NEW CURRICULA

Advanced Training in Medical Oncology (Adult Medicine)

Curriculum standards

RACP Specialists. Together

About this document

The new Advanced Training in Medical Oncology (Adult Medicine) curriculum consists of curriculum standards and learning, teaching, and assessment (LTA) programs.

This document outlines the curriculum standards for Advanced Training in Medical Oncology (Adult Medicine) for trainees and supervisors. The curriculum standards should be used in conjunction with the Advanced Training in Medical Oncology (Adult Medicine) LTA programs.

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Program overview

Purpose of Advanced Training

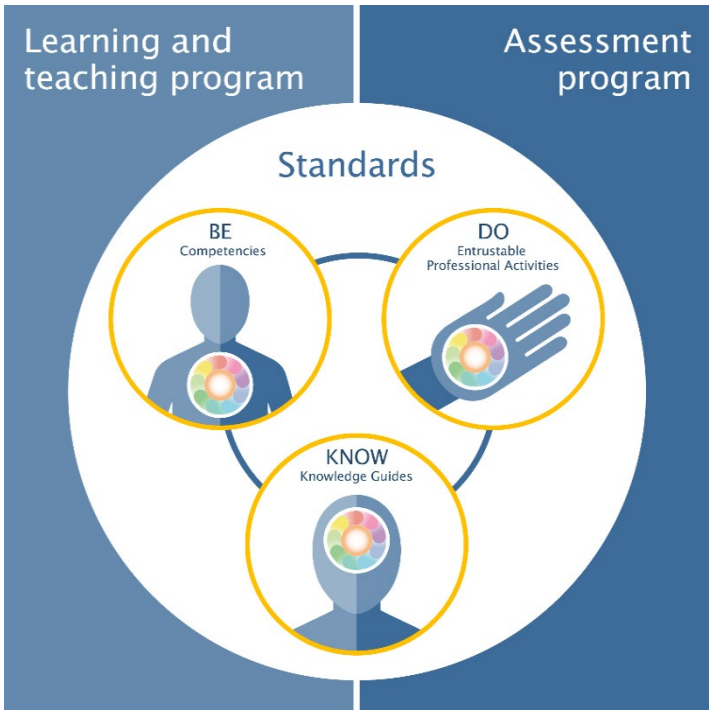
The RACP offers Advanced Training in 33 diverse medical specialties as part of Division, Chapter, or Faculty training programs.

The purpose of Advanced Training is to develop a workforce of physicians who:

- have received breadth and depth of focused specialist training, and experience with a wide variety of health problems and contexts
- are prepared for and committed to independent expert practice, lifelong learning, and continuous improvement
- provide safe, quality health care that meets the needs of the communities of Australia and Aotearoa New Zealand.



RACP curriculum model



The **RACP curriculum model** is made up of curricula standards supported by learning, teaching, and assessment programs.

Learning and teaching programs outline the strategies and methods to learn and teach curricula standards, including required and recommended learning activities.

Assessment programs outline the planned use of assessment methods to provide an overall picture of the trainee's competence over time.

The **curricula standards** outline the educational objectives of the training program and the standard against which trainees' abilities are measured.



- **Competencies** outline the expected professional behaviours, values and practices of trainees in 10 domains of professional practice.



- **Entrustable Professional Activities** (EPAs) outline the essential work tasks trainees need to be able to perform in the workplace.



- **Knowledge guides** outline the expected baseline knowledge of trainees.

Professional Practice Framework

The Professional Practice Framework describes 10 domains of practice for all physicians.



Learning, teaching, and assessment (LTA) structure

The learning, teaching and assessment structure defines the framework for delivery and trainee achievement of the curriculum standards in the Advanced Training program.

Advanced Training is structured in three phases. These phases will establish clear checkpoints for trainee progression and completion.

1	**Specialty foundation**	• Orient trainees and confirm their readiness to progress in the Advanced Training program
2	**Specialty consolidation**	• Continue trainees' professional development in the specialty and support progress towards the learning goals
3	**Transition to Fellowship**	• Confirm trainees' achievement of the curriculum standards, completion of Advanced Training, and admission to Fellowship • Support trainees' transition to unsupervised practice



Figure 1: Advanced Training learning, teaching, and assessment structure

- An **entry decision** is made before entry into the program.
- A **progress decision**, based on competence, is made at the end of each phase of training.
- A **completion decision**, based on competence, is made at the end of the training program, resulting in eligibility for admission to Fellowship.



Advanced Training is a **hybrid time- and competency-based training program**. There is a minimum time requirement of full-time equivalent experience, and progression and completion decisions are based on evidence of trainees' competence.

Medical Oncology (Adult Medicine) specialty overview

Medical oncologists specialise in the investigation, study, diagnosis, management, and systemic treatment of malignant disease. Medical oncology is a multidisciplinary specialty that requires proficiency in medical sciences, clinical medicine, diagnostic medicine, and pharmacology.

Medical oncologists exhibit these key attributes and skills to diagnose, treat, and support patients with cancer, and other conditions:

- **Expert diagnostic skills.** Medical oncologists manage a broad range of cancers, including developing optimal treatment plans for cancer patients and managing the side effects of cancer treatments. Medical oncologists must be able to effectively determine which type of cancer their patients have, as well as what stage the cancer is. As many forms of cancer are life-threatening, being able to diagnose them correctly is an integral part of the job.
- **Broad clinical experience and skills.** Medical oncology requires a breadth of clinical experience and skills in caring for acute medical problems and chronic illness, patients' and families' emotional needs, symptom control, survivorship, and end-of-life care.
- **Evidence-based treatment and therapy.** Medical oncologists use a broad range of preventative, definitive and palliative medicines such as chemotherapy, hormonal therapy, molecular targeted agents, immunotherapy, and analgesics. A key role of the medical oncologist is to assess and manage patients' diseases and symptoms using effective evidence-based techniques.
- **Interpersonal and communication skills.** Medical oncologists advocate for patients and their families within the healthcare system. Cancer patients and their families and/or carers experience one of the most emotionally vulnerable times of their lives following a cancer diagnosis. To provide optimal care, medical oncologists need to demonstrate compassion, empathy, and clear and effective communication skills.
- **Lead and work in a multidisciplinary team.** Medical oncology care is multidisciplinary. Medical oncologists lead multidisciplinary teams, coordinating the contributions of different healthcare professionals to provide holistic care.
- **Research skills.** Medical oncologists contribute to body of cancer research (therapeutics, biology, epidemiology, and clinical outcomes research). Cancer research is constantly evolving; consequently, medical oncologists must stay on top of current research and studies to be effective in their positions. This often involves attending medical conferences, critically appraising research from medical journals, and going to training workshops to stay informed on the most recent cancer treatments and methods. Medical oncologists are also commonly involved in the conduct of clinical trials and other research within established ethical frameworks.

- **Teaching.** Medical oncology roles include teaching responsibilities, educating patients about their conditions, and training junior doctors, medical students, and allied healthcare professionals.

Medical Oncology (Adult Medicine) learning goals

The curriculum standards are summarised as 16 learning goals. The learning goals articulate what trainees need to be, do and know, and are assessed throughout training.

BE Competencies	1. Professional behaviours
DO EPAs	2. Team leadership 3. Supervision and teaching 4. Quality improvement 5. Clinical assessment and management 6. Acute care 7. Longitudinal care, including management of transitions 8. Communication with patients 9. Prescribing 10. Investigations and procedures 11. Clinic management 12. Critical appraisal of evidence
KNOW Knowledge guides	13. Foundations of oncology 14. Oncological emergencies and acute care 15. Management of specific malignancies 16. Anticancer therapies

Curriculum standards

Competencies

Competencies outline the expected professional behaviours, values and practices that trainees need to achieve by the end of training.

Competencies are grouped by the 10 domains of the professional practice framework.

Competencies will be common across training programs.

Learning goal 1: Professional behaviours



Medical expertise

Professional standard. Physicians apply knowledge and skills informed by best available current evidence in the delivery of high-quality, safe practice to facilitate agreed health outcomes for individual patients and populations.

Knowledge. Apply knowledge of the scientific basis of health and disease to the diagnosis and management of patients.
Synthesis. Gather relevant data via age- and context- appropriate means to develop reasonable differential diagnoses, recognising and considering interactions and impacts of comorbidities.
Diagnosis and management. Develop diagnostic and management plans that integrate an understanding of individual patient circumstances, including psychosocial factors and specific vulnerabilities, epidemiology, and population health factors in partnership with patients, families or carers[1], and in collaboration with the health care team.

[1] References to patients in the remainder of this document may include their families whānau and/or carers.

Communication



Professional standard. Physicians collate information, and share this information clearly, accurately, respectfully, responsibly, empathetically, and in a manner that is understandable.

Physicians share information responsibly with patients, families, carers, colleagues, community groups, the public, and other stakeholders to facilitate optimal health outcomes.

Effective communication. Use a range of effective and appropriate verbal, nonverbal, written and other communication techniques, including active listening.

Communication with patients, families, and carers. Use collaborative, effective, and empathetic communication with patients, families, and carers.

Communication with professionals and professional bodies. Use collaborative, respectful, and empathetic clinical communication with colleagues, other health professionals, professional bodies, and agencies.

Written communication. Document and share information about patients to optimise patient care and safety.

Privacy and confidentiality. Maintain appropriate privacy and confidentiality, and share information responsibly.

Quality and safety



Professional standard. Physicians practice in a safe, high-quality manner within the limits of their expertise.

Physicians regularly review and evaluate their own practice alongside peers and best practice standards, and conduct continuous improvement activities.

Patient safety. Demonstrate a safety focus and continuous improvement approach to own practice and health systems.

Harm prevention and management. Identify and report risks, adverse events, and errors to improve healthcare systems.

Quality improvement. Participate in quality improvement activities to improve quality of care and safety of the work environment.

Patient engagement: Enable patients to contribute to the safety of their care.



Teaching and learning

Professional standard. Physicians demonstrate a lifelong commitment to excellence in practice through continuous learning and evaluating evidence.

Physicians foster the learning of others in their profession through a commitment to mentoring, supervising, and teaching[2].

Lifelong learning. Undertake effective self-education and continuing professional development.

Self-evaluation. Evaluate and reflect on gaps in own knowledge and skills to inform self-directed learning.

Supervision. Provide supervision for junior colleagues and/or team members.

Teaching. Apply appropriate educational techniques to facilitate the learning of colleagues and other health professionals.

Patient education. Apply appropriate educational techniques to promote understanding of health and disease amongst patients and populations.



Research

Professional standard. Physicians support creation, dissemination and translation of knowledge and practices applicable to health.[2] They do this by engaging with and critically appraising research, and applying it in policy and practice to improve the health outcomes of patients and populations.

Evidence-based practice. Critically analyse relevant literature and refer to evidence-based clinical guidelines, and apply these in daily practice.

Research. Apply research methodology to add to the body of medical knowledge and improve practice and health outcomes.

[2] Adapted from Richardson D, Oswald A, Chan M-K, Lang ES, Harvey BJ. Scholar. In: Frank JR, Snell L, Sherbino J, editors. The Draft CanMEDS 2015 Physician Competency Framework – Series IV. Ottawa: The Royal College of Physicians and Surgeons of Canada; 2015 March.

Cultural safety

Professional standard. Physicians engage in iterative and critical self-reflection of their own cultural identity, power, biases, prejudices and practising behaviours. Together with the requirement of understanding the cultural rights of the community they serve, this brings awareness and accountability for the impact of the physician's own culture on decision-making and healthcare delivery. It also allows for an adaptive practice where power is shared between patients, family, whānau and/or community and the physician, to improve health outcomes.



Physicians recognise the patient and population's rights for culturally safe care, including being an ally for patient, family, whānau and/or community autonomy and agency over their decision-making. This shift in the physician's perspective fosters collaborative and engaged therapeutic relationships, allows for strength-based (or mana-enhanced) decisions, and sharing of power with the recipient of the care, optimising health care outcomes.

