DigiCanTrain

Digital Skills Training for Health Care Professionals in Oncology

Project Number: 101101253

WP 4: Pilot of DigiCanTrain programme

Deliverable 4.1: Pilot evaluation report

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Version		1	
Due Date		31.08.2025	
Work Package		WP 4	
Deliverable		D 4.1	
Dissemination level		Public but some data sensitive	
WP Leaders		Catalan Institute of Oncology (ICO)	
Delivered		30.09.2025	
Version	Date	Comments	Modified by
02	18.12.2025	*Executive Summary:* 679 participants/ 24.30% > change to 678 participants / 24.34%	ICO
	18.12.2025	*Executive Summary*	Turku UAS

Co-funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the Health and Digital Executive Agency (HaDEA). Neither the European Union nor the granting authority can be held responsible for them.

		Add > respectively by 15.9.2025. The programme platform is kept open for both trainers and participants to complete by end of January 2026 to improve the completion rates.	
	18.12.2025	*Executive Summary* Finalized > change to finalised	Turku UAS
	18.12.2025	*Executive Summary* Add > in time	Turku UAS
	18.12.2025	*Executive Summary* Course > change to programme	Turku UAS
	18.12.2025	*Outline* Update outline, list of figures and list of tables	ICO
	01.10.2025	*Introduction* Paragraph with more updated information	ICO
	18.12.2025	*Introduction* Specially > change to especially	ICO
	18.12.2025	*Objectives* Evaluate > change to report the evaluation	Turku UAS
	18.12.2025	*Objectives* Fixed > change to set	Turku UAS
	18.12.2025	*Objectives* Enrol > change to enrolled	Turku UAS
	18.12.2025	*Trainers' recruitment process* It should also be mentioned that the form contained information on to > change to and	Turku UAS
	18.12.2025	*Trainers' recruitment process and participant recruitment process* Add > To increase the number of trainers another recruitment period was taken with same channels prior the second cohort started.	Turku UAS
	18.12.2025	*Trainers and participants learning pathways* Pre-; post and > delete ;	Turku UAS
	18.12.2025	*Results* Add > 4.1 Recruitment strategies section (new section). Consequently, all the sub-enumerations in this section have been moved in number	ICO
	18.12.2025	*Recruitment strategies* Add > Table 3	ICO
	18.12.2025	*Recruitment results > Country of work and workplace* Country of work > change to Country of work and workplace	ICO
	18.12.2025	*Recruitment results > Country of work and workplace* Add > Characteristics of healthcare workplaces, such as digitalisation and infrastructure, training and education, working conditions, differ between countries, in the table 3 and table 4 the workplace is broken down across countries	ICO
	18.12.2025	*Recruitment results > Country of work and workplace* Add > and grouped in their type of workplace	ICO
	18.12.2025	*Recruitment results > Country of work and workplace* Delete > Figures 5 and 6 and add Table 4 and Table 5	ICO
	18.12.2025	*Recruitment results > Country of work and workplace* Delete > type of work subsection and the corresponding Figures 8 and 9. Move the text in this subsection in the Country of work and workplace subsection	ICO
	18.12.2025	*Recruitment results > Institution enrolled*	ICO

		Figure 7 has been renumbered as Figure 5	
	18.12.2025	*Recruitment results > Profession* Figure 10 has been renumbered as Figure 6	ICO
	18.12.2025	*Recruitment results > Profession* Figure 11 has been renumbered as Figure 7	ICO
	18.12.2025	*Recruitment results > Learning pathway* Figure 12 has been renumbered as Figure 8	ICO
	18.12.2025	*Recruitment results > The highest academic degree* Figure 13 has been renumbered as Figure 9	ICO
	18.12.2025	*Recruitment results > The highest academic degree* Figure 14 has been renumbered as Figure 10	ICO
	18.12.2025	*Recruitment results > Years of experience* Figure 15 has been renumbered as Figure 11	ICO
	18.12.2025	*Recruitment results > Years of experience* Figure 16 has been renumbered as Figure 12	ICO
	18.12.2025	*Recruitment results > Previous training* Figure 17 has been renumbered as Figure 13	ICO
	18.12.2025	*Recruitment results > Experience eLearning methods* Figure 18 has been renumbered as Figure 14	ICO
	18.12.2025	*Recruitment results > Experience eLearning methods* Figure 19 has been renumbered as Figure 15	ICO
	18.12.2025	*Recruitment results > Experience eLearning methods* Figure 20 has been renumbered as Figure 16	ICO
	18.12.2025	*Recruitment results > Experience in the field of education (trainers*) Figure 21 has been renumbered as Figure 17	ICO
	18.12.2025	*Completion rates* Learners > change to participants	Turku UAS
	18.12.2025	*Completion rates* Significant revisions have been made to the text and figures on Completion rate section to present the data more clearly. Now the information is organized trainers and participants sociodemographic information and the participation status, shown the number of participants who completed, partially completed or did not start or not log in	ICO
	18.12.2025	*Submodules assessment and Trainers and participant's evaluation programme* The figure numbers have been shifted by one, that is, what was previously Figure 30 is now Figure 31, and so on, to align with the new numbering	ICO
	18.12.2025	*Trainers and participants' evaluation programme > Module 5 > Submodule 5.4* Evatualte > change to evaluate	ICO
	18.12.2025	*Trainers and participants' evaluation programme > Module 2* Applied > change to apply	ICO
	18.12.2025	*Conclusions* Add 2nd and 3rd paragraph	ICO
	18.12.2025	*Conclusions* Stakeholders recommendations > change to stakeholders'recommmendations	ICO
	18.12.2025	*Conclusions* DigiCanTran completion rates > change to DigiCanTrain completion rates	ICO
	01.10.2025	*References* Delete reference Bray et al. (2018) and add reference Elmadani M. et ak (2025)	ICO

Executive Summary

This deliverable report – *D4.1 Pilot evaluation report* – describes the recruitment protocol and the pilot programme evaluation for both trainers and participants conducted as part of *Work Package 4 (WP4) Pilot of DigiCanTran programme* for the *DigiCanTrain* project. The pilot evaluation report aimed to provide a general overview of the pilot phase implementation, its strengths and weaknesses and some suggestions to according to both trainers and participants to make it more fluid and interesting.

Recruitment of trainers and participants was conducted by designated members of the consortium, ensuring balanced representation from each participating country within the consortium partners. All of them followed a dissemination strategy, in which an invitation letter and an information brochure, was developed to ensure that all members were aligned. 843 contributors were recruited, into two cohorts, to participate in the *DigiCanTrain* programme, comprising 15.78% (n = 133) trainers and 84.22% (n = 710) participants.116 trainers and 678 participants registered into the Moodle platform. Finally, 47 trainers and 165 participants completed the *DigiCanTrain* programme giving a completion rate of 40.52% and 24.34%, respectively by 15.9.2025. The programme platform is kept open for both trainers and participants to complete by end of January 2026 to improve the completion rates. Those who finalised the training in time had an excellent opinion of the programme, finding it extremally useful to improve their understanding of digital knowledge applied to oncology.

This report is structured as follows: Chapter one – *1. Introduction* – gives a general background of the project. Chapter two – *2. Objectives* – mentions the objectives of the pilot evaluation report. Chapter three – *3. Methodology* – describes the steps followed by the designated members of the consortium for the trainers and participants' recruitment process, the contingency plan, the learning pathways and the pilot programme satisfaction by trainers and participants. Chapter four – *4. Results* – presents an analysis of the main characteristics of both trainers and participants, including their sociodemographic characteristics, programme completion rates, submodule grades, and responses to the satisfaction questionnaires for modules and submodules. Chapter five – *5. Conclusions* – describes the main points reached after completing the pilot phase of the project. The deliverable is completed with chapter six – *6. References* and chapter seven – *7. Annexes*: *Annex A: DigiCanTrain trainers' brochure*, *Annex B: Participants recruitment process guideline*, *Annex C: DigiCanTrain participants' brochure*.

OUTLINE

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1. Introduction

Cancer is the second leading cause of death worldwide and presents a significant public health challenge, especially in Europe. In 2022, close to 2.74 million new of cancer were diagnosed. By 2040, without quick actions, cases are expected to exceed 3.24 million according to European Cancer Information System (1). The increasing number of those getting cancer will pose a significant challenge for public health and will touch upon the lives of many. Cancer care requires effective collaboration by an interprofessional healthcare team (2). In a very short time, healthcare and cancer care in the Europe has been faced to rapidly respond to the COVID-19 pandemic. The COVID-19 pandemic showed the importance of mutual learning, sharing of knowledge and updating skills to save lives and achieve better health outcomes. The COVID-19 pandemic also showed the potential of digitalization to transform the way healthcare is delivered and therefore bringing efficiency, transparency and convenience (3). Moreover, healthcare is rapidly shifting towards a digitized future where technological solutions are used in the care of people with cancer across the care continuum and settings (4).

Correctly used eHealth technology can be a useful tool for facilitating a dialogue among healthcare professionals (HCPs) and meet health and care needs of people affected by cancer. eHealth has the potential to better the delivery of cancer care through improved patient–provider communication, enhanced symptom and toxicity assessment and management, and optimised patient engagement across the cancer care continuum (3). Digital technology is an inevitable part of the future of European healthcare. Despite the current use of e-technology, its positive effects and its potential, most health professionals feel insufficiently trained to deal with the digital revolution.

Digital Skills Training for Health Care Professionals in Oncology (*DigiCanTrain*) project implements a new digital skills training for cancer healthcare workforce in Europe by supporting the development of more effective, person-centred healthcare, digital cancer care services and the use of contemporary eHealth technology. *DigiCanTrain* focus is on up-skilling and re-skilling the healthcare workforce in the cancer care setting which then in return support the development of effective and person-centred healthcare and digital healthcare services and use of contemporary eHealth technology by HCP. *DigiCanTrain* project will design, pilot, and evaluate *DigiCanTrain* education and training programme for trainers, and clinical and non-clinical HCPs (nHCPs) with the purpose to improve access to continuing professional education, increase digital skills, and the use of digital health technology by HCP and nHCP working with people affected by cancer.

To provide HCPs and non-clinical HCPs with digital competences related to oncology, *WP4 – Pilot of DigiCanTrain programme* – was implemented immediately after the design and development of *WP3 – Co-design of the DigiCanTrain programme* – and tested the feasibility of the designed programme in the WP3.

2. Objectives

The main objective of this deliverable is to report the evaluation of the short-term impact and feasibility of the *DigiCanTrain* pilot programme.

To achieve the general objective, several specific objectives were set:

- Execute the pilot programme in partner countries.
- Examine recruitment progress for both trainers and participants.
- Analyse profiles and sociodemographic characteristics of trainers and participants that enrolled in the programme and those who complete the pilot.
- Assess the success of the pilot programme by examining both the completion rates and the grades obtained for each submodule.
- Explore expectations of both trainers and participants by evaluating the main findings from the satisfaction questionnaires for each module and submodule.

3. Deliverable of the pilot

First, a face-to-face meeting was held with all members of the consortium in Barcelona (Spain) at the headquarters of Open University of Catalonia (UOC), partner members, during the 17th and 18th of September 2024. The primary objective of this meeting was to present the status of the *DigiCanTrain* pilot programme implementation and the steps to implement it to consortium members, with the aim of developing an effective strategy for recruiting both trainers and participants. The meeting was led by UOC and Catalan Institute of Oncology (ICO). The meeting agenda was divided into the following blocks:

- Block I: Welcome and project overview
- Block II: Recruitment process
- Block III: Recruitment update
- Block IV: Pilot implementation
- Block V: Programme evaluation
- Block VI: Communication and dissemination strategies
- Block VII: Conclusions and closing

The following subsections outline both trainers and participants recruitment methodology, contingency plan, learning pathway and programme evaluation which mainly were presented and discussed during the meeting in Barcelona (Spain).

3.1. Trainers' recruitment process

DigiCanTrain consortium members defined a trainer as a facilitator and supporter of the learning process. Trainer was responsible for empowering participants, encouraging independent learning, and helping to solve any doubts or challenges related to the process that may arise.

To become a trainer, the consortium members reached a consensus that **trainer** had to have one of the following **profiles**:

- **Medical doctor specialists:** such as clinical oncology, radiology, or surgery.
- **General practitioners:** primary care physicians.

- **Nurses:** general nurses providing care to individuals affected by cancer and those with specialized training in cancer nursing.

- **Allied healthcare professionals (allied HCPs):** psychologists, counsellors, and social workers involved in supporting cancer care.

- **Non-clinical healthcare professionals (nHCPs):** professionals working on NGO focused on cancer advocacy and support, managers overseeing cancer care facilities and programs, researchers with an interest in oncology, educators involved in training healthcare practitioners or the public about cancer.

Apart from the profile, professionals interested in becoming trainers were expected to fulfil the following eligibility criteria: (I) possess **experience in oncology**, (II) demonstrate **technological proficiency**, (III) be **familiar with e-Learning**, (IV) show a willingness to stay **updated with current digital tools**, (V) display **strong motivation**, and (VI) commit **enough time for the programme**.

Moreover, trainers who express interest in participating in the pilot phase were required to accept the following commitments: (I) become thoroughly **familiar with programme's content**, **structure, and objectives**, (II) complete ***Module 1 – Train the trainers***, ***Module 2 – Interprofessional education***, and the **specific professional module** tailored to each participant profile (nurses, specialists/general medicine, or non-clinical HCPs), and (III) participate in **programme evaluation** by completing pre- and post- surveys related to the programme in general, as well as, the modules and submodules.

Finally, as trainers, their responsibilities in the project were: (I) **asset in the recruitment** of participants, and (II) be **responsible** for the operation of **three forums** that have the programme. The three forums were: (I) each profile forum by resolving doubts, (II) general information forum by sending reminders, welcoming students and notifying the trainees any aspect related to the course, and (III) trainers' forum by sharing information with other trainers.

Each consortium partners had an extensive network of contacts who might be interested in participating in the programme and becoming trainers. For this reason, the **members responsible for recruiting trainers managed the process independently**, based on the guidelines set during the meeting in Barcelona. According to these guidelines, it was mainly expected that professionals from the consortium countries (Finland, Estonia, Spain, Ireland, Romania, and Greece) and indirect beneficiaries' country, (Belgium) would be recruited as trainers.

Recruitment process started after the meeting in December 2024. Each member of the consortium **sent the recruitment materials,** designed in previous WP**,** to identified potential trainers or entities via email. This email included an invitation

letter and a brochure explaining the main characteristics of the *DigiCanTrain* course, such as course details, overview, content, benefits, requisites, responsibilities, and trainers' commitments (see Annex A). To register, an **online registration form**, Google Forms, **was shared** with potential **participants**. The form included fields for collecting trainers' personal information, as well as sociodemographic information and how participants' personal data was processed. The profile and sociodemographic data of trainers obtained from the application forms, were analysed using Microsoft Excel. This information was used to select the final trainers based on the eligibility criteria established by the consortium. The received applications were reviewed, and the final candidates were **notified of their enrolment in the programme via email.** Finally, trainers were able to register for coursing the *DigiCanTrain* programme, which was hosted on the **University of Turku's Moodle platform.**

From this recruitment process, it was expected that around 60 trainers enrolled into the *DigiCanTrain* trainers' programme. To ensure that approximately 60 trainers successfully enrolled into the pilot programme, an additional 10-15% of trainers were expected to be recruited to account for potential dropouts or non-completions. Table 1 shows the approximate number of trainers that each consortium member was expected to recruit without considering the additional percentage for the dropouts.

Country	Partner	Estimated number of trainers recruited
FINLAND (n = 5)	Turku UAS	2
	UTU	NA
	THL	NA
	VARNA	2
	CSF	1
IRELAND (n = 16)	NUI	14
	NCCP	2
SPAIN (n = 5)	ICO	5
	UOC	NA
ESTONIA (n = 13)	TTK	13
ROMANIA (n = 4)	IOCN	4
BELGIUM (n = 6)	EONS	1
	ECO	5
GREECE (n = 12)	NKUA	12
TOTAL		**61**

Table 1. Estimated minimum number of trainers that should have been recruited to participate in the pilot training.

Nevertheless, recruitment of trainers was not limited by country or profession/profile. To promote general recruitment and allow **trainers from other countries** to participate, **dissemination efforts were enhanced** through general email campaign, targeted promotion on healthcare professional platforms,

outreach to both professional and patient associations, and consortium members' social networks.

To ease the registration process, and be accessible to every interested in the training, **trainers brochure was available on *DigiCanTrain* webpage** (https://digicantrain.turkuamk.fi/for-trainers-and-participants/).

Trainers were recruited in two cohorts. The first one was between 20th July and 30th September 2024 as the pilot phase -Training of Trainers (ToT) - started in October 2024 and ended in January 2025. To increase the number of trainers another recruitment period was taken with same channels prior the second cohort started. The second cohort was from March 2025 to August 2025.

3.2. Participants recruitment process

DigiCanTrain consortium members defined a participant (trainee or learner) as a learner that assumed an active role in their own learning journey and was committed to assume the level of knowledge necessary to pass the evaluation tests with proactively addressing any doubts or questions that may arise during their learning experience and engaging with the material.

To become a participant, consortium members reached a consensus that candidates should predominantly meet one of the following profile criteria:

- **Medical doctor specialists:** such as clinical oncology, radiology, or surgery.
- **General practitioners:** primary care physicians.
- **Nurses:** general nurses providing care to individuals affected by cancer and those with specialized training in cancer nursing.
- **Allied-HCPs:** psychologists, counsellors, and social workers involved in supporting cancer care.
- **nHCPs:** professionals working on NGO focused on cancer advocacy and support, managers overseeing cancer care facilities and programs, researchers with an interest in oncology, educators involved in training healthcare practitioners or the public about cancer.

In addition to meeting the profile criteria, candidates interested in participating in the programme as participants were expected to fulfil the following eligibility criteria: (I) express a **strong motivation**, (II) show **commitment to complete the programme** regardless of working hours, and (III) have an interest in **applying the knowledge learned** in their day-to-day work.

Moreover, participants who enrolled in the pilot phase had to accept the following commitments: (I) **complete the modules** according to each participant profile (nurses, specialists/general medicine, allied HCPs or nHCPs), and (II) **complete programme's evaluation questioners** (post-, pre- and feasibility programme surveys and the satisfaction evaluation module and submodule questionnaires)

Participants also had different responsibilities to follow: (I) **self-directed learning**, (II) **participate in recommended modules**, both compulsory and optional, (III) **provide feedback to the trainer**, sharing insights, challenges, and suggestions, and (IV) **use the different communication channels** provided to interact with peers, ask questions, and seek clarifications.

Initially, it was expected that a **minimum of 180 participants should have recruited to participate in the pilot programme**. To ensure that the desired number of professionals would be recruited the training, the recruitment rate had to be at least 10-15% more by country and profile. Table 2 shows the minimum number of participants expected to participate into the *DigiCanTrain* programme based on professional profile and consortium country (the additional 10-15% is not included).

		By country						
		Finland	Estonia	Spain	Ireland	Romania	Greece	**TOTAL**
By professional profile	Medical doctors' specialist and general practitioners	5	5	10	5	5	15	45
	Nurses	5	5	20	5	5	25	65
	Non-HCP	5	5	5	5	5	10	35
	Allied HCP	5	5	5	5	5	10	35
TOTAL		20	20	40	20	20	60	**180**

Table 2. Minimum number of participants that should have been recruited to participate into the DigiCanTrain pilot programme divided by country and profile

To streamline the recruitment process and ensure alignment among all involved consortium members, a participant recruitment guideline was developed (see Annex B). In general, to recruit learners, consortium entities had to follow the same steps as for recruiting trainers. First, target **participants** for each profile **were identified** by the involved consortium members. Then, **participants' recruitment materials** (invitation letter and brochure) **were sent** to the identified learners via email. The brochure or information sheet contained sections such as general overview, benefits gained, and characteristics to meet to be elected, and an online application form link to register (see Annex C). The **online registration form was filled out by interested applicants**. This form was used to collect personal data

and sociodemographic information to assess the eligibility of those registered, as well as to inform them about personal data treatment and usage. The **profile and sociodemographic data** of participants obtained from the application forms, were analysed using **Microsoft Excel.** The **received applications were reviewed,** and the **acceptance into the programme** of the selected students **was notified** via emails. Finally, participants were able to register for coursing the *DigiCanTrain* programme, which was hosted on the **University of Turku's Moodle platform.**

Concurrently, with the dissemination of emails to the participant distribution lists provided by each entity involved in the recruitment process, **each consortium partner** also **developed its own complementary diffusion strategy**. These strategies included a general email campaign, promotion on healthcare professional platforms, outreach to professional and patient associations, and dissemination of the programme through their social networks. This allowed participants from other countries to enrol into the programme. Then, participants could register on the platform and take the course.

Participants information and registration link were available on the ***DigiCanTrain* webpage** (https://digicantrain.turkuamk.fi/for-trainers-and-participants/), easily accessible for interested parties.

Participants were recruited in two cohorts. The first one was performed between October and December 2024, and participants' *DigiCanTrain* pilot programme started in January 2025 and ended in July 2025. To increase the number of participants another recruitment period was taken with same channels prior the second cohort started. The second cohort took place between March 2025 to August 2025.

3.3. Contingency plan

WP4 coordinators were responsible for supervising that the recruitment of trainers and participants was carried out correctly. WP4 coordinators developed a contingency plan, this ensured that recruitment was effective, and each involved entity achieved the proposed number of trainers and participants. The contingency plan to guarantee broad visibility of the *DigiCanTrain* programme was:

- **Engage with local networks**, including relevant organizations and professional associations to foster collaboration and amplify outreach.
- **Use digital channels** such as social media platforms and dedicated online resources were leveraged to efficiently disseminate key messages of the project, such as benefits, to target audiences.
- **Collaborate with relevant community groups and institutions** aligned with the *DigiCanTrain* objectives.

- **Explore creative approaches** such as offering incentives to attract participants or sharing success stories and testimonials to motivate potential recruits.

3.4. Trainers and participants learning pathways

Trainees and participants registered into the programme had to follow the learning pathways shown in Figure 1 and Figure 2, respectively, which were designed in *WP2 – Co-design of the DigiCanTrain programme.*

Before starting the course, trainers were asked to complete a **pre-evaluation survey**. The survey was voluntary and accessible by a link to Webropol on the Moodle platform and available in 6 languages (consortium languages). The **course started** by completing *Module 1 – Train the trainers* - and *Module 2 – Interprofessional education*. Then, trainers had to pursue the profession-specific module. Finally, at the end of the programme, between March to September 2025, trainers were encouraged to provide feedback by completing two voluntary surveys: the **post-survey,** which measured the skills developed, and the **feasibility and feedback survey.** Post- and feasibility and feedback survey link, which was the same, was sent via email, to all the trainers registered in the Moodle course, independently if they finalized the training (see Figure 1).

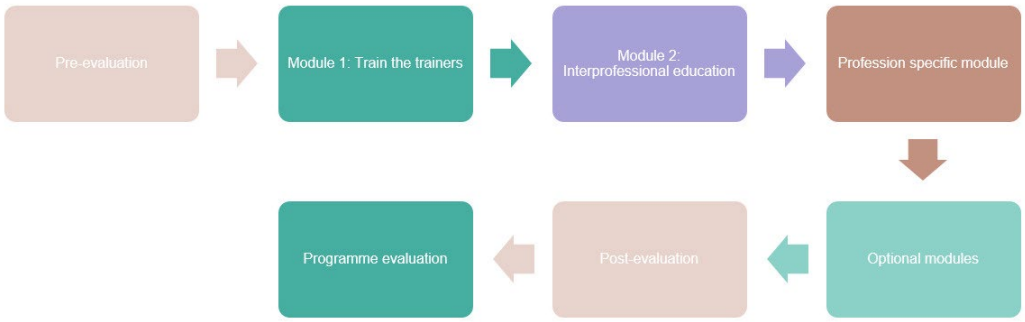

Figure 1. Trainer learning modules pathway

On the other hand, all participants had to complete *Module 2 – Interprofessional education* and one of the specialists' modules (Module 3, 4 or 5), depending on their professional profile. Like the trainers, learners responded voluntarily to a **pre-post and feasibility surveys to evaluate the overall pilot programme implementation** and the mandatory **submodule assessment (quiz)** and **submodule and module satisfaction evaluation questionnaires** (see Figure 2). Surveys and questionnaires were the same for both trainers and participants and qualitative questions of the evaluation questionnaires were analysed by Microsoft Excel.

Optionally, trainers and participants could complete other modules that were not from their speciality.

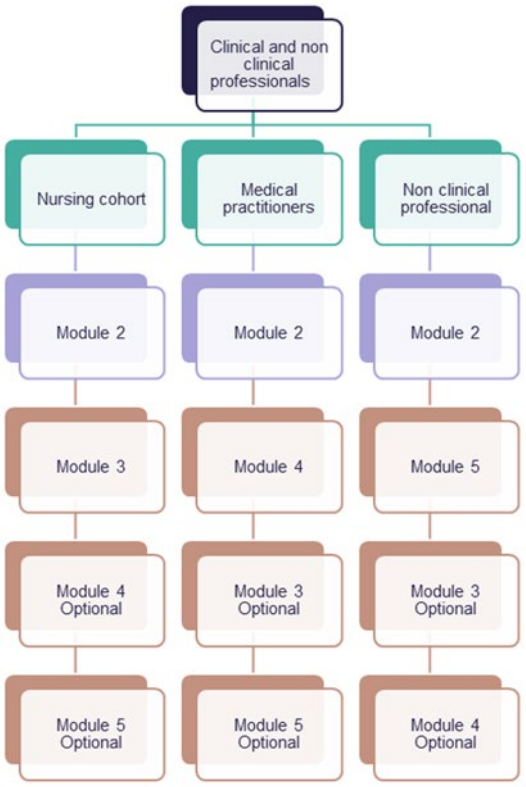

Figure 2. Participant learning modules pathway

3.5. Pilot programme evaluation

Pilot implementation was evaluated to assess the *DigiCanTrain* programme from multiple perspectives

1. **Pre- and post- surveys:** evaluated the impact on digital skills in care among trainers and participants. To facilitate their understanding, pre- and post-surveys were translated into the different languages of the consortium members: English, Finnish, Spanish, Estonian, Greek and Romanian. These results were explained analysed deeply in *WP5 - Quality Control and Evaluation*.

2. **Feedback and feasibility surveys for trainers and participants:** evaluated trainers and participants experience, overall impression of the project, and its implementation process. As pre- and post- surveys, this survey translated in the languages of the consortium members. These results were explained and analysed deeply in *WP5 - Quality Control and Evaluation*.

3. **Feedback and feasibility surveys for organisations:** designed to evaluate the experience of entities that participated in the project, including satisfaction, general opinions, and future development needs, at the end of the project lifetime through an online questionnaire. These results were explained and analysed deeply in *WP5 - Quality Control and Evaluation*.

4. **Submodule assessment (quiz):** designed to evaluate quantitatively the knowledge acquired by both trainers and participants at the end of each submodule. Each assessment quiz was qualified through a grade from 0 to 100 points. The submodule assessment was mandatory to complete in order to obtain the final certificate.

5. **Submodule evaluation:** designed to evaluate subjectively if the new acquired knowledge and skills were useful. The submodule evaluation questionnaire was compulsory for the certification and was only available in English via Moodle. The submodule evaluation consisted of **4 quantitative close-ended questions** based on Linkert scale, rated from 1 to 10:

    - *1. Do you have an improved understanding and awareness of the knowledge and/or skills of the content provided in this submodule? (Rated I do not (1) to I do (10))*

    - *2. Do you feel more confident in relation to your knowledge and/or skills after completing this submodule? (Rated Do not feel confident (1) to Feel confident (10))*

    - *3.Do you think that you will integrate this submodule specific knowledge and/or skills into your workplace environment/clinical practice? (Rated Very unlikely (1) to Very likely (10))*

    - *4. Do you think the assessment for this submodule was helpful to your learning? (Rated Not helpful (1) to Helpful (10))*

For reporting purposes, the results of each submodule have been grouped into the following categories (I) 0 to 4: BAD; (II) 5 to 6: SATISFACTORY, (III) 7 to 8: GOOD, and (IV) 9 to 10: EXCELLENT. Questions not answered by some of the learners were marketed as N/A. Question analysis was done using Microsoft Excel.

4. **Module evaluation:** designed to evaluate subjectively the time required to complete the module, the clarity of the material, the suitability of the delivery mode, among others. Module evaluation was done after completing all submodules from the same module, it was compulsory for the certification and was available only in English via Moodle platform. The module satisfaction evaluation questionnaire consisted of **17 quantitative**

and close-ended questions, rated on a scale from 1 to 10 and **6 qualitative and open-ended questions.** All the qualitative question were analysed using Microsoft Excel. Following there are listed **17 quantitative and close-ended questions**:

- *1. The module title is explicit*
- *2. The module title links logically to other program modules*
- *3. Objectives are clearly defined*
- *4. Objectives identify competencies that will be covered in the module*
- *5. Objectives list the specific skills or knowledge the learner will gain by taking the module*
- *6. Content supports identified training objectives*
- *7.Content includes required topics*
- *8. Content or supplemental materials consider and include stakeholder recommendations*
- *9. Module and supplemental materials are culturally appropriate, use culturally sensitive language, and acknowledge cultural norms*
- *10. Materials are accessible in an individual's preferred language*
- *11. Module accommodates different learning styles*
- *12. The module accommodates a variety of relevant illustrations/examples/ visual aids*
- *13. The module is accessible to all potential participants*
- *14. Learning outcomes are clearly described*
- *15. Learning outcomes are measurable*
- *16. The instructional approach helps the learner to learn, assimilate, and apply the content*
- *17. Interactivity is used throughout the module to involve and engage the learner in active learning*)

Following there are enumerated **6 qualitative and open-ended questions:**

- *1. Which part of the training was the most useful for you?*
- *2. How can the information gained be applied in your daily practice?*
- *3. Do you have any recommendations on how to improve the training?*
- *4. Was there sufficient time?*
- *5. Would you recommend this module to other professionals?*
- *6. Would you like to add anything else?*

5. **Completion rates:** measured the proportion of both trainers and participants who successfully complete all the submodules of their learning pathway.

4. Results

4.1. Recruitment strategies

Consortium countries such as Greece or Spain, relied on more **traditional recruitment methods, such as newsletters and email campaigns** (see *section 3. Deliverable of the pilot, trainers and participants recruitment process*) were effective and appropriate to achieve the desired number of trainers and participants. Nonetheless, in some consortium countries, such as Finland or Ireland, **contingency measures were implemented** to ensure enrolment targets were achieved. These contingency measures included (I) **fostering engagement with local networks and collaborating with relevant community groups and institutions** through visits to local cancer centres and establishing links with national cancer organisations, regional Managed Clinical and Academic Cancer Networks, nursing directorates education offices of oncology hospitals, and large general hospitals in major urban centres, and (II) **exploring creative approaches** though emailing trainers to ask them to personally contact potential participants to join the *DigiCanTrain* programme.

Contacted networks and healthcare groups involved were **professional and academic networks, patient advocacy groups, governmental bodies, hospitals, primary care clinics, specialist clinics, and public health institutions**. The role of these networks and healthcare groups was served as key point of contact to help consortium members to disseminate *DigiCanTrain* recruitment materials (see Annex A and Annex C) and the benefits on joining and completing the programme within their contacts and network.

Given that the programme was highly focused on the field of oncology, consortium members in charge of handling their local recruitment preferred to minimize the use of digital channels, such as social media platforms, to avoid reaching undesired audiences during the recruitment process.

Incentives offered by *DigiCanTrain* programme to encourage potential trainers and participants to take the course were relevant both for boosting registration and for promoting retention once they were enrolled. The *DigiCanTrain* programme incentives included free registration and training programme, a certificate of attendance/participation, micro-credentials recognition, and offer a space to meet other professionals and share experiences. Among these, **the most valued incentive** for both trainers and participants **was the certificate of attendance/participation**. In some institutions, presenting this certificate could lead to get some benefits, such as professional recognition or promotion. However,

in institutions where certificate did not provide any benefit, getting a certificate did not appear to influence in trainers and participants motivation or participation.

During the design of the programme, several **potential barriers that could hinder the enrolment** of trainers and participants **were** identified and **minimized** to foster engagement (see Table 3).

Barriers	Action to minimize barriers
Time commitment	24/7 access to the course by computer or tablet
Type of training	100% online format
Cost/resources	Free of registration
Language barriers	Translation of the content into the languages of the consortium member countries

Table 3. Identified barriers and their actions to minimize them

4.2. Recruitment results

The recruitment process was carried out in two cohorts. The first cohort included 811 individuals, of which 14.92% (n = 121) were trainers and 85.08% (n = 690) were participants. The second cohort enrolled another 32 individuals, 37.50% (n = 12) identified as trainers and 62.50% (n = 20) as participants. Altogether, 843 contributors were recruited to participate in the *DigiCanTrain* programme, comprising 15.78% (n = 133) trainers and 84.22% (n = 710) participants.

Below is a summary of the sociodemographic characteristics of the enrolled individuals, presented separately for trainers and learners, as well as, for both cohorts.

Gender

Regarding gender, this information was only collected for participants; it was not requested for the trainers. **Female participation predominated in both cohorts**. Cohort 1: 78.99% (n = 545) were female, while 20.87% (n = 144) were male and 0.14% (n = 1) did not answer. Cohort 2 consisted of 70.00% (n = 14) females and 30.00% (n = 6) male participants (see Figure 3).

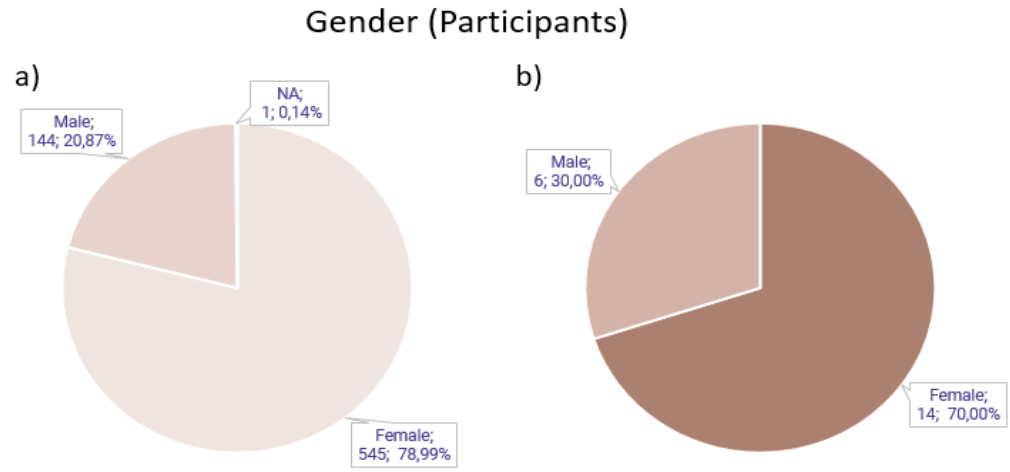

Figure 3. Gender distribution for participants (a) first cohort and (b) second cohort

These findings suggest that there was no gender balance in participants' enrolment, and more women were enlisted, potentially because of the specific nurse cohort programme, a profession in which female gender predominate.

