

Cancer services -medical oncology

CSCF v3.2

Module overview

Please note: This module must be read in conjunction with the Fundamentals of the Framework (including glossary and acronym list) and Cancer Services Preamble

Medical oncology is the branch of cancer medicine that assesses patients with cancer and manages their care, particularly through the use of systemic therapies, such as cytotoxic chemotherapy, biological therapies (i.e. targeted therapies), hormonal therapies and immunotherapy. Commonly treated cancers include breast, colorectal, lung, pancreas and prostate cancers.

The management and administration of systemic therapy is complex. Severe and sometimes life-threatening side effects, including multi-organ toxicity, immunosuppression and infection, can occur as a result of the highly toxic nature of the drugs. The prescribing and dispensing of oral chemotherapy must be carried out to the same service standards as parenteral chemotherapy.

Medical oncology service activities include:

- assessment of patients, including prognosis and likely treatment benefit and tolerance
- management of patients with progressive cancer
- prescription, preparation and administration of systemic therapy
- management of side effects and toxicity of treatment, including nausea and vomiting, and the risk of serious or life-threatening infection
- psycho-social and allied health care
- ongoing assessment and follow-up of patients during and following completion of systemic therapy
- day medical procedures, such as infusion of blood and/or blood products, steroids and other intravenous treatments not associated with medical oncology treatment/s.
- rehabilitation and support.

This module outlines four levels of complexity for medical oncology service provision: Levels 3 to 6. In addition, consultative medical oncology services may be provided by a Level 4, 5 or 6 medical oncology service either on-site, or off-site at a Level 3, 4 and/or 5 medical oncology service. The levels of complexity for medical oncology services, including provision of multidisciplinary-focused consultative services, are illustrated in Table 1.

Table 1: Levels of complexity for medical oncology services

Service complexity	Level 3	Level 4	Level 5	Level 6
		May provide consultative/outreach services to a lower level of service		
	May host consultative/outreach services from a higher level service			

The different service levels address the complexity and risk associated with the delivery of medical oncology. In particular, the administration of systemic therapy has a major impact on service complexity. Despite the non-surgical nature of systemic therapy, it is nonetheless a procedure. Systemic therapies may be delivered by various routes (e.g. oral or parenteral), and each systemic therapy protocol has different requirements for safe delivery and follow-up. Safe delivery of different systemic therapy protocols requires different levels of support.

Factors contributing to levels of risk in the administration of systemic therapy include:

- tumour group
- treatment intention (i.e. curative or palliative)
- regimen and proposed dosage of systemic anticancer drugs and elective / essential supportive drugs
- route of administration of vesicant drugs for systemic therapy (e.g. oral or parenteral)
- patient risk
- intensity of systemic therapy
- neutropenia
- patient understanding of treatment goals and side effects.

The different levels also address the role of registered medical specialists with credentials in medical oncology and registered medical practitioners with an interest in medical oncology in treating malignancies and supervising the delivery of initial (first cycle) and maintenance courses of systemic therapy. Throughout this module, *initial* and *first cycle therapy* refers to the first administration of a new systemic therapy protocol within neoadjuvant, adjuvant and palliative treatment care plans.

Children and adolescents have specific needs and supports from health services—please refer to the relevant children’s services modules.

Service networks

In addition to the requirements outlined in the Fundamentals of the Framework, specific service network requirements include:

- documented processes with Haematological Malignancy Services, Radiation Oncology Services, diagnostic services (including high-quality Medical Imaging and Pathology

Services), surgical and medical subspecialties, Medication Services, allied health services and Palliative Care Services, with these interactions based on the principles of multidisciplinary care

- utilisation of cancer care networks to enhance the seamless delivery of cancer services and manage / reduce risks of gaps in treatment
- consultancy (outreach) service provision, where applicable.

Service requirements

In addition to the requirements outlined in the Fundamentals of the Framework, specific service requirements include:

- information for patients and their carers about available cancer services, risks, available treatments and support services
- use of service-based treatment protocols (where available) and organ-specific treatment guidelines and standards, published by the National Health and Medical Research Council, to standardise treatment and reduce the risk of clinical errors
- risk assessments for all procedures involving the handling of cytotoxic chemotherapeutic agents in order to determine all appropriate risk-control measures are in place¹
- provide relevant clinical indicator data to satisfy accreditation and other statutory reporting obligations.

