

Advanced practice roles amongst Therapeutic Radiographers/Radiation Therapists (TR/RTTs): European snapshot

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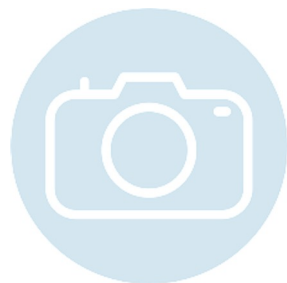
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Outline



Background & Rationale



Aim & Objectives



Methods



Results & Key Findings



Conclusion & Recommendations

Background



What are Advanced Practice (AP) roles?



Practitioners with several years of experience and additional qualification



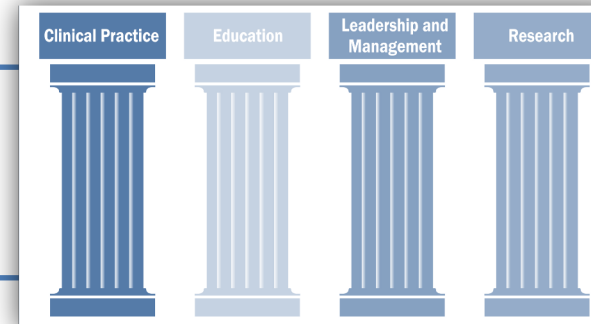
Level of practice: high degree of **autonomy** and **complex decision making**.



Core capabilities and area specific **clinical competence** to practice across 4 pillars



Not performed at graduation time!
(entry-level)



Background



Why AP roles are important in Radiotherapy (RT)?



Ageing population & cancer incidence/prevalence



Cancer survivorship & public expectations



RT workforce demands & challenges in staff recruitment/retention



RT advances in technologies/modalities/techniques & Artificial Intelligence



Impact on clinical, organizational and professional outcomes

Systematic Literature Review-SLR findings



Roles

- Clinical areas
- Site-specific
- Role dependent



Scope of practice

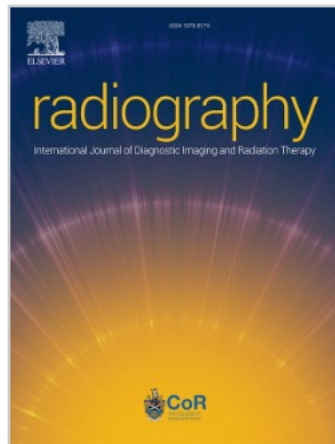
- 7 Dimensions
- 27 Subdimensions





Systematic Review

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

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Impact

ABSTRACT

Introduction: Advances in Radiotherapy (RT) technology and increase of complexity in cancer care have enabled the implementation of new treatment techniques. Subsequently, a greater level of autonomy, responsibility, and accountability in the practice of Therapeutic Radiographers/Radiation Therapists (TR/RTTs) has led to Advanced Practice (AP) roles. The published evidence of this role is scattered with confusing terminology and divergence regarding the perception of whether a specific role represents AP internationally. This study aims to establish an international baseline of evidence on AP roles in RT to identify roles and activities performed by TR/RTTs at advanced level practice and to summarise the impact.

Methods: A systematic PRISMA review of the literature was undertaken. Thematic analysis was used to synthesise the roles and associated activities. Six RT external experts validated the list. The impact was scrutinised in terms of clinical, organisational, and professional outcomes.

Results: Studies ($n = 87$) were included and categorised into four groups. AP roles were listed by clinical area, site-specific, and scope of practice, and advanced activities were organised into seven dimensions and 27 sub-dimensions. Three most-reported outcomes were: enhanced service capacity, higher patient satisfaction, and safety maintenance.

Conclusion: Evidence-based AP amongst TR/RTTs show how AP roles were conceptualised, implemented, and evaluated. Congruence studies have shown that TR/RTTs are at par with the gold-standard across the various AP roles.

Implications for practice: This is the first systematic literature review synthesising AP roles and activities of TR/RTTs. This study also identified the main areas of AP that can be used to develop professional frameworks and education guiding policy by professional bodies, educators and other stakeholders.

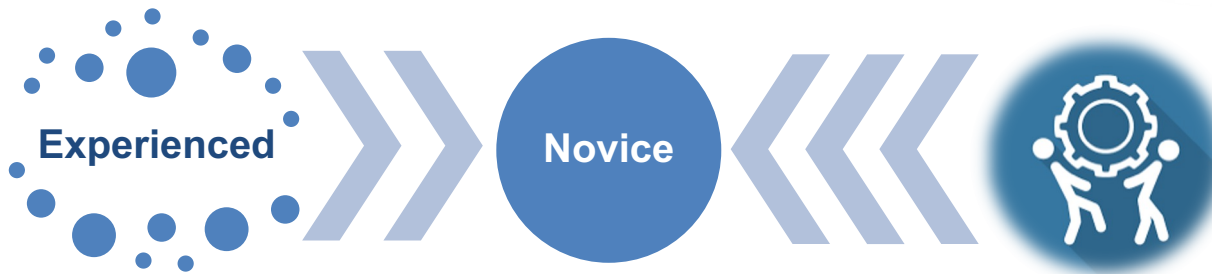
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Rationale



AP roles nature and evolution in RT

- Great variability & lack of standardization
- Local development to supply demands
- *Ad-hoc* implementation & development



Conceptual and practical gaps at national & European level

- Education & training



Aim & Objectives



- ❑ To assess current AP roles amongst TR/RTTs.

- ❑ To identify the educational gaps for this advanced level practice across Europe.



Methods



Study design

- Cross-sectional



Survey

- Mix-method questionnaire distributed via SAFE EUROPE partners (online)

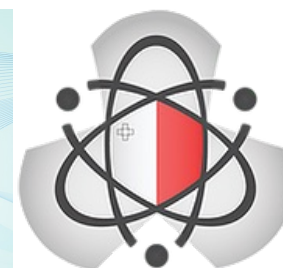
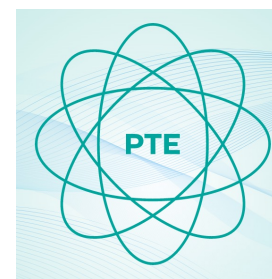


Self-administered questionnaire

1. Advanced practitioners TR/RTTS
2. TR/RTTs working in AP roles/tasks
3. Not sure/ Other/ None of the above



Associação Portuguesa
de Radioterapeutas



Methods



Self-design questionnaire:

