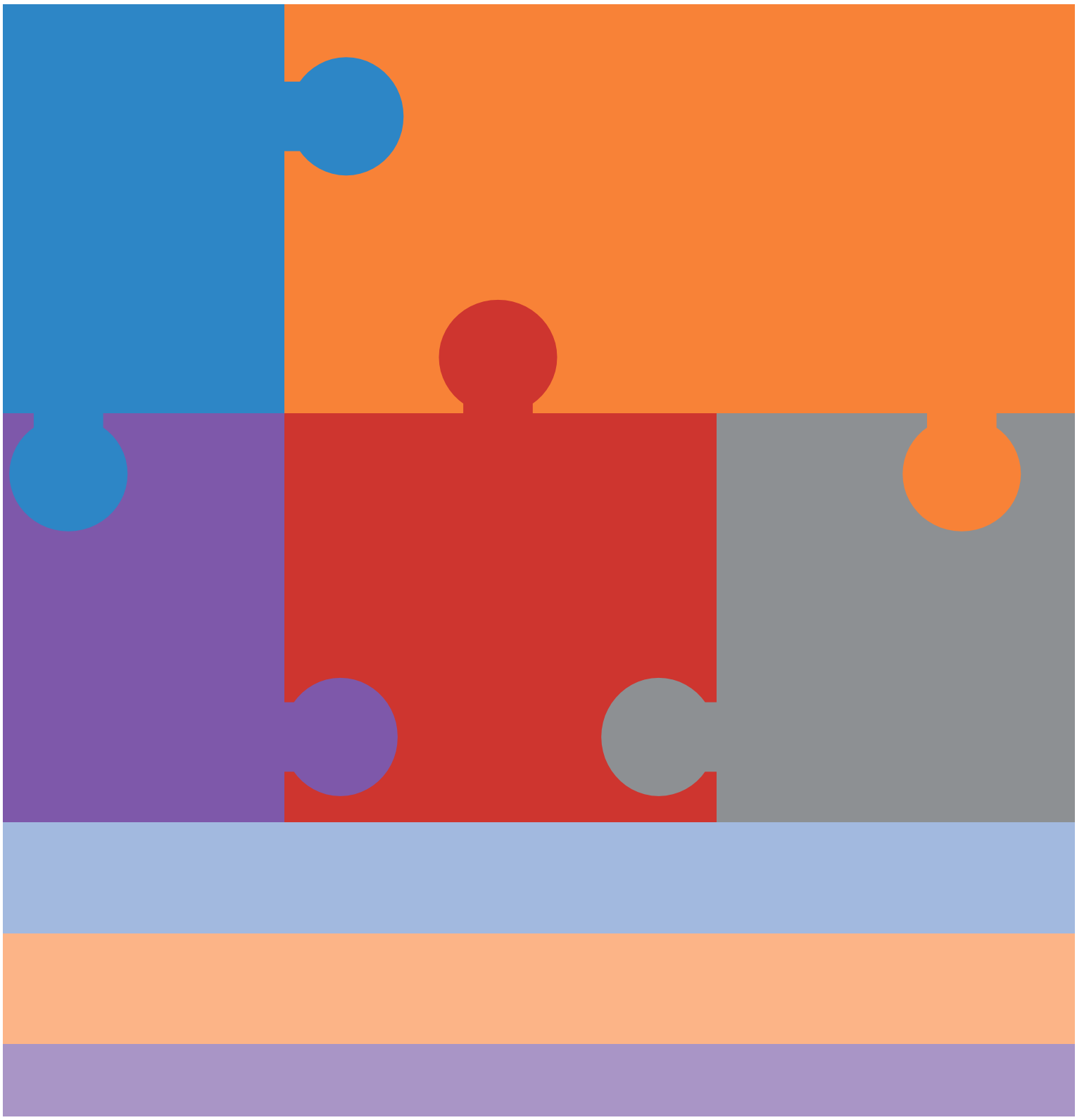
The EONS Cancer Nursing Education Framework



Contents

Acknowledgements 2
Foreword from the EONS Presidents 4
Glossary 6
Introduction 10
Module 1: Cancer Prevention, Screening, Early Detection and Health Promotion in Cancer Care 15
Module 2: Cancer Pathophysiology and the Principles of Treatment Decision-Making 21
Module 3: Cancer Treatment, Patient and Occupational Safety 24
Module 4: Supporting People Living With, Through and Beyond Cancer 31
Module 5: Supporting People with Advanced Disease and at End of Life 38
Module 6: Communication in Cancer Care 42
Module 7: Leadership and Management in Cancer Nursing 48
Module 8: Research Utilisation and Evidence in Cancer Care 52
Advanced Cancer Nursing Roles 56
Annex 1: How to use the framework 59
Annex 2: eHealth and Cancer 61

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Foreword from the EONS Presidents

As Presidents of the European Oncology Nursing Society (EONS), we are very proud to present the updated EONS Cancer Nursing Education Framework 2022. The very first cancer nursing education document (EONS Post-basic Curriculum in Cancer Nursing) was developed by EONS in 1991 and was one of the first nursing initiatives to receive funding from the European Union's Europe Against Cancer (EAC) programme. The document was then extensively revised in 1998 and 2013. In 2018, the framework was updated with major revisions of structure and to better reflect the progress and developments within cancer care and cancer nursing. The name was changed to "EONS Cancer Nursing Education Framework" to better capture the purpose of the document. The extensive developments within cancer care and increased body of evidence-based information available for cancer nursing practice were the driving forces of the updated 5th edition.

The focus of the update process was on the literature underpinning the Framework and education for cancer nurses. In view of the rapid development in cancer care, increasing number of systematic reviews and professional guidelines and standards, reading lists need to be seen as a starting point. Further literature searches are always recommended to ensure the contemporary content of the education. Also, any relevant national and other international policies should be integrated in the implementation of education.

The EONS Cancer Nursing Education Framework has proven to be a very useful document in many countries across Europe, with the previous version becoming the most downloaded document in EONS' history. It has been used for a great many purposes, for example as a reference to advocate for more hours of training on certain topics, to promote the development of new national cancer nursing programmes and career possibilities, to support continuing education programmes and as guidance for other educational events. EONS members are advised to adapt this Framework to meet their specific professional needs within their country. To support the versatile use of the Framework, a short guide on "How to use" with examples is provided as Annex 1. The development of digital health and cancer care impacts cancer nursing practice and education. Therefore, it was seen as important to also address eHealth in this updated Framework (annex 2). While this topic is not addressed directly within each module, the principles of eHealth should be discussed within the context of educational topics in the modules as appropriate.

The latest revision was led by the EONS President Elect, whose background is in cancer nursing education, together with members of EONS Education Working Group and representatives from all the EONS working groups and the Young Cancer Nurses network. EONS' member organisations, the European National Cancer Nursing Societies, have also been involved in the process together with other experts. For an overview of the update process, see Figure 1 below.

A PDF version of the Framework is available at: www.cancernurse.eu. Please acknowledge the EONS Cancer Nursing Education Framework 2022 when using the document. Cite: European Oncology Nursing Society (EONS) 2022. EONS Cancer Nursing Education Framework, fifth edition.

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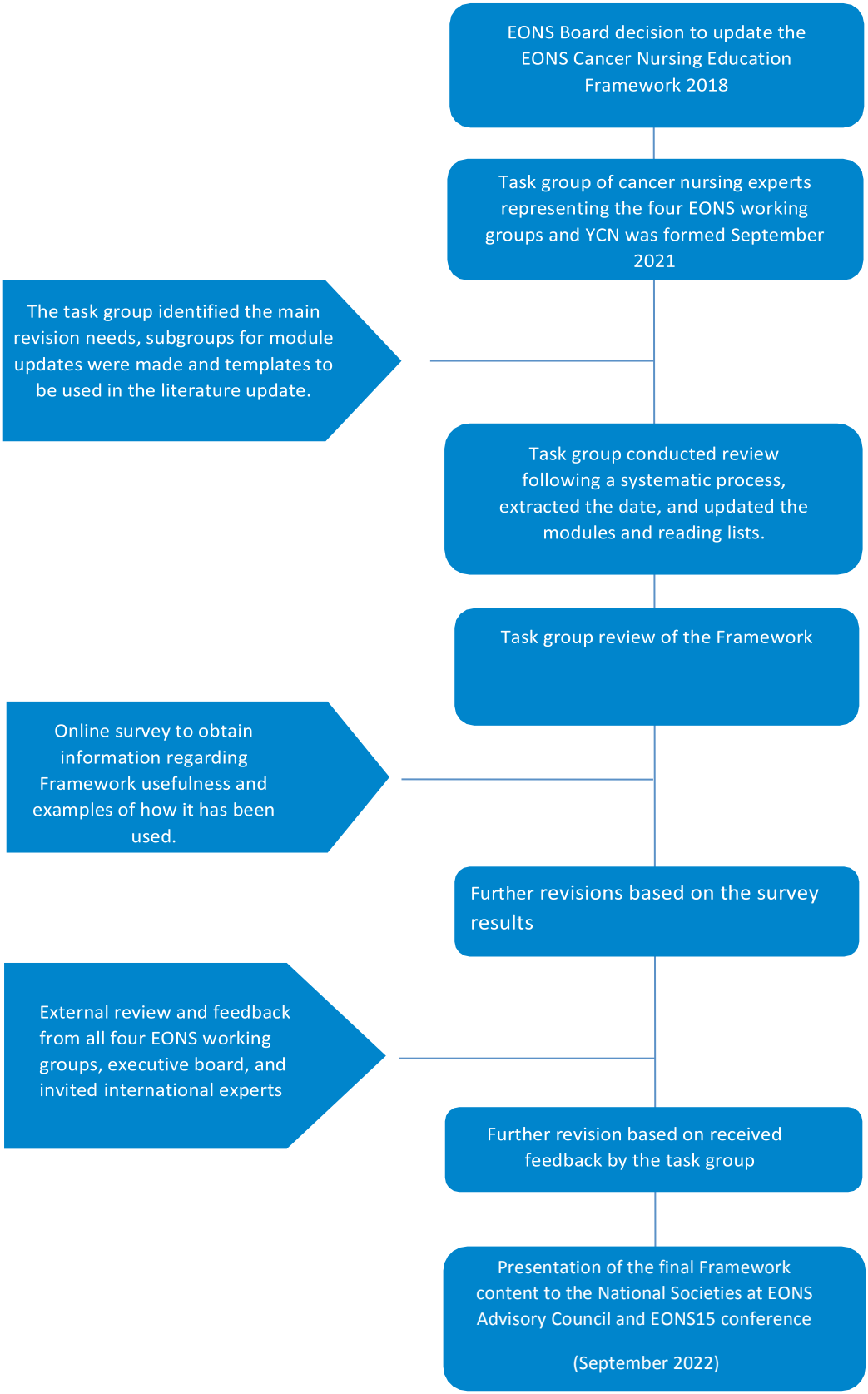
Figure 1: Process Overview



Glossary

Term	Definition
Advanced Practice Nurse	Registered nurse who has acquired the expert cancer nursing knowledge base, complex decision-making skills and clinical competencies for expanded practice, the characteristics of which are shaped by the context and/or country in which they are credentialed to practice. A master's degree is recommended for entry level. (International Council of Nurses [ICN], 2020)
Cancer nurse	It is the position of the European Oncology Nursing Society that a cancer nurse is a qualified registered nurse who has the authority and full responsibility to provide essential nursing care to people affected by cancer. This care is based upon their evidence-based, specialised, ethical and personal knowledge and skills. Cancer nurses are fully accountable in all cancer care settings and across the care continuum for all nursing services and associated patient outcomes provided under their direction.
Cancer prevention	Cancer prevention can be divided into primary, secondary, and tertiary prevention. *Primary prevention* involves avoiding exposure to carcinogenic agents or behaviours and frequently is applied to broad populations, *secondary prevention* targets existing, more specific risks in more closely defined higher-risk populations and *tertiary prevention* primarily aims to prevent or control the symptoms and morbidity of established cancer, or the morbidity caused by cancer therapy. (Blackburn, 2010)
Cancer Care Continuum	A framework for understanding cancer-related pathway priorities for the people affected by cancer, from prevention to survivorship or end of life. The Framework places at its core the person with cancer, significant others and informal carers (person-centered care) and shows the need for communication between the patient and the health-care providers across hospital and community settings. (Young et al., 2020)
Informal carers	Usually relatives but sometimes friends, whom the patient identifies as providing significant usually unpaid support and care, and as 'sharing the most' in their illness experience. (National Cancer Institute [NCI], 2022)
Competencies	Competencies represent a dynamic combination of knowledge, understanding, skills and abilities. The knowledge, skills, values, and attitudes that are required for cancer nurses to carry out their work safely and effectively.
eHealth	The cost effective and secure use of information and communication technologies (ICT) in support of health and health-related fields, including healthcare services, health surveillance, health literature, and health education, knowledge and research. (WHO, 2010)
End of Life (EOL)	People in the last months or years of their life; this includes those whose death is imminent (expected within a few hours or days). (National Health Services [NHS], 2022)
End of Life Care (EOLC)	Holistic, comprehensive care which is provided to people who are nearing the end of life, including the necessary support to family members and significant others. Usually provided during the last year of life but this is often difficult to predict. The aim is to help people live as well as possible and to die with dignity. End-of-life care may be used synonymously with palliative care or hospice care and may also be understood more specifically as comprehensive care for dying patients in the last few hours or days of life.
Epidemiology	The study of the distribution of diseases and determinants of diseases in populations, including all forms of disease that relate to the environment and ways of life.

Term	Definition
European Credit Transfer System (ECTS)	European Credit Transfer System (ECTS) is a central tool in the Bologna Process. ECTS is a learner-centred for credit accumulation and transfer based on the principle of transparency of the learning, teaching and assessment processes. Its objective is to facilitate the planning, delivery and evaluation of study programmes and student mobility by recognising learning achievements, and qualifications and periods of learning. (European Commission, ECTS Users' Guide, 2015)
Evidence-based Practice (EBP)	The conscientious, explicit and judicious use of best evidence in making decisions about the care of the individual patient. It means integrating individual clinical expertise with the best available external clinical evidence from systematic research. (Sackett et al., 2000)
Health literacy	Health literacy is an important predictor of successful self-management (Papadakos et al., 2018). It refers to people's knowledge, motivation and competences to access, understand, appraise, and apply health information. That is, to make judgments and take decisions in everyday life concerning healthcare, disease prevention and health promotion to maintain or improve quality of life. (Sørensen et al., 2012)
Integrated cancer care	An integrated approach to cancer care, bridging cancer prevention, research, early-diagnosis, and treatment to improve patient outcomes. (European Society for Medical Oncology [ESMO], 2020)
Multidisciplinary team (MDT)	Teams consisting exclusively of professionals from different professions or disciplines. The terms inter/multi-disciplinary are broader and include all members of healthcare teams, professional and non-professional (Nancarrow et al., 2013). Multidisciplinary collaboration refers to collaborative practice of the team.
Nursing-sensitive outcomes	Outcomes which define the end results of nursing interventions and are indicators of problem resolution or progress toward problem or symptom resolution. The ICN defines a nursing outcome as the measure or status of a nursing diagnosis at points in time after a nursing intervention, while nursing-sensitive outcomes are defined as changes in health status upon which nursing care has had a direct influence. Variables affecting patient outcomes include: diagnosis, socio-economic factors, family support, age and gender, and the quality of care provided by other professionals and support workers. (ICN, 2009)
Nurse-led clinics/services	A nurse-led clinic is any outpatient clinic that is run or managed by registered nurses, usually nurse practitioners or clinical nurse specialists. Nurse-led services refers to services in which a nurse is responsible for the overall co-ordination, management and continuity of care for a specific episode of treatment or intervention. However, only some countries in Europe have introduced nurse-led clinics or services in the health service system.
Palliative care	An approach that improves the quality of life of patients and their families facing the problems associated with life-threatening illness through the prevention and relief of suffering by means of early identification and impeccable assessment and treatment of pain and other problems, physical, psychosocial and spiritual (WHO, 2002).
Patient-reported outcome (PRO)	The distinction between a PRO and an observer-generated report is that the PRO is a self-report made directly by the patient without being made through another party. PROs can be defined as a "measurement of any aspect of a patient's health status that comes directly from the patient and include health-related quality of life (HRQL), symptoms, satisfaction and adherence to medication. (US Food and Drug Administration, 2009; Calvert et al., 2013)

Term	Definition
Person affected by cancer	Person affected by cancer refers to people affected by all types of cancer, including those at risk of developing cancer, people living with cancer, cancer survivors, informal carers, family members and significant others across the age spectrum and continuum of care (Royal College of Nursing [RCN], 2022).
Person-centered care	Person-centered care is defined by the World Health Organization as empowering people to take charge of their own health rather than being passive recipients of services. It includes care approaches and practices that see the person as a whole with many levels of needs and goals, with these needs coming from their own personal social determinants of health. (World Health Organization [WHO], 2015)
People-centered care	People-centered care is an approach to care that consciously adopts individuals', carers', families' and communities' perspectives as participants in, and beneficiaries of, trusted health systems that respond to their needs and preferences in humane and holistic ways (World Health Organization [WHO], 2015).
Self- management	A dynamic, self-empowering, self-directed process of implementing behaviours that recognise, prevent, relieve or decrease the timing, intensity, distress, concurrence, and unpleasant quality of symptoms to achieve optimal performance outcomes. Self-management is thought to be broader than self-care as it addresses the management of treatments, lifestyle changes and physical, psychosocial, and spiritual consequences of disease. Positive changes in self-management behaviour leads to the achievement of optimal performance outcomes such as functional status. (Baydoun et al., 2018)
Supportive care	The prevention and management of the adverse effects of cancer and its treatment for people with cancer. This includes management of physical and psychological symptoms and side effects across the continuum of the cancer experience from diagnosis, through anticancer treatment, to post- treatment care. Enhancing rehabilitation, secondary cancer prevention, survivorship and end-of-life care are all integral to supportive care (Multinational Association of Supportive Care in Cancer (MASCC, 2015). Supportive care is the central pillar of cancer nursing. It enables and empowers people to self-manage where possible. (Young et al., 2020)
Survivorship	Survivorship focuses on the health and well-being of people living with and beyond cancer. This includes the physical, mental, emotional, social, and financial effects of cancer that begin at diagnosis and continue through treatment and beyond. The survivorship experience also includes issues related to follow-up care (including regular health and wellness checkups), late effects of treatment, cancer recurrence, second cancers, and quality of life. Cancer survivors are individuals from the time of diagnosis, through the balance of their life. Family members, friends, and informal caregivers are also considered part of the survivorship experience. (NCI's definition, Denlinger et al., 2014)
Symptom management	Care given to help relieve the symptoms of a disease, such as cancer, and the side effects caused by treatment of the disease. Symptom management may help a person feel more comfortable, but it does not treat or cure the disease. It may involve taking certain medicines to relieve pain or nausea or using guided imagery or deep breathing exercises to reduce stress or anxiety. Symptom management is one aspect of palliative care and supportive care. (NCI's dictionary)

REFERENCES AND RESOURCES

Baydoun M, Barton DL, Arslanian-Engoren C. A cancer specific middle-range theory of symptom self-care management: A theory synthesis. J Adv Nurs. 2018 Dec;74(12):2935-2946. doi: 10.1111/jan.13829.

