



INTERACT EUROPE

Deliverable 2.1 – Consensus paper on the design, scope and educational approach associated with the Inter-specialty cancer training programme

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Abstract: INTERACT-EUROPE brings together 33 partners from 17 countries aiming to develop a European inter-specialty cancer training programme involving all main oncology disciplines and professions, cancer centres and patient groups, based on relevant needs assessments. The project will foster a patient-centric approach to quality cancer care through the promotion of multi-disciplinary and multi-professional team working.

This report defines the methodology that will be used for the design and development of the curriculum, considering the different models of learning (rotations, mentorship, online), including proficiency-based learning and evaluation methodology (outcomes and metrics) and determines the target population in terms of the level of skills and experience the curriculum will address.

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	<p>European School of Oncology (ESO) https://www.eso.net/</p>
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 <p>EASL The Home of Hepatology</p>	<p>European Association for the Study of the Liver (EASL) https://easl.eu/</p>
 <p>SIOG INTERNATIONAL SOCIETY OF GERIATRIC ONCOLOGY</p>	<p>International Society of Geriatric Oncology (ISGO) https://siog.org/</p>
 <p>EATEL European Association of Technology Enhanced Learning</p>	<p>European Association of Technology Enhanced Learning (EATEL) https://ea-tel.eu/</p>
 <p>ESGO European Society of Gynaecological Oncology</p>	<p>European Society of Gynaecological Oncology (ESGO) https://esgo.org/</p>

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Introduction

Europe's Beating Cancer Plan¹ includes the vision for an inter-specialty cancer training programme:

- Focusing on medical oncology, clinical and radiation oncology, surgical oncology, radiology and cancer nursing
- Delivering a more skilled and mobile workforce through cross-border training and information sharing
- Including a focus on patients' quality of life and well-being including mental, psychosocial and nutritional support along with patient empowerment
- Addressing skills gaps with training in cancer prevention, early detection, diagnosis, treatment, rehabilitation and survivorship
- Optimising collaboration among cancer specialists
- Ultimately benefiting cancer patients through long-term legacy

In response to a call for action grants on that matter under the EU4Health programme², the consortium coordinated by the European Cancer Organisation (ECO) submitted a successful proposal for an Innovative Collaboration for Inter-specialty Cancer Training Across Europe (INTERACT-EUROPE), on behalf of a wide range of European Cancer Specialty Societies.

The main strands of the INTERACT-EUROPE project are:

- Training needs assessment and curriculum development
- Preparation of trainees and cancer centres
- Application of innovative technologies to enhance inter-specialty cancer training
- Evaluation and accreditation

The INTERACT-EUROPE Work Package 2 focuses in particular on assessing inter-specialty cancer training needs and developing the training programme curriculum.

1.1 Work Package 2 Objectives

The main objectives of Work Package 2 have been set as follows:

- To support the development of a curriculum for Inter-Specialty Cancer Training by conducting a training needs assessment and a systematic literature review;
- To define core joint competences for radiation, clinical, medical and surgical oncologists, as well as radiologists and cancer nurses, that will form the basis of a curriculum for an Inter-specialty Cancer Training Programme for clinical oncology, medical oncology, surgery/surgical oncology, radiology and nursing;
- To ensure the wide multidisciplinary representation and consultation of specialists, patients and other stakeholders;
- To disseminate and promote interdisciplinary training;
- To promote enhanced understanding, co-operation and communication across specialties in order to improve the quality of care provided.

1.2 Stakeholders involved

Work package leaders and co-leaders

ESTRO: Jesper Eriksen, Education Council Chair; Kim Benstead, Past Chair of Curriculum Committee; Chiara Gasparotto, Deputy CEO; Laura La Porta, Senior Manager Education.

EONS: Johan De Munter, President; Virpi Sulosaari, President-Elect; Wendy McNally, Education working group co-chair; Richard G. Kelly, Chief Operating Officer; Irena Rollo, EU Project Administrator; Nikolina Dodlek, Board member, Young Cancer Nurses network chair; Celia Diez de los Rios, Education working group co-chair.

ESSO: Niall O'Higgins, Past-President; Andreas Brandl, Board member & Young Committee Chair; Isabel Teresa Rubio, President-Elect; Wim Ceelen, Board member; Pompiliu Piso, Board member; Carine Lecoq, Chief Operating Officer; Gao Shuang, Communication & Events Coordinator; Maria Popovics, Communication and Project Assistant.

Work package contributors

Contributing experts: Serdar Turhal, Chair of the Section of Medical Oncology of the European Union of Medical Specialists (UEMS); Kathy Oliver, Co-Chair of the ECO Patient Advisory Committee.

Representatives from INTERACT-EUROPE Work Package 2 consultative partners, including wide-ranging cancer professional organisations: European School of Oncology (ESO), European Association of Urology (EAU), European Association of Palliative Care (EAPC), European Pain Federation (EFIC), European Society of Sexual Medicine (ESSM), European Lung Foundation (ELF Europe), European Society of Breast Cancer Specialists (EUSOMA), European Society for Clinical Nutrition and Metabolism (ESPEN), European Association of Nuclear Medicine (EANM), European Association for the Study of Obesity (EASO), European Society of Pathology (ESP), Romanian Association for Services and Communication in Oncology (APSCO), Trinity College Dublin (TCD), European Society of Gynaecological Oncology (ESGO), International Society of Geriatric Oncology (SIOG), European Association for the Study of the Liver (EASL).

2. Curriculum Design

2.1 Methodology

The project team decided to use the CanMEDS³ framework to guide the overall design of the inter-specialty cancer training curriculum.