- ✓ Face & content validity
- ✓ Test-retest reliability
- ✓ Ethics approval



I- Sociodemographics

II- Professional profile

- IIA- Advanced practitioner
- IIB- TR\RTT working in AP role/tasks

III- Education & training needs

Methods



Data collection

- Dec 2021 – March 2022

Data analysis

- Quantitative data
- Qualitative data
- Triangulation



Results & Key Findings



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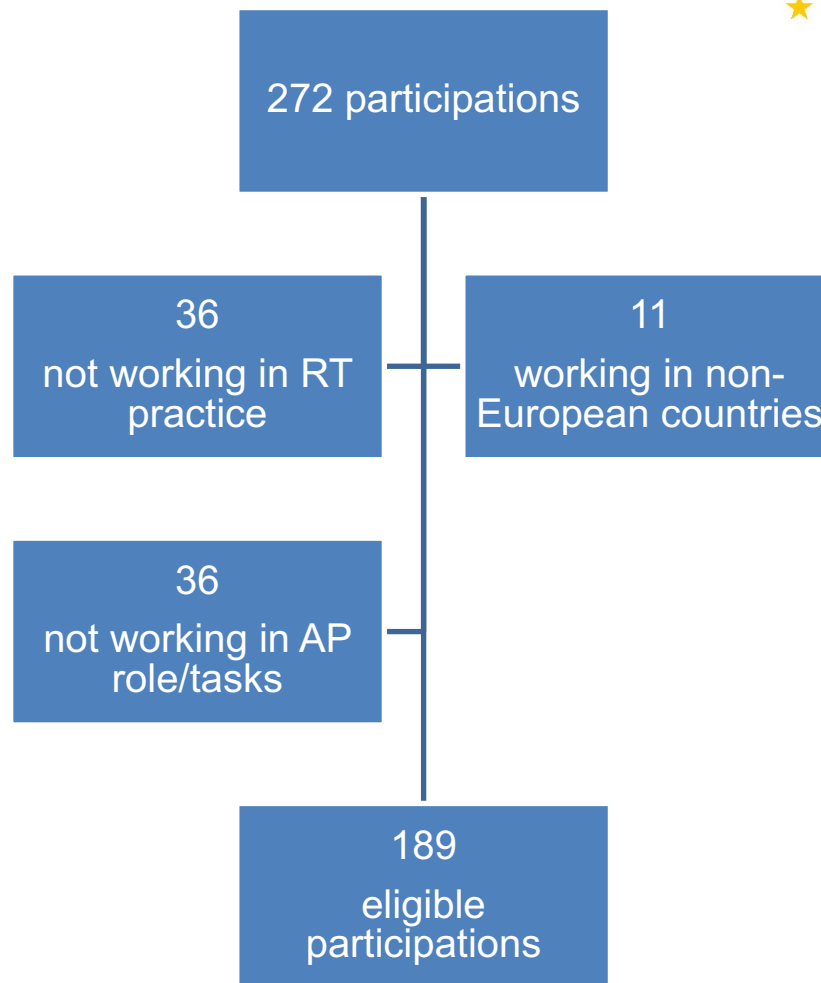


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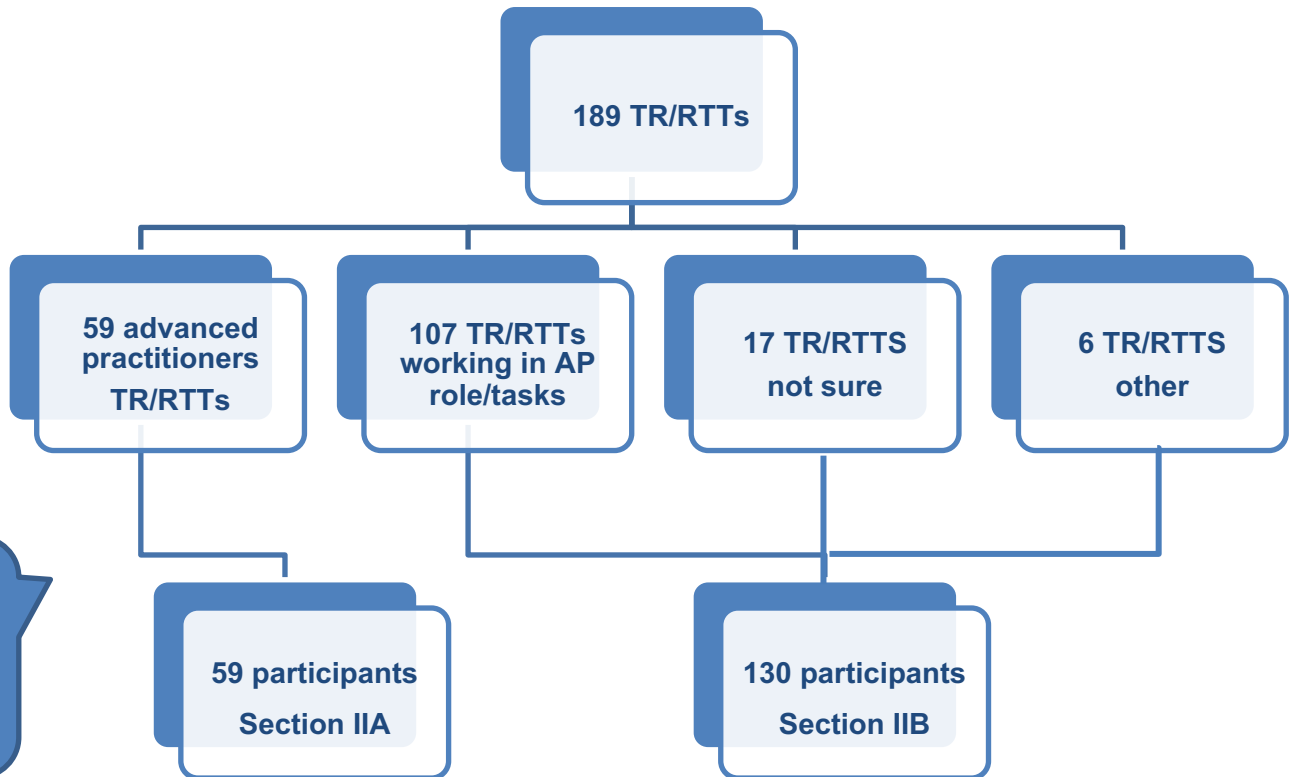
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Online survey engagement

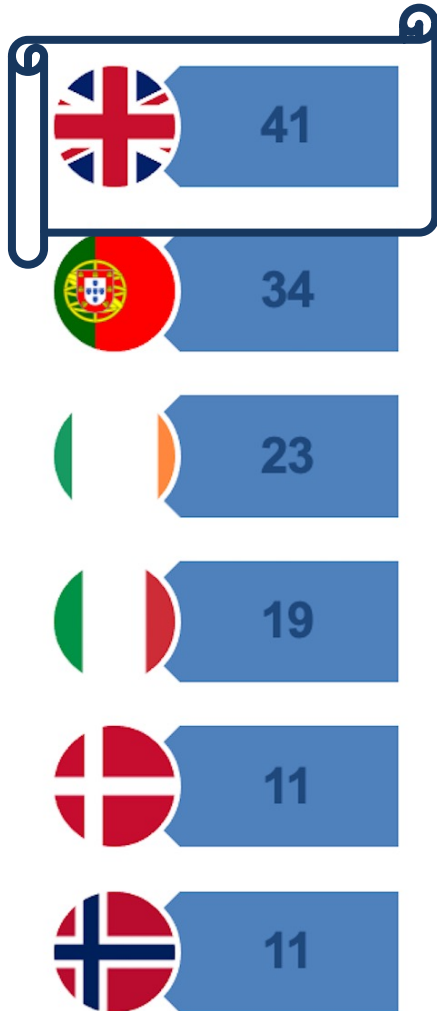


Which definitions best apply to your practice?