Physicians critically analyse their environment to understand how colonialism, systemic racism, social determinants of health and other sources of inequity have and continue to underpin the healthcare context. Consequently, physicians then can recognise their interfacing with, and contribution to, the environment in which they work to advocate for safe, more equitable and decolonised services and create an inclusive and safe workplace for all colleagues and team members of all cultural backgrounds.[3]

Critical reflection. Engage in iterative and critical self-reflection and demonstrate cultural safety in the context of their own cultural identity, power, biases, prejudices and practising behaviours.
Allyship. Recognise the patient and population's rights to culturally safe care, including being an ally for patient, family, whānau and/or community autonomy and agency over their decision-making.
Inclusive communication. Apply culturally-safe communication, acknowledging the sharing of power, and cultural and human rights to enable patients, families and whānau to engage in appropriate patient care decisions.
Culturally safe environment. Contributes to a culturally safe learning and practice environment for patients and team members. Respect patients may feel unsafe in the healthcare environment.

[3] The RACP has adopted the Medical Council of New Zealand's definition of cultural safety (below).

Cultural safety can be defined as[1]:

- the need for doctors to examine themselves and the potential impact of their own culture on clinical interactions and healthcare service delivery
- the commitment by individual doctors to acknowledge and address any of their own biases, attitudes, assumptions, stereotypes, prejudices, structures, and characteristics that may affect the quality of care provided
- the awareness that cultural safety encompasses a critical consciousness where healthcare professionals and healthcare organisations engage in ongoing self-reflection and self-awareness and hold themselves accountable for providing culturally safe care, as defined by the patient and their communities.

1. Curtis et al. "Why cultural safety rather than cultural competency is required to achieve health equity". International Journal for Equity in Health (2019) 18:174



Ethics and professional behaviour

Professional standard. Physicians' practice is founded upon ethics, and physicians always treat patients, their families, communities, and populations in a caring and respectful manner.

Physicians demonstrate their commitment and accountability to the health and wellbeing of individual patients, communities, populations, and society through ethical practice.

Physicians demonstrate high standards of personal behaviour.

Beliefs and attitudes. Reflect critically on personal beliefs and attitudes, including how these may impact on patient care.
Honesty and openness. Act honestly, including reporting accurately, and acknowledging their own errors.
Patient welfare. Prioritise patients' welfare and community benefit above self-interest.
Accountability. Be personally and socially accountable.
Personal limits. Practise within their own limits and according to ethical principles and professional guidelines.
Self-care. Implement strategies to maintain personal health and wellbeing.
Respect for peers. Recognise and respect the personal and professional integrity, roles, and contribution of peers.
Interaction with professionals. Interact equitably, collaboratively, and respectfully with other health professionals.
Respect and sensitivity. Respect patients, maintain appropriate relationships, and behave equitably.
Privacy and confidentiality. Protect and uphold patients' rights to privacy and confidentiality.
Compassion and empathy. Demonstrate a caring attitude towards patients and endeavour to understand patients' values and beliefs.
Health needs. Understand and address patients', families', carers', and colleagues' physical and emotional health needs.
Medical and health ethics and law. Practise according to current community and professional ethical standards and legal requirements.



Judgement and decision making

Professional standard. Physicians collect and interpret information, and evaluate and synthesise evidence, to make the best possible decisions in their practice.

Physicians negotiate, implement, and review their decisions and recommendations with patients, their families and carers, and other health professionals.

Diagnostic reasoning. Apply sound diagnostic reasoning to clinical problems to make logical and safe clinical decisions.

Resource allocation. Apply judicious and cost-effective use of health resources to their practice.

Task delegation. Apply good judgement and decision making to the delegation of tasks.

Limits of practice. Recognise their own scope of practice and consult others when required.

Shared decision making. Contribute effectively to team-based decision-making processes.



Leadership, management, and teamwork

Professional standard. Physicians recognise, respect, and aim to develop the skills of others, and engage collaboratively to achieve optimal outcomes for patients and populations.

Physicians contribute to and make decisions about policy, protocols, and resource allocation at personal, professional, organisational, and societal levels.

Physicians work effectively in diverse multidisciplinary teams and promote a safe, productive, and respectful work environment that is free from discrimination, bullying, and harassment.

Managing others. Lead teams, including setting directions, resolving conflicts, and managing individuals.

Wellbeing. Consider and work to ensure the health and safety of colleagues and other health professionals.

Leadership. Act as a role model and leader in professional practice.

Teamwork. Negotiate responsibilities within the health care team and function as an effective team member.



Health policy, systems, and advocacy

Professional standard. Physicians apply their knowledge of the nature and attributes of local, national, and global health systems to their own practices. They identify, evaluate, and influence health determinants through local, national, and international policy.

Physicians deliver and advocate for the best health outcomes for all patients and populations.

Health needs. Respond to the health needs of the local community and the broader health needs of the people of Australia and New Zealand.

Prevention and promotion. Incorporate disease prevention, health promotion, and health surveillance into interactions with individual patients and their social support networks.

Equity and access. Work with patients and social support networks to address determinants of health that affect them and their access to needed health services or resources.

Stakeholder engagement. Involve communities and patient groups in decisions that affect them to identify priority problems and solutions.

Advocacy. Advocate for prevention, promotion, equity, and access to support patient and population health needs within and outside the clinical environment.

Resource allocation. Understand the factors influencing resource allocation, promote efficiencies, and advocate to reduce inequities.

Sustainability. Manage the use of health care resources responsibly in everyday practice.

Entrustable Professional Activities



Entrustable Professional Activities (EPAs) outline the essential work tasks trainees need to be able to perform in the workplace.

#	Theme	Title
2	Team leadership	Lead a team of health professionals
3	Supervision and teaching	Supervise and teach professional colleagues
4	Quality improvement	Identify and address failures in health care delivery
5	Clinical assessment and management	Clinically assess and manage the ongoing care of patients
6	Acute care	Manage the early care of acutely unwell patients
7	Longitudinal care, including management of transitions	Manage and coordinate the longitudinal care and appropriate transitions in care of patients with chronic illness, disability, and/or long-term health issues
8	Communication with patients	Discuss diagnoses, management plans, and prognosis with patients
9	Prescribing	Prescribe therapies tailored to patients' needs and conditions
10	Investigations and procedures	Select, organise, and interpret investigations and procedures
11	Clinic management	Manage an outpatient clinic
12	Critical appraisal of evidence	Critically appraise evidence to provide the best cancer care, ensuring patient safety, wise allocation of resources, and advancement of research through evidence-based practice

Learning goal 2: Team leadership

Theme	Team leadership	
Title	**Lead a team of health professionals**	
Description	This activity requires the ability to: • prioritise workload • organise multiple concurrent tasks • identify the range of team members' skills, expertise, and roles • articulate individual responsibilities, expertise, and accountability of team members • ascertain and apply leadership techniques in daily practice • collaborate with and motivate team members • promote and adopt insights from team members • act as a role model	
Behaviours		
Professional practice framework domain	**Ready to perform without supervision** Expected behaviours of a trainee who can routinely perform this activity without needing supervision	**Requires some supervision** Possible behaviours of a trainee who needs some supervision to perform this activity
	The trainee will:	The trainee may:
Medical expertise	• synthesise information with other disciplines to develop optimal, goal-centred plans for patients[4] • assess and effectively manage clinical risk in various scenarios • demonstrate clinical competence and skills by effectively supporting team members	• demonstrate adequate knowledge of health care issues by interpreting complex information • assess the spectrum of problems to be addressed • apply medical knowledge to assess the impact and clinical outcomes of management decisions • provide coordinated and quality health care for populations or patients as a member of a multidisciplinary team
Communication	• provide support and motivate patients or populations and health professionals by effective communication • demonstrate a transparent, consultative style by engaging patients, families, whānau, carers, relevant professionals and/or the public in shared decision making • work with patients and other health professionals to resolve conflict that may arise when planning and aligning goals	• communicate adequately with colleagues • communicate adequately with patients and/or the public • respect the roles of team members

[4] References to patients in the remainder of this document may include their families whānau and/or carers.

	• demonstrate rapport with people at all levels by tailoring messages to different stakeholders	
Quality and safety	• identify opportunities to improve care by participating in surveillance and monitoring of adverse events and near misses • identify activities within systems to reduce errors, improve patient and population safety, and implement cost-effective change • place safety and quality of care first in all decision making	• participate in audits and other activities that affect the quality and safety of patients' care • participate in multidisciplinary collaboration to provide effective health services and operational change • apply appropriate use of electronic medical records and other technologies to improve safety
Teaching and learning	• regularly self-evaluate personal professional practice, and implement changes based on the results • actively seek feedback from supervisors and colleagues on performance • maintain current knowledge of new technologies, health care priorities and changes of patients' expectations • teach competently by imparting professional knowledge • manage and monitor learner progress, providing regular assessment and feedback	• accept feedback constructively, and change behaviour in response • recognise the limits of personal expertise, and involve other health professionals as needed • demonstrate basic skills in facilitating colleagues' learning
Cultural safety	• demonstrate culturally competent relationships with professional colleagues and patients • demonstrate respect for diversity and difference • take steps to minimise unconscious bias, including the impact of gender, identity, sexual orientation, religion, cultural beliefs and socioeconomic background on decision making	• demonstrate awareness of cultural diversity and unconscious bias • work effectively and respectfully with people from different cultural backgrounds
Ethics and professional behaviour	• promote a team culture of shared accountability for decisions and outcomes • encourage open discussion of ethical and clinical concerns • respect differences of multidisciplinary team members • recognise the ethics of resource allocation by aligning optimal patients and organisational care • effectively consult with stakeholders, achieving a balance of alternative views • acknowledge personal conflicts of interest and unconscious bias	• support ethical principles in clinical decision making • maintain standards of medical practice by recognising the health interests of patients or populations as primary responsibilities • respect the roles and expertise of other health professionals • promote team values of honesty, discipline, and commitment to continuous improvement • demonstrate understanding of the negative impact of workplace conflict

	• act collaboratively to resolve behavioural incidents and conflicts such as harassment and bullying	• work effectively as a member of a team
Judgement and decision making	• evaluate health services and clarify expectations to support systematic, transparent decision making • make decisions when faced with multiple and conflicting perspectives • ensure medical input to organisational decision making • adopt a systematic approach to analysing information from a variety of specialties to make decisions that benefit health care delivery • recognise own limitations and, when required, seek help in an appropriate way	• review new health care interventions and resources • interpret appropriate data and evidence for decision making • inadequately consult with senior colleagues
Leadership, management, and teamwork	• combine team members' skills and expertise in delivering patient care and/or population advice • develop and lead effective multidisciplinary teams by developing and implementing strategies to motivate others • build effective relationships with multidisciplinary team members to achieve optimal outcomes • ensure all members of the team are accountable for their individual practice	• identify the range of personal and other team members' skills, expertise, and roles • acknowledge and respect the contribution of all health professionals involved in patients' care • participate effectively and appropriately in multidisciplinary teams • seek out and respect the perspectives of multidisciplinary team members when making decisions
Health policy, systems, and advocacy	• engage in appropriate consultation with stakeholders on the delivery of health care • advocate for the resources and support for health care teams to achieve organisational priorities • influence the development of organisational policies and procedures to optimise health outcomes • identify the determinants of health of the population, and mitigate barriers to access to care • remove self-interest from solutions to health advocacy issues	• communicate with stakeholders within the organisation about health care delivery • identify methods used to allocate resources to provide high-quality care • promote the development and use of organisational policies and procedures

Learning goal 3: Supervision and teaching

Theme	Supervision and teaching	
Title	**Supervise and teach professional colleagues**	
Description	This activity requires the ability to: • facilitate work-based teaching in a variety of settings • teach professional skills • create a safe and supportive learning environment • promote learners to be self-directed and identify learning experiences • support learners to identify learning needs, formulate goals, and plan activities to demonstrate achievement of goals • plan, deliver, and provide work-based assessments • facilitate learners in day-to-day work, and provide feedback • support learners to prepare for assessments	
Behaviours		
Professional practice framework domain	**Ready to perform without supervision** Expected behaviours of a trainee who can routinely perform this activity without needing supervision The trainee will:	**Requires some supervision** Possible behaviours of a trainee who needs some supervision to perform this activity The trainee may:
Medical expertise	• combine high-quality care with high-quality teaching • explain the rationale underpinning a structured approach to decision making • consider the population health effect when giving advice • encourage the learner to consider the rationale and appropriateness of investigation and management options • encourage and support the use of evidence-based practice	• teach learners using basic knowledge and skills
Communication	• establish rapport and demonstrate respect for junior colleagues, medical students, and other health professionals • actively encourage a collaborative and safe learning environment with learners and other health professionals • encourage learners to tailor communication as appropriate for different patients[5], such as younger or older people, and different populations	• demonstrate accessible, supportive, and compassionate behaviour

[5] References to patients in the remainder of this document may include their families whānau and/or carers.

