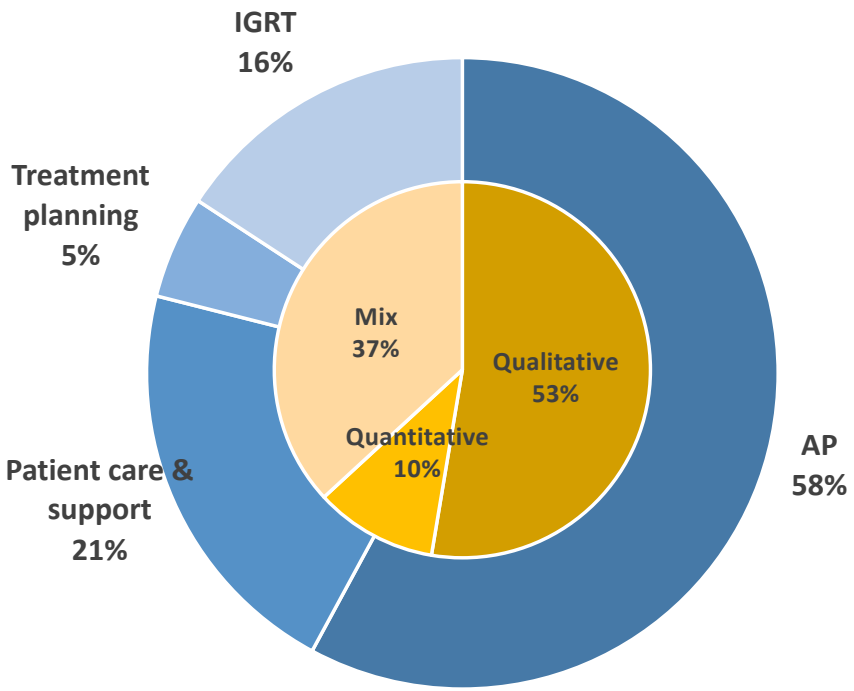
Task congruence (30 studies)