9% TR/RTTs undecided of current level of working practice

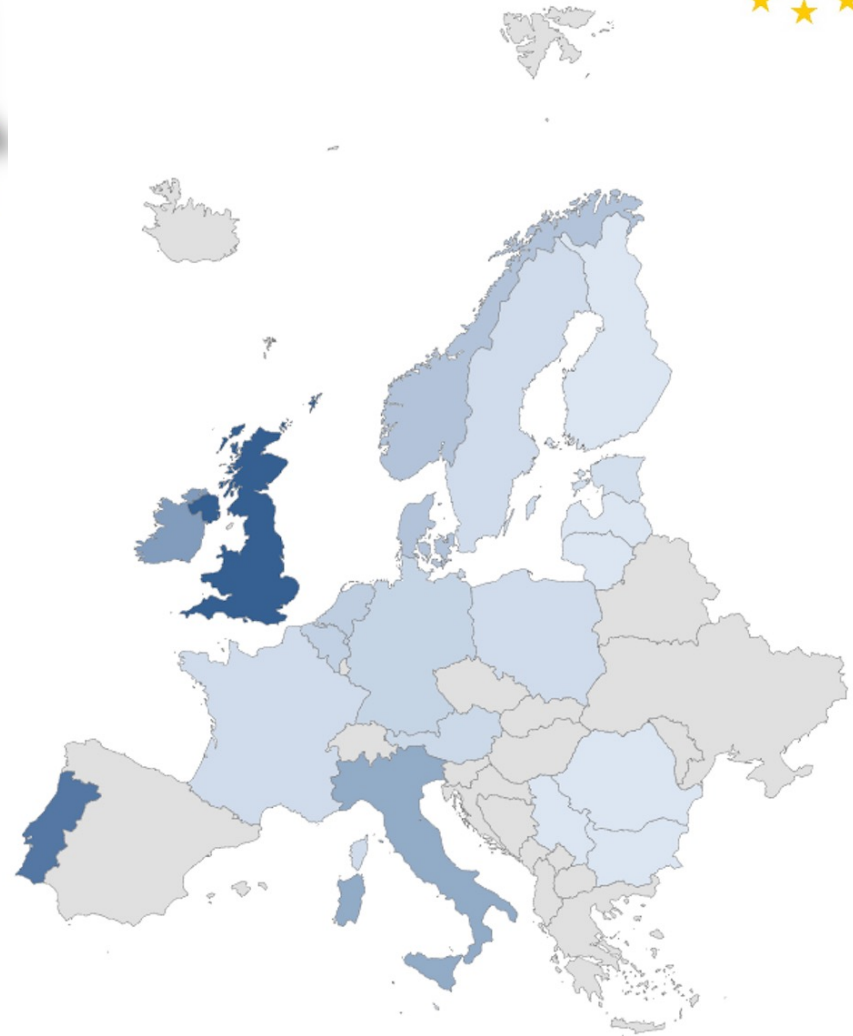
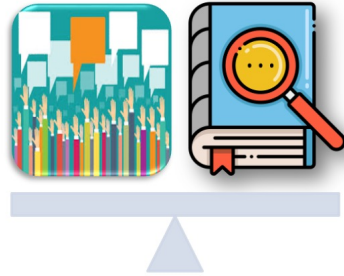
Results



21

Working countries

n participants 1 41



Results



Respondents' characteristics

72%

- Female

16%

- Migrant TR/RTTs

94%

- Worked as TR/RTT in treatment

48%

- RT-only programme

29%

- RT, Medical Imaging, Nuclear Medicine

13 years



- Professional experience as TR/RTT (1-37)

EQF6



- Education academic level (EQF4 - EQF8)

6 years

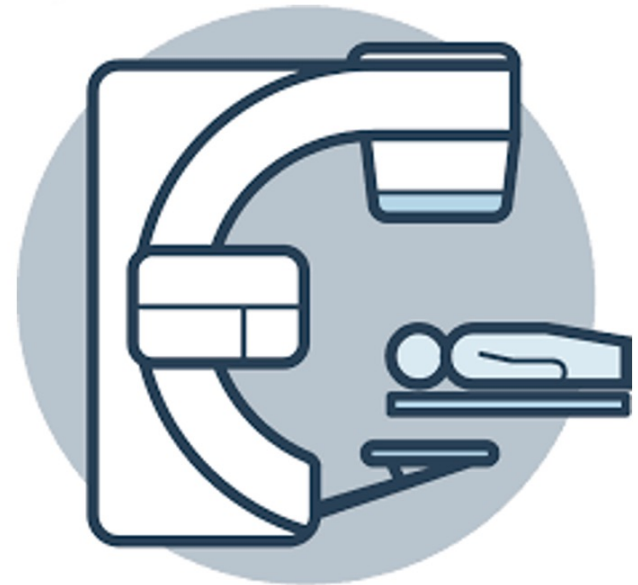
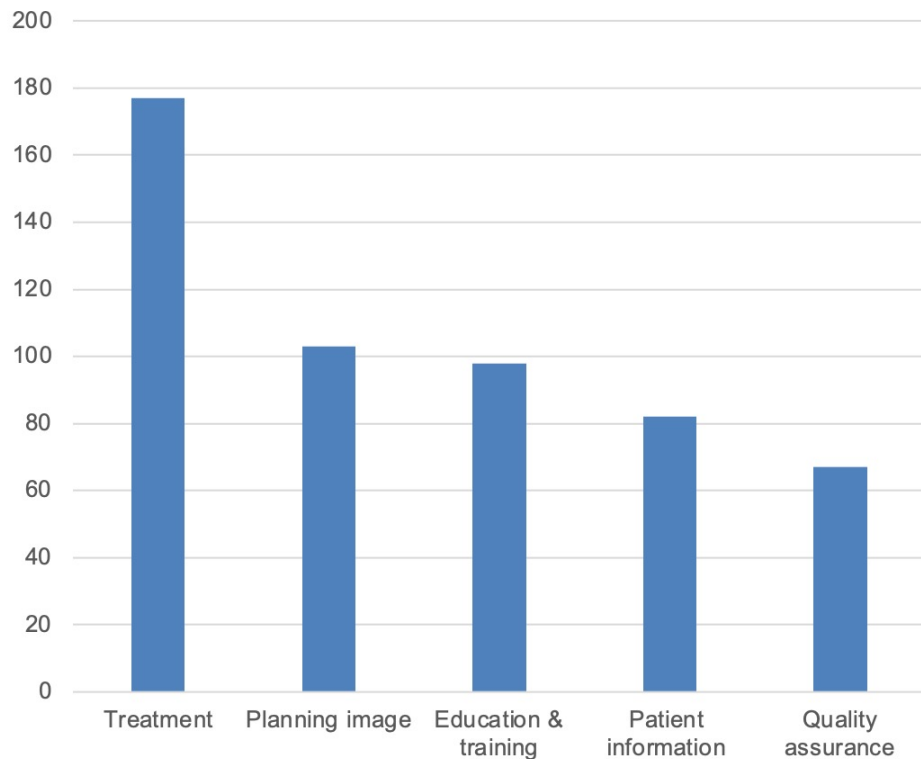