	• communicate effectively when teaching, assessing, and appraising learners • support learners to deliver clear, concise and relevant information in both verbal and written communication • listen and convey information clearly and considerately	
Quality and safety	• support learners to deliver quality care while maintaining their own wellbeing • apply lessons learned about patient safety by identifying and discussing risks with learners • assess learners' competence, and provide timely feedback to minimise risks to care • maintain the safety of patients and organisations involved with education, and appropriately identify and action concerns	• observe learners to reduce risks and improve health outcomes
Teaching and learning	• demonstrate knowledge of the principles, processes, and skills of supervision • provide direct guidance to learners in day-to-day work • work with learners to identify professional development goals and learning opportunities based on their individual learning needs • offer feedback • act as a role model • participate in teaching and supervision of professional development activities • encourage self-directed learning and assessment • develop a consistent and fair approach to assessing learners • tailor feedback and assessments to learners' goals • seek feedback and reflect on own teaching by developing goals and strategies to improve • establish and maintain effective mentoring through open dialogue • support learners to identify and attend formal and informal learning opportunities • recognise the limits of personal expertise, and involve others appropriately	• demonstrate basic skills in the supervision of learners • apply a standardised approach to teaching, assessment, and feedback without considering individual learner needs • implement teaching and learning activities that are aligned to learning goals • adopt a teaching style that encourages learner self-directedness

Research	• clarify junior colleagues' research project goals and requirements, and provide feedback regarding the merits or challenges of proposed research • monitor the progress of learners' research projects regularly, and may review research projects prior to submission • support learners to find forums to present research projects • encourage and guide learners to seek out relevant research to support practice	• guide learners with respect to the choice of research projects • ensure that the research projects planned are feasible and of suitable standards
Cultural safety	• role model a culturally appropriate approach to teaching • encourage learners to seek out opportunities to develop and improve their own cultural competence • encourage learners to consider culturally appropriate care of Māori and Aboriginal and Torres Strait Islander peoples into patients' management • consider factors that inform values and beliefs in teaching and learning, including gender identity, sexual orientation, cultural, ethical, and religious backgrounds	• function effectively and respectfully when working with and teaching with people from different cultural backgrounds
Ethics and professional behaviour	• apply principles of ethical practice to teaching scenarios • consider the patient during clinical teaching, and maintain standards of professional practice • act as a role model to promote professional responsibility and ethics among learners • respond appropriately to learners seeking professional guidance	• demonstrate professional values, including commitment to high-quality clinical standards, compassion, empathy, and respect • provide learners with feedback to improve their experiences
Judgement and decision making	• prioritise workloads and manage learners with different levels of professional knowledge or experience • link theory and practice when explaining professional decisions • promote joint problem solving • support a learning environment that allows for independent decision making • use sound and evidence-based judgement during assessments and when giving feedback to learners	• provide general advice and support to learners • use health data logically and effectively to investigate difficult diagnostic problems • inadequately consult with senior colleagues

	• escalate concerns about learners appropriately • recognise own limitations and, when required, seek help in an appropriate way	
Leadership, management, and teamwork	• maintain personal and learners' effective performance and continuing professional development • maintain professional, clinical, research, and/or administrative responsibilities while teaching • create an inclusive environment whereby the learner feels part of the team • help shape organisational culture to prioritise quality and work safety through openness, honesty, shared learning, and continued improvement	• demonstrate the principles and practice of professionalism and leadership in health care • participate in mentor programs, career advice, and general counselling
Health policy, systems, and advocacy	• advocate for suitable resources to provide quality supervision and maintain training standards • explain the value of health data in the care of patients or populations • support innovation in teaching and training	• integrate public health principals into teaching and practice

Learning goal 4: Quality improvement

Theme	Quality improvement	
Title	**Identify and address failures in health care delivery**	
Description	This activity requires the ability to: • identify and report actual and potential (near miss) errors • perform and evaluate system improvement activities • comply to best practice guidelines • inspect clinical guidelines and outcomes • enhance the development of policies and protocols designed to protect patients and enhance health care • monitor own practice and develop individual improvement plans	
Behaviours		
Professional practice framework domain	**Ready to perform without supervision** Expected behaviours of a trainee who can routinely perform this activity without needing supervision	**Requires some supervision** Possible behaviours of a trainee who needs some supervision to perform this activity
	The trainee will:	The trainee may:
Medical expertise	• regularly review patients' or population health outcomes to identify opportunities for improvement in delivering appropriate care • evaluate environmental and lifestyle health risks, and advocate for healthy lifestyle choices • use standardised protocols and best available evidence to adhere to best practice • regularly monitor personal professional performance	• contribute to processes on identified opportunities for improvement • recognise the importance of prevention and early detection of cancer • use local guidelines to assist patient care decision making
Communication	• support patients[6] to have access to, and use, easy-to-understand, high-quality information about health care • support patients to share decision making about their own health care, to the extent they choose • assist patients' access to their health information, as well as complaint and feedback systems • respectfully discuss with patients any safety and quality concerns they have relating to their care, appropriately acting on these concerns	• demonstrate awareness of the evidence for consumer engagement and its contribution to quality improvement in health care • apply knowledge of how health literacy might affect the way patients or populations gain access to, understand, and use health information • advocate for patients

[6] References to patients in the remainder of this document may include their families whānau and/or carers.

	• implement the organisation's open disclosure policy	
Quality and safety	• demonstrate safety skills, including infection control, adverse event reporting, and effective clinical handover • participate regularly in multidisciplinary meetings where quality and safety issues are standing agenda items, and where innovative ideas and projects for improving care are actively encouraged • participate in systems for surveillance of adverse events and near misses, including the reporting of such events • ensure that identified opportunities for improvement are raised and reported appropriately • improve health care through the use of clinical audits and registries of data on patients' experiences and outcomes, learnings from incidents, and complaints	• demonstrate understanding of a systematic approach to improving the quality and safety of health care
Teaching and learning	• participate in professional training in quality and safety • supervise and manage the performance of junior colleagues to deliver high-quality, safe care	• work within organisational quality and safety systems for the delivery of clinical care • use opportunities to learn about safety and quality theory and systems
Research	• ensure that any protocol for human research is: » approved by a human research ethics committee in accordance with the national statement on ethical conduct in human research » conducted in accordance with best Good Clinical Practice principles	• recognise that patient participation in research is voluntary and based on an appropriate understanding about the purpose, methods, demands, risks, and potential benefits of the research
Cultural safety	• identify and address biases, such as those regarding gender identity, sexual orientation, and cultural and religious diversity, in personal and group decision making to prevent harmful impacts on patient outcomes • use the expertise of culture-specific liaisons, such as Māori and Aboriginal and Torres Strait Islander peoples hospital liaison officers, to achieve best outcomes for patients and organisations	• communicate effectively with patients from culturally and linguistically diverse backgrounds • effectively assess, understand, and respect cultural factors that contribute to patient decision making and health care engagement

Ethics and professional behaviour	• contribute to developing an organisational culture that enables and prioritises patients' safety and quality of care	• comply with professional regulatory requirements and codes of conduct
Judgement and decision making	• use decision-making support tools, such as guidelines, protocols, pathways, and reminders • analyse and evaluate current care processes to improve health care • recognise own limitations and, when required, seek help in an appropriate way	• access information and advice from other health practitioners to identify, evaluate, and improve patients' care management • inadequately consult with senior colleagues
Leadership, management, and teamwork	• formulate and implement quality improvement strategies, collaboratively involving all key health professionals • support multidisciplinary team activities to lower patients' risk of harm, and promote multidisciplinary educational programs • actively involve clinical pharmacists in the medication-use process	• demonstrate attitudes of respect and cooperation among members of different professional teams, especially where concerns regarding the quality of health care provision are raised • partner with clinicians and managers to ensure patients receive appropriate care and information on their care
Health policy, systems, and advocacy	• participate in all aspects of the development, implementation, evaluation, and monitoring of governance processes • measure, analyse, and report a set of specialty-specific processes of care and outcome clinical indicators, and a set of generic safety indicators • take part in designing and implementing organisational systems for: » defining the scope of clinical practice » performance monitoring and management » clinical, and safety and quality education and training	• maintain a dialogue with service managers about issues that affect patient care • contribute to relevant organisational policies and procedures • help shape an organisational culture that prioritises safety and quality through openness, honesty, learning, and quality improvement • identify local and major international agencies with a role in cancer control, research, and/or treatment • recognise legal issues relating to anticancer treatments, the institution and withdrawal of life support systems, and the Voluntary Assisted Dying Legislation across states, countries, and the Commonwealth

Learning goal 5: Clinical assessment and management

Theme	Clinical assessment and management	
Title	**Clinically assess and manage the ongoing care of patients**	
Description	This activity requires the ability to: • identify and access sources of relevant information about patients • retrieve patient histories • examine patients • synthesise findings to develop provisional and differential diagnoses • discuss findings with patients[7] • generate a management plan • present findings to other health professionals • enrol and manage patients on clinical trials, as appropriate	
Behaviours		
Professional practice framework domain	**Ready to perform without supervision** Expected behaviours of a trainee who can routinely perform this activity without needing supervision	**Requires some supervision** Possible behaviours of a trainee who needs some supervision to perform this activity
	The trainee will:	The trainee may:
Medical expertise	• elicit accurate, organised, and problem-focused medical histories, considering physical, psychosocial, and risk factors • perform full physical examinations to establish the nature and extent of problems • synthesise and interpret findings from histories and examinations to devise the most likely provisional diagnoses via reasonable differential diagnoses • assess the severity of problems, the likelihood of complications, and clinical outcomes • develop management plans based on relevant guidelines, and consider the balance of benefit and harm by taking patients' personal sets of circumstances and preferences into account	• take patient-centred histories, considering psychosocial factors • perform accurate physical examinations • recognise and correctly interpret abnormal findings • synthesise pertinent information to direct clinical encounters and diagnostic categories • develop appropriate management plans
Communication	• communicate openly, listen, and take patients' concerns seriously, giving them adequate opportunity to ask questions	• anticipate, read, and respond to verbal and nonverbal cues • communicate patients' situations to colleagues, including senior clinicians • demonstrate active listening skills

[7] References to patients in the remainder of this document may include their families whānau and/or carers.