Blackburn EH. Highlighting the science of cancer prevention. Cancer Prev Res. 2010 Apr;3(4):393. doi: 10.1158/1940-6207.CAPR-10-0034.

Calvert M, Brundage M, Jacobsen PB, Schünemann HJ, Efficace F. The CONSORT Patient-Reported Outcome (PRO) extension: implications for clinical trials and practice. Health Qual Life Outcomes. 2013 Oct 29;11:184. doi: 10.1186/1477-7525-11-184.

Denlinger CS, Carlson RW, Are M … Freedman-Cass D. Survivorship: introduction and definition. Clinical practice guidelines in oncology. J Natl Compr Canc Netw. 2014 Jan;12(1):34-45. doi: 10.6004/jnccn.2014.0005.

European Society for Medical Oncology (ESMO). ESMO 2020 Vision. https://www.esmo.org/content/download/68849/1233986/1/ESMO-2020-vision-brochure.pdf

National Cancer Institute. Informal Caregivers in Cancer: Roles, Burden, and Support. https://www.cancer.gov/about-cancer/coping/family-friends/family-caregivers-hp-pdq

National Heath Service (NHS), UK. What end of life care involves. 2022. https://www.nhs.uk/conditions/end-of-life-care/what-it-involves-and-when-it-starts/

Pérez-Alfonso KE, Sánchez-Martínez V. Electronic Patient-Reported Outcome Measures Evaluating Cancer Symptoms: A Systematic Review. Semin Oncol Nurs. 2021 Apr;37(2):151145. doi: 10.1016/j.soncn.2021.151145.

Royal College of Nursing (RCN), 2022. Career and education framework for cancer nursing. RCN, London, UK.

Sackett, D.L., Straus, S.E., Richardson, W.S., Rosenberg, W., Haynes, R.B., 2000. Evidence-based medicine: how to practice and teach EBM. Churchill Livingstone, London.

Sørensen K, Van den Broucke S, Fullam J…Consortium Health Literacy Project European. Health literacy and public health: a systematic review and integration of definitions and models. BMC Public Health. 2012 Jan 25;12:80. doi: 10.1186/1471-2458-12-80.

Taberna M, Gil Moncayo F, Jané-Salas E, Antonio M, Arribas L, Vilajosana E, Peralvez Torres E, Mesía R. The Multidisciplinary Team (MDT) Approach and Quality of Care. Front Oncol. 2020 Mar 20;10:85. doi: 10.3389/fonc.2020.00085.

US Food and Drug Administration: Guidance for Industry: Patient-reported outcome measures: use in medical product development to support labeling claims. U.S. Department of health and human services food and drug administration. 2009.

Weldring T, Smith SM. Patient-Reported Outcomes (PROs) and Patient-Reported Outcome Measures (PROMs). Health Serv Insights. 2013 Aug 4;6:61-8. doi: 10.4137/HSI.S11093.

World Heath Organization (WHO). WHO global strategy on integrated people-centred health services 2016-2026. 2015. https://interprofessional.global/wp-content/uploads/2019/11/WHO-2015-Global-strategy-on-integrated-people-centred-health-services-2016-2026.pdf

World Health Organization (WHO). Report on the second global survey on eHealth. 2010.

Young AM, Charalambous A, Owen RI, Njodzeka B, Oldenmenger WH, Alqudimat MR, So WKW. Essential oncology nursing care along the cancer continuum. Lancet Oncol. 2020 Dec;21(12):e555-e563. doi: 10.1016/S1470-2045(20)30612-4.

Introduction

The overall purpose of this EONS Cancer Nursing Education Framework is to provide guidance regarding the fundamental knowledge, skills and competencies required by nurses who care for people affected by cancer as part of multi-professional teams across Europe. It is particularly intended to provide guidance for structuring the learning content of cancer nursing programmes and continuing professional education and to those involved in the education, training and professional development of cancer nurses across Europe.

Cancer nurses are at the heart of tackling the increasing burden of cancer (Young et al., 2020). Nurses who receive specialist education in cancer care at postgraduate level have the potential to have impact across the spectrum of cancer care (Yates et al., 2021). EONS' mission is to ensure that all people affected by cancer benefit from the care of highly educated, well-informed and competent cancer nurses. Person-centered integrated cancer care and optimal communication are essential components of cancer nursing care which can be achieved by investment in high-quality cancer nursing education. (Young et al. 2020).

Education preparation of cancer nurses in Europe

When using the EONS Cancer Nursing Education Framework, it is necessary to note variations between countries across the European continent. These are due to differences in education systems, but also the state of recognition of cancer nursing as a specialty and nursing roles in general. Thus, the government and non-government organisations should optimise the substantial resource of nurses to ensure that the burden of cancer is reduced worldwide (Yates et al., 2021). Contextual factors such as recognition, autonomy, access to graduate education, career opportunities, and educational preparation both in the length of and level of education are one of the described differences (Sharp et al., 2019; Kelly et al., 2020). Some countries have established postgraduate certified cancer nursing programmes, while others have invested in postgraduate cancer nursing programmes without certification while in some countries, no specialised cancer nursing programmes exists.

EONS' position is that a cancer nurse is a qualified registered nurse who has the authority and full responsibility to provide essential nursing care to people affected by cancer. This care is based upon their evidence-based, specialised, ethical and personal knowledge and skills. Cancer nurses are fully accountable in all settings where people with cancer are cared for and across the cancer care continuum for all nursing services and associated patient outcomes provided under their direction.

There are three levels of cancer nursing expertise: 1) generalist, 2) specialist, and 3) advanced. All registered nurses should have fundamental preparation on the prevention of cancer and the care of people affected by cancer. The specialised nurses who have completed postgraduate education relevant for cancer care and have developed more specialised competencies, are able to provide more holistic and comprehensive care for people affected by cancer. These specialist cancer nurses offer tailored, accessible and expert care to people living with, through and beyond cancer and to their families, informal caregivers and significant others in all phases of the Cancer Care Continuum, from primary prevention to end of life care. An advanced level cancer nurse is a nurse with post-graduate education and training in advanced nursing (see ICN 2020). The third level is discussed in the chapter on Advanced Cancer Nursing Roles.

Care across the lifespan and vulnerable groups

Cancer affects all population groups. The 'care across the lifespan' approach in healthcare reflects on, and adapts to, changes in demographics, society and the expectations of individuals, society and the expectations of individuals. A lifespan perspective recognises that changes in physical, cognitive and social domains are all influential in cancer nursing practice. Nurses interact with people at every point of their lifespan. It should be noted that the goal of this framework is to provide a general overview and at the same time cancer-nursing-specific learning content without aiming to capture the needs of specific groups. Cancer nurses caring for people of different ages affected by cancer require specific competencies in clinical practice for example, paediatric or gero-oncology nursing. It is also recognised that people with different types of cancer have specific needs that call for distinct competence requirements in cancer nurses. In this Framework, it is not possible to capture all the needs of specific vulnerable groups of people with cancer: people who are disadvantaged for a variety of reasons such as those with intellectual disability, mental illness, mental health problems, social deprivation, prisoners, homeless people, people with auditory or visual impairment, LGBTQIA+, refugees and migrants. There is also inequality and disparities among people from different genders, geographical locations and ethnicities.

Therefore, the users of the EONS Cancer Nursing Education Framework are encouraged to always critically review and extend the suggested reading of the modules to capture the essence of education provided depending on the target group, learning goals and specific competence requirements.

Healthcare is also rapidly shifting towards a digitised future where technological solutions are used in the care of people with cancer across the care continuum and settings (Charalambous 2020). eHealth technology, correctly used, can be a very useful complementary tool to facilitate dialogue among health care professionals and meet the health and care needs of people affected by cancer. Digital health and learning reflect not only on cancer care but on cancer education too. Digital health is an integral part of all the Framework modules. However, to acknowledge the development digitalisation, an additional section on 'eHealth and Cancer' is available in Annex 1.

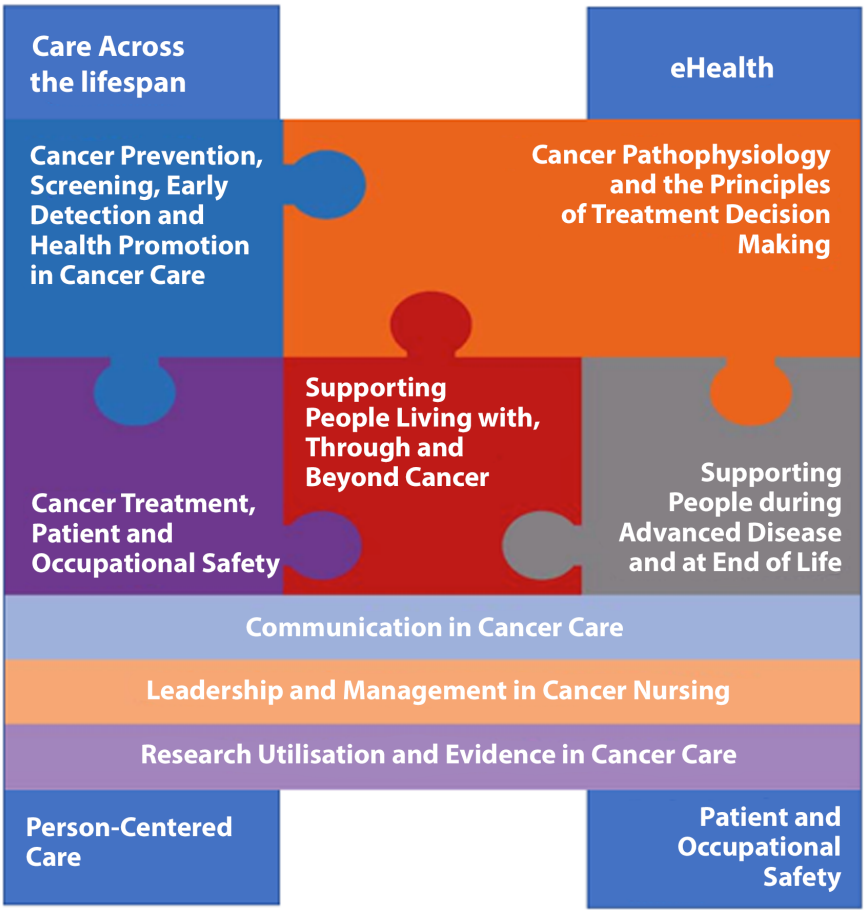
The structure and use of the EONS Cancer Nursing Education Framework

The EONS Cancer Nursing Education Framework comprises eight modules which can be used in their entirety (equivalent to 54 ECTS), or individually, to support the planning and implementation of education (Figure 2). The Framework can be adapted to support the development of specialist education for nurses according to country-specific needs and regulation. Thus, EONS believe that following the outline of this Framework will ensure the educational preparation of specialist cancer nurses. Competencies and learning goals of advanced level cancer nursing education are not the focus of the Framework. We also recognise that there are different ways to support access for nurses to continuing professional education and ensure the competences of the cancer care workforce. The Framework can be used to identify goals and plan professional development of individual nurses or a unit. To support the use of the Framework, a short guide has been developed (available in Annex 2).

Reflecting the overall Cancer Care Continuum (Young et al., 2020), the first five modules of the Framework focus on the key knowledge that cancer nurses require across the spectrum from cancer prevention to end-of-life care. The last three modules address communication, leadership and management and research; however, given their critical importance in the context of cancer care, it is

recommended that these concepts are incorporated across all modules. In the 5th edition, we have edited the figure to capture the four cornerstones which encompass each of the modules: Care across lifespan, Person-centered Care, Patient and occupational safety and eHealth.

Figure 2: Overview of the Framework



Learning outcomes (what the learner should know) and their relevant practice competencies are described for each of the eight modules. The learning outcomes seek to address a variety of cognitive levels to encourage more complex learning, such as evaluation rather than the demonstration of knowledge and comprehension only. The content section is intended to provide guidance regarding the key concepts that need to be addressed in the respective modules to enable 'the learner' to achieve the learning outcomes and practice competencies for each. At the end of each module, a list of updated, relevant and seminal references and resources are provided. Given the rapid developments in oncology, increasing number of publications and available systematic reviews, professional guidelines and standards, reference lists need to be seen as a starting point. A further literature search is always recommended to ensure the educational content is up to date. In addition, any relevant national and other international policies should be integrated in the implementation of the education.

The Framework employs the ECTS in its attempt to identify the workload associated with each of the modules and their explicit learning outcomes (ECTS users' guide 2015).

A total of 54 ECTS credits are allocated to the learning outcomes and associated workload of a full-time academic year or its equivalent. On completion of all eight modules, it is recommended that learners be encouraged to undertake a self-directed piece of work. Learners, therefore, could obtain a further six ECTS through undertaking a substantial piece of written work, e.g., a portfolio of evidence of learning and competence development combined with critical reflection (total of 60 ECTS). This document should aim to demonstrate overall learning from the programme of study.

This Framework aims to demonstrate overall learning in a postgraduate cancer nursing programme. Learning includes recommended contact hours and study hours with practice (in the learner's own practice). Thus, EONS can only provide a recommendation; the actual education provider is responsible for making the decision and how the achievement of learning outcomes will be assessed once the education has been completed.

The methods used for learning, teaching and assessment and also the resources available for teaching and assessment will vary between countries. Examples of these are given in Table 1. It is recommended, where possible, that educators employ several different teaching and assessment strategies across all the modules to facilitate different learning styles. This is to provide learners with opportunities to play to their strengths and to learn from feedback provided during formative assessments.

Table 1 Examples of learning, teaching and assessment methods

Learning methods	**Teaching methods**	**Assessment methods**
Self-regulated learning	Blended learning approach	Different types of exams
Group / team-based learning	eLearning methodology	Reflective essays
Case studies	Problem-based learning (PBL) pedagogy,	Objective structured clinical examinations (OSCEs) and other performance assessment methods.
Gaming	Authentic assignment and/or essay	
Clinical visits	Enquiry-based learning (EBL) pedagogy	Reports of holistic assessments/consultations and person-centered care plans
Virtual learning	Simulation and virtual reality (VR) pedagogy	Portfolio

REFERENCES AND RESOURCES

Brand NR, Qu LG, Chao A, Ilbawi AM. Delays and Barriers to Cancer Care in Low- and Middle-Income Countries: A Systematic Review. Oncologist. 2019 Dec;24(12):e1371-e1380. doi: 10.1634/theoncologist.2019-0057.

Campbell, P., Torrens, C., Kelly, D., Charalambous, A., Domenech-Clement, N., Nohavova, I. Ostlund, U., Patiraki, E., Salisbury, D., Sharp, L., Wiseman, T., Oldenmenger, W., Wells, M., 2017. Recognizing European cancer nursing: Protocol for a systematic review and meta-analysis of the evidence of effectiveness and value of cancer nursing. J. Adv. Nurs. 00: 1–10. https://doi.org/10.1111/jan.13392

Challinor JM, Galassi AL, Al-Ruzzieh MA, Bigirimana JB, Buswell L, So WKW, Steinberg AB, Williams M. Nursing's Potential to Address the Growing Cancer Burden in Low- and Middle-Income Countries. J Glob Oncol. 2016 Feb 3;2(3):154-163. doi: 10.1200/JGO.2015.001974.

Doorenbos AZ, Jang MK, Li H, Lally RM. eHealth Education: Methods to Enhance Oncology Nurse, Patient, and Caregiver Teaching. Clin J Oncol Nurs. 2020 Jun 1;24(3):42-48. doi: 10.1188/20.CJON.S1.42-48.

Fiset VJ, Graham ID, Davies BL. Evidence-based practice in clinical nursing education: A scoping review. J Nurs Educ. 2017;56(9):534–541. doi: 10.3928/01484834-20170817-04.

Kelly D, Lankshear A, Wiseman T, Jahn P, Mall-Roosmäe H, Rannus K, Oldenmenger W, Sharp L. The experiences of cancer nurses working in four European countries: A qualitative study. Eur J Oncol Nurs. 2020 Dec;49:101844. doi: 10.1016/j.ejon.2020.101844.

Lehane E, Leahy-Warren P, O'Riordan C…Hegarty J. Evidence-based practice education for healthcare professions: an expert view. BMJ Evid Based Med. 2019 Jun;24(3):103-108. doi: 10.1136/bmjebm-2018-111019.

MacKenzie AR, Parker I. Introduction to quality issues in vulnerable populations. J Oncol Pract. 2015 May;11(3):185-6. doi: 10.1200/JOP.2015.004770.

McVeigh H. Care across the lifespan. In A Textbook of Community Nursing. 2nd Edition. 2017. Routledge. Taylor & Francis group.

Pierce DN. Minority Populations and the Use of Palliative Care. Crit Care Nurs Clin North Am. 2022 Mar;34(1):19-29. doi: 10.1016/j.cnc.2021.11.002.

Sharp L, Rannus K, Olofsson A, Kelly D, Oldenmenger WH; EONS RECaN group. Patient safety culture among European cancer nurses-An exploratory, cross-sectional survey comparing data from Estonia, Germany, Netherlands, and United Kingdom. J Adv Nurs. 2019 Dec;75(12):3535-3543. doi: 10.1111/jan.14177.

Taberna, Moncayo Francisco G, Jané-Salas E, Maite A… Ricard M. The Multidisciplinary Team (MDT) Approach and Quality of Care. Front Oncol 2020 Mar;10. doi:10.3389/fonc.2020.00085

Yates P, Charalambous A, Fennimore L, Nevidjon B, So WKW, Suh EE, Woodford E, Young A. Position Statement on Cancer Nursing's Potential to Reduce the Growing Burden of Cancer across the World. Asia Pac J Oncol Nurs. 2021 Jan 29;8(2):107-109. doi: 10.4103/2347-5625.308313.

Young AM, Charalambous A, Owen RI, Njodzeka B, Oldenmenger WH, Alqudimat MR, So WKW. Essential oncology nursing care along the cancer continuum. Lancet Oncol. 2020 Dec;21(12):e555-e563. doi: 10.1016/S1470-2045(20)30612-4.