- AP experience (0-30)

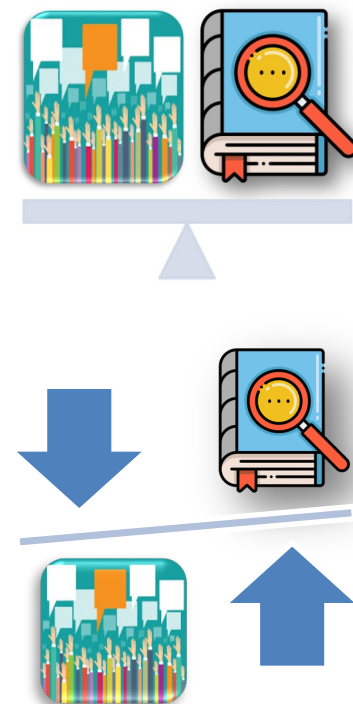
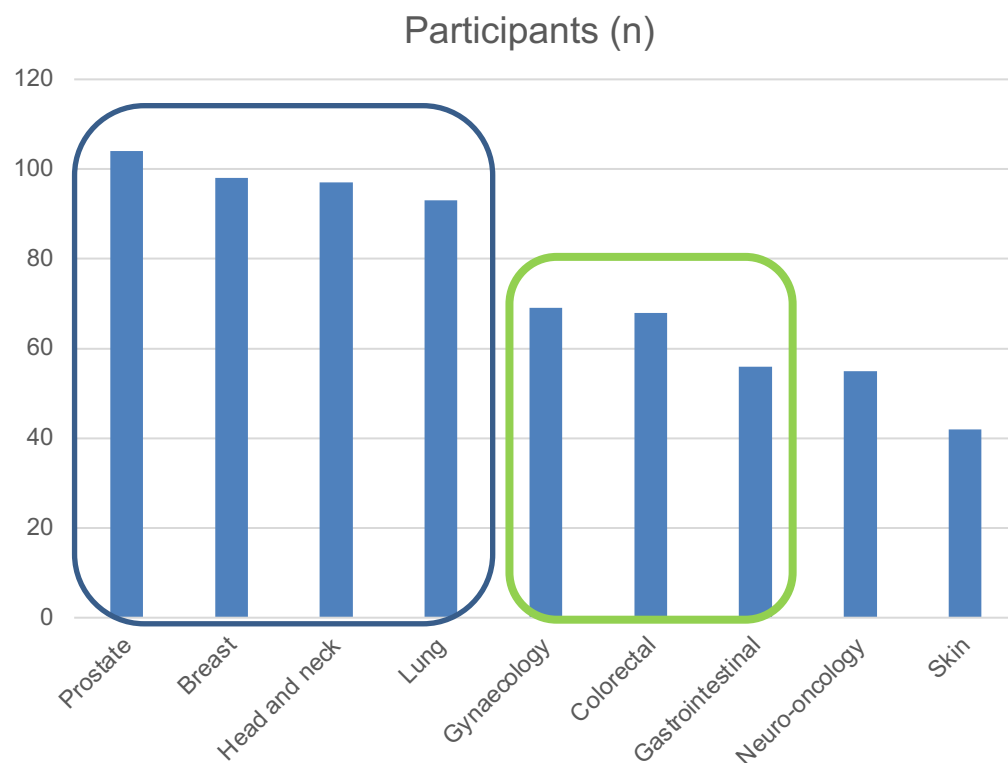
Areas of clinical practice as TR/RTT



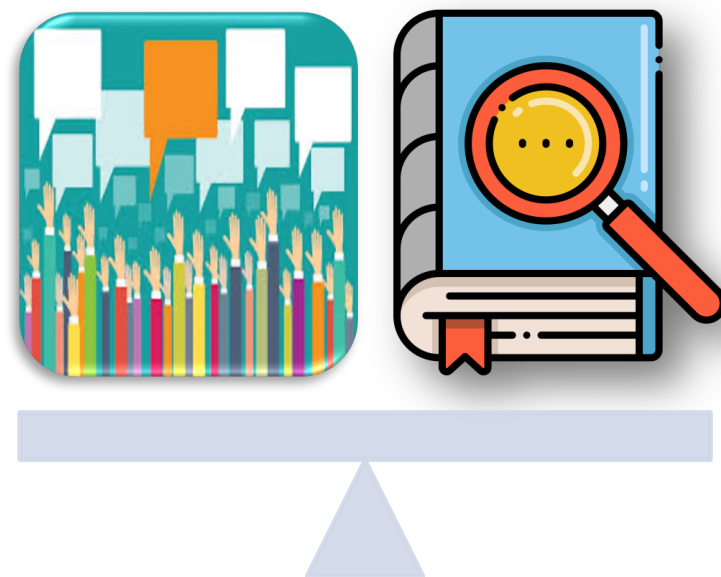
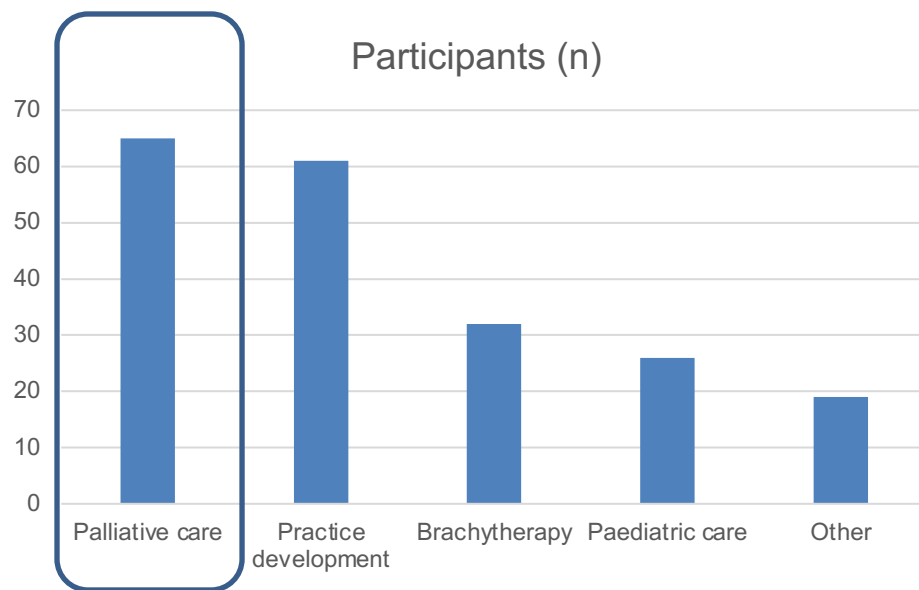
Participants (n)



