

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](#). This module should also be read in conjunction with the following South Australian standards, plans and care pathways:

- > South Australian Statewide Cancer Control Plan 2011-15
- > Standards for Chemotherapy Services in South Australia 2010
- > South Australian Radiotherapy Service Plan 2014-2015
- > SA Health Cancer Care Pathways

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 side effects, including multi-organ toxicity, immunosuppression and infection, can sometimes occur as a result of the toxic nature of the drugs. The prescribing and dispensing of oral chemotherapy must be carried out to the same service standards as parenteral chemotherapy.

This module outlines four levels of complexity for medical oncology service provision. 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)
- > route of administration of cytotoxic drugs and targeted therapies for systemic therapy (e.g. oral or parenteral)
- > vesicant vs non-vesicant drugs
- > patient risk / co-morbidities
- > intensity and complexity of systemic therapy
- > risk of chemotherapy induced 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 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 have specific needs in 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 Services](#) and [Pathology Services](#)), surgical and medical subspecialties, [Pharmacy 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.
- > An electronic service network with higher level services, ensuring access to information related to latest evidence-based care and treatments.

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 and eviQ, to standardise treatment and reduce the risk of clinical errors
- > risk assessments for all procedures involving the handling of cytotoxic and other hazardous drugs in order to determine all appropriate risk-control measures are in place
- > provide relevant clinical indicator data to satisfy accreditation and other statutory reporting obligations.

Workforce Requirements

The CSCF does not prescribe staffing ratios, absolute skill mix, or clerical and/or administration workforce requirements for a team providing a service, as these are best determined locally and in accordance with relevant industrial instruments. Where minimum standards, guidelines or benchmarks are available, the requirements outlined in this module should be considered as a guide only. All staffing requirements should be read in conjunction with the *Health Care Act 2008*, Awards and relevant Enterprise Agreements including, but not limited to:

- > SA Health Salaried Medical Officers Enterprise Agreement 2013
- > SA Health Visiting Medical Specialists Enterprise Agreement 2012
- > SA Health Clinical Academics Enterprise Agreement 2014
- > Nursing/Midwifery (South Australian Public Sector) Enterprise Agreement 2013
- > SA Ambulance Service Enterprise Agreement 2011
- > SA Public Sector Wages Parity Enterprise Agreement Salaried 2014

In addition to the requirements outlined in the [Fundamentals of the Framework](#), specific workforce requirements include:

- > The workforce employed to provide chemotherapy services must be credentialed and/or educated and assessed as competent according to current SA Health policies, standards and endorsed guidelines or frameworks.
- > only chemotherapy competent health care professionals prepare or administer chemotherapy
 - > pharmacy staff complete training program endorsed by SA Pharmacy as relevant to scope of work
 - > nurses establish and maintain a minimum level of chemotherapy competence as outlined in the Statewide Framework for Chemotherapy Education and Assessment 2010
 - > all new clinicians commencing in, or transferring to, a chemotherapy service or cancer speciality area must undertake or verify credentialing, chemotherapy education and competency assessment relevant to the risk level of chemotherapy provided within that service or area.
- > All first cycle chemotherapy protocols/treatment plans are prescribed by a specialist oncologist with access to all relevant patient information.
- > subsequent orders for administration of parental and oral chemotherapy cycles or doses are prescribed by an appropriately credentialed medical practitioner or authorised nurse practitioner working in collaboration with a specialist oncologist/haematologist
- > all chemotherapy orders are verified by an appropriately skilled clinical pharmacist with access to the patient information relevant to the treatment.
- > 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 prescribing, administration, handling, preparation and disposal of cytotoxic and related waste, appropriate to their roles
- > all staff involved in systemic therapy treatment must have a good understanding of both common and unusual toxicities associated with systemic therapy provided in their clinical unit

Medical Oncology Services	Level 3	Level 4	Level 5	Level 6
<p>Service description</p>	<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 a registered Medical Oncologist who reviews patients locally or at a higher level service. > services delivered predominantly by medical practitioners, 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 severe acute reactions or prolonged neutropenia. > provides support before, during and after medical oncology treatment provision. 	<ul style="list-style-type: none"> > administers conventional doses of systemic therapy and may operate as 'cancer unit'. > provides chemotherapy under supervision of a level 5 or 6 Oncology service. > manages relatively moderate risk systemic therapy protocol > 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 > part of service network with higher level services, ensuring access to information related to latest evidence-based care and treatments. 	<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. > 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, imaging specialists 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. > provides nurse led-late survivorship, late effects and surveillance service. > may be referral centre for recognised cancer specialty, such as bone or thyroid cancer.