CanMEDS is a curricular framework that identifies and describes the abilities physicians require to effectively meet the health care needs of the people they serve. It was developed by the Royal College of Physicians and Surgeons of Canada⁴ with the purpose to improve patient care by enhancing physician training. It identifies seven roles: Clinical Expert, Communicator, Collaborator, Leader, Health Advocate, Scholar and Professional. CanMEDS has become the most widely accepted and applied physician competency framework in the world and is the basis of UEMS (European Union of Medical Specialists) Training Requirements.

Several oncology societies' curricula as listed below in section 2.2.2 were reviewed in order to ensure that the CanMEDS structural approach is fit to respond to the needs of the project. This decision was later confirmed during the INTERACT-EUROPE project kick-off meeting in Brussels on 27-28 June 2022.

2.2 Assessment of Inter-Specialty Cancer Training Needs (June-September 2022)

A mixed methods approach was utilised to assess inter-specialty cancer training needs. This includes a quantitative survey, a qualitative survey (see Annex 1) and a scoping review (systematic literature review) (see Annex 2).

Using the results of the qualitative survey, quantitative survey and the results of the scoping review, the work package team will then conduct a cross analysis and map the themes to derive overlapping concepts which will then inform the development of the curriculum. This work will be undertaken initially by WP2. The survey and review (cf. 2.2.2) outcomes will be discussed during a WP2 Experts meeting on 9th September and shared with all work package consultative partners (cf. 1.2) during the 2nd project Consensus meeting to be held on 23rd September 2022 (project Month 4) to form the basis of the curriculum.

2.2.1 Qualitative and Quantitative survey

Questions to learn more about participants' background were included at the beginning of the survey. They covered the following aspects: profession, specialty, practicing country, institution type, age, gender, and participation in multidisciplinary team (MDT) meetings. The second group of questions sought their views on the importance of inter-specialty training (qualitative survey). The third part of the survey was developed by identifying competences that were possibly relevant to the Inter-specialty cancer training programme (quantitative survey).

Target survey participants

The survey was anticipated to take 45 to 60 minutes to complete. Therefore, it was agreed to send the survey to a selective number of individuals, including representatives from organisations part of the INTERACT-EUROPE consortium, members of European cancer specialty society Committees, their Trainees' committees, and the European Cancer Organisation's Patient Advisory Committee.

Key contacted entities included:

- INTERACT-EUROPE Consortium Member representatives,
- European specialty society Committee members e.g. education & training committees of ESTRO, EONS, ESSO, ESR (European Society of Radiology), ESO (European School of Oncology),
- Young and Trainees' Committees members of the above societies,
- European Union of Medical Specialists (UEMS) Section of Medical Oncology members,
- European Union of Medical Specialists (UEMS) Section of Radiation Therapy members,
- European Union of Medical Specialists (UEMS) Division of Surgical Oncology members,
- Members of the ECO Patient Advisory Committee.

Online Tool

Survey Monkey[®] was used as the platform with an initial aim of obtaining 100 to 150 responses spread across the groups. SurveyMonkey has recorded 219 participants. On average, 105 participants completed the full survey (qualitative and quantitative). The survey was launched in mid-June 2022 (Project Month 1) for a duration of four weeks with a closing date in July 2022 (Project Month 2).

A preliminary e-mail was sent early June to announce and promote the survey amongst participants. The survey was anonymous, and responses have been recorded and stored according to the EU General Data Protection Regulation (EU) 2016/679.⁴

Qualitative Survey

The qualitative survey was drafted to assess whether participants deem inter-speciality training valuable and which barriers may arise. The qualitative survey consisted of 8 open questions concerning the participant's understanding of inter-specialty training and their vision on how it should be developed and implemented. The survey included questions on whether impediments exist in delivering inter-specialty training and whether such a programme would support respondents' professional development.

Quantitative Survey

The Quantitative Survey consisted of 127 statements addressing competences that were possibly relevant to the Inter-specialty cancer training programme. These statements included competences identified from European Cancer Specialty Curricula, in both the nursing and oncology fields, namely:

- Interdisciplinary training for cancer specialists⁵
- ESSO core curriculum committee update on surgical oncology⁶
- ESTRO core curriculum for radiation oncology/radiotherapy 4th edition⁷
- Clinical oncology module for the ESTRO core curriculum⁸
- European training curriculum for radiology⁹
- EONS cancer nursing education framework¹⁰
- European training requirements for the specialty of medical oncology¹¹
- Leader role curriculum for radiation oncology¹²
- Royal College of Nursing career pathway and education framework for cancer nursing¹³
- Other documents and curricula provided by the INTERACT-EUROPE consortium partners

Additional competences were added to this by a representative of the European Cancer Organisation's Patient Advisory Committee.

The survey encompassed both clinical and non-clinical competences.

The survey helped identify what is valuable for trainees to learn in order to work more effectively with different specialties and professions to deliver better care and to provide psychosocial and nutritional support for people affected by cancer.

Participants were asked to score how valuable they thought each competency was in achieving these objectives using a seven-point Likert Scale (see Figure 1).

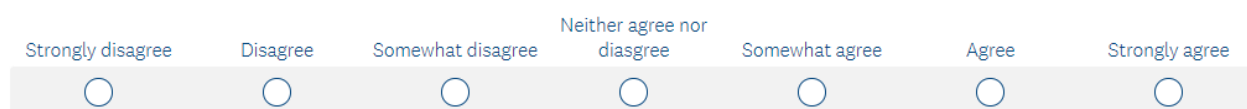


Figure 1: Likert Scale

Analysis of Qualitative and Quantitative surveys July - September 2022

The analysis of the survey will take place between mid-July and September 2022 (project months 2-4). The qualitative data will be transcribed verbatim using thematic analysis. The transcripts will be read until the project team are familiar with the content, after which codes and themes will be drawn up for discussion. The themes will be compared, and any discrepancies will be discussed in more detail within WP2.