	• provide information to patients and their family, whānau, or carers to enable them to make a fully informed decision from various diagnostic, therapeutic, and management options • communicate clearly, effectively, respectfully, and promptly with other health professionals involved in patients' care	
Quality and safety	• demonstrate safety skills, including infection control, adverse event reporting and effective clinical handover • recognise and effectively deal with aggressive and violent patient behaviour through appropriate training • obtain informed consent before undertaking any investigation or providing treatment (except in an emergency) • ensure patients are informed of the material risks associated with any part of proposed management plans	• perform hand hygiene, and take infection control precautions at appropriate moments • take precaution against assaults from confused or agitated patients, ensuring appropriate care of patients • document history and physical examination findings, and synthesise with clarity and completeness
Teaching and learning	• set defined objectives for clinical teaching encounters, and solicit feedback on mutually agreed goals • regularly reflect upon and self-evaluate professional development • obtain informed consent before involving patients in teaching activities • turn clinical activities into an opportunity to teach, appropriate to the setting	• set clear goals and objectives for self-learning • self-reflect frequently • deliver teaching considering learners' level of training
Research	• search for, compile, analyse, interpret, and evaluate information relevant to the research subject • describe Good Clinical Practice in line with international directives for all aspects of the conduct of clinical trials • recognise the role and limitations of clinical trials in regular practice • identify the rapidly evolving landscape in basic scientific, translational, and clinical research • identify relevant resources to access up-to-date evidence and guidelines • manage patients on clinical trials according to Good Clinical Practice and other protocols	• refer to guidelines and medical literature to assist in clinical assessments when required • demonstrate an understanding of the limitations of evidence and the challenges of applying research in daily practice

	• identify and ethically enrol patients into clinical trials	
Cultural safety	• use plain-language patient education materials • demonstrate cultural and linguistic sensitivity • demonstrate effective and culturally competent communication and care for Māori and Aboriginal and Torres Strait Islander peoples, and members of other cultural groups • engage professional interpreters, health advocates, or family or community members to assist in communication with patients as appropriate, and understand the potential limitations of each • acknowledge patients' identity, beliefs, and values, and demonstrate awareness of how these can impact their health	• display respect for patients' cultures, and attentiveness to social determinants of health • display an understanding of at least the most prevalent cultures in society, and an appreciation of their potential culturally based beliefs, values, and perspectives, while recognising that there is individual variance within cultural groups • appropriately access interpretive or culturally focused services
Ethics and professional behaviour	• demonstrate professional values, including compassion, empathy, respect for diversity, integrity, honesty, and partnership to all patients • hold information about patients in confidence, unless the release of information is required by law or public interest • assess patients' capacity for decision making, involving a proxy decision maker appropriately	• demonstrate professional conduct, honesty, and integrity • consider patients' decision-making capacity • identify patients' preferences regarding management and the role of their families, whānau, or carers in decision making • not advance personal interest or professional agendas at the expense of patient or social welfare
Judgement and decision making	• apply knowledge and experience to identify patients' problems, making logical, rational decisions, and acting to achieve positive outcomes for patients • use a holistic approach to health, considering comorbidity, uncertainty, and risk • use the best available evidence for the most effective therapies and interventions to ensure quality care	• demonstrate clinical reasoning by gathering focused information relevant to patients' care • recognise personal limitations and seek help in an appropriate way when required
Leadership, management, and teamwork	• work effectively as a member of multidisciplinary teams to achieve the best health outcome for patients • demonstrate awareness of colleagues in difficulty, and work within the appropriate structural systems to support them while maintaining patient safety	• share relevant information with members of the health care team

Health policy, systems, and advocacy	• participate in health promotion, disease prevention and control, screening, and reporting notifiable diseases • aim to achieve the optimal cost-effective patient care to allow maximum benefit from the available resources	• identify and navigate components of the healthcare system relevant to patients' care • identify and access relevant community resources to support patient care

Learning goal 6: Acute care

Theme	Acute care	
Title	**Manage the early care of acutely unwell patients**	
Description	This activity requires the ability to: • assess acutely unwell patients[8], and initiate management in the clinically appropriate care setting, such as community, sub-acute, or acute care settings • recognise clinical deterioration, and respond by following the local process for escalation of care in a patient-centred manner • recognise and manage acutely unwell patients who require decisions regarding goals of care with resultant acute resuscitation or palliation • communicate with ancillary services, such as intensive care or community-based teams	
Behaviours		
Professional practice framework domain	**Ready to perform without supervision** Expected behaviours of a trainee who can routinely perform this activity without needing supervision	**Requires some supervision** Possible behaviours of a trainee who needs some supervision to perform this activity
	The trainee will:	The trainee may:
Medical expertise	• recognise immediate life-threatening conditions and deteriorating and critically unwell patients, and respond appropriately • perform advanced life support, according to resuscitation council guidelines, to a high level of advanced resuscitation skills • demonstrate knowledge of potential outcomes, risks, and complications of resuscitation • effectively assess, diagnose, and manage acute undifferentiated clinical presentations, including oncological emergencies • identify unwell patients that can be safely managed outside of hospital, and initiate robust and safe management for said patients • select investigations that ensure maximum patient safety through excluding or diagnosing critical patient issues, avoiding wasteful and morbid investigations that will not improve patient care • optimise medical management before, during, and after operations	• recognise seriously unwell patients requiring immediate care • apply basic life support as indicated • identify general medical principles of caring for patients with undifferentiated and undiagnosed conditions • identify potential causes of current deterioration, and comply with escalation protocols • facilitate initial tests to assist in diagnosis, and develop management plans for immediate treatment • document information to outline the rationale for clinical decisions and action plans • assess perioperative and periprocedural patients

[8] References to patients in the remainder of this document may include their families whānau and/or carers.

	• develop plans of multidisciplinary treatment, rehabilitation, and secondary prevention following acute events, including consideration of prognosis and patient preferences • systematically identify causes of acute deterioration in health status and levels of physical and cognitive functioning • manage escalations, de-escalations, and transitions of care in a proactive and timely manner • provide clear and effective discharge summaries with recommendations for ongoing care	
Communication	• communicate clearly with other team members, and coordinate efforts of multidisciplinary team members • use closed-loop and clear communication with other health care team members during resuscitation • facilitate early communication with patients, their families, whānau, carers, and health care team members to allow shared decision making • negotiate realistic treatment goals, and determine and explain the expected prognoses and outcomes • employ communication strategies appropriate for younger patients or those with cognitive difficulties • explain the situation to patients in an understandable, sensitive, and supportive manner, avoiding jargon and confirming patients' comprehension • determine the level of health literacy of individual patients, and their level of understanding of agreed care decisions	• demonstrate communication skills to sufficiently support the function of multidisciplinary teams • determine patients' understanding of their diseases and what they perceive as the most desirable goals of care
Quality and safety	• maintain up-to-date certification in advanced life support • use clinical information technology systems for conducting prospective and retrospective clinical audits • analyse adverse incidents and sentinel events to identify system failures and contributing factors • evaluate and explain the benefits and risks of clinical interventions based on individual patients' circumstances	• evaluate the quality of processes through well-designed audits • recognise the risks and benefits of operative interventions • evaluate the quality and safety processes implemented within the workplace, and identify gaps in their structure • raise appropriate issues for review at morbidity and mortality meetings

	• identify evidence-based practice gaps using clinical indicators, and implement changes to improve patients' outcomes • document treatment given without consent in an emergency according to local guidelines • coordinate and encourage innovation, and objectively evaluate improvement initiatives for outcomes and sustainability	
Teaching and learning	• demonstrate effective supervision skills and teaching methods that are adapted to the context of the training • encourage questioning among junior colleagues and students in response to unanswered clinical questions • seek guidance and feedback from health care teams to reflect on encounters and improve future patients' care	• mentor and train others to enhance team effectiveness • provide constructive feedback to junior colleagues to contribute to improvements in individuals' skills • coordinate and supervise junior colleagues from the emergency department and the wards
Research	• select studies based on optimal trial design, freedom from bias, and precision of measurement • evaluate the value of treatments in terms of relative and absolute benefits, cost, potential patient harm, and feasibility • evaluate the applicability of the results of clinical studies to the circumstances of individual patients, especially those with multiple comorbidities • specify research evidence to the needs of individual patients	• demonstrate efficient searching of literature databases to retrieve evidence • use information from credible sources to aid in decision making • refer to evidence-based clinical guidelines and protocols for acutely unwell patients • demonstrate an understanding of the limitations of the evidence and the challenges of applying research in daily practice
Cultural safety	• negotiate health care decisions in a culturally appropriate way by considering variation in family structures, cultures, religion, gender identity, sexual orientation, and belief systems • integrate culturally appropriate care of Māori and Aboriginal and Torres Strait Islander peoples into patients' management • consider cultural, ethical, and religious values and beliefs in the assessment and management of acutely unwell patients and when leading multidisciplinary teams	• practise cultural competency appropriate for the community serviced • proactively identify barriers to access to healthcare
Ethics and professional behaviour	• consider the consequences of delivering treatment that is deemed futile, directing to other care as appropriate	• communicate medical management plans as part of multidisciplinary plans

	• advise patients of their rights to refuse medical therapy, including life-sustaining treatment • develop management plans that are based on medical assessments of the clinical conditions and multidisciplinary assessments of functional capacity • facilitate interactions within multidisciplinary teams, respecting values, encouraging involvement, and engaging all participants in decision making • demonstrate critical reflection on personal beliefs and attitudes, including how these may affect patient care and health care policy	• establish, where possible, patients' wishes and preferences about care • contribute to building a productive culture within teams
Judgement and decision making	• recognise the need for escalation of care, and escalate to appropriate staff or services • integrate evidence related to questions of diagnosis, therapy, prognosis, risks, and cause into clinical decision making • reconcile conflicting advice from other specialties, applying judgement in making clinical decisions in the presence of uncertainty • use care pathways effectively, including identifying reasons for variations in care	• involve additional staff to assist in a timely fashion when required • recognise personal limitations and seek help in an appropriate way when required
Leadership, management, and teamwork	• work collaboratively with staff in the emergency department, intensive care, and other subspecialty inpatient units • manage the transition of acute medical patients through their hospital journey • lead a team by providing engagement while maintaining a focus on outcomes	• collaborate with and engage other team members, based on their roles and skills • ensure appropriate multidisciplinary assessment and management • encourage an environment of openness and respect to lead effective teams
Health policy, systems, and advocacy	• use a considered and rational approach to the responsible use of resources, balancing costs against outcomes • prioritise patient care based on need, and consider available health care resources • collaborate with emergency medicine staff and other colleagues to develop policies and protocols for the investigation and management of common acute medical problems	• identify the systems for the escalation of care for deteriorating patients • recognise the role of clinician leadership and advocacy in appraising and redesigning systems of care that lead to better patient outcomes

Learning goal 7: Longitudinal care, including management of transitions

Theme	Longitudinal care, including management of transitions	
Title	**Manage and coordinate the longitudinal care and appropriate transitions in care of patients with chronic illness, disability, and/or long-term health issues**	
Description	This activity requires the ability to: • develop management plans and goals in consultation with patients[9] • administer chronic and advanced conditions, complications, disabilities, and comorbidities • collaborate with other health care providers to provide evidence-based, patient-centred, optimal management • facilitate patients' self-management and self-monitoring • identify the appropriate health care providers and other stakeholders with whom to exchange pertinent, contextually appropriate, and relevant patient information • facilitate transitions of patient care to ensure optimal continuity of care between providers and settings, within the context of the patient's goals of care and needs • collaborate within the broader health policy context	
Behaviours		
Professional practice framework domain	**Ready to perform without supervision** Expected behaviours of a trainee who can routinely perform this activity without needing supervision The trainee will:	**Requires some supervision** Possible behaviours of a trainee who needs some supervision to perform this activity The trainee may:
Medical expertise	• regularly assess and review care plans for patients based on short- and long-term clinical and quality-of-life goals • provide documentation on patients' presentation, management, and progress, including key points of diagnosis, goals of care, and decision making to inform coordination of care • ensure patients contribute to their needs assessments and care planning • monitor treatment outcomes, effectiveness, and adverse events • anticipate possible changes in patients' conditions, and formulate management plans • facilitate optimal transitions in care for patients	• assess patients' knowledge, beliefs, concerns, and daily behaviours related to their medical condition/s and/or disabilities and their management • recognise the details of patients' medical conditions, illness severity, and potential emerging issues • contribute to medical record entries on histories, examinations, and management plans in a way that is accurate and sufficient as a member of multidisciplinary teams

[9] References to patients in the remainder of this document may include their families whānau and/or carers.