Age

Age was only collected for participants; it was not requested for the trainers. In the first cohort, the age range in which more people were enrolled was 31–45 years, who accounted for 44.64% (n = 308), followed by 46–60 years at 37.54% (n = 259), 18–30 years at 14.64% (n = 101), and 61 years or more at 3.19% (n = 22). In the second cohort, the results were slightly different: 45.00% (n = 9) were between 18 and 30 years, 40.00% (n = 8) were between 31 and 45 years, and 15.00% (n = 3) were between 46 and 60 years, while nobody who was 61 years or more enrolled (see Figure 4).

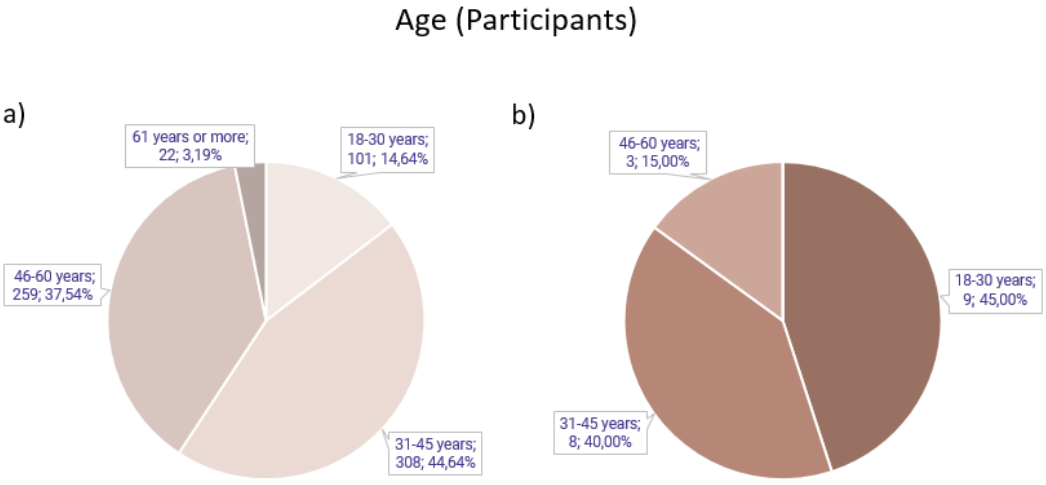

Figure 4. Age distribution in the (a) first cohort and (b) second cohort

Based on these results, **professionals in their mid-career, who possessed some professional experience, were eager to enhance their understating of digital tools** and subsequently applying them into their daily work.

Country of work and workplace

Characteristics of healthcare workplaces, such as digitalisation and infrastructure, training and education, working conditions, **differ between countries**, in the table 3 and table 4 the workplace is broken down across countries. Based on the current countries of employment of participants and trainers, individuals were classified according to consortium member countries (Spain, Finland, Ireland, Romania, and Greece), other European and non-European countries and grouped in their type of workplace. **There were notable differences in the countries of employment between the first and second cohort. In the first cohort, trainers and participants recruited were from all consortium member countries.** Regarding the trainers' first cohort, their distributions were as follows: Spain 42.98% (n = 52), Finland 6.61% (n = 8), Estonia 9.09% (n = 11), Ireland 9.09% (n = 11), Romania 7.44% (n = 9), Greece 7.44% (n = 9), other European countries 13.22% (n = 16), and non-European countries 4.13% (n = 5). Participants' first cohort classification was: Spain 40.29% (n = 278), Finland 3.33% (n = 23), Estonia 16.81% (n = 116), Ireland 4.93% (n = 34), Romania 5.51% (n = 38), Greece 16.09% (n = 111), other European countries 1.59% (n = 11), and non-European countries 11.45% (n = 79) (see Table 4 and Table 5).

In the second cohort, trainers' countries of employment were distributed as follows: 8.33% (n = 1) trainers from Finland, Estonia, Romania, and non-European countries and 66.67% (n = 8) from Greece. There was no representation from Spain, Ireland, or any other European country. Participants' second cohort representation mostly came from Romania with 45.00% (n = 9), Greece with 25.00% (n = 5) and less representation from Spain with 15.00% (n = 3), Finland with 10.00% (n = 2) and Ireland with 5.00% (n = 1). There were no people from Estonia, other European countries or non-European countries (see Table 4 and Table 5).

These findings indicate that the **number of individuals enrolled in the project was influenced by the country population**. Greater number of trainers and participants were recruited in larger countries, like Spain and Greece. On the other hand, the first cohort recruited the majority of trainers and participants, meaning that the **initial diffusion strategy was executed effectively** and reached a significant number of professionals.

	Cancer Treatment centre	Association for healthcare professionals	Education institute	Education institute	Governmental institute	National or regional cancer society	Other	Other type of cancer care unit	Other type of health care unit	Total general
Trainers - Cohort 1	**58 47.93%**	**5 4.13%**		**12 9.92%**	**2 1.65%**	**5 4.13%**	**7 5.79%**	**13 10.74%**	**19 15.70%**	**121**
Estonia	1			2				6	2	11
Finland	6					1	1			8
Greece	4			4					1	9
Ireland	8			2	1					11
Romania	7			1			1			9
Spain	27	1		1		3	4	7	9	52
Other EU countries	5	3		1		1	1		5	16
Non-EU countries		1		1	1				2	5
Trainers - Cohort 2	**1 8.33%**		**1 8.33%**	**2 16.67%**	**1 8.33%**	**2 16.67%**		**1 8.33%**	**4 33.33%**	**12**
Estonia						1				1
Finland			1							1
Greece	1			1		1		1	4	8
Romania					1					1
Non-EU countries				1						1
Total general	**59**	**5**	**1**	**14**	**3**	**7**	**7**	**14**	**23**	**133**

Table 4. Trainers recruitment distribution according to their type of workplace and country

	Cancer Treatment centre	Association for healthcare professionals	Education institute	Governmental institute	National or regional cancer society	Other type of cancer care unit	Other type of health care unit	Other	NA	Total general
Participants – Cohort 1	**314 45.51%**	**23 3.33%**	**30 4.35%**	**38 5.51%**	**7 1.01%**	**78 11.30%**	**165 23.91%**	**34 4.93%**	**1 0.14%**	**690**
Estonia	61	1	10	4	2	9	24	5		116
Finland	15				3	2	3			23
Greece	50	1	8	3		14	27	7	1	111
Ireland	27	1	2			2	2			34
Romania	30	2	1	1		1	3			38
Spain	104	12	5	15		42	83	17		278
Non-EU countries	23	4	3	15	1	7	22	4		79
Other EU countries	4	2	1		1	1	1	1		11
Participants - Cohort 2	**8 40%**		**1 5%**		**1 5%**	**1 5%**	**9 45%**			**20**
Finland					1		1			2
Greece	1		1				3			5
Ireland							1			1
Romania	7					1	1			9
Spain							3			3
Total general	**322**	**23**	**31**	**38**	**8**	**79**	**174**	**34**	**1**	**710**

Table 5. Participants recruitment distribution according to their type of workplace and country

In the first cohort, trainers' workplace type was tracked as follows: 47.93% (n = 58) worked in a cancer treatment centre, 15.70% (n = 19) worked in another type of

health care unit, 10.74% (n = 13) worked in another type of cancer care unit, 9.92% (n = 12) worked in an educational institute, 4.13% (n = 5) worked in a national or regional cancer society, 4.13% (n = 5) worked in an association for healthcare professionals, only 1.65% (n = 2) worked in a governmental institute and 5.79% (n = 7) worked in other types of organisations not listed here. Participants' workplace type was as detailed: 45.51% (n = 314) worked in a cancer treatment centre, 23.91% (n = 165) worked in another type of health care unit, 11.30% (n = 78) worked in another type of cancer care unit, 5.51% (n = 38) worked in a governmental institute, 4.35% (n = 30) worked in an educational institute, 3.33% (n = 23) worked in an association for healthcare professionals, 1.01% (n = 7) worked in a national or regional cancer society, 4.93% (n = 34) worked in other types of organisations and 0.14% (n = 1) did not answer (see Table 4 and Table 5).

In the second cohort, workplace of trainers was distributed as follows: 33.33% (n = 4) worked in another type of healthcare units, 16.67% (n = 2) worked in a national or regional cancer society and an educational institute, and 8.33% (n = 1) worked in each of the following organisations: cancer treatment centre, another type of cancer care unit and governmental institute. No trainers were employed in an association for healthcare professionals or other types of organisations. Participants predominantly worked in other types of health care unit, representing 45.00% (n = 9) of the sample. 40.00% (n = 8) were employed in cancer treatment centres. Another type of cancer care unit, national or regional society and education institute, each type of organisation accounted for 5.00% (n = 1). No participants worked in association for healthcare professionals, governmental institute or other types of organisations (see Table 4 and Table 5).

The findings show that the percentage of trainers and participants who belonged to the same type of workplace was not balanced, with **cancer treatment centres being the most prevalent among the various types of workplaces**. These results were below the expectations because the training was focus on oncology.

Institution enrolled

In the first cohort, the institutions represented by both trainers and participants were quite diverse. Only a few trainers and participants came from the same institution. The three institutions with the highest number of participating trainees were: Catalan Institute of Oncology: 8.26% (n = 10), SA Pärnu Haigla: 7.44% (n = 9) and Institutul Oncologic "Prof. Dr. Ion Chiricuta" Cluj-Napoca: 4.96% (n = 6). Among the participants, the three most represented institutions were North Estonia Medical Centre Foundation - Põhja Eesti Regionaalhaigla: 9.13% (n = 63), Catalan Institute of Oncology: 5.36% (n = 37) and Institutul Oncologic "Prof.Dr.Ion Chiricuta" Cluj-Napoca: 3.04% (n = 21) (see Figure 5).

In reference to the second cohort, all trainers came from different institutions, while among participants the most represented institution was Institutul Oncologic

București Profesor Doctor Alexandru Trestioreanu which accounted for 30.00% (n = 6).

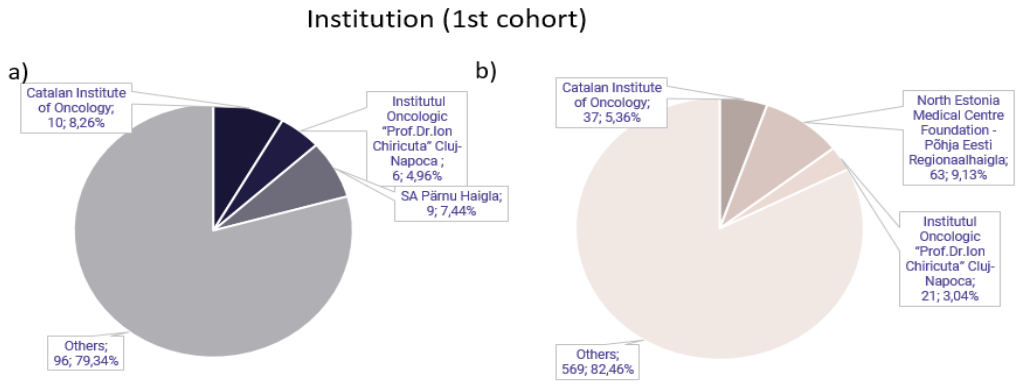

Figure 5. Name of the institutions from which (a) trainers and (b) participants from the first cohort come

This suggests that the dissemination was conducted with excellence, as evidenced by the **diversity of the enrolled individuals' affiliations**, which extended beyond the consortium institutions.

Profession

In the first cohort, 45.45% (n = 55) of trainers were from nursing-related professions, including 9.09% (n = 11) diploma/license nurse, 9.09% (n = 11) staff nurse, 13.22% (n = 16) specialist cancer nurse, 5.79% (n = 7) specialist nurse/other speciality, and 8.26% (n = 10) advanced practice nurse. Other noteworthy professionals' profiles include medical oncologist who represented 9.92% (n = 12) of trainers and radiation oncologist at 5.79% (n = 7). Oncology surgeons, palliative care specialists and pharmacists each profile accounted for 4.13% (n = 5) of the sample. General practitioners, radiographers, physiotherapists, dietitians, and urologists each profession represented less than 3.31% of the cohort. There was no representation from clinical oncologists, physicists, radiotherapists, occupational therapists and physiologists. However, the cohort included other HCPs (10.74%, n = 13), which were assistants, medical students, other medical specialities and allied HCPs such as social workers, and other nHCPs (6.61%, n = 8), which were manager, researchers, teachers. The roles included in other HCPs and non-clinical HCPs category did not align with the listed categories.

When analysing the participants in the first cohort, more than half of the participants in this case 52.82% (n = 365) were from nursing-related professions, break down in 15.35 % (n = 108) diploma/license nurse, 10.85% (n = 75) staff nurse, 12.61% (n = 87) specialist cancer nurse, 7.97% (n = 55) specialist nurse/other speciality, and 5.80% (n = 40) advanced practice nurse. Among the professions with notable recruitment levels were medical oncologists who accounted for 6.38% (n = 44). Radiation oncologists and general practitioners each profile

represented by 4.35% (n = 30), while radiographers accounted for 3.33% (n = 23), pharmacists accounted for 3.04% (n = 21). Other professional roles, each comprised less than 2.68% (n = 19) were oncology surgeons, radiotherapists, physiotherapists, dieticians, palliative care specialists, clinical oncologists, psychologists, occupational therapists, physicists and urologists. Additionally, roles that did not fall within the predefined categories were in other HCPs who accounted for 10.29% (n = 71) (including other medical specialists, assistants, medical students, and allied HCPs such as social workers, counsellors) and other nHCPs with 3.91% (n = 27) (including teachers, managers, researchers, pharmacy technicians) (see Figure 6).

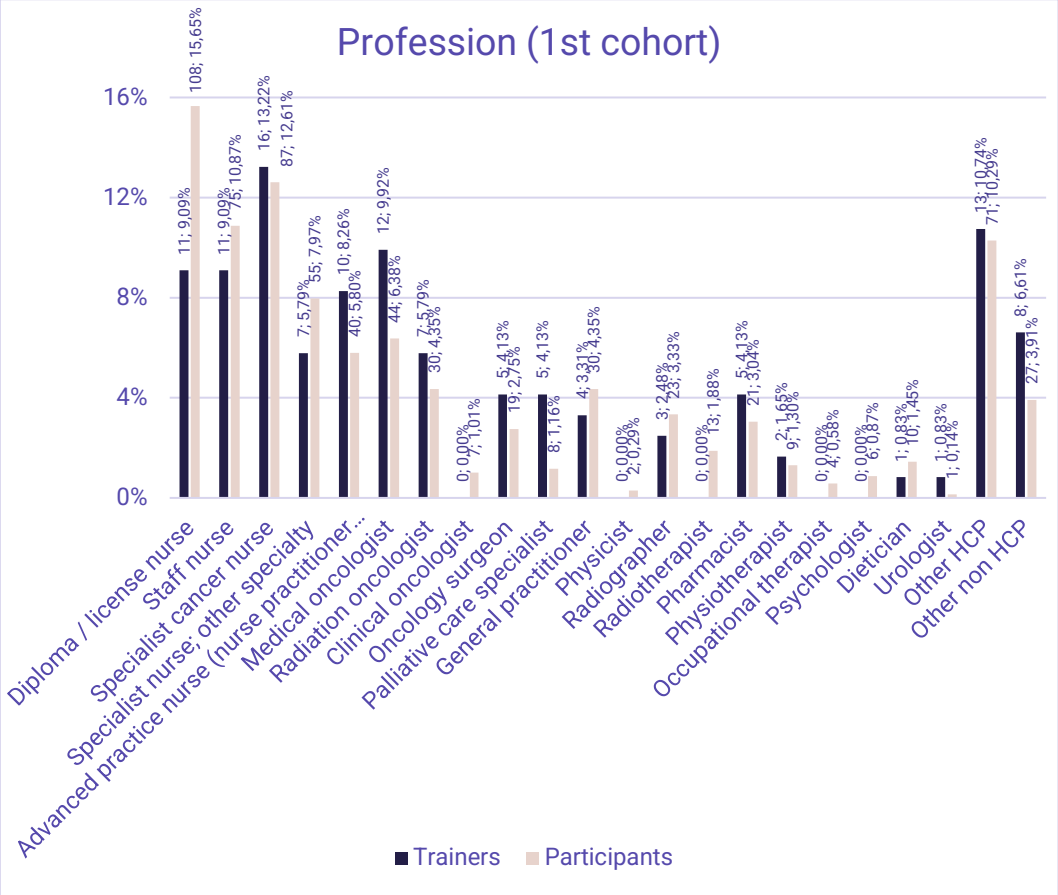

Figure 6. Professional roles distribution in the first cohort

In the second cohort, 58.33% (n = 7) of trainers were from nursing-related professions, including 8.33% (n = 1) staff nurse, 33.33% (n = 4) specialist cancer nurse, 8.33% (n = 1) specialist nurse/other specialty, and 8.33% (n = 1) advanced practice nurse. Other professional categories represented were radiation oncologists with 16.67% (n = 2) and palliative care specialists with 8.33% (n = 1). Other HCP and nHCP both each accounted for 8.33% (n =1) of the trainer group. No representation was observed for the remaining listed professional profiles.

Regarding participants, in the second cohort, in contrast with the first cohort, 4 out of 10 of the participants, (40.00%, n = 8) were radiation oncologists, while nursing-related professions accounted for 30.00% (n = 6), which was distributed as follows: 5.00% (n = 1) diploma/license nurse, 10.00% (n = 2) staff nurse, 5.00% (n = 1) specialist cancer nurse, 10.00% (n = 2) specialist nurse/other specialty, and non from advanced practice nurse. Other recruited professionals were general practitioner with 15.00% (n = 3) and medical oncologist and radiographer with a representation of 5.00% (n = 1) in each group. There was no representation from other professional roles (see Figure 7).

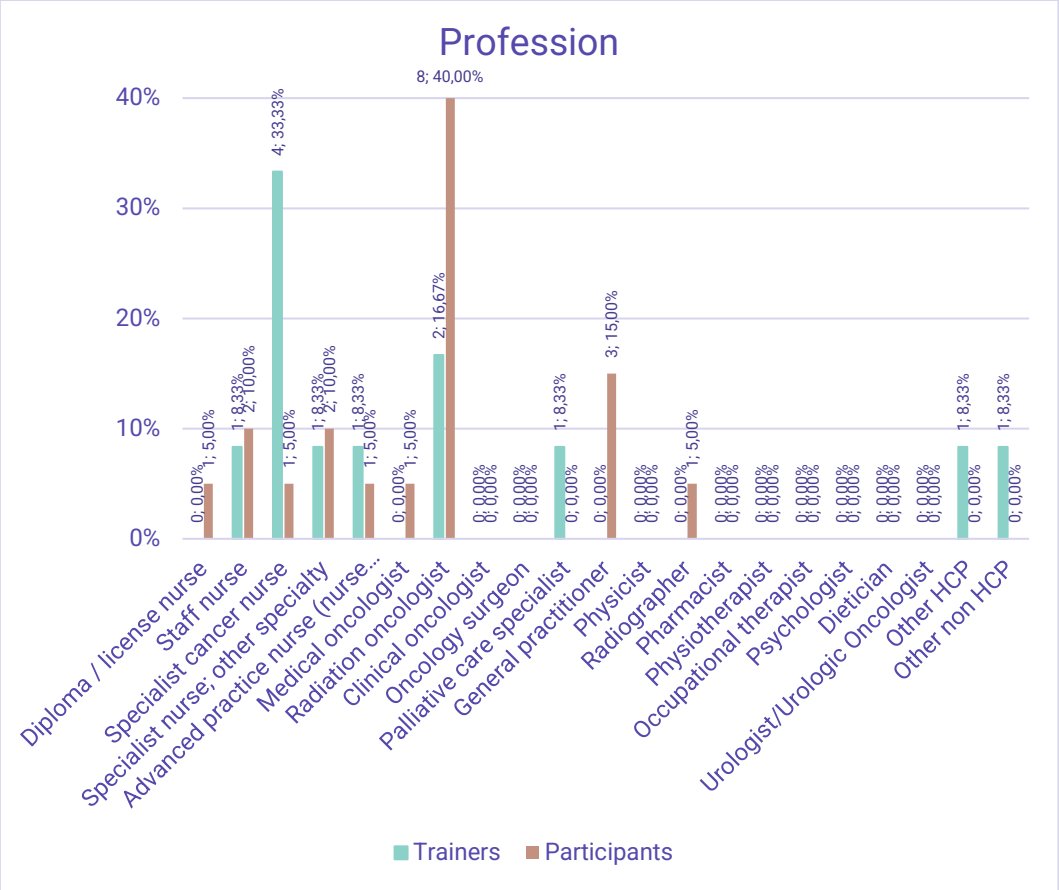

Figure 7. Professional roles distribution in the second cohort

According to these results, **HCPs were the group most interested in enrolling in course, with particular emphasis on the nurse cohort**. **Oncology HCPs also expressed interest, but their specialities were heterogenic**. nHCPs expressed less interest. Maybe it could be attributed to the fact that number of nHCPs reached during the dissemination campaign was fewer.

Learning pathway

Trainers and participants had to choose the learning pathway that they wanted to follow during the course. They could choose between (I) nurses, (II) MD's & general practitioners, (III) allied HCPs, and (IV) nHCPs pathways.

In the first cohort more than the half of the learners, 52.32% (n = 361) followed the nurses learning pathway, 26.09% (n = 180) chose the MD's & general practitioners, 12.75% (n = 88) did the allied-HCPs pathway and only 8.84% (n = 61) followed the nHCPs (see Figure 8 a). However, in the second cohort, participants enrolled mainly in the MD's & general practitioners path, which accounts for 60.00% (n = 12), followed by the nurses pathway with 30.00% (n = 6), and nHCPs and allied HCPs only enrolled 5.00% (n = 1) of learners in each learning pathway (see Figure 8 b).

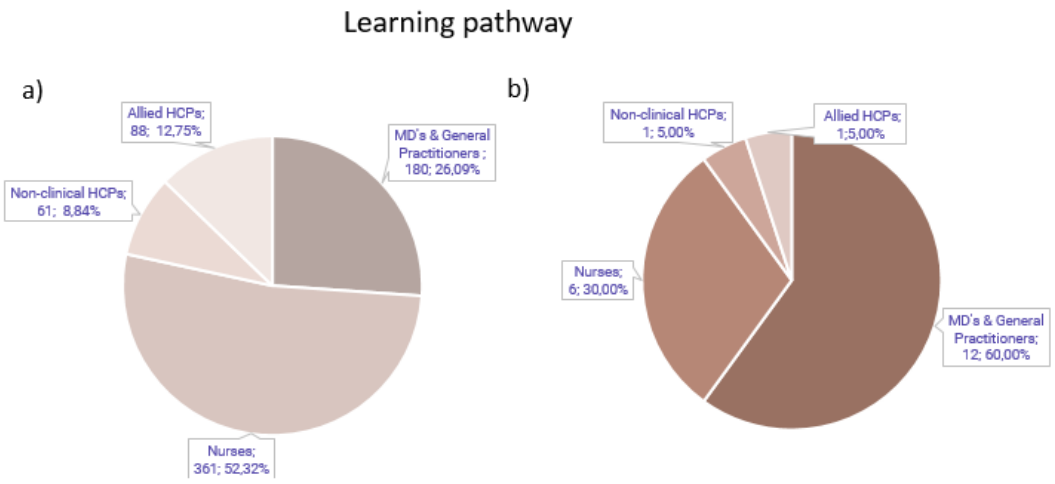

Figure 8. Learning pathway followed by participants (a) first cohort and (b) second cohort

The highest academic degree

There were five types of academic degrees: diploma, bachelor's, master's, licentiate, and doctoral degree. In the first cohort, most trainers and participants (46.28%; n = 56 and 36.23%, n = 250, respectively) reported that their highest level of academic studies was a master's degree. Conversely, only 11.57% (n = 14) and 10% (n = 69) of the trainers and participants, respectively, reported possessing a doctoral degree (see Figure 9).

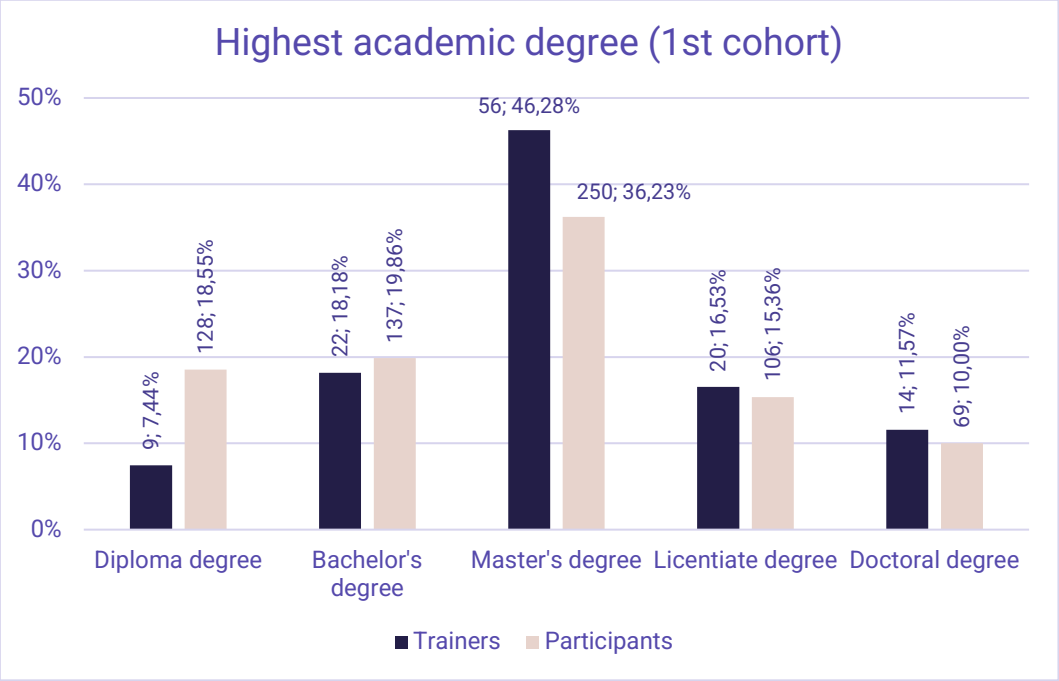

Figure 9. Highest academic degree level in the first cohort

In the second cohort, the distribution of the highest academic degree was like the first cohort. Among both trainers and learners, the most common highest academic qualification was a master's degree, accounting for 75% (n = 9) and 35% (n =7), respectively. For the trainers, bachelor's degree, licentiate degree and doctoral degree represented 8.33% (n = 1) while there was no representation from diploma degree. Among participants bachelor's degree accounted for 25.00% (n = 5), licentiate degree for 20.00% (n = 4), doctoral degree 15.00% (n = 3) (see Figure 10).

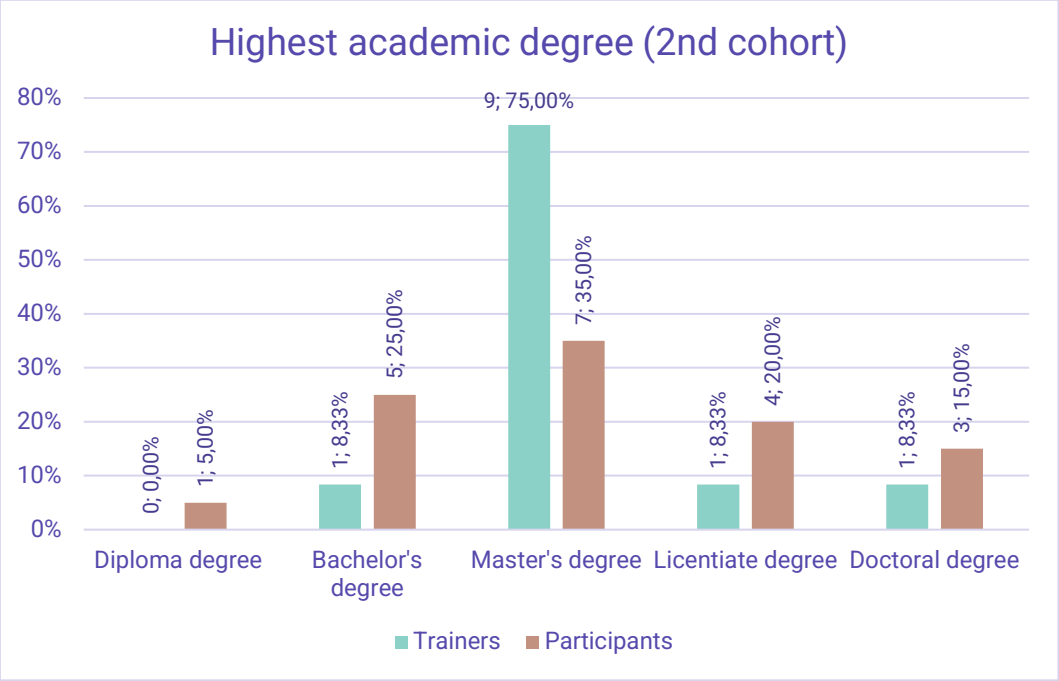

Figure 10. Highest academic degree level in the second cohort

These responses illustrated that **most HCPs and nHCPs elected to specialize by a master's degree,** while a **small number of them continue their specialization by pursuing a doctoral degree.**

Years of experience

Years of experience in cancer care were grouped according to the following ranges less than 2 years, from 2 to 5 years, from 6 to 10 years and over 10 years. In the first cohort, the years of work experience of trainers were tracked as following: less than 2 years and 3 – 5 years had the same amount 20.66% (n = 25) each group, 6 – 10 years was 19.83% (n = 24) and over 10 years, which was the majority, was 38.84% (n = 47). The years of work experience in cancer care of the learners followed a similar trend as for the trainers. More than one third of the trainees (38.84%, n = 268) had over 10 years of experience, 23.91% (n = 165) had less than 2 years, almost the same amount of participants had 2 – 5 years and 6 – 10 years who accounted for 19.13% (n = 132), and 18.12% (n = 125), respectively (see Figure 11).

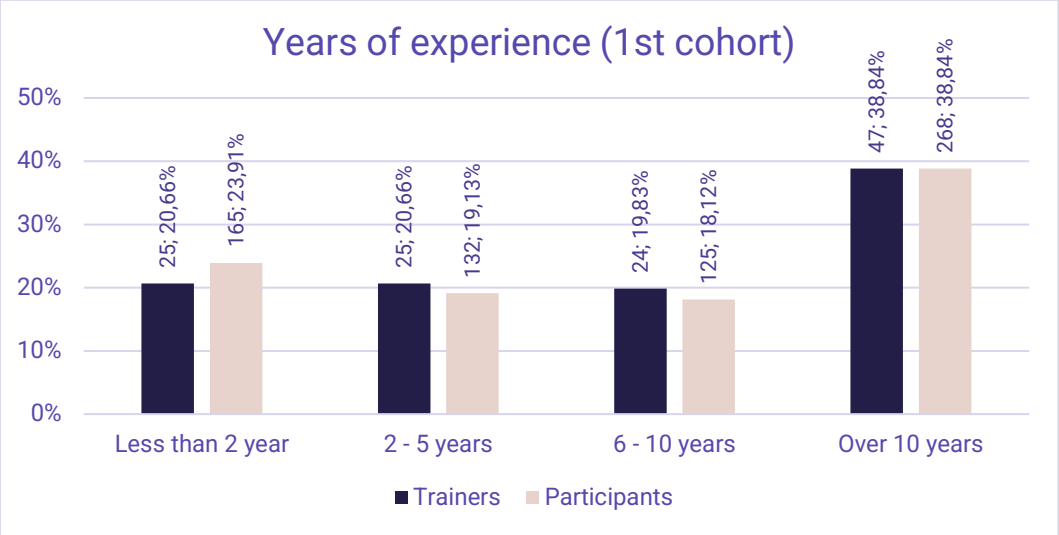

Figure 11. Trainers and participants years of experience distribution in the first cohort

In the second cohort, the trend was completely different. For trainers, half of them (50%, n = 6) had between 2 and 5 years, while 33.33% (n = 4) had less than 2 years and only 16.67% (n = 2) had more than 10 years of experience. Nobody reported to have between 6 and 10 years of experience. For participants, slight more than the half of them (55.00%, n = 11) had less than 2 years of experience in cancer care, 30.00% (n = 6) had between 2 and 5 years, 5.00% (n = 1) had between 6 and 10 years, and 10.00% (n = 2) had over 10 years (see Figure 12).