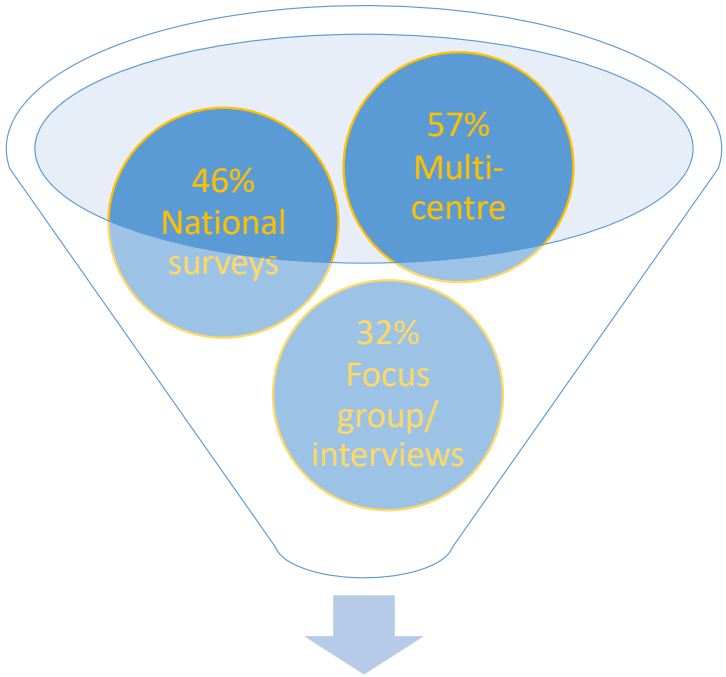




TR *vs* RO

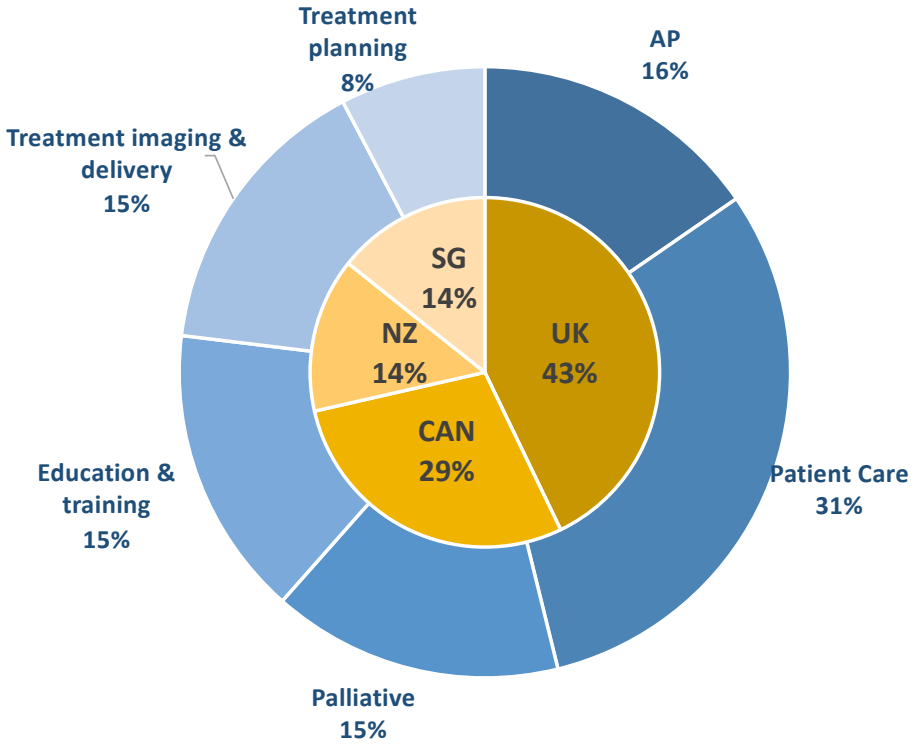
Opinion & Implementation (19 studies)

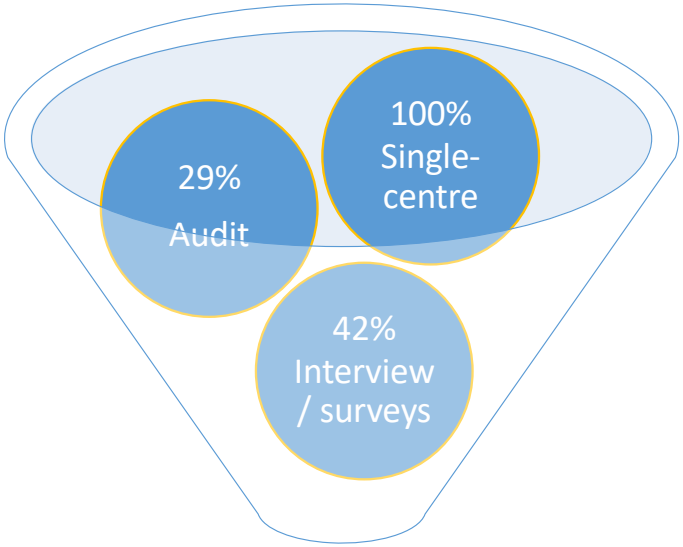




Focus: AP or role-specific

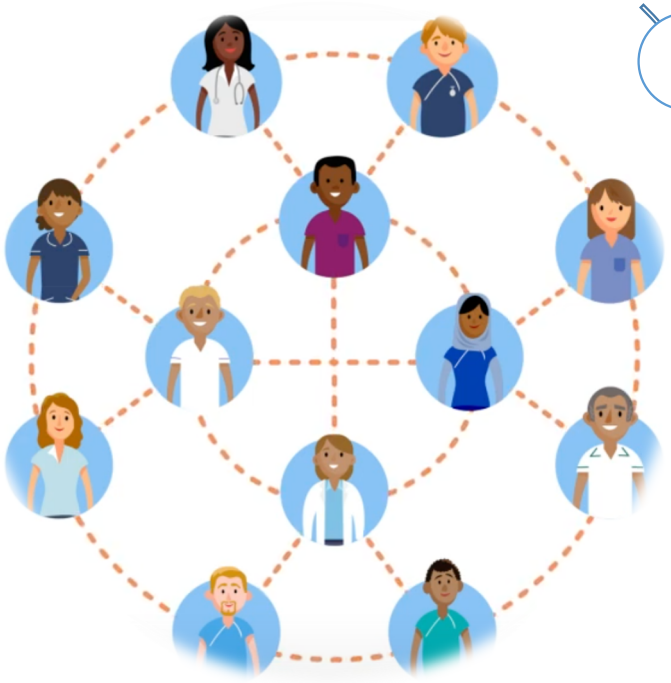
Education & Programme Evaluation (7 studies)