The quantitative results will be analysed using descriptive statistics through the online SurveyMonkey tool. The median and interquartile range for the scores for each question will be calculated to provide a measure of how valuable the groups think each competency is and the degree of consensus on this. The percentage of respondents scoring agree or strongly agree will also be noted.

2.2.2 A Systematic Literature Review (June-August 2022)

Methodology: Scoping review

Literature search after consultation with librarians was conducted in the following medical and health sciences databases:

- CINAHL¹⁴ (The Cumulative Index to Nursing and Allied Health Literature)
- PubMed/MEDLINE¹⁵ (Medical Literature Analysis and Retrieval System Online - U.S. National Library of Medicine's life science database)
- PsycInfo¹⁶ (Database of peer-reviewed literature in behavioral science and mental health)
- Scopus¹⁷ (Elsevier's abstract and citation database)

The objective of the literature review is to understand the extent and type of evidence around interprofessional education (IPE) in oncology:

How inter-specialty (interprofessional) education and training has been defined in the oncology setting? How inter-specialty and interprofessional education and training have been defined in the oncology setting?

What competences have been used in curriculum development of interprofessional education (IPE) in oncology?

What teaching and learning methods (including assessment) have been used?

The literature review process has proceeded in the agreed timeline. First, after librarian consultation, computerized systematic literature search is completed and references identified are downloaded into Covidence Review Management system¹⁸. After that 3 researchers independently review article titles and abstract against inclusion and exclusion criteria. Next, the full texts of articles remaining are searched and downloaded and 3 researchers independently review articles and also the reference lists of articles to identify potentially articles to be added for data extraction. For the data extraction a template is made, and the three researchers extract the information from the articles to find answers on review questions. In this stage, some articles are based on consensus excluded and the final number of articles on analysis is 23. The analysis and synthesis will be conducted in August and preparation of a manuscript to be submitted to international scientific journal.

The scoping review (see Annex 2) produces information on current state of inter-specialty or interprofessional education in the oncology setting. Moreover, it will inform the curriculum development on existing descriptions/definitions of inter-specialty training, identify interprofessional education (IPE) training content and teaching and learning methods (including assessment). The latter is needed later on WP 3 and 4 also to select and plan the learning scenario to be tested and inform what assessment methods could be used.

2.3 Curriculum Development (September Onwards)

The inter-specialty cancer training needs assessment, derived from the results of the three exercises will be used to develop a draft of the competencies to be included in the training curriculum. Opportunity for further input will be provided to work package consultative partners (see list above); the draft will then be discussed with them and other contributing experts including the European Cancer Organisation's Patient Advisory Committee, before developing a final curriculum.

Based on the findings of the needs assessment, the model of learning and target population addressed by the curriculum will be adjusted. The Inter-specialty training curriculum will include competency framework for cross-disciplinary training of clinical cancer specialists, initially in the disciplines of medical oncology, surgical oncology, radiation oncology, and oncology nurses as well as recommendations on implementation of the training (theoretical and practical training) and assessment of learning and competency development. In the end of the project these will form the inter-specialty cancer training programme. Assessment will be built into both learning experiences and will be developed with Work Package 3 Centres and Trainees preparation and Work Package 4 Technology Enhanced Learning.

The consensus meeting to be held on 23rd September 2022 (project Month 4) will be an important opportunity for linking WP2 further with other INTERACT-EUROPE work packages on the nature, likely duration and prospective key features of the inter-specialty cancer training programme recommended at the end of the project.

The training needs assessment undertaken by WP2 and the initial assessment of cancer centres needs developed by WP3 will be discussed together at this consensus meeting. The results of this discussion together with discussion with WP2 consultative partners, will help guide curricula design.

Based on the above, a first draft curriculum will be devised to define the competences required by the training programme. It will emphasise the central role and need for a sensitive approach to people with cancer. This draft design will be based on the CanMEDS curriculum framework described above. (September - November 2022 (project Months 4-6).

The first draft training curriculum will be submitted to WP2 consultative partners for their feedback.

Close cooperation with Work Package 3 (Preparation of Trainees and Cancer Centres) and Work Package 6 (Communication, Dissemination and Exploitation) will allow wider outreach to relevant stakeholders for input on the first draft of the curriculum. Comments and suggestions will be invited from:

- Patient representative groups
 - Prospective trainees of the inter-specialty cancer training programme
 - Prospective participating Cancer Centres
 - Newly qualified specialists
 - European Specialist and National Societies
 - Relevant sections of the European Union of Medical Specialists (UEMS)
- A second draft of the training curriculum will be developed based on the comments and input received following the consultation. Further virtual meetings will support the exchanges of the work package lead organisations (EONS, ESSO, ESTRO) on this, as well as with the work package consultative partners.
- Further comments will be invited from the above-described work package partners and wide stakeholder constituency.
- A final revision will be conducted, and the final curriculum will be shared with all work package partners and stakeholders for agreement by the end of April 2023 (project month 10).
- The curriculum will be circulated to WP2 consultative partners, other INTERACT-EUROPE consortium partners, European and national societies within each specialty and to all other relevant stakeholders including trainee and patient representative groups for their endorsement and uptake.
- The inter-specialty curriculum will be submitted for publication by the end of July 2023 (project month 12). This activity will be conducted in liaison with Work Package 6 (Communication, Dissemination and Exploitation).