Website resources

European Commission, Directorate-General for Education, Youth, Sport and Culture, ECTS users' guide 2015, Publications Office, 2017, https://data.europa.eu/doi/10.2766/87592

Module 1

Cancer Prevention, Screening, Early Detection and Health Promotion in Cancer Care

Suggested ECTS credit points: 6
Contact hours: 60 hours
Study hours with practice: 120 hours (applying in their own practice)

MODULE OVERVIEW

The overall aim of this module is for the learner to develop knowledge and skills regarding cancer epidemiology with a view to enabling him/her to play a central role in the context of cancer prevention, screening and the early detection of cancer.

Cancer is a major cause of morbidity and mortality globally. As people are living longer, cancer incidence and mortality are expected to continue to increase because of the strong relationship between cancer and advancing age. Epidemiology plays a pivotal role in cancer risk reduction and control by describing the distribution of cancer and discovering risk factors for the disease. Estimations suggest that approximately 40% of the cancers in Europe could be prevented if current evidence related to risk and protective factors was translated into effective primary prevention activities (EU Beating Cancer Plan, 2021).

This module introduces the learner to key concepts which have shaped the development of cancer preventive, screening and early detection services at national and international levels. More specifically, it focuses on the epidemiology of cancer with respect to the occurrence, distribution, and determinants of cancer. Cancer prevention strategies, cancer screening and early detection are also addressed.

	LEARNING OUTCOMES At the end of this module, cancer nurses will be able to:	PRACTICE COMPETENCIES At the end of this module, cancer nurses will be able to:	LEARNING CONTENT (in alphabetical order)
1.	Critically analyse the epidemiology of cancer.	Explain the occurrence and distribution of the most common cancers with a focus on Europe and the individual countries across the European continent.	Cancer epidemiology among vulnerable groups. Occurrence of cancer (i.e., incidence, prevalence, survival and mortality rates) and distribution (i.e., age, sex and region) of the most common cancers. National cancer registry data and WHO Global Cancer Country Profiles to describe the occurrence and distribution of cancers in nurses' own country.
2.	Examine the modifiable and non-modifiable aetiological risk factors of cancer.	Undertake a comprehensive history to identify the individual, familial, genetic, sociocultural, economic and environmental factors which may increase the risk for developing cancer. Identify and explain the multifactorial causes of cancer to people affected by the disease.	Most common genetic mutations/syndromes e.g., BRCA 1/2, APC, MLH1, MSH2) in cancer setting. Risk factors for cancer (e.g., lifestyle, socioeconomic, genetic predisposition, family history, environmental influences, work-based risk factors, infectious agents, nutritional factors, hormonal and reproductive factors, age, cultural factors and random errors in DNA copying).

	LEARNING OUTCOMES At the end of this module, cancer nurses will be able to:	PRACTICE COMPETENCIES At the end of this module, cancer nurses will be able to:	LEARNING CONTENT (in alphabetical order)
3.	Critically analyse cancer preventive strategies, screening for cancer (including genetic screening), the importance and appropriate actions for early detection of cancer and appropriate health promotion strategies.	Provide evidence-based verbal and written information regarding lifestyle-related, preventive strategies for cancer, which is appropriate and individualised to people affected by cancer. Provide evidence-based verbal and written information regarding cancer screening programmes to people at risk for cancer.	Barriers to effective information provision (e.g., age, language, cultural, health literacy, impaired hearing/vision). Cancer health promotion strategies. Cancer prevention strategies. Cancer screening programmes. Cancer strategy/policy (at a national and European level). Challenges regarding screening and early detection of cancer among vulnerable subgroups. Evidence-based interventions for genetic testing and cancer screening. Influence of health policy on individuals and their decision-making. Informational support.
4.	Critically evaluate the current cancer screening strategies.	Provide appropriate, individualised and evidence-based verbal and written information support regarding the benefits and risks related to cancer screening.	Benefits versus limitations and harms of screening. Screening programmes and early detection/rapid access clinics.

	LEARNING OUTCOMES At the end of this module, cancer nurses will be able to:	PRACTICE COMPETENCIES At the end of this module, cancer nurses will be able to:	LEARNING CONTENT (in alphabetical order)
5.	Identify the signs and symptoms of the most common cancers and explain the concept of early detection.	Provide evidence-based verbal and written information regarding early signs and symptoms of common cancers and when and who to contact at the onset of symptoms.	Early signs and symptoms of the most common cancers. Implications of delayed diagnosis.
6.	Evaluate the nurse's role with reference to risk reduction and early detection in the context of cancer.	Educate individuals and communities about cancer, the risk of developing cancer and strategies to reduce risk, including the value of engagement in screening programmes for early detection. Encourage individuals and family members to utilise appropriate local, national and/or international cancer organisations for further information	Approaches to increasing public awareness e.g., use of Social Media for digital advocacy Evidence-based interventions focusing on for example: tobacco cessation, dietary modification, bariatric surgery, alcohol reduction, exercise interventions, UV and ionizing radiation protection, vaccination, pollution control, occupational safety. Health belief theories and health behaviour change theories. Health promotion and health education. Psychosocial approaches and support organisations of relevance at the outset of a cancer diagnosis (i.e., during diagnostic and staging process). Social and cultural attitudes to cancer.

REFERENCES AND RESOURCES

Benito L, Binefa G, Lluch T, Vidal C, Milà N, Puig M, Roldán J, Garcia M. Defining the role of the nurse in population-based cancer screening programs. Clin J Oncol Nurs. 2014 Aug;18(4):E77-83. doi: 10.1188/14.CJON.E77-E83.

Canelo-Aybar C, Ferreira DS, Ballesteros M... Alonso-Coello P. Benefits and harms of breast cancer mammography screening for women at average risk of breast cancer: A systematic review for the European Commission Initiative on Breast Cancer. J Med Screen. 2021 Dec;28(4):389-404. doi: 10.1177/0969141321993866.

Fillon M. The social media cancer misinformation conundrum. CA Cancer J Clin. 2022 Jan;72(1):3-4. doi: 10.3322/caac.21710.

Han CJ, Lee YJ, Demiris G. Interventions Using Social Media for Cancer Prevention and Management: A Systematic Review. Cancer Nurs. 2018 Nov/Dec;41(6):E19-E31. doi: 10.1097/NCC.0000000000000534.

Hooper L, Anderson AS, Birch J, Forster AS, Rosenberg G, Bauld L, Vohra J. Public awareness and healthcare professional advice for obesity as a risk factor for cancer in the UK: a cross-sectional survey. J Public Health (Oxf). 2018 Dec 1;40(4):797-805. doi: 10.1093/pubmed/fdx145.

Hugosson J, Roobol MJ, Månsson M… Auvinen A; ERSPC investigators. A 16-yr Follow-up of the European Randomized study of Screening for Prostate Cancer. Eur Urol. 2019 Jul;76(1):43-51. doi: 10.1016/j.eururo.2019.02.009.

Humphrys E, Burt J, Rubin G, Emery JD, Walter FM. The influence of health literacy on the timely diagnosis of symptomatic cancer: A systematic review. Eur J Cancer Care (Engl). 2019 Jan;28(1):e12920. doi: 10.1111/ecc.12920.

James LJ, Wong G, Craig JC… Tong A. Men's perspectives of prostate cancer screening: A systematic review of qualitative studies. PLoS One. 2017 Nov 28;12(11):e0188258. doi: 10.1371/journal.pone.0188258.

Jansen EEL, Zielonke N, Gini A…EU-TOPIA consortium. Effect of organised cervical cancer screening on cervical cancer mortality in Europe: a systematic review. Eur J Cancer. 2020 Mar;127:207-223. doi: 10.1016/j.ejca.2019.12.013.

Lau J, Lim TZ, Jianlin Wong G, Tan KK. The health belief model and colorectal cancer screening in the general population: A systematic review. Prev Med Rep. 2020 Oct 6;20:101223. doi: 10.1016/j.pmedr.2020.101223.

Li C, Liu Y, Xue D, Chan CWH. Effects of nurse-led interventions on early detection of cancer: A systematic review and meta-analysis. Int J Nurs Stud. 2020 Oct;110:103684. doi: 10.1016/j.ijnurstu.2020.103684.

Loud JT, Murphy J. Cancer Screening and Early Detection in the 21st Century. Semin Oncol Nurs. 2017 May;33(2):121-128. doi: 10.1016/j.soncn.2017.02.002.

van Meerbeeck JP, Franck C. Lung cancer screening in Europe: where are we in 2021? Transl Lung Cancer Res. 2021 May;10(5):2407-2417. doi: 10.21037/tlcr-20-890.

Mili N, Paschou SA, Goulis DG, Dimopoulos MA, Lambrinoudaki I, Psaltopoulou T. Obesity, metabolic syndrome, and cancer: pathophysiological and therapeutic associations. Endocrine. 2021 Dec;74(3):478-497. doi: 10.1007/s12020-021-02884-x.

Molina-Montes E, Ubago-Guisado E, Petrova D, Amiano P, Chirlaque MD, Agudo A, Sánchez MJ. The Role of Diet, Alcohol, BMI, and Physical Activity in Cancer Mortality: Summary Findings of the EPIC Study. Nutrients. 2021 Nov 28;13(12):4293. doi: 10.3390/nu13124293.

Morère JF, Eisinger F, Touboul C, Lhomel C, Couraud S, Viguier J. Decline in Cancer Screening in Vulnerable Populations? Results of the EDIFICE Surveys. Curr Oncol Rep. 2018 Mar 5;20(Suppl 1):17. doi: 10.1007/s11912-017-0649-7.

Mosquera I, Mendizabal N, Martín U, Bacigalupe A, Aldasoro E, Portillo I; from the Desberdinak Group. Inequalities in participation in colorectal cancer screening programmes: a systematic review. Eur J Public Health. 2020 Jun 1;30(3):416-425. doi: 10.1093/eurpub/ckz236.

Murfin J, Irvine F, Meechan-Rogers R, Swift A. Education, income and occupation and their influence on the uptake of cervical cancer prevention strategies: A systematic review. J Clin Nurs. 2020 Feb;29(3-4):393-415. doi: 10.1111/jocn.15094.

Ritchie D, Mallafré-Larrosa M, Ferro G, Schüz J, Espina C. Evaluation of the impact of the European Code against Cancer on awareness and attitudes towards cancer prevention at the population and health promoters' levels. Cancer Epidemiol. 2021 Apr;71(Pt A):101898. doi: 10.1016/j.canep.2021.101898.

Watson J. Advocacy and Collaboration: Advancing Cancer Prevention and Screening. Clin J Oncol Nurs. 2020 Oct 1;24(5):39-44. doi: 10.1188/20.CJON.S2.39-44.
Zeng L, Helsingen LM, Kenji Nampo F, Wang Y, Yao L, Siemieniuk RA, Bretthauer M, Guyatt GH. How do cancer screening guidelines trade off benefits versus harms and burdens of screening? A systematic survey. BMJ Open. 2020 Dec 2;10(12):e038322. doi: 10.1136/bmjopen-2020-038322.

Cochrane library systematic reviews (Examples):

Kitson S, Ryan N, MacKintosh ML, Edmondson R, Duffy JM, Crosbie EJ. Interventions for weight reduction in obesity to improve survival in women with endometrial cancer. Cochrane Database Syst Rev. 2018 Feb 1;2(2):CD012513. doi: 10.1002/14651858.CD012513.pub2.

Knips L, Bergenthal N, Streckmann F, Monsef I, Elter T, Skoetz N. Aerobic physical exercise for adult patients with haematological malignancies. Cochrane Database Syst Rev. 2019 Jan 31;1(1):CD009075. doi: 10.1002/14651858.CD009075.pub3.

Koliopoulos G, Nyaga VN, Santesso N…Arbyn M. Cytology versus HPV testing for cervical cancer screening in the general population. Cochrane Database Syst Rev. 2017 Aug 10;8(8):CD008587. doi: 10.1002/14651858.CD008587.pub2

Lindson N, Klemperer E, Hong B, Ordóñez-Mena JM, Aveyard P. Smoking reduction interventions for smoking cessation. Cochrane Database Syst Rev. 2019 Sep 30;9(9):CD013183. doi: 10.1002/14651858.CD013183.pub2.

Nagar H, Wietek N, Goodall RJ, Hughes W, Schmidt-Hansen M, Morrison J. Sentinel node biopsy for diagnosis of lymph node involvement in endometrial cancer. Cochrane Database Syst Rev. 2021 Jun 9;6(6):CD013021. doi: 10.1002/14651858.CD013021.pub2.

Rueda JR, Solà I, Pascual A, Subirana Casacuberta M. Non-invasive interventions for improving well-being and quality of life in patients with lung cancer. Cochrane Database Syst Rev. 2011 Sep 7;2011(9):CD004282. doi: 10.1002/14651858.CD004282.pub3.

Staley H, Shiraz A, Shreeve N, Bryant A, Martin-Hirsch PP, Gajjar K. Interventions targeted at women to encourage the uptake of cervical screening. Cochrane Database Syst Rev. 2021 Sep 6;9(9):CD002834. doi: 10.1002/14651858.CD002834.pub3.

Joanna Briggs Institute Evidence summaries (Examples):

SKIN CANCER PREVENTION: EDUCATION AND INFORMATION (2021); BREAST CANCER: MAMMOGRAPHY SCREENING (2021); LUNG CANCER: DIAGNOSIS (2021)

Website resources

ECIS European Cancer Information System https://ecis.jrc.ec.europa.eu/

European Cancer Organisation (ECO) https://www.europeancancer.org/resources: Primary Prevention: United for Action 2021; Earlier is Better: Advancing Cancer Screening and Early Detection (2021); Action Across Tumour Types and Challenges (2021); Self-sampling and HPV screening in Europe: Position paper (2021)

European Code against Cancer https://cancer-code-europe.iarc.fr/index.php/en/

European Commission https://ec.europa.eu/health/non-communicable-diseases/cancer: Scoping Paper: Cancer Screening (2021); Europe's Beating Cancer Plan (2021); Europe's Beating Cancer Plan, Fact Sheet (2021)

International Agency for Research on Cancer IARC https://www.iarc.who.int/

National Institute of Health and Care Excellence NICE: Suspected cancer: recognition and referral, NICE guideline (2021) https://www.nice.org.uk/guidance/ng12

OECD Organisation for Economic Cooperation and development: Cancer incidence and mortality (2020) https://www.oecd-ilibrary.org/sites/b80245bd-en/index.html?itemId=/content/component/b80245bd-en

UICC Union for International Cancer Control https://www.uicc.org/news/globocan-2020-new-global-cancer-data

World Cancer Research Fund. Preventing Cancer website https://www.wcrf-uk.org/preventing-cancer/

World Cancer Research Fund/American Institute for Cancer Research. Diet, Nutrition, Physical Activity and Cancer: a Global Perspective. Continuous Update Project Expert Report (2018). https://www.wcrf.org/wp-content/uploads/2021/02/Summary-of-Third-Expert-Report-2018.pdf

World Health Organisation WHO. Global cancer country profiles. https://www.iccp-portal.org/news/who-cancer-country-profiles-2020

Guide to Cancer Early Diagnosis (2017). https://apps.who.int/iris/handle/10665/254500

Module 2

Cancer Pathophysiology and the Principles of Treatment Decision-Making

Suggested ECTS credit points: 6
Contact hours: 60 hours
Study hours with practice: 120 hours (applying in their own practice)

MODULE OVERVIEW

The overall aim of this module is for the learner to develop knowledge and skills regarding cancer biology and the diagnosis and staging of cancer with a view to enabling them to support and facilitate the decision-making of people affected by cancer in the context of localised, locally advanced or metastatic disease.

This module focuses on the biological processes that contribute to the development of cancer. It also addresses the diagnostic and staging process and the principles of cancer treatment decision-making. The pathophysiology of cancer is important not only for understanding the process of cancer development but also to enhance knowledge of the rationale for the treatments. The role of the nurse within the multidisciplinary team regarding supporting people affected by cancer throughout the process is especially important here.

	LEARNING OUTCOMES At the end of this module, cancer nurses will be able to:	PRACTICE COMPETENCIES At the end of this module, cancer nurses will be able to:	LEARNING CONTENT (in alphabetical order)
1.	Critically analyse the biological processes which lead to the development of cancer.	Provide people affected by cancer with evidence- based verbal and written information about the development and properties of cancer with a view to addressing their informational and supportive care needs.	Biology of cancer including the hallmarks of cancer.
2.	Critically analyse the range of diagnostic and staging approaches used to establish a cancer diagnosis, the extent of the disease and prognosis.	Support people affected by cancer through the diagnosis and staging process. Undertake initial and ongoing comprehensive assessments (using validated tools where appropriate) to identify the informational, physical, emotional, and social needs (where relevant) of people affected by cancer during the diagnostic and staging process.	Comprehensive nursing assessment. Diagnostic tests and investigations (tumour, node, metastasis (TNM)/equivalent appropriate staging), grading, biomarkers.
3.	Critically analyse the nursing role in supporting people affected by cancer during the diagnostic and staging process for cancer (particularly in the context of their age-appropriate informational, physical, emotional and social care needs, where relevant).		Evidence-based nursing interventions focusing on the provision of support to people affected by cancer during the diagnostic and staging process for cancer. Nursing-sensitive outcomes in the diagnostic/staging process of cancer.
4.	Discuss the physical, psychological, social, ethical and cancer-specific issues which need to be considered in order to support and facilitate person-centered decision-making in the context of localised, locally advanced or metastatic disease.	Undertake a comprehensive history to identify factors in addition to the cancer stage and grade which are important for optimal outcomes related to treatment decision making (e.g., performance status, comorbidities, medications, psychological and social factors, patient's care and treatment preferences). Provide a supportive environment where people with cancer are encouraged to share their concerns and beliefs and to express their preferences regarding the decisions made about their treatment. Encourage people affected by cancer to utilise appropriate local, national and/or international cancer organisations for further information, psychosocial, spiritual and/or financial support.	Clinical practice guidelines (CPGs) /evidence-based resources (EBRs) from the main international medical cancer organisations. Decision aids related to cancer treatment. Goals of treatment: e.g., cure, control or palliation. Multidisciplinary team shared decision-making.

REFERENCES AND RESOURCES

Ashelford S, Raynsford J and Taylor V. Pathophysiology and Pharmacology in Nursing Chapter 5 Cancer. 2019, 114-146.