"In house" programes / postgraduation

Dimensions of Advanced Practice

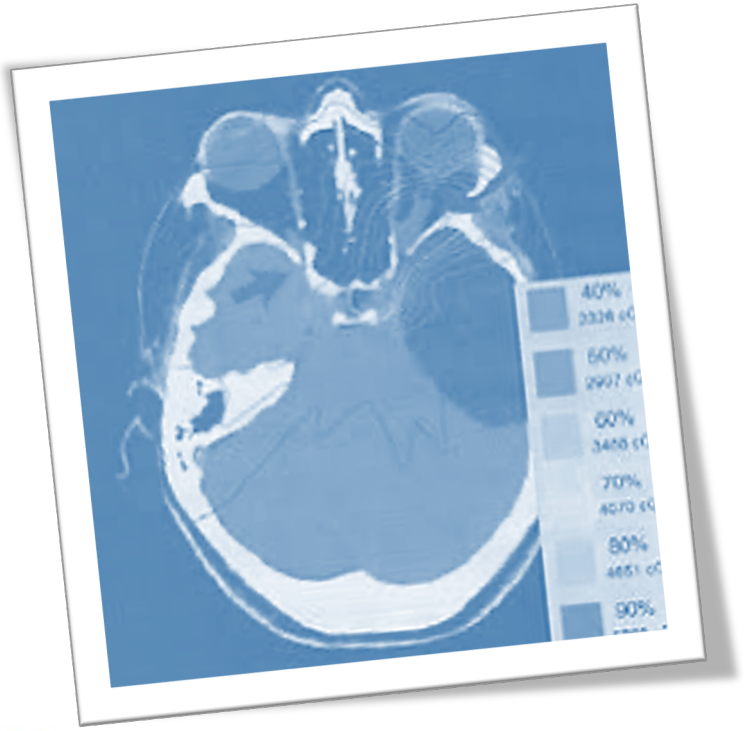


- Patient Care
- Treatment Planning
- Treatment Imaging & Delivery
- Management & Consultancy
- Quality & Risk Management
- Research & Innovation
- Education & Training

Advanced Patient Care

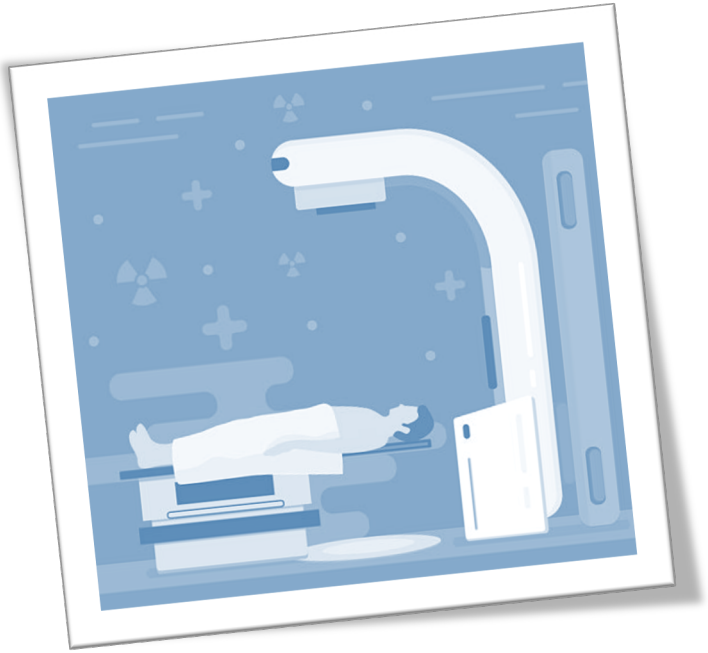
21	• Patient assessment & screening
20	• Patient information & counselling
16	• Pharmacological intervention & side effects management
16	• Referral to other dispiplines
14	• Patient education & advocacy
11	• Holistic support & psycho-oncology intervention
9	• Patient follow up & survivorship support

Advanced Treatment Planning



- 21 • Planning of complex techniques & cases
- 13 • TR-led simulation: virtual & physical
- 7 • Treatment prescription of standard cases
- 4 • Multimodality image registration & fusion
- 4 • Re-simulation & re-plan of complex cases
- 2 • Contrast administration