2.4 Timeline

June 2022 (project month 1): Comparison of curricula, several WP2 experts meeting, 1st Consensus meeting, Survey development and launch of survey.

July-August 2022 (project month 2-3): Closing of survey, analysis of survey results, literature review and drafting of the training needs assessment.

September 2022 (project month 4): WP2 Experts meeting, Input from WP2 consultative partners and 2nd Consensus meeting with all partners.

September-November 2022 (project month 4-6): Development of 1st draft curriculum.

November-December 2022 (project month 6-7): Contribution from WP2 consultative partners on 1st draft curriculum and wider consultation with educational and oncology communities as well as other relevant stakeholders.

December 2022-February 2023 (project month 7-9): Development of 2nd draft curriculum and further contribution and consultations of work package partners, experts and stakeholders.

March-May 2023 (project month 10-12): Finalisation of training curriculum, circulation and endorsements

June-August 2023 (project month 13-15): Publication, communication and promotion of final training needs curriculum

September-November 2023 (project month 16-18): Contributions to end of project blueprint and defining future plans.

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4. Annexes

Annex A: Inter-specialty Cancer Training Programme Curriculum Competences from European Specialty Curricula

Background information

What is your profession (tick all that apply):

☐ Cancer Nurse
☐ Caregiver
☐ Clinical Oncologist
☐ Medical Oncologist
☐ Medical Physicist
☐ Radiologist
☐ Patient
☐ Patient advocate
☐ Radiation Oncologist
☐ Radiation Therapist
☐ Surgeon
☐ Surgical Oncologist
☐ Other. Please specify:

If you are a medical doctor, are you a

- ☐ Specialist
- ☐ Trainee

If you are a nurse, are you a

- ☐ Registered nurse
- ☐ Specialist nurse

In which country are you practicing?

- ☐ Dropdown list of European countries

In which type of institution are you working?

- ☐ University/Teaching hospital
- ☐ Other Public Hospital
- ☐ Private Hospital
- ☐ Other. Please specify:

Do you participate in regular multidisciplinary team meetings?

- ☐ Yes
- ☐ No

What is your gender?

- ☐ Female
- ☐ Male
- ☐ Non-binary
- ☐ Prefer not to say

What is your age?

- ☐ <30
- ☐ 30-35
- ☐ 36-40

- 41-50
- 51-65
- >65

Qualitative Survey (open questions)

“What is valuable for trainees to learn in order to work more effectively with different specialties and professions to deliver better care and to provide psychosocial and nutritional support for people affected by cancer?”

1. What is your understanding of inter-speciality training (IST)?
2. Why is IST necessary in caring for people affected by cancer and their family?
3. What barriers/challenges are there to accessing IST and education within your role as a healthcare professional?
4. Are there any barriers/challenges to working in an IST context?
5. Have you experienced IST improving the cancer journey for patients and their families and/or for you as a healthcare professional?
6. Describe a time when you were particularly proud of your professional healthcare team and why?
7. What was your role in this situation?
8. In your opinion, what are the three most important learnings that trainees should take away from an IST curriculum?
9. Do you have any further comments you would like to add?

Quantitative Survey

Please score the competences below as to whether you agree they are valuable using the following Likert Scale.

- Strongly disagree
- Disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Agree
- Strongly agree

General:

It is valuable to recommend that a period of interdisciplinary training, in each of the other two disciplines, be mandated for all trainees in the specialties of 1) medical oncology 2) surgical oncology/cancer surgery and 3) radiation oncology/clinical oncology.

It is valuable for cancer nurses and medical trainees (in clinical oncology, medical oncology, radiation oncology, radiology, surgical oncology/cancer surgery) to have the opportunity to observe each other in practice consulting with patients.

Clinical Expert Role

Contribute effectively to tumor board discussions

<p>It is valuable to explain the pathological factors that determine treatment decisions including prognostic and predictive biomarkers including cytogenetic and molecular biomarkers and the most common targetable mutations. and associated targetable therapies</p> <ul style="list-style-type: none"> ⊙ Strongly disagree ⊙ Disagree ⊙ Somewhat disagree ⊙ Neither agree nor disagree ⊙ Somewhat agree ⊙ Agree ⊙ Strongly agree
<p>It is valuable to understand the terminology for high-throughput omic technologies, including genomics, proteomics, transcriptomics, epigenomics and metabolics.</p>
<p>It is valuable to describe the indications and contraindications and radiation burden of imaging modalities. and the optimal imaging strategy for staging and response assessment based on the imaging anatomy and pathways of spread for the common cancer types.</p> <p>It is valuable to understand the role of imaging in treatment planning e.g., surgery, radiotherapy.</p>
<p>It is valuable to be familiar with the wide range of interventional techniques used in oncological radiology and their potential risks and complications.</p>
<p>It is valuable to understand the relative costs of the various imaging examinations in oncologic imaging.</p>
<p>It is valuable to apply national or international guidelines and research evidence to the management of an individual patient.</p> <p>It is valuable to analyse clinical reasoning processes demonstrating an understanding of cognitive bias, human factors and diagnostic error.</p>
<p>It is valuable to discuss the implications of hereditary gene mutations on the management of a patient</p>
<p>It is valuable to discuss paraneoplastic syndromes and their management.</p>
<p>It is valuable to describe the different types of radiotherapy, their mechanisms of action and administration.</p> <p>It is valuable to describe the role of radiotherapy in the treatment of cancer either offering a significant improvement in local recurrence thereby impacting on disease-free survival and overall survival or improving symptoms.</p>
<p>It is valuable to discuss the role of surgery either as a primary modality in cure or palliation or in enabling other treatment modalities (e.g., placement of clips, spacers or omentum) to enable optimal radiation treatment, outline common operations for cancer and the role of adequate margins following surgery</p>

It is valuable to outline the interpretation of pathological response found at surgery following neoadjuvant therapies and how this may impact surgery.