Brierley, J. D., Gospodarowicz, M. K. and Wittekind, C. (Eds) The TNM Classification of Malignant Tumours. 2016 8th edition, The Union for International Cancer Control (UICC) https://www.uicc.org/resources/tnm/publications-resources

Chen Y, Lin F, Wang B, Tang YL, Li J, Xiong L. The Development and Validation of the Psychological Needs of Cancer Patients Scale. Front Psychol. 2021 Jun 3;12:658989. doi: 10.3389/fpsyg.2021.658989

Foulkes M, Lavender V, Kumaralingam N, Campbell K.(eds) Fundamentals of cancer care. 2021. UKONS. EBN health, Oxford.

Hanahan D, Weinberg RA. The hallmarks of cancer. Cell.2000. 100;57–70. doi:10.1016/S0092-8674(00)81683-9

Hanahan D, Weinberg RA. Hallmarks of cancer: the next generation. Cell. 2011. 4;144(5):646-74. doi:10.1016/j.cell.2011.02.013

Hanahan, D. Hallmarks of Cancer: New Dimensions Cancer Discov 2022 12 (1): 31–46. doi:10.1158/2159-8290.CD-21-1059.

Mansour P. Tumour pathology: Classification, Grading and Staging in Wyatt, D. and Hulbert-Williams, N. (eds) Cancer and Cancer Care. 2015. Sage publications Ltd, London.

Peart A, Lewis V, Brown T, Russell G. Patient navigators facilitating access to primary care: a scoping review. BMJ Open. 2018 Mar 17;8(3):e019252. doi: 10.1136/bmjopen-2017-019252

Reyna VF, Nelson WL, Han PK, Pignone MP. Decision making and cancer. Am Psychol. 2015 Feb-Mar;70(2):105-18. doi: 10.1037/a0036834.

Schouten B, Avau B, Bekkering GTE, Vankrunkelsven P, Mebis J, Hellings J, Van Hecke A. Systematic screening and assessment of psychosocial well-being and care needs of people with cancer. Cochrane Database Syst Rev. 2019 Mar 26;3(3):CD012387. doi: 10.1002/14651858.CD012387.pub2

Snowden A, Young J, Savinc J. Meeting psychosocial needs to improve health: a prospective cohort study. BMC Cancer. 2020 Jun 5;20(1):528. doi: 10.1186/s12885-020-07022-w

Tadman, M., Roberts, D. and Foulkes, M. (2019) (Sections 2 to 4, The Cancer Problem), Oxford Handbook of Cancer Nursing (2nd edition) Oxford University Press, Oxford

Wyatt, D. and Bates, V. (2015) The Biology of Cancer in Wyatt, D. and Hulbert-Williams, N. (eds) Cancer and Cancer Care, Sage publications Ltd, London

Website resources

American Joint Commission on Cancer. Cancer Staging https://www.cancer.org/treatment/understanding-your-diagnosis/staging.html

American Society of Clinical Oncology (ASCO). Molecular testing and biomarkers https://www.asco.org/practice-patients/guidelines/molecular-testing-and-biomarkers

Cancer Research UK (2022) Comprehensive tools for health care professionals https://www.cancerresearchuk.org/health-professional

European Society for Medical Oncology (ESMO). Clinical practice guidelines for information on the current management of various cancers, including screening, diagnosis and staging and management of local/regional and metastatic disease. http://www.esmo.org/Guidelines

European Society for Radiotherapy & Oncology (ESTRO) https://www.estro.org/

European Society for Surgical Oncology (ESSO). Guidelines. http://www.essoweb.org/guidelines/

Macmillan Cancer Support Holistic Needs Assessment https://www.macmillan.org.uk/healthcare-professionals/innovation-in-cancer-care/holistic-needs-assessment

National Comprehensive Cancer Network (NCCN), 2022. NCCN Guidelines for treatment by cancer site. https://www.nccn.org/guidelines/category_1

Module 3

Cancer Treatment, Patient and Occupational Safety

Suggested ECTS credit points: 9
Contact hours: 90 hours
Study hours with practice: 180 hours (applying in their own practice)

MODULE OVERVIEW

The overall aim of this module is for the learner to develop knowledge and skills to safely deliver cancer therapies used to treat cancer and manage the impact of the treatments on people with cancer.

Cancer nurses play a pivotal role within the multidisciplinary team on the safe delivery and management of therapies used to treat cancer. An important aspect of the nursing role in this context is to appropriately assess and manage treatment-related adverse effects and toxicities. Cancer nurses must also provide relevant and timely information to ensure that people with cancer can engage in clinical decision-making about their treatment, care and management to enable informed consent, and to understand their treatment and its potential side effects in order to increase self-management. Cancer nurses, therefore, require knowledge about the principles, mechanisms and impact of cancer treatments. Within this module the core skills underpinning the provision of safe practice within cancer healthcare settings will also be addressed.

	LEARNING OUTCOMES At the end of this module, cancer nurses will be able to:	PRACTICE COMPETENCIES At the end of this module, cancer nurses will be able to:	LEARNING CONTENT (in alphabetical order)
1.	Critically analyse the principles of local and systemic cancer treatments and demonstrate understanding of the different treatment modalities.	Provide evidence-based and credible information in a range of formats and explain to person with cancer, at an appropriate level and pace, the range of cancer treatments available to facilitate their involvement in decision-making about their treatment, care and management. Provide a supportive environment in which people affected by cancer are encouraged to ask questions and share their concerns and beliefs about their disease and treatment. Apply information on precision medicine in oncology to clinical nursing practice and patient education.	Cellular therapy. Chemotherapy. Clinical trials. Combination treatment modalities. Cytotoxic drugs. Hematopoietic stem cell transplantation. Hormone therapies. Immunotherapies. Integrative oncology. Multi-modal treatment Novel therapies such as CAR T cell therapies. Tumour vaccines. Precision health and medicine. Radiotherapy. Surgery.
2.	Identify the acute, chronic and late toxicities of cancer treatments. Identify the evidence to reduce the risk of and/or manage these effects.	Educate people with cancer and their significant others to monitor for and report signs of acute, chronic and late toxicities of cancer treatments. Use evidence-based interventions to assess, prevent and manage treatment toxicities. Know when to refer to and involve other healthcare providers.	Assessment tools for toxicities. Current evidence and local/national/international policies/guidelines for the management of acute, chronic and late toxicities side effects of cancer treatments.

	LEARNING OUTCOMES At the end of this module, cancer nurses will be able to:	PRACTICE COMPETENCIES At the end of this module, cancer nurses will be able to:	LEARNING CONTENT (in alphabetical order)
3.	Critically evaluate and demonstrate how cancer treatments are delivered safely and effectively. Critically analyse the requirements of occupational safety in the cancer care setting and the safe handling and administration of hazardous drugs (HDs).	Be involved in the delivery of treatment within their scope of practice and requirements of the healthcare setting. Provide continuity and help coordinate care during treatment and document this. Recognise the hazards associated with cancer treatments and take preventative actions to minimise these and comply with local and national safety regulations, legislation and guidelines. Provide information and support and act as a role model for colleagues to ensure safe practice in the treatment settings.	Chemotherapy spillage. Drug-herb interactions. European and national policies on patient and occupational safety and culture. Extravasation. Personal protective equipment (PPE). Radiation safety. Resources for safe delivery of cancer treatments. Routes of administration. Safe handling, storage, administration and disposal of hazardous cancer drugs. Safe handling of oral chemotherapeutic agents. Safety at home. Surgical safety. Telephone triage and supportive care resources. Treatment pathways.
4	Evaluate the range of support needed and available to people with cancer throughout their treatment	Provide education to people with cancer on their treatment and advice on self-management. Educate people with cancer regarding practical skills required for effective treatment and self-management interventions where relevant.	Adherence to cancer treatment. Self-management strategies.

	LEARNING OUTCOMES At the end of this module, cancer nurses will be able to:	PRACTICE COMPETENCIES At the end of this module, cancer nurses will be able to:	LEARNING CONTENT (in alphabetical order)
5.	Explain treatment-related emergencies and the signs/symptoms experienced by people with cancer.	Use evidence-based interventions to assess, prevent and assist in the management of emergencies caused by cancer therapies. Know when to refer to and involve other healthcare providers.	Acute cerebral oedema. Acute reactions to radiation (., skin and mucosal reactions, pneumonitis). Anaphylaxis. Anemia. Cardiac tamponade. Hemorrhagic cystitis. Hypercalcemia. Hypersensitivity reactions. Metastatic Spinal Cord Compression Neutropenic sepsis and septic shock. Pathological fractures. Peripheral neuropathy. Post-surgery complications. Reactions to chemotherapy, radiotherapy, targeted therapies and immunotherapy. Superior vena cava syndrome. Thrombocytopenia. Tumour lysis syndrome. Uncontrolled side effects e.g., nausea and vomiting, diarrhea, mucositis.

REFERENCES AND RESOURCES

Abshire D, Lang MK. The Evolution of Radiation Therapy in Treating Cancer. Semin Oncol Nurs. 2018 May;34(2):151-157. doi: 10.1016/j.soncn.2018.03.006..

Bayer V. An Overview of Monoclonal Antibodies. Semin Oncol Nurs. 2019 Oct;35(5):150927. doi: 10.1016/j.soncn.2019.08.006.

Barton-Burke M, Ciccolini K, Mekas M, Burke S. Dermatologic Reactions to Targeted Therapy: A Focus on Epidermal Growth Factor Receptor Inhibitors and Nursing Care. Nurs Clin North Am. 2017 Mar;52(1):83-113. doi: 10.1016/j.cnur.2016.11.005.

Bayat Mokhtari R, Homayouni TS, Baluch N, Morgatskaya E, Kumar S, Das B, Yeger H. Combination therapy in combating cancer. Oncotarget. 2017 Jun 6;8(23):38022-38043. doi: 0.18632/oncotarget.16723.

Bernabeu-Martínez MA, Ramos Merino M, Santos Gago JM, Álvarez Sabucedo LM, Wanden-Berghe C, Sanz-Valero J. Guidelines for safe handling of hazardous drugs: A systematic review. PLoS One. 2018;13(5):e0197172. doi:10.1371/journal.pone.0197172.

Blidner AG, Choi J, Cooksley T…Anderson R. Cancer immunotherapy-related adverse events: causes and challenges. Support Care Cancer. 2020 Dec;28(12):6111-6117. doi: 10.1007/s00520-020-05705-5.

Bombard Y, Baker GR, Orlando E, Fancott C, Bhatia P, Casalino S, Onate K, Denis JL, Pomey MP. Engaging patients to improve quality of care: a systematic review. Implement Sci. 2018 Jul 26;13(1):98. doi: 10.1186/s13012-018-0784-z.

Car, L. T., Papachristou, N., Urch, C…Vincent, C. Prioritizing medication safety in care of people with cancer: clinicians' views on main problems and solutions. J Glob Health. 2017 Jun;7(1):011001. doi: 10.7189/jogh.07.011001.

Chan A, Cameron MC, Garden B…Lacouture ME. A systematic review of patient-reported outcome instruments of dermatologic adverse events associated with targeted cancer therapies. Support Care Cancer. 2015 Aug;23(8):2231-44. doi: 10.1007/s00520-014-2564-x.

Costa A, McGraw C. xploring perceptions and experiences of oral chemotherapy in people with cancer. Cancer Nursing Practice. 2018 Jun. doi: 10.7748/cnp.2018.e1464.

Coyne E, Northfield S, Ash K, Brown-West L. Current evidence of education and safety requirements for the nursing administration of chemotherapy: An integrative review. Eur J Oncol Nurs. 2019 Aug;41:24-32. doi: 10.1016/j.ejon.2019.05.001.

Davies M, Duffield EA. Safety of checkpoint inhibitors for cancer treatment: strategies for patient monitoring and management of immune-mediated adverse events. Immunotargets Ther. 2017 Aug 24;6:51-71. doi: 10.2147/ITT.S141577. PMID: 28894725; PMCID: PMC5584920.

Dickens E, Ahmed S. Principles of cancer treatment by chemotherapy. Surgery. 2018 36(3):134-138. doi: 10.1016/j.mpsur.2017.12.002.

Ding J, Farah MH, Nayfeh T…Murad MH. Targeted Therapy- and Chemotherapy-Associated Skin Toxicities: Systematic Review and Meta-Analysis. Oncol Nurs Forum. 2020 Sep 1;47(5):E149-E160. doi: 10.1188/20.ONF.E149-E160.

Farge D, Frere C, Connors JM…International Initiative on Thrombosis and Cancer (ITAC) advisory panel. 2019 international clinical practice guidelines for the treatment and prophylaxis of venous thromboembolism in patients with cancer. Lancet Oncol. 2019 Oct;20(10):e566-e581. doi: 10.1016/S1470-2045(19)30336-5.

Friese CR, Wong M, Fauer A, Mendelsohn-Victor K, Polovich M, McCullagh MC. Hazardous Drug Exposure: Case Report Analysis From a Prospective, Multisite Study of Oncology Nurses' Exposure in Ambulatory Settings. Clin J Oncol Nurs. 2020 Jun 1;24(3):249-255. doi: 10.1188/20.CJON.249-255.

Ginex PK, Backler C, Croson E…Morgan RL. Radiodermatitis in Patients With Cancer: Systematic Review and Meta-Analysis. Oncol Nurs Forum. 2020 Nov 1;47(6):E225-E236. doi: 10.1188/20.ONF.E225-E236.

Graeve CU, McGovern PM, Alexander B, Church T, Ryan A, Polovich M. Occupational Exposure to Antineoplastic Agents. Workplace Health Saf. 2017 Jan;65(1):9-20. doi: 10.1177/2165079916662660.

Grilo AM, Santos B, Baptista I, Monsanto F. Exploring the cancer patients' experiences during external radiotherapy: A systematic review and thematic synthesis of qualitative and quantitative evidence. Eur J Oncol Nurs. 2021 Jun;52:101965. doi: 10.1016/j.ejon.2021.101965.

Guerra-Martín MD, Tejedor-Bueno MS, Correa-Casado M. 2021 Effectiveness of Complementary Therapies in Cancer Patients: A Systematic Review. Int J Environ Res Public Health. 2021 Jan 24;18(3):1017. doi: 10.3390/ijerph18031017.

Hanna TP, King WD, Thibodeau S…Aggarwal A. Mortality due to cancer treatment delay: systematic review and meta-analysis. BMJ. 2020 Nov 4;371:m4087. doi: 10.1136/bmj.m4087.

Johnson SB, Park HS, Gross CP, Yu JB. Use of Alternative Medicine for Cancer and Its Impact on Survival. J Natl Cancer Inst. 2018 Jan 1;110(1). doi: 10.1093/jnci/djx145.

Klastersky J, de Naurois J, Rolston K, Rapoport B, Maschmeyer G, Aapro M, Herrstedt J; ESMO Guidelines Committee. Management of febrile neutropaenia: ESMO Clinical Practice Guidelines. Ann Oncol. 2016 Sep;27(suppl 5):v111-v118. doi: 10.1093/annonc/mdw325.

Klemencic S, Perkins J. Diagnosis and Management of Oncologic Emergencies. West J Emerg Med. 2019 Mar;20(2):316-322. doi: 10.5811/westjem.2018.12.37335.

Lee SM, Choi HC, Hyun MK. An Overview of Systematic Reviews: Complementary Therapies for Cancer Patients. Integr Cancer Ther. 2019 Jan-Dec;18:1534735419890029. doi: 10.1177/1534735419890029.

Lin Y, Chang Y, Lin YC, Lou MF. Factors Influencing Nurses' Use of Hazardous Drug Safe Handling Precautions. Oncol Nurs Forum. 2019 May 1;46(3):E86-E97. doi: 10.1188/19.ONF.E86-E97.

Lukez A, Baima J. The Role and Scope of Prehabilitation in Cancer Care. Semin Oncol Nurs. 2020 Feb;36(1):150976. doi: 10.1016/j.soncn.2019.150976.

Magalhães B, Fernandes C, Lima L, Martinez-Galiano JM, Santos C. Cancer patients' experiences on self-management of chemotherapy treatment-related symptoms: A systematic review and thematic synthesis. Eur J Oncol Nurs. 2020 Dec;49:101837. doi: 10.1016/j.ejon.2020.101837.

Oncology Nursing Society (ONS) & Brant JM. Core Curriculum for Oncology Nursing, 6th Edition 2019. Saunders, USA.

Pereira Lermontov S, Carreiro Brasil S, Rezende de Carvalho M. Medication Errors in the Context of Hematopoietic Stem Cell Transplantation: A Systematic Review. Cancer Nurs. 2019 Sep/Oct;42(5):365-372. doi: 10.1097/NCC.0000000000000613.

Sansevere ME, White JD. Quality Assessment of Online Complementary and Alternative Medicine Information Resources Relevant to Cancer. Integr Cancer Ther. 2021 Jan-Dec;20:15347354211066081. doi: 10.1177/15347354211066081.

Schwappach DL, Gehring K. Frequency of and predictors for withholding patient safety concerns among oncology staff: a survey study. Eur J Cancer Care (Engl). 2015 May;24(3):395-403. doi: 10.1111/ecc.12255.

Segal EM, Flood MR, Mancini RS, Whiteman RT, Friedt GA, Kramer AR, Hofstetter MA. Oral chemotherapy food and drug interactions: a comprehensive review of the literature. J Oncol Pract. 2014 Jul;10(4):e255-68. doi: 10.1200/JOP.2013.001183.

Sharp L, Rannus K, Olofsson A, Kelly D, Oldenmenger WH; EONS RECaN group. Patient safety culture among European cancer nurses-An exploratory, cross-sectional survey comparing data from Estonia, Germany, Netherlands, and United Kingdom. J Adv Nurs. 2019 Dec;75(12):3535-3543. doi: 10.1111/jan.14177.

So WKW, Law BMH, Chan DNS, Xing W, Chan CWH, McCarthy AL. The Effect of Nonpharmacological Interventions on Managing Symptom Clusters Among Cancer Patients: A Systematic Review. Cancer Nurs. 2020 Nov/Dec;43(6):E304-E327. doi: 10.1097/NCC.0000000000000730.

Soheili M, Jokar F, Eghbali-Babadi M, Sharifi M, Taleghani F. Exploring the occupational health needs of oncology nurses: A qualitative study. J Educ Health Promot. 2021 Jun 30;10:224. doi: 10.4103/jehp.jehp_1151_20.

Sun V, Fong Y. Minimally Invasive Cancer Surgery: Indications and Outcomes. Semin Oncol Nurs. 2017 Feb;33(1):23-36. doi: 10.1016/j.soncn.2016.11.003.

Tariman JD. Changes in Cancer Treatment: Mabs, Mibs, Mids, Nabs, and Nibs. Nurs Clin North Am. 2017 Mar;52(1):65-81. doi: 10.1016/j.cnur.2016.10.004.