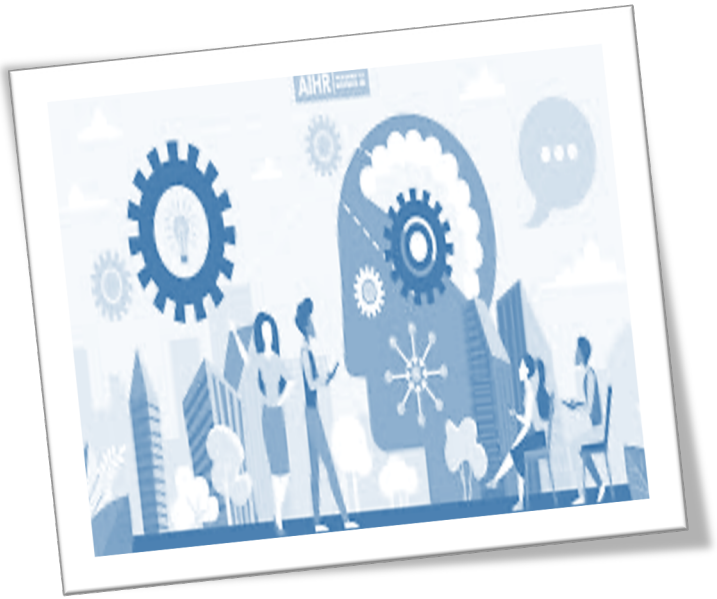
Advanced Treatment Imaging & Delivery



6	• IGRT decision making & approval
6	• Complex techniques implementation & delivery
5	• ART decision making & approval
3	• Complex cases consultancy & supervision

art

Advanced Management & Consultancy



- 11 • Evidence-based practice advancement
- 7 • Audits & accreditation
- 5 • Service innovation & project management
- 5 • Authorizations & new referrals
- 2 • Clinical governance & business cases
- 2 • National guidance & commmunication

Advanced Quality & Risk Management

- 9 • Quality assurance
- 4 • Risk management

Advanced Research & Innovation

- 8 • Knowledge translation & dissemination
- 7 • Independent research
- 6 • Innovation & service development
- 2 • National & international involvement

Advanced Education & Training

- 10 • Coordination & supervision of clinical education
- 6 • Development of education programmes
- 4 • Development of CPD & support
- 4 • RT advocacy

Specialities

34

Site-specific

48

Palliative

Brachytherapy

Paediatric

Breast

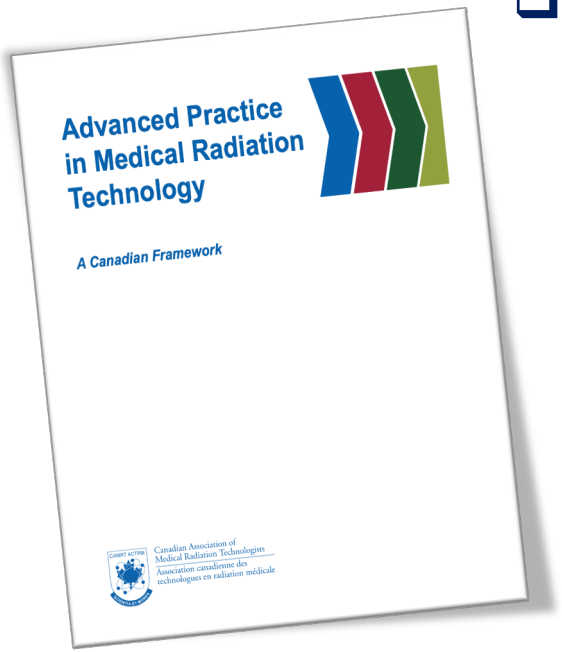
Prostate/Urology

Head & Neck

Lung

Discussion

- CSRT (AP4RT) advanced roles
  - ✓ Palliative & supportive care
  - ✓ Planning image
  - ✓ Patien assessment & symptom management
  - ✓ Skin cancer management
  - ✓ Mycosis fungoides



- Advanced practitioner roles
  - ✓ IGRT & IGART
  - ✓ Breast
  - ✓ Paediatric
  - ✓ Pallliative
  - ✓ Treatment review
  - ✓ Integrated cancer care