It is valuable to outline the mechanism of action of commonly used systemic therapies including chemotherapy, monoclonal antibodies, hormonal therapies, tyrosine kinase inhibitors and immune therapies.

It is valuable to discuss the role of commonly used systemic therapies including chemotherapy, monoclonal antibodies, hormonal therapies, tyrosine kinase inhibitors and immune therapies in the neoadjuvant, adjuvant, curative and palliative settings.

It is valuable to explain the criteria used to assess response to systemic therapy e.g., the RECIST criteria.

It is valuable to discuss the scheduling of systemic anti-cancer therapy, radiotherapy and surgery in those cancers treated with combined modality therapy including the use of combined medical and surgical oncology treatments such as cytoreductive surgery and HIPEC and isolated limb perfusion.

It is valuable to discuss the management of a patient when there is therapeutic uncertainty, complexity and ambiguity.

It is valuable to justify a decision that radiotherapy, systemic therapy or surgery are not indicated due to cancer stage, performance status or comorbidities.

It is valuable to discuss the role of palliative care in the management of the patient.

Undertake the initial consultation

It is valuable to structure the consultation effectively taking a focused history, undertaking a careful clinical examination and ordering relevant investigations to accurately diagnose conditions that may require curative, adjuvant, neoadjuvant or palliative radiotherapy, chemotherapy or surgical intervention including emergency treatment.

It is valuable to diagnose oncological emergencies manage them effectively or recognise when referral to another special or the Intensive Care Unit is indicated.

It is valuable to provide people affected by cancer with evidence-based written and verbal information about the development and treatment of cancer with a view to addressing their informational and supportive care needs.

It is valuable to support people affected by cancer through the diagnosis and staging process. Undertake initial and comprehensive assessments (using validated tools where appropriate) to identify people affected by cancers 'informational, physical, emotional and social care needs (where relevant) during the diagnostic and staging process.

It is valuable to evaluate and discuss with the patient the possible management strategies taking into account the factors related to the cancer, the patient's goals, their comorbidities and frailty and the adverse effects of possible options.

It is valuable to modify approach to address pregnancy.

It is valuable to explain the implications of hereditary genetic abnormalities and refer appropriately for genetic counselling.

It is valuable to discuss the influence of pre-existent psychological/psychiatric illness and how to support and treat the patient.

It is valuable to encourage people affected by cancer to utilise appropriate local, national and/or international cancer organisations for further information, psychosocial, spiritual and/or financial support.

Support the patient, relatives and carers prior to and during treatment

It is valuable to understand the role of optimisation of nutrition before surgery, radiotherapy, chemotherapy and chemoradiotherapy and be aware of the importance of nutritional support if malnutrition is present in patients who may require these therapies.

It is valuable to take a focused history, undertake a careful clinical examination and order relevant investigations to accurately diagnose the acute side effects of systemic therapies including chemotherapy, monoclonal antibodies, hormonal therapies, tyrosine kinase inhibitors and hormonal therapies.

It is valuable to know and prevent adverse events and interactions between commonly used drugs and systemic anti-cancer therapies.

It is valuable to know interactions between food and anti-cancer therapies.

It is valuable to describe prophylactic strategies that can reduce and minimise the frequency and/or severity of complications/toxicities with systemic anti-cancer therapies.

It is valuable to outline appropriate treatment for patients experiencing toxicities from systemic anti-cancer therapies in the acute setting.

It is valuable to be familiar with the adverse events reporting system.

It is valuable to take a focused history, undertake a careful clinical examination and order relevant investigations to accurately diagnose acute toxicities from radiotherapy or chemoradiotherapy and outline appropriate treatment.

Manage survivorship

It is valuable to develop a long-term, strategy for follow-up of patient following treatment for cancer including a plan for patient-specific rehabilitation and surveillance imaging.

It is valuable to provide information to people affected by cancer to promote and support self care including the role of exercise, diet, smoking cessation or alcohol as appropriate.

It is valuable to know who to refer to for legal issues such as employment, financial issues such as insurance and family issues such as international travel and holidays and to recognise the merit of Right to be Forgotten legislation so that those who have recovered from cancer are not penalised unnecessarily when accessing financial and insurance services.
It is valuable to recognise the importance of smooth transitions such as between acute healthcare settings and home care, from active treatment to survival programmes, or from paediatric to adult cancer services.
It is valuable to demonstrate knowledge and understanding of how cancer and therapies for this can affect teenagers and young adults including short and long-term fertility, emotional implications, education and employment.
It is valuable to educate people affected by cancer to monitor for and report signs of acute, chronic and late toxicities of cancer treatments.
It is valuable to demonstrate awareness of the range of services and professionals including statutory, voluntary and charitable organisations, available to support people affected by cancer and refer appropriately to meet the individual needs of people affected by cancer.
It is valuable to consider the needs of younger and older patients who may not have capacity to make decisions for themselves.
It is valuable to take a focused history to diagnose the common psychological sequelae following a cancer diagnosis and treatment for cancer, manage them or refer appropriately to other specialities. It is valuable to discuss Patient Related Outcome Measures (PROMS).
It is valuable to take a focused history, undertake a careful clinical examination and order relevant investigations to accurately diagnose the late side effects of radiotherapy, systemic anti-cancer therapies, radiochemotherapy and surgery for cancer. Discuss options for managing these and implement them or refer appropriately to other specialities.
Manage patients with relapsed disease
It is valuable to describe the patterns of recurrence in common cancers.
It is valuable to take a careful history, perform a careful clinical examination and request relevant investigations to diagnose relapsed disease
It is valuable to take a focused history, undertake a careful clinical examination and order relevant investigations to evaluate the possible management strategies including radiotherapy, systemic anti-cancer therapies and surgery taking into account the factors related to cancer including whether there is a possibility of curative treatment, the patient's goals, their comorbidities and frailty and the adverse effects of the possible options.
It is valuable to discuss the role of radiofrequency ablation and cryotherapy in the management of metastases.
It is valuable to recognise when radiotherapy, systemic therapy and surgery are not indicated.