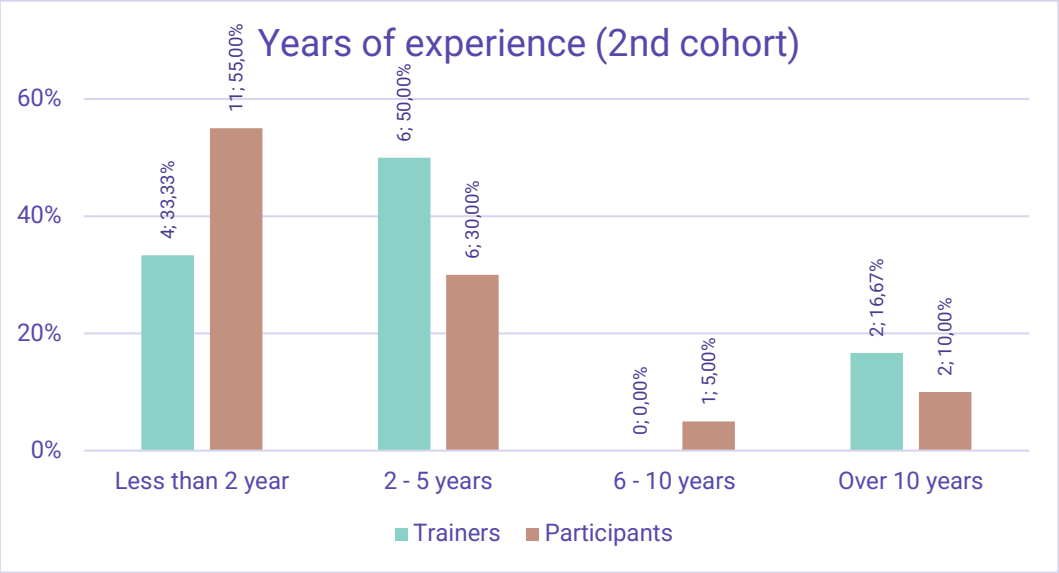

Figure 12.Trainers and participants years of experience distribution in the second cohort

These results demonstrated that the **programme effectively engaged both experienced professionals and those in the early stages of their careers**.

Previous training

Regarding formal or informal training on digital skills that learners had received before this course, for both cohorts a little more than most of the learners answered that they had not received any training before. In the first cohorts was 54.64% (n = 377) and 55.00% (n = 11) in the second cohort. While 45.36% (n = 313) and 45.00% (n = 9) for the first and second cohort, respectively, answered that they had received previous training (see Figure 13).

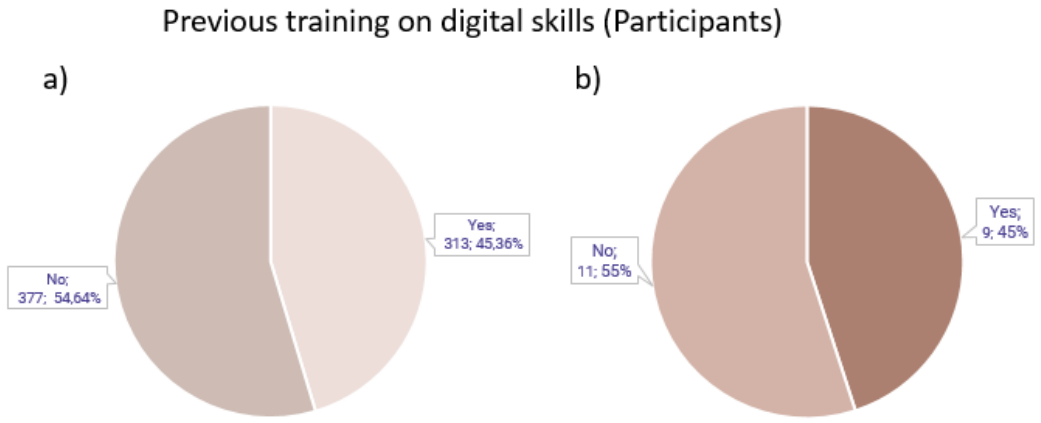

Figure 13. Participants that had received formal or informal training on digital skills before (a) in the first cohort and (b) in the second cohort

Digital skills training programmes focus on oncology are relatively newly, and **professionals are still under training**.

Experience eLearning methods

Those participants and trainers enrolled were asked about their previous experience with eLearning methods. In reference to the participants in the first cohort, 14.20% (n = 98) answered not to have experience in eLearning methods, 26.52% (n = 183) had little experience, 38.70% (n = 267) had some, and 20.58% (n = 142) had plenty. In the second cohort, no experience and a little experience predominated with a weight of 25.00% (n = 5) and 30.00% (n = 6) respectively, while some experience was represented by 20.00% (n = 3), and 25.00% (n = 5) of the sample reported having plenty (see Figure 14).

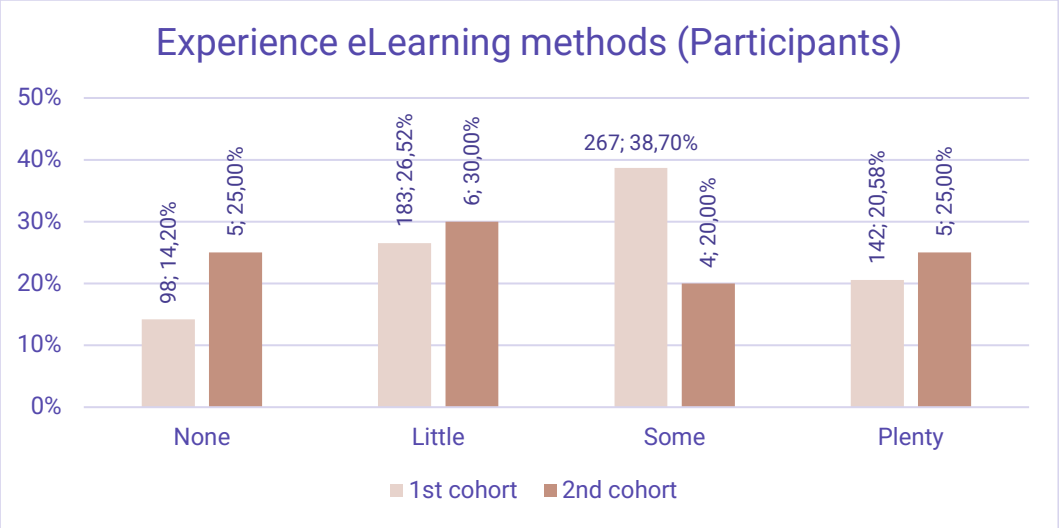

Figure 14. Participants' experience in using eLearning methods in the first and second cohort

In the case of trainers, they were asked about their experience in using eLearning methods from the point of view of educator (teacher) and as a participant (learner). In the first cohort as participants (learners) point of view 45.45% (n = 55) of the sample reported to have plenty of experience, 31.40% (n = 38) had some, 16.53% (n = 20) had little while 6.61% (n = 8) had no experience. Analysing their experience in using eLearning methods as an educator (teachers), the trend was the opposite. 37.19% (n = 45) had no experience, 22.31% (n = 27) had little, 26.45% (n = 32) had some and 14.05% (n = 17) had plenty of experience (see Figure 15).

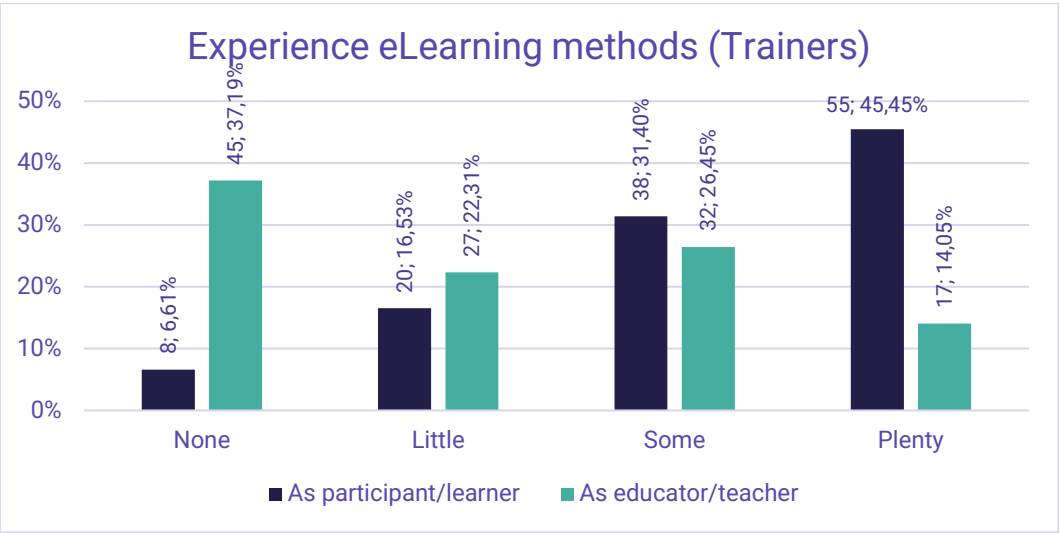

Figure 15. Trainers' experience in using eLearning methods in the first cohort

When examining the second cohort, the distribution was very similar. As a participant/learner predominated plenty of experience with 58.33% (n = 7) while as

an educator/teacher, the majority had no and little experience, which accounted 33.33% (n = 4) for each category (see Figure 16).

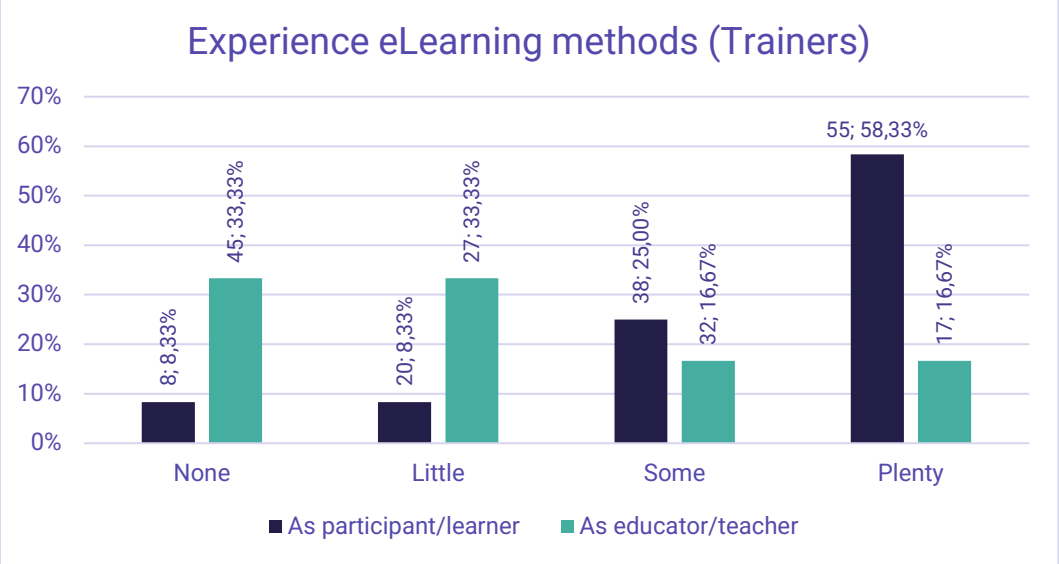

Figure 16. Trainers' experience in using eLearning methods in the second cohort

Mainly participants have some experience in eLearning, meaning that previously **did not participate in online programmes**. This could reflect on having some difficulties to interact with the Moodle platform. On the other hand, **trainers as participant point of view**, indicate that have a **lot of experience** in the eLearning sector meaning that p**articipated in other eLearning programmes and are familiar with online platforms**, such as Moodle. In contrast, their experience **as an educator** using eLearning methods is **little or null**, for some this is their **first time interacting with students through online learning** and could be more challenge for them to get familiar.

Experience in the field of education (trainers)

Trainers were asked about their experience in the field of education, meaning if they were clinical teachers (qualified), clinical teachers (not qualified), health care educators (qualified), experienced in teaching or training (not qualified), or none of the listed previous categories.

In the first cohort, 7.44% (n = 9) reported to be clinical teacher (qualified) and 12.40% (n = 15) be health care educator (qualified), meaning that 19.84% (n = 24) of the trainers were qualified for teaching while the 42.97% (n = 52) of the trainers even had experience in teaching were not qualified, which included 34.71% (n = 42) had experienced in teaching or training (not qualified) and 8.26% (n =10) were clinical teacher. The remaining 37.19% (n = 45) of the trainers were not categorized in these categories (none of the above).

In the second cohort, the trainers' characteristics were like the first cohort. 8.33% (n = 1) reported being clinical teachers (qualified), and 16.67% (n = 2) reported being health care educators (qualified), meaning that 25% (n = 3) of trainers were qualified for teaching, while 41.67% (n = 5) were not qualified for teaching. This category included clinical teachers (not qualified) (16.67%, n = 2) and those experienced in teaching or training (not qualified) (25%, n = 3). 33.33% (n = 4) of trainers did not fall in the adobe categories (see Figure 17).

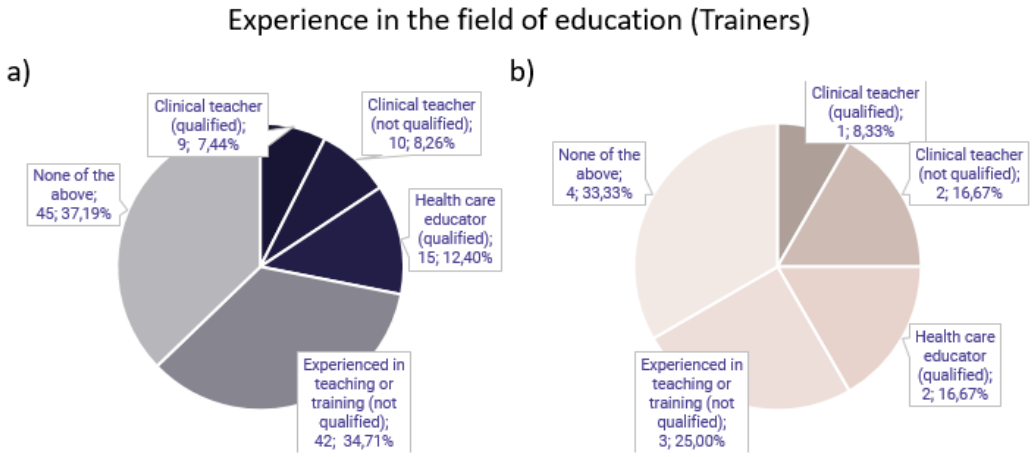

Figure 17. Experience in the field of education for trainers (a) in the first cohort and (b) in the second cohort

These results indicate that most of **professionals give importance to teach** due some of them had experience, however, mainly were not qualified meaning that they **do not possess a certificate. Not having a formal certificate may mean they lack certain skills needed to effectively communicate information and interacting with audience or students.**

4.3. Completion rates

Completion rates offer valuable information about the characteristics of trainers and participants who, either completed or initiated the course but were unable to complete it, after enlisting in the recruitment registration. This analysis examines the completion status, country, and learning pathway of both trainers and participants enrolled in the *DigiCanTrain* course. On September 21st, 2025, there was registered into the Moodle platform a total of 794 individuals, 14.61% (n = 116) were trainers and 85.39% (n = 678) were participants. There were 5 trainers and 1 participant enrolled in the platform that were not registered in the initial registration forms, recruitment process. These individuals were considered in the completion rate, country of work and learning pathway analysis because we had the information, but for the recruitment process analyses and were labelled with Unknown.

Trainers

Regarding trainers, 116 individuals registered for the *DigiCanTrain* Programme out of the 133 who initially expressed interest during the first and second recruitment phases. This represents a registration rate of 85.93% among trainers. The ***DigiCanTrain* programme was successfully completed by 40.52% (n = 47) of the trainers**. While 20.69% (n = 24) partially completed and 38.79% (n = 45) did not start the course or logged in (see Figure 18). It is important to emphasize that from the 47 trainers who completed their learning pathway programme**, 24 of them (51.06%) completed all the *DigiCanTrain* learning pathways,** meaning that they did the modules that did not align with their itinerary.

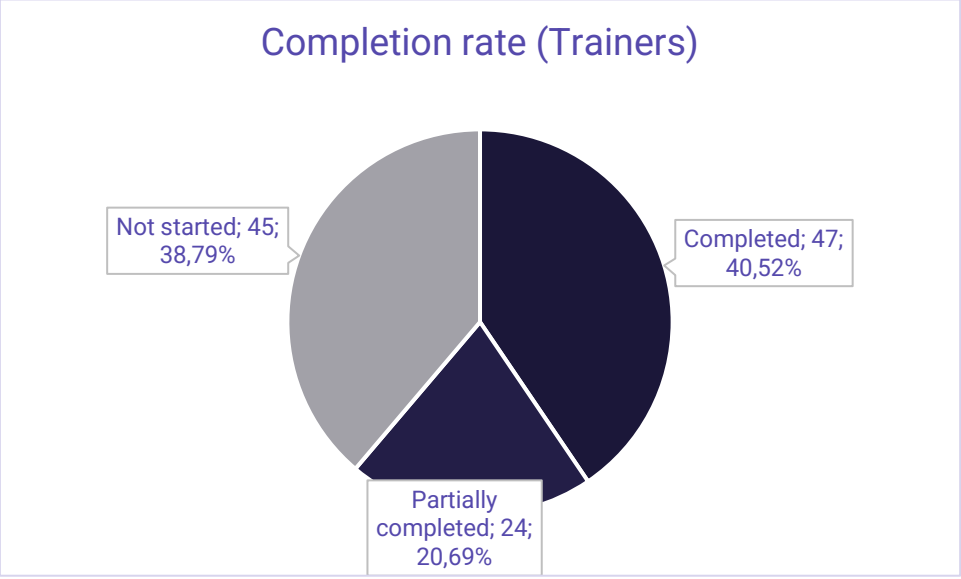

Figure 18. Completion rates of trainers

Figure 19 illustrates the trainer's work country enrolled in the Moodle platform. **The number of individuals that enrolled in the programme was balance around all the Consortium countries, engaging between 12 and 9 individuals**, except in Spain, where the enrolment was approximately 5 times higher (n = 50), and in Belgium, where the enrolment was n =2. This suggests there was **widespread interest in the course, as registrations were fairly balanced across the consortium countries.** When analysing in which country more trainers finalized it, **Ireland stood out as the one with the highest number of trainers who successfully completed the training (10 out of 12)** followed by Greece (9 out of 10), Spain (8 out of 50), Finland (7 out of 9) and Estonia (7 out of 12), other European countries (4 out of 10) and Romania (2 out of 10). No one from Belgium or non-European countries finalized the training. Regarding completion rates (completed/enrolled per country), four of the six consortium countries (Finland, Estonia, Ireland, and Greece) had completion rates exceeding 50.00%, while Spain, Romania, and other European countries had the

completion rates under 50.00%. Completion rate of Belgium and non-European countries was 0% due to the number of recruited individuals were exceedingly small and consequently none finalized it.

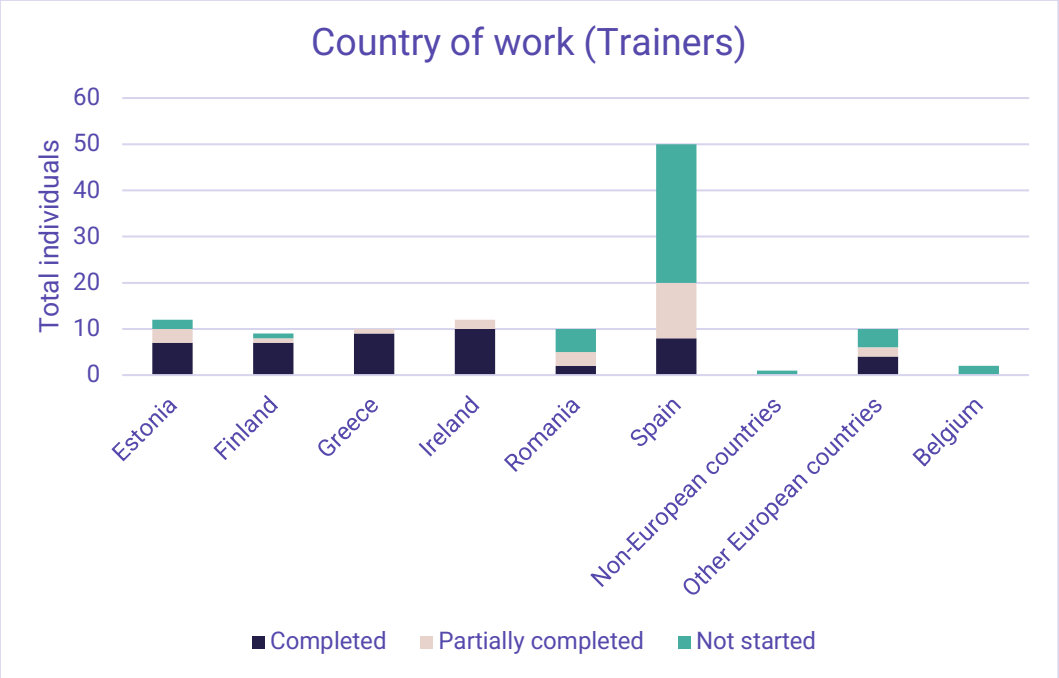

Figure 19. Country of work of trainers enrolled in the DigiCanTrain programme platform

Regarding the most popular **learning pathway selected by trainers was nursing with 60 out of 116 (51.17%)** individuals who enrolled in the programme. Additionally, nursing was the learning pathway that more trainers completed it (n = 31, nurse completion rate of 51.67%). The pathway for medical practitioners was the second most popular learning module; 41 individuals out of 116 (35.34%) registered in the medical practitioners learning pathway, and 10 of them finished the programme, giving a medical practitioners completion rate of 24.39%. A smaller number of trainers enrolled nHCPs, allied HCPs and the combined pathways (allied HCPs+medical practitioners; allied HCPs+nHCPs and nursing+medical practitioners), which were finished by 2, 1 or 0 trainers (see Table 6). In Table 6, it is appreciated that a large HCPs with different specializations completed the training, not only oncologist. Also, it is seen that, the more specialized the subject/course was, as it was the case of nursing pathway, more professionals completed it. In some cases, the chosen profession and the selected learning pathway did not correspond. This may be due to an incorrect selection due to a lack of clarity in the available options, or a different interpretation of the terms used.

	Completed	Partially completed	Not started	Total general
Medical Practitioners	**10**	**12**	**19**	**41**
General practitioner	2	1	1	4
MD's & General Practitioners			1	1
Medical oncologist	1	3	5	9
Oncology surgeon		1	4	5
Palliative care specialist	3	1		4
Pharmacist		1		1
Radiation oncologist	2	2	3	7
Radiographer	1	1	1	3
Urologist	1			1
Other HCP		2	4	6
Nursing	**31**	**10**	**19**	**60**
Advanced practice nurse	6	2	2	10
Diploma / license nurse	5	2	4	11
Medical oncologist			1	1
Nurses	1		1	2
Physiotherapist	1			1
Specialist cancer nurse	6	4	2	12
Specialist nurse; other specialty	2		5	7
Staff nurse	6	2	2	10
Non-clinical HCPs	1			1
unknown	2		2	5
Allied HCP	**2**	**2**	**3**	**7**
Allied HCPs			1	1
Dietician	1			1
Pharmacist		1	1	2
Other HCP	1		1	2
Other nHCP		1		1
nHCP	**1**		**3**	**4**
Other nHCP	1		3	4
Nursing; Medical Practitioners			**1**	**1**
Medical oncologist			1	1
Allied HCP; Medical Practitioners	**1**			**1**
Physiotherapist	1			1
Allied HCP; nHCP	**2**			**2**
Other nHCP	1			1
Pharmacist	1			1
Total general	**47**	**24**	**45**	**116**

Table 6. Learning pathway and profession of trainers enrolled in the programme

Figure 20 shows the number of trainers enrolled in each learning pathway categorized by their country. **Nursing and medical practitioners were registered in almost all consortium countries, except in Estonia**. However, regarding the trainers who chose allied HCPs and nHCPs learning pathway, their participation across countries was not homogeneous.

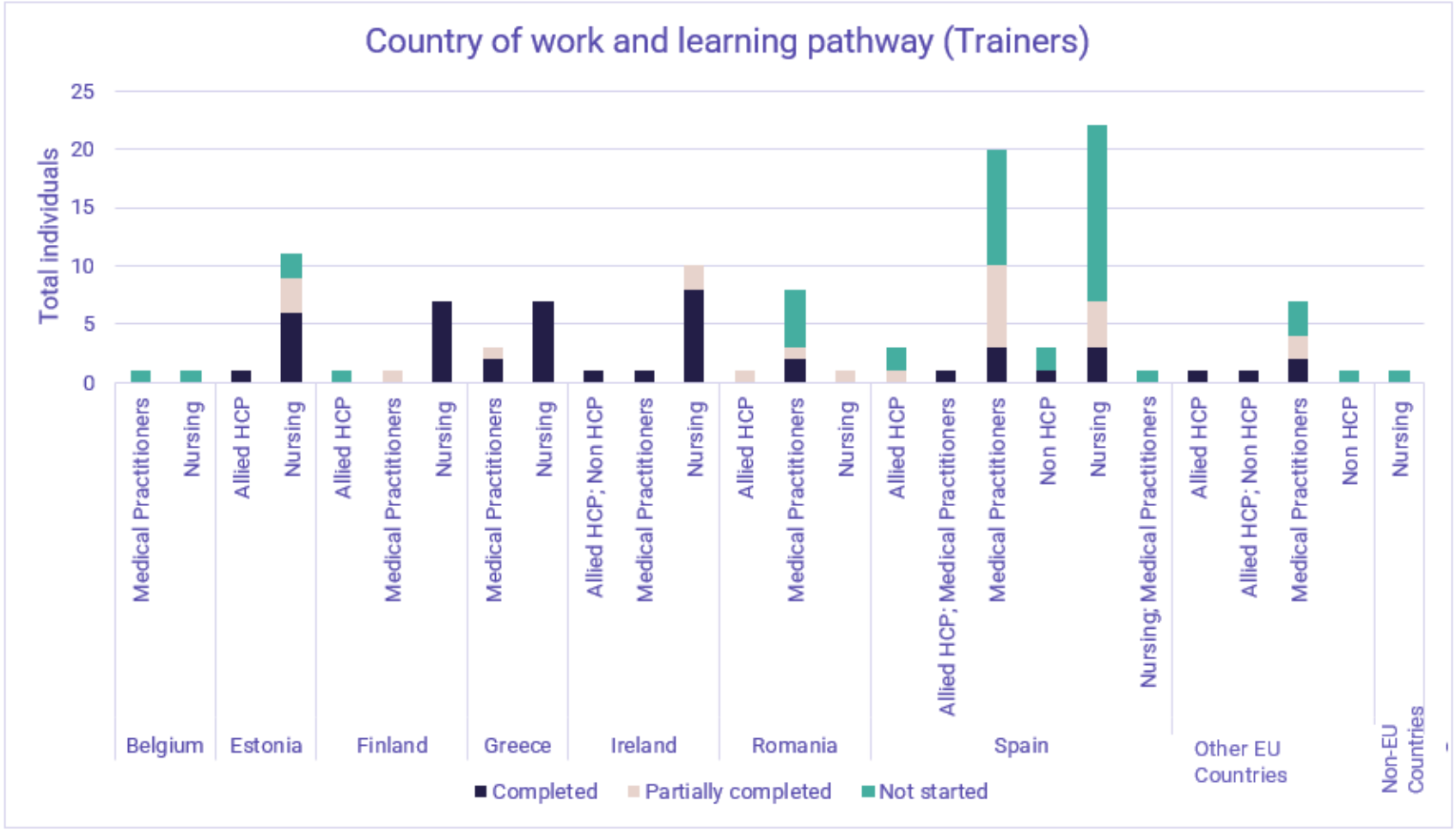

Figure 20. Number of trainers enrolled in each learning pathway, categorized by country

Regarding workplace of **trainers enrolled in the platform, the main workplace was cancer treatment centre (n = 53, 45.69%), which is consistent with the fact that the training was aimed at professionals in the field of oncology,** followed by other type of health care units (n = 17; 14.66%), education institute (n = 13; 11.21%), other type of cancer care unit (n = 11; 9.48%), and with less representation were association for healthcare professionals, national or regional cancer society, governmental institute and other workplace. Figure 21 displays the workplace of trainers enrolled in the platform categorized by their completion rate. Although trainers from cancer treatment centres were the majority of enrolled, their completion rate was not the highest, only 20 trainers completed the training giving a completion rate cancer treatment centre of 37.74%, while 26.42% (n = 14) partially completed it and 35.85% (n = 19) not started. This hight interest but low completion rate maybe due to the fact that, although the programme content was highly appealing to the trainers, their saturate workload prevented them from completing or starting it.

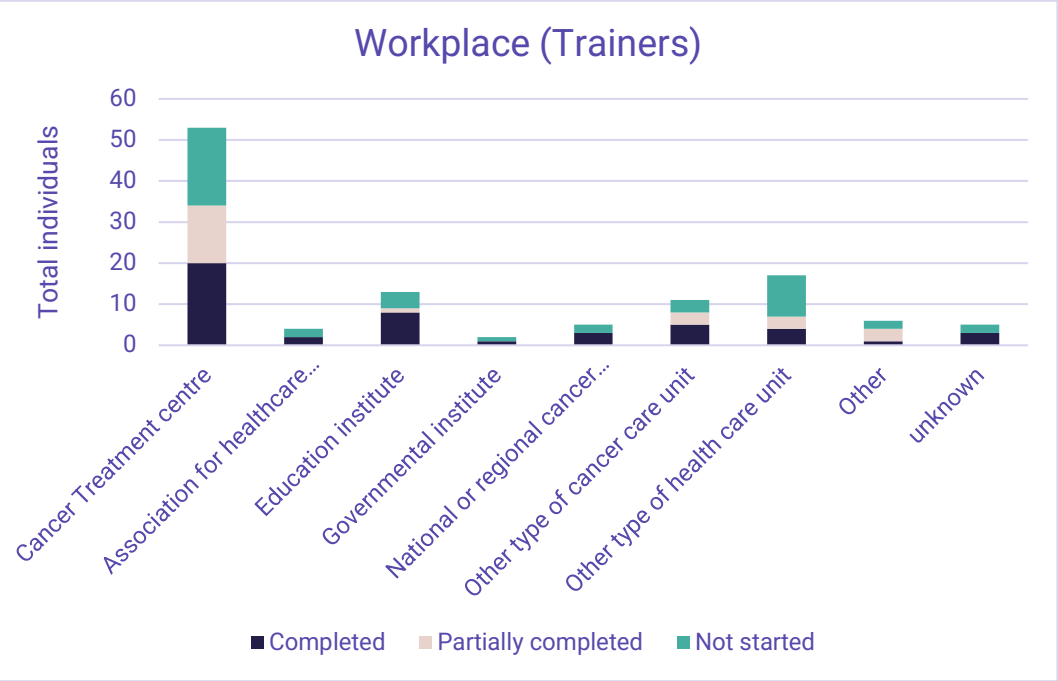

Figure 21. Workplace of trainers enrolled in the programme

When analysing **the highest academic degree of trainers predominates the master's degree** (n = 53; 45.69%) while the diploma was the less represented (n = 9, 7.76%). This may suggest that many professionals, after completing the bachelor's degree, pursue further specialization through a master's degree. Of the 53 individuals who held a master's degree, 24 individuals successfully completed the programme, resulting in a master's degree completion rate of 45.28%% (Figure 22). Additionally, the highest completion rate was for bachelor's degree accounting

for 52.94% (9 out of 17 trainers) and the lowest dropout rate 47.06%, (8 out of 17) trainers partially completed or did not start it. This indicates that professionals with basic education wanted to enhance their competences and skills with complementary courses and programmes.

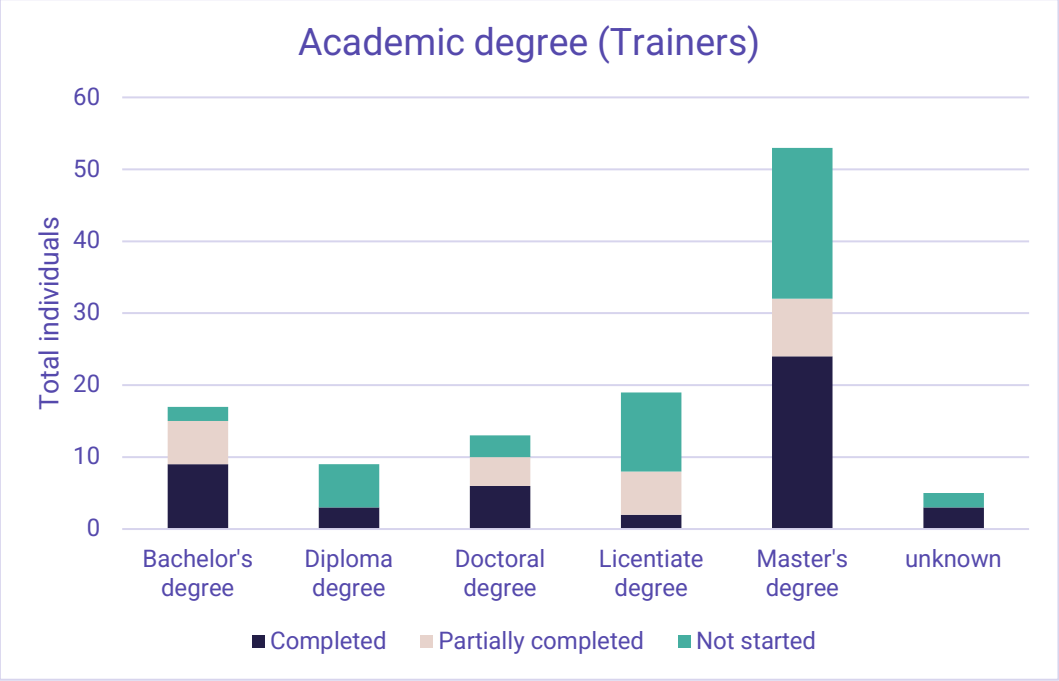

Figure 22. Academic degree of trainers that were enrolled in the programme

In Figure 23 it can be seen that majority of **trainers who completed the programme had more than 10 years of experience**, 18 out of 43 enrolled with more than 10 years of experience, giving a completion rate of 41.86%. On the other hand, it is also seen that trainers with fewer years of training (< 2 years) had a higher dropout rate, 66.67% of them did not finalize the course or even not started. The elevate dropout rate observed among trainers with less than 2 years of experience maybe be explained by the fact that they finished their university studies recently, making the programme content less relevant for them.

