



The Royal Australasian
College of Physicians

Medical Oncology

Advanced Training Curriculum

Adult Medicine Division



MOGA



The Royal Australasian
College of Physicians

Physician Readiness for Expert Practice (PREP) Training Program

Medical Oncology Advanced Training Curriculum

TO BE USED IN CONJUNCTION WITH:

Basic Training Curriculum – Adult Internal Medicine

Professional Qualities Curriculum

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- Dr Craig Lewis, FRACP
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- A/Prof Euan Walpole, FRACP

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CONTACT DETAILS

THE ROYAL AUSTRALASIAN COLLEGE OF PHYSICIANS

AUSTRALIA

145 Macquarie Street
Sydney
NSW 2000
Australia

Tel: (+61) (2) 9256 5444
Fax: (+61) (2) 9252 3310

Email: racp@racp.edu.au
Website: www.racp.edu.au

AOTEAROA NEW ZEALAND

Level 10
3 Hunter Street
Wellington 6011
New Zealand

Tel: (+64) (4) 472 6713
Fax: (+64) (4) 472 6718

Email: racp@racp.org.nz
Website: www.racp.edu.au

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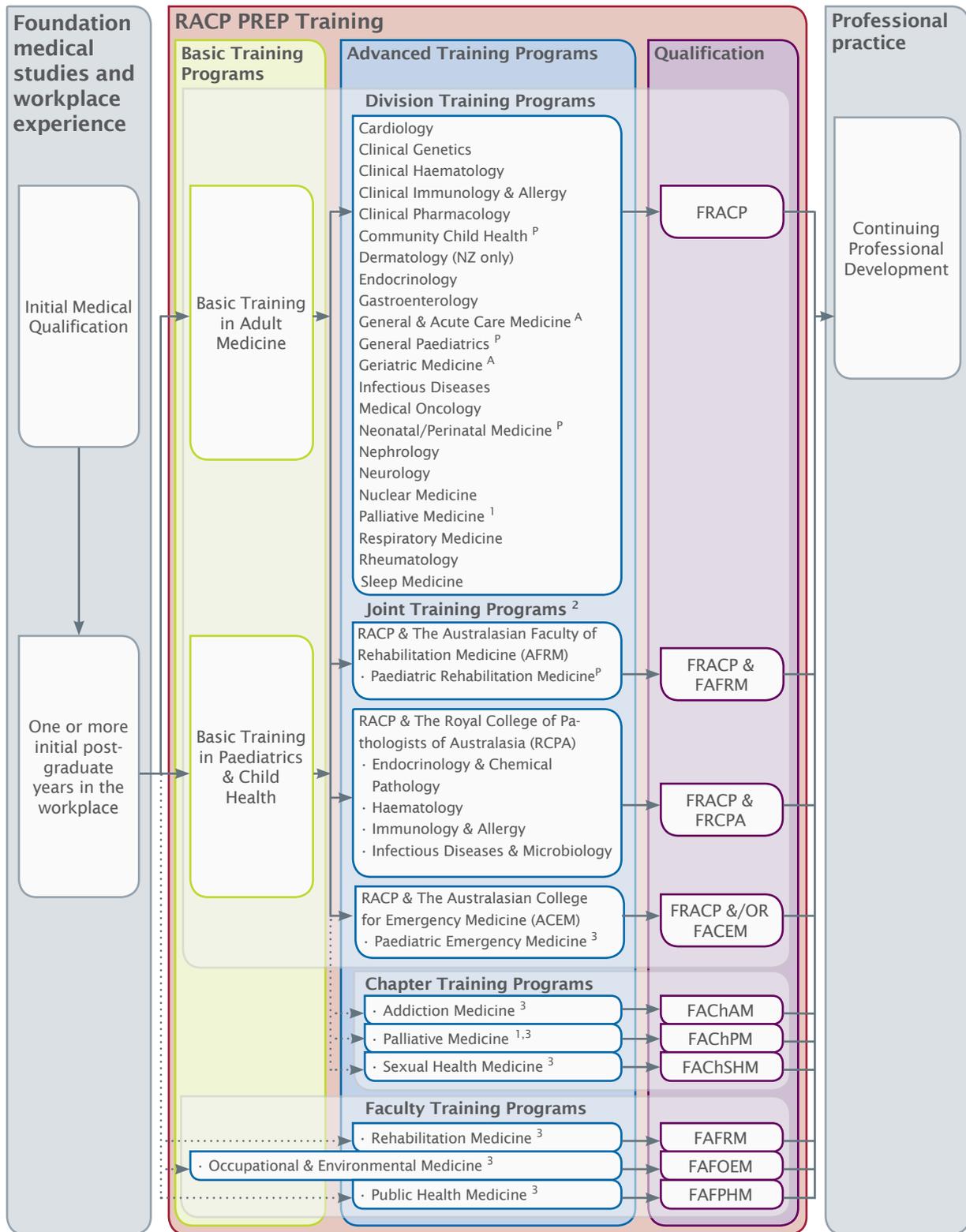
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Please note: No Domains, Themes or Learning Objectives have been updated for this edition; design changes ONLY.