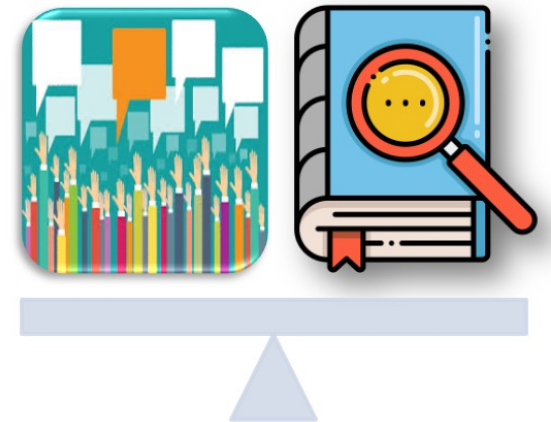
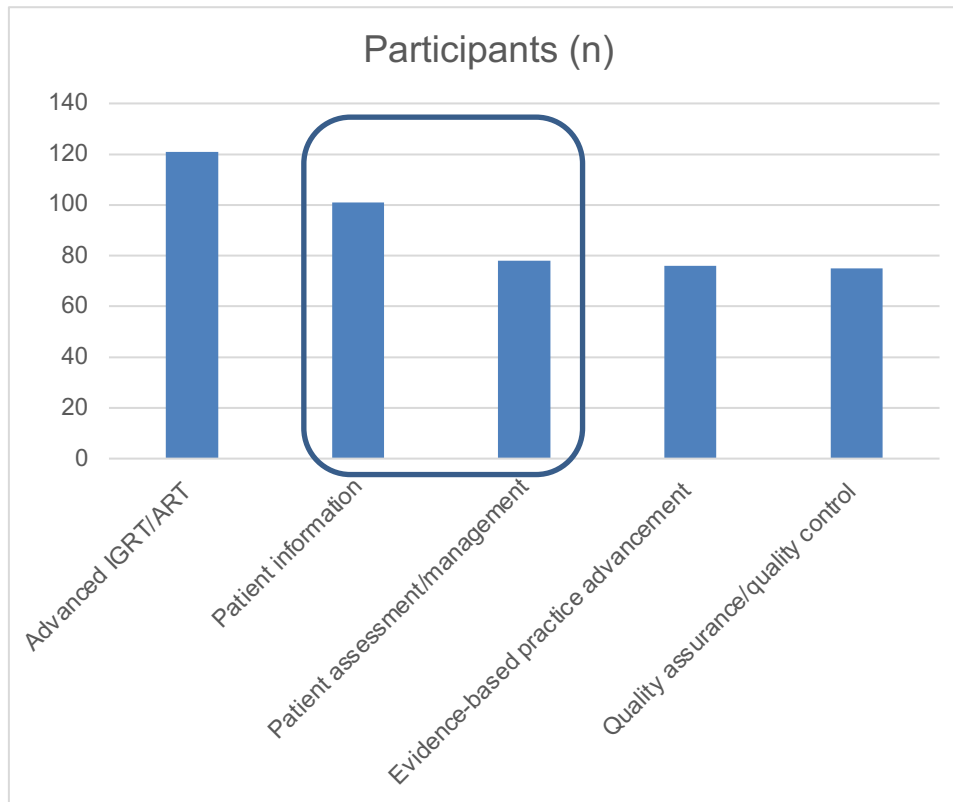
Site-specific roles in AP level



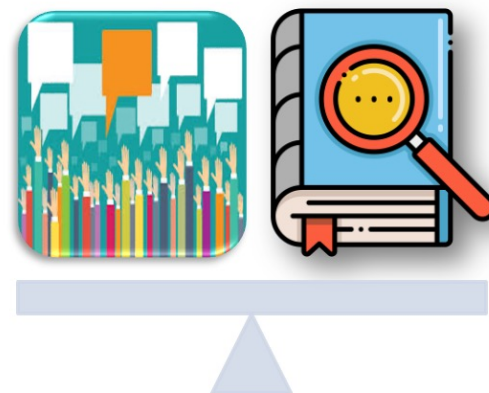
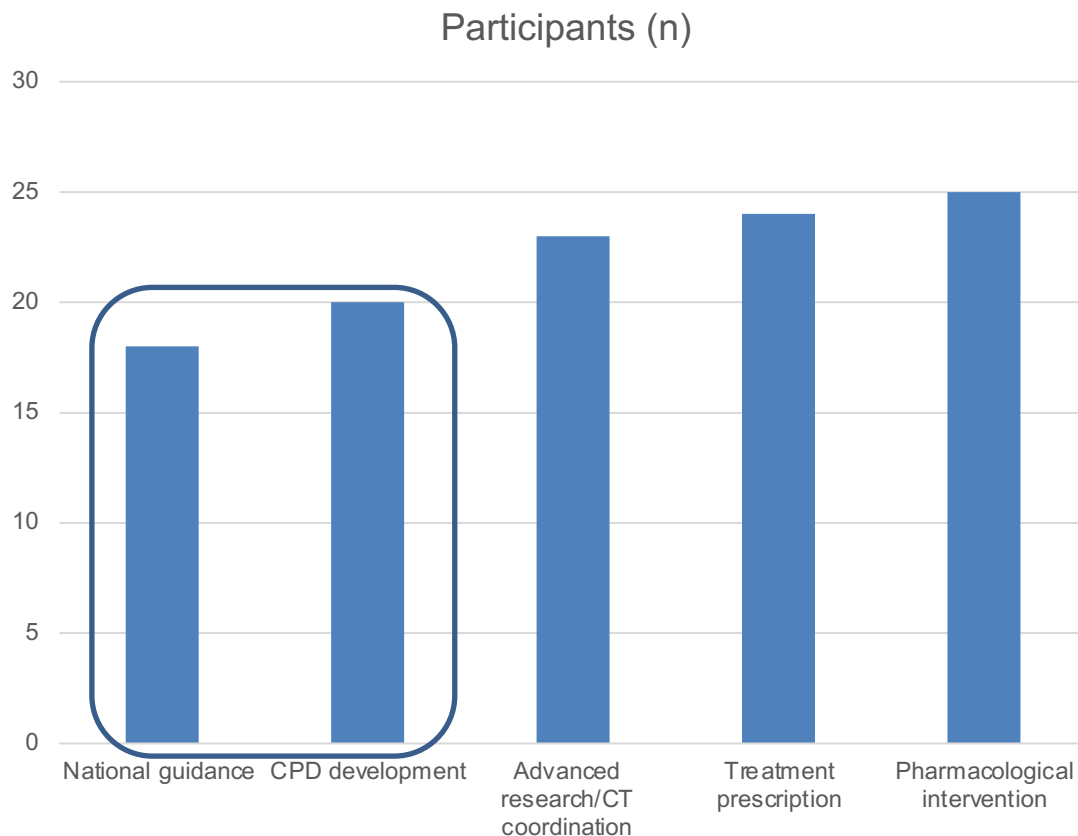
Clinical areas of AP