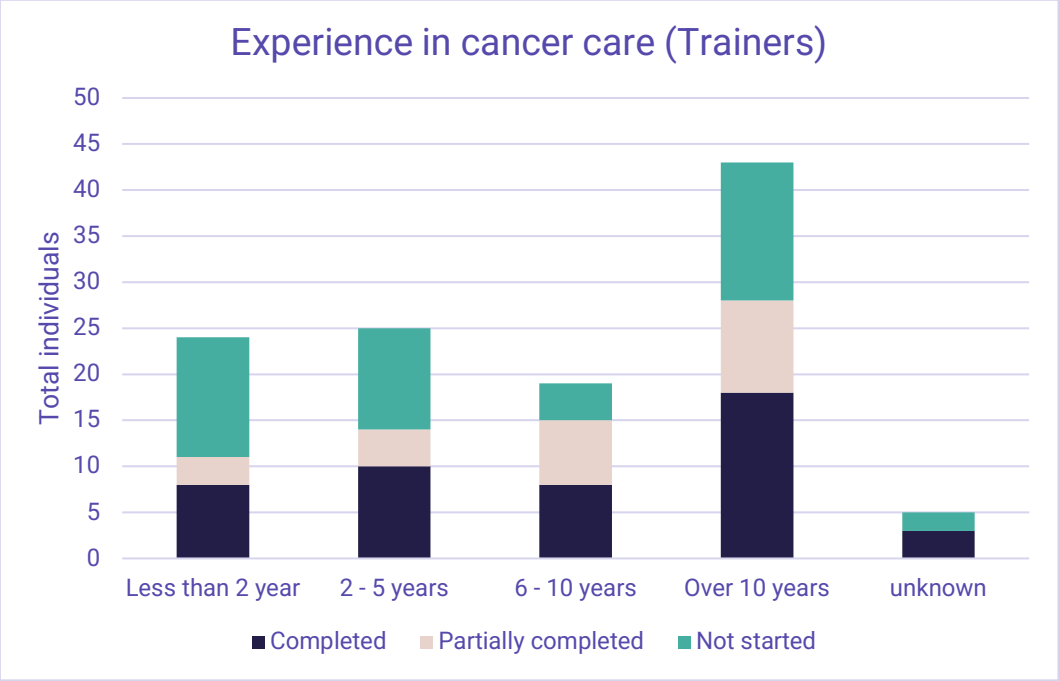

Figure 23. Years of experience in cancer care of trainers enrolled in the programme

Regarding the experience in teaching, **a large number of trainers who completed the programme reported having some experience in teaching or training but without be qualified** (n = 17). Only a minority of trainers who finalized the programme were formally qualified to teach (n = 7). However, a relevant number of trainers who completed the programme mentioned not feeling represented in any category, educator/teacher qualified/not qualified (n = 15). This may suggest that they lacked prior teaching experience and they enrolled in the course to acquired new skills and competencies in the teaching and training area (see Figure 24).

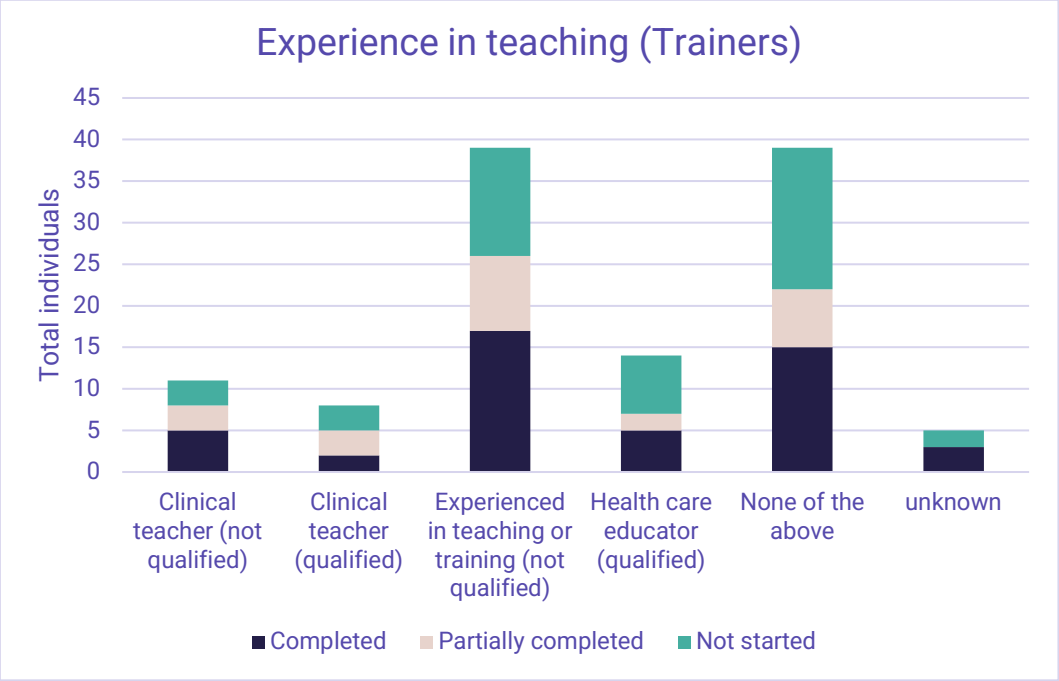

Figure 24. Experience in teaching or training of trainers enrolled in the programme

Participants

Regarding participants, 678 individuals registered for the *DigiCanTrain* Programme out of the 710 who initially expressed interest during the first and second recruitment phases. This represents a registration rate of 95.49% among participants. The ***DigiCanTrain* programme was completed by 24.34% (n = 165) of the participants**. While 19.03% (n = 129) partially completed the course, and 56.64% (n = 384) did not start the course or logged in (see Figure 25). 5 out of the 165 participants that completed the training did all the course/learning pathways.

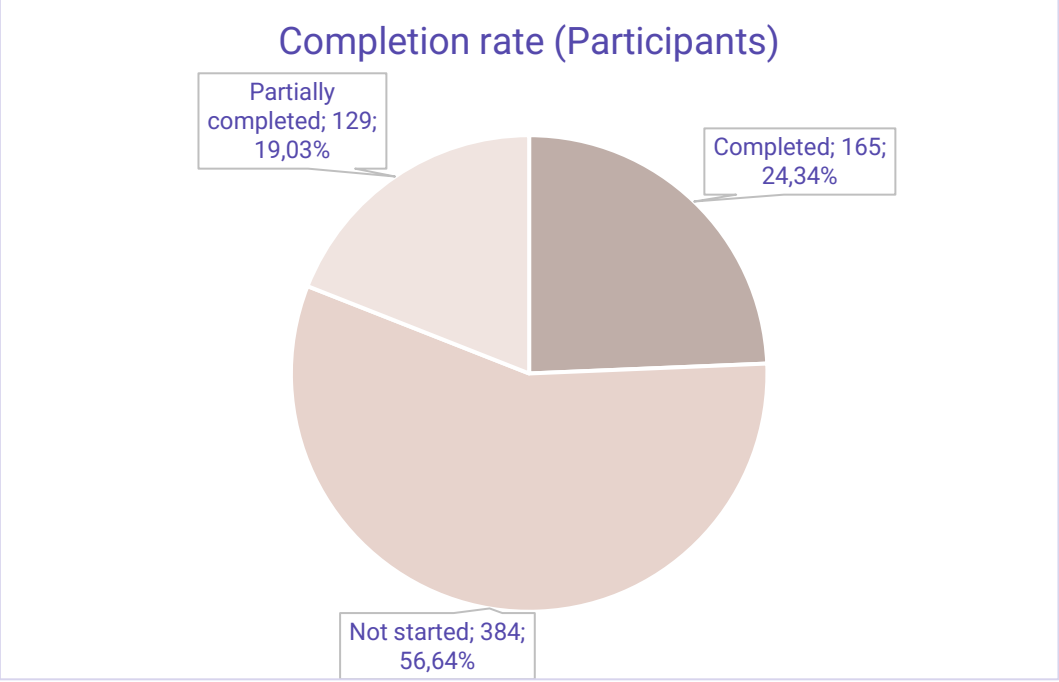

Figure 25. Completion rates of participants

Regarding the learning pathway selected by participants, **358 out of 678 individuals who enrolled selected the nurse learning pathway (n = 52.80%) and 114 out of 358 nurses completed the pathway (nurses completion rate of 31.84%),** giving the highest participants learning completion rate. The pathway for medical practitioners was the second most popular learning module with a registration of 179 individuals out of 678 (26.40%). 18 of 179 finished the programme medical and general practitioners, giving a completion rate of 10.91%. Only 8.85% (n = 60) and 11.95% (n = 81) of participants chose nHCPs and allied HCPs, respectively, from these only 17 out of 60 nHCPs and 16 out of 81 allied HCPs completed the programme, giving a learning pathway completion rate of 28.33% for nHCPs and 19.75% for allied HCPs (see Table 7). Moreover, it is appreciated in the Table 7 that some of the professionals chose a learning pathway that was not the most optimal for them. This may be because the register information was not clear enough. Additionally, choosing a learning pathway that

was not the most suitable for them, perhaps it was a reason why the dropout rate was higher.

	Completed	Partially completed	Not started	Total general
MD's & General Practitioners	**18**	**28**	**133**	**179**
Advanced practice nurse	1			1
Clinical oncologist		1	5	6
Dietician			1	1
Diploma / license nurse	1		2	3
General practitioner		7	19	26
Medical oncologist	4	8	28	40
Occupational therapist		1	1	2
Oncology surgeon		3	15	18
Palliative care specialist			1	1
Pharmacist			5	5
Physicist			1	1
Physiotherapist			4	4
Radiation oncologist	4	4	23	31
Radiographer	4	1	1	6
Radiotherapist			1	1
Staff nurse	1	1	1	3
Urologist			1	1
Other HCP	3	2	24	29
Nurses	**114**	**71**	**173**	**358**
Advanced practice nurse	13	5	17	35
Diploma / license nurse	35	16	48	99
General practitioner			1	1
Medical oncologist			2	2
Palliative care specialist	1	1	2	4
Radiation oncologist			2	2
Radiographer	2		4	6
Radiotherapist	2			2
Specialist cancer nurse	25	19	35	79
Specialist nurse; other specialty	13	12	24	49
Staff nurse	22	15	32	69
Other HCP	1	3	5	9
NA			1	1
Allied HCPs	**16**	**19**	**46**	**81**
Advanced practice nurse	1			1
Dietician	1	3	4	8
Occupational therapist			1	1
Palliative care specialist		2	1	3
Pharmacist		4	6	10
Physiotherapist		1	3	4
Psychologist	1	1	4	6
Radiation oncologist			2	2
Radiographer	1	5	3	9
Radiotherapist	10			10
Specialist cancer nurse	1			1
Specialist nurse; other specialty			1	1
Staff nurse			2	2

Other HCP	1	2	17	20
Other nHCP		1	2	3
nHCPs	**17**	**11**	**32**	**60**
Advanced practice nurse			1	1
Dietician			1	1
Diploma / license nurse	2		2	4
General practitioner			1	1
Medical oncologist			1	1
Occupational therapist			1	1
Pharmacist		5	1	6
Physicist	1			1
Radiographer	1		1	2
Specialist cancer nurse	3	1		4
Specialist nurse; other specialty	1		4	5
Staff nurse	2		1	3
Other HCP			10	10
Other nHCP	7	5	8	20
Total general	**165**	**129**	**384**	**678**

Table 7. Learning pathway and profession of participants enrolled in the programme

Participants enrolment was not balanced between consortium countries. The highest enrolment into the platform was observed in Spain (39.82%, n = 270), Estonia (16.81%, n = 114) and Greece (15.93%, n = 108). In contrast, the engagement in the other consortium countries (Finland, Ireland, Romania) and other European countries did not exceed 8%. The enrolment of participants from non-European countries was 11.36% (n = 77). An analysis of the countries of those who completed the programme revealed that completion rates were not uniform across countries, nearly half of the participants who completed the training were from Estonian (n = 86), followed by Greece (n = 39); Spain (n = 22), Ireland (n =8), Finland (n = 6) and Romania (n = 4). None completed the training from other countries (see Figure 27). These findings suggest that **countries with more population**, such as Spain or Greece, **could get more participants to enrol into the programme, however it was not correlated with the number of professionals who finalized the course**, which usually was less (see Figure 26).

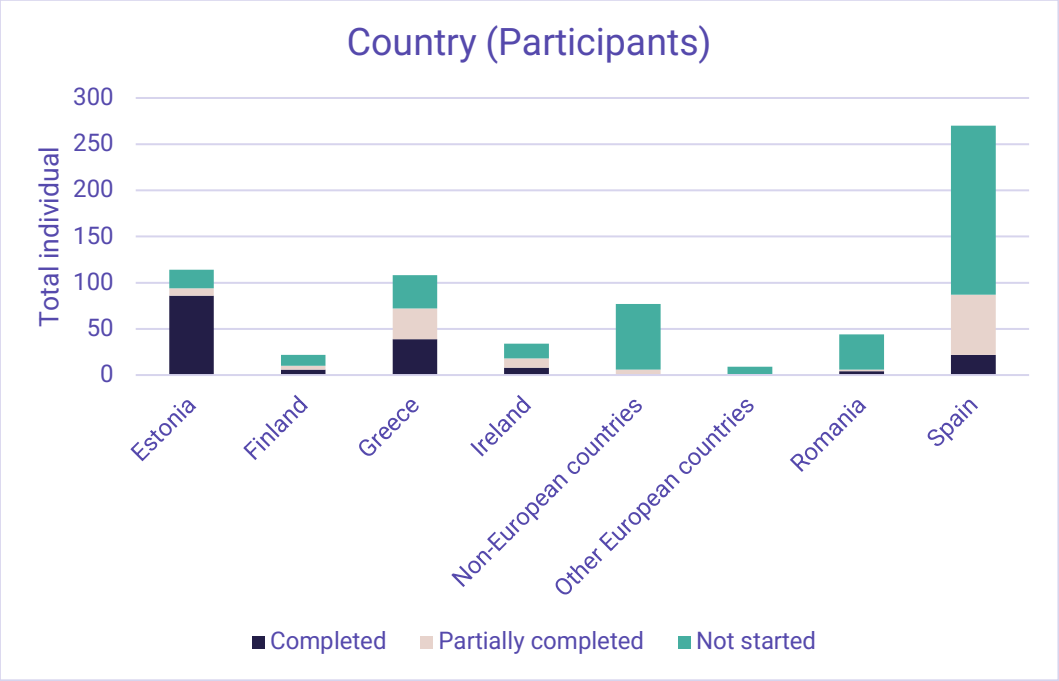

Figure 26. Country of work of participants enrolled in the DigiCanTrain programme platform

Additionally, Figure 27 illustrates the number of participants who enrolled in and completed each learning pathway, categorized by country. Overall, **nursing module represented the most frequently selected pathway across all countries**. Nevertheless, the number of professionals who completed the nursing learning pathway in each country was comparable to that of the other pathways, which generally enrolled fewer participants**,** except in Estonia and Greece. This could suggest that a high initial engagement rate did not necessarily translate into a higher number of professionals completing the programme successfully. Completion rates depended on other factors such as the availability of time among professionals.

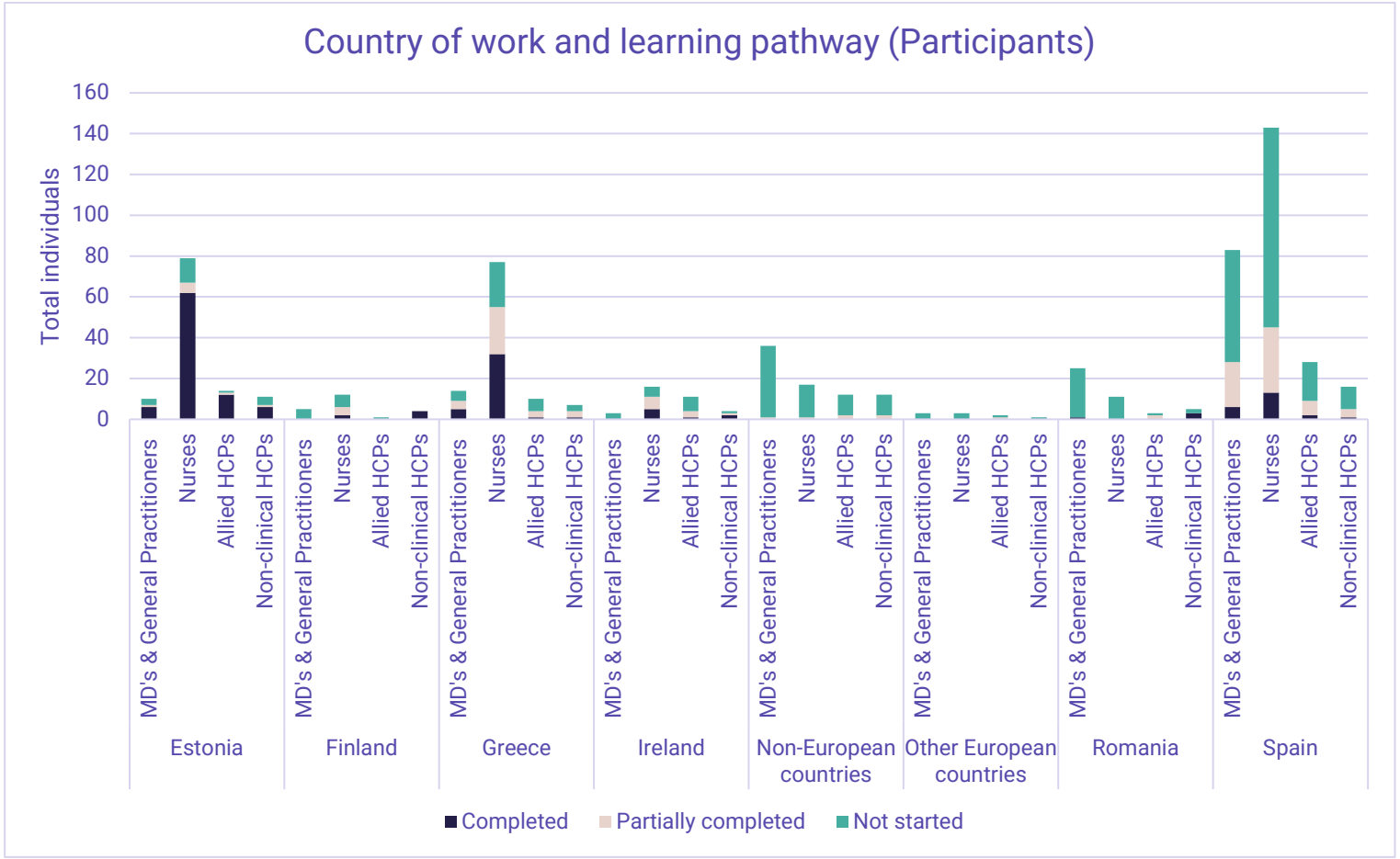

Figure 27. Number of participants enrolled in the programme in each country and categorized by the different learning pathways

Regarding workplace of participants enrolled in the platform, the main workplace of the participants, due to the training was focused on professionals in the field of oncology, was cancer treatment centre (n = 310, 45.72%), followed by other type of health care units (n = 165, 24.34%), other type of cancer care unit (n = 76, 11.21%), and with less representation were association for healthcare professionals, national or regional cancer society, educational institute, governmental institute and other workplace. Figure 28 displays the workplace of participants enrolled in the platform categorized by their completion rate. Although **participants from cancer treatment centres were the majority and the ones with the largest number of individuals who completed the programme, there was also a large majority who leave it halfway or did not finish it**, only 32.58% (n = 101 out of 310) complete the programme while 18.39% (n = 57 out of 310) partially completed it and 49.03% (n = 152 out of 310) did not start. **The workplace with the highest completion rate was national or regional cancer society, accounting for 71.43%** (n = 5 out of 7). Although the number of individuals in the national and regional cancer society was low, likely because in general there are fewer professionals specialize in the oncology field, the few who registered were highly motivated to do the training and finishing the programme.

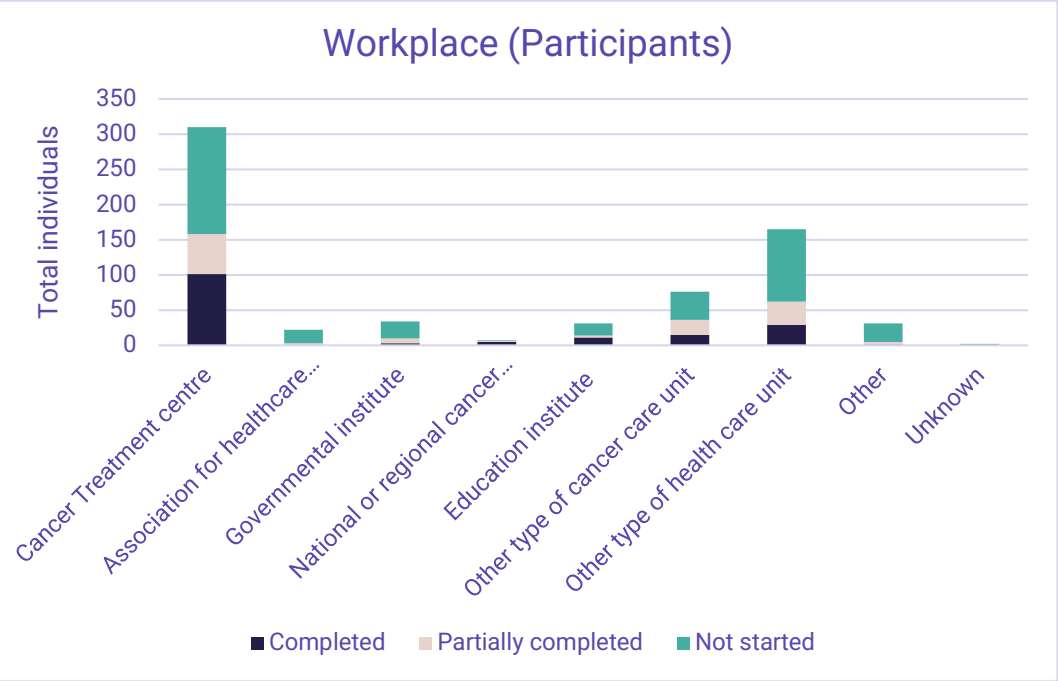

Figure 28. Workplace of participants enrolled in the programme

When analysing the highest academic degree of participants, participants with a bachelor's degree had the highest completion rate accounting for 46.81% meaning that 66 individuals out of 141 who had the bachelor's degree completed the programme successfully. Participants that had a doctoral degree or licentiate

degree had a low completion rate, only 7.58% (n = 5 out of 66) of doctorates and 6.73% (7 out of 104) licentiates completed the programme (Figure 29). This indicates that **professionals with basic education wanted to enhance their competences and skills with complementary courses and programmes** while participants with more training or education were less interested in taking the course.

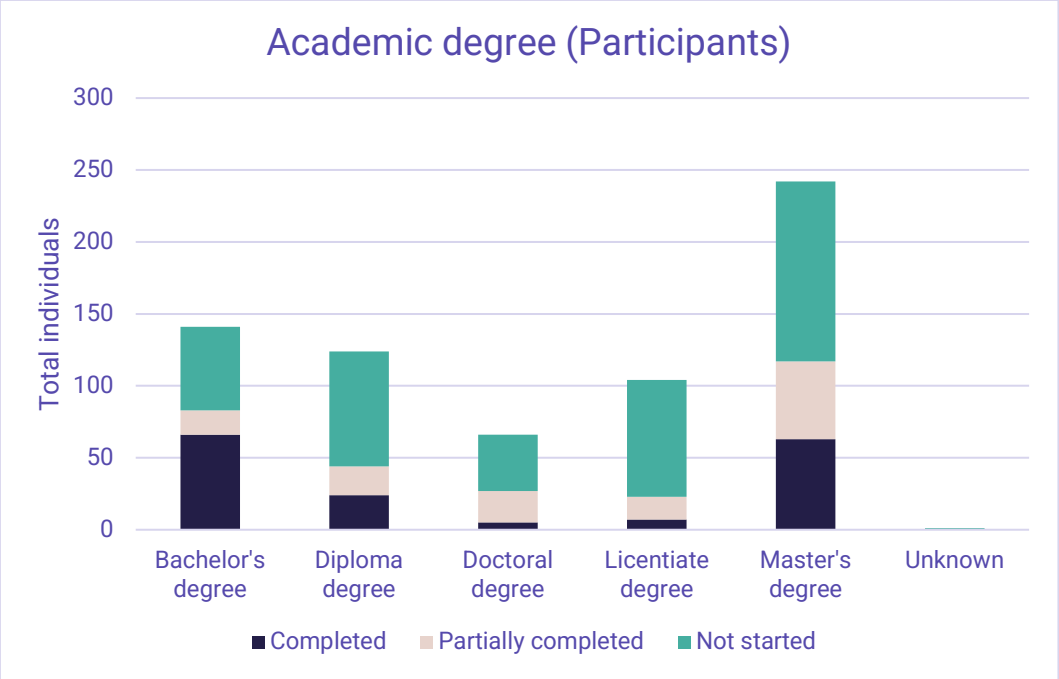

Figure 29. Highest academic degree of participants enrolled in the programme

In Figure 30 it can be seen that the **majority of participants who enrolled in the programme had more than 10 years of experience**, n = 256 out of 678 (37.76%). Only 60 participants with more than 10 years of experience completed the programme, giving over 10 years completion rate of 23.44%, while a hight number of them did not start or finalize the programme, n = 138 and n = 58 out of 259 respectively, giving a total drop out of 76.56%. One possible reason why participants with high experience found the programme uninteresting and either did not complete it or did not start it could be that they already possess the relevant experience and should have participated as trainers.

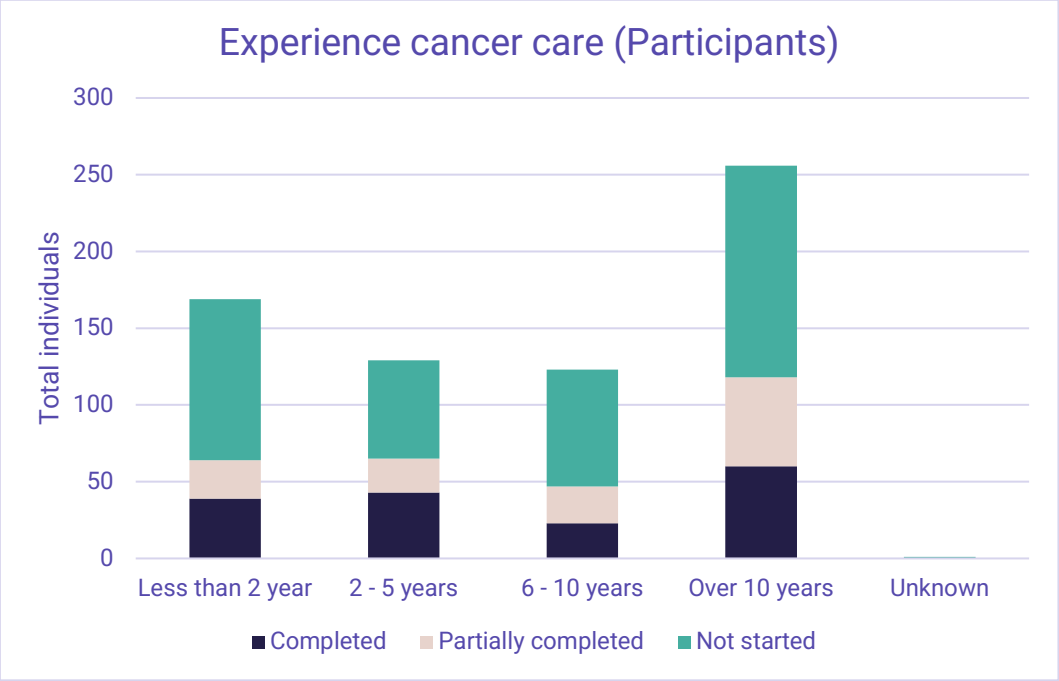

Figure 30. Years of experience in cancer care of participants enrolled in the programme

4.4. Submodule assessment

After completing each submodule, both trainers and participants were required to complete the **submodule assessment (quiz)**, from with an average score was obtained. The following section presents the average score obtained by both trainers and participants for each submodule and module.

Overall, the scores across all modules were excellent. Module 4 Medical practitioner cohort obtained the lowest score, with a rating of 95.9 out of 100, while Module 1 Train the trainers obtained the highest score, with a score of 97.4 out of 100. These results could indicate that, in general, the content and information of the 5 modules was well-understood and assimilated by both trainers and participants, regardless of the cohort (see Figure 31).

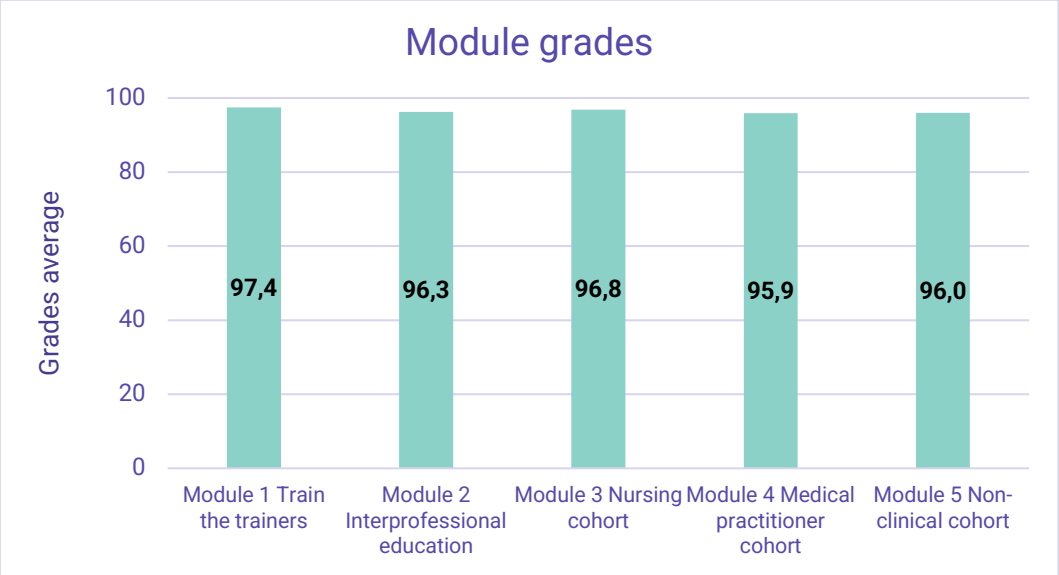

Figure 31. Grade average by module

Figure 32 illustrates the grades average obtained for each submodule after both trainers and participants did the submodule assessment. **6 submodules out of 22 obtained an average score of 100**.These submodules were 1.3, 1.5, 1.6, 1.7, 4.4 and 5.3. **The lowest grade was for submodule 1.1 Digital health literacy and education, with a grade of 91**. Overall, these high grades demonstrated that knowledge and skills presented in all submodules were well understood by both trainers and participants. None of the submodules appeared to be a significant challenge for the learners, indicating a relevant comprehension of the content.

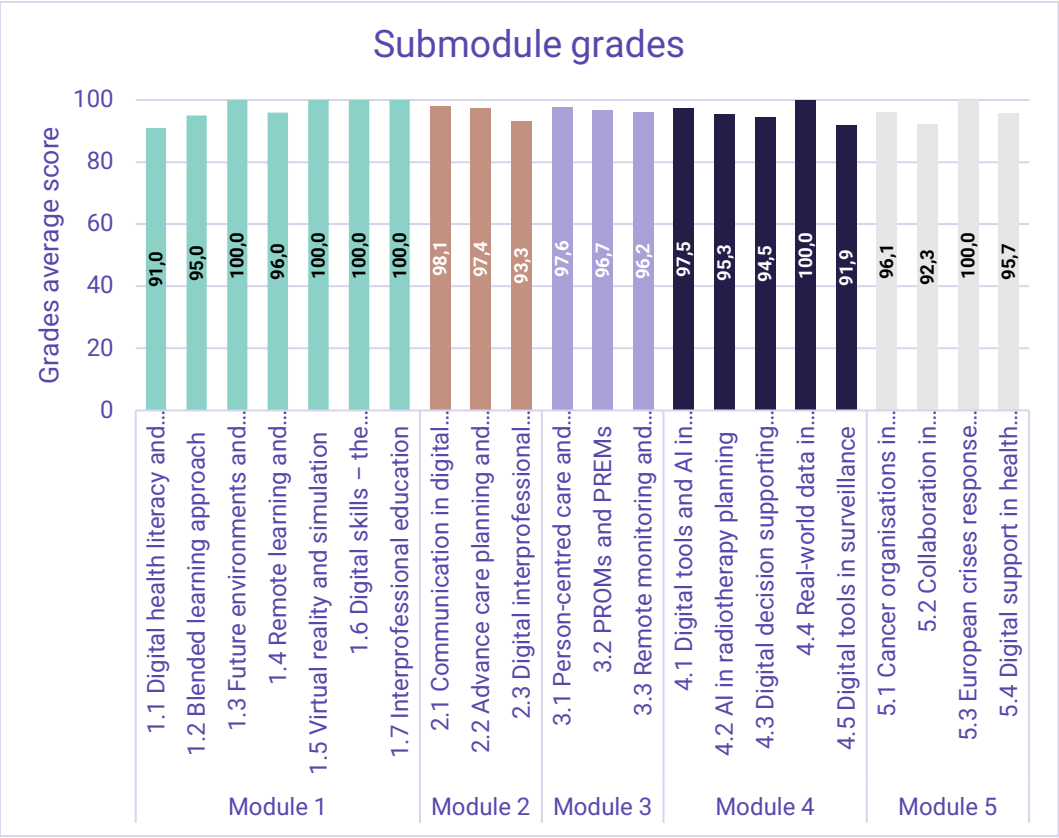

Figure 32. Grade average score for each submodule

4.5. Trainers and participants' evaluation programme

Module 1 Train the trainers and its embedded submodules

The following section presents the results of trainers' evaluation Module 1 Train the trainers, and its submodules 1.1 to 1.7. 58 trainers answered module 1. Most of the submodules evaluation questions from module 1 were answered by 57 or 59 trainers except for Submodule 1.1, which was answered by 61 trainers.