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RACP FELLOWSHIP TRAINING PATHWAYS AND THE CONTINUUM OF LEARNING



^P Trainees must complete Basic Training in Paediatrics & Child Health to enter this program.

^A Trainees must complete Basic Training in Adult Medicine to enter this program.

¹ Trainees who have entered Advanced Training in Palliative Medicine via a RACP Basic Training Program will be awarded FRACP upon completion and may subsequently be awarded FACHPM. Trainees who have NOT entered Advanced Training in Palliative Medicine via a RACP Basic Training Program will only be awarded FACHPM upon completion.

² The Child & Adolescent Psychiatry Joint Training Program with the Royal Australian and New Zealand College of Psychiatrists (RANZCP) is currently under review by the RACP and RANZCP and closed to new entrants at present.

³ Alternative entry requirements exist for these training programs; please see the corresponding PREP Program Requirements Handbook for further information.

NB1: This diagram only depicts training programs that lead to Fellowship. Please see the RACP website for additional RACP training programs.

NB2: For further information on any of the above listed training programs, please see the corresponding PREP Program Requirements Handbook.

OVERVIEW OF THE SPECIALTY

The medical oncologist is a consultant physician specialising in the investigation, study, diagnosis, management, and treatment of benign and malignant growths, tumours, cancers, and diseases, including preventative and palliative medicine, using medications such as chemotherapy, hormones, molecular targeted agents, and analgesics.

Medical oncology is a young specialty that can offer an interesting and widely diverse range of career options and flexible working opportunities for its practitioners. Most medical oncologists undertake a mix of clinical and research activities. Clinical work covers the diagnosis and systemic management of cancer. Research opportunities include basic oncology research, clinical trials and other clinical research, cancer epidemiology, pharmacology, and hereditary cancer. Opportunities exist for teaching at both undergraduate and postgraduate levels.

Clinical research is a significant component of practice for most medical oncologists and provides long-term career satisfaction.

Medical oncologists work as an integral part of multidisciplinary teams to provide holistic, multimodality care to patients with cancer.

Most medical oncologists work in moderate to large centres in metropolitan or regional areas. Most are currently employed through the public hospital system, with many operating in both public and private practice. There is, however, an increasing trend towards operation within private practice in either a singular or group setting. Many oncologists offer visiting services to regional centres, which are usually in the private setting.

The specialty requires a breadth of clinical experience and skills in caring for acute medical problems and chronic illness, patients' and families' emotional needs, symptom control, and end-of-life care.

Importance of specialty's role

The specialty of medical oncology is expected to grow in importance and size in response to an increasing incidence and prevalence of cancer.

One in four Australian women and one in three Australian men will experience a diagnosis of cancer, and at least half will receive some of their care from a medical