Tavakoli A, Carannante A. Nursing Care of Oncology Patients with Sepsis. Semin Oncol Nurs. 2021 Apr;37(2):151130. doi: 10.1016/j.soncn.2021.151130.

Weingart SN, Zhang L, Sweeney M, Hassett M. Chemotherapy medication errors. Lancet Oncol. 2018 Apr;19(4):e191-e199. doi: 10.1016/S1470-2045(18)30094-9.

Cochrane library systematic reviews (Examples):

Arthurs G, Simpson J, Brown A…Concert CM. The effectiveness of therapeutic patient education on adherence to oral anti-cancer medicines in adult cancer patients in ambulatory care settings: a systematic review. JBI Database System Rev Implement Rep. 2015 Jun 12;13(5):244-92. doi: 10.11124/jbisrir-2015-2057.

Piechotta V, Adams A, Haque M, Scheckel B, Kreuzberger N, Monsef I, Jordan K, Kuhr K, Skoetz N. Antiemetics for adults for prevention of nausea and vomiting caused by moderately or highly emetogenic chemotherapy: a network meta-analysis. Cochrane Database Syst Rev. 2021 Nov 16;11(11):CD012775. doi: 10.1002/14651858.CD012775.pub2.

Ream E, Hughes AE, Cox A, Skarparis K, Richardson A, Pedersen VH, Wiseman T, Forbes A, Bryant A. Telephone interventions for symptom management in adults with cancer. Cochrane Database Syst Rev. 2020 Jun 2;6(6):CD007568. doi: 10.1002/14651858.CD007568.pub2.

Joanna Briggs Evidence summaries (Examples):

CHEMOTHERAPY: HOME ADMINISTRATION (2021); MEDICATION SAFETY: SMART INFUSION PUMPS (2021); CHEMOTHERAPY: PULMONARY TOXICITY (2022)

Website resources

ASCO guidelines https://www.asco.org/practice-patients/guidelines

Updated American Society of Clinical Oncology/Oncology Nursing Society 2016. Chemotherapy Administration Safety Standards, Including Standards for Pediatric Oncology https://onf.ons.org/onf/44/1/2016-updated-american-society-clinical-oncologyoncology-nursing-society-chemotherapy

ESMO clinical guidelines https://www.esmo.org/guidelines

European Oncology Nursing Society 2019. EONS Safety Manifesto https://secureservercdn.net/160.153.137.163/z2y.621.myftpupload.com/wp-content/uploads/2020/06/EONSSafetyManifesto.pdf

EONS Safety Webinars (available in EONS YouTube channel)

European Oncology Nursing Society 2020. Nutrition in People with Cancer. Clinical practice Guidance for Cancer Nurses. https://cancernurse.eu/wp-content/uploads/2021/07/NutriCaNurse-booklet_final.pdf

MASCC clinical guidelines https://www.mascc.org/mascc-guidelines

MASCC Oral Agent Teaching Tool (MOATT) https://www.mascc.org/MOATT

UK Oncology Nursing Society (UKONS), 2020. Acute oncology initial management guidelines.

https://www.ukons.org/site/assets/files/1134/acute_oncology_initial_management_guidelines.pdf

Module 4

Supporting People Living With, Through and Beyond Cancer

Suggested ECTS credit points: 9
Contact hours: 90 hours
Study hours with practice: 180 hours (applying in their own practice)

MODULE OVERVIEW

The overall aim of this module is for the learner to develop the knowledge and skills to provide care and support to people affected by cancer throughout their care continuum. Advances in cancer screening programmes and treatment modalities result in an increase in long-term survivorship. However, this means that cancer survivors are more likely to experience longer-term physical and psychosocial effects which may persist for years beyond diagnosis. Cancer nurses have a pivotal role in the provision of excellent supportive care to people affected by cancer covering all phases of disease. While in this module it is acknowledged that palliative care should be introduced early in the disease trajectory and be delivered alongside potentially curative treatments, issues related to advanced disease and end of life will be addressed in the next module (Module 5)

	LEARNING OUTCOMES At the end of this module, cancer nurses will be able to:	PRACTICE COMPETENCIES At the end of this module, cancer nurses will be able to:	LEARNING CONTENT (in alphabetical order)
1.	Show understanding of the impact of cancer on the physical, functional, psychological, emotional, sexual, social, and spiritual wellbeing of people affected by cancer. Show understanding of the impact of cancer for different age groups.	Classifies potential physical, functional, psychological, emotional, social, and spiritual effects of cancer and its treatment. Recognises risk factors for acute, long-term and late effects of cancer and its treatment, including risk of secondary cancer. Demonstrates systematic approaches to assessment of cancer-related and treatment-related effects.	Acute and late/long-term physical effects of cancer and its treatment. Acute and late/long-term functional effects of cancer and its treatment. Acute and late/long-term psychological effects of cancer and its treatment. Acute and late/long-term social effects of cancer and its treatment. Acute and late/long-term spiritual effects of cancer and its treatment. Quality of life, and classification of the effects of cancer and cancer treatment. The impact of cancer across the life span: from infancy to older age. Systematic approaches to symptom assessment of people affected by cancer.

	LEARNING OUTCOMES At the end of this module, cancer nurses will be able to:	PRACTICE COMPETENCIES At the end of this module, cancer nurses will be able to:	LEARNING CONTENT (in alphabetical order)
2.	Critically evaluate the complex and evolving information and educational needs of people affected by cancer.	Recognises common unmet information and educational needs of people affected by cancer. Provides appropriate and credible information and education in anticipation of the potential needs of people affected by cancer tailored to the phase of the cancer care continuum.	Factors influencing the education of people affected by cancer. Resources and strategies to support education of people affected by cancer and their significant others. The role of information in decision-making and functional consent. Unmet information and educational needs of people affected by cancer.
		Utilises interventions to ensure optimal communication of information, recognising potential barriers to education, including intellectual/learning disabilities and/or sensory impairments and language barriers. Demonstrate understanding of strategies to promote the autonomy of vulnerable people in decisions about care.	

	LEARNING OUTCOMES At the end of this module, cancer nurses will be able to:	PRACTICE COMPETENCIES At the end of this module, cancer nurses will be able to:	LEARNING CONTENT (in alphabetical order)
3.	Appraise the complex supportive care needs of people affected by cancer and their significant others, and the role of cancer nurses and the MDT in the provision of supportive care. supportive care needs of people affected by cancer, and the role of cancer nurses and the multidisciplinary team in the provision of supportive care.	Apply the principles of symptom management throughout the care continuum to address acute and late/long-term effects of cancer and cancer treatments. Develop an individualised care plan in collaboration with the person affected by cancer, tailored to the phase of disease and effects of cancer. Uses evidence-based supportive care interventions to address acute and late/long-term effects of cancer treatment, which are consistent with the needs, preferences and life stage of the person affected by cancer. Perceives the roles of multidisciplinary team members and coordinates integration of care to enable holistic, person-centered care.	Cancer nurses' role in clinical decision-making. Complex symptom management, symptom clusters and symptom burden. Decision-making in the multidisciplinary team. Evidence-based pharmacological and non-pharmacological symptom management. Poly-pharmacy and adherence in long-term cancer management. Rehabilitation. Specialist and multidisciplinary support for symptom management. Supportive care services and models of care. Supportive care interventions to manage acute and late/long-term physical effects of cancer and its treatment. Supportive care interventions to manage acute and late/long-term functional effects of cancer and its treatment. Supportive care interventions to manage acute and late/long-term psychological effects of cancer and its treatment. Supportive care interventions to manage acute and late/long-term social effects of cancer and its treatment. Supportive care interventions to manage acute and late/long-term spiritual effects of cancer and its treatment. Supporting people affected by cancer.

	LEARNING OUTCOMES At the end of this module, cancer nurses will be able to:	PRACTICE COMPETENCIES At the end of this module, cancer nurses will be able to:	LEARNING CONTENT (in alphabetical order)
4.	Demonstrate understanding of self-management support strategies and interventions to optimise quality of life people affected by cancer.	Distinguishes between symptoms that can be managed with simple measures and those that require urgent and/or specialist intervention Provide evidence-based and credible information to people affected by cancer to promote and support self-management and enable independence. Signpost people affected by cancer to other sources of support.	Health promotion and lifestyle behaviours: exercise, smoking cessation and diet. Motivational interviewing. Theories of self-management and self-care. Theories of coping, empowerment and resilience.
5.	Discuss the potential impact of co-morbidities and polypharmacy and the consequences of long-term and late effects of cancer treatment.	Appropriately consider comorbidity, the impact of long-term illness and survivorship on the health status and well-being of people affected by cancer. Deliver supportive care to manage cancer co-morbidities and other diseases. Implement appropriate referrals to other professionals and agencies in respect of these.	Co-morbidity and other disease states in cancer care. Frailty in older adulthood.
6.	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.	Act to support effective continuity of care and seamless transitions between different healthcare services, from active treatment through to survivorship (long-term follow-up) and/or palliative and end of life care.	Discharge planning. The transition from paediatric and/or young adult services to adult services for teenagers and young adults.

REFERENCES AND RESOURCES

Alexander G, Lockwood S. Effect of yoga on sleep quality among adult cancer patients: a systematic review. JBI Database System Rev Implement Rep. 2014 Jun; 12(6): 382 – 419. doi: 10.11124/jbisrir-2014-1654.

Arthurs G, Simpson J, Brown A, Kyaw O, Shyrier S, Concert CM. The effectiveness of therapeutic patient education on adherence to oral anti-cancer medicines in adult cancer patients in ambulatory care settings: a systematic review. JBI Database System Rev Implement Rep. 2015 Jun 12;13(5):244-92. doi: 10.11124/jbisrir-2015-2057.

Booker R, Bays S, Burnett L, Torchetti T. Supporting People and Their Caregivers Living with Advanced Cancer: From Individual Experience to a National Interdisciplinary Program. Semin Oncol Nurs. 2021 Aug;37(4):151169. doi: 10.1016/j.soncn.2021.151169.

Cabilan CJ, Hines S. The short-term impact of colorectal cancer treatment on physical activity, functional status and quality of life: a systematic review. JBI Database System Rev Implement Rep. 2017 Feb;15(2):517-566. doi: 10.11124/JBISRIR-2016003282.

Duijts SF, van Egmond MP, Spelten E, van Muijen P, Anema JR, van der Beek AJ. Physical and psychosocial problems in cancer survivors beyond return to work: a systematic review. Psychooncology. 2014 May;23(5):481-92. doi: 10.1002/pon.3467

Edney LC, Roseleur J, Gray J, Koczwara B, Karnon J. Mapping a decade of interventions to address the supportive care needs of individuals living with or beyond cancer: a scoping review of reviews. Support Care Cancer. 2022 May;30(5):3793-3804. doi: 10.1007/s00520-021-06713-9.

Ellington L, Billitteri J, Reblin M, Clayton MF. Spiritual Care Communication in Cancer Patients. Semin Oncol Nurs. 2017 Dec;33(5):517-525. doi: 10.1016/j.soncn.2017.09.002.

Greenlee H, DuPont-Reyes MJ, Balneaves LG, Carlson LE, Cohen MR, Deng G, Johnson JA, Mumber M, Seely D, Zick SM, Boyce LM, Tripathy D. Clinical practice guidelines on the evidence-based use of integrative therapies during and after breast cancer treatment. CA Cancer J Clin. 2017 May 6;67(3):194-232. doi: 10.3322/caac.21397.

Ishino, M. *et al.* (2022) 'Family involvement in advance care planning for people living with advanced cancer: A systematic mixed-methods review', *Palliative Medicine*, 36(3), pp. 462–477. doi:10.1177/02692163211068282.

Kaiser EG, Prochaska JJ, Kendra MS. Tobacco Cessation in Oncology Care. Oncology. 2018;95(3):129-137. doi: 10.1159/000489266.

Lang D, Lim LC. Effects of art therapy for family caregivers of cancer patients: a systematic review. JBI Database System Rev Implement Rep. 2014 May;12(4): 374-394. doi:10.11124/jbisrir-2014-1096.

Lambert SD, Harrison JD, Smith E, Bonevski B, Carey M, Lawsin C, Paul C, Girgis A. The unmet needs of partners and caregivers of adults diagnosed with cancer: a systematic review. BMJ Support Palliat Care. 2012 Sep;2(3):224-30. doi: 10.1136/bmjspcare-2012-000226.

McCarthy B. Family members of patients with cancer: what they know, how they know and what they want to know. Eur J Oncol Nurs. 2011 Dec;15(5):428-41. doi: 10.1016/j.ejon.2010.10.009.

Mehnert A, Koranyi S, Philipp R, Scheffold K, Kriston L, Lehmann-Laue A, Engelmann D, Vehling S, Eisenecker C, Oechsle K, Schulz-Kindermann F, Rodin G, Härter M. Efficacy of the Managing Cancer and Living Meaningfully (CALM) individual psychotherapy for patients with advanced cancer: A single-blind randomized controlled trial. Psychooncology. 2020 Nov;29(11):1895-1904. doi: 10.1002/pon.5521.

Merenda C. Exploring the role of oncology nurse navigators. ONS Connect. 2011 Oct;26(10):8-12.

Munn Z, Lockwood C, Moola S. The Development and Use of Evidence Summaries for Point of Care Information Systems: A Streamlined Rapid Review Approach. Worldviews Evid Based Nurs. 2015 Jun;12(3):131-8. doi: 10.1111/wvn.12094.

Rock CL, Doyle C, Demark-Wahnefried W, … Gansler T. Nutrition and physical activity guidelines for cancer survivors. CA Cancer J Clin. 2012 Jul-Aug;62(4):243-74. doi: 10.3322/caac.21142. Erratum in: CA Cancer J Clin. 2013 May;63(3):215.

Ruiz M, Reske T, Cefalu C, Estrada J. Management of elderly and frail elderly cancer patients: the importance of comprehensive geriatrics assessment and the need for guidelines. Am J Med Sci. 2013 Jul;346(1):66-9. doi: 10.1097/MAJ.0b013e31826d59aa.

Smith S., Mooney S, Cable, M, Taylor RM. A blueprint of care for teenagers and young adults with cancer. 2nd edition 2016. Teenage Cancer Trust, London.

Tan CH, Wilson S, McConigley R. Experiences of cancer patients in a patient navigation program: a qualitative systematic review. JBI Database System Rev Implement Rep. 2015 Mar 12;13(2):136-68. doi: 10.11124/jbisrir-2015-1588.

Tay LH, Ong AKW, Lang DSP. Experiences of adult cancer patients receiving counseling from nurses: a qualitative systematic review. JBI Database System Rev Implement Rep. 2018 Oct;16(10):1965-2012. doi: 10.11124/JBISRIR-2017-003606.

Tho PC, Ang E. The effectiveness of patient navigation programs for adult cancer patients undergoing treatment: a systematic review. JBI Database System Rev Implement Rep. 2016 Feb;14(2):295-321. doi: 10.11124/jbisrir-2016-2324.

Ullgren H, Kirkpatrick L, Kilpeläinen S, Sharp L. Working in silos? - Head & Neck cancer patients during and after treatment with or without early palliative care referral. Eur J Oncol Nurs. 2017 Feb; 26:56-62. doi: 10.1016/j.ejon.2016.12.003.

Vallet-Regí M, Manzano M, Rodriguez-Mañas L, Checa López M, Aapro M, Balducci L. Management of Cancer in the Older Age Person: An Approach to Complex Medical Decisions. Oncologist. 2017 Mar;22(3):335-342. doi: 10.1634/theoncologist.2016-0276.

Wanat M, Boulton M, Watson E. Patients' experience with cancer recurrence: a meta-ethnography. Psychooncology. 2016 Mar;25(3):242-52. doi: 10.1002/pon.3908.

Cochrane library systematic reviews (Examples):

Haun MW, Estel S, Rücker G, Friederich HC, Villalobos M, Thomas M, Hartmann M. Early palliative care for adults with advanced cancer. Cochrane Database Syst Rev. 2017 Jun 12;6(6):CD011129. doi: 10.1002/14651858.CD011129.pub2.

Preston NJ, Hurlow A, Brine J, Bennett MI. Blood transfusions for anaemia in patients with advanced cancer. Cochrane Database Syst Rev. 2012 Feb 15;2012(2):CD009007. doi: 10.1002/14651858.CD009007.pub2.

Joanna Briggs Evidence summaries (Examples):

CANCER PAIN: ASSESSMENT TOOLS (2021); CANCER PATIENTS: INFORMATION NEEDS (2021)

Website *resources*

European Oncology Nursing Society (EONS). Young Cancer Nurses network Webinars (available in EONS Youtube channel)

Macmillan Cancer Support
The importance of physical activity for people living with and beyond cancer: A concise evidence review.
https://be.macmillan.org.uk/Downloads/CancerInformation/LivingWithAndAfterCancer/MAC138200415PhysicalActivityevidencereviewDIGITAL.pdf

Children's Oncology Group (COG), 2018. COG Supportive care endorsed guidelines. Long-term follow-up guidelines for survivors of childhood, adolescent, and young adult cancers, version 5.
http://www.survivorshipguidelines.org/pdf/2018/cog_ltfu_guidelines_v5.pdf

Society for Integrative Oncology (SIO). Integrative Oncology Guidelines. https://integrativeonc.org/practice-guidelines/guidelines

Module 5

Supporting People with Advanced Disease and at End of Life

Suggested ECTS credit points: 6
Contact hours: 60 hours
Study hours with practice: 120 hours (applying in their own practice)

MODULE OVERVIEW

The overall aim of this module is to help learners develop knowledge and skills to deliver a high standard of palliative and supportive care to those who are living with advanced disease including at the end of life.

People living with advanced cancer can experience multiple and complex physical, practical, psychosocial, emotional and spiritual needs. Cancer nurses have a pivotal role not only in ensuring that people live well until they die but also in providing the conditions for experiencing a dignified death in accordance with their wishes.

As specified by the World Health Organisation, palliative care should be introduced to the person with cancer and their families early in the disease trajectory (not just at end of life) and delivered alongside treatments which aim to prolong life, such as chemotherapy and radiotherapy (WHO, 2020). However, it is recognised that within cancer healthcare services, where care may be focused on a curative approach, there are challenges and barriers to incorporating a palliative care approach.

Therefore, this module should aim to offer the learner practical strategies on how to apply and integrate the palliative approach when they care for people affected by cancer.