Workforce requirements

In addition to the requirements outlined in the Fundamentals of the Framework, specific workforce requirements include:

- all chemotherapy is prescribed by, or under direct supervision of, a registered medical practitioner and/or specialist with credentials in medical oncology
- all registered medical practitioners involved in systemic therapy treatment have at least a broad understanding of both common and unusual toxicities associated with systemic therapy
- all health professionals involved in the patient's treatment are:
 - experienced and competent regarding the consequences of both systemic therapy and underlying disease
 - educated in the psychosocial impact of cancer and management of associated issues
- all health professionals involved in systemic therapy treatment must have evidence of ongoing competency in the safe administration, handling, preparation and disposal of cytotoxic and related waste, appropriate to their roles
- all staff involved in systemic therapy treatment must have at least a broad understanding of both common and unusual toxicities associated with systemic therapy
- all nursing staff involved in clinically validating prescriptions and the supply of cytotoxic drugs to consult with a pharmacist at a higher level service who has appropriate competency in oncology/haematology.

Note: A chemotherapy **proficient** nurse is defined as a nurse who has successfully completed Antineoplastic Drug Administration Course (ADAC) and Central Venous Access Device(CVAD) competency as identified in eviQ and minimum of 3 years' experience; and a chemotherapy **capable** nurse is defined as a nurse who has successfully completed Antineoplastic Drug Administration Course (ADAC) and Central Venous Access Device(CVAD) competency as identified in eviQ and working with supervision.

Medical Oncology services

	Level 3	Level 4	Level 5	Level 6
Service descriptions	<ul style="list-style-type: none"> provides low-risk ambulatory and/or inpatient diagnostic, consultation and treatment service with access to limited support services. provides chemotherapy under supervision of registered medical specialist with credentials in medical oncology who reviews patient locally or at higher level service. services delivered predominantly by registered medical practitioners (general practitioners), although not necessarily on-site, registered nurses and visiting day-only / telehealth specialist medical services. administers conventional doses of relatively low-risk systemic therapy under protocols not normally expected to produce prolonged neutropenia. provides maintenance courses of systemic therapy subsequent to initial courses (first cycle) commenced at, and supervised by, Levels 4, 5 	<ul style="list-style-type: none"> administers conventional doses of systemic therapy and may operate as 'cancer unit'. manages relatively moderate-risk systemic therapy protocols with low risk of neutropenic sepsis. provides ambulatory care under visiting registered medical specialist with credentials in medical oncology and inpatient care under registered medical specialist with credentials in internal medicine. also may provide maintenance courses of systemic therapy to adolescents aged 15 to 18 years (please refer to cancer services - children's) can administer initial (first cycle) courses for limited number of protocols where ordered and directly supervised by visiting registered medical specialist with credentials in medical oncology. also provides systemic therapy to patients 	<ul style="list-style-type: none"> provides treatment for all common malignancies, excluding haematological malignancies, and may operate as cancer unit or cancer centre, depending on staffing and level of support services. manages relatively high-risk systemic therapy protocols potentially resulting in periods of myelosuppression of less than one week. able to administer initial (first cycle) courses of systemic therapy and supervise subsequent maintenance courses provided at Level 3 and 4 medical oncology services, except for adolescents 15 years and over, where treatment should be initiated at a Level 6 Service. also treats low-incidence, highly specialised cancers after initial assessment and development of treatment plan at Level 6. 	<ul style="list-style-type: none"> provided at large hospital and usually delivered in cancer centre. provides initial assessment, management and treatment plans for common malignancies, in collaboration with disease-specific surgeons, radiation oncologists, pathologists and supportive care specialties. provides initial assessment and management of low-incidence and highly specialised cancers (e.g. germ cell tumours, gynaecologic malignancies and sarcomas), which includes treatment plan. also serves as reference centre for all medical oncology service levels. multidisciplinary cancer specialties on-site, including radiation oncology and surgical oncology, required to manage low-incidence, specialised malignancy service. may be referral centre for recognised cancer specialty,

	<p>or 6 medical oncology services.</p> <ul style="list-style-type: none"> provides support before, during and after medical oncology treatment provision. 	<p>diagnosed with breast, lung, prostate, upper gastrointestinal and colorectal malignancies, or palliative management (if higher level or more complex care required, patients may need transfer to Level 5 service).</p> <ul style="list-style-type: none"> capacity to provide timely after-care to patients receiving autologous transplants elsewhere. pathology turnaround time usually within 2 hours and particularly important in order to manage any complications of treatment, regardless of whether patient receiving palliative or curative care. part of service network with higher level services, ensuring access to information related to latest evidence-based care and treatments. 		<p>such as bone or thyroid cancer.</p>
<p>Service requirements</p>	<p>As per module overview, plus:</p> <ul style="list-style-type: none"> local supervision by registered medical practitioner or nurse practitioner responsible for 	<p>As per Level 3, plus:</p> <ul style="list-style-type: none"> on-site (or documented process for) access—within 24 hours—to renal dialysis, respiratory, cardiology and infectious diseases services. 	<p>As per Level 4, plus:</p> <ul style="list-style-type: none"> site-specific (breast, lung and colorectal) and general oncology consultative services available. 	<p>As per Level 5, plus:</p> <ul style="list-style-type: none"> management of relatively high-risk complex protocols. delivery of all systemic therapy protocols, including