Communication	• educate patients about their condition and expected prognosis or trajectory • encourage patients' self-management through education to take greater responsibility for their care, and support problem solving • communicate with multidisciplinary team members, and involve patients in the dialogue • communicate with patients about their management plans and relevant transitions of care, and engage and support these parties in decision making • write detailed and relevant medical record entries and comprehensive handover documents, including accurate clinical assessments and management plans • initiate and maintain verbal communication with other health professionals as required • provide support for patients' psychological, spiritual, and/or emotional concerns	• provide healthy lifestyle advice and information to patients on the importance of self-management • work in partnership with patients, and motivate them to comply with agreed care plans • communicate clearly with clinicians and other health professionals • communicate accurately and in a timely manner to ensure continuity and quality of care, including during transitions of care settings and providers
Quality and safety	• use innovative models of clinical care, including telehealth and digitally integrated support services • review medicine use, and ensure patients understand safe medication administration to prevent errors • support patients' self-management by balancing between minimising risk and helping patients to become more independent • participate in quality improvement processes impacting on patients' abilities to undertake normal activities of daily living • demonstrate understanding of the medicolegal context of written communications, as well as relevant consent requirements and processes for the release and exchange of information • identify patients at risk of poor transitions of care, and identify strategies to mitigate this risk	• participate in continuous quality improvement processes and clinical audits • identify activities that may improve patients' quality of life and experience of health care • keep patient information secure, adhering to relevant privacy legislation • ensure clinical handovers are complete and accurate
Teaching and learning	• educate patients to recognise and monitor their symptoms, and undertake strategies to assist their recovery	• use clinical practice guidelines for chronic diseases management • provide opportunities to teach junior colleagues

	• contribute to the development of clinical pathways based on current evidence and guidelines • integrate clinical education in handovers and transition of care meetings	
Research	• prepare reviews of literature based on patient encounters to present at journal club meetings • search for and critically appraise evidence to resolve clinical areas of uncertainty	• search literature using problem / intervention / comparison / outcome (PICO) format • recognise appropriate use of review articles
Cultural safety	• communicate with careful consideration to health literacy, language barriers, and culture, respecting patient choices • recognise the timing, location, privacy, and appropriateness of sharing information with patients • encourage patients from culturally and linguistically diverse backgrounds to join local networks to receive the support needed for long-term self-management	• provide culturally safe medical care • consider whether an interpreter is required
Ethics and professional behaviour	• disclose and share only contextually appropriate medical and personal information, consistent with privacy laws and confidentiality and professional guidelines • use consent processes for the release and exchange of health information • assess patients' decision-making capacity, and appropriately identify and use alternative decision makers	• share information between relevant service providers • acknowledge and respect the contributing role of patients, their families, whānau, carers, and other health professionals in patient care
Judgement and decision making	• ensure patient care occurs in the most appropriate facility or setting • implement appropriate clinical care pathways in accordance with up-to-date clinical evidence • recognise patients' needs in terms of both internal resources and external support on long-term health care journeys	• recognise personal limitations and seek help in an appropriate way when required
Leadership, management, and teamwork	• coordinate whole-person care through all stages of the patients' care journey • use a multidisciplinary approach to manage patient care, showing respect for the roles and expertise of all involved health professionals and care providers	• participate in multidisciplinary team meetings • recognise factors which may impact upon optimal transfer and continuity of care

	• develop collaborative relationships with patients, their families, whānau, carers, and other health professionals	
Health policy, systems, and advocacy	• use health screening for early intervention • help patients access relevant initiatives, supports, and services • participate in government and local initiatives to reduce hospital admissions and improve patients' quality of life	• demonstrate awareness of government initiatives and services available for patients with cancer and their carers, and display knowledge of how to access them

Learning goal 8: Communication with patients

Theme	Communication with patients	
Title	**Discuss diagnoses, management plans, and prognosis with patients**	
Description	This activity requires the ability to: • select a suitable context, and include family and/or carers and other team members • devise a patient-centred perspective, including adjusting for cognition and disabilities • select and use appropriate communication strategies • structure conversations intentionally • negotiate a mutually agreed management plan • verify patient[10] understanding of information • develop and implement a management plan • discuss expected life expectancy and end-of-life care preferences • document the conversation	
Behaviours		
Professional practice framework domain	**Ready to perform without supervision** Expected behaviours of a trainee who can routinely perform this activity without needing supervision The trainee will:	**Requires some supervision** Possible behaviours of a trainee who needs some supervision to perform this activity The trainee may:
Medical expertise	• seek to understand the concerns and goals of patients, and plan management in partnership with them • provide information to patients about all aspects of their management to enable them to make informed decisions about diagnostic, therapeutic, and management options, including at the end of life • anticipate and be able to correct any misunderstandings patients may have about their conditions and/or risk factors	• apply knowledge of the scientific basis of health and disease to the management of patients • demonstrate an understanding of the clinical problems being discussed • formulate management plans in partnership with patients
Communication	• use appropriate communication strategies for communication, such as emails, face-to-face, or phone calls • provide information to patients in plain language, avoiding jargon, acronyms, and complex medical terms	• select appropriate modes of communication • engage patients in discussions, avoiding the use of jargon • check patients' understanding of information • collaborate with patient liaison officers as required

[10] References to patients in the remainder of this document may include their families whānau and/or carers.

	• elicit patients' views, concerns, and preferences, promoting rapport • encourage questions, and answer them thoroughly • ask patients to share their thoughts or explain their management plan in their own words, to verify understanding • convey information considerately and sensitively to patients, seeking clarification if unsure of how best to proceed • treat children and young people respectfully, and listen to their views • recognise the role of families, whānau, and carers in decision making, and encourage patients to involve them when appropriate • share confronting information, including prognoses, in a compassionate, clear way and in a supportive environment • ensure communication is documented in a clear and accurate way, and in an appropriate format	• adapt communication style in response to patients' age, developmental level, and cognitive, physical, cultural, socioeconomic, and situational factors
Quality and safety	• discuss with patients the potential benefits and harms of their management options • provide information to patients in a way they can understand before asking for their consent • consider young people's capacity for decision making and consent • recognise and take precautions where patients may be vulnerable, such as issues of child protection, self-harm, or elder abuse • participate in processes to manage patient complaints	• inform patients of the material risks associated with proposed management plans • treat information about patients as confidential
Teaching and learning	• discuss the aetiology of diseases and explain the purpose, nature, and extent of the investigation and treatment options • produce informed consent or other valid authority before involving patients in teaching • role model good communication strategies and techniques for junior colleagues and learners	• respond appropriately to information sourced by patients, and to patients' knowledge regarding their condition
Research	• provide information to patients that is based on guidelines issued by the National Health and Medical Research Council and/or Health	• demonstrate an understanding of the limitations of the evidence and the challenges of applying research in daily practice

	Research Council of Aotearoa New Zealand • provide information to patients in a way they can understand before asking for their consent to participate in research	• refer to evidence-based clinical guidelines
Cultural safety	• effectively communicate with members of cultural groups, including Māori and Aboriginal and Torres Strait Islander peoples, by meeting patients' specific language, cultural, and communication needs • use qualified language interpreters or cultural interpreters to help meet patients' communication needs • provide plain language and culturally appropriate written materials to patients when possible	• identify when to use interpreters • allow enough time for communication across linguistic and cultural barriers
Ethics and professional behaviour	• encourage and support patients to be well informed about their health, and to use this information wisely when they make decisions • encourage and support patients and, when relevant, their families, whānau or carers, in caring for themselves and managing their health • demonstrate respectful professional relationships with patients • prioritise honesty, patients' welfare, and community benefit above self-interest • develop a high standard of personal conduct, consistent with professional and community expectations • support patients' rights to seek second opinions	• respect the preferences of patients • communicate appropriately, consistent with the context, and respect patients' needs and preferences • maximise patient autonomy, and support their decision making • avoid sexual, intimate, and financial relationships with patients • demonstrate a caring attitude towards patients • respect patients, including protecting their rights to privacy and confidentiality • behave equitably towards all, irrespective of gender, age, culture, socioeconomic status, sexual preferences, beliefs, illness-related behaviours, or the illness itself • use social media ethically and according to legal obligations to protect patients' confidentiality and privacy
Leadership, management, and teamwork	• communicate effectively with team members involved in patients' care • discuss medical assessments, treatment plans, and investigations with primary and other care teams, to align them with the appropriate resources • facilitate an environment where all team members feel they can contribute and their opinion is valued	• answer questions from team members • summarise, clarify, and communicate responsibilities of health care team members • keep health care team members focused on patient outcomes

Health policy, systems, and advocacy	• collaborate with other services, such as community health centres and consumer organisations, to help patients navigate the healthcare system	• communicate with and involve other health professionals as appropriate

Learning goal 9: Prescribing

Theme	Prescribing	
Title	**Prescribe therapies tailored to patients' needs and conditions**	
Description	This activity requires the ability to: • collect and interpret medication histories • choose appropriate medicines based on an understanding of pharmacology, taking into consideration age, comorbidities, potential drug interactions, risks, and benefits • communicate with patients[11] about the benefits and risks of proposed therapies • explain instructions on medication administration effects and side effects • monitor medicines for efficacy and safety • review medicines and interactions, and cease where appropriate • collaborate with pharmacists	
Behaviours		
Professional practice framework domain	**Ready to perform without supervision** Expected behaviours of a trainee who can routinely perform this activity without needing supervision	**Requires some supervision** Possible behaviours of a trainee who needs some supervision to perform this activity
	The trainee will:	The trainee may:
Medical expertise	• identify the patients' disorders requiring pharmacotherapy • consider non-pharmacologic therapies • consider age, chronic disease status, lifestyle factors, allergies, potential drug interactions, and patient preference prior to prescribing new medications • plan for follow-up and monitoring • understand the mechanism of action, pharmacodynamics, and pharmacokinetics of chemotherapeutic agents	• be aware of potential side effects and practical prescription points, such as medication compatibility and monitoring in response to therapies • select medicines for common conditions appropriately, safely, and accurately • demonstrate understanding of the rationale, risks, benefits, side effects, contraindications, dosage, and drug interactions • identify and manage adverse events
Communication	• discuss and evaluate the risks, benefits, and rationale of treatment options, making decisions in partnership with patients • describe how the medication should and should not be administered, including any important relationships to food, time of day, and other medicines being taken • write clear and legible prescriptions in plain language,	• discuss and explain the rationale for treatment options with patients • explain the benefits and burdens of therapies, considering patients' individual circumstances • write clearly legible scripts or charts using generic names of the required medication in full, including mg / kg / dose information and all legally required information