	LEARNING OUTCOMES At the end of this module cancer nurses will be able to:	PRACTICE COMPETENCIES At the end of this module cancer nurses will be able to:	LEARNING CONTENT (in alphabetical order)
1.	Critically analyse how the philosophy and principles of palliative and end of life care are implemented for people affected by cancer.	Recognise that palliative and end of life care is the responsibility of all healthcare professionals regardless of the environment. Identify the barriers to integrating palliative and end-of-life care and act to address them. Inform, support and educate people affected by cancer palliative and end- of-life care where appropriate. Demonstrate an open attitude towards and act as an advocate for palliative and end-of-life care. Raise awareness and educate colleagues about palliative and end-of-life care.	Contemporary approaches to palliative care. Historical barriers to palliative and end-of-life care. Historical journey of palliative and end-of-life care. Impact on quality of life and survival. Interface between active cancer treatment, palliative and end-of-life care.
2.	Critically analyse the important role of advanced care planning and palliative care throughout the care continuum.	Recognise the importance of effective continuity of care and seamless transitions between different healthcare services, from active treatment through to end of life. Facilitate appropriate discussions between health- and social care professionals and people affected by cancer to elicit their preferences with respect to goals of care and the transition between care aimed at cure and end-of-life care.	Advance care planning. Advanced disease symptom management, for example, breathlessness, pain, nausea and vomiting. Case management in advanced disease. Communication skills used for challenging conversations. Holistic Needs Assessment. Transitional palliative care.
3.	Identify the physical, psychological, social, emotional and existential impact of advanced disease.	Undertake a holistic assessment of the needs concerns and symptoms commonly experienced by persons with cancer receiving palliative and end-of-life care. Identify and deliver evidence-informed nursing interventions to support people affected by cancer.	

	LEARNING OUTCOMES At the end of this module cancer nurses will be able to:	PRACTICE COMPETENCIES At the end of this module cancer nurses will be able to:	LEARNING CONTENT (in alphabetical order)
4.	Describe the signs of dying and distinguish between reversible treatable symptoms and those which indicate the final phase of life.	Recognise the final phase of life. Communicate sensitively, truthfully and without ambiguity about the dying process with person with cancer. Deliver appropriate interventions to guide and support people affected by cancer through the dying process. Involve and know when to refer on to other healthcare providers.	The biology of dying (recognising the dying process and biological criteria for defining death at the end of the dying process). Communication skills for end-of-life care. Decision making at end of life. The key symptoms experienced when dying.
5.	Discuss the goal of care of a person with cancer who is dying and the needs of both the person and their family/ informal caregivers/significant others.	Provide appropriate nursing interventions to promote comfort and dignity. Respect and respond to different cultural and religious perspectives/needs at end of life. Identify need and implement strategies for involving and supporting the family, informal carers and significant others.	Ensure person with cancer is comfortable and dignity upheld. Cultural/religious approaches to death and dying. Last offices. Legal and ethical issues involved in end-of-life care. Spiritual care. Symptom management.
6.	Explore concepts of loss, grief and bereavement and how these may be applied within clinical practice.	Utilise active listening and observation skills to recognise, assess and appropriately support a person and their family experiencing distress. Know when to refer on to and involve other healthcare professionals, where appropriate. Support and give advice to families, informal caregivers and significant others following death.	Acting in the best interests of people affected by cancer. Concepts of loss and grief. Family support and bereavement counselling. Sustaining hope.

REFERENCES AND RESOURCES

Coelho A, Parola V, Cardoso D, Bravo ME, Apóstolo J. Use of non-pharmacological interventions for comforting patients in palliative care: a scoping review. JBI Database System Rev Implement Rep. 2017 Jul;15(7):1867-1904. doi: 10.11124/JBISRIR-2016-003204.

Crawford GB, Dzierżanowski T, Hauser K, … Ripamonti CI; ESMO Guidelines Committee. Electronic address: clinicalguidelines@esmo.org. Care of the adult cancer patient at the end of life: ESMO Clinical Practice Guidelines. ESMO Open. 2021 Aug;6(4):100225. doi: 10.1016/j.esmoop.2021.100225.

Greater Manchester Health and Social Care Partnership. Palliative care pain & symptom control guidelines for adults for staff providing generalist palliative care. 5th edition 2022. Greater Manchester and Eastern Cheshire Strategic Clinical Networks.

Hui D, Bruera E. Integrating palliative care into the trajectory of cancer care. Nat Rev Clin Oncol. 2016 Mar;13(3):159-71. doi: 10.1038/nrclinonc.2015.201.

Hui D, Heung Y, Bruera E. Timely Palliative Care: Personalizing the Process of Referral. Cancers (Basel). 2022 Feb 18;14(4):1047. doi: 10.3390/cancers14041047.

Ikander T, Dieperink KB, Hansen O, Raunkiær M. Patient, Family Caregiver, and Nurse Involvement in End-of-Life Discussions During Palliative Chemotherapy: A Phenomenological Hermeneutic Study. J Fam Nurs. 2022 Feb;28(1):31-42. doi: 10.1177/10748407211046308.

Jordan K, Aapro M, Kaasa S, Ripamonti CI, Scotté F, Strasser F, Young A, Bruera E, Herrstedt J, Keefe D, Laird B, Walsh D, Douillard JY, Cervantes A. European Society for Medical Oncology (ESMO) position paper on supportive and palliative care. Ann Oncol. 2018 Jan 1;29(1):36-43. doi: 10.1093/annonc/mdx757.

Lister S, Hofland J, Grafton H.Symptom control and care towards the end-of-life. The Royal Marsden Manual of Clinical Nursing Procedures, 10th edition 2020. The Royal Marsden, London.

Martins Pereira S, Hernández-Marrero P, Pasman HR, Capelas ML, Larkin P, Francke AL. Nursing education on palliative care across Europe: Results and recommendations from the EAPC Taskforce on preparation for practice in palliative care nursing across the EU based on an online-survey and country reports. Palliat Med. 2021 Jan;35(1):130-141. doi: 10.1177/0269216320956817.

Marchi LPES, Santos Neto MFD, Moraes JP, Paiva CE, Paiva BSR. Influence of advance directives on reducing aggressive measures during end-of-life cancer care: A systematic review. Palliat Support Care. 2021 Jun;19(3):348-354. doi: 10.1017/S1478951520000838.

Sekse RJT, Hunskår I, Ellingsen S. The nurse's role in palliative care: A qualitative meta-synthesis. J Clin Nurs. 2018 Jan;27(1-2):e21-e38. doi: 10.1111/jocn.13912.

Parajuli J, Hupcey J. Oncology Nurses' Identified Educational Needs for Providing Palliative Care. West J Nurs Res. 2021 Sep;43(9):809-816. doi: 10.1177/0193945920986112.

Vanbutsele G, Pardon K, Van Belle S, Surmont V, De Laat M, Colman R, Eecloo K, Cocquyt V, Geboes K, Deliens L. Effect of early and systematic integration of palliative care in patients with advanced cancer: a randomised controlled trial. Lancet Oncol. 2018 Mar;19(3):394-404. doi: 10.1016/S1470-2045(18)30060-3.

Weathers E, O'Caoimh R, Cornally N, Fitzgerald C, Kearns T, Coffey A, Daly E, O'Sullivan R, McGlade C, Molloy DW. Advance care planning: A systematic review of randomised controlled trials conducted with older adults. Maturitas. 2016 Sep;91:101-9. doi: 10.1016/j.maturitas.2016.06.016.

Cochrane reviews (Example)

Haun MW, Estel S, Rücker G, Friederich HC, Villalobos M, Thomas M, Hartmann M. Early palliative care for adults with advanced cancer. Cochrane Database Syst Rev. 2017 Jun 12;6(6):CD011129. doi: 10.1002/14651858.CD011129.pub2.

Website resources

Children's Cancer and Leukemia Group (2022) Introduction to palliative care in children and young people with cancer (cclg.org.uk)

Royal College of Nursing (2018)
Palliative and End of Life Care Nursing | Children and young people | Royal College of Nursing (rcn.org.uk)

WHO, 2020. Definition of palliative care. World Health Organisation, Geneva.
http://www.who.int/cancer/palliative/definition/en/

Palliative care for people with cancer. (2019). Position paper of ONS.
https://www.ons.org/make-difference/ons-center-advocacy-and-health-policy/position-statements/palliative-care-people

National Institute of Healthcare Excellence (NICE) (2015=. Care of dying adults in the last days of life.
https://www.nice.org.uk/guidance/ng31

Module 6

Communication in Cancer Care

Suggested ECTS credit points: 6
Contact hours: 60 hours
Study hours with practice: 120 hours (applying in their own practice)

MODULE OVERVIEW

The overall aim of this module is to help learners to develop the knowledge and skills required for effective communication with people affected by cancer and the MDT throughout the Cancer Care Continuum from primary cancer prevention, early detection, throughout treatment and through to end-of-life care.

Effective person-centered communication is consistently identified as being a key factor in determining the cancer needs, concerns and preferences of people affected by cancer but also their satisfaction, adherence to treatment, recommended behaviour change, safety, improved outcomes and recovery.

Nurses working in all types of cancer care settings can be exposed to very difficult and distressing situations, some of which can be extremely challenging. Insufficient educational preparation and training in communication has been found to be a major factor contributing to stress, lack of job satisfaction and emotional burnout in healthcare professionals.

	LEARNING OUTCOMES At the end of this module, cancer nurses will be able to:	PRACTICE COMPETENCIES At the end of this module, cancer nurses will be able to:	LEARNING CONTENT
1.	Discuss the importance of effective person-centered communication with people affected by cancer in all settings (specialist, general, clinical, community).	Effectively utilise verbal, written and digital modes of communication to provide information, education and support in an empathetic, understandable and caring manner while maintaining confidentiality.	Avoidance of blocking behaviours e.g., closed/multiple/leading questions, missing cues, changing topic/time/place, selective attention to cues. Barriers to effective communication: e.g., patient and healthcare perceptions and expectations, age, language, sensory impairments, communication impairments, low literacy, poor health literacy, certain medical and mental health problems, anxiety, physical discomfort, heavy workload, time pressure, inadequate staffing, unsuitable environment/ distractions. Communication goals and needs of people affected by cancer. Confidentiality and data protection. Consideration of challenges related to use of untrained/unqualified translators. Core communication skills, e.g., open questions, active listening, identifying cues and exploring concerns, paraphrasing, reflection, silence, empathy, clarification, non-verbal communication. Evidence-based patient information and education materials which are clearly written, literacy friendly. Facilitators of effective communication: use of core communication skills, caring attitude, privacy, quiet spaces, designated time, use of appropriate translators, sensory aids. Impact of nurse-patient communication on health outcomes (e.g., adherence to treatment) and on patient experience. Impact of nurse-patient communication on patient and health professional satisfaction. Individualised, achievable person-
2.	Demonstrate knowledge of communication theories and how they are applied in practice, including strategies for conducting assessments.	Select and adopt an appropriate communication 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 Care Continuum.	

3.	Critically evaluate the barriers to and facilitators of effective communication when interacting with people affected by cancer.	Assess for and address any patient-related, nurse-related or environmental barriers to effective communication.	centered goals, plan of care/action plan with timely review periods. Needs assessment tools. Person-centered care. Patient/person-centered communication. Shared decision-making. Strategies for dealing with challenging communications such as breaking bad news (e.g., SPIKES), managing strong emotions (e.g., and RELEASE), handling difficult questions. Therapeutic communication.

	LEARNING OUTCOMES At the end of this module, cancer nurses will be able to:	PRACTICE COMPETENCIES At the end of this module, cancer nurses will be able to:	LEARNING CONTENT (in alphabetical order)
4.	Explore the importance of multi-professional communication in cancer care and how this can be enhanced.	Appropriately select from a range of communication skills and styles available in order to promote clear and unambiguous information exchanges with other health professionals.	Communication tools, e.g., SBAR, SAGE & THYME, Calgary-Cambridge, closed loop communication, briefing and debriefing. Confidentiality and data protection. Common language. Effective teamwork. Evidence-based patient information material. Managing professional boundaries in face-to-face and digital communication. Methods and principles for effective professional communication. Principles and methods for effective clinical information exchange with focus on safe handovers and care transitions including between hospital and community. Verbal, non-verbal and written communication.
5.	Identify supportive strategies which will help cancer nurses to develop emotional resilience.	Demonstrate emotional literacy, reflective ability, appropriate empathy and social competence. Act as a role model for others. Recognise own emotional needs and act accordingly using help-seeking behaviour to prevent compassion fatigue and burnout. Seek emotional and developmental support when required.	Compassion fatigue, burnout and its impact on communication. Emotional resilience, reflective ability, emotional intelligence. Social confidence, social support, reflective practice, supervision, peer coaching, mindfulness, experiential learning.
6.	Demonstrate insight into the emotional labour involved when caring for people affected by cancer and evaluate reasons why care of the self and colleagues is important.	Caring for self. Collegial support.	Caring for self. Support for colleagues.

REFERENCES AND RESOURCES

Arraras JI, Giesinger J, Shamieh O, … Kulić D; EORTC Quality of Life Group. Cancer patient satisfaction with health care professional communication: An international EORTC study. Psychooncology. 2022 Mar;31(3):541-547. doi: 10.1002/pon.5823.

Baile WF, Buckman R, Lenzi R, Glober G, Beale EA, Kudelka AP. SPIKES-A six-step protocol for delivering bad news: application to the patient with cancer. Oncologist. 2000;5(4):302-11. doi: 10.1634/theoncologist.5-4-302.

Berg MN, Ngune I, Schofield P, Grech L, Juraskova I, Strasser M, Butt Z, Halkett GKB. Effectiveness of online communication skills training for cancer and palliative care health professionals: A systematic review. Psychooncology. 2021 Sep;30(9):1405-1419. doi: 10.1002/pon.5702.

Connolly M, Perryman J, McKenna Y, Orford J, Thomson L, Shuttleworth J, Cocksedge S. SAGE & THYME: a model for training health and social care professionals in patient-focused support. Patient Educ Couns. 2010 Apr;79(1):87-93. doi: 10.1016/j.pec.2009.06.004.

Farzi S, Taleghani F, Yazdannik A, Esfahani MS. Communication culture in cancer nursing care: an ethnographic study. Support Care Cancer. 2022 Jan;30(1):615-623. doi: 10.1007/s00520-021-06388-2.

Ferrell B, Buller H, Paice JA. Communication Skills: Use of the Interprofessional Communication Curriculum to Address Physical Aspects of Care. Clin J Oncol Nurs. 2020 Oct 1;24(5):547-553. doi: 10.1188/20.CJON.547-553.

Grant G, Kinman G. Emotional resilience in the helping professions and how it can be enhanced. Health and Social Care Education 2014 Dec;3(1): 23-34.doi: 10.11120/hsce.2014.00040.

Heaven C, Green, C. Effective Communication in Cancer Care. In Wyatt, D. and Hulbert-Williams, N. (eds) Cancer and Cancer Care. 2015. Sage, London.

Hong YA, Hossain MM, Chou WS. Digital interventions to facilitate patient-provider communication in cancer care: A systematic review. Psychooncology. 2020 Apr;29(4):591-603. doi: 10.1002/pon.5310.

Kerr D, Ostaszkiewicz J, Dunning T, Martin P. The effectiveness of training interventions on nurses' communication skills: A systematic review. Nurse Educ Today. 2020 Jun; 89:104405. doi: 10.1016/j.nedt.2020.104405.

Kissane et al. (2017) (eds) Oxford Textbook of Communication in Oncology and Palliative Care (2nd edition) https://oxfordmedicine.com/view/10.1093/med/9780198736134.001.0001/med-9780198736134.

Lin MF, Hsu WS, Huang MC, Su YH, Crawford P, Tang CC. "I couldn't even talk to the patient": Barriers to communicating with cancer patients as perceived by nursing students. Eur J Cancer Care (Engl). 2017 Jul;26(4). doi: 10.1111/ecc.12648.

Lelorain S. Discussing Prognosis with Empathy to Cancer Patients. Curr Oncol Rep. 2021 Mar 14;23(4):42. doi: 10.1007/s11912-021-01027-9.

Mazor KM, Street RL Jr, Sue VM, Williams AE, Rabin BA, Arora NK. Assessing patients' experiences with communication across the cancer care continuum. Patient Educ Couns. 2016 Aug;99(8):1343-8. doi: 10.1016/j.pec.2016.03.004.

Moore PM, Rivera S, Bravo-Soto GA, Olivares C, Lawrie TA. Communication skills training for healthcare professionals working with people who have cancer. Cochrane Database Syst Rev. 2018 Jul 24;7(7):CD003751. doi: 10.1002/14651858.CD003751.

Nixon J, Gray L, Turner J, Bernard A, Scaife J, Cartmill B. Communicating Actively Responding Empathically (CARE): Comparison of Communication Training Workshops for Health Professionals Working in Cancer Care. J Cancer Educ. 2020 Feb;35(1):54-60. doi: 10.1007/s13187-018-1439-0.

Oguchi M, Jansen J, Butow P, Colagiuri B, Divine R, Dhillon H. Measuring the impact of nurse cue-response behaviour on cancer patients' emotional cues. Patient Educ Couns. 2011 Feb;82(2):163-8. doi: 10.1016/j.pec.2010.04.006.

Pehrson C, Banerjee SC, Manna R, … Bylund CL. Responding empathically to patients: Development, implementation, and evaluation of a communication skills training module for oncology nurses. Patient Educ Couns. 2016 Apr;99(4):610-616. doi: 10.1016/j.pec.2015.11.021.

Rygg LØ, Brataas HV, Nordtug B. Oncology nurses' lived experiences of video communication in follow-up care of

home-living patients: A phenomenological study in rural Norway. Eur J Oncol Nurs. 2021 Jun; 52:101955. doi: 10.1016/j.ejon.2021.101955.

Street RL Jr, Spears E, Madrid S, Mazor KM. Cancer survivors' experiences with breakdowns in patient-centered communication. Psychooncology. 2019 Feb;28(2):423-429. doi: 10.1002/pon.4963.

Suh SR, Lee MK. Effects of Nurse-Led Telephone-Based Supportive Interventions for Patients With Cancer: A Meta-Analysis. Oncol Nurs Forum. 2017 Jul 1;44(4):E168-E184. doi: 10.1188/17.ONF.E168-E184.

Sutar R, Chaudhary P, Yadav V. Prevalence of collusion in cancer communications: A meta-analysis. Psychooncology. 2022 Mar;31(3):372-387. doi: 10.1002/pon.5824.

Wittenberg E, Goldsmith J, Buller H, Ragan SL, Ferrell B. Communication Training: Needs Among Oncology Nurses Across the Cancer Continuum. Clin J Oncol Nurs. 2019 Feb 1;23(1):82-91. doi: 10.1188/19.CJON.82-91.

