

WP3 - Competencies of radiotherapy professionals working on the Linac across the EU

Mr Jose Guilherme Couto

Dr Sonya McFadden

Dr Patricia McClure

Dr Paul Bezzina

Dr Liberato Camileri

Dr Ciara Hughes



Background



Research Questions / Scope

Which competencies are most/least developed across the EU?


Which course characteristics influence the competency level?



Survey

Part A: Educational programme characteristics

Part B: 63 competencies on the linac

- 1 (not developed) to 7 (competent)
- 14 themes 
- Based on a previous thematic analysis of the literature (Couto et al., 2019)

- 1 Radiation safety
- 2 File verification
- 3 Positioning and immobilisation
- 4 Radiotherapy treatment delivery
- 5 Image verification of patient setup
- 6 Equipment quality assurance
- 7 Professional and ethical practice
- 8 Patient care
- 9 Pharmacology
- 10 Research and education
- 11 Quality and risk management
- 12 Management and leadership
- 13 Decision making
- 14 Teamwork and multidisciplinary

Distributed by
To education institutions



Results

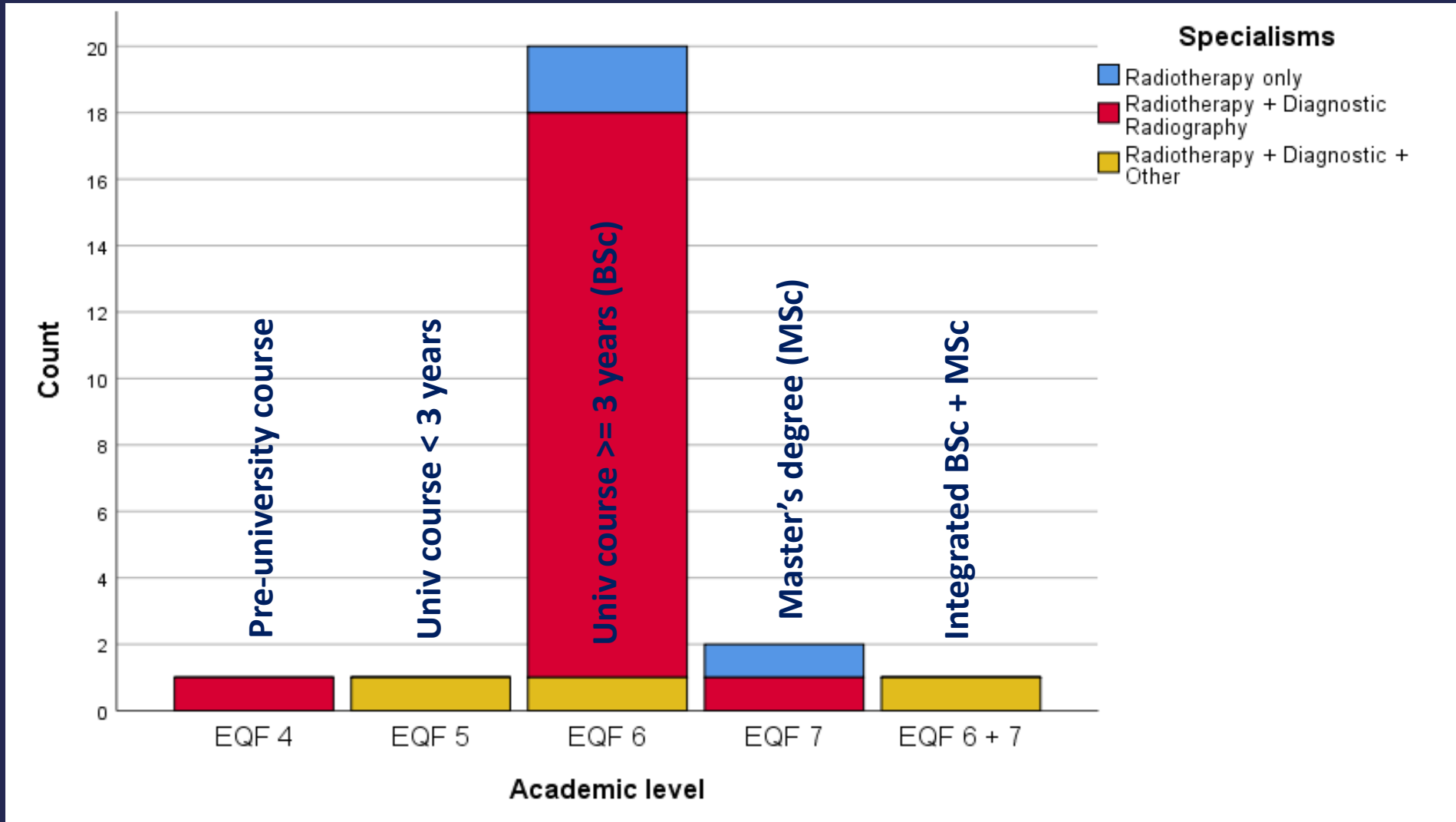


89 respondents

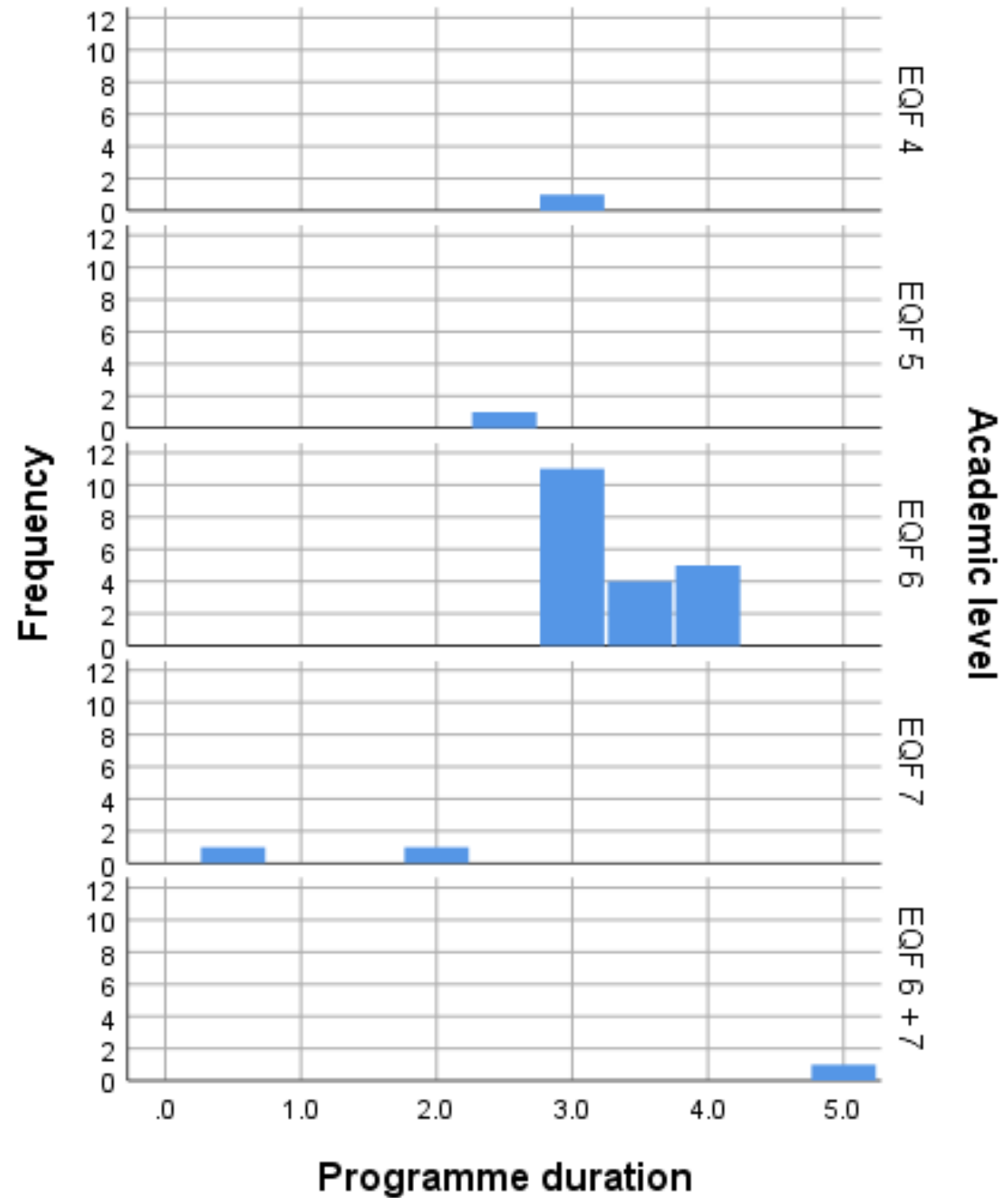


Total of 25 national-programmes
(19 EU countries)