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	and include specific indications for the anticipated duration of therapy • educate patients about the intended use, expected outcomes, and potential side effects for each prescribed medication, addressing the common, rare, and serious effects at the time of prescribing to improve patients' adherence to pharmacotherapy • ensure patients' understanding by repeating back pertinent information, such as when to return for monitoring and whether therapy continues after this single prescription • identify patients' concerns and expectations, and explain how medicines might affect their everyday lives • anticipate queries to help enhance the likelihood of medicines being taken as advised • ensure appropriate information is available at all steps of the medicine management pathway	• seek further advice from experienced clinicians or pharmacists when appropriate
Quality and safety	• review medicines regularly to reduce non‑adherence, and monitor treatment effectiveness, possible side effects, and drug interactions, ceasing unnecessary medicines • use electronic prescribing tools where available, and access electronic drug references to prevent errors caused by drug interactions and poor handwriting • prescribe new medicines only when they have been demonstrated to be safer or more effective at improving patient-oriented outcomes than existing medicines • participate in clinical audits to improve prescribing behaviour, including an approach to polypharmacy and prescribing cascade • report suspected adverse events to the Advisory Committee on Medicines, and record it in patients' medical records	• check the dose before prescribing • monitor side effects of medicines prescribed • identify medication errors and institute appropriate measures • use electronic prescribing systems safely • rationalise medicines to avoid polypharmacy
Teaching and learning	• ensure patients understand management plans, including adherence issues • use appropriate guidelines and evidence-based medicine	• undertake continuing professional development to maintain currency with prescribing guidelines

	resources to maintain a working knowledge of current medicines, keeping up to date on new medicines • use continuously updated software for computers and electronic prescribing programs	• reflect on prescribing, and seek feedback from a supervisor
Research	• critically appraise research material to ensure any new medicine improves patient-oriented outcomes • use sources of independent information about medicines that provide accurate summaries of the available evidence on new medicines • consider enrolment in clinical trials, and understand the rational for trial medications	• make therapeutic decisions according to the best evidence • recognise where evidence is limited, compromised, or subject to bias or conflict of interest • recognise the critical role of clinical trials in cancer drug development
Cultural safety	• explore patients' understanding of and preferences for non-pharmacological and pharmacological management • offer patients effective choices based on their expectations of treatment, health beliefs, and cost • interpret and explain information to patients at the appropriate level of their health literacy	• acknowledge how patients' cultural and religious backgrounds, gender identity, sexual orientation, attitudes, and beliefs, might influence the acceptability of pharmacological and non-pharmacological management approaches
Ethics and professional behaviour	• provide information to patients about: » how to take the medicine » potential side effects » what the medicine is for » what the medicine does » when it should be stopped • make prescribing decisions based on good safety data when the benefits outweigh the risks • demonstrate understanding of the ethical implications of pharmaceutical industry-funded research and marketing	• consider the efficacy of medicines in treating illnesses, including the relative merits of different non-pharmacological and pharmacological approaches • follow regulatory and legal requirements and limitations regarding prescribing • follow organisational policies regarding pharmaceutical representative visits and drug marketing
Judgement and decision making	• use a systematic approach to select treatment options • use medicines safely and effectively to get the best possible results • choose suitable medicines only if medicines are considered necessary and will benefit patients • prescribe medicines appropriately to patients' clinical needs, in doses that meet their individual requirements, for a sufficient	• recognise personal limitations and seek help in an appropriate way when required • consider the following factors for all medicines: » contraindications » cost to patients and the community » funding and regulatory considerations » generic versus brand medicines » interactions risk-benefit analysis

	length of time, with the lowest cost to them • evaluate new medicines in relation to their possible efficacy and safety profile for individual patients	
Leadership, management, and teamwork	• interact with medical, pharmacy, and nursing staff to ensure safe and effective medicine use	• work collaboratively with pharmacists • participate in medication safety and morbidity and mortality meetings
Health policy, systems, and advocacy	• choose medicines in relation to comparative efficacy, safety, and cost-effectiveness against medicines already on the market • recognise the processes of drug approval and marketing in Australia / Aotearoa New Zealand • prescribe for individual patients, considering history, current medicines, allergies, and preferences	• prescribe in accordance with the organisational policy • explain issues surrounding cancer drug approval and prescribing, including equity of access to cancer care and drugs

Learning goal 10: Investigations and procedures

Theme	Investigations and procedures	
Title	**Select, organise, and interpret investigations and procedures**	
Description	This activity requires the ability to: • select, plan, and use evidence-based clinically appropriate investigations • select, plan, and perform procedures if appropriate • produce informed consent, and perform procedures and post-procedure care • evaluate the anticipated value of the investigation or procedure • collaborate with patients to support the decisions that are right for them • interpret the results and outcomes of investigations • communicate the outcome of investigations and procedures to patients[12]	
Behaviours		
Professional practice framework domain	**Ready to perform without supervision** Expected behaviours of a trainee who can routinely perform this activity without needing supervision The trainee will:	**Requires some supervision** Possible behaviours of a trainee who needs some supervision to perform this activity The trainee may:
Medical expertise	• choose evidence-based investigations, using them to complement comprehensive clinical assessments • assess patients' concerns, and determine the need for specific tests that are likely to result in overall benefits • recognise and correctly interpret abnormal findings, considering patients' specific circumstances, and act accordingly • determine procedures by assessing patient-specific factors, risks, and alternatives, and perform if appropriate • avoid wasteful and morbid investigations that will not improve patient care	• provide rationale for investigations and indications for procedures • recognise the significance of abnormal test results, and act on these • interpret results of common diagnostic investigations and procedures • consider patient factors and comorbidities • consider age-specific reference ranges
Communication	• explain to patients the potential benefits, risks, costs, burdens, and side effects of each option, including the option to have no investigations • use clear language, ensure patient understanding, and confirm their agreement to proposed investigations	• discuss the indications, risks, benefits, and complications of investigations and procedures with patients • arrange investigations and procedures, providing accurate and informative referrals, and liaise with other services where appropriate

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	• provide explanations on the rationale for individual test ordering • use written, visual material, or other aids that are accurate and up to date to support discussions with patients • explain findings or possible outcomes of investigations to patients • deliver potentially distressing information to patients with care and empathy • address patients' concerns relating to investigations and procedures, and provide the opportunity to ask questions	• explain the results of investigations to patients
Quality and safety	• identify adverse outcomes that may result from a proposed investigation, focusing on patients' individual situations • document the notification and disclosure of adverse outcomes appropriately • ensure appropriate informed consent is obtained before undertaking any procedures	• consider safety aspects of investigations and procedures when planning them • seek help with interpretation of test results for less common tests or indications or unexpected results
Teaching and learning	• use appropriate guidelines, evidence sources, and decision-making support tools • participate in ongoing self-education to improve test ordering strategies as per evidence-based guidelines • provide skills training, and specific and constructive feedback to junior colleagues	• participate in continued professional development
Research	• provide patients with relevant information if a proposed investigation is part of a research program • obtain written consent from patients if the investigation is part of a research program	• refer to evidence-based clinical guidelines • consult current research on investigations
Cultural safety	• recognise patients' views and preferences about any proposed investigation and the adverse outcomes they are most concerned about	• consider how patients' gender identity, sexual orientation, cultural and religious backgrounds, attitudes, and beliefs might influence the acceptability of proposed investigations
Ethics and professional behaviour	• practice within the scope of authority given by patients (with the exception of emergencies) • recognise own limitations and seek assistance when required	• identify appropriate proxy decision makers when required • choose not to investigate in situations where it is not appropriate for ethical reasons

	• respect patients' decisions to refuse investigations, even if their decisions may not be appropriate or evidence based • advise patients if there are additional costs, which patients may wish to clarify before proceeding • explain the expected benefits, as well as the potential risks, of any proposed investigation before obtaining informed consent or other valid authority • demonstrate comprehension of genetic findings from investigations, and the complexities of subsequent disclosure	• practise within current ethical and professional frameworks • practise within own limits, and seek help when needed • involve patients in decision making regarding investigations, obtaining the appropriate informed consent, including financial consent, if necessary
Judgement and decision making	• evaluate the costs, benefits, and potential risks of each investigation or procedure in a clinical situation • adjust the investigative path depending on test results received • consider whether patients' conditions may get worse or better if no tests are selected	• choose the most appropriate investigation for the clinical scenario in discussion with patients • recognise personal limitations and seek help in an appropriate way when required
Leadership, management, and teamwork	• consider the role other members of the healthcare team might play, and what other sources of information and support are available • ensure results are checked in a timely manner, taking responsibility for following up results	• demonstrate understanding of what parts of an investigation are provided by different doctors or health professionals
Health policy, systems, and advocacy	• select and justify investigations regarding the pathological basis of disease, appropriateness, utility, safety, and cost effectiveness • consider resource utilisation through peer review	

Learning goal 11: Clinic management

Theme	Clinic management	
Title	**Manage an outpatient clinic**	
Description	This activity requires the ability to: • facilitate medical procedures and treatments • facilitate clinic services, including appropriate resource allocation, and use of time and services (e.g. telehealth) • measure quality improvement activities • communicate with patients[13], other health professionals, and team members in an inclusive and supportive manner • prepare appropriate and timely documentation, correspondence, and referrals to other health practitioners • demonstrate problem-solving skills • use public resources responsibly	
Behaviours		
Professional practice framework domain	**Ready to perform without supervision** Expected behaviours of a trainee who can routinely perform this activity without needing supervision The trainee will:	**Requires some supervision** Possible behaviours of a trainee who needs some supervision to perform this activity The trainee may:
Medical expertise	• effectively identify and address current clinical concerns, as well as longer-term clinical objectives, as appropriate to patients' context • evaluate environmental and lifestyle health risks, and advocate for healthy lifestyle choices • maintain timely documentation on patients' presentation, management, and progress, including creation of accurate and appropriately prioritised problem lists in clinical notes or as part of ambulatory care reviews	• demonstrate understanding of the importance of prevention, early detection, health maintenance, and chronic condition management
Communication	• help patients navigate the healthcare system to improve access to care by collaboration with other services, such as community health centres and consumer organisations • link patients to specific community-based health programs and group education programs • demonstrate compassion when dealing with clinical management	• wherever practical, meet patients' specific language and communication needs • facilitate appropriate use of interpreter services and translated materials

[13] References to patients in the remainder of this document may include their families whānau and/or carers.

	• use appropriate written and verbal communication with other health practitioners and administrators • maintain privacy and confidentiality • demonstrate compassion and empathy in responding to verbal and nonverbal cues and emotion while giving medical information	
Quality and safety	• practice health care that maximises patient safety • adopt a systematic approach to the review and improvement of professional practice in the outpatient clinic setting • identify aspects of service provision that may be a risk to patients' safety • ensure patients are informed about fees and charges	• take reasonable steps to address issues if patients' safety may be compromised • recognise a systematic approach to improving the quality and safety of health care • participate in organisational quality and safety activities, including clinical incident reviews
Teaching and learning	• evaluate own professional practice • demonstrate skills in educating junior colleagues • contribute to the generation of knowledge • maintain professional continuing education standards	• recognise the limits of personal expertise, and involve other professionals as needed to contribute to patients' care • use information technology appropriately as a resource for modern medical practice
Research	• obtain informed consent or other valid authority before involving patients in research • inform patients about their rights, the purpose of the research, the procedures to be undergone, and the potential risks and benefits of participation before obtaining consent • identify up-to-date knowledge of availability of clinical trials relevant to patients	• allow patients to make informed and voluntary decisions to participate in research • refer to evidence-based guidelines to assist with decision making
Cultural safety	• apply knowledge of the cultural needs of the community serving, and how to shape service to those people • mitigate the influence of own culture and beliefs on interactions with patients and decision making • adapt practice to improve patient engagement and health outcomes	• acknowledge the social, economic, cultural, and behavioural factors influencing health, both at individual and population levels
Ethics and professional behaviour	• identify and respect the boundaries that define professional and therapeutic relationships • comply with the legal requirements of preparing and managing documentation	• identify the responsibility to protect and advance the health and wellbeing of individuals and communities • maintain the confidentiality of documentation, and store clinical notes appropriately

	• respect the roles and expertise of other health professionals • demonstrate awareness of financial and other conflicts of interest • manage factors of time and workload in a professional manner: » clinic schedule » feasibility » punctuality • openly disclose and report errors	• ensure that the use of social media is consistent with ethical and legal obligations
Judgement and decision making	• integrate prevention, early detection, health maintenance, and chronic condition management, where relevant, into clinical practice • work to achieve optimal and cost-effective patient care that allows maximum benefit from the available resources • triage referrals appropriately by assessing urgency of care required • recognise the need to refer to other health professionals	• identify the appropriate use of human resources, diagnostic interventions, therapeutic modalities, and health care facilities • identify general principles for local modalities
Leadership, management, and teamwork	• prepare for and conduct clinical encounters in a well-organised and time-efficient manner • work effectively as a member of multidisciplinary teams or other professional groups • ensure that all important discussions with colleagues, multidisciplinary team members, and patients are appropriately documented • review discharge summaries, notes, and other communications written by junior colleagues • support colleagues who raise concerns about patients' safety	• attend relevant clinical meetings regularly
Health policy, systems, and advocacy	• demonstrate capacity to engage in the surveillance and monitoring of the health status of populations in the outpatient setting • maintain good relationships with health agencies and services • apply the principles of efficient and equitable allocation of resources to meet individual, community, and national health needs	• identify common population health screening and prevention approaches