Website resources

BC Safety and Quality Council (2013). Culture change toolbox
https://bcpsqc.ca/resource/culture-change-toolbox/

EACH International Association for Communication in Healthcare (previously European Association for Communication in Healthcare) https://each.international/

National Cancer Institute -Communication in Cancer Care
https://www.cancer.gov/about-cancer/coping/adjusting-to-cancer/communication-pdq

National Institute for Clinical Excellence (NICE) (2004). Guidance on cancer services: Improving supportive and palliative care for adults. https://www.nice.org.uk/guidance/csg4 (read alongside http://nice.org.uk/guidance/NG142 (2019 edition)

Module 7

Leadership and Management in Cancer Nursing

Suggested ECTS credit points: 6
Contact hours: 60 hours
Study hours with practice: 120 hours (applying in their own practice)

MODULE OVERVIEW

The overall aim of this module is for learners to develop leadership skills to facilitate team management and to organise work and practice development within a cancer setting.

Regardless of role or position, all cancer nurses are expected to provide leadership. Multidisciplinary team working is vital in cancer care. Therefore, cancer nurses need to develop skills in interpersonal relationships, communication and workforce development.

	LEARNING OUTCOMES At the end of this module, cancer nurses will be able to:	PRACTICE COMPETENCIES At the end of this module, cancer nurses will be able to:	LEARNING CONTENT (in alphabetical order)
1.	Differentiate between leadership and management and consider how different models of leadership and multidisciplinary team working may impact on the delivery of person-centered holistic care to people affected by cancer.	Use appropriate leadership and management strategies in practice and evaluate the impact of these strategies upon people affected by cancer, other members of the healthcare team and development of practice and/or services.	Advocacy. Challenges of clinical leadership Change management. Delegation and communication. Development of cancer nursing roles. Differences between leadership and management. Importance of the role of modelling. Leadership skills for collaborative and effective teamwork. Models and theories of management and leadership. Political and emotional intelligence, self-awareness, social skills, social awareness, self-management. Theories of leadership.
2.	Critically analyse the legal, ethical and professional issues in relation to the care of people affected by cancer and disparities in cancer nursing and cancer care.	Practice in accordance with legal, ethical and professional principles in order to provide safe, effective, timely, cost- effective cancer care to people affected by cancer. Practice in accordance with national and local policies and standards to provide safe, effective, timely, cost-effective cancer care to people affected by cancer. Provide leadership in the contribution to implementation, evaluation of policies, and standards relevant to cancer care.	Caring, therapeutic, interpersonal relationships. Clinical audit and standards for practice, quality improvement data. Core communication skills. Ethical frameworks for clinical decision-making Good governance with clear structures and accountability. Importance of adherence to relevant legislation, policies, protocols, and guidelines. Importance of cancer nursing input at a strategic level and in local and national policy development. Membership and leadership of multi-professional teams.
3.	Describe the principles of risk assessment and management	Assess risk and implement appropriate risk management strategies in order to promote	Quality improvement strategies.

	LEARNING OUTCOMES At the end of this module, cancer nurses will be able to:	PRACTICE COMPETENCIES At the end of this module, cancer nurses will be able to:	LEARNING CONTENT (in alphabetical order)
	in relation to the care of people affected by cancer.	patient well-being and safety in practice.	Risk assessment and safety.
4.	Discuss the importance of self-development and emotional resilience for cancer nurses.	Demonstrate evidence of continuing professional development Actively promote the professional development of cancer nurses working in other areas of the organisation.	Continuing professional development for cancer nurses. Foster a mentoring culture. Lifelong learning. National and international networking. Postgraduate education for cancer nurses. Supporting cancer nurses and creating opportunities for them to develop emotional resilience. Training in leadership and management.
5.	Discuss the importance of relevant and evidence-based resource management strategies in relation to cancer care.	Demonstrate the ability to plan, allocate, coordinate and evaluate the use of evidence-based resources in an appropriate manner when providing care to people affected by cancer.	Financing of healthcare delivery together with continuation planning and resource management as appropriate for national context. Importance of continuity, coordination and evaluation of care pathways. Managing human resources, lay carers, nursing colleagues and students.

REFERENCES AND RESOURCES

Broome M, Marshal ES. Transformational Leadership in Nursing, 3rd edition 2020. Springer, USA.

Bryant-Lukosius D, Spichiger E, Martin J, … De Geest S. Framework for Evaluating the Impact of Advanced Practice Nursing Roles. J Nurs Scholarsh. 2016 Mar;48(2):201-9. doi: 10.1111/jnu.12199.

Cummings GG, Tate K, Lee S, Wong CA, Paananen T, Micaroni SPM, Chatterjee GE. Leadership styles and outcome patterns for the nursing workforce and work environment: A systematic review. Int J Nurs Stud. 2018 Sep;85:19-60. doi: 10.1016/j.ijnurstu.2018.04.016.

Dearman C, Harris JL, Roussel L, Thomas PL. Project planning and management : a guide for nurses and interprofessional teams 2020. 3rd edition. Jones & Bartlett Learning. Available at https://ug1lib.org/book/3679329/44cf8d?dsource=recommend

Gopee N, Galloway J.. Leadership and Management in Healthcare, 3rd edition 2017. Sage, London.

Harris J, Rousel L, Dearman C, Thomas P. Project Planning and Management: A Guide for Nurses and Interprofessional Teams. 3rd edition 2020. Jones & Bartlett Learning, USA.

Kouzes JM, Posner BZ. The Leadership Challenge. 6th edition 2017. Jossey Bass, San Francisco.

Mallory GA. Strategies for professional nursing associations to contribute to evidence-based practice and high quality health care. J. Perioper. Crit. Intensiv. Care Nurs. 2016 Jul;2(124): 2. doi: 10.4172/2471-9870.1000124.

Mariner, Tomey, A. A Guide to Nursing Management and Leadership, 8th edition 2008. Mosby, St. Louis.

Marquis BL, Harrison CJ. Leadership Roles and Management Functions in Nursing. 9th edition 2017. Lippincott, Williams and Wilkins, Philadelphia.Parkin P. Managing Change in Healthcare: Using Action Research. 2009. Sage, London.

Pedler M, Burgoyne, J, Boydell T. A Manager's Guide to Self-Development, 6th edition 2013. McGraw Hill, London.

Rosenzweig M, Giblin J, Mickle M, Morse A, Sheehy P, Sommer V, Bridging The Gap Working Group. Bridging the gap: a descriptive study of knowledge and skill needs in the first year of oncology nurse practitioner practice. Oncol Nurs Forum. 2012 Mar;39(2):195-201. doi: 10.1188/12.ONF.195-201.

Sullivan, EJ, Decker PJ. Effective Leadership and Management in Nursing. 9th edition 2018. Pearson Prentice Hall, London.

Truant T, Chan RJ. Future ready: Strengthening oncology nursing leadership in the context of professional oncology nursing organizations. Can Oncol Nurs J. 2017 Feb 1;27(1):2-4.

Yagasaki K, Komatsu H. Preconditions for successful guideline implementation: perceptions of oncology nurses. BMC Nurs. 2011 Nov 8;10:23. doi: 10.1186/1472-6955-10-23.

Yukl G. Leadership in Organisations. 8th edition 2013. Prentice Hall, Upper Saddle River, USA.

Website resources

NHS Leadership Academy, 2019. Clinical leadership - a framework for action. NHS Institute for Innovation and Improvement. https://www.england.nhs.uk/wp-content/uploads/2021/08/clinical-leadership-framework.pdf

Oncology Nursing Society (ONS), 2012. Leadership competencies. https://www.ons.org/sites/default/files/leadershipcomps.pdf

The Centre for Clinical Governance Research in Health (2009). Travaglia J, Debono D. Clinical audit: A comprehensive review of the literature. https://www.gov.ie/pdf/?file=https://assets.gov.ie/11884/d280a954843c43b5963138125a952c97.pdf#page=1

National Cancer Control Programme (2016-2018). Office of the Nursing and Midwifery Services Director Plan 2016-2018. Clinical Strategy and Programmes Division. https://www.lenus.ie/bitstream/handle/10147/623879/onmsd-plan-2016-2018.pdf?sequence=1&isAllowed=y

Module 8

Research Utilisation and Evidence in Cancer Care

Suggested ECTS credit points: 6
Contact hours: 60 hours
Study hours with practice: 120 hours (applying in their own practice)

MODULE OVERVIEW

The overall aim of this module is for the learner to develop necessary knowledge and skills to enhance research utilisation and the provision of evidence-based care. Cancer nurses play a central role in the development and implementation of evidence-based practice. An understanding of the research process and the different research methodologies (including clinical trials) is necessary to facilitate research utilisation, initiate quality assurance processes and the implementation of evidence-based care. This module aims to develop the skills of the learner regarding searching, retrieving and critically appraising research for cancer care in cancer nursing.

	LEARNING OUTCOMES At the end of this module, cancer nurses will be able to:	PRACTICE COMPETENCIES At the end of this module, cancer nurses will be able to:	LEARNING CONTENT (in alphabetical order)
1.	Critically analyse how knowledge and evidence are developed for clinical practice.	Discuss the relevance and application of research methodologies to support the development of evidence to guide cancer nursing practice. Demonstrates ability to provide an evidence-based rationale for interventions in cancer care in general and in cancer nursing in particular. Identify the strengths and limitations of the different research methodologies employed. Demonstrates capacity to develop and implement evidence-based interventions.	Data management and privacy in health services research. Ethical issues in research and evidence-based change. Introduction to research methodologies and levels of evidence to inform practice. Involvement of patients and key stakeholders in co-design of interventions. Overview of research designs, including quantitative, qualitative and mixed methods designs, and their strengths and limitations. Reporting and presenting results of research and reporting standards for various research methodologies. Research utilisation in nursing; barriers to and facilitators of research utilisation. Use of specialist knowledge to contribute to the development of evidence-based policies and procedures and practice development for cancer nursing.
2.	Identify the key sources of research and evidence-based clinical practice guidelines (CPGs) relevant to cancer care and cancer nursing.	Discuss characteristics of high-quality evidence relevant to cancer care and cancer nursing.	Effective search strategies, information skills tutorials. Introduction to evidence synthesis. Overview of electronic databases (e.g., PubMed, CINAHL Plus, Embase, PsycINFO, Cochrane library); print/e-journals and print/e-books. Sources of grey literature, including relevant websites for clinical practice guidelines and evidence-based resources.

		Demonstrates awareness of key academic health science databases and understanding of strategies for effective searches of relevant databases.	Use of validated criteria/framing structures to formulate research questions (e.g., PICO, PICOT).
3.	Critically appraise peer-reviewed research articles and clinical practice guidelines relevant to cancer care and cancer nursing.	Engages in critical discussion and critique of evidence and clinical practice guidelines.	Analysis and critical thinking. Introduction to critical appraisal tools.
4.	Describe the principles of cancer clinical trials and discuss the role of the nurse in this context.	Provide safe and effective care to patients on clinical trials in accordance with study protocols, ensuring optimal outcomes and experiences for people affected by cancer.	Good clinical practice. Introduction to cancer clinical trials. The role of the nurse in cancer clinical trials. Safeguarding the interests and wellbeing of people affected by cancer enrolled in clinical trials.
5.	Critically analyse the use of health services research in cancer service development and explore the role of clinical audit in practice development.	Describe and contribute to health services research and clinical audit in their clinical area. Appropriately apply evidence-based recommendations in the clinical area having considered the strengths and limitations of the research.	Introduction to clinical audit. Introduction to health service evaluation. Introduction to implementation science. Key performance indicators. Patient-reported outcome and experience measures. Resources required to support clinical audit, ethical issues and data.

REFERENCES AND RESOURCES

Booth A, Sutton A, Clowes M, James MMS. (2022) Systematic Approaches to a Successful Literature Review. 3rd edition 2022. SAGE Publications Ltd.

Bowling A. Research methods in health: Investigating health and health services. 4th edition 2014. Open University Press, McGraw Hill Education.

Gillis, P. and Whitby, E. Clinical Drug Trials in cancer care. In Wyatt, D. and Hulbert-Williams, N. (eds) Cancer and Cancer Care. 2015. Sage, London.

GottwaldM, Lansdown G. Clinical Governance: Improving the quality of healthcare for patients and service users. 2nd edition 2021. Open University Press. Aveyard

Payne H, Preston S. A Postgraduate's Guide to Doing a Literature Review in Health and Social Care. 2nd edition 2021. Open University Press, McGraw Hill Education.

Gough D, Oliver S,Thomas J. eds. An introduction to systematic reviews. 2nd edition 2017. SAGE Publications.

Gray JR, Grove SK. Burns and Grove's The Practice of Nursing Research Appraisal, Synthesis, and Generation of Evidence 9th edition 2020. Elsevier Saunders, St Louis, Missouri.

Greenhalgh T. How to read a paper: the basics of evidence-based medicine and healthcare. 6th edition 2019. John Wiley & Sons.

Heaslip V, Lindsay B. Research and Evidence-Based Practice: For Nursing, Health and Social Care Students. 2019. Lantern Publishing Limited.

Higgins JPT, Thomas J, Chandler J. Cochrane Handbook for Systematic Reviews of Intervention. 2nd edition 2019. The Cochrane Collection.

Kennedy, E. sand Hulbert-Williams, N. Psychosocial research in cancer care . In Wyatt, D. and Hulbert-Williams, N. (eds) Cancer and Cancer Care. 2015. Sage, London.

Ness EA, Royce C. Clinical Trials and the Role of the Oncology Clinical Trials Nurse. Nurs Clin North Am. 2017 Mar;52(1):133-148. doi: 10.1016/j.cnur.2016.10.005.

Polit DF, Beck CT. Nursing Research: Generating and Assessing Evidence for Nursing Practice. 10th edition 2020. LWW; Wolters Kluwer.

Squires JE, Estabrooks CA, Gustavsson P, Wallin L. Individual determinants of research utilization by nurses: a systematic review update. Implement Sci. 2011 Jan 5;6:1. doi: 10.1186/1748-5908-6-1.

Johnson LA. Putting evidence into practice. Clin J Oncol Nurs. 2014;18 Suppl:2-4. doi: 10.1188/14.CJON.S3.2-4.

Straus S E, Glasziou P, Richardson WS, Haynes RB. Evidence-Based Medicine E-Book: How to Practice and Teach 5th edition 2018. EBM.; Elsevier Health Sciences.

Website resources

American Society of Clinical Oncology (ASCO). Clinical practice guidelines.
https://www.asco.org/practice-patients/guidelines

Critical Appraisal Skills Programme (CASP) (2017). CASP UK: Better Value Healthcare Ltd Oxford.
http://www.casp-uk.net/casp-tools-checklists.

European Society for Medical Oncology (ESMO). Clinical practice guidelines.
http://www.esmo.org/Guidelines

National Comprehensive Cancer Network (NCCN). Clinical practice guidelines in oncology.
https://www.nccn.org/guidelines/category_1.

NHS Improvement (2017). Handbook of Quality Service Improvements and Redesign Tools. ACT Academy, London.
https://improvement.nhs.uk/resources/qsir-programmeme/

Advanced Cancer Nursing Roles

One of EONS' most important strategic aims is to gain recognition for cancer nursing as a specialty all over Europe. The EONS Cancer Nursing Education Framework provides nurses, nursing educators, instructors, nursing managers, healthcare organisations and governments with guidance on educational preparation of nurses who care for people affected by cancer whatever their level of practice. It is crucial to recognise that it is important for nurses to have opportunities for continuous professional development and to build upon the knowledge and skills outlined in the Framework. This chapter discusses advanced practice nursing, which is the third level of cancer nursing as mentioned in the introduction to the Framework. An advanced level cancer nurse is a nurse with post-graduate education (master's degree) and training in advanced nursing (see ICN 2020).

Research shows that higher nursing education is associated with improved patient outcomes and safety (Aiken et al, 2014; 2021) and that advanced nursing roles are safe, effective and well received by patients (ICN, 2017). In the WHO (2020) report, a total of 78 countries (53% of respondent countries) reported having advanced practice roles for nurses in healthcare. This WHO (2020) report recommends that planners and regulators should optimise the contributions of nursing practice, including advanced practice further accompanied by the WHO Global Strategic Directions for Nursing and Midwifery 2021-2025, stating that nurses with an advanced education can take extended responsibilities in the health system.

The need for advanced practice nursing roles, particularly in the field of cancer survivorship, is growing (Corcoran et al.,2015). However, advanced practice is equally needed across all spheres of the Cancer Care Continuum. Advanced practice nurses can bring added value on patient outcomes (Aiken et al.,2021, Kerr et al., 2021), job satisfaction, retention of nurse workforce and might be able to relieve the burden on oncology departments by reducing the number of visits through more efficient symptom management (Alotaibi & Al Anizi 2020). Furthermore, the nurse-led clinics have shown a positive impact on improving self-reported responses such as distress levels, satisfaction, quality of life, depressive symptoms, concerns and vomiting among people with cancer (Molassiotis et al., 2020). However, the regulations, recognition and requirements for advanced nursing roles vary across Europe (Maier et al., 2017).

In 2020, the International Council of Nurses (ICN) defined advanced practice nursing as advanced nursing interventions that influence clinical healthcare outcomes for individuals, families and diverse populations. Advanced practice nursing is based on graduate education and preparation along with the specification of central criteria and core competencies for practice. An advanced practice nurse (APN) is a generalist or specialised nurse who has acquired, through post-graduate education, the expert knowledge base, complex decision-making skills and clinical competencies for advanced nursing practice. The characteristics of the work role is shaped by the context in which they are credentialed to practice. The two most identified APN roles are clinical nurse specialist (CNS) and nurse practitioner (NP) (ICN, 2020).

ICN also describe the nature of practice for the APN roles (ICN, 2017; 2020). Practice is characterised by the integration and application of a broad range of theoretical and evidence-based knowledge i.e. integrates research, education, practice and management; a high degree of professional autonomy and independent practice; case management/own caseload; advanced health assessment skills, decision-making skills; diagnostic reasoning skills; recognised advanced clinical competencies; provision of consultant services to other health providers; plans, implements and evaluates programmes and recognised as first point of contact for patients. There are regulatory

mechanisms that are country-specific. Among these regulations are the right to diagnose, authority to prescribe medication, authority to prescribe treatment, authority to refer patients to other health care specialists and authority to admit patients to the hospital and other healthcare facilities.

Existing advanced cancer nursing roles vary considerably across Europe at present. For example, cancer nurses in the UK, Netherlands and Ireland may have roles as clinical nurse specialists (CNS), nurse practitioners (NP) or advanced nurse practitioners (ANP) with very wide-ranging tasks (described below). In most cases, a master's degree or higher academic title is required for these roles. Other countries have specific roles in cancer care that are established but not formally recognised as advanced cancer nursing roles. This might create a risk of losing many highly qualified nurses in clinical practice (Lagerlund et al., 2015). Thus, as there is great variation in the educational preparation of APNs across Europe, it would be valuable to develop future programmes and APN roles with a more coherent approach. The ICN (2020) guidelines state that educational preparation of APNs through advanced practice nursing programmes should be via completion of a full master's degree rather than individual master's-level modules. ICN also recommends formal recognition of educational programmes, accreditation and a formal system of licensing, registration and certification.