Medical Oncology Services	Level 3	Level 4	Level 5	Level 6
Service requirements	<p>As per module overview, plus:</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 drugs, 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 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. > 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 medical practitioners (general practitioners), social work or equivalent, consultation-liaison psychiatry, pain management, palliative care, psychological and emotional support services, supportive care and community services, and other allied health professionals as required and appropriate for service being provided. > 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. 	<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. > access to central venous access service. > access to clinical genetics / medical genetics service. > 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. > may have outpatient / outreach services (visiting or telehealth). 	<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. > 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 team, which is composed of health professionals specialising in medical oncology, surgery, radiation oncology, pharmacy services, pathology, palliative care and supportive care. > 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>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 intensive chemotherapy protocols. > chemoradiation protocols for high risk of inpatient care (e.g. head and neck cancer). > access to inpatient radiation treatment including radiiodine treatment for thyroid cancer. > capacity to provide stem cell transplantation in conjunction with superspecialist 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 advanced diagnostic radiology and nuclear medicine services including PET/CT and interventional radiology services, including (but not limited to) percutaneous transhepatic cholangiogram, stent insertions, hepatic artery embolisation, peripherally inserted central catheters and breast tumour localisation. > access to internal radiotherapy with agents such as Lutetium-177 > may provide medical oncology consultative services at lower service levels.

Medical Oncology Services	Level 3	Level 4	Level 5	Level 6
Workforce requirements	<p>As per module overview, plus:</p> <p>Medical</p> <ul style="list-style-type: none"> > registered medical practitioner available. > Access (on site, visiting or tele-medicine) to registered medical specialist with credentials in medical oncology for advice. > Access (on site, visiting or tele-medicine) to registered medical specialist with credentials in microbiology for advice. > Access (on site, visiting or tele-medicine) to ambulatory / 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. > Chemotherapy competency for all staff involved in the administration of chemotherapy. <p>Nursing</p> <ul style="list-style-type: none"> > staffing levels in accordance with relevant industrial instruments > Chemotherapy competency for all nursing staff involved in the administration of chemotherapy. > access (on site, visiting or tele-medicine) to registered nurse (s) with specialised knowledge and experience in medical oncology, at Level 5 or 6 medical oncology service and/or outreach support as required. <p>Pharmacy Services</p> <ul style="list-style-type: none"> > Access to drugs supplied on individual prescription > Service provided on site, or overseen by pharmacist located elsewhere > Community based medication review services available > access to cancer clinical pharmacist with provision of chemotherapy drug monitoring, utilisation review and adverse drug reaction reporting > Access to chemotherapy production services via pharmacy service <p>Allied health</p> <ul style="list-style-type: none"> > access to allied health professionals, as required. 	<p>As per Level 3, plus:</p> <p>Medical</p> <ul style="list-style-type: none"> > As per Level 3 <p>Nursing</p> <ul style="list-style-type: none"> > As per Level 3. <p>Pharmacy Services</p> <ul style="list-style-type: none"> > On site or visiting pharmacy service available and includes: > Pharmacy controlled drug distribution to inpatients and outpatients > On site or regional access to general clinical pharmacy service for inpatients and outpatients > On site, visiting or remote access to cancer clinical pharmacist > Access (on site or external contract) to chemotherapy production services > Access to drug information > Provision of chemotherapy drug monitoring, utilisation review and adverse drug reaction reporting <p>Allied health</p> <ul style="list-style-type: none"> > access to dietitian, social worker, occupational therapist, physiotherapist, podiatrist, speech pathologist, and psychological and emotional support services. 	<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 practitioner with credentials in medical oncology, responsibility may be shared with registered medical specialist with credentials in clinical haematology at the service. > inpatient care under registered medical specialist with credentials in medical oncology, possibly aligned with junior medical staff. > access to registered medical specialist with credentials in infectious diseases for advice and guidance. 	<p>As per Level 5, plus:</p> <p>Pharmacy Services</p> <ul style="list-style-type: none"> > Clinical pharmacy service provided 7 days a week including participation in ward rounds , MDT meetings and outpatient services > Services include specialist cancer clinical pharmacist (on site or visiting) > Provides clinical consultation to other hospitals as required > Has access to sterile manufacturing and IV admixture service including cytotoxic drug and parenteral nutrition (on site or external contract) > May provide production pharmacy service for other sites > Appropriate level pharmacy to support intrathecal administration as required > 24 hour pharmacy on call service
Specific risk considerations	> Nil	> Nil	> Nil	> Nil

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	
Nuclear medicine		5		5		5	5	
Palliative care		3		4		5		5
Pathology		3		5	5		6	
Pharmacy		5		5		5	6	
Radiation oncology		5		5		5		5
Rehabilitation		1		2		3		3
Renal				4		4	5	

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.

For more information

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Public I1-1A

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