Learning goal 12: Critical appraisal of evidence

Theme	Critical appraisal of evidence	
Title	**Critically appraise evidence to provide the best cancer care, ensuring patient safety, wise allocation of resources, and advancement of research through evidence-based practice**	
Description	This activity requires the ability to: • examine research evidence to judge its value and relevance in a clinical context • prepare informed decisions about cancer treatments regarding efficacy and toxicities of treatment using the best available evidence • identify biases and limitations in research findings to prevent adoption of ineffective, clinically insignificant, or potentially harmful treatments • prioritise interventions with proven efficacy to optimise resource allocations and reduce health care costs • facilitate shared decision making between patients and clinicians using the best available evidence • identify gaps in existing knowledge to improve future research and oncology studies • demonstrate institutional policy and guidelines are evidence-based and up to date.	
Behaviours		
Professional practice framework domain	**Ready to perform without supervision** Expected behaviours of a trainee who can routinely perform this activity without needing supervision	**Requires some supervision** Possible behaviours of a trainee who needs some supervision to perform this activity
	The trainee will:	The trainee may:
Medical expertise	• demonstrate proficiency in evidence-based medicine • use research critically to provide considered expert opinions in all aspects of clinical care, including at multidisciplinary team meetings • demonstrate the ability to have evidence-based discussions with colleagues in and out of the specialty where a difference in opinion is observed	• discuss key findings from landmark trials related to cancer management • keep up to date with the publication and presentation of practice-changing evidence with reference to clinical cases
Communication	• facilitate informed and shared decision making with patients[14] and their families, whānau and/or carers, including in-depth discussion of available evidence if required or appropriate • communicate evidence in a way that is understandable for patients • communicate effectively with multidisciplinary members,	• refer to the available evidence when making shared decisions with patients • recognise the timing, location, privacy, and appropriateness of sharing information with patients

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	including allied health staff, scientists, and statisticians, regarding best practice updates • emphasise the use of clinically proven information to inform critical patient care decisions • acknowledge the significance of evidence-based clinical information in guiding patient care decisions	
Quality and safety	• document the rationale behind decisions, including factors considered, evidence, and research findings and patients' input as reference for future care	• demonstrate awareness of updated consensus treatment guidelines and standards of care, with an ability to compare research findings with established best practices
Teaching and learning	• contribute to teaching sessions to ensure critical appraisal skills are transferred successfully to the other members of the health care team	• proactively seek to improve own ability for critical appraisal
Research	• demonstrate proficiency in the principles of evidence-based medicine, such as hierarchy of evidence, systematic reviews, and critical appraisal tools, to evaluate research quality • appreciate and discuss the limitations of published research • identify gaps and evidence that will lead to future research	• demonstrate understanding of research methodology, such as study design, statistical analysis, and data interpretation, to identify biases, flaws, and limitations in research studies
Cultural safety	• communicate with careful consideration to health literacy, language barriers, and culture, respecting patients' choices • consider gaps in evidence surrounding cultural groups, and consider ways to improve equity in clinical trial opportunities	• recognise the barriers to inclusion in clinical trials and the limitations of evidence due to cultural groups' underrepresentation
Ethics and professional behaviour	• reflect on ethical implications of applying evidence or research findings, especially in cases where evidence may be limited, experimental, or controversial • apply self-learning and share updates on critical appraisal techniques, new evidence, and best practices to ensure own knowledge remains current	• understand the ethical aspects of oncology research, such as patient consent, research ethic boards, and conflicts of interest, to ensure research integrity
Judgement and decision making	• determine the applicability of research findings to patients, considering factors such as age, comorbidities, and patients' treatment preferences • consider the potential benefits and risks of implementing treatments based on research findings or evidence in clinical	• assess the quality of research, including study design, methodology, and data analysis, to determine reliability and validity of presented evidence

	practice, considering the impact on patients' outcome, quality of life, and potential adverse effects • recognise the importance of being compassionate	
Leadership, management, and teamwork	• communicate with multidisciplinary members effectively to facilitate exchange of ideas and perspectives on new evidence • identify areas of improvement and implement evidence-based changes in own practice and/or institution	• promote best practice treatment based on evidence-based findings
Health policy, systems, and advocacy	• provide recommendations for local and institutional guidelines based on best available evidence • make effective decisions on resource allocation for treatment options with best efficacy, considering adverse effects and impact on quality of life • advocate for improved access to new diagnostics, treatments, and research funding	• promote shared decision making and patient-centred care based on best clinical evidence

Knowledge guides



Knowledge guides provide detailed guidance to trainees on the important topics and concepts trainees need to understand to become experts in their chosen specialty.

Trainees are not expected to be experts in all areas or have experience related to all items in these guides.

#	Title
13	**Foundations of oncology**
14	**Oncological emergencies and acute care**
15	**Management of specific malignancies**
16	**Anticancer therapies**

EPIDEMIOLOGY, PATHOPHYSIOLOGY, AND CLINICAL SCIENCES

Advanced Trainees will have in-depth knowledge of the topics listed under each clinical sciences heading.

For the statistical and epidemiological concepts listed, trainees should be able to describe the underlying rationale, the indications for using one test or method over another, and the calculations required to generate descriptive statistics.

Cancer biology

- Cancer cell properties that differentiate it from normal cell biology:
  - hallmarks of cancer
- Carcinogenesis and tumour growth, including mechanisms of:
  - angiogenesis
  - metastasis
  - proliferation
  - tumour cell invasion
- Cell cycle and programmed cell death:
  - control by oncogenesis
  - interaction with therapy
- Cell mechanics, including cell adhesion and contact inhibition
- Gene regulation and dysregulation
- Intracellular signalling
- Mechanisms of drug resistance:
  - changes in drug transport
  - intrinsic versus inherited
  - mutations in target protein or pathway
- Molecular alterations as they relate to therapeutic targets
- Protein function and aberration
- Tumour immunology:
  - concepts of:
    - cellular
    - humoral
    - immune checkpoints that can be therapeutically targeted
    - immune system components
    - immuno-evasion
    - immuno-surveillance
  - regulatory action of cytokines on the immune system
  - tumour and host immune systems inter-relationship:
    - action of cytokines on tumours
    - antigenicity
    - immune-mediated antitumour cytotoxicity

Epidemiology of cancer

- Interpret measures of frequency and trends of disease, such as:
  - incidence
  - mortality and morbidity:
    - associated with the most common malignancies worldwide and within Australia / Aotearoa New Zealand
  - odds ratio
  - prevalence
  - relative risk
- Place epidemiological data from local and international sources into context

Principles of cancer screening

- Cancer development:
  - » methods of prevention
- Preventive measures for cancer development:
  - » cancer control programs:
    - national
    - worldwide
  - » health promotion
  - » national screening programs
  - » prophylactic interventions:
    - chemoprevention
    - surgery
    - vaccine
  - » resources available
- Promote health literacy for cancer prevention:
  - » cancer prevention strategies:
    - promote
    - recognise
  - » counsel patients[15] appropriately regarding risk factors for subsequent malignancy

Scientific foundations of oncology

- Aetiology of genetic and environmental factors in oncogenesis
- Identification of risk factors for subsequent malignancy, such as modifiable and non-modifiable risks

INVESTIGATIONS, PROCEDURES, AND CLINICAL ASSESSMENT TOOLS

Advanced Trainees will know the scientific foundation of each investigation and procedure, including relevant anatomy and physiology. They will be able to interpret the reported results of each investigation or procedure.

Advanced Trainees will know how to explain the investigation or procedure to patients, families, and carers, and be able to explain procedural risk and obtain informed consent where applicable.

- Biomarkers:
  - » predictive
  - » prognostic
- Indications for, and interpretation of, advanced molecular testing, such as:
  - » circulating tumour DNA
  - » next generation sequencing (NGS)
- Interpretation of histopathological results
- Omics, such as:
  - » genomic
  - » metabolomic
  - » proteomic

[15] References to patients in the remainder of this document may include their families, whānau and/or carers.

IMPORTANT SPECIFIC ISSUES

Advanced Trainees will identify important specialty-specific issues and the impact of these on diagnosis, management, and outcomes.

Communication

- Breaking bad news
- Cancer survivorship, such as:
  - » dietary
  - » exercise
  - » psychosocial wellbeing
  - » secondary malignancy risk
- Discuss:
  - » clinical trials
  - » end-of-life care, including voluntary assisted dying
  - » prognosis formulation and estimation, including the use of aids in the formulation, estimation, and explanation of prognosis, risks, and benefits of treatment options
- Unfunded / Novel therapy:
  - » embedded compassion-based practices
  - » management of complex family dynamics

Principles and conduct of oncology clinical trials and research

- Clinical trial design:
  - » eligibility
  - » end points:
    - ○ qualitative
    - ○ quantitative
  - » study types and their respective benefits and limitations:
    - ○ case reports
    - ○ differences between phase I, II, III, and IV studies
    - ○ meta-analysis
    - ○ observational studies
    - ○ randomised control trials
    - ○ registry analyses
    - ○ systematic reviews
- Conduct of clinical trials:
  - » adherence to protocol requirements and ensuring safe, patient-centred care in conduct and recording
  - » clinical trial assessments, such as:
    - ○ common terminology criteria for adverse events (CTCAE)
    - ○ response evaluation criteria in solid tumours (RECIST)
  - » ethics and governance
  - » Good Clinical Practice
- Interpretation and communication of statistical analyses in relation to clinical trials, and how it relates to clinical practice

KEY PRESENTATIONS AND CONDITIONS

Advanced Trainees will have a comprehensive depth of knowledge of these presentations and conditions.

Presentations

- Altered bowel habit
- Anorexia, malnutrition, and weight loss
- Dyspnoea / Cough
- Fatigue
- Fever
- Nausea
- Organ failure
- Malignant effusions
- Pain
- Psychospiritual crisis
- Weakness

Conditions

- Brain metastasis and raised intracranial pressure
- Cancer-related thromboses
- Cardiac tamponade
- Febrile neutropenia
- Severe acute electrolyte abnormalities of malignancy
- Severe immune-related complications of immunotherapy
- Spinal cord compression
- Superior vena cava obstruction
- Tumour lysis syndrome

For each presentation and condition, Advanced Trainees will **know how to:**

Synthesise

- recognise the clinical presentation
- identify relevant epidemiology, prevalence, pathophysiology, and clinical science
- take a comprehensive clinical history
- conduct an appropriate examination
- establish a differential diagnoses
- plan and arrange appropriate investigations
- consider the impact of illness and disease on patients[16] and their quality of life when developing a management plan

Manage

- provide evidence-based management
- prescribe therapies tailored to patients' needs and conditions
- recognise potential complications of disease and its management, and initiate preventative strategies
- involve multidisciplinary teams

Consider other factors

- identify individual and social factors and the impact of these on diagnosis and management

[16] References to patients in the remainder of this document may include their families whānau and/or carers.