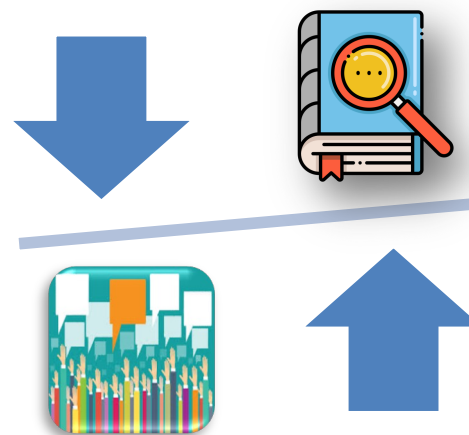
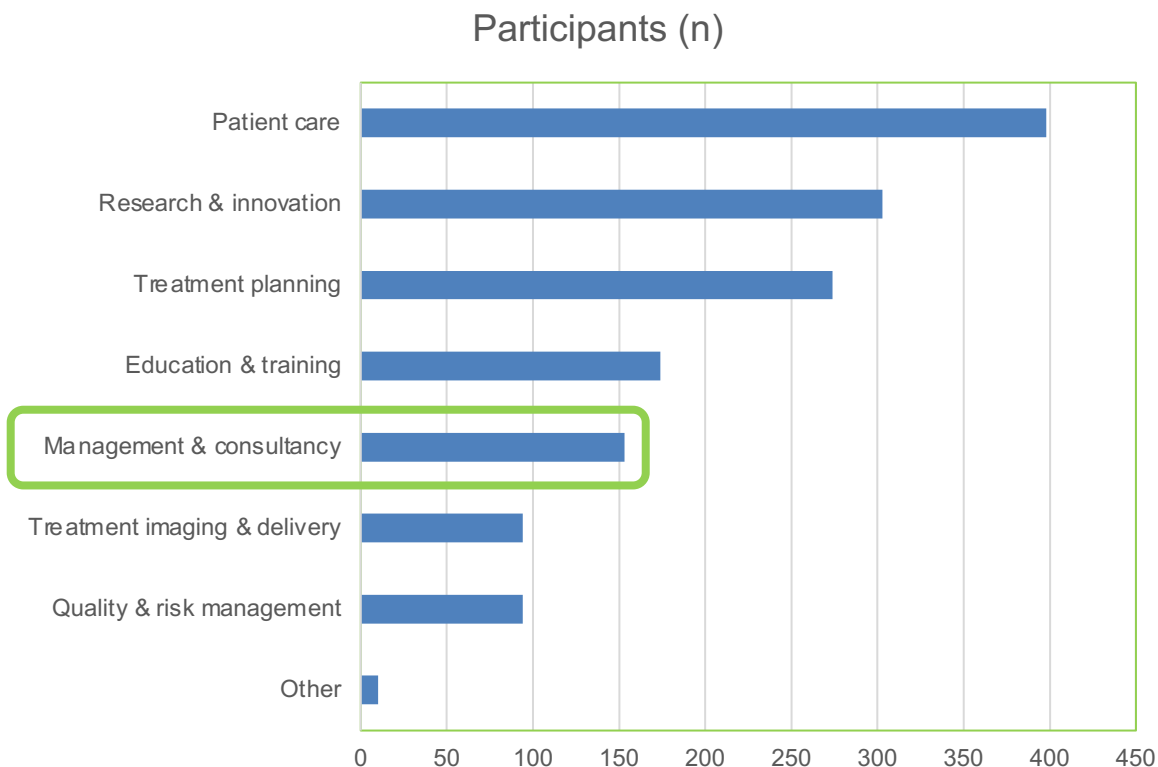
Scope of AP by activities



Scope of AP by activities



Scope of AP by dimensions



Project management

Clinical governance/business case

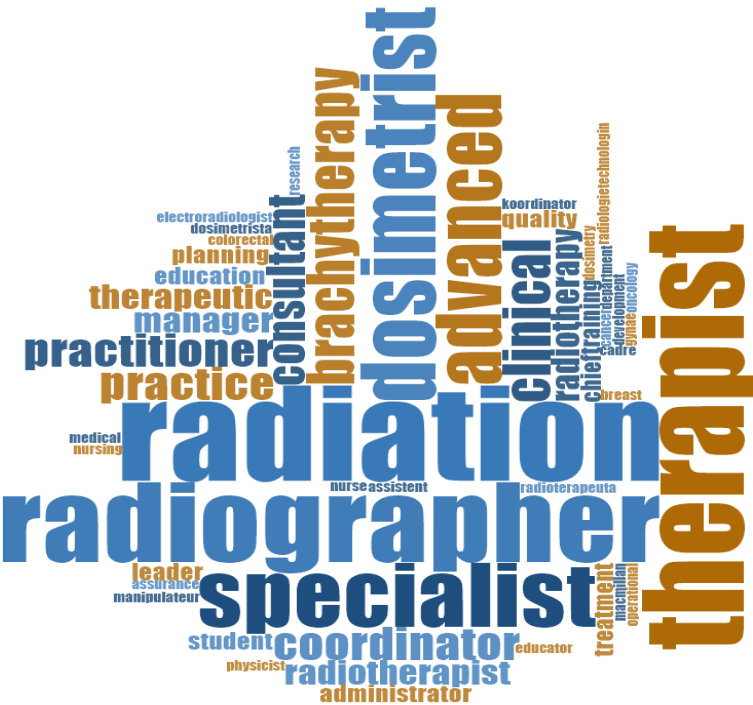
National guidance

Job Titles...



electroradiology
 coordinatore assurance department formateur
 technologue electroradiologist técnico diploma
 imaging dosimetrista radiothérapie operational certificat
 formatrice breast radioterapeuta urology training floor
 dutch services quality brachytherapy development deputy
 radiologia treatment radiotherapist dosimetriste
 fisica consultant specialist coordinator cadre
 educator studies manager therapist therapeutic review hospital
 assistant tecnico advanced radiation senior planning german
 technician dosimetrist radiographer research técnica consider
 medizinsch practice radiographer research advance
 colorectal allied nurse clinical practitioner nursing degree
 comparto gynae leader health radiotherapy chief dosimetry cancer
 therapy action manipulateur radioterapia medical trainee fernanda
 brachtherapy education administrator radiologie council
 correia assistant student called radiologietechnologin chair employees
 equivalence imagerie bestralingsdeskundige gynaecological