In general, the assessment indicators were evaluated positively. Nearly all trainers, more than 90%, agreed that module title was explicit (yes = 93.10%, n = 54; no = 1.72%, n = 1; N/A = 5.17%, n = 3), title was logically link to other programme modules (yes = 93.10%, n = 54; no = 3.45%, n = 2; N/A = 3.45%, n = 2), objectives were clearly defined (yes = 98.28%, n = 57; no = 0%, n = 0; N/A = 1.72%, n = 2), objectives identified competencies covered in the module (yes = 94.83%, n = 55; no = 0%, n = 0; N/A = 5.17%, n = 3), objectives listed the specific skills or knowledge to gain (yes = 96.55%, n = 56; no = 1.72%, n = 1; N/A = 1.72%, n = 1), content included required topics (yes = 94.83%, n = 55; no = 1.72%, n = 1; N/A = 3.45%, n = 2), module

content were culturally appropriated (yes = 94.83%, n = 55; no = 3.45%, n = 2; N/A = 1.72%, n = 1), and learning outcomes were clearly described (yes = 93.10%, n = 54; no = 1.72%, n = 1; N/A = 5.17%, n = 3). Indicators rated "yes" by fewer trainers, between 70% and 89% of trainers, were: content supported identified training objectives (yes = 87.93%, n = 51; no = 3.45%, n = 2; N/A = 8.62%, n = 5), module accommodated different learning styles (yes = 82.76%, n = 48; no = 12.07%, n = 7; N/A = 5.12%, n = 3), module was accessible to all participants (yes = 81.03%, n = 47; no = 6.90%, n = 4; N/A = 12.07%, n = 7), learning outcomes were measurable (yes = 82.76%, n = 48; no = 5.17%, n = 3; N/A = 12.07%, n = 7), instructional approach helped the learner to learn, assimilate, and apply the content (yes = 86.21%, n = 50; no = 6.90%, n = 4; N/A = 6.90%, n = 4), interactivity was used throughout the module to involve and engage the learner in active learning (yes = 81.03%, n = 47; no = 17.24%, n = 10; N/A = 1.72%, n = 1), content or supplemental materials considered and included stakeholder recommendations (yes = 79.31%, n = 46; no = 3.45%, n = 2; N/A = 17.24%, n = 10), module accommodated a variety of relevant illustrations, examples, visual aids (yes = 70.69%, n = 41; no = 17.24%, n = 10; N/A = 12.07%, n = 7). Indicator that less trainers found to be represented in this module was materials were accessible in an individual's preferred language, with 56.90% (n = 33) of the trainers selecting "yes", while 17.24% (n = 10) of trainers voted "no" and, 12.07% (n = 7) of them did not answer (see Figure 33).

These results suggested that objectives were clearly explained and defined for the module, meaning that trainers could know from the beginning what to expect, and which were the knowledge, skills, and aptitudes to gain. However, further editions content could consider including more relevant illustrations and visual adds, more stakeholder recommendations and offer in other languages.

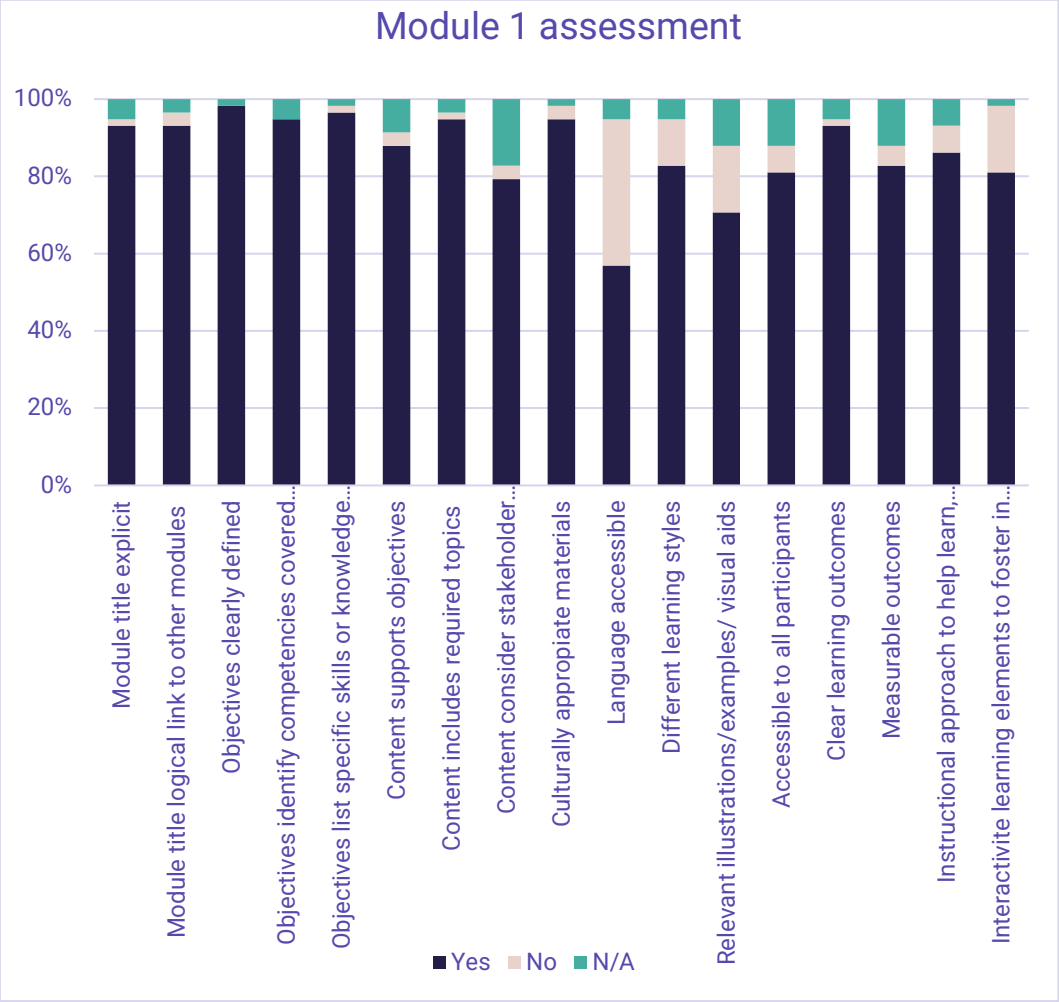

Figure 33. Module 1 evaluation rates

Submodule 1.1 Digital health literacy and education

Digital health literacy and education submodule enhanced trainers' knowledge to explain various learning theories guiding adult learning in digital health, and the skill to apply digital pedagogy solutions according to learning theories.

49.18% (n = 30) of trainers believed that assessment for this submodule was extremally helpful (9 – 10 points) to their learning and nobody found unhelpful, giving the highest average, 8.26 out of 10, of the four questions. Moreover, 4 out of 10 trainers (40.98% n = 25) found that this module highly improved (9 – 10 points) their understating and skills in by learning various theories in digital pedagogy and thus applying correctly to guiding adult learning. Almost half of them, 47.54%, n = 29, thought that the learning theories and the various digital pedagogies strategies learned could be integrated in their workplace in a good manner (7 – 8 points). Only 24.59% (n =15) of trainers felt extremally confident in new abilities and

knowledge acquired regarding digital health literacy and education (excellent, 9 – 10 points) and 8 out of 61 (13.11%) of them did not feel confident (0 -4 points). This question obtained the lowest average score with 7.26 (see Figure 34).

These findings suggest that the content on the digital health literacy and education submodule was very helpful for trainers and enhanced their knowledge and skills by providing new concepts and new forms to understanding the relevance of digital health literacy. However, after completing this submodule they do not feel more confident meaning that perhaps the new knowledge and skills acquired should be reinforced by more exercises.

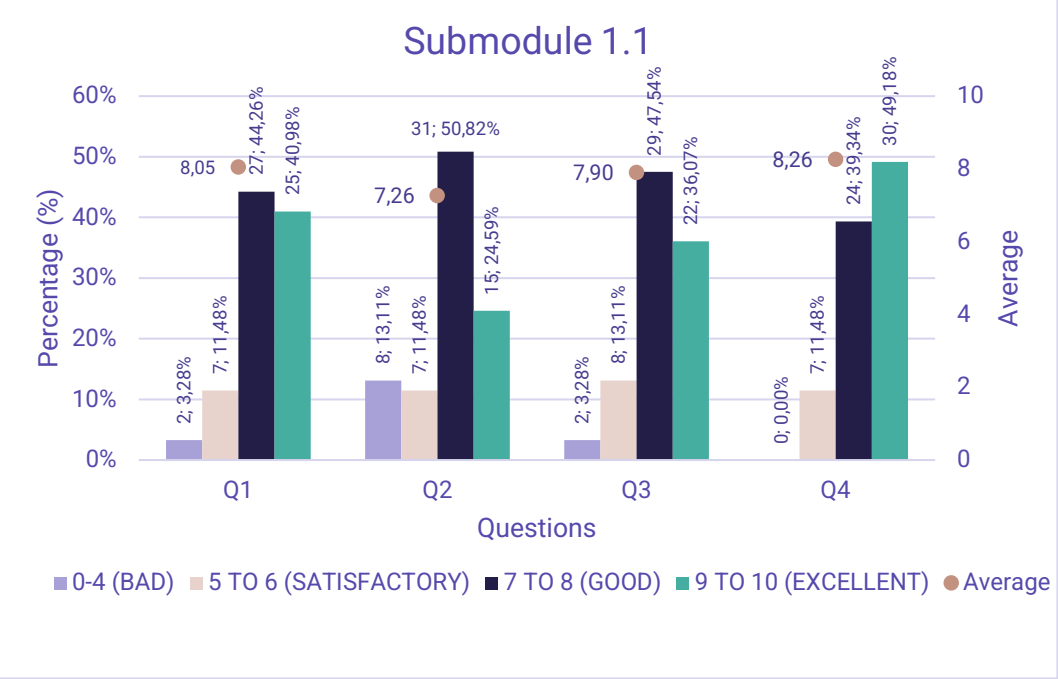

Figure 34. Trainers' evaluation submodule 1.1 rates and their average for the four evaluation questions

Submodule 1.2 Blended learning approach

Blending learning approach submodule aimed to provide a general knowledge of key terminologies, benefits, and challenges of blended or hybrid learning methods, as well as introduce strategies to integrate various online activities and materials to foster peer engagement and create community among learners.

For nearly 6 out of 10 trainers (57.63%; n = 34) though that this submodule extremely improved their understanding and awareness of the knowledge and skills in blended learning (9 – 10 points), giving the highest average score of 8.49. Moreover, 53.45% (n = 31) found that the assessment of this submodule was highly helpful for their learning (9 – 10 points). 44.07% (n = 26) of trainers indicated that they would integrate this newly acquired blended learning knowledge into their

workplace environment. Regarding the level of confidence in relation to blended or hybrid knowledge and skills acquired after the course, 48.28% (n = 28) of the trainers rated this questions as “good” (7 – 8 points), resulting in the lowest average score 7.81 compared to the other indicators (see Figure 35).

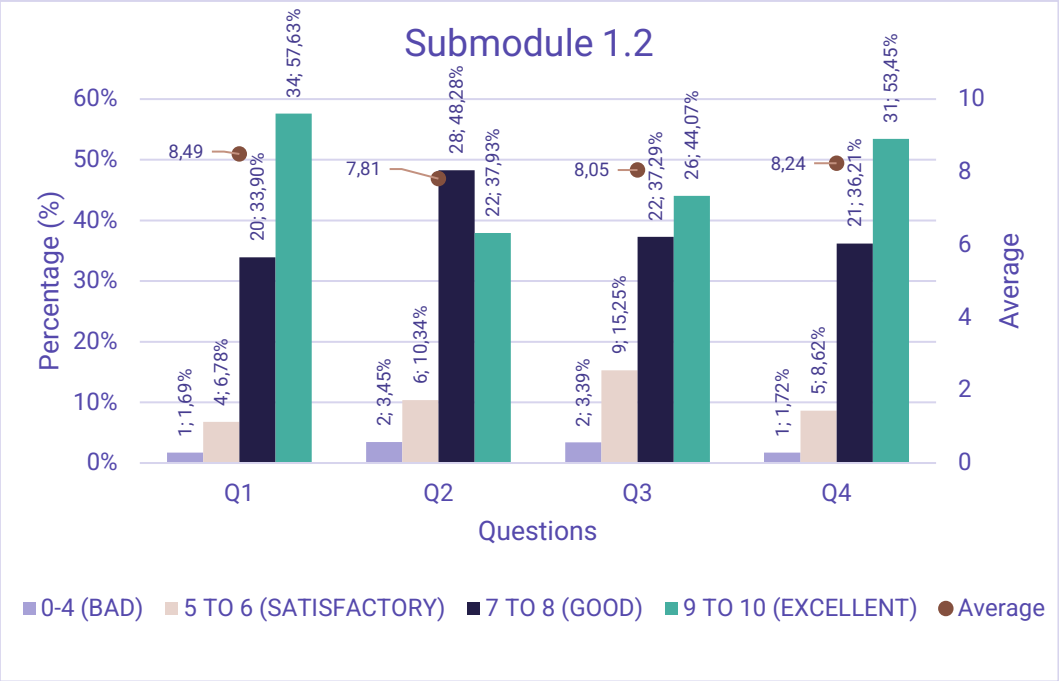

Figure 35. Trainers’ evaluation submodule 1.2 rates and their average for the four evaluation questions

Submodule 1.3 Future environments and education technology

Future environments and education technology submodule aimed to present the future operating environments in education, such the use of 360-degree view, 3D immersive platforms, as well as strategies to integrate this technology and tools into their classrooms.

For almost 5 out of 10 trainers (48.28%; n = 28) this submodule extremely improved (9 and 10 points) understanding and awareness of their knowledge and skills on future environments and education technology, giving trainers new strategies and abilities to apply new education technology, such as apps or software in cancer care education. Moreover, 44.83% (n = 26) of trainers considered that the assessment for this submodule was immensely helpful to their learning (9 – 10 points). However, only 34.48% (n = 20) felt extremely confident in relation to their knowledge and skills after this submodule and 35.09 (n = 20) highly considered integrating new education technology strategies in cancer care into their daily work (see Figure 36).

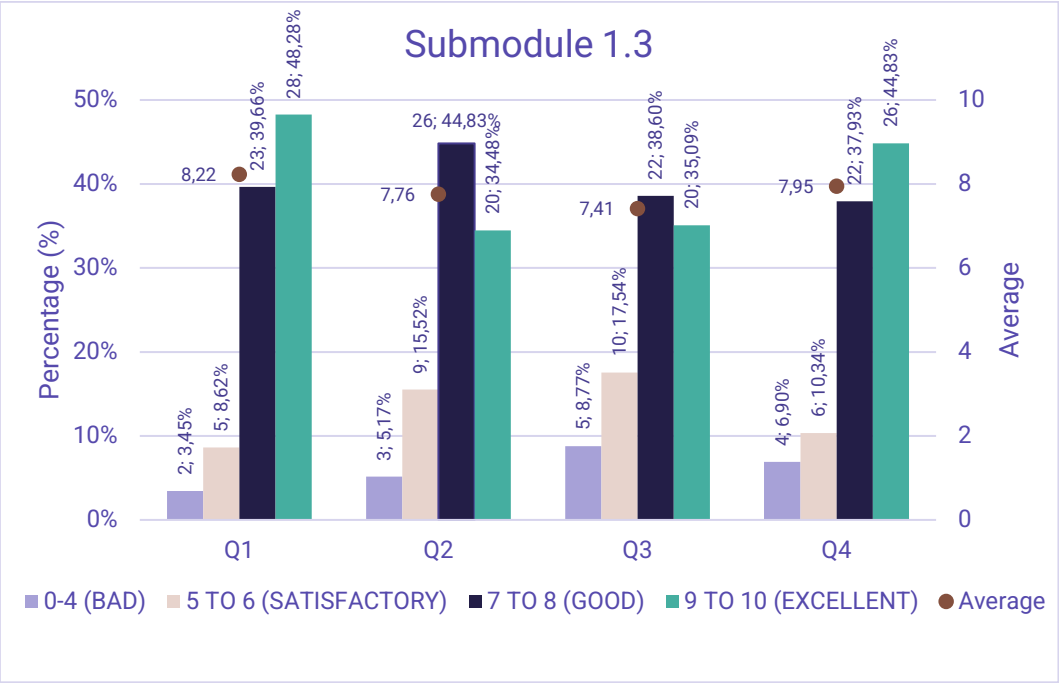

Figure 36. Trainers' evaluation submodule 1.3 rates and their average for the four evaluation questions

Submodule 1.4 Remote learning and teaching in oncology

Remote learning and teaching in oncology submodule aimed to present the different modes of delivery in remote learning such as videos, discussion boards, prerecorded presentations, to give tips to apply properly and to explore the opportunities and challenges of it.

Trainers' satisfaction is moderately good for the submodule 1.4, having an average higher than 8 in the 4 assessment questions. In the 4 assessment questions, most of the trainers rated them with excellent (9 – 10 points). For almost 6 out of 10 trainers (58.62%; n = 34) believed that the assessment of this submodule was very helpful to improve their learning (9 – 10 points). In a smaller number of trainers, 53.45%, n = 31, their understanding and awareness of knowledge and skills on remote learning and teaching indicated that was highly improved (9 – 10 points). A little less than half of trainers, 48.28% (n = 28), contemplated to integrate this new knowledge and skills into their workplace in a highly positive way and 44.83 (n = 26) felt very confident with the expertise acquired (see Figure 37).

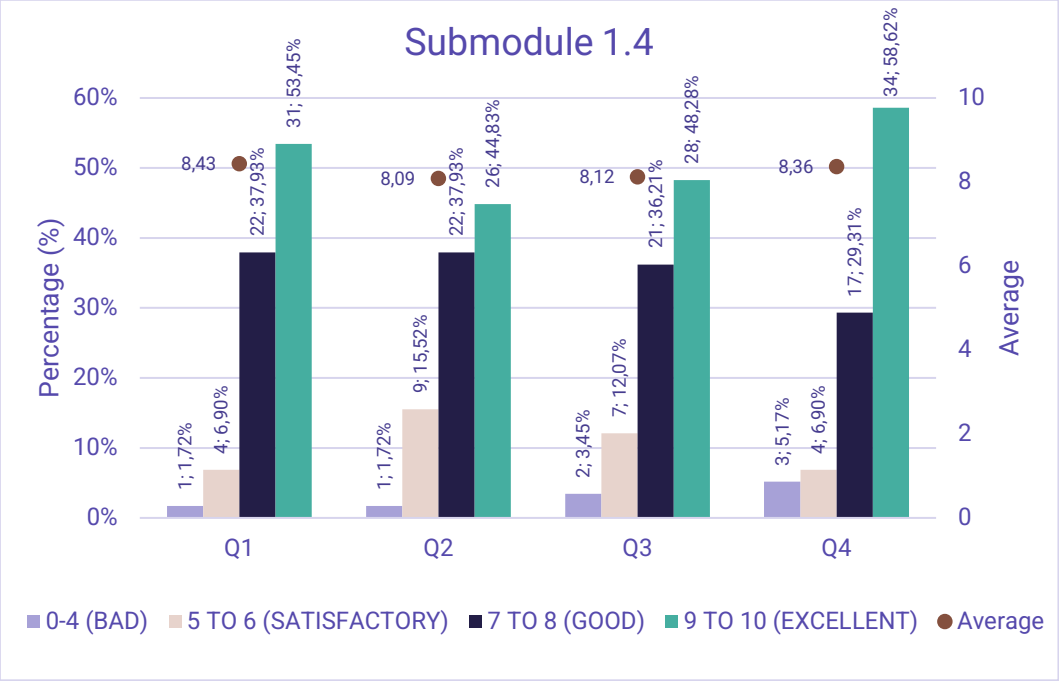

Figure 37. Trainers' evaluation submodule 1.4 rates and their average for the four evaluation questions

Submodule 1.5 Virtual reality and simulation in post-pandemic world

Virtual reality and simulation in post-pandemic world submodule aimed to introduce the basic principles and terminology of immersive technologies and simulation learning concepts, as well as examples of different immersive technologies to apply in cancer care training.

Trainers' satisfaction of this submodule is slightly good, having an average between 7 – 8 out of 10 in the 4 assessment questions. In general, in this submodule, satisfactory, rated with 5 – 6 points, and bad satisfaction, rated with 0 - 4 points, increased. 46.55% (n = 27) trainers felt that thanks to this submodule their knowledge and skills on virtual reality and simulation extremely improved (rated with 9 – 10 points). Almost the same percentage of trainers, around 43% (n = 25), felt very confident to integrate virtual reality and simulation to their work or clinical practices and felt the assessment highly helpful for enhance their learning (9 – 10 points) (see Figure 38).

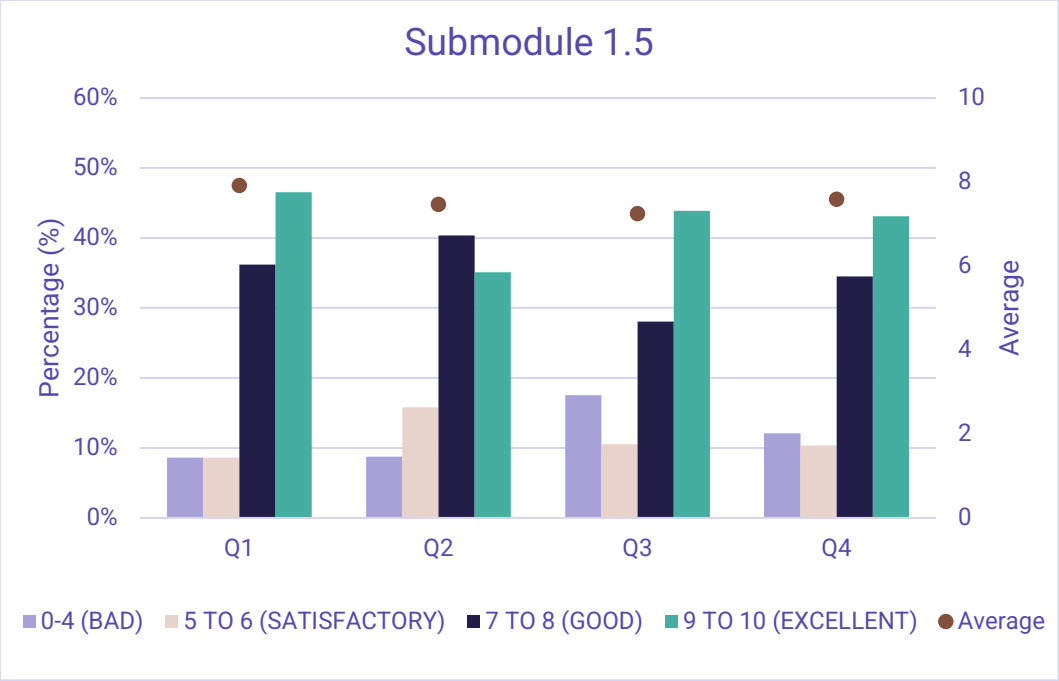

Figure 38. Trainers' evaluation submodule 1.5 rates and their average for the four evaluation questions

Submodule 1.6 Digital skills the educator's toolkit

Educator's toolkit submodule aimed to introduce trainers to the basics concepts to create a toolkit, including the selection of adaptable materials and tools to one's own teaching, advice to support trainees during their learning pathway, and principles of cybersecurity and patient data protection.

Half of the trainers (50%, n = 29) indicated a strong intention to integrate the educator's toolkit in their daily practice (9 – 10 points), giving to this item the highest average score of 8.14 out of 10. Additionally, 44.83% (n = 26) of trainers believed that submodule's assessment was extremally helpful for their learning (9 – 10 points) while 12.07% (n = 7) found it unhelpful (0 – 4 points). Nearby half of the trainers (47.37%, n = 27) answered that this submodule highly improved their understating and skills in creating toolkits, patient data safety, and learner guiding and support (rated 9 – 10). In terms of confidence in relation to the knowledge and skills acquired, 54.39% (n = 31) rated their confidence as "good" (7 – 8 points) while only 29.82% (n = 17) felt "very confident" (9 – 10 points), obtaining the lowest average score with 7.47 of the 4 assessment questions (see Figure 39). The relatively high percentage of trainers who did not find the assessment useful may indicate that evaluation was more focused on the theoretical content rather than practical content (see Figure 39).

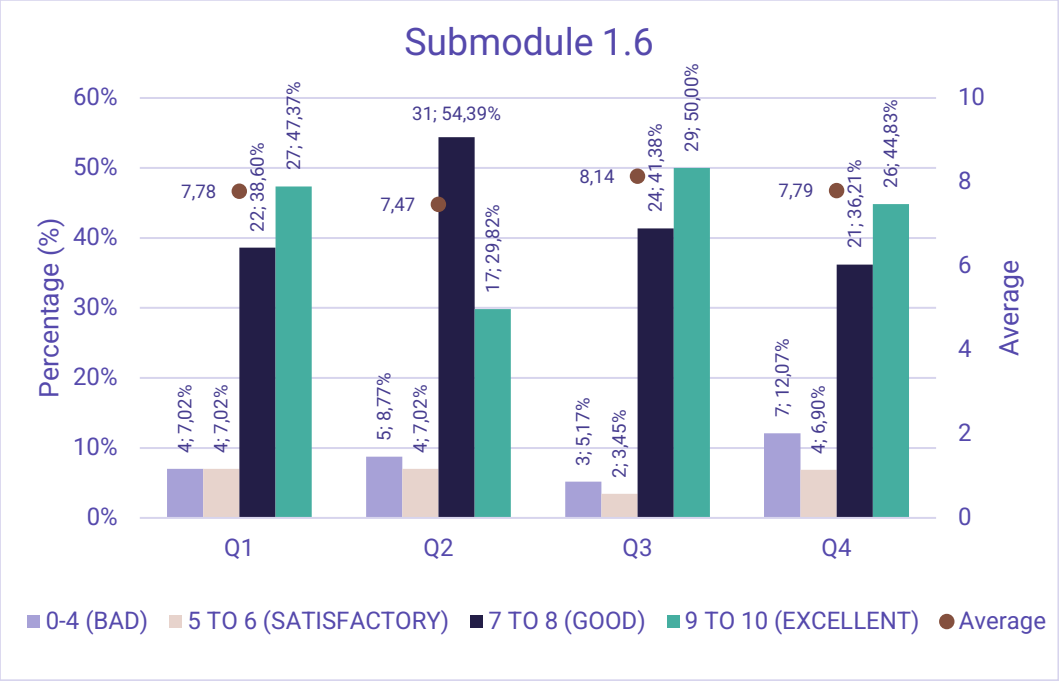

Figure 39. Trainers' evaluation submodule 1.6 rates and their average for the four evaluation questions

Submodule 1.7 Interprofessional education in the support of digitalization of oncology services

Interprofessional education in the support of digitalization of oncology services submodule aimed to give an overview of profession-specific roles, competences, and responsibilities in the support the digitalization of oncology services. It also addressed barriers and solutions for effective communication in interprofessional education and offered strategies to enhanced interprofessional relationships and communication skills.

Trainers' satisfaction with the submodule was moderately high, with an average score above 8 across Q1, Q3 and Q4. More than half of the trainers consider the following assessment questions "excellent" (9 or 10 points): improved understanding and awareness of the knowledge and/or skills provided (50.88, n = 29), integration of submodule specific knowledge and/or skills into their workplace or clinical practice (52.63%, n = 30) and the usefulness of the assessment in supporting their learning (51.72%, n = 30) meaning that trainers found submodules highly relevant and helpful for their work. However, in terms of confidence in applying the acquired knowledge and skills, the most prevalent answered was "good" (7 - 8 points), accounting for 53.45% (n = 31) (see Figure 40).

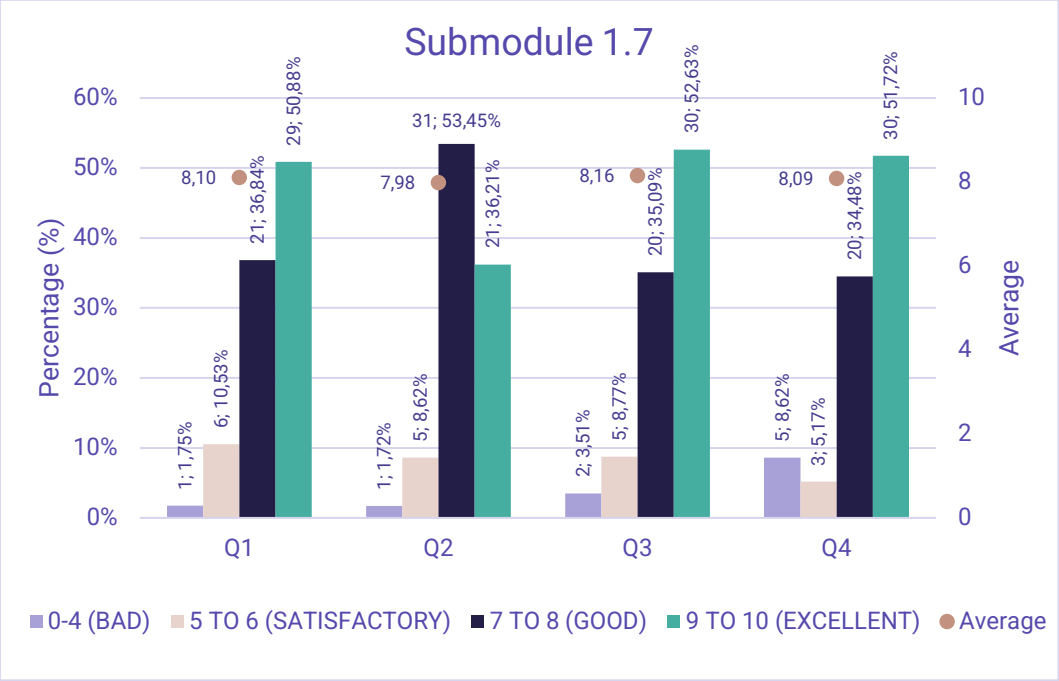

Figure 40. Trainers' evaluation submodule 1.7 rates and their average for the four evaluation questions

Module 2 Interprofessional education and its embedded submodules

The following section presents the results of satisfaction evaluation Module 2 Interprofessional education, and its submodules 2.1 to 2.3. Module 2 satisfaction questionnaire was answered by 230 respondents (referred also as learners or participants), which included participants and trainers. Submodules evaluation questions from module 2 were answered by 218 or 222 respondents.

Overall, the 17 assessment indicators were rated positively. 5 out of 17 indicators were considered to be included in the module by 90% and 92% of the respondents (rated "Yes"), while between 4 - 5% (n = 9 – 11) thought they were not included (rated "No") and between 4 - 5% (n = 9 – 11) respondents responded with N/A. The 5 top indicators were: title module was explicit, content supported identified training objectives, content included required topics, learning outcomes were clearly described, and instructional approach helped the learner to learn, assimilate, and apply the content. On the other hand, indicator with the lowest agreement, accounting for only 65.45% (n =144) of the respondents was accessible of materials in an individual's preferred language while 20% (n = 44) did not find accessible in their preferred language and 14.55% (n = 32) believed that did not apply.

Module title linked logically to other program modules, objectives were clearly defined, objectives identified competencies covered in the module, objectives listed the specific skills or knowledge gained by the learner, content or

supplemental materials considered and included stakeholder recommendations, module and supplemental materials were culturally appropriate, used culturally sensitive language, and acknowledged cultural norms, and interactivity was used throughout the module to involve and engage the learner in active learning indicators were rated as “Yes” for the 85% and 90% of the respondents. In contrast, 80% and 84.99% of the respondents voted as “Yes” the following indicators module accommodated different learning styles, module accommodated a variety of relevant illustrations, examples and visual aids, module was accessible to all potential participants, learning outcomes were measurable (see Figure 41).

Regarding the open-ended question, on which part of the training was most useful, responses generally indicated that all content was valuable and useful. This depends on each participant experience and personal objectives, making hard to conclude which was the most outstanding submodule. Respecting of how information gained could be applied in their daily practice, most of the answers referred that they would be able to better support and treat patients by integrating technology into patient care and enhance the communication. In addition, interprofessional communication and collaboration was enhanced. However, few learners mentioned that were unable to applied because their institution did have the limited digital resources and tools.

Overall, most of respondents were satisfied with the Module 2. However, several recommendations for Module 2 improvement were suggested, some of which were already were reflected in the close-ended question. This included make the course available in multiple languages, include more interactive, real-life situations, and learning exercises, and have a more friendly user platform to be more intuitive. The vast majority found that the allocated time was sufficient to complete, and they would recommend it to other professionals.

These findings demonstrate that content and materials of Module 2 were well-designed and aligned with the objectives. However, to better achieve the learning outcomes, it should be considered to include more relevant examples, such as real-life situations, or visuals materials.

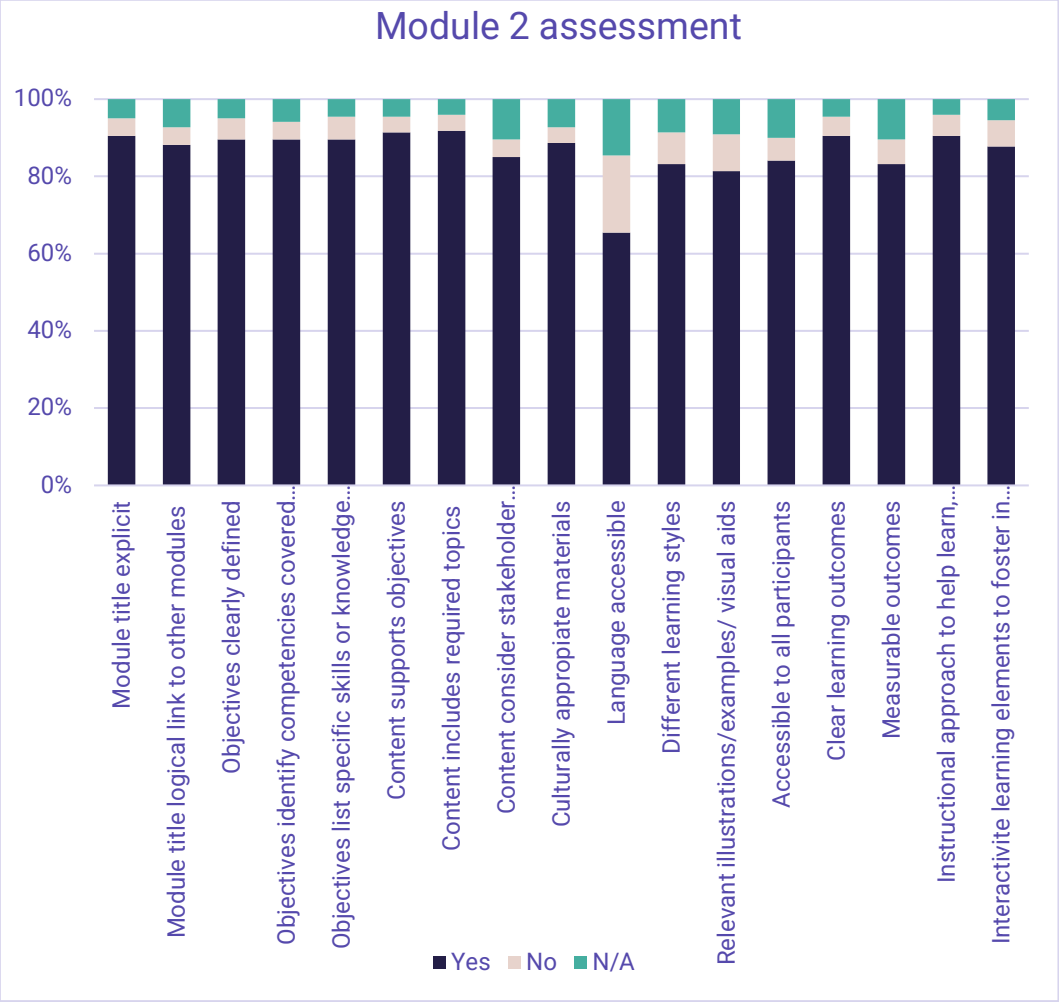

Figure 41. Module 2 evaluation rates

Submodule 2.1 Communication training for HCPs in digital care environment

Communication training for HCPs in digital care environment aimed to provide the key principles of nature, purpose and function of digital communications, assess various types of digital communication, collaboration and participation strategies, forms and channels for HCPs and the attitude to use digital tools to communicate respectfully, professional and ethically.