	<p>overall continuity of patient care.</p> <ul style="list-style-type: none"> • capacity to deal with medical oncology complications. • urgent telephone consultation with referring Level 5 or 6 medical oncology service, as required, for all complications of treatment requiring admission. • access to radiation oncology services within six hours transport for urgent treatment (e.g. spinal cord compression). • reports all unexpected events or unanticipated problems within 24 hours, in normal circumstances, to treating registered medical specialist with credentials in medical oncology. • adheres to protocols for emergency oncology care, intravenous administration of anticancer agents, cytotoxic handling and disposal, central line care, blood transfusions and infection control. • capacity to provide day treatment, with allocated ambulatory day beds for treatment. • access to support services, particularly to Level 5 and 	<ul style="list-style-type: none"> • access to central venous access service. • access to clinical genetics / medical genetics service. • may have outpatient / outreach services (visiting or telehealth). 	<ul style="list-style-type: none"> • designated oncology unit for patients, including those requiring admission for systemic therapy, or for treatment of toxicity or complications of therapy. • day treatment area for ambulatory procedures, such as bone trephine biopsies, venepuncture, and administration of chemotherapy, biological agents and blood transfusions. • transfer or referral of highly complex or high-risk patients to Level 6 service. • on-site access to, or documented process for, patient referral and transfer to/from radiotherapy unit to ensure safe service provision and provide concurrent chemoradiation and inpatient treatment. • provides concurrent chemoradiation for protocols with low risk of inpatient care and non-inpatient radiation oncology services. • multidisciplinary management of oncology patients, including case conferences and development of treatment plans with multidisciplinary 	<p>intensive chemotherapy protocols.</p> <ul style="list-style-type: none"> • chemoradiation protocols for high risk of inpatient care (e.g. head and neck cancer). • access to inpatient radiation treatment. • capacity to provide stem cell transplantation in conjunction with super specialist haematology malignancy service. • concurrent chemoradiation treatment for all tumour types, including head and neck cancer. • on-site renal dialysis, respiratory, infectious diseases and pain management services. • access to subspecialty surgeons, such as orthopaedics or surgical oncology management by stream (e.g. breast, colorectal, head and neck, upper gastrointestinal, lung or bladder). • access to interventional radiology services, including (but not limited to) percutaneous transhepatic cholangiogram, stent insertions, hepatic artery embolisation, peripherally inserted central catheters
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	<p>above medication services, and pathology turnaround time of within 24 hours to manage any complications of treatment, regardless of whether patient is receiving palliative or curative treatment.</p> <ul style="list-style-type: none"> • documented processes for overnight and emergency health admission of patients to nearby health service, where systemic therapy performed in day-health service or other ambulatory setting. • documented processes with multidisciplinary consultation group, including registered medical specialists with credentials in medical oncology, surgery, radiation oncology and pathology. • documented processes with registered medical practitioners (general practitioners), social work or equivalent, consultation-liaison psychiatry, pain management, palliative care, psychosocial support, supportive care and community services, as required and appropriate for service being provided. 		<p>team, which is composed of health professionals specialising in medical oncology, surgery, radiation oncology, medication services, pathology, palliative care and supportive care.</p> <ul style="list-style-type: none"> • documented processes for access to palliative care, pain management and radiation oncology services. • provides active support for lower level services. • part of service network with Level 6 service, ensuring access to information related to latest evidence-based care and treatments. • may provide consultative service by registered medical specialist with credentials in medical oncology, either in person or via telehealth. 	<p>and breast tumour localisation.</p> <ul style="list-style-type: none"> • may provide medical oncology consultative services at lower service levels.
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	<ul style="list-style-type: none"> • may manage appropriate cases locally after consultation with registered medical specialist with credentials in medical oncology. • may have capacity to support outpatient / outreach (visiting or telehealth) medical oncology consultative services by Level 4, 5 or 6 medical oncology service. 			
Workforce requirements	<p>As per module overview, plus:</p> <p>Medical</p> <ul style="list-style-type: none"> • registered medical practitioner available. • access—24 hours—to registered medical specialist with credentials in medical oncology for advice. • access—24 hours—to registered medical specialist with credentials in microbiology for advice. • access—within 24 hours—to ambulatory / consultative services by registered medical specialist with credentials in medical oncology or clinical haematology, with provision for telephone consultation 	<p>As per Level 3, plus:</p> <p>Medical</p> <ul style="list-style-type: none"> • local supervision by registered medical specialist with credentials in internal medicine with interest and experience in medical oncology. • access—24 hours—where inpatients treated, to registered medical practitioner. • access—24 hours— to registered medical specialist with credentials in internal medicine and with experience in medical oncology, with access—24 hours—to Level 5 or 6 	<p>As per Level 4, plus:</p> <p>Medical</p> <ul style="list-style-type: none"> • service provided by registered medical specialist with credentials in medical oncology. • access—24 hours— to registered medical specialist with credentials in medical oncology, responsibility may be shared with registered medical specialist with credentials in clinical haematology at the service. • access to registered medical specialist with credentials in infectious diseases for advice and guidance. <p>Nursing</p>	<p>As per Level 5, plus:</p> <p>Medical</p> <ul style="list-style-type: none"> • inpatient care under registered medical specialist with credentials in medical oncology, possibly with aligned junior medical staff. • access—24 hours— to registered medical specialist with credentials in medical oncology and access to at least two registered medical specialists with credentials in medical oncology. • registered medical practitioner on-site 24 hours. <p>Nursing</p> <ul style="list-style-type: none"> • suitably qualified and experienced nurse manager