Discussion

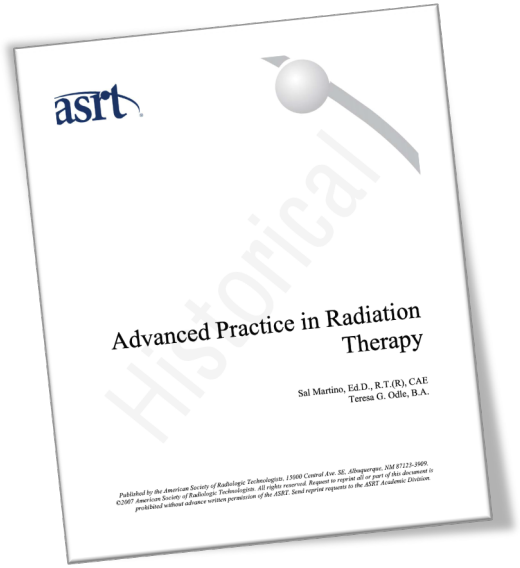
- None US study in SLR

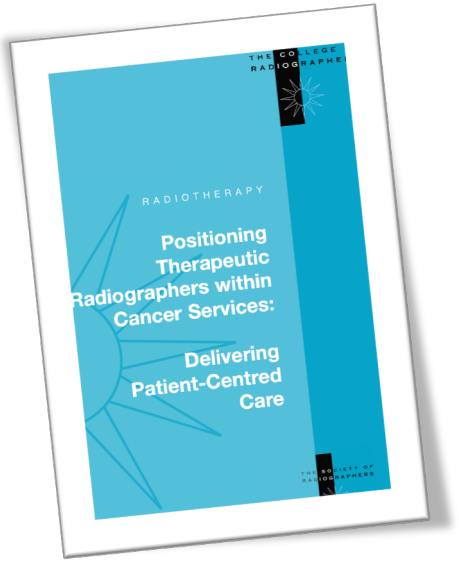
  Midlevel practitioners

  - ✓ Oncology physician assistant
  - ✓ Clinical nurse specialist
  - ✓ Assistant radiologist

- US models of Advanced roles
  - ✓ Continuity of care specialist
  - ✓ Technology-education specialist
  - ✓ Physician extender

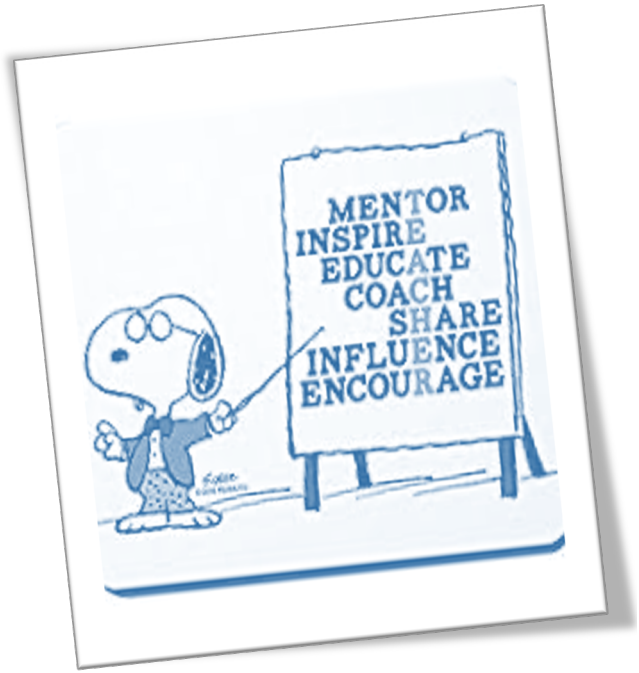
- UK models of Advanced Roles
  - ✓ Site-specific Expert Practice Practitioner
  - ✓ Technical specialist expert practitioner
  - ✓ Community liaison expert practitioner





Take-home messages

- In two decades of AP many roles were developed and the established ones are those that meet local service needs.
- TRs are consistently achieving required standards of clinical expertise and technical speciality.
- The research of the advanced roles should integrate the 4 pillars of AP.
- Standardization is important…but should maintain flexibility for successful local implementation.



Future resaerch

- Next steps of the SLR…
  - ✓ Education & CPD requirements
  - ✓ Clinical, organizational & professional outcomes
- Next research…
  - ✓ Capability framework

Acknowledgements

- SAFE EUROPE Consortium

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