Trainers' satisfaction with the submodule was extremely high, with an average score above 8 across for the 4 assessment questions. All the assessment questions were rated with 9 or 10 points (excellent) by more than half of the respondents. Improved understanding and awareness of the knowledge and/or skills provided (57.86, n = 162), feel confident in relation to their knowledge and/or skills after completing this submodule (50%, n = 140), integration of submodule specific knowledge and/or skills into their workplace or clinical practice (53.05%,

n = 148) and the usefulness of the assessment in supporting their learning (61.79%, n = 173). These evaluation indicators were only unmet by 4% or less (n ≤ 10) of the respondents (0 – 4 points). Respondents found this submodule highly relevant, and helpful for their work. Moreover, they felt more confident in relation to their knowledge and skills after this submodule meaning that their knowledge/skills were reinforced and updated with newer (see Figure 42).

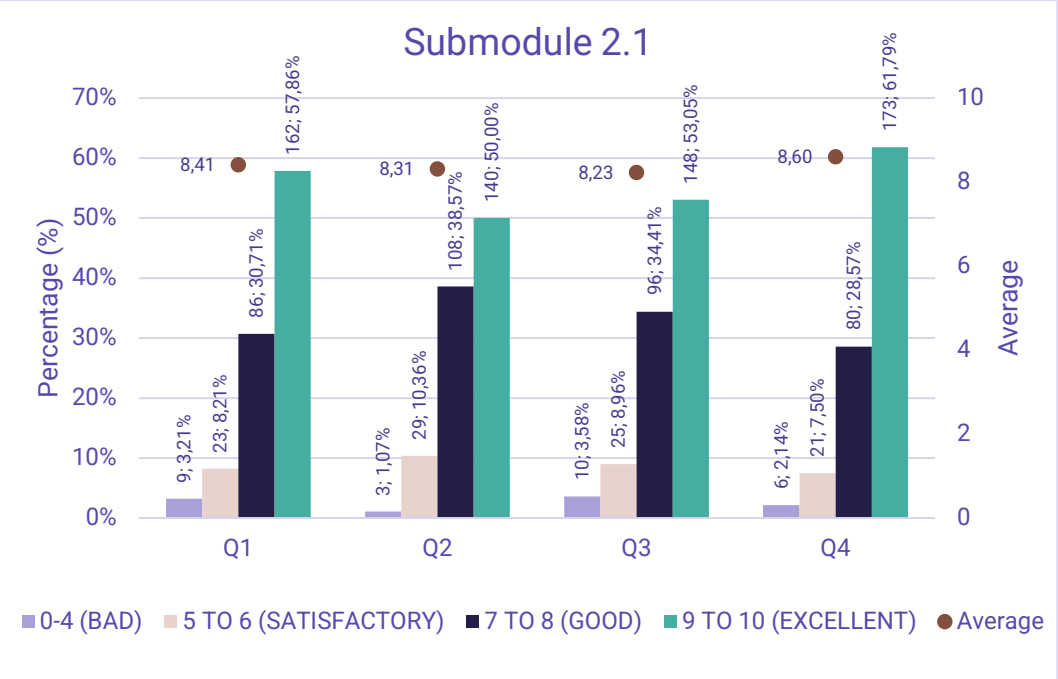

Figure 42. Learners' evaluation submodule 2.1 rates and their average for the four evaluation questions

Submodule 2.2 Advance care planning and digital self-management support in cancer

Advance care planning and digital self-management support in cancer submodule aimed to introduce advance care planning and its principles, the role of digital self-management to support patients in their needs of care and assess the effects of mHealth apps on patient's self-efficacy in advance care planning process.

Respondents' satisfaction with the submodule was exceedingly high, with an average score above 8 across all assessment questions. 64.84% (n = 144) of the learners thought that assessment for this submodule was incredibly helpful for their learning (9 – 10 points), giving to this item the highest average score of 8.73 out of 10. Additionally, 63.06% (n = 140) of respondents believed that this submodule highly improved their understanding and awareness of the knowledge and/or skills in relation to advance care planning and digital self-management support (9 – 10 points). Although they were awareness of the submodule content, a smaller proportion of respondents rated their confidence feeling in relation to the

knowledge and skills acquired with 9 – 10 points, accounting for 52.49% (n = 116) while the responses rated with 7 – 8 points increased. The lowest average score was for the integration of these concepts to their workplace or clinical practice, accounting for 8.39. Although, 57.21% (n = 127) of the learners voted this item with 9 – 10 points, a 4.50% (n = 10) of them did not believe to integrate (see Figure 43). These results suggest that the content was interesting for them, but for a smaller number, content was not detailed enough for feeling confident to apply the advance care planning and digital self-management support knowledge and recommendations explained in the submodule to their day-to-day.

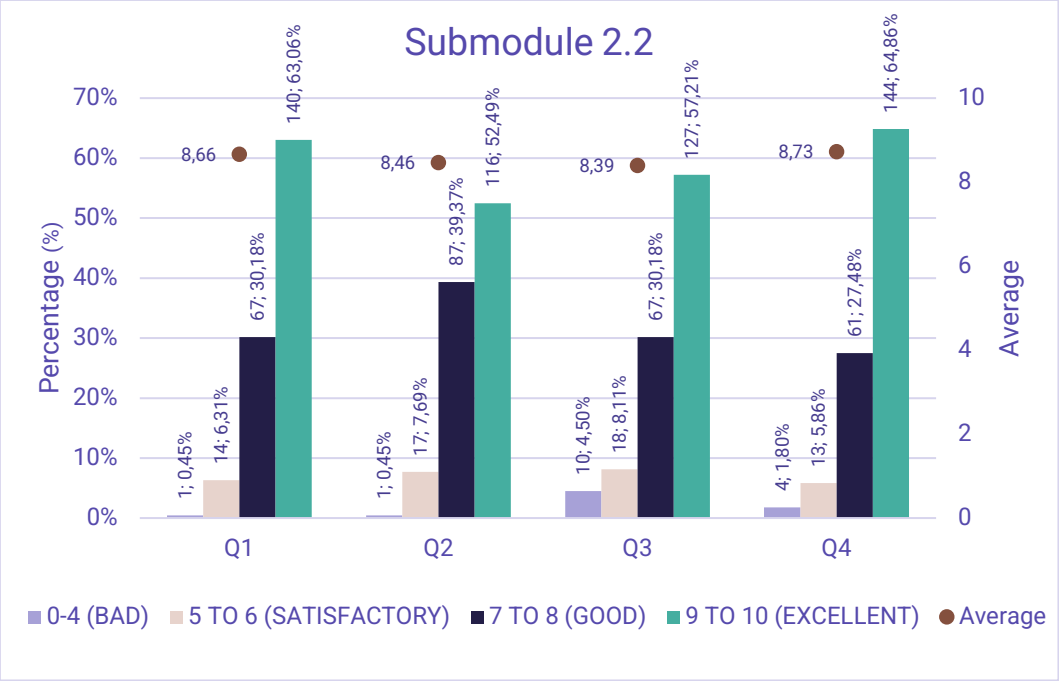

Figure 43. Learners' evaluation submodule 2.2 rates and their average for the four evaluation questions

Submodule 2.3 Digitalised interprofessional work models in cancer care

Digitalised interprofessional work models in cancer care submodule its goal was to describe different digital tools and technologies for interprofessional collaborations and share information under safety and ethical standards.

For nearly 6 out of 10 learners (61.82%; n = 136), this submodule extremely improved their understanding and awareness of the knowledge and skills in digitalised interprofessional work models in cancer care (9 – 10 points), giving the highest average score of 8.67. Moreover, 65.60% (n = 143) found that the assessment of this submodule was incredibly helpful for their learning (9 – 10 points) while only 0.92% (n = 2) did not find useful. A little bite more than half of the respondents, 54.79% (n = 120), indicated that they would integrate some of the digital tools to enhance and improve the interprofessional collaborations into their

workplace environment. Regarding the level of confidence in relation to the concepts presented, less than half of the learners, 48.68% (n = 107), rated this indicator as “excellent” (9 – 10 points) and 42.73% (n =94) rated as “good” (7 – 8 points) while only 0.91% (n = 2) failed to be confidence, resulting in the lowest average score 8.36 compared to the other indicators (see Figure 44).

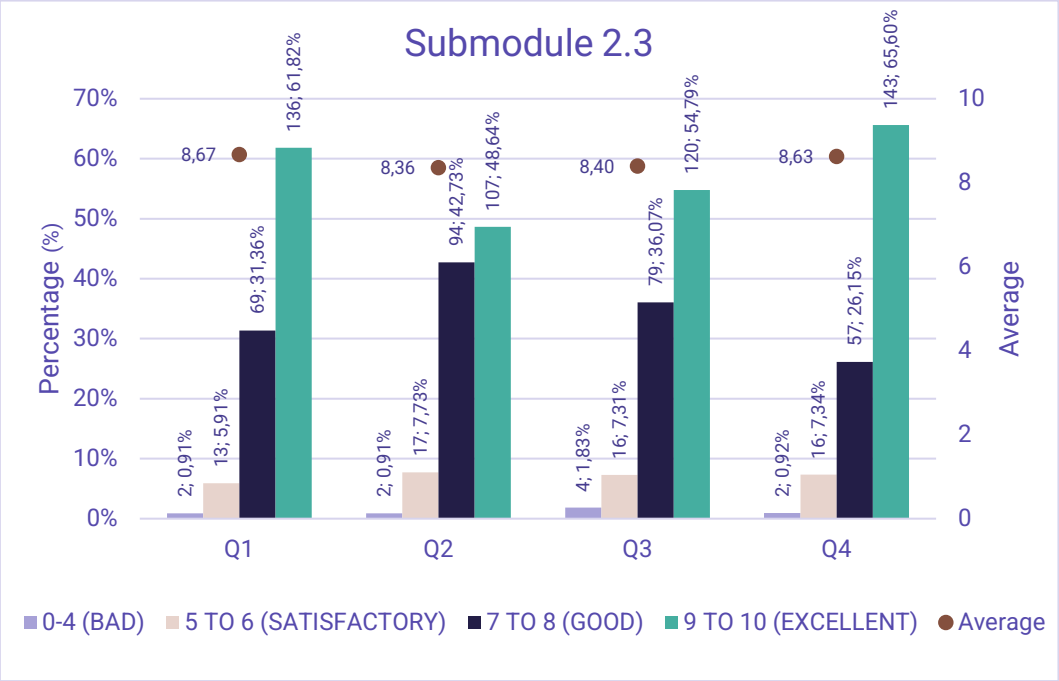

Figure 44. Learners’ evaluation submodule 2.3 rates and their average for the four evaluation questions

Module 3 Cancer nurses (Nursing cohort) and its embedded submodules

The following section presents the results of evaluation Module 3 Cancer nurses (Nursing cohort), and its submodules 3.1 to 3.3. Module 3 satisfaction evaluation questionnaire was answered by 194 respondents (referred also as learners or participants), which included participants and trainers.

Overall, the 17 assessment indicators were rated positively. 9 out of 17 indicators were considered to be included in the module by 90% and 94% (n = 175 – 182) of the respondents (rated “Yes”), while between 4 - 5% (n = 4 – 9) thought they were not included (rated “No”) and between 2 - 6% (n = 6 – 12) of respondents rated with N/A. The 9 top indicators were: title module was explicit and linked to other programme modules, objectives were clearly defined, identified competences covered in the module and listed the specific skills and knowledge gained by learner after the module, content supported identified training objectives, materials were culturally appropriated, had relevant illustrations, examples and visual aids and learning outcomes were described properly. Only 75.26% (n =146) of the respondents found the material accessible in an individual’s preferred language

while 13.92% (n = 27) did not find accessible in their preferred language and 10.82% (n = 21) answered NA (see Figure 45).

Regarding the open-ended question on which part of the training was most useful, most of the respondents highlighted the gained knowledge about appropriated use of PROMs and PREMs for care. In terms of how the information gained could be applied in their work some learners reported that could be challenging or difficult, primarily because in some respondent's countries digital health was not adequately implemented.

In general, learners expressed satisfaction with the Module 3, would recommend it to other professionals. and felt that the allocated time was sufficient, though a little extra time for interactive discussion and Q&A would have been beneficial.

Aspects that could be improved after examining the respondents satisfaction and their recommendations were the following (I) add more information on different websites or apps that could be used in daily practise, due to the information given was a bit shallow and commonly known, (II) include more real-life case studies or video demonstrations of digital collaboration and patient interactions to understand better their practical application and (III) offer the course in other languages.

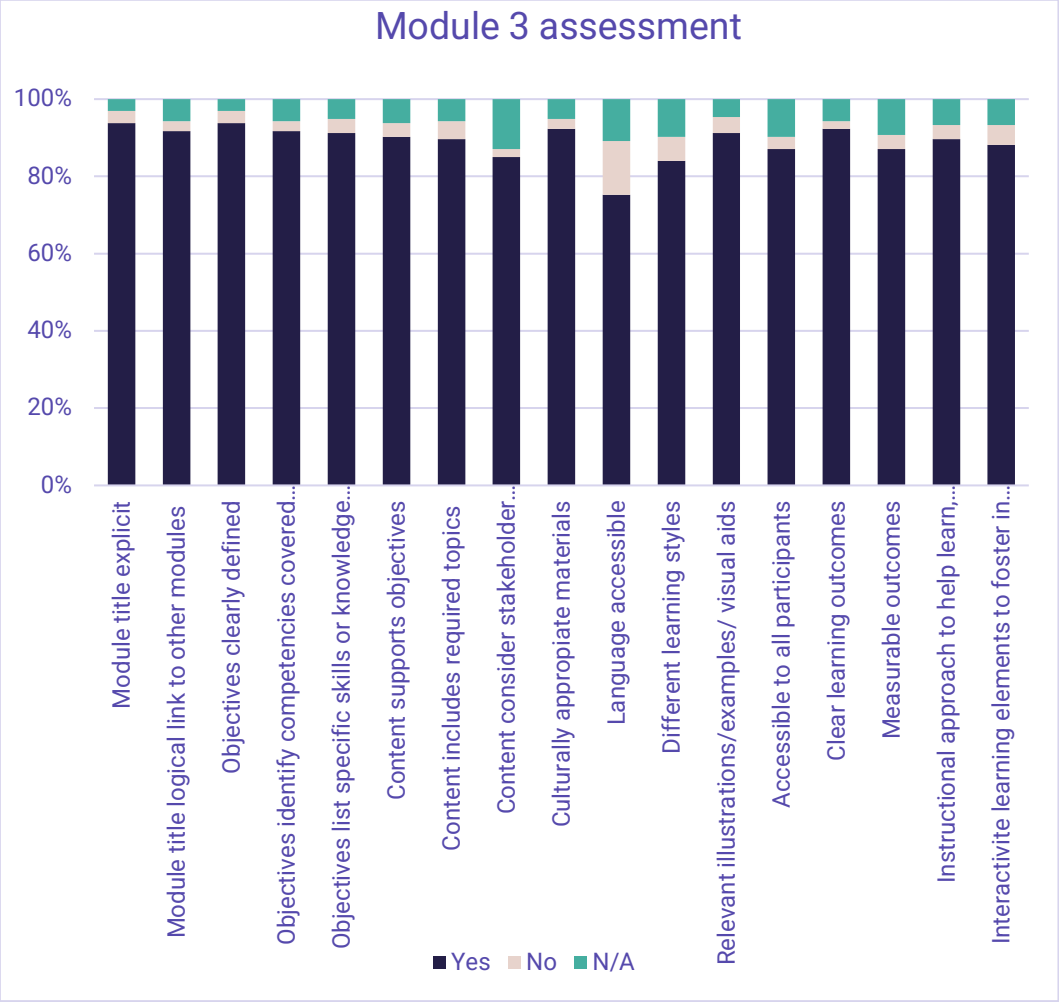

Figure 45. Module 3 evaluation rates

Submodule 3.1 Person-centred care and digital self-management support in cancer

Person-centred care and digital self-management support in cancer submodule aimed to introduce the main keys of person-centred care in digital cancer care, evaluated and explore benefits and barriers of digital interventions and motivated to use them.

Respondents' satisfaction in relation with this submodule was remarkably high, with average scores ranging between 8.41 and 8.78. The highest average score, 8.78, was for the statement "improved understanding and awareness of the knowledge and or skills", with 64.43% (n = 125) rating it 9 and 10 points (excellent), 27.84% (n = 54) rating it 7 and 8 points (good), 7.22% (n = 14) rating it 5 and 6 points (satisfactory) and 0.52% (n =1) rating it 4 or below (bad). The lowest average score, 8.41, was for the statement "feel more confident in relation to your

knowledge and/or skills after completing this submodule", counting for 57.51% (n = 111) rating it 9 and 10 points (excellent), 31.09% (n = 60) rating it 7 and 8 points (good), 9.84% (n = 19) rated it 5 and 6 points (satisfactory) and 1.55% (n =3) rating it 4 or less points (see Figure 46).

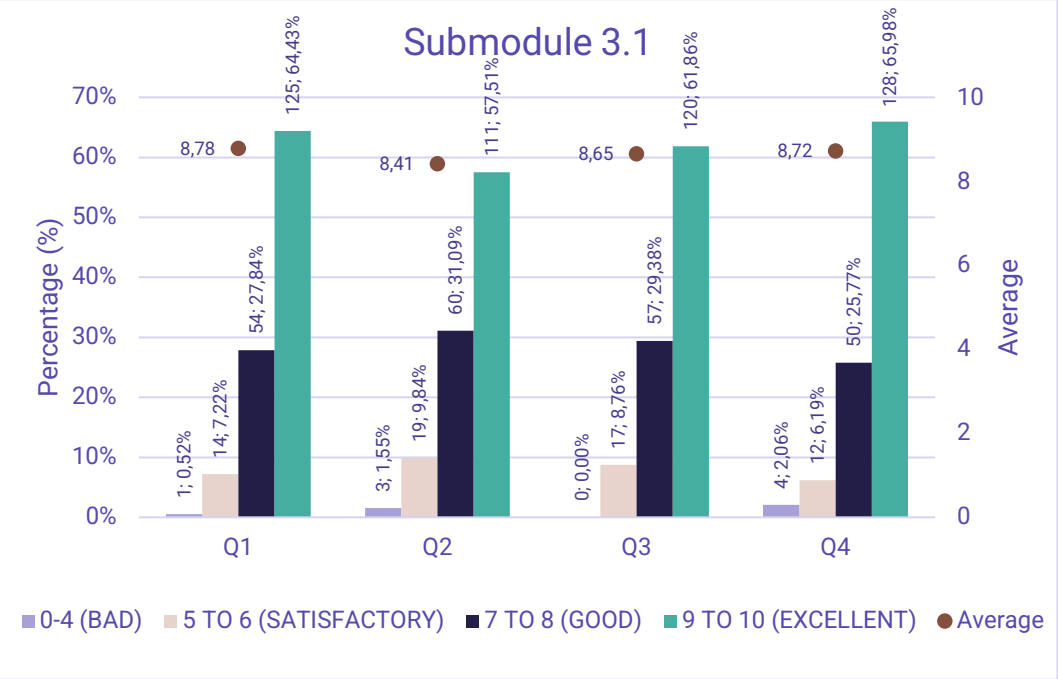

Figure 46. Learners' evaluation submodule 3.1 rates and their average for the four evaluation questions

Submodule 3.2 Patient involvement on patient-reported outcome measures (PROMs) and patient-reported experience measures (PREMs) for care and management (health data base)

Patient involvement on patient-reported outcome measures (PROMs) and patient-reported experience measures (PREMs) for care and management submodule wanted to give an overview of PROMs and PREMs, their implementation and administration and the importance of provide adequate feedback of PROMs and PREMs to patients.

Respondents had an elevated level of satisfaction with this submodule, with average scores ranging from 8.45 to 8.88. The indicator "improved understanding and awareness of the knowledge and/or skills of the content provided in this submodule" had the highest average score of 8.88. 69.07 (n = 134) of learners rated it "excellent" (9 – 10 points), 24.23% (n = 47) rated it "good" (7 – 8 points) and only 6.70% of the respondents thought that it was "satisfactory" (5 – 6 points. No one suspended this item. On the other hand, the statement "feel more confident in relation to your knowledge and/or skills after completing this submodule" had the lowest average score, 8.45. Here, nearby half of the learners (55.21%, n = 106)

thought that it was “excellent”, rating it 9 – 10 points, 36.46% (n = 70) that it was “good”, rating it 7 – 8 points, 7.81% (n = 15) that it was “satisfactory”, rating it 5 – 6, while 1 learner (0.52%) was completely unconfident (see Figure 47).

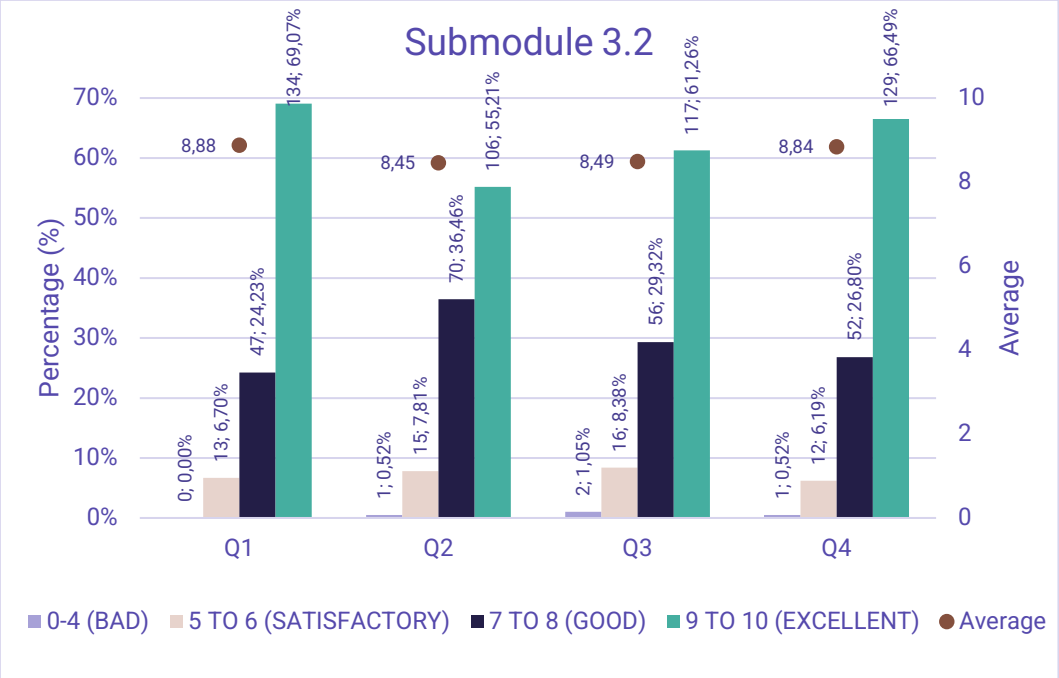

Figure 47. Learners’ evaluation submodule 3.2 rates and their average for the four evaluation questions

Submodule 3.3 Remote monitoring and eConsultation in oncology nursing practice (Nurse to nurse consultation services)

Remote monitoring and eConsultation in oncology nursing practice submodule aimed to explain the characteristics (benefits and challenges) and the ways to use and apply remote monitoring and eConsultiation to their oncology nursing practice.

Respondents reported important levels of satisfaction with this submodule with average scores ranging from 8.51 to 8.82. “Improved understanding and awareness of the knowledge and/or skills of the content provided in this submodule” was the aspect with the highest rate, 8.82. 7 out of 10 respondents (71,35% n = 137) awarding it 9 – 10 points. An additional 2 out of 10 respondents (22.40%, n = 43) voted it 7 – 8 points, a smaller percentage, (5.73%, n = 11) rated it 5 – 6 points while only 1 learner (0.52%) did not improve. In contrast the statement having the lowest average score was “feel more confident in relation to your knowledge and/or skills after completing this submodule”. 6 out 10 respondents (60.10%, n = 116) gave an “excellent” score (9 – 10 points), only 3 out of 10 respondents (30.57%, n = 59) gave a “good” score (7 – 8 points=, while 8.81% (n =17) gave a “satisfactory” score (5 – 6 points and 0.52% (n = 1) felt extremally unconfident (0 – 4 points) (see Figure 48).

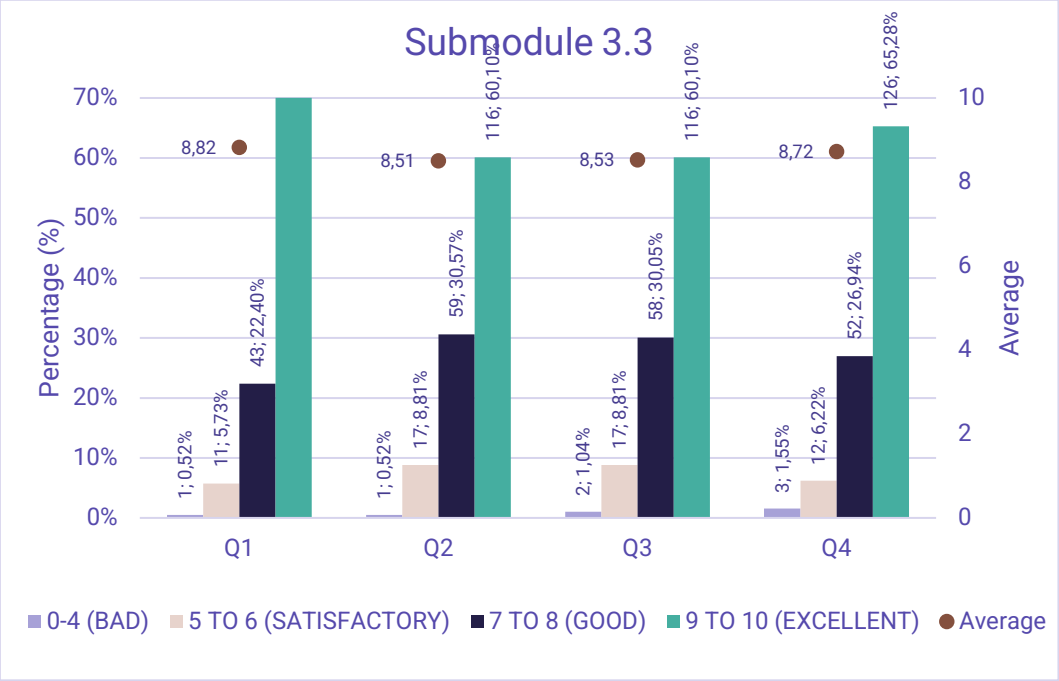

Figure 48. Learners' evaluation submodule 3.2 rates and their average for the four evaluation questions

Module 4 Specialists (clinical oncology, radiology, surgery) and general medicine (Medical practitioner cohort) and its embedded submodules

The following section presents the results of learners' evaluation Module 4 Specialists (clinical oncology, radiology, surgery) and general medicine (Medical practitioner cohort), and its submodules 4.1 to 4.5. Module 4 satisfaction evaluation questionnaire was answered by 158 respondents (referred also as learners or participants), which included participants and trainers.

Overall, respondents rated the 17 satisfaction evaluation indicators positively. 11 out of 17 indicators were considered to be included in the module by 90% and 97% (n = 141 – 152) of respondents (rated "Yes"), while 1 - 5% (n = 3 – 7) believed they were not included (rated "No) and 2 - 7% (n = 4 – 10) indicated they did not know whether the indicator were included (rated "N/A"). The 11 top indicators were: title module was explicit and linked to other programme modules, objectives were clearly defined, and identified the competences covered, content supported training objectives and included all required topics, module accommodated different learning styles and a variety of relevant illustrations, examples, and visual aids, learning outcomes were clearly described and measurable and instructional approach facilitated learning, assimilation and application of the content. In contrast, only 76.58% (n =121) of the respondents felt the material was accessible their preferred language, whereas 12.03% (n = 19) did not find accessible, and 11.39% (n = 18) selected NA (see Figure 49).

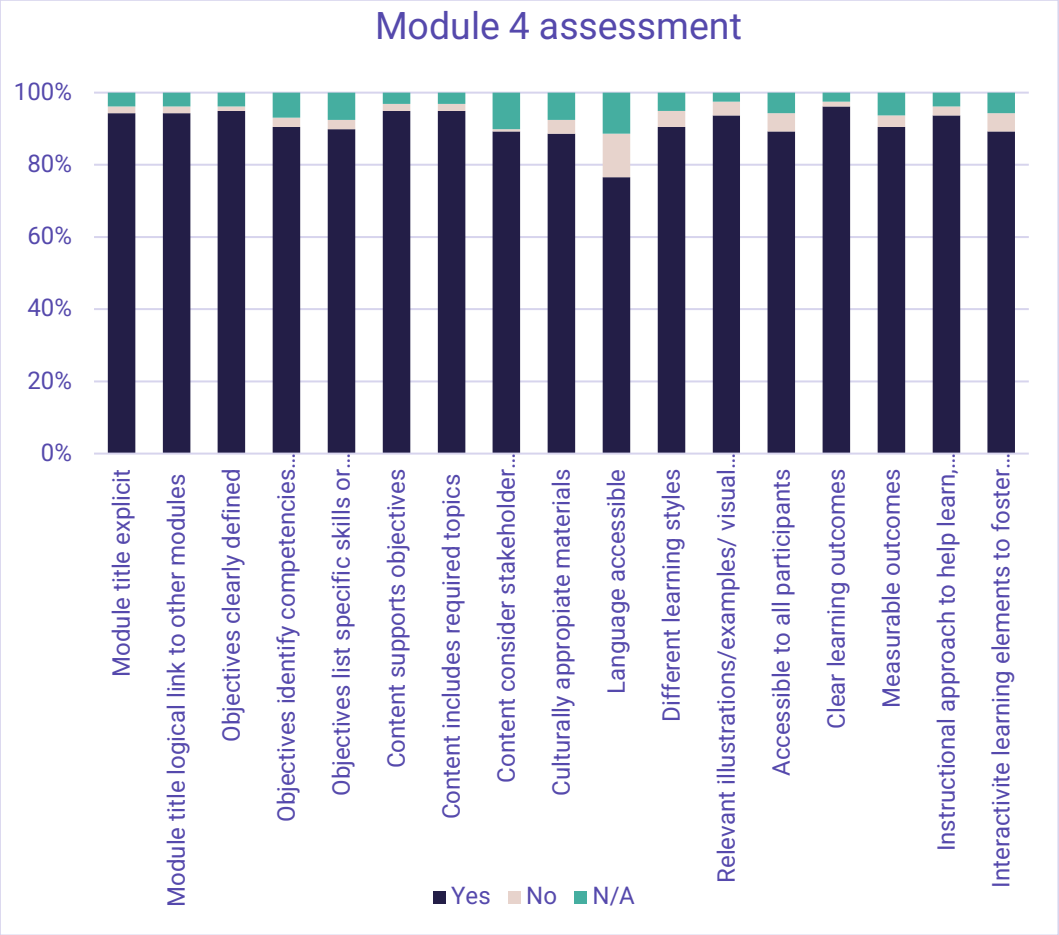

Figure 49. Module 4 evaluation rates

Regarding the open-ended question on which part of the training was most useful, no single section stood out, meaning the different submodules were mentioned. Responses varied depending on each participant's background. For the question, how the information gained could be applied in their daily practice, several participants mentioned would like to attempt to integrate especially communication with patients' part. Nonetheless some respondents could not be able to integrate all of this information to their work due to limited digital resources.

In general, learners were expressed satisfaction with Module 4. Some suggestions to improved were: (I) increase participant engagement by offering more interactive activities, (II) offer it in different languages, (IV) add subtitles to videos because some speakers were non-native English speakers, (V) and ensure all links worked and recommended articles were accessible. The vast majority felt that the time allocated for this module was sufficient and stated they would recommend it to other professionals.

Although mirror changes should be done for future editions, the outcome suggest that the content and materials of Module 4 were appealing and aligned with learners' objectives.

Submodule 4.1 Digital tools and artificial intelligence (AI) technology in cancer diagnostics

Digital tools and artificial intelligence (AI) technology in cancer diagnostics submodule aimed to introduce some digital tools and AI tech commonly used in oncology field by presenting the latest developments, their advantages, and disadvantages and how this emerging technology can be use in cancer diagnostics.

167 -168 individuals answered this submodule assessment. Respondents' satisfaction with the submodule was extremely good, with an average score ranged between 8.28 – 8.64. All the assessment questions were rated with 9 or 10 points by more than half of the respondents. Improved understanding and awareness of the knowledge and/or skills provided (64.29% n = 108), feel confident in relation to their knowledge and/or skills after completing this submodule (50%, n = 84), integration of submodule specific knowledge and/or skills into their workplace or clinical practice (53.36%, n = 93) and the usefulness of the assessment in supporting their learning (61.08%, n = 102). These evaluation indicators were only failed by 1.79% or less (n ≤ 3) of the respondents (0 – 4 points). Respondents reported that this submodule significantly improved their understanding of how to apply and use digital tools and AI technology in cancer diagnostics. They found the content particularly useful as it could be incorporated into real-life situations (see Figure 50).