	<p>for complications of treatment and admissions for complications.</p> <p>Nursing</p> <ul style="list-style-type: none"> • suitably qualified and experienced registered nurse in charge on each shift. • access to minimum two registered nurses. • two registered nurses appropriately qualified and experienced in checking chemotherapy prescriptions before treatment administered. • access to registered nurse/s with specialised knowledge and experience in medical oncology, at Level 5 or 6 medical oncology service, for advice, consultative services and/or outreach support, as required. <p>Allied health</p> <ul style="list-style-type: none"> • access to allied health professionals, as required. 	<p>medical oncology service for emergency advice.</p> <ul style="list-style-type: none"> • access—within 24 hours—to outpatient / consultative services by registered medical specialist with credentials in medical oncology or clinical haematology, with provision for telephone consultation for complications of treatment and admissions for complications. <p>Allied health</p> <ul style="list-style-type: none"> • access to social worker, occupational therapist, physiotherapist, speech pathologist, and psychological and emotional support services. • access to nutrition team, as required. 	<ul style="list-style-type: none"> • suitably qualified and experienced registered nurse in charge on each shift on-site during working hours. • adequate nursing staff—minimum of one registered nurse each shift.² <p>Allied health</p> <ul style="list-style-type: none"> • access—24 hours— to oncology pharmacist. 	<p>(however titled) in charge of unit.</p> <ul style="list-style-type: none"> • on-site access to registered nurses with specialist oncology qualifications and experience.
<p>Specific risk considerations</p>	<p>Nil</p>	<p>Nil</p>	<p>Nil</p>	<p>Nil</p>

Support services requirements for medical oncology services

	Level 3		Level 4		Level 5		Level 6	
	On-site	Accessible	On-site	Accessible	On-site	Accessible	On-site	Accessible
Anaesthetic				3	3		6	
Cardiac (coronary care unit)				4		4		4
Cardiac (cardiac diagnostic and interventional)				3		3		3
Cardiac (cardiac medicine)				3		3		3
Intensive care						5	6	
Medical		3		4		4	5	
Medical imaging		3		5		5	5	
Medication		5		5		5	6	
Nuclear medicine		5		5		5	5	
Palliative care		3		4		5		5
Pathology		3		5	5		6	

Radiation oncology		5		5		5		5
Rehabilitation		1		2		3		3
Renal				4		4	5	

Table note: On-site means staff, services and/or resources located within the health facility or adjacent campus including third party providers. Accessible means ability to utilise a service (either located on-site or off-site) or skills of a suitably qualified person (who may be either on-site or off-site)—without difficulty or delay—via various communication mediums including but not limited to face-to-face, telehealth, telepharmacy, and/or outreach

Legislation, regulations and legislative standards

Refer to the Fundamentals of the Framework for details.

Non-mandatory standards, guidelines, benchmarks, policies and frameworks

Refer to the Fundamentals of the Framework and Cancer Services Preamble for details.

Reference list

1. Queensland Government. Queensland Workplace Health and Safety Strategy: Guide for Handling Cytotoxic Drugs and Related Waste. Department of Industrial Relations; 2005. <http://www.deir.qld.gov.au/workplace/publications/guides/cytotoxic/index.htm>
2. Cancer Australia. The National Cancer Nursing Education Project (EdCaN): A National Professional Development Framework for Cancer Nursing. Canberra: Cancer Australia; 2008. <http://www.edcan.org/>