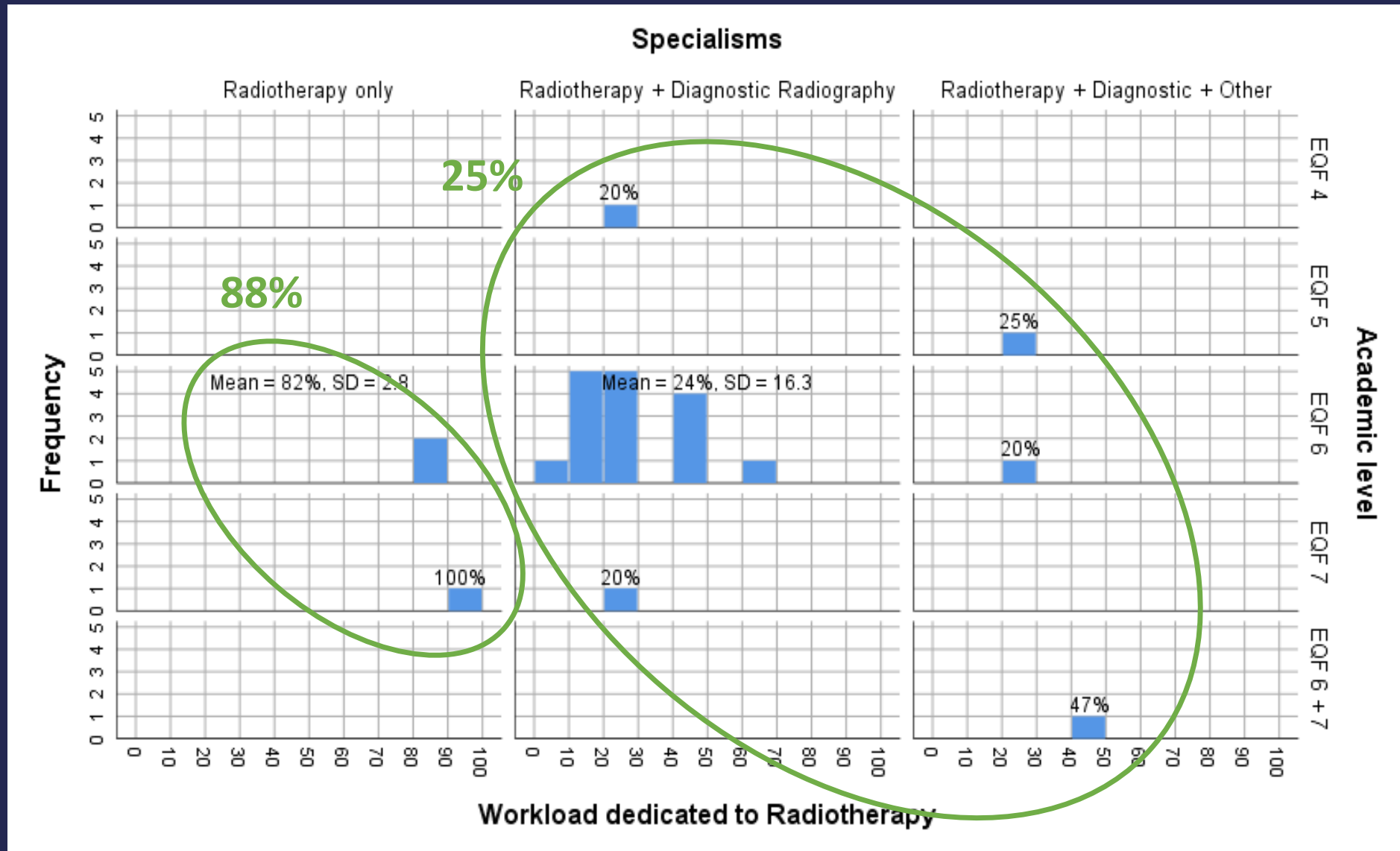
Academic level & Specialisms



Course duration

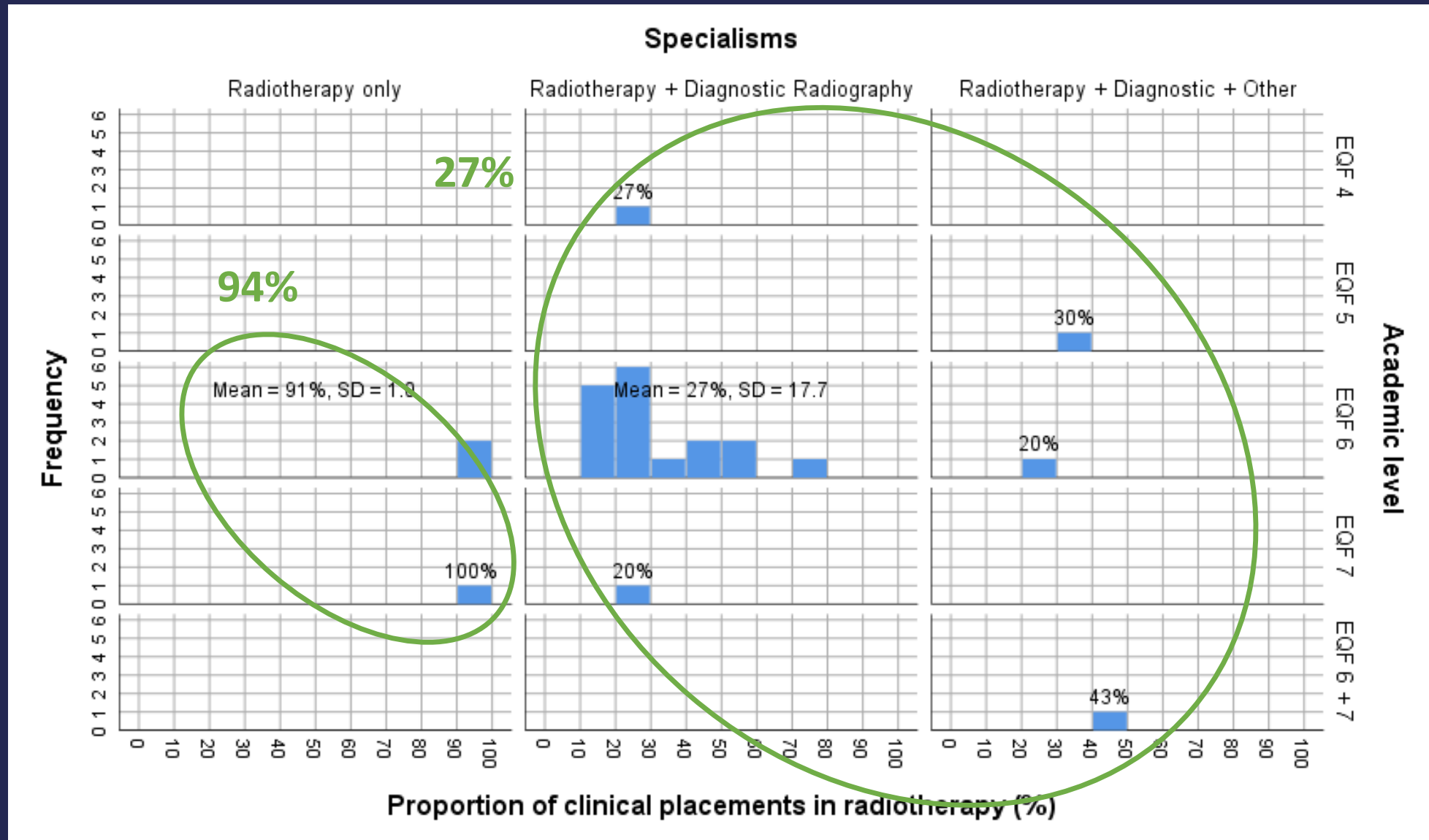