<p>It is valuable to discuss the role of palliative care in the management of the patient. Implement treatment to control symptoms or refer appropriately to other specialties.</p> <p>It is valuable to recognise the final phase of life.</p>
<p>It is valuable to inform, support and educate people affected by cancer about palliative and end-of-life care where appropriate and to elicit their preferences with respect to goals of care and the transition between care aimed at cure and end-of-life care including appropriate discussions regarding “Do not resuscitate orders” (DNR).</p> <p>It is valuable to demonstrate awareness of the legal importance of living wills and advance directives and how these may be arranged by patients</p>
<p>It is valuable to undertake a holistic assessment of the needs, concerns and symptoms commonly experienced by people affected by cancer receiving palliative and/or end-of-life care, recognising and supporting vulnerable patients e.g., the elderly, cognitively impaired and responding to different cultural and religious perspectives.</p>
<p>It is valuable to support and give advice to families and carers following death including referral to appropriate bereavement counselling services and outline theories of loss, grief and bereavement and how these are applied in clinical practice.</p>

Non-Clinical Roles

Communicator

<p>Build a therapeutic relationship with people affected by cancer</p>
<p>It is valuable to discuss the theory underpinning communication skills:</p> <p>Strongly disagree</p> <p>Disagree</p> <p>Somewhat disagree</p> <p>Neither agree nor disagree</p> <p>Somewhat agree</p> <p>Agree</p> <p>Strongly agree</p>
<p>It is valuable to effectively utilise verbal, written and digital modes of communication to provide information, education and support in an understandable, empathetic, respectful and caring manner while maintaining confidentiality.</p>
<p>It is valuable to assess for and address any patient-related, health care professional-related or environmental barriers to effective communication.</p>

Elicit and synthesise accurate and relevant information from patients

It is valuable to select and adopt an appropriate communications approach, from a range of core communication and consultation skills, to effectively assess the informational, educational and supportive care needs of people affected by cancer throughout the cancer trajectory, reacting to body language and verbal cues with relevant observations and questions and demonstrating active listening.

It is valuable to communicate clearly with patients respecting their social, political, cultural, religious and sexual standpoint.

Develop management plans with patients and their families that reflect their health care needs and goals

It is valuable to give clear objective information about standard treatments, clinical trials and experimental treatments including the process, side effects, and benefits and risks so that patients can make informed choices about their treatment options.

It is valuable to discuss the results of clinical investigations clearly and empathetically with the patient and their carers.

It is valuable to ascertain if the patient and their families have understood the information and take effective measures if this is not the case and to assist them to access reliable sources of information including trusted websites and patient organisations.

It is valuable to explain to the patient that their care is being discussed by an MDT and the nature of the decision-making process.

It is valuable to discuss patients' beliefs regarding alternative and complementary therapies.

It is valuable to take informed consent from patients and know the legal position if the patient lacks capacity.

Manage emotionally charged conversations

It is valuable to elicit the patient's wishes about the information they wish to receive at various stages of their journey and break bad news in an appropriate way including communicating sensitively, truthfully and without ambiguity about, for example, life with cancer, sexual issues and the dying process.

It is valuable to disclose errors and adverse safety events appropriately.

Document accurately and share appropriately information about the consultation

It is valuable to detail in a timely and accurate manner details of the consultation and management plan including where appropriate the survivorship plan, either in a written or digital form, complying with national legislation communicating this information clearly to the health care team.

It is valuable to maintain patient confidentiality.

Collaborator

Work effectively across disciplinary and professional boundaries with other members of the health care professions

It is valuable to contribute to effective discussions in multidisciplinary teams (MDT). Understand and value the roles of all health care professionals and encourage team working to optimise treatment. Willing to compromise to reach a consensus. Respect the views of others and the conclusions of the MDT.

It is valuable to negotiate overlapping responsibilities for shared care of patients.

Transfer care safely to another health care professional

It is valuable to determine when care should be transferred to another physician or health care professional and facilitate continuity of care by timely, effective communication. This may include supporting patient's requests for further opinions.

Support colleagues

It is valuable to identify when colleagues are under pressure and offer help.