Cancer nurses who develop their level of practice, in advanced nursing roles, can continue to develop their competencies and are often clinical role models, mentors, leaders, and supervisors and able to influence practice and policy. They could, therefore, have a positive impact on quality of care, retention of nurse workforce, recruitment and other important factors in healthcare. It is important to offer clinical nursing positions which require higher academic qualifications that could be combined with development and research, to enable cancer nurses to work to their full potential and to guarantee access to advanced cancer nursing care for people affected by cancer.

REFERENCES AND RESOURCES

Aiken LH, Sloane DM, Bruyneel L, … Sermeus W; RN4CAST consortium. Nurse staffing and education and hospital mortality in nine European countries: a retrospective observational study. Lancet. 2014 May 24;383(9931):1824-30. doi: 10.1016/S0140-6736(13)62631-8.

Aiken LH, Sloane DM, Brom HM, Todd BA, Barnes H, Cimiotti JP, Cunningham RS, McHugh MD. Value of Nurse Practitioner Inpatient Hospital Staffing. Med Care. 2021 Oct 1;59(10):857-863. doi: 10.1097/MLR.0000000000001628.

Alotaibi T, Al Anizi CA. The impact of advanced nurse practitioner (ANP) role on adult patients with cancer: A quantitative systematic review. Appl Nurs Res. 2020 Dec;56:151370. doi: 10.1016/j.apnr.2020.151370.

Corcoran S, Dunne M, McCabe MS. The Role of Advanced Practice Nurses in Cancer Survivorship Care. Semin Oncol Nurs. 2015 Nov;31(4):338-47. doi: 10.1016/j.soncn.2015.08.009.

European Oncology Nursing Society (EONS). EONS position statement: The role of nurses in cancer care. European Oncology Nursing Society (EONS), 2015. http://www.cancernurse.eu/advocacy/positionstatementcancercare.html

International Council of Nurses (ICN). Aim and objectives of the ICN international nurse practitioner / advanced practice network. International Council of Nurses (ICN), 2017. https://international.aanp.org/Practice/APNRoles

International Council of Nurses (ICN), 2020. Guidelines on Advanced Practice Nursing. https://www.icn.ch/system/files/documents/2020-04/ICN_APN%20Report_EN_WEB.pdf

Kerr H, Donovan M, McSorley O. Evaluation of the role of the clinical Nurse Specialist in cancer care: an integrative literature review. Eur J Cancer Care (Engl). 2021 May;30(3):e13415. doi: 10.1111/ecc.13415.

Lagerlund M, Sharp L, Lindqvist R, Runesdotter S, Tishelman C. Intention to leave the workplace among nurses working with cancer patients in acute care hospitals in Sweden. Eur J Oncol Nurs. 2015 Dec;19(6):629-37. doi: 10.1016/j.ejon.2015.03.011.

Maier, C.B., Aiken, L.H., & Busse, R. Nurses in advanced roles in primary care: Policy levers for implementation, OECD Health Working Papers, 2017, No. 98, OECD Publishing, Paris. Available in: https://doi.org/10.1787/a8756593-en.

Molassiotis A, Liu XL, Kwok SW. Impact of advanced nursing practice through nurse-led clinics in the care of cancer patients: A scoping review. Eur J Cancer Care (Engl). 2021 Jan;30(1):e13358. doi: 10.1111/ecc.13358. Epub 2020 Nov 9. PMID: 33169476.

World Health Organisation (WHO). State of the world's nursing 2020: investing in education, jobs and leadership. World Health Organisation 2020, Geneva: Licence: CC BY-NC-SA 3.0 IGO.

World Health Organisation (WHO). Global strategic directions for nursing and midwifery 2021-2025. World Health Organisation (WHO) 2021, Geneva: Licence: CC BY-NC-SA 3.0 IGO.

Annex 1 How to use the framework

The EONS Cancer Nursing Education Framework (CNEF) aims to provide an informative and user-friendly document which has a wide range of uses, for example as a reference to advocate for more hours of training on certain topics, to promote development of new national cancer nursing programmes and career possibilities, to support a range of continuing education programmes and as guidance for other educational events. It can be used in its entirety or on a modular basis and can be adapted to suit the professional development needs of the individual or organisation.

This annex offers examples of how the framework may be used to support cancer nursing education and practice.

What is the EONS Cancer Nursing Education Framework?

The EONS CNEF provides a gold standard for education in cancer care which can be applied in any care setting. It consists of eight modules:

Module 1: Cancer Prevention, Screening, Early Detection and Health Promotion in Cancer Care

Module 2: Cancer Pathophysiology and the Principles of Treatment Decision-Making

Module 3: Cancer Treatment, Patient and Occupational Safety

Module 4: Supporting People Living With, Through and Beyond Cancer

Module 5: Supporting People with Advanced Disease and at End of Life

Module 6: Communication in Cancer Care

Module 7: Leadership and Management in Cancer Nursing

Module 8: Research Utilisation and Evidence in Cancer Care

The eight modules together encompass fundamental concepts in cancer and cancer care and provide an evidence-based resource which links theory and practice. Each module provides helpful references, suggested databases and websites which can be used to support a wider search by users who are planning additional specific and targeted learning (e.g., site specific cancers, cancer across the age spectrum).

Who can use this Framework?

The Framework is suitable for use by a wide range of stakeholders in any setting and at any level such as individual nurses, teams of nurses, nurse managers, nurse leaders and educators.

How can the Framework be used?

The overall Framework provides a structured guide to key concepts in cancer care which can be applied in any practice or education setting and at any level. Individual modules or the entire Framework can be used as a basis to inform learning and/or its development and can be adapted to suit the needs of the user. For example, users can further the content when planning cancer education which has a specific focus such as children and young people, geriatric oncology, site-specific cancers, people with additional and/or diverse needs or those who may be vulnerable.

Here are some examples of how the Framework can be used to support learning:

- Developing academic courses such as modules or programmes
    - Provides structure and content when planning and developing the education
    - Provides support in developing/strengthening aims and objectives for education
    - Provides guidance for developing assessment structures
    - Provides guidance for evaluating achievement of learning outcomes by students
    - Provides a suggested guide to academic ECTS points
- Developing sessions or study days
    - Provides structure and content when planning and developing the event
    - Provides support in developing/strengthening aims and objectives of the event
- Informing best practice
    - Guides the development and achievement of competencies in practice
- Personal and professional development
    - Self-reflective assessment of oncology nursing competencies and need for professional development
- EONS Endorsement
    - Guides application for endorsement of education events/courses by mapping to part of or whole of, the Framework (see link to EONS endorsement process https://cancernurse.eu/education/eons-endorsement/)
- Frameworks
    - Forms a basis for the development of national education and career development frameworks
- As a policy tool
    - Informs local and national policy.

Where

Individual modules or the Framework in its entirety can inform the basis of learning in any education or practice setting.

When

There are no restrictions on when the Framework can be used. However, the Framework is the intellectual property of EONS and when used, this should be acknowledged.

Annex 2 eHealth and Cancer

Introduction

Cancer nursing practice is influenced by the wider context of healthcare both nationally and globally, and this in turn influences the development and delivery of cancer education. The Covid-19 pandemic has shown the potential of digitalisation to transform the way that healthcare is delivered (Penedo et al,. 2020). eHealth technology, correctly used, can be a very useful complementary tool to facilitate dialogue among healthcare professionals and meet the health and care needs of people affected by cancer. The EU Beating Cancer Plan also highlights the need to advance digital health services and the development and implementation of telehealth, eHealth applications and digital tools in cancer care. This annex highlights the relevance of digital health and learning to cancer care and cancer education and supports the application of digital health within the European Oncology Nursing Society Cancer Nursing Education Framework.

Context

Healthcare is rapidly shifting towards a digitised future where technological solutions are used in the care of people with cancer across the care continuum and settings (Charalambous, 2020). Person-centered cancer care needs to respond to increasing use of eHealth moving care beyond the traditional in-person care model to real-time, dynamic, and technology-assisted assessments and interventions (Penedo et al., 2020). The management of long-term conditions needs to be patient-centred, personalised, supporting people with cancer in different settings and enabled by digital health, data analytics, behavioural science and connected medical devices (Charalambous, 2020).

Special attention needs to be taken when implementing telehealth to ensure equity of access for people with cancer, their safety and their engagement; it should complement and not be a substitute for in-person care. Also, appropriate training opportunities for healthcare professionals and expert guidance on the best use of telehealth in cancer care settings is crucial (European Cancer Organisation [ECO], 2021).

Main concepts related to eHealth – a definition of terms

- eHealth
    - The cost-effective and secure use of information and communication technologies (ICT) in support of health and health-related fields, including healthcare services, health surveillance, health literature, and health education, knowledge and research (WHO, 2010).
- mHealth
    - mHealth is a component of eHealth. It refers to medical and public health practice supported by mobile devices, such as mobile phones, patient monitoring devices, personal digital assistants (PDAs) and other wireless devices (WHO, 2011).
- Information and Communication Technology (ICT)
    - Is a “diverse set of technological tools and resources used to transmit, store, create, share or exchange information (UNESCO, 2009).
- Telemedicine
    - The delivery of a wide array of healthcare services by all healthcare professionals, where distance is a critical factor, using information and communication technologies for the exchange of valid information for diagnosis, treatment and prevention of disease and injuries, research and evaluation, and for the continuing education of healthcare providers, all in the interests of advancing the health of individuals and their communities. Often used to refer to care and services delivered by physicians (WHO, 1998).
- Telehealth
    - Often used interchangeably with telemedicine, however telehealth refers more to healthcare services involving all health care professions.
    - Involves the use of telecommunications and virtual technology to deliver healthcare outside of traditional healthcare facilities.
    - Allows for healthcare workers in remote field settings to obtain guidance from professionals elsewhere in relation to diagnosis, care and referral of patients (WHO, 2010).

- Can also be defined as the use of electronic information and telecommunications technologies to support long-distance clinical healthcare, patient and health professional health-related education, public health and health administration, thus referring to both clinical and non-clinical applications in the way of education, administration and research, while telemedicine is often reserved for direct clinical and patient care applications.

- Digital Health
  - The field of knowledge and practice associated with the development and use of digital technologies to improve health. It encompasses eHealth and expands the concept of eHealth to include digital consumers, with a wider range of smart and connected devices. It also encompasses other uses of digital technologies for health such as the Internet of Things, advanced computing, big data analytics, artificial intelligence including machine learning and robotics (WHO, 2021).

Benefits of eHealth

Although the adoption of telehealth technology relies on patient participation and the motivation of patients to become partners in their healthcare (Pennell et al,. 2017), 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 (Penedo et al., 2020). Examples of successful applications in cancer care include cancer telegenetics, remote chemotherapy supervision, administration and remote monitoring of oncology medication, symptom management, survivorship care, palliative care, and approaches to increase access to cancer clinical trials (Sirintrapun & Lopez, 2018, Maguire et al., 2021).

In the last decade and increasingly during the Covid-19 pandemic, telehealth, mobile applications and wearable devices have been dramatically changing access to health resources for patients, informal caregivers, and health care providers (Kessel et al. 2016). There are many current applications and software using information and communication technology in telehealth and mobile health in the oncology setting. Cancer nurses should be aware of the pervasiveness and impact of telehealth and mobile health to this unique population (Cannon, 2018).

The benefits of telehealth for people with cancer include:

- close and continual connection to the multidisciplinary team responsible for their care as well as efficient communication channels (e.g. Maguire et al, 2021)
- time-sensitive connection without compromising quality of care (Kessel et al., 2016)
- improved access to specialised cancer care services (e.g. for people with cancer who have difficulty traveling to a clinic because of living in a remote location or lack of transportation, increasing opportunities exist to access healthcare remotely (Doyle-Lindrud, 2016).

The benefits of telehealth for the multidisciplinary team include:

- opportunities to track and monitor the care across the cancer care continuum (Kraschnewski & Gabbay, 2013)
- timely reaction to care needs and early detections of complications
- channels for interprofessional communication, information sharing and clinical decision support (Doyle-Lindrud, 2016).
- the potential to reduce administrative burdens and improve both efficiency and quality of care delivery (Pennell et al., 2017).
- opportunities to better collaboration between primary and specialist care (ECO, 2021).

For telehealth to meet its full potential, updated policies, regulations, and clinical practice guidelines are needed to recognise advances in the new technologies while maintaining rigorous quality of care standards (Doyle-Lindrud, 2016). Nurses also need new and renewed skills to provide safe, effective, culturally relevant telehealth and virtual care (Rambur et al., 2019).

Why we need eHealth in cancer nursing practice?

eHealth interventions are increasingly being used in cancer care, for example to support patients and informal caregivers in managing symptoms and problems in daily life (Slev et al., 2016). eHealth, and telehealth as a means to deliver health care services, aim to improve the patient experience of care, improve the health of populations, reduce the per capita cost of health care and improve the experience of providing care (Tuckson et al., 2017). Telehealth shifts care to more participatory care and an improved healthcare system composed of patient empowerment (Pennell al., 2017). For cancer nurses, people-centred approaches aiming for patient empowerment have become a strong point of reference and a necessity in cancer care, with patient and multidisciplinary communication a key component of relationship-based care for people affected by cancer and also for effective multidisciplinary teamwork (Young et al,. 2020). As such, the relevance of eHealth to cancer care should be a key consideration when developing and delivering cancer education.

References

Cannon C. Telehealth, Mobile Applications, and Wearable Devices are Expanding Cancer Care Beyond Walls. Semin Oncol Nurs. 2018 May;34(2):118-125. doi: 10.1016/j.soncn.2018.03.002.

Charalambous A. Utilizing the Advances in Digital Health Solutions to Manage Care in Cancer Patients. Asia Pac J Oncol Nurs. 2019 Jul-Sep;6(3):234-237. doi: 10.4103/apjon.apjon_72_18.

Charalambous A. Personalising the Technological Experience. In A. Charalambous (edit.) Developing and Utilizing Digital Technology in Healthcare for Assessment and Monitoring. Springer Nature Switzerland. 2020. Cham, Switzerland, 19-28.

Doyle-Lindrud S. Telemedicine in Oncology. Clin J Oncol Nurs. 2016 Feb;20(1):27-8. doi: 10.1188/16.CJON.27-28.

Gonçalves-Bradley DC, J Maria AR, Ricci-Cabello I…Shepperd S. Mobile technologies to support healthcare provider to healthcare provider communication and management of care. Cochrane Database Syst Rev. 2020 Aug 18;8(8):CD012927. doi: 10.1002/14651858.CD012927.pub2.

European Cancer Organisation (ECO). Unlocking the Potential of Data & Digitalisation in Cancer Care. European Cancer Organisation 2021. Digital Health Network.

Kessel KA, Vogel MME, Schmidt-Graf F, Combs SE. Mobile Apps in Oncology: A Survey on Health Care Professionals' Attitude Toward Telemedicine, mHealth, and Oncological Apps. J Med Internet Res. 2016 Nov 24;18(11):e312. doi: 10.2196/jmir.6399.

Kraschnewski JL, Gabbay RA. Role of health information technologies in the Patient-centered Medical Home. J Diabetes Sci Technol. 2013 Sep 1;7(5):1376-85. doi: 10.1177/193229681300700530.

Larson JL, Rosen AB, Wilson FA. The Effect of Telehealth Interventions on Quality of Life of Cancer Patients: A Systematic Review and Meta-Analysis. Telemed J E Health. 2018 Jun;24(6):397-405. doi: 10.1089/tmj.2017.0112.

Lewis J, Ray P, Liaw ST. Recent Worldwide Developments in eHealth and mHealth to more Effectively Manage Cancer and other Chronic Diseases - A Systematic Review. Yearb Med Inform. 2016 Nov 10;(1):93-108. doi: 10.15265/IY-2016-020.

Maguire R, McCann L, Kotronoulas G, … Donnan PT. Real time remote symptom monitoring during chemotherapy for cancer: European multicentre randomised controlled trial (eSMART). BMJ. 2021 Jul 21;374:n1647. doi: 10.1136/bmj.n1647.

Pennell NA, Dicker AP, Tran C, Jim HSL, Schwartz DL, Stepanski EJ. mHealth: Mobile Technologies to Virtually Bring the Patient Into an Oncology Practice. Am Soc Clin Oncol Educ Book. 2017;37:144-154. doi: 10.1200/EDBK_176093.

Penedo FJ, Oswald LB, Kronenfeld JP, Garcia SF, Cella D, Yanez B. The increasing value of eHealth in the delivery of patient-centred cancer care. Lancet Oncol. 2020 May;21(5):e240-e251. doi: 10.1016/S1470-2045(20)30021-8.

Rambur B, Palumbo MV, Nurkanovic M. Prevalence of Telehealth in Nursing: Implications for Regulation and Education in the Era of Value-Based Care. Policy Polit Nurs Pract. 2019 May;20(2):64-73. doi: 10.1177/1527154419836752.

Sirintrapun JS. & Lopez AM. Telemedicine in Cancer Care. 2018 ASCO EDUCATIONAL BOOK, 540-545.

Slev VN, Mistiaen P, Pasman HR, Verdonck-de Leeuw IM, van Uden-Kraan CF, Francke AL. Effects of eHealth for patients and informal caregivers confronted with cancer: A meta-review. Int J Med Inform. 2016 Mar;87:54-67. doi: 10.1016/j.ijmedinf.2015.12.013.

Tuckson RV, Edmunds M, Hodgkins ML. Telehealth. N Engl J Med. 2017 Oct 19;377(16):1585-1592. doi: 10.1056/NEJMsr1503323.

UNESCO. Guide to measuring information and communication technologies (ICT) in education. 2009 UNESCO Institute for statistics, Montreal, Canada.

World Health Organisation (WHO) A health telematics policy in support of WHO's Health-For-All strategy for global health development: report of the WHO group consultation on health telematics (1998); Telemedicine:opportunities and developments in member states. Report on the second global survey on eHealth (2010); mHealth:New horizons for health through mobile technologies: second global survey on eHealth. (2011): Global Strategy on Digital Health 2020-2025. (2021)

Young AM, Charalambous A, Owen RI, Njodzeka B, Oldenmenger WH, Alqudimat MR, So WKW. Essential oncology nursing care along the cancer continuum. Lancet Oncol. 2020 Dec;21(12):e555-e563. doi: 10.1016/S1470-2045(20)30612-4.

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