% of course dedicated to Radiotherapy



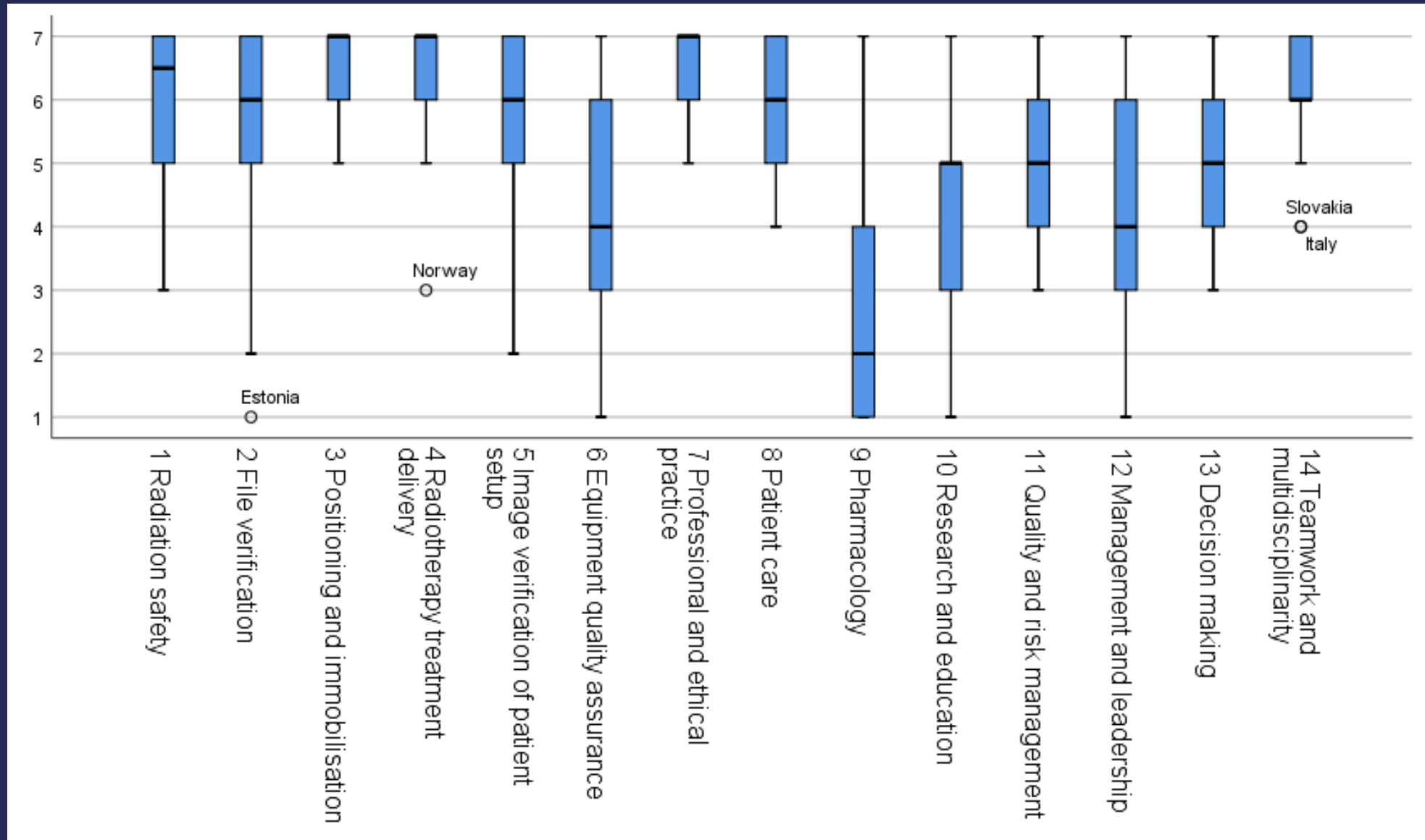
Kruskal-Wallis test: RT only vs. RT + others ($p = 0.005$)

% Clinical placements dedicated to Radiotherapy



Kruskal-Wallis test: RT only vs. RT + others ($p = 0.005$)