- Advanced Practitioners group



(Senior) TR/RTT

(Senior) dosimetrist

Head/chief TR/RTTs

- Brachytherapy or site-specific

Advanced practitioner

(Clinical) specialist TR/RTT

- Treatment planning/ IGRT & ART



- **Variability & inconsistency**
- **Multiple role titles**

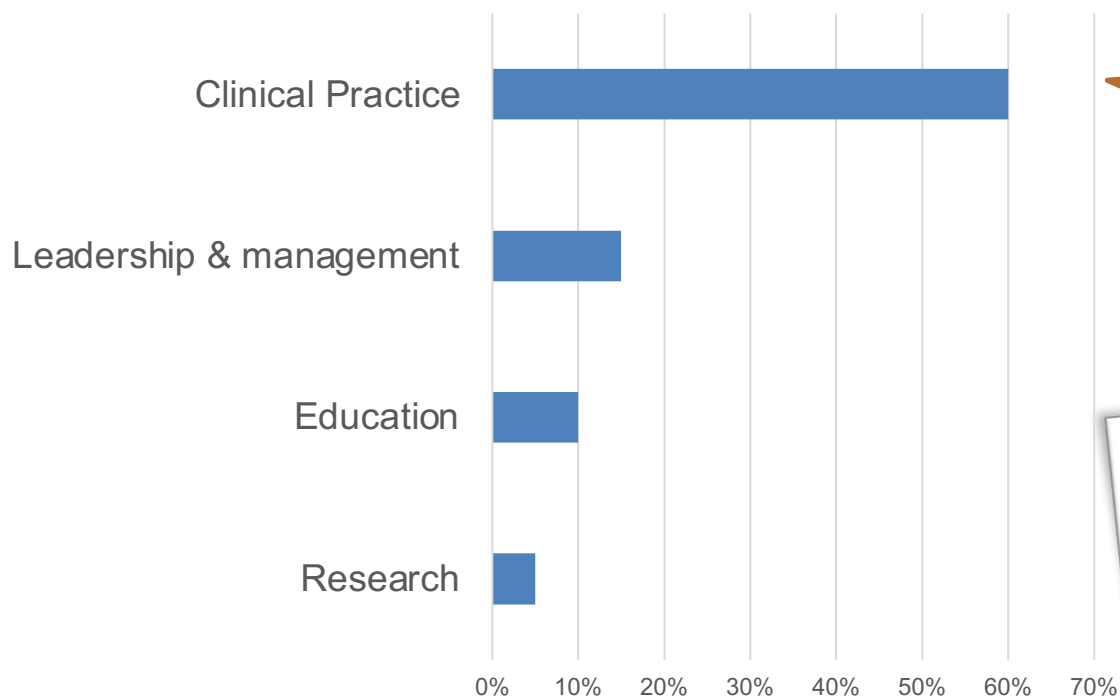
Job description

- **75% participants**

Job plan

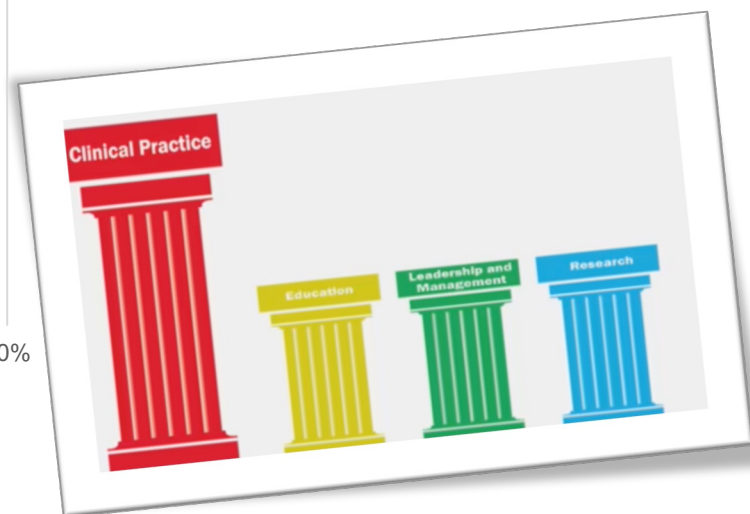
- 32% working time by AP pillars

Working time by AP pillar



Clear focus on
Clinical Practice pillar

Research pillar
neglected



AP requirements



Minimum working years to perform AP roles/tasks

- 5 years



42%

Minimum postgraduate education to undertake AP roles/tasks

- Master's degree or specific modules



AP governance



National RT-specific framework for AP or departmental protocols for AP role/tasks performance



National multi-professional AP framework for healthcare. (Advanced Practitioners)



AP regulation/ practice agreement

- Professional body
- Department



AP support & implementation



12% in AP post with temporary funding:

- Employer/ government

10% do not know AP post funding type



Only 19% of TR/RTTs has financial compensation for this extra responsibility in their remuneration



Involvement in AP role/tasks development:

- New technologies/techniques implementation
- Emerging role/task
- Service/care pathway redesign
- Quality improvement programme



AP assessment



Only **1 in 4** advanced posts/roles/tasks are evaluated

- Process evaluation, competency/capability assessment, annual report, audit, and peer review...



62% in AP roles/tasks with impact assessment:

- Quality initiatives, patient and professional satisfaction, innovation, and time savings...



Professional & organizational factors:

- Limited staff resources
- Lack of dedicated time
- Departmental culture...



AP education



Additional academic degree/ training qualification:

- “RT and Oncology”/ “Advanced Practice” degree
- Specific master’s modules



Clinical supervision/ peer support



Training courses (universities)



67% with funding for education and/or training (employer)