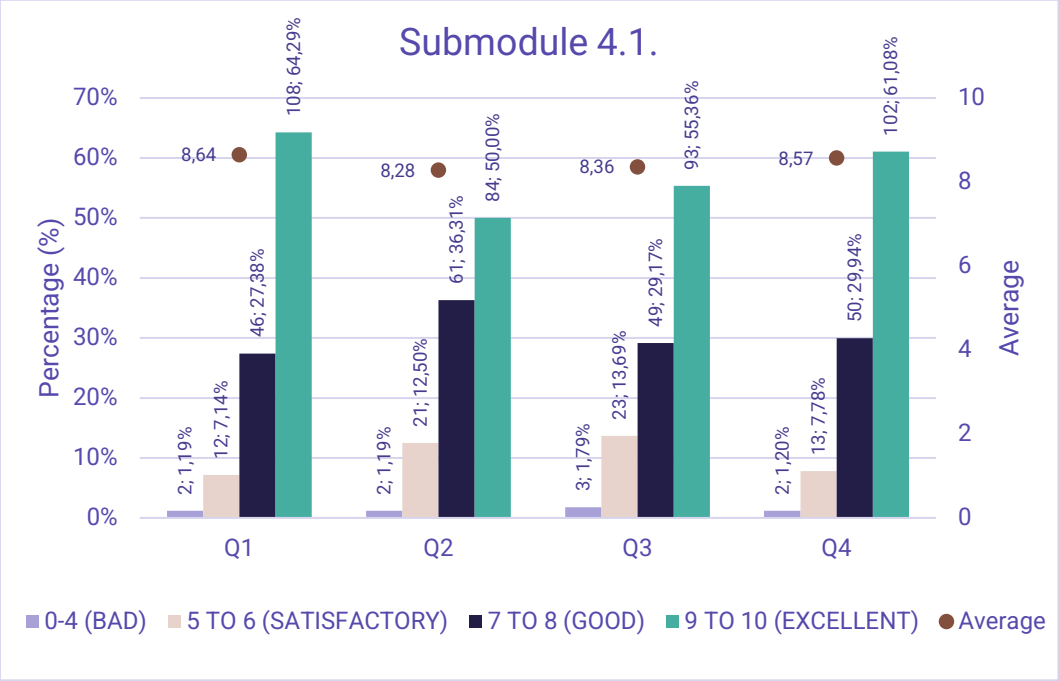

Figure 50. Learners' evaluation submodule 4.1 rates and their average for the four evaluation questions

Submodule 4.2 AI methodology as a part of modern radiotherapy planning

AI methodology as a part of the modern radiotherapy planning submodule aimed to introduce how AI was applied in the radiotherapy units, and their barriers and enablers of using it for radiotherapy planning.

This submodule assessment was answered by 162 -163 individuals. Learners responded moderately positive to the submodule evaluation questionnaire, with satisfaction average scores between 7.95 – 8.63. The most appreciated item was the improvement in understanding and awareness of the knowledge and/or skills of the content provided in this submodule, with 66.87% (n = 109) of respondents rating it 9 – 10 points. In contrast, when it was asked about feeling more confident in relation to their knowledge and/or skills after completing this submodule? satisfaction was slightly lower (average score 7.95) with 48.15% (n = 78) of the respondents rating it 9 – 10 points, while satisfaction rated 7 – 8 points (good) increased highly up to 39.51% (n = 65). Consequently, of this moderate confidence 6.79% (n = 11) of the learners will not feel certain how to apply the acquired knowledge in their clinical work (see Figure 51).

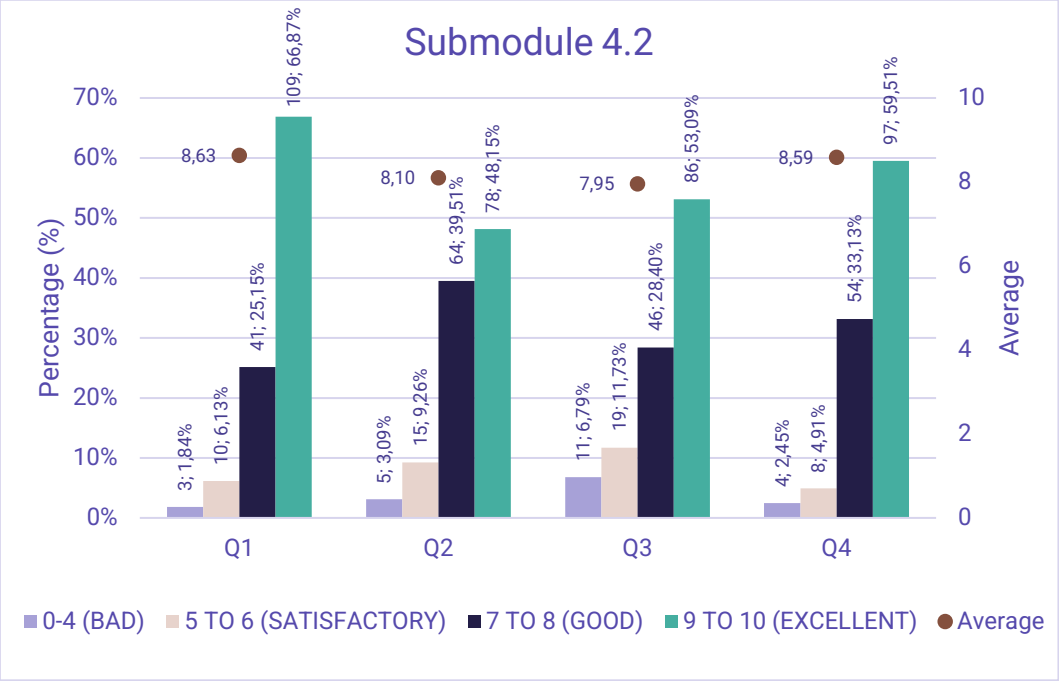

Figure 51. Learners' evaluation submodule 4.2 rates and their average for the four evaluation questions

Submodule 4.3 Digital decision supporting systems as working environments in implementing genomics to cancer treatment and prevention (Tumour DNA as well as genetic risk for hereditary cancer)

Digital decision supporting systems as working environments in implementing genomics to cancer treatment and prevention submodule aimed to describe the basics of genomics focus on cancer, give the tools to interpret digital genomic data, and how to integrate this data into patient care, treatment decisions, and prevention strategies, and present the role of digital decision support systems.

This submodule assessment was answered by 159 -160 individuals. Learners' satisfaction with the submodule was notably high, with average scores ranging from 8.16 to 8.64. The highest-rated statement (8.64 average score) was "improved understanding and awareness of the knowledge and/or skills of the content provided in this submodule", with 66.04% (n = 105) rating it excellent (9 – 10 points) followed by "assessment for this submodule was helpful to your learning" statement with an average score of 8.63 and 65% (n = 104) of respondents rating it "excellent" (9 – 10 points) however "satisfactory" rating (5 – 6 points) was slightly higher 10% (n = 16) compared with the first statement. In contrast, the lowest-rated statement (8.16 average score) was "integration of this submodules specific knowledge and/or skills into your workplace environment/clinical practice", with 55.63% (n = 89) of learners rating it "excellent" (9 – 10 points), 28.75% (n = 46) rating it "good" (7 – 8 points), 9.38% (n = 15) rating it "satisfactory" (5 – 6 points) and 6.25% (n = 10) rating it "bad satisfaction" (0 – 4

points) (see Figure 52). The data shows that learners effectively gain meaningful awareness of knowledge and skills, however they do not feel comfortable to apply these new emergent tools to interpret genomic data and to integrate into patient care to treat decisions.

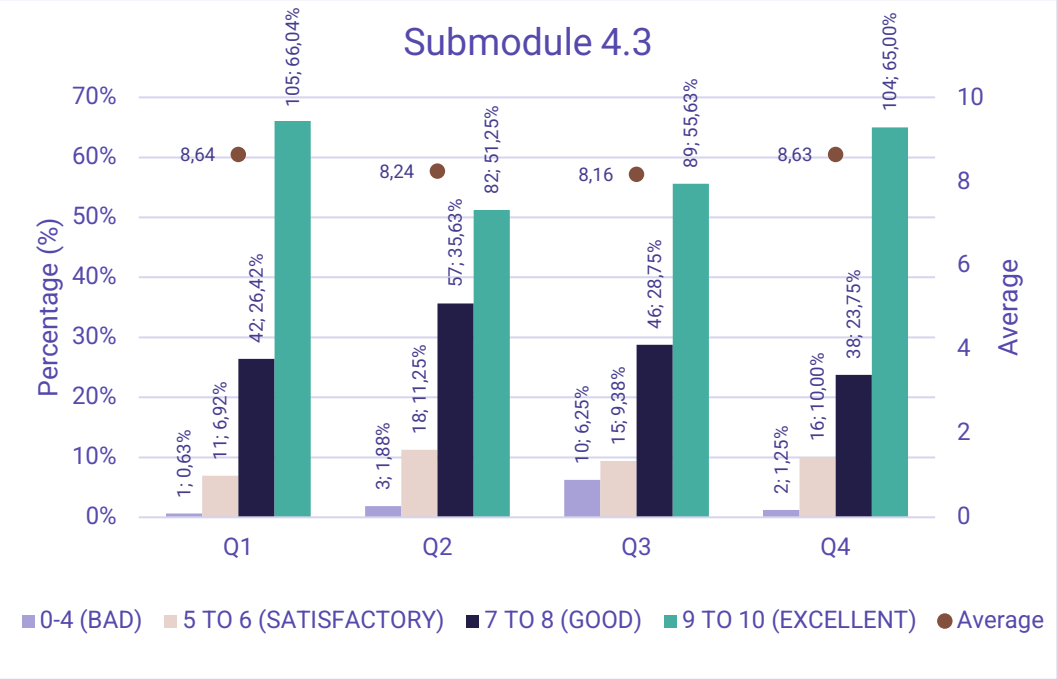

Figure 52. Learners' evaluation submodule 4.3 rates and their average for the four evaluation questions

Submodule 4.4 Electronic patients records and real-world data in supporting treatment decisions

Electronic patients records and real-world data in supporting treatment decisions submodule aimed to present the latest developments and electronic patient records in supporting treatment decisions, how to use digital information in treatment decisions, and understand the benefits and barriers of real-world data for making treatment decisions.

This submodule assessment was answered by 158 -160 individuals. Learners' satisfaction with the submodule was extremally high, with average scores ranging from 8.34 to 8.83. The most appreciated statement was the "improved understanding and awareness of the knowledge and/or skills of the content provided in this submodule", with 70.63% (n = 113) of respondents rating it 9 – 10 points. In contrast, when it was asked about statement "feel more confident in relation to your knowledge and/or skills after completing this submodule" satisfaction was slightly lower (average score 8.34) with 53.80% (n = 85) of the respondents rating it 9 – 10 points (excellent), while satisfaction rated 7 – 8 points (good) and satisfaction rated 5 -6 points (satisfactory) increased highly up to

36.08% (n = 57) and 10.13% (n = 16), compared to the previous statement. No one felt extremally unconfident. Despite reporting moderate confidence in knowledge and skills gained regarding electronic patients records and real-data in supporting treatment decisions, a vast majority of learners (62.89%, n = 100, rating it 9 – 10 points) indicated they will try to apply them in their professional environment (see Figure 53).

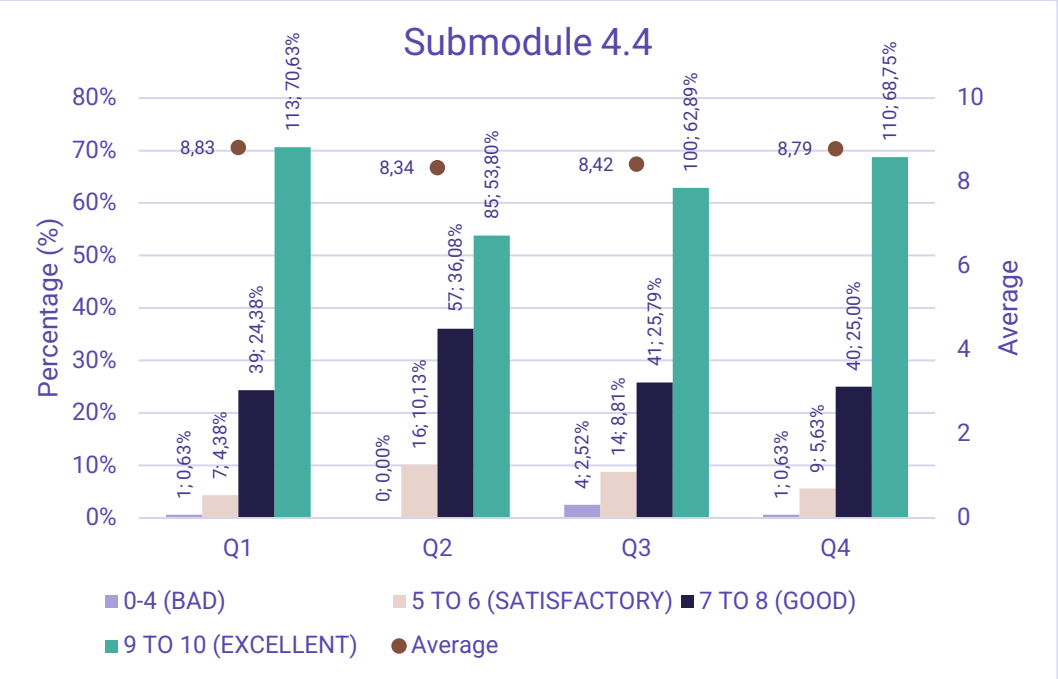

Figure 53. Learners' evaluation submodule 4.4 rates and their average for the four evaluation questions

Submodule 4.5 eHealth and digital tools in patient surveillance

eHealth and digital tools in patient surveillance submodule aimed to describe digital interventions used and latest developments, present how digital interventions can be used, and mention the barriers and enablers to eHealth and digitals tools in cancer patients surveillance.

This submodule assessment was answered by 157 -159 individuals. Learners' satisfaction with the submodule was extremally high, with average scores ranging from 8.25 to 8.76. In contrast, from the other submodules of module 4, the highest-rated satisfaction statement from submodule 4.5 (8.76 average score) was "assessment for this submodule was helpful to your learning" with 64.78% (n = 103) of respondents rating it very helpful (9 – 10 points) and only 0.63% (n = 1) thought that it was unhelpful, followed by statements "improved understanding and awareness of the knowledge and/or skills of the content provided in this submodule" with an average score 6.69 and "integrating this submodules specific knowledge and/or skills into your workplace environment/clinical practice" with an

average score 8.31 and the last one with the lower average score (8.25) was “feel more confident in relation to your knowledge and/or skills after completing this submodule” with 63 respondents (40.13%) marking 7 – 8 points satisfaction (good). These outcomes suggest that assessment questions and exercises were well-formulate to integrate the concepts and abilities explained in relation to eHealth and digital tools in patients’ surveillance, however content should be redesigned to increase the comfort of the learns regarding this content after completing this submodule (see Figure 54).

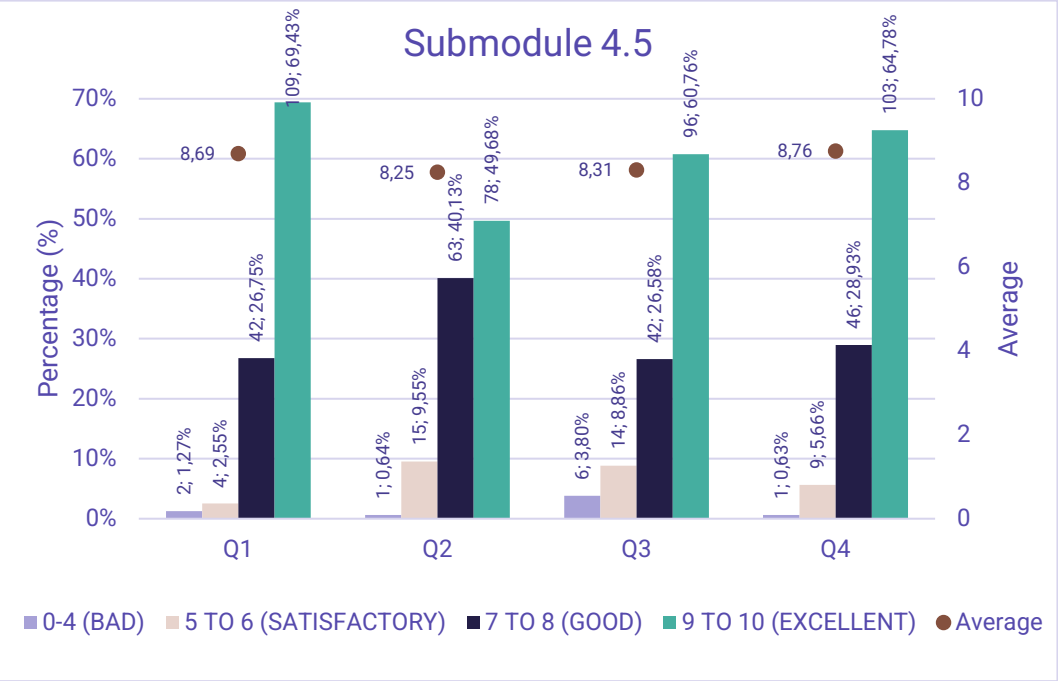

Figure 54. Learners’ evaluation submodule 4.5 rates and their average for the four evaluation questions

Module 5 Non-clinical staff working in health systems and/or health authorities and or non-governmental organisation (Non-clinical cohort) and its embedded submodules

The following section presents the results of learners’ evaluation Module 5 Non-clinical staff working in health systems and/or health authorities and or non-governmental organisation (Non-clinical cohort) and its submodules 5.1 to 5.4. Module 5 satisfaction evaluation questionnaire was answered by 150 respondents (referred also as learners or participants), which included participants and trainers.

Overall, the 17 satisfaction evaluation indicators were rated positively by respondents. A large percentage of respondents, more than 90% (n ≥ 135), agreed (rated “Yes”) that 12 out of 17 indicators were presented in the module. Only a small minority felt they were not the indicators were presented or were uncertain about them The statements were: module title was explicit (Yes = 90%, n = 135),

module title linked logically to other programme modules (Yes = 91.33%, n = 137), objectives were clearly defined (Yes = 98%, n = 147), objectives identified competencies covered (Yes = 93.33%, 140), objectives listed the specific skills or knowledge gained (Yes = 95.33%, n = 143), content supported identified training objectives (Yes = 90%, n = 135), content included required topics (n = 90%, n = 135), module and supplemental materials were culturally appropriate, used culturally sensitive language, and acknowledged cultural norms (Yes = 90.67%, n = 136), module accommodated a variety of relevant illustrations/examples/ visual aids (Yes = 90.67, n = 136), module was accessible to all potential participants (Yes = 90%, n = 135), learning outcomes were clearly described (Yes = 93.33%, n = 140) and instructional approached guided learners to learn, assimilate, and apply the content (Yes = 90.67%, n = 136). These shows that objectives of the module were clearly communicated before the training began, allowing learners to know what they could expect to learn after completing the different submodules of module 4. In contrast, materials accessibility in preferred languages was the item that less respondents, 77.33% (n = 166), had the perception to be included (see Figure 55).

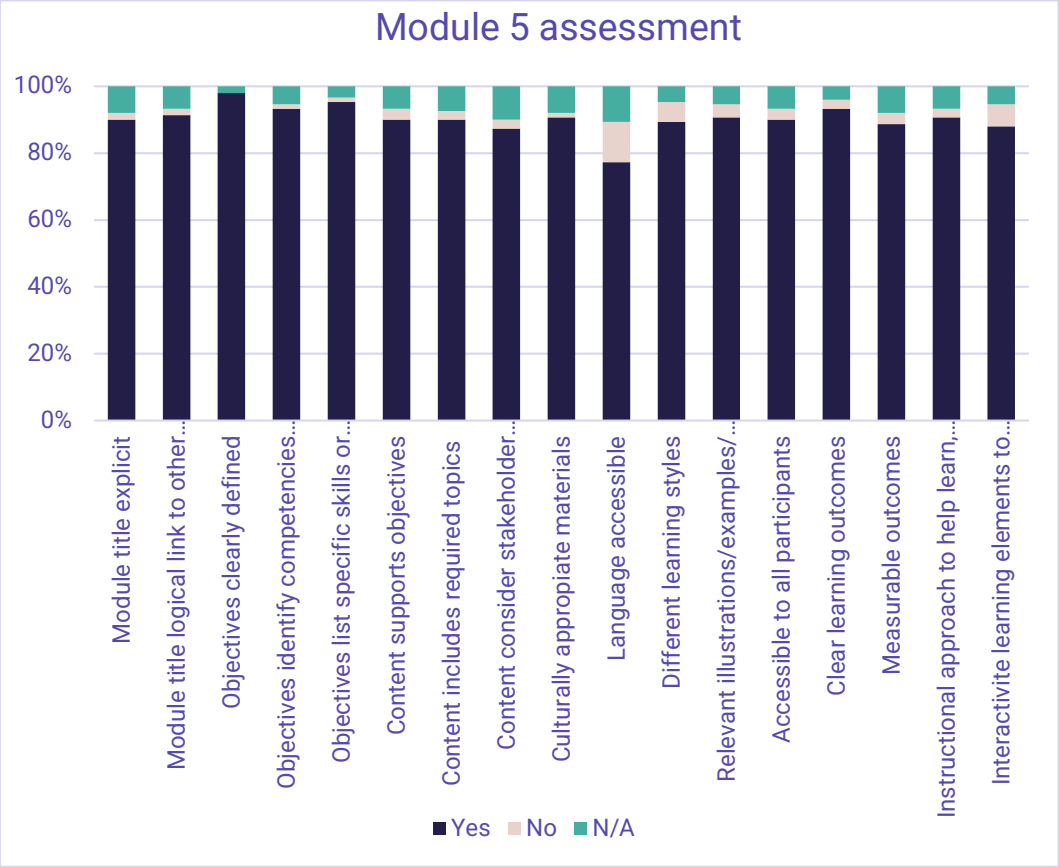

Figure 55. Module 5 evaluation rates

Open-ended responses provided further insight. When asked about the most useful part of the module, participants gave varied answers, however patient

interaction and effective communication appeared several times. Recommendations to enhance the module experience was (I) add more interactive exercises, (II) use native English speakers in the video, and (III) reformulated the presentations to be simpler by using key points to avoid extra information. Most respondents agreed that the time allocated for the module was sufficient and reported that they would recommend the module to their colleagues.

Submodule 5.1 Cancer organisations in digital cancer journey

Cancer organisations in digital cancer journey submodule aimed to introduce the role, needs and structure of Cancer Society in person-centred digital care, propose strategies for improving digital patient-centred care through collaboration with Cancer Society and be aware of the influence and role of Cancer Society on the patient experience and continuous improvement of care.

This submodule assessment was answered by 152 -156 individuals. Learners' satisfaction with this submodule was notably good, with average scores ranging from 8.18 to 8.63. The most positively rated statement regarding cancer organisations in digital cancer journey was the "improved understanding and awareness of the knowledge and/or skills of the content provided in this submodule", with 67.74% (n = 105) of respondents rating it 9 – 10 points indicating a strong improvement in their understanding in regarding needs and roles of Cancer Society in aid patient experience. This was followed by the statement "assessment for this submodule was helpful to your learning", which 65.79% (n = 100) of respondents rated it immensely helpful (9 – 10 points). 60.65% (n = 94) of the respondents commented that they really would integrate this submodule specific knowledge and/or skills into their workplace environment/clinical practice (9 – 10 points). The lowest-rated item was "feel more confident in relation to your knowledge and/or skills after completing this submodule" accounting only for 50% (n = 78) of respondents that rated felt extremally confident (rated 9 – 10 points) (see Figure 56).

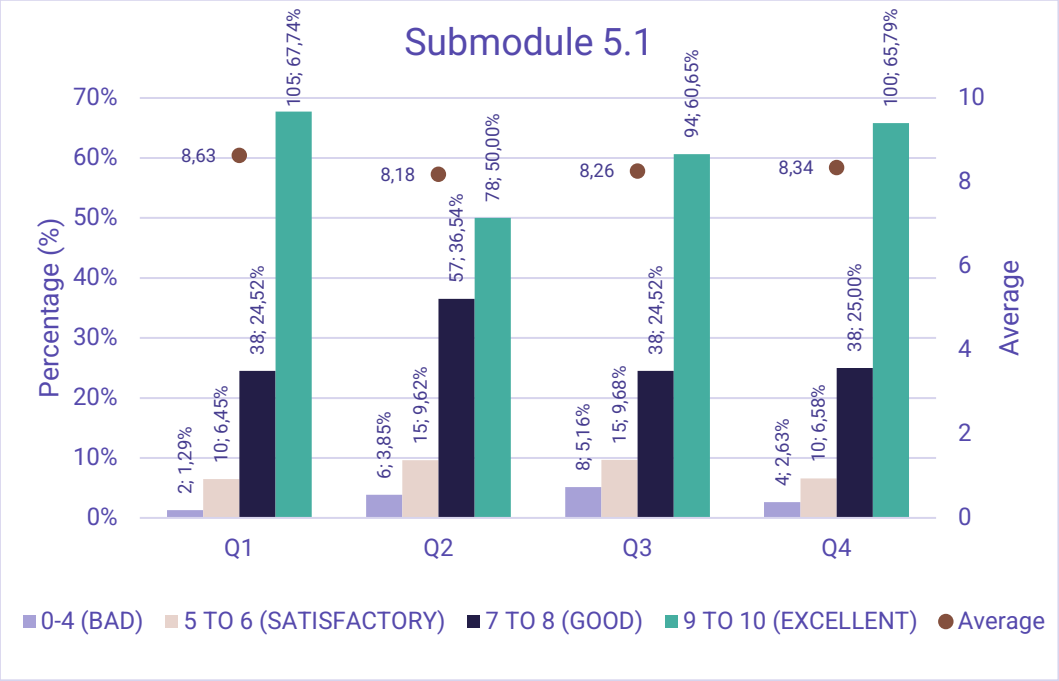

Figure 56. Learners' evaluation submodule 5.1 rates and their average for the four evaluation questions

Submodule 5.2 Collaborative models in building organisation resilience in oncology

Collaborative models in building organisation resilience in oncology aimed to explain different types of digital communication, collaboration and participation strategies, forms, and channels that are important for building organisation resilience in oncology, know guidelines, regulations and best practices when working with personal, public, professional and/or confidential digital information, data, and content while collaborating and benefits of using digital tools for collaborative models in building resilience in oncology.

This submodule assessment was answered by 151 -153 individuals. Learners' satisfaction with this submodule was notably good, with average scores ranging from 8.21 to 8.64. The highest average score, 8.56, was for the statement "assessment for this submodule was helpful to your learning". Although it is no reflected in the Figure 57 due to scores 9 and 10 were grouped in the same category, 10 points were rated by 63 (41,18%) of the learners, for that reason the overall average was higher. The lowest average score, 8.21, was for the statement "feel more confident in relation to your knowledge and/or skills after completing this submodule", with only nearly half of the respondents rated it 9 and 10 points ("excellent") (see Figure 57).

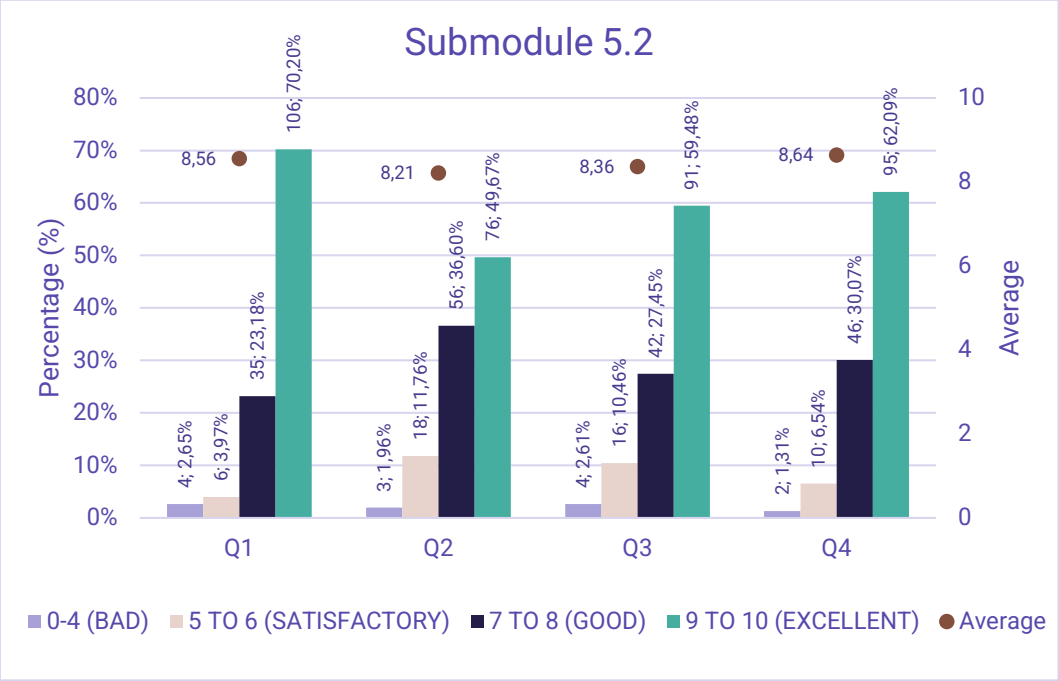

Figure 57. Learners' evaluation submodule 5.2 rates and their average for the four evaluation questions

Submodule 5.3 European crises response model in oncology

European crises response model in oncology submodule aimed to recognize and describe the characteristics associated with the different crises in the context of cancer care and explain the role of digital tools in cancer care crises, assess the needs of cancer patients in crises situations and identify/apply strategies to support their care and describe case study examples involving cancer care crises

This submodule assessment was answered by 150 -151 individuals. Learners' satisfaction with this submodule was sightly good, with average scores ranging from 7.87 to 8.50. The indicator "improved understanding and awareness of the knowledge and/or skills of the content provided in this submodule" had the highest average score of 8.50. 60.93% (n = 92) of learners rated it "excellent" (9 – 10 points), 27.18% (n = 42) rated it "good" (7 – 8 points), 8.51% of the respondents thought that it was "satisfactory" (5 – 6 points) and only 2.65% (n = 4) though that they did not improve. On the other hand, the statement "feel more confident in relation to your knowledge and/or skills after completing this submodule" had the lowest average score, 7.87. Here, the most prevalent response with 44.57% (n = 67) was 7 – 8 points (rated as "good") and 38.67% (n = 58) though that was "excellent" rating with 9 – 10 points (see Figure 58).

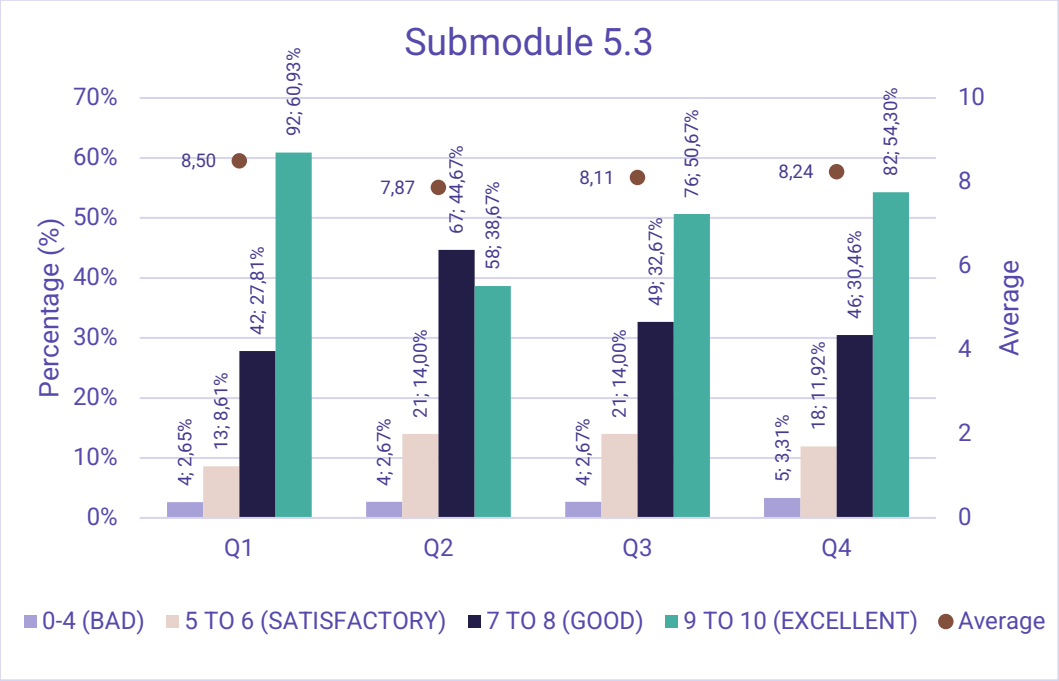

Figure 58. Learners' evaluation submodule 5.3 rates and their average for the four evaluation questions

Submodule 5.4 Digital support in health care system resilience and leadership (Utilization of data pools in clinical settings and leadership)

Digital support in health care system resilience and leadership aimed to present key efficiency metrics used and identify key development areas in their own organization, evaluate the different types of healthcare quality and efficiency indicators and explain knowledge management principles in digital cancer care leadership.

This submodule assessment was answered by 149 -151 individuals. Learners' satisfaction with this submodule was quite good, with average scores ranging from 7.87 to 8.50.

Respondents reported moderate levels of satisfaction with this submodule with average scores ranging from 7.89 to 8.49. "Improved understanding and awareness of the knowledge and/or skills of the content provided in this submodule" was the aspect with the highest rate, 8.49. 6.4 out of 10 respondents (64% n = 96) awarding it 9 – 10 points. An additional 2.6 out of 10 respondents (26.67%, n = 40) voted it 7 – 8 points, a smaller percentage, (6.67%, n = 10) rated it 5 – 6 points while only 4 learner (2.67%) did not improve. In contrast the statement having the lowest average score was "feel more confident in relation to your knowledge and/or skills after completing this submodule". 4.6 out 10 respondents (46.96%, n = 70) gave an "excellent" score (9 – 10 points), only 3.4 out of 10 respondents (34.23%, n = 51) gave a "good" score (7 – 8 points), while 14.09% (n

= 21) gave a “satisfactory” score (5 – 6 points) and 4.70% (n = 7) gave a “bad” or fail score (0 – 4 points) (see Figure 59).