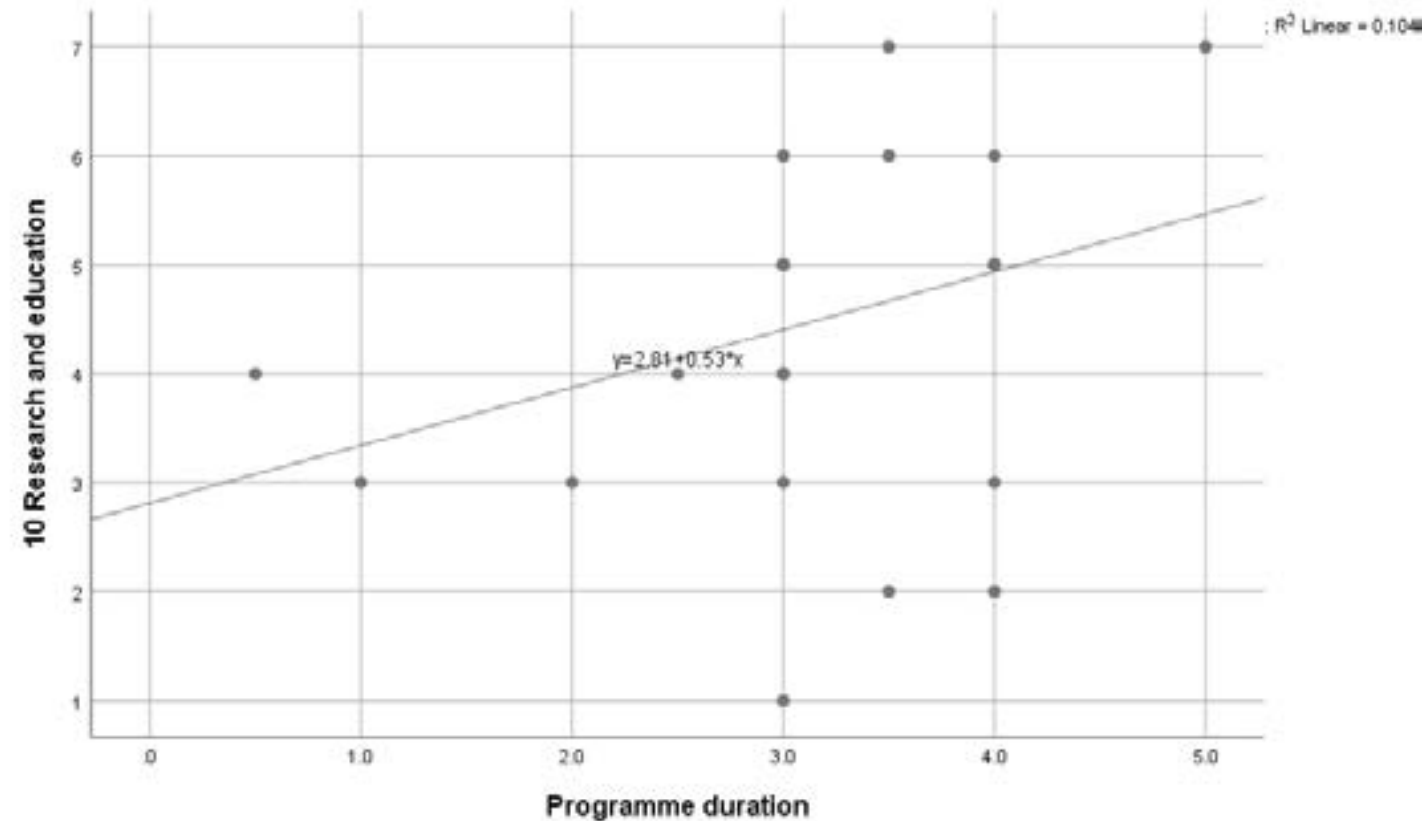
Most/Least Developed Competency themes



P > 0.05	EQF 4 or 5 (n=2) Mean	EQF 6 (n=20) Mean
1 Radiation safety	6.00	5.72
2 File verification	5.00	5.58
3 Positioning and immobilisation	6.00	6.65
4 Radiotherapy treatment delivery	5.40	6.51
5 Image verification of patient setup	5.42	5.89
6 Equipment quality assurance	3.88	3.96
7 Professional and ethical practice	6.00	6.35
8 Patient care	5.29	5.97
9 Pharmacology	1.33	3.62
10 Research and education	3.38	4.71
11 Quality and risk management	4.17	5.45
12 Management and leadership	4.50	4.11
13 Decision making	3.50	5.20
14 Teamwork and multidisciplinary	5.75	5.91

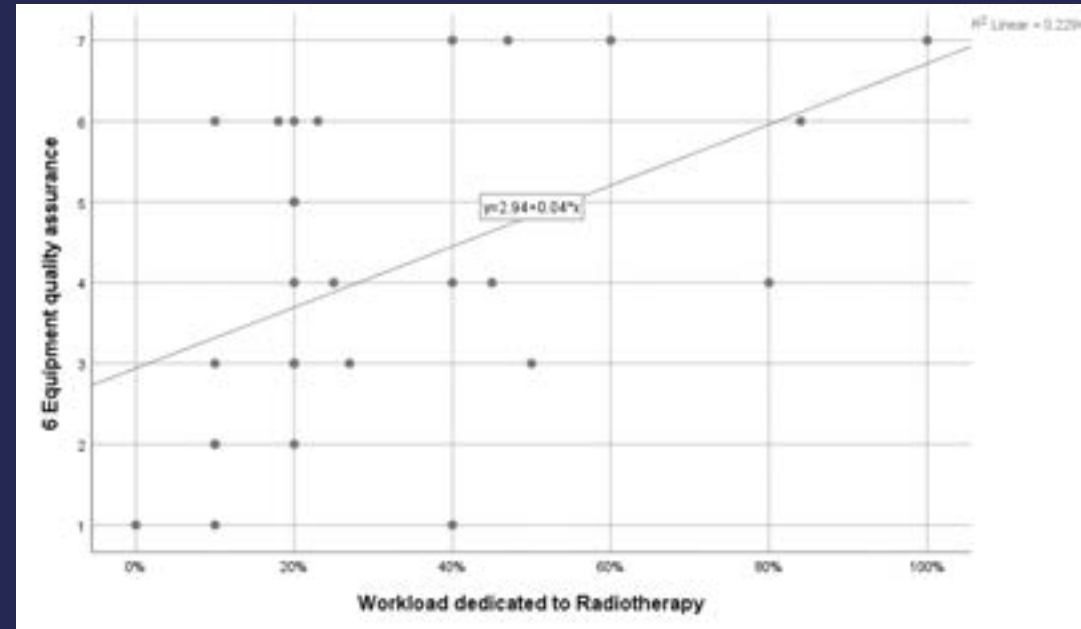
Programme duration

	Programme duration	
	Rs	P-value
7 Professional and ethical practice	.402	.026
10 Research and education	.517	.005
11 Quality and risk management	.494	.007
13 Decision making	.486	.008