LESS COMMON OR MORE COMPLEX PRESENTATIONS AND CONDITIONS Advanced Trainees will understand these presentations and conditions. Advanced Trainees will understand the resources that should be used to help manage patients with these presentations and conditions.	**Conditions** • Paraneoplastic syndromes	
EPIDEMIOLOGY, PATHOPHYSIOLOGY, AND CLINICAL SCIENCES Advanced Trainees will have a comprehensive depth of knowledge of the principles of the foundational sciences.	• Acknowledge: » contributing factors » emergencies » pathophysiology » risks of acute oncological presentations	
INVESTIGATIONS, PROCEDURES, AND CLINICAL ASSESSMENT TOOLS Advanced Trainees will know the scientific foundation of each investigation and procedure, including relevant anatomy and physiology. They will be able to interpret the reported results of each investigation or procedure. Advanced Trainees will know how to explain the investigation or procedure to patients, families, and carers, and be able to explain procedural risk and obtain informed consent where applicable.	• Diagnose, systematically assess, and manage acute oncological emergencies requiring urgent intervention • Manage a range of symptoms and syndromes associated with an initial presentation of malignancy, and formulate appropriate diagnostic and treatment plans • Recognise the limitations of diagnostic investigations **Clinical assessments tools** • Accurately stage cancers • Assessment of performance status: » Eastern Cooperative Oncology Group (ECOG) and Karnofsky Performance Scale (KPS) scores » frailty screening tools, as appropriate • Interpretation of diagnostic testing, such as: » biochemistry, haematology, and tumour markers » imaging » tissue pathology • Psychospiritual • Quality of life **Procedures** • Insertion of subcutaneous or intravenous devices for drug delivery • Lumbar puncture • Pleural and ascitic paracentesis and pleurodesis • Selection and interpretation of biopsy techniques to obtain diagnostic tissue	

IMPORTANT SPECIFIC ISSUES

Advanced Trainees will identify important specialty-specific issues and the impact of these on diagnosis and management and integrate these into care.

- Clinical trials in cancer:
  - consider suitability of clinical trials for all patients presenting with cancer
  - recognise vital role of research in advancing cancer care
- Fertility considerations in men and women of child-bearing potential
- Indications for urgent systemic therapy for acute symptomatic presentations of cancer
- Recognition of the impacts of cancer on a patient and their family:
  - cultural
  - financial
  - psychosocial
  - spiritual
- Recognition of the importance of:
  - a multidisciplinary approach to care
  - supportive care, including early introduction to palliative care teams

Learning goal 15 – Management of specific malignancies

Medical Oncology, Adult Medicine

KEY PRESENTATIONS AND CONDITIONS

Advanced Trainees will have a comprehensive depth of knowledge of these presentations and conditions.

- Breast cancer
- Cancer of unknown primary site
- Central nervous system malignancies:
  - high grade glioma
- Endocrine tumours:
  - neuroendocrine neoplasms
- Gastrointestinal cancers:
  - colon and rectal cancer
  - gastric cancer
  - gastroesophageal junction cancer
  - gastrointestinal stromal tumour
  - hepatobiliary cancers
  - oesophageal
  - pancreatic adenocarcinoma
- Genitourinary cancers:
  - malignant germ cell tumours of the adult male
  - prostate cancer
  - renal cell cancer
  - urothelial cancer
- Gynaecologic malignancies:
  - cervical cancer
  - endometrial cancer
  - ovarian cancer
- Head and neck cancers:
  - laryngeal cancer
  - nasopharyngeal cancer
  - oral cavity cancer
  - oropharyngeal cancer
- Skin cancers:
  - melanoma
  - squamous cell cancer
- Thoracic malignancies:
  - mesothelioma
  - non-small cell lung cancer
  - small cell lung cancer

For each presentation and condition, Advanced Trainees will **know how to:**

Synthesise

- recognise the clinical presentation
- identify relevant epidemiology, prevalence, pathophysiology, and clinical science
- take a comprehensive clinical history
- conduct an appropriate examination
- establish a differential diagnosis
- plan and arrange appropriate investigations
- consider the impact of illness and disease on patients[17] and their quality of life when developing a management plan

Manage

- provide evidence-based management
- prescribe therapies tailored to patients' needs and conditions
- recognise potential complications of disease and its management, and initiate preventative strategies
- involve multidisciplinary teams

Consider other factors

- identify individual and social factors and the impact of these on diagnosis and management

[17] References to patients in the remainder of this document may include their families whānau and/or carers.

LESS COMMON OR MORE COMPLEX PRESENTATIONS AND CONDITIONS Advanced Trainees will understand these presentations and conditions. Advanced Trainees will understand the resources that should be used to help manage patients with these presentations and conditions.	**Presentations and conditions** • Central nervous system malignancies: » non-high grade glioma • Endocrine tumours: » adrenal carcinoma » thyroid cancer • Gastrointestinal cancers: » anal cancer » appendiceal cancer » small bowel cancer • Genitourinary cancers: » penile cancer • Gynaecologic malignancies: » gestational trophoblastic neoplasia » ovarian germ cell » vulvar and vaginal cancers • Head and neck cancers: » salivary duct cancer » sinonasal cancer • Sarcomas: » bone sarcomas » soft tissue sarcoma • Skin cancers: » basal cell cancer » Merkel cell carcinoma • Thoracic malignancies: » thymoma and thymic cancer	
EPIDEMIOLOGY, PATHOPHYSIOLOGY, AND CLINICAL SCIENCES Advanced Trainees will have a comprehensive depth of knowledge of the principles of the foundational sciences.	Epidemiology, pathophysiology, and clinical sciences of the aforementioned presentations and conditions	
INVESTIGATIONS, PROCEDURES, AND CLINICAL ASSESSMENT TOOLS Advanced Trainees will know the scientific foundation of each investigation and procedure, including relevant anatomy and physiology. They will be able to interpret the reported results of each investigation or procedure.	**Clinical assessment tools** • Assess patients' performance status using scoring systems, such as: » Eastern Cooperative Oncology Group (ECOG) » Karnofsky performance status (KPS) • Interpret diagnostic investigations to accurately stage cancers using appropriate staging systems, such as: » tumour-node-metastasis » tumour-specific staging systems, such as: ○ International Federation of Gynecology and Obstetrics (FIGO) • Use other clinical tools: » frailty screening tools » nutrition scores	

Advanced Trainees will know how to explain the investigation or procedure to patients, families, and carers, and be able to explain procedural risk and obtain informed consent where applicable.	**Investigations** • Investigations and procedures as they relate to specific cancer types, including: » appropriate methods for obtaining diagnostic tissue » genetic and genomic testing » imaging » laboratory diagnostics (e.g. blood tests) » molecular biology / pathology » tumour histopathology **Treatments** • Detailed knowledge of: » cancer-specific treatment protocols » management of complications of therapy
IMPORTANT SPECIFIC ISSUES Advanced Trainees will identify important specialty-specific issues and the impact of these on diagnosis and management and integrate these into care.	• Clinical trials in cancer: » consider suitability of clinical trials for all patients presenting with cancer » recognise vital role of research in advancing cancer care • Hereditary cancer syndromes: » genetic syndromes » principles of screening and counselling for affected patients and family members • Multidisciplinary cancer care indications for: » other speciality care in the management of cancer » radiotherapy » surgery • Principles of: » supportive care and symptom management, including early introduction to palliative care teams if indicated » survivorship • Recognition of the psychosocial, cultural, and financial impact of cancer on patients and their families • Specific communication techniques to lead an empathetic, balanced, and culturally safe discussion of the prognostic implications of a diagnosis of advanced cancer, including breaking bad news • Specific impacts of cancer and treatment: » body image » cognition » fertility » psychosocial wellbeing » sexuality

CLINICAL SCIENCES

Advanced Trainees will describe the principles of the foundational sciences.

- For each pharmacological therapy:
  - » assessment and adaptation of dose and scheduling
  - » pharmacology:
    - pharmacogenomics
    - pharmacokinetics
  - » radiotherapy:
    - basic scientific principles and logistics
    - benefits and risks
    - indications
    - the role of concurrent chemotherapy as a radiosensitiser, and common chemoradiation regimens
  - » specific dosing considerations
  - » supportive care, such as antiemetics and bone modifying agents
  - » surgery:
    - indications in primary and palliative settings
  - » toxicity profile and monitoring (acute and long term)

Major therapies used in cancer

- Systemic anticancer therapies:
  - » antibody-drug conjugates
  - » chemotherapy
  - » hormonal agents
  - » immune checkpoint inhibitor therapy
  - » molecularly targeted therapy
  - » monoclonal antibodies
  - » theranostics
  - » tumour vaccines
  - » tyrosine kinase inhibitors

ELIGIBILITY CONSIDERATIONS

Advanced Trainees will assess patients' current conditions and plan the next steps.

- Cancer stage and goals of care
- Identification and assessment of special conditions that influence the treatment of older people with malignant disorders
- Identification of the potential effect of patients' comorbid medical conditions on the toxicity and efficacy of treatment
- Impact of cultural, geographical, psychological, socioeconomic, and spiritual factors in the accessibility and suitability of specific treatments
- Indications for specific anticancer therapies (pharmacological and non-pharmacological) in different settings, such as:
  - » adjuvant
  - » concomitant
  - » definitive
  - » neoadjuvant
  - » palliative

LESS COMMON OR MORE COMPLEX PATIENT CONSIDERATIONS Advanced Trainees will understand the resources that should be used to help manage patients[18] with these presentations and conditions.	• Indications and role of repeat biopsies and predictive testing: » repeating immunohistochemistry or molecular testing after progression to guide future therapy • Management of complex presentations: » conflicts in care decisions » delayed diagnoses » oncological emergencies » pregnancy » recognition of complex interplay between: ○ care wishes ○ medical and psychological comorbidities ○ socioeconomic and cultural factors in patient presentations ○ therapy choices • Principles and indications for specific predictive testing, such as: » dihydropyrimidine dehydrogenase enzyme deficiency testing when considering fluoropyrimidine-based chemotherapy » role of molecular oncology in guiding treatment decisions
UNDERTAKING THERAPY Advanced Trainees will monitor the progress of patients during the therapy.	• Administration management of chemotherapy: » informed consent for treatment » management of extravasation » management of infusion reactions » types of venous access devices, management, and complications • Education of patients on identifying and managing toxicities related to anticancer therapies, including prompts for emergency escalation • Identification, assessment, and management of the unique toxicities associated with immune checkpoint inhibitors, including: » cardiotoxicity » cutaneous toxicity » endocrinopathies, including such as thyroid toxicity » gastrointestinal toxicity, including colitis » haematological toxicity » hepatotoxicity » musculoskeletal toxicity » neurological toxicity » ocular toxicity » pulmonary toxicity » renal toxicity • Identification, assessment, and management of toxicities of systemic anticancer therapies, such as: » constipation » cytokine release syndrome (CRS) » cytopenia and use of granulocyte-colony stimulating factors » diarrhoea » fatigue » febrile neutropenia and infections » impact on sex and fertility » mucositis » nausea and vomiting:

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	○ cardiac toxicities ○ cutaneous toxicities ○ neuropathy ○ ocular toxicities ○ organ-specific effects ○ pneumonitis • Knowledge of biochemical, clinical, and radiological markers of responsiveness to therapy • Supportive treatments during anticancer therapy: » complementary therapies » including role for multidisciplinary care
POST-THERAPY Advanced Trainees will know how to monitor and manage patients post-therapy.	• Post-treatment effects: » fertility » late complications of treatment: ○ chemotherapy: ▪ cardiotoxicity ▪ endocrine toxicities ▪ secondary malignancy risk ○ immune-related complications of immunotherapy » neuropathy » psychosocial impact • Surveillance schedules and roles for shared care models
IMPORTANT SPECIFIC ISSUES Advanced Trainees will identify important specialty-specific issues and the impact of these on diagnosis and management and integrate these into care.	• Clinical trials in cancer: » consider suitability of clinical trials for all patients presenting with cancer » recognise the vital role of research in advancing cancer care • Principles of: » cancer drug development and the rapidly evolving landscape of clinical trials in cancer » principles of survivorship, including assessment of chronic / late drug toxicities and management of the fear of cancer recurrence