Leader

Contribute to the improvement of cancer care delivery in teams and the wider health care system

It is valuable to identify where quality improvements may be initiated in the work environment and demonstrate knowledge of the steps and tools that may be applied to quality improvement processes including the use of data to drive change.
It is valuable to describe key quality indicators for monitoring service performance in oncology.
It is valuable to assess risk and implement appropriate risk management strategies in order to promote patient well-being and safety in practice and participate in the development and implementation of patient safety initiatives.
It is valuable to discuss current major challenges in health care and provide leadership in the contribution to and implementation and evaluation of policies and standards relevant to cancer care.
Engage in stewardship of cancer care resources
It is valuable to discuss factors involved with resource stewardship including financial and other costs of cancer patient care and describe local and international guidelines and initiatives to promote resource stewardship including initiatives which bring about increased efficiency in cancer care focusing on what is important to the patient while not sacrificing quality.
It is valuable to discuss prioritisation of patients on waiting lists.
It is valuable to appreciate the conflict sometimes inherent between access to gold standard, equitable healthcare opportunities and available resources.
Demonstrate elements of leadership in practice
It is valuable to describe leadership theories and styles and how these may apply in practice.
It is valuable to prioritise tasks including patient assessment and treatment.
It is valuable to engage in developing self-awareness: strengths, weaknesses, values, behaviour drivers and impact on others.
It is valuable to run effective and efficient meetings.
It is valuable to take responsibility for effective communication around the vision for, and purpose of, change with multidisciplinary team members, patients and other stakeholders.
It is valuable to demonstrate the ability to negotiate and problem-solve with other team members.
It is valuable to demonstrate awareness of the roles and organisational structures of relevant professional societies.

Health Advocate

Advise the patient on behaviour and lifestyle
It is valuable to describe the occurrence and distribution of the most common cancers with a focus on Europe.
It is valuable to discuss the principles of screening, including the main advantages and drawbacks of a screening programme, and the organisation of screening using breast, lung and colorectal cancer as core examples and outline national and international guidelines in this field.
It is valuable to provide appropriate and individualised evidence-based verbal and written information regarding the benefits and risks of screening for cancer to people affected by cancer.
It is valuable to undertake a comprehensive history to identify the individual, familial, genetic, sociocultural, economic and environmental factors which may increase the risk for developing cancer and provide information and psychological and emotional support on strategies to reduce risk.
It is valuable to advise the patient on relevant changes in behaviour and lifestyle prior to treatment to increase the chance of tumour response and to cope with acute toxicities e.g., smoking cessation and diet.
It is valuable to advise the patient on relevant changes in behaviour and lifestyle to enable them to cope optimally with late toxicities due to previous treatment and the side effects of present medication.
Support patients to navigate the healthcare system
It is valuable to enable patients to access the available resources to obtain treatment in a timely, efficient manner.
It is valuable to advocate for and promote, shared decision-making between people affected by cancer and their healthcare team regarding all stages treatment, care and management.

Scholar

Develop and follow a continuing personal development plan
It is valuable to assess gaps in knowledge and identify resources to meet these.

It is valuable to retrieve high-quality research articles and evidence-based guidelines relevant to cancer care by formulating effective research questions and utilising effective search strategies for sourcing relevant electronic and print material and critically review medical information.
It is valuable to develop or revise local evidence-based guidelines integrating evidence into personal practice.
Participate in research activities
It is valuable to discuss trial design.
It is valuable to provide safe and effective care to patients on clinical trials in accordance with study protocols with a view to ensuring optimal outcomes and experiences for patients.
It is valuable to discuss challenges to recruiting teenagers and young adults to research trials, ensuring that patient choice is considered and appropriate advice in complex and challenging situations is delivered.
It is valuable to describe and contribute to health service research and clinical audit in their clinical area.
It is valuable to discuss the organisations that design and run trials nationally and internationally and how to access information regarding their trials.
It is valuable to show awareness of rules for writing scientific papers and how to submit them for publication.

Professional

Adhere to high ethical standards
It is valuable to discuss ethical principles and be able to apply them when caring for patients.
It is valuable to respect diversity. Do not disadvantage a patient on grounds of their gender, race, culture, philosophical or religious beliefs. Show understanding for patients' ethical concerns and divergent viewpoints.
It is valuable to demonstrate respect for patients and caregivers.
It is valuable to maintain appropriate boundaries with patients.
It is valuable to maintain patient confidentiality and be able to inform patients on the legal situation regarding information held on them in medical notes.
It is valuable to apply codes of research ethics including the Good Clinical Practice Guidelines.

It is valuable to provide the patient with all relevant information when taking consent.
It is valuable to manage conflicts of interest appropriately.
It is valuable to exhibit appropriate behaviour in the use of communication on the internet.
Aspire to excellence
It is valuable to work according to professional codes and laws.
It is valuable to keep knowledge and skills up to date, recognize one's own competency limits and refer appropriately.
It is valuable to take responsibility for actions and respond appropriately to negative feedback.
It is valuable to work collaboratively with other healthcare professionals to optimise patient care and to encourage shared decision-making between healthcare professional and patient.
It is valuable to recognise and respond to unethical behaviour in other healthcare professionals.
Maintain own wellbeing
It is valuable to exhibit self-awareness and manage personal and professional demands to reduce the risk of burn out.
It is valuable to seek emotional and developmental support when required.

Annex B: Interprofessional education and training in oncology – a scoping review

DRAFT

Title: Interprofessional education and training in oncology – a scoping review

Authors

First author name¹ Second author name² Third author name³ Fourth author name⁴ Fifth author name⁵ Sixth author name⁶

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Abstract

Over the last decade, there has been increased interest to develop education initiatives to improve interprofessional collaboration and practice in the cancer care setting. Cancer care requires effective collaboration by an interprofessional health care team. Interprofessional collaboration can be defined as collaborative interaction among experts with different professional backgrounds involved in the care of people with cancer and who share common goals. Interprofessional education aims to improve the collaboration among the cancer care teams. There is increasing body of evidence on interprofessional education (IPE) in cancer care setting. However, this evidence is somewhat scattered. There is also a great variation on the teaching and learning methods used to implement IPE programmes and the interprofessional care competences guiding development of IPE programmes. Therefore, a scoping review is needed to summarise results of previous research to guide the future development of interspecialty training in oncology.