Proportion of course dedicate to RT

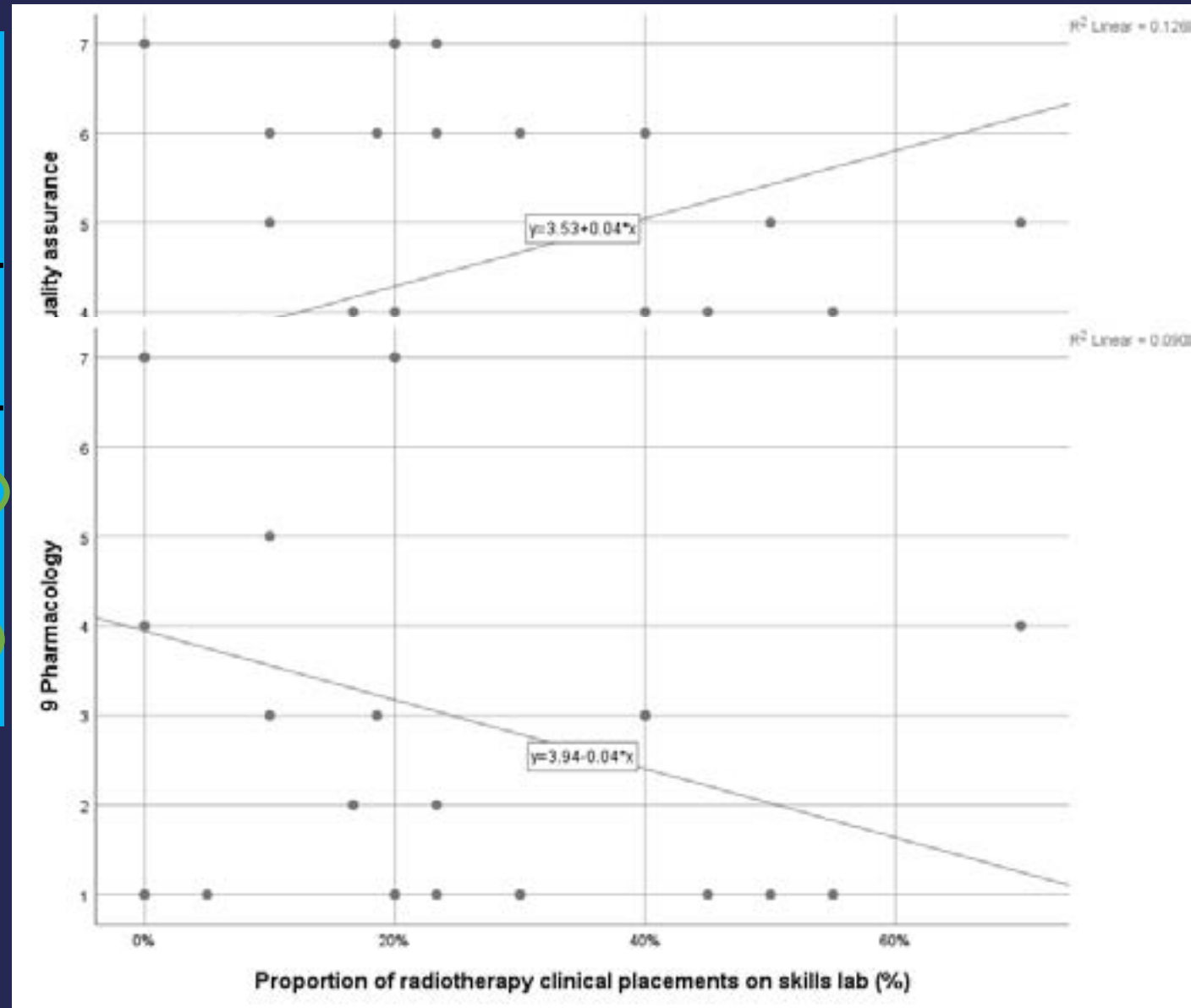
	Workload in RT		Proportion of placements in RT		Hours of clinical placements in RT	
	Rs	P	Rs	P	Rs	P
2 File verification	.500	.006	.438	.014	.590	.004
3 Positioning and immobilis.	.327	.060	.358	.040		
6 Equipment QA	.508	.006	.436	.015	.522	.011