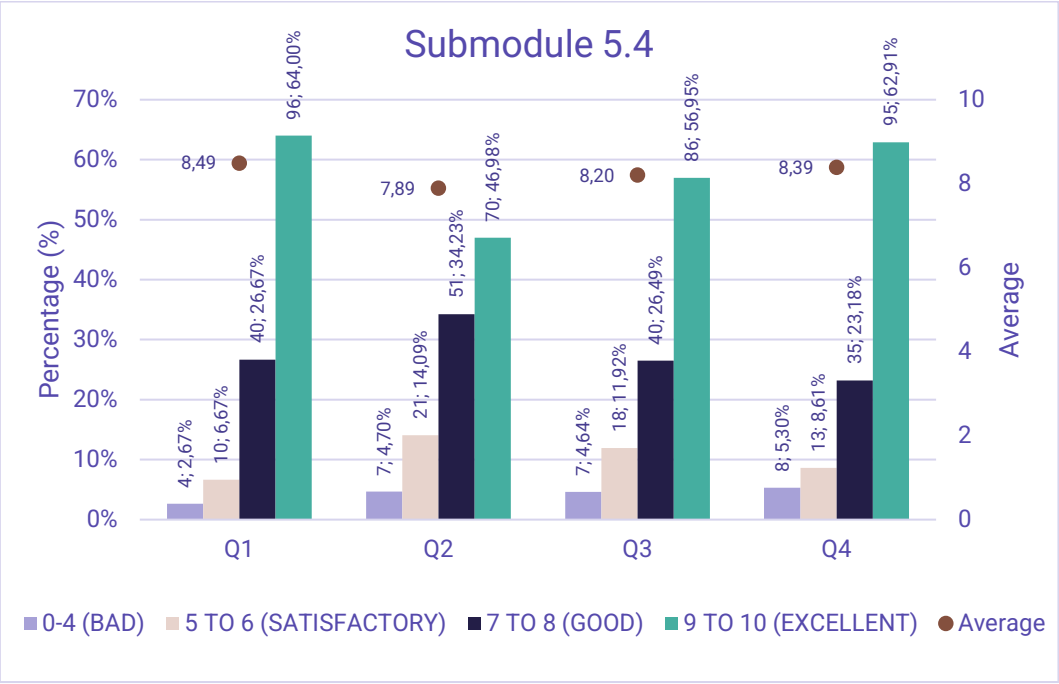

Figure 59. Learners’ evaluation submodule 5.4 rates and their average for the four evaluation questions

5. Conclusions

The recruitment process was a success as more than 10-15% of the total number of trainers and participants that initially aimed to reach were recruited. This means that the project's dissemination measures implemented were remarkably effective. Additionally, this may suggest that the project programme initially appeared appealing to a broad group of professionals working in cancer care and be update in digital skills.

Despite the success in the recruitment process, **some contingency approaches had been implemented** to finally reach the desire number of enrolled trainers and participants. The most successful strategy to achieve the target number was **having support of local networks, community groups and institutions** and involve them in the dissemination of the *DigiCanTrain* brochure and the benefits of participating in the programme within their contacts and network. Moreover, having a good interpersonal relationship with these groups foster their involvement in the project dissemination.

For future initiatives to enhance the recruitment process, consortium members **identified 3 complementary measures** to foster dissemination of this kind of programmes: (I) **face-to-face open forums**, (II) **pre-recorded informative videos** and **personal phone calls**. Although the following aspect did not depend on the consortium members, consortium members mentioned that professionals should have more support from their institutions or managers by providing more free time to be able to complete the training correctly and enhance the completion rate.The countries with the highest number of participating trainers and learners were Spain, Romania, and Greece. Participation from non-European countries or European countries outside the consortium was low, which is understandable given that dissemination efforts were primarily focused on consortium countries. Within each country, the institutions represented by trainers and participants were highly diverse, indicating that the interest in the training programme extended beyond specific organisations, not only the ones that participate in the consortium. This suggests that professionals were motivated to engage in training regardless of their enrolled institution. Notably, a considerable number of trainers and participants were **affiliated with cancer treatment centres**, which aligned within the programme' focus on training on digital cancer care.

In reference to the participants, it was observed that more than **half who showed interest in the course were women**. This could because a large number of participants that took the course had **nursing-related professions**. In relation to this fact, the majority of people interested in doing the programme chose the nurse's learning pathway. The fact that more women participated in training could

be attributed to nursing profession is usually associated with the female sector. In 2022, only 11.91% were men in nursing (5). Furthermore, since this training had a pathway exclusively for nursing, the number of nurses, and therefore registered women, increased even more. Other noteworthy professionals' profiles included medical oncologist, although there was a significant diversity among other profiles, but most of them were cancer related professions. This indicated that a wide range of healthcare professionals, were interested in training and gaining knowledge in digital health to complement their expertise. The professional profile of the trainers followed the same trend as for the participants, but the number of individuals with a nursing-related profile was slightly lower. When examining educational level, it was evident that most of the individuals **hold master's degrees as their highest level of education**. This suggested that after completing the undergraduate studies, professional often pursue further specialization trough postgraduate programmes.

The growing integration of digital technologies in recent years has required professionals to start to incorporate them into their daily practice. As a result, the majority of the participants fall within the **age range of 31 to 60 years**. Interest to digital sector tends to decline beyond this range, particularly from the age of 60-onward, when many professionals are less familiar with digital tools or are approaching to the retirement. This data was only analysed for the participants' profile. In connection with this, the data on years of experience in cancer care revelled that nearby 40% of trainers and participants **had over a decade of professional experience**. This highlights a **strong commitment to continuous learning and high experienced professionals seek** further training to be updated with the digital technologies. Digitals skills represent a new frontier for many professionals, and both formal and informal training opportunities in this area are only becoming more widespread. This was reflected in the fact that slightly more than half of the **learners** reported having received **no prior training on digital health** before enrolling in this course. Similarly, over half of the learners indicated **having little to no experience with eLearning methods**, highlighting the ongoing need for programmes that help update and strengthen digital competences in healthcare fields. On the other hand, when **trainers** were asked about their experience with eLearning, more than half reported having some and **plenty of experience with such methods as learners** or participants suggesting some prior exposure to digital courses. However, **most had limited or no experience using eLearning methods as an educator**. A closer look at the trainers' educational experience reveals that only around **20 – 25% were formally qualified as clinical teachers or healthcare educators**. Meanwhile, 40 – 45% had experience in teaching, training, or clinical teacher without holding a formal qualification. This suggests a **deficit of qualified educators** because they could perform course even in the absence of certification. However, the lack of formal training in pedagogy for the trainers may present challenges in effectively communicating knowledge and facilitating the learning. For that reason, more programmes such as *DigiCanTrain* programme,

which is focus on training the trainers with all the necessary knowledge to form later the learners, need to be develop and promote among the professionals.

A high number of individuals finally enrolled to the Moodle platform for taking the course. In the Moodle platform were enrolled 116 trainers and 679 participants. However, only finalized the course 47 trainers and 165 participants, meaning that **completion rates were 40.52% and 24.30%,** respectively. Many of the enrolled professionals dropout the training without logging into the platform (Trainers 38.79%, n = 45; Participants 56.55%, n = 384). This suggests that, while professionals are **highly motivated** to enhance their digitals skills to improve patient care and treatment, they often **face significant barriers** to completing the training. These barriers include a lack of available time due to heavy patients loads or other clinical responsibilities, as well as institutional constraints such as not having hours available for trainings, which limit their ability to engage with the programme. It is reported that in Massive Open Online Courses (MOOC), the completion rate based on enrolled participants varied between 0.7% and 52.1% with a median value of 12.30% (6, 7). ***DigiCanTrain* completion rates were higher than the median**. One reason could be due **to objectives, outcomes and duration of the programme were available before** trainers and participants enrolled. In this way, interested trainers and participants can easily decide, if the course suits their goals and expectations and improve the final completion rate. Analysing the learning pathway completion rates, **nursing cohort** is the groups that has a **higher completion rate for both trainers (51.67%) and participants (31.84%)**. Having a more defined path for each profession may help to see the course content is more aligned to their needs, leading a lower dropout rate. In contrast, medical practitioner, allied HCPs and nHCPs pathways are broader in professions, resulting with a large number of professionals enrolled simply because the course is free, even if it is not aligned with their interested and leading to higher dropout rates.

In general, **programme was received positively by both trainers and participants.** All **submodules were considered highly engaging**, making it difficult to highlight any one as the most relevant. This high variability is due to the goals and expectations of each learner. The fact that content captivates professionals from different backgrounds and levels of expertise adds an extra value to the programme. In most cases, trainers and participants found submodules highly engaging, and the **newly acquired knowledge is considered to be integrated into their workplace or clinical practice**. The lowest-rated aspect across nearby all submodules was trainers' confidence in the learned concepts. Although trainers and participants do not feel extremely confidence in relation to their knowledge and/or skills after completing the course, they improve their understanding and awareness as it is reflected in the submodules' grades, which were extremally high, and the assessment submodules quiz was useful to evaluated what they have learnt. These findings suggest that, even though the course content is well-developed and well-received, **incorporating more practical exercises, real**

situations, more illustrations or stakeholders' recommendations could aid to reinforce key concepts and improve the confidence with the learned methodologies and concepts.

In addition, the most remarkable improvement for a better experience, and better learning outcomes, is to **offer the course in multiple languages**, not only in English. For some trainers and participants, English is not their native language, this could make that they need more time and be more focus, which leads a higher dropout Another recurrent recommendation is having **speakers in their native tongue** to avoid strong accents.

The *DigiCanTrain* programme is rated as excellent for the professionals, and they would recommend to other professionals. For future editions, the most important changes should be:

- offer the training in more language
- use native speakers
- include more visual aids, real-life cases studies, and stakeholder recommendations, without increasing the allocated time or relying on lengthy presentations

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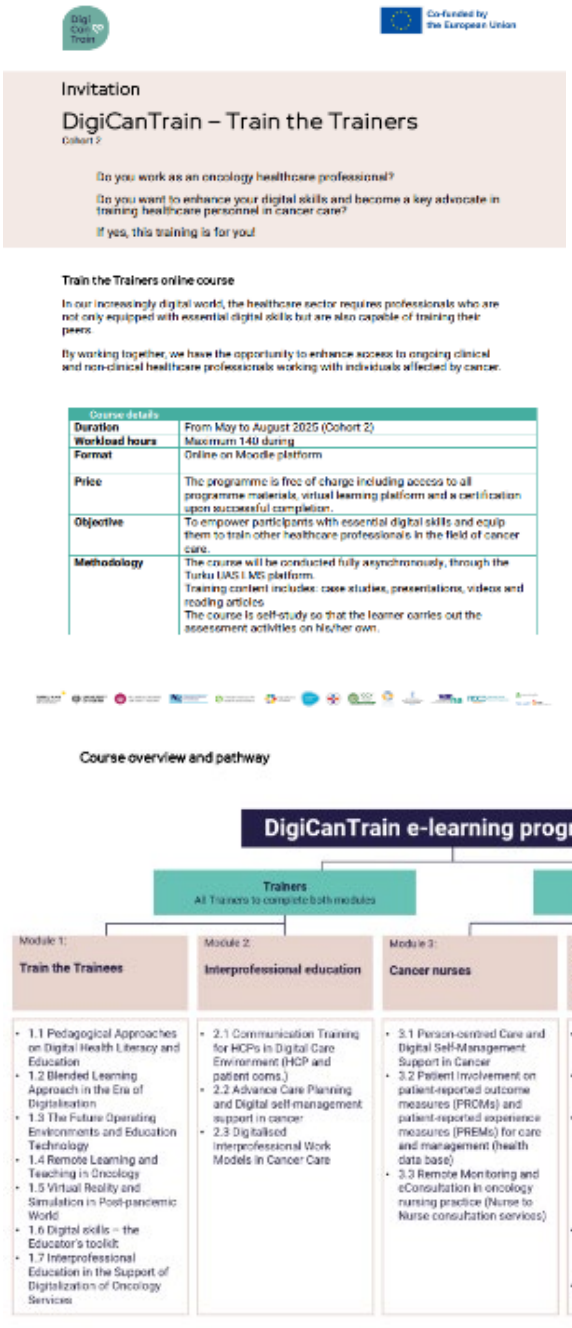
7. Annexes

Annex A. *DigiCanTrain* trainers' brochure



Co-funded by the European Union

Invitation

DigiCanTrain – Train the Trainers

Cohort 2

Do you work as an oncology healthcare professional?

Do you want to enhance your digital skills and become a key advocate in training healthcare personnel in cancer care?

If yes, this training is for you!

Train the Trainers online course

In our increasingly digital world, the healthcare sector requires professionals who are not only equipped with essential digital skills but are also capable of training their peers.

By working together, we have the opportunity to enhance access to ongoing clinical and non-clinical healthcare professionals working with individuals affected by cancer.

Course details	
Duration	From May to August 2025 (Cohort 2)
Workload hours	Maximum 140 during
Format	Online on Moodle platform
Price	The programme is free of charge including access to all programme materials, virtual learning platform and a certification upon successful completion.
Objective	To empower participants with essential digital skills and equip them to train other healthcare professionals in the field of cancer care.
Methodology	The course will be conducted fully asynchronously, through the Turku UAS LMS platform. Training content includes: case studies, presentations, videos and reading articles The course is self-study so that the learner carries out the assessment activities on his/her own.

Course overview and pathway

DigiCanTrain e-learning programme

Trainers
All Trainers to complete both modules

Trainers
To complete 1 module depending on professional background

Module 1: **Train the Trainees**	Module 2: **Interprofessional education**	Module 3: **Cancer nurses**	Module 4: **Specialists (clinical oncology, radiology, surgery) and general medicine**	Module 5: **Non-clinical staff working in health systems and/or health authorities and or non-governmental organisation**
• 1.1 Pedagogical Approaches on Digital Health Literacy and Education • 1.2 Blended Learning Approach in the Era of Digitalisation • 1.3 The Future Operating Environments and Education Technology • 1.4 Remote Learning and Teaching in Oncology • 1.5 Virtual Reality and Simulation in Post-pandemic World • 1.6 Digital skills – the Educator's toolkit • 1.7 Interprofessional Education in the Support of Digitalization of Oncology Services	• 2.1 Communication Training for HCPs in Digital Care Environment (HCP and patient coms.) • 2.2 Advance Care Planning and Digital self-management support in cancer • 2.3 Digitalised Interprofessional Work Models in Cancer Care	• 3.1 Person-centred Care and Digital Self-Management Support in Cancer • 3.2 Patient Involvement on patient-reported outcome measures (PROMs) and patient-reported experience measures (PREMs) for care and management (health data base) • 3.3 Remote Monitoring and eConsultation in oncology nursing practice (Nurse to Nurse consultation services)	• 4.1 Digital tools and artificial intelligence (AI) technology in cancer diagnostics • 4.2 AI methodology as a part of modern radiotherapy planning • 4.3 Digital decision supporting systems as working environments in implementing genomics to cancer treatment and prevention (Tumor DNA as well as genetic risk for hereditary cancer). • 4.4 Electronic patients records and real-world data in supporting treatment decisions • 4.5 eHealth and digital tools in patient surveillance	• 5.1 Cancer Organisations in Digital Cancer Journey • 5.2 Collaborative models in building organisation resilience in Oncology • 5.3 European Crises Response Model in Oncology • 5.4 Digital Support in Health Care System Resilience and Leadership (Utilization of Data pools in Clinical Settings and Leadership)

The benefits of joining the programme

- Enhance your e-learning skills and learn on the latest updates on the digital health interventions in oncology and technology.
- Gain specialized knowledge in oncology and digital interventions.
- Connect with a network of professionals from diverse fields and backgrounds and contribute on discussion forums to the advancement of cancer care.
- Collaborate to make a significant difference in patients' lives and in the field of oncology by empowering healthcare professionals with essential digital skills.
- Receive a certificate that you have participated in the course.

Who are we looking for?

We are looking for motivated professionals with expertise in oncology and technology who are ready to take on the challenge of training others in the exciting world of digital cancer care.

We welcome professionals with the following backgrounds:

- Medical Specialists – in i.e. medical oncology, radiation oncology and surgery;
- General Practitioners – primary care physicians;
- Nurses – general nurses providing care to individuals affected by cancer and those with specialized training in cancer nursing;
- Allied Healthcare Professionals – therapists, counsellors, and social workers involved in supporting cancer care;
- Non-clinical Healthcare Professionals – professionals working in NGOs focused on cancer advocacy and support, managers overseeing cancer care facilities and programmes, researchers with an interest in oncology, educators involved in training healthcare practitioners or the public about cancer.

While previous experience in the field of training or education is preferred, we also encourage people with limited experience and the above-mentioned qualifications to apply for the programme.

What we expect from your participation

As a trainer, your role is to guide and facilitate the participants' learning journey, provide support, resources, and assistance as needed. You will empower participants, foster independent learning, and facilitate the resolution of doubts and challenges.

Your responsibilities include:

1. Familiarising yourself with programme content, structure, and objectives during the train-the-trainers phase.
2. Assisting in recruiting participants from respective cancer centers or organizations, ensuring a diverse and engaged group.
3. Suggesting the most suitable module itinerary according to the participant profile and interests.
4. Monitoring participant progress throughout the pilot phase to provide support when needed.
5. Maintaining communication with local project partners for technical and content-related support.
6. Participating in the evaluation of the pilot programme, offering insights and suggestions for the continuation of the programme beyond the pilot phase.
7. Participating in communication channels to foster collaboration and knowledge-sharing among trainers within the same country.

Questions and answers

How long does the training programme take, and what is the time commitment required?

- The training programme for trainers consists of three modules, totaling a maximum of 140 hours. Approximately 5–8 hours of dedication per week is recommended. However, the learners are individuals and the time they need to devote can vary among the trainers and across different weeks.

Will I receive a certificate from the course?

- Yes, you will receive a certificate. The certificate will outline the following: the DigiCanTrain Programme learning outcomes, the workload hours you completed, and the programme's European Qualifications Framework (EQF) level.

How will the training sessions be conducted? Are they in-person, online, or blended learning?

- The training sessions will be delivered online and asynchronously through a virtual campus so you can complete the modules at your own pace. Our training methods include interactive presentations, lectures, case studies and informative videos. Each section of the programme is followed by self-assessment questions, presented in the format of multiple-choice questions with unlimited attempts.

Are there instructors and facilitators leading the training sessions?

- The course is primarily self-paced and taught online with self-learning resources. Both the module materials and the assessment activities are designed for autonomous learning. However, expert tutors are available to provide support and address any doubts or queries you may have while taking the course.

Ready to join?

If you're ready to make a difference in cancer care and want to be a trainer, please register at the following link:

Scan the QR code or visit https://digicantrain.turkuamk.fi/

We will estimate your eligibility and suitability for the programme based on your responses and inform you of the decision by September 9, 2024.

Thank you for your interest and participation.

CONTACT INFORMATION

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Daniela Cabutto, Open University of Catalonia – dcabutto@uoc.edu

This training is delivered as part of the DigiCanTrain project, which is co-financed by EU4Health. The primary aim of this project is to improve the digital skills of healthcare professionals. By doing so, we can ensure that our healthcare system is prepared for the digital age.

Annex B: Participants recruitment process

Participants Recruitment Process Guideline

What's it for

This guide serves as a comprehensive manual for all partners involved in recruiting **Participants (Learners)** for the DigiCanTrain pilot program. It aims to provide clear instructions and guidelines to facilitate the recruitment process.

What you'll get

- Understanding of recruitment objectives and participant profiles.
- Step-by-step guidance through the recruitment process.
- Strategies and suggestions to achieve your recruitment goals.

1. Participant Pilot

The pilot phase of the DigiCanTrain program comprises both Trainers and Participants who are pivotal in evaluating the efficacy of the digicantrain training program.

In the context of this pilot study, the **Participant** assumes an active role in their own learning journey, proactively addressing any doubts or questions that may arise during their learning experience.

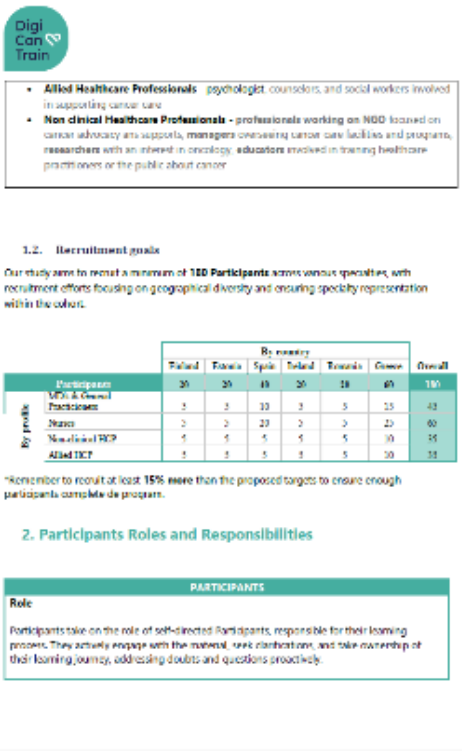
1.1. Target

The participants we seek to recruit meet the following specific profiles and criteria that will guide the identification and selection of ideal candidates to participate in the DigiCanTrain pilot phase.

Participants profile

The pilot will involve a diverse range of **European healthcare professionals (HCP), including:**

- **Medical Doctors Specialists** - such as clinical oncology, radiology, and surgery
- **General Practitioners** - primary care physicians
- **Nurses** - general nurses providing care to individuals affected by cancer and those with specialized training in cancer nursing



- **Allied Healthcare Professionals** - psychologist, counselors, and social workers involved in supporting cancer care
- **Non clinical Healthcare Professionals** - **professionals working on NGO** focused on cancer advocacy and supports, **managers** overseeing cancer care facilities and programs, **researchers** with an interest in oncology, **educators** involved in training healthcare practitioners or the public about cancer.

1.2. Recruitment goals

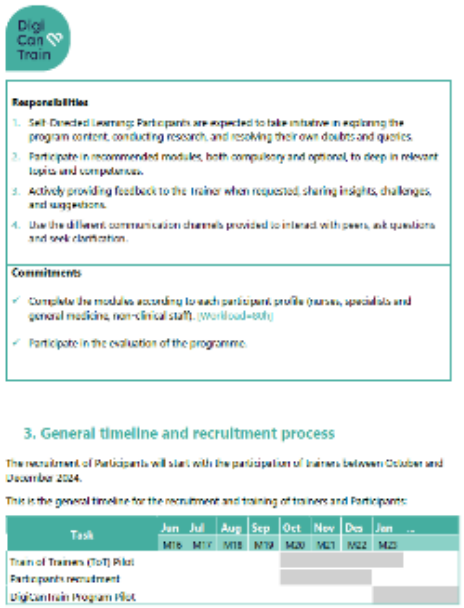
Our study aims to recruit a minimum of **180 Participants** across various specialties, with recruitment efforts focusing on geographical diversity and ensuring specialty representation within the cohort.

		By country						
		Finland	Estonia	Spain	Ireland	Romania	Greece	Overall
	Participants	30	30	40	30	30	60	180
By profile	MDs & General Practicioners	5	5	10	5	5	15	45
	Nurses	5	5	20	5	5	20	60
	Non-clinical HCP	5	5	5	5	5	10	35
	Allied HCP	5	5	5	5	5	10	35

*Remember to recruit at least **15% more** than the proposed targets to ensure enough participants complete de program.

2. Participants Roles and Responsibilities

PARTICIPANTS
Role
Participants take on the role of self-directed participants, responsible for their learning process. They actively engage with the material, seek clarifications, and take ownership of their learning journey, addressing doubts and questions proactively.



Responsibilities

1. **Self-Directed Learning:** Participants are expected to take initiative in exploring the program content, conducting research, and resolving their own doubts and queries.
2. Participate in recommended modules, both compulsory and optional, to deep in relevant topics and competences.
3. Actively providing feedback to the trainer when requested, sharing insights, challenges, and suggestions.
4. Use the different communication channels provided to interact with peers, ask questions and seek clarification.

Commitments

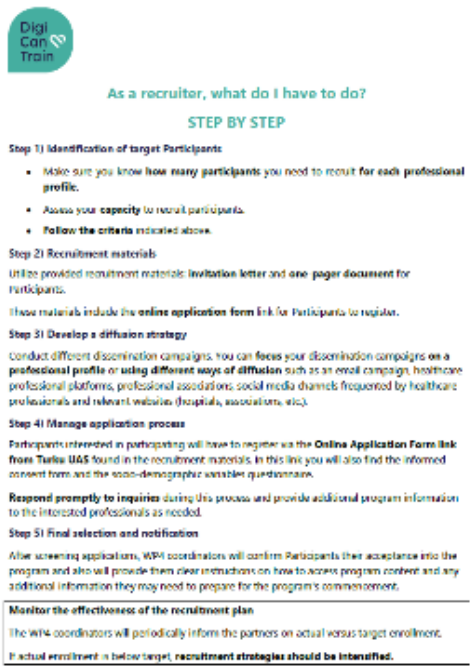
- ✓ Complete the modules according to each participant profile (nurses, specialists and general medicine, non-clinical staff). (Workload=60h)
- ✓ Participate in the evaluation of the programme.

3. General timeline and recruitment process

The recruitment of Participants will start with the participation of trainers between October and December 2024.

This is the general timeline for the recruitment and training of trainers and Participants:

Task	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	..
	M16	M17	M18	M19	M20	M21	M22	M23	
Train of Trainers (ToT) Pilot									
Participants recruitment									
DigiCanTrain Program Pilot									



As a recruiter, what do I have to do?

STEP BY STEP

Step 1) Identification of target Participants

- Make sure you know **how many participants** you need to recruit **for each professional profile.**
- Assess your **capacity** to recruit participants.
- **Follow the criteria** indicated above.

Step 2) Recruitment materials

Utilize provided recruitment materials: **invitation letter** and **one-pager document** for Participants.

These materials include the **online application form link** for Participants to register.

Step 3) Develop a diffusion strategy

Conduct different dissemination campaigns. You can **focus** your dissemination campaigns **on a professional profile** or **using different ways of diffusion** such as an email campaign, healthcare professional platforms, professional associations, social media channels frequented by healthcare professionals and relevant websites (hospitals, associations, etc.).

Step 4) Manage application process

Participants interested in participating will have to register via the **Online Application Form link from Turku UAS** found in the recruitment materials. In this link you will also find the informed consent form and the socio-demographic variable questionnaire.

Respond promptly to inquiries during this process and provide additional program information to the interested professionals as needed.

Step 5) Final selection and notification

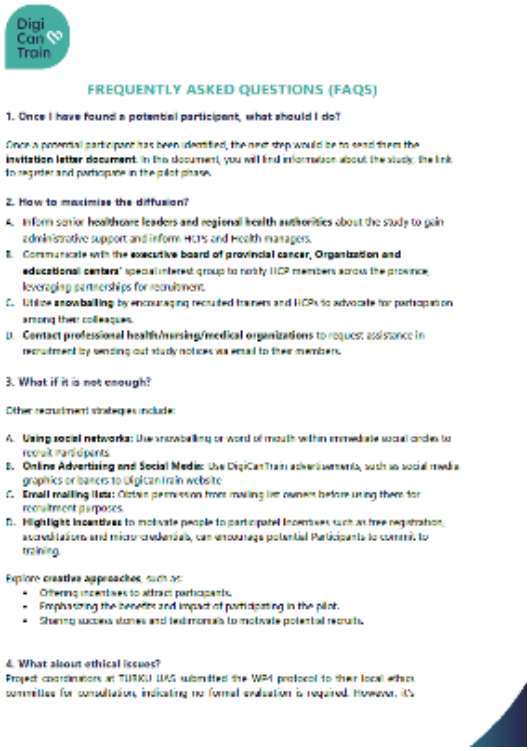
After screening applications, WP4 coordinators will confirm Participants their acceptance into the program and also will provide them clear instructions on how to access program content and any additional information they may need to prepare for the program's commencement.

Monitor the effectiveness of the recruitment plan

The WP4 coordinators will periodically inform the partners on actual versus target enrollment.

If actual enrollment is below target, **recruitment strategies should be intensified.**

guideline



FREQUENTLY ASKED QUESTIONS (FAQS)

1. Once I have found a potential participant, what should I do?

Once a potential participant has been identified, the next step would be to send them the **invitation letter document**. In this document, you will find information about the study, the link to register and participate in the pilot phase.

2. How to maximise the diffusion?

A. Inform senior **healthcare leaders and regional health authorities** about the study to gain administrative support and inform HCPs and health managers.
B. Communicate with the **executive board of provincial cancer, Organization and educational centers'** special interest group to notify HCP members across the province, leveraging partnerships for recruitment.
C. Utilize **snowballing** by encouraging recruited trainees and HCPs to advocate for participation among their colleagues.
D. **Contact professional health/nursing/medical organizations** to request assistance in recruitment by sending out study notices via email to their members.

3. What if it is not enough?

Other recruitment strategies include:

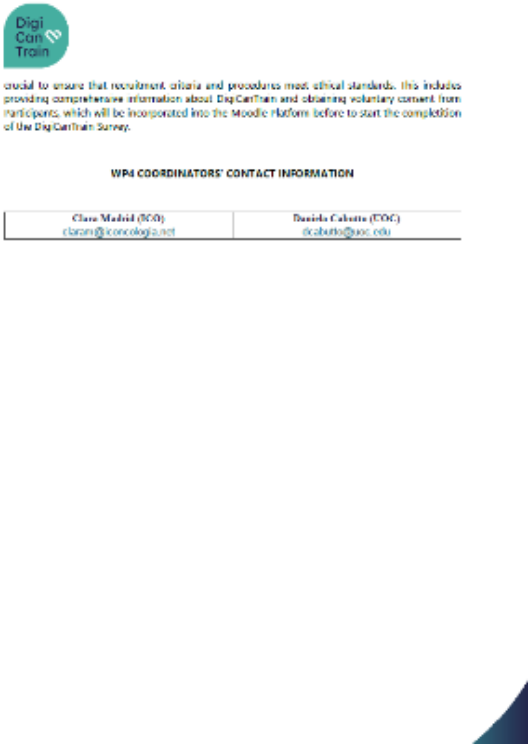
A. **Using social networks:** Use snowballing or word of mouth within immediate social circles to recruit participants.
B. **Online Advertising and Social Media:** Use DigiCanTrain advertisements, such as social media graphics or banners to digicantrain website
C. **Email mailing lists:** Obtain permission from mailing list owners before using them for recruitment purposes.
D. **Highlight incentives** to motivate people to participate Incentives such as free registration, accreditations and micro-credentials, can encourage potential Participants to commit to training.

Explore **creative approaches**, such as:

- Offering incentives to attract participants.
- Emphasizing the benefits and impact of participating in the pilot.
- Sharing success stories and testimonials to motivate potential recruits.

4. What about ethical issues?

Project coordinators at TUTAKU LIAS submitted the WP4 protocol to their local ethics committee for consultation, indicating no formal evaluation is required. However, it's



crucial to ensure that recruitment criteria and procedures meet ethical standards. This includes providing comprehensive information about DigiCanTrain and obtaining voluntary consent from participants, which will be incorporated into the Moodle platform before to start the completion of the DigiCanTrain Survey.

WP4 COORDINATORS' CONTACT INFORMATION

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Annex C: *DigiCanTrain* participants brochu

Invitation

DigiCanTrain e-learning programme

Do you work as a healthcare professional?
Do you want to enhance your digital skills?
If yes, this training is for you!

By taking the online course, you can increase and update your digital skills.
In addition, you will be involved in developing more effective and person-centred digital cancer care services for individuals affected by cancer.

DigiCanTrain e-learning programme	
Duration	From May to August 2025 (Cohort 2)
Workload	Maximum 80 hours
Format	Online on Moodle platform
Price	The programme is free of charge including access to all programme materials, virtual learning platform, and a certification upon successful completion
Objective	To empower participants with essential digital skills
Methodology	The course is self-study so that the learner carries out the assessment activities on their own. The learning material includes case studies, presentations, videos and reading articles

Co-funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the Health and Digital Executive Agency (HaDEA). Neither the European Union nor the granting authority can be held responsible for them.

Cohort 2

The benefits of joining the programme

The course will enhance your e-learning skills and provide the latest updates on digital health interventions in oncology and technology. In addition, you will gain specialized knowledge in oncology and digital interventions.

Your peers will enable you to connect with a network of professionals from diverse fields and backgrounds. This way, you can contribute to discussion forums and the advancement of cancer care.

Once you have completed the course, you will receive a certificate of participation. Participating will have an impact on others, as you can make a significant difference in patients' lives by improving your essential digital skills.

Who are we looking for?

The course is aimed at different types of European healthcare professionals:
- medical doctors and specialists in e.g., clinical oncology, radiology, and surgery
- general practitioners: primary care physicians
- nurses: general nurses providing care to individuals affected by cancer and those with specialised training in cancer nursing
- allied healthcare professionals: psychologists, counsellors, and social workers involved in supporting cancer care
- non-clinical healthcare professionals:
  - professionals working in NGO focused on cancer advocacy and support
  - managers overseeing cancer care facilities and programmes
  - researchers with an interest in oncology
  - educators involved in training healthcare practitioners or the public about cancer.

What we expect from your participation

We expect you to...
- participate and complete the recommended modules to deepen your knowledge in the relevant topics.
- self-direct your learning: actively engage with the material, seek clarifications, address questions, and point out your observations proactively. As a learner, you are responsible for your own learning process.
- provide feedback when requested to your dedicated trainer, sharing your insights, challenges, and suggestions.
- interact with peers by asking questions and seeking clarifications using the provided communication channels.

Ready to join?

If you're ready to make a difference in cancer care, please scan the QR code or visit

digicantrain.turkuamk.fi

Contact information

Clara Madrid Alejos, Catalan Institute of Oncology – claram@iconcologia.net
Daniela Cabutto, Open University of Catalonia – dcabutto@uoc.edu

This training is delivered as part of the DigiCanTrain project, which is co-financed by EU4Health. The primary aim of this project is to improve the digital skills of healthcare professionals. By doing so, we can ensure that our healthcare system is prepared for the digital age.