Objective:

The objective of this scoping review is to understand the extent and type of evidence in relation to interprofessional education (IPE) in oncology. Aim is to identify how IPE has been defined and methodology underlying the implementation of the IPE.

Introduction:

One emerging aspect for future health care has been the demand for an increase in collaborative care (Mercedes et al. 2016). Interprofessional health-care teams understand how to optimize the skills of their members, share case management and provide better health-services to patients and the community. The resulting strengthened health system leads to improved health outcomes. (WHO 2010) Oncology is based on the synergy between several professionals whose common goal is to improve the care of people with cancer. Therefore, cancer care requires fluent interprofessional collaboration (Denton & Conron, 2016; Chiew et al., 2018). Outcomes in clinical oncology can be improved when care is delivered by high-performance teams (James et al., 2016). Interprofessional collaboration improves patient outcomes and promotes understanding of and compliance with treatment. Sharing a common core of knowledge and training is needed to facilitate collaboration between professionals in oncology setting. The advantages of an interprofessional working group are the knowledge base, expertise and skills of the interdisciplinary groups (Moilanen et al, 2020).

Interprofessional education IPE has demonstrated to improve patient outcomes in a variety of health care fields and clinical settings (Prades & Porras, 2014). The primary goal of interprofessional education (IPE) is improved interprofessional collaboration (Schultz et al. 2021). According to Dow et al. (2017), in oncology, we need to expand the notions of interprofessional practice to encompass both teams and networks. Thus, IPE programs vary substantially across countries (Herath et al. 2017).

Moreover, one of the barriers of successful implementation on IPE and training, is the variety among the definitions of main concepts underlying the research and development of IPE programs. Commonly used concepts are interprofessional, interdisciplinary, multiprofessional and multidisciplinary collaboration or cooperation in the interprofessional practice. Interprofessional education can be broadly defined as a pedagogical approach on teaching and learning process that fosters collaborative work between two or more health care professions (WHO 2010). It is assumed that through effective incorporation of interprofessional education into curricular and practice settings, optimal patient-centered outcomes can potentially result as effective and highly integrated teams facilitate and optimize collaborative patient care and safety (Olenick et al. 2010). Recently, EU launched the concept of “interspecialty training” to combine education and training of medical and nursing professionals in cancer care setting (EU Beating Cancer Plan 2021).

There is recent research on interprofessional collaboration, team work and interprofessional education available in the field of oncology; for example to enhance collaborative practice skills within clinical oncology (James et al., 2016), in radiation oncology (Shultz et al., 2022), to determine the impact and value of interprofessional learning (Ball et al., 2021) and interprofessional communication in cancer care setting (Buller et al. 2021). Thus, the evidence is somewhat scattered. There is also a great variation on the teaching and learning methods used to implement IPE programmes. Therefore, a scoping review is needed to summarise results of previous research to guide the future development of interspecialty training in oncology.

The questions guiding the scoping review are:

How inter-specialty (interprofessional) education and training has been defined in previous research in oncology setting?

What competences has been used to guide the curriculum development of IPE in oncology?

What teaching and learning methods (incl. assessment) has been used in previous studies?

Inclusion criteria: Summarize the inclusion criteria using the participants, concept, and context (PCC framework) and highlight any relevant exclusions in paragraph format. Present the information in one to three sentences – NOT under individual subheadings.

P(articipants)= oncology medical professionals (medical oncologists, radiation oncologists, surgical oncologists) and nurses, **C(oncept)**= interspecialty or interprofessional education or programmes, **C(ontext)**= Cancer care setting

Criteria:

Inclusion: Quantitative and qualitative studies and systematic reviews; papers with focus on IPE, development of interprofessional collaboration and teamwork through IPE. Teaching, learning and assessment methods of IPE. Setting is oncology.

Exclusion: Editorials, discussion papers, focus on other health care professionals, non-oncological professionals, conference abstracts and proceedings

Limits: English language, 2012-2022 (10 years)

Methods:

The databases: CINAHL, MEDLINE (Ovid), PubMed, PsycInfo, Scopus

The search terms: clinical oncology [MESH], medical oncology [MESH]; radiation oncology [MESH]; surgical oncology [MESH], oncology nursing [MESH] AND interprofessional training OR Interprofessional education OR interdisciplinary education OR interprofessional learning

The literature search: two researchers will conduct the search (first screen titles/abstracts, second screen full text, third the reference list of identified articles, reviewers' intent also to contact authors of primary sources if needed).

Data extraction: A draft of data charting table or form will be developed and piloted at the protocol stage to record the key information of the source; author, reference, aim/purpose, / population, methodology, intervention and results or findings relevant to the review question/s.

Analysis of the evidence and presentation of the results: We plan to extract results and *descriptively map* by content analysis to provide an overview of existing research and evidence on the use of IPE in cancer care setting. In scoping reviews, quality appraisal tools are not always used (need to decide as we see the type of research we find).

The proposed scoping review will be conducted in accordance with the JBI methodology for scoping reviews. The results of the search and the study inclusion process will be reported in full in the final scoping review and presented in a Preferred Reporting Items for Systematic Reviews and Meta-analyses extension for scoping review (PRISMA-ScR) flow diagram (insert citation to PRISMA-ScR statement and include in the reference list).

Keywords:

Interprofessional education, interprofessional collaboration, interdisciplinary education, multidisciplinary education, oncology, cancer care

Journal options:

BMC Medical Education, European Journal of Cancer, ESMO open, Journal of Advanced Research.