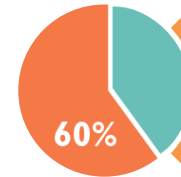
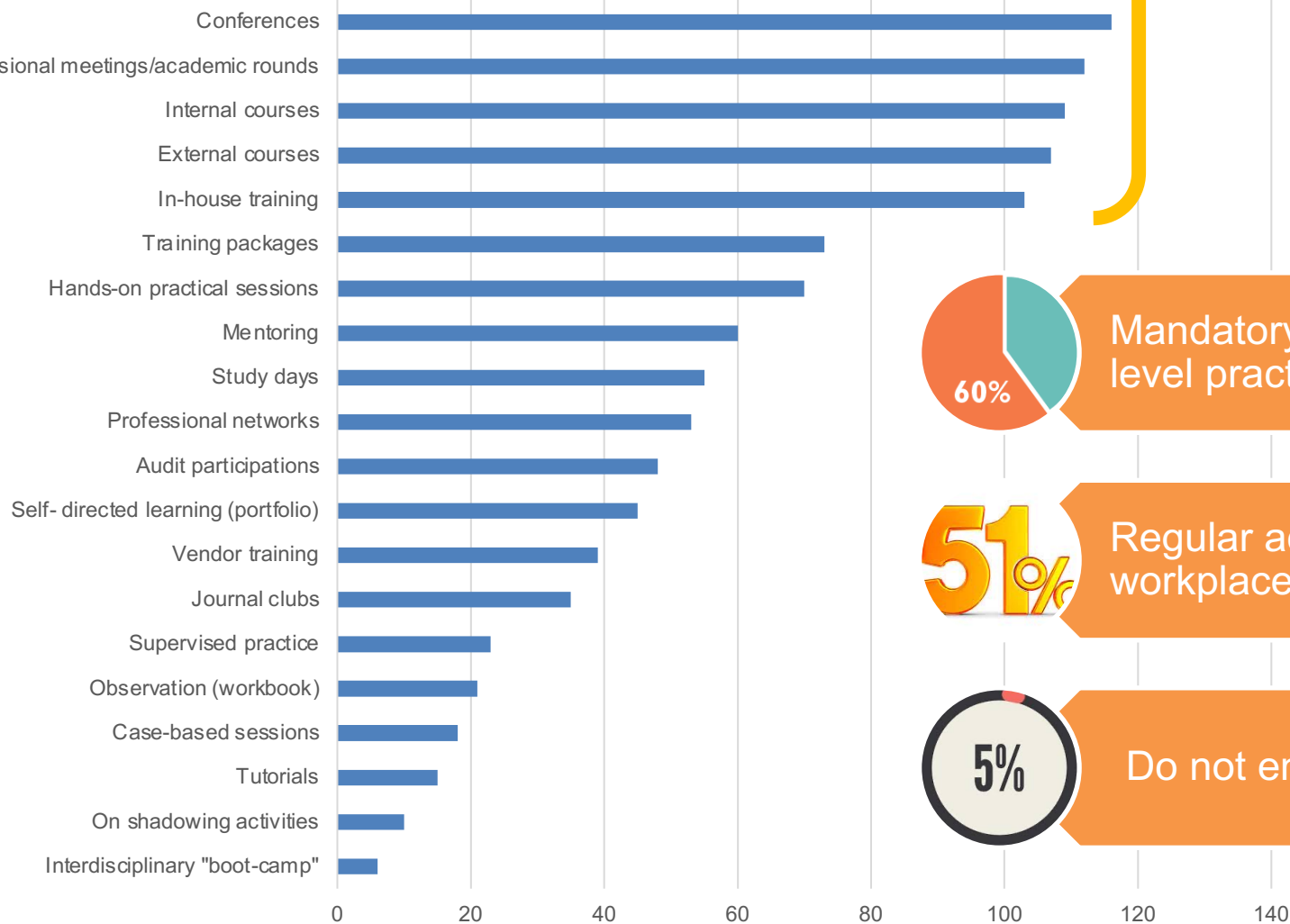
Factors:

Cost of existing courses, the role/task did not require it, lack of funding

CPD activities



Participants (n)



Mandatory for advanced level practice



Regular access in workplace



Do not engage in CPD!

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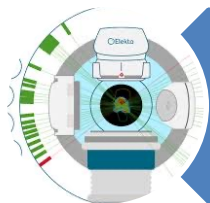


PTE
Portuguese
Therapeutic
Education

Education & training needs



Knowledge



IGRT/ART



Multimodal
imaging &
technologies



Advanced
treatment planning

Capabilities & advanced skills



Leadership skills

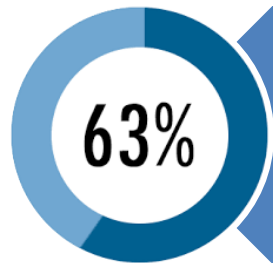


Management skills



Clinical-site/
specialty expertise

Emerging AP roles

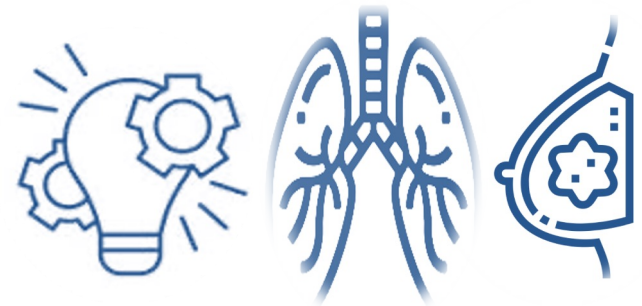


New AP roles will emerge to meet future service needs

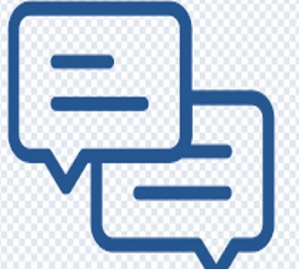
Eg: brachytherapy activities, RT data management (AI), psychology interventions...

TOP 3

Practice development
Lung cancer
Breast cancer



AP education & training gaps



52% consider that there are gaps in education & training for AP roles in RT

32% do not know if gaps exist in their countries



- Limited access of existing courses (cost, language barrier)

- **Direct**
 - No formal training
 - Lack of regulation & guidance

- **Indirect**
 - Dual qualification for TR/RTTs
 - Lack of professional recognition & career development

- Work based learning with low support from universities
- Lack of protected time

- Lack of team support
- Low management support



Participant findings by country



- 95% of participants stated that CPD is mandatory for AP



- All participants that self-reported as Advanced Practitioners stated that do not have job plan.



- All TR/RTTs with clear knowledge about their level of practice



Conclusion & Recommendations



“Mixed-bag” of AP roles & job titles at national and European levels.

- Standardize job tiles & descriptions to ensure role recognition & support.



Inconsistency in AP both at national and European level

- European framework based on AP roles in RT & requirements.



Conclusion & Recommendations



Disproportion between the 4 AP pillars neglecting the research pillar

- Highlight the value of each AP pillar to all stakeholders and the importance of the job plan.



Variability in AP evaluation and impact assessment.

- Employers should evaluate their AP posts and assess the impact for AP sustainability.



Future Proof

Conclusion & Recommendations

Considerable variability in support & supervision for education & training.

- Creation of accredited Master's programmes specific for RT AP/
- Clear pathways of education & training for role development of TR/RTTs with more support from the universities.
- Update curricula with new emerging AP roles of AP programmes.
- CPD activities should be offer at workplace with manager support.



Acknowledgements



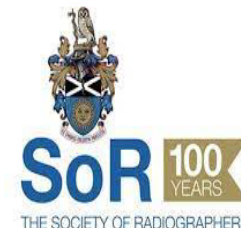
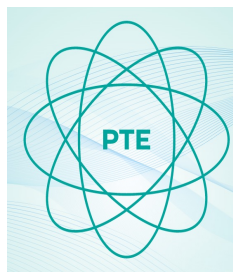
Survey validation

SAFE EUROPE RT experts: Ana Luísa Soares (PT), Bartosz Bak (PL), Charlotte Beardmore (UK), Isabel Lobato (PT), Filipe Moura (PT), Kyle Muscat (MT), Marco Caetano (PT)

External RT experts: Filipa Sousa (BE), Francesca Cavallo (IT), Kate Lavery (NIR), Philipp Scherer (AT), Rita Simões (ENG)

Statistical analysis: Jéssica Rodrigues (PT)

Survey dissemination & support



Next study...



Please volunteer for the online interview

<https://forms.office.com/r/Sairf20JSQ>

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Advanced Practice Roles
Interview

An assessment of advanced practice
roles amongst Therapeutic
Radiographers/ Radiation Therapists in
Europe

...

* Required

1. Would you like to be interviewed to
further explore this issue in the next
study phase (semi-structured interview
lasting 40 minutes to 1 hour)? *

☐ Yes

☐ No



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