Proportion of rt clinical placements on skills labs

Proportion of RT placements on skills labs

	Rs	P-value
6 Equipment quality assurance	.446	.014
9 Pharmacology	-.475	.011



Conclusions

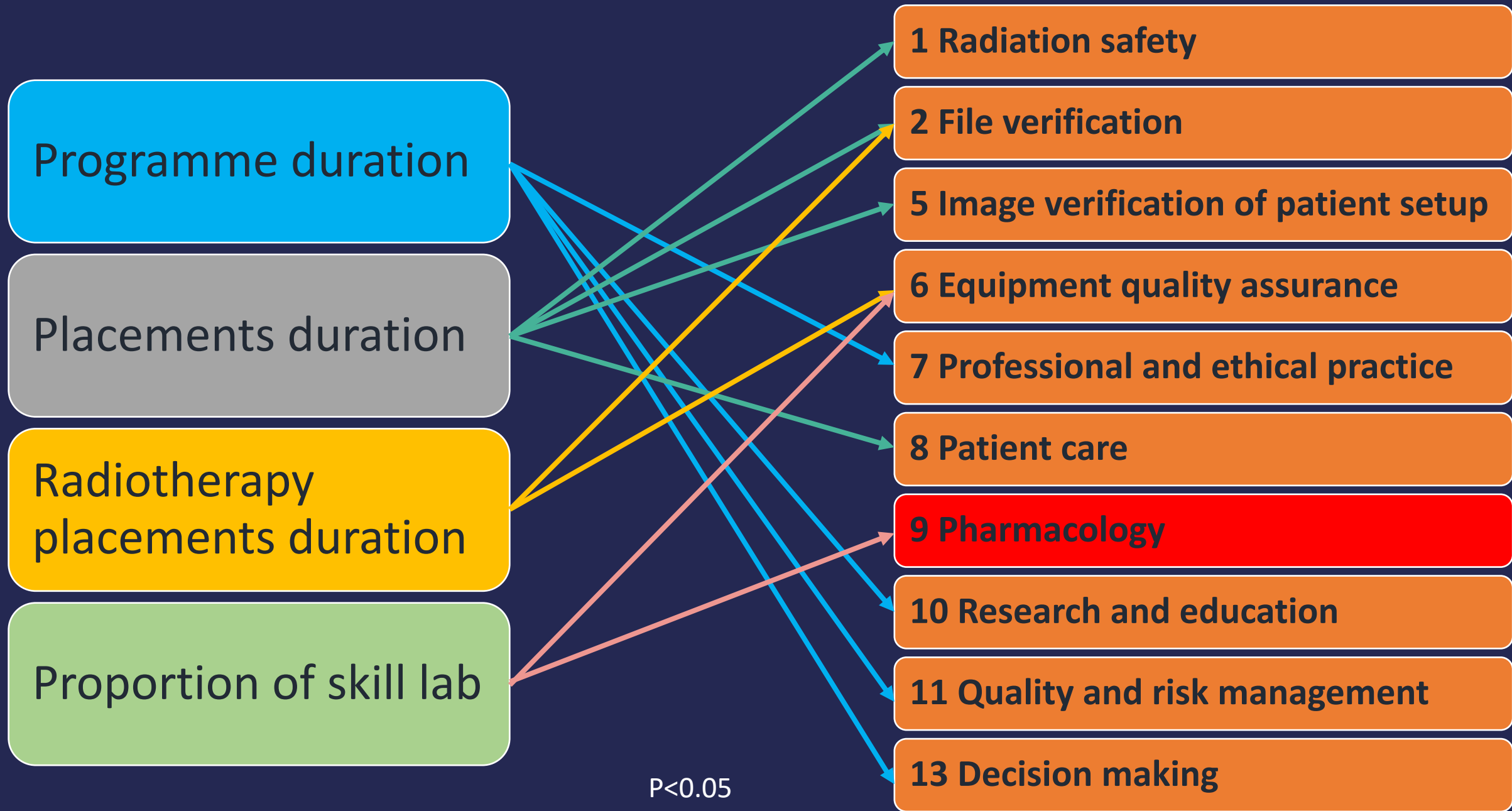
Programmes that have multiple specialisms

↓ proportion of:
course in RT
placements in RT

↓ competencies in:
File verification
Positioning & immobil.
Equipment QA

P<0.05

P<0.05



There are competencies that must be further developed



Pharmacology



**Equipment
quality
assurance**



**Management
and
leadership**



**Research and
education**



Less developed

(score < 5)

Education programmes should have adequate:

Programme and placement durations

Proportion of RT workload and placements

Proportion of skills lab placements

...TO ACHIEVE HIGHER LEVELS OF COMPETENCY IN RT

NEXT STEPS

Interviews of stakeholders
regarding these differences



Webinars





INTERNATIONAL CONFERENCE ON MEDICAL IMAGING & RADIOTHERAPY

7th - 9th
February 2020

**SAFE EUROPE
Project**

LOCATION:
Radisson Blu Resort
St Julian's, Malta



Questions 😊 ?

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Thank You!

jose.g.couto@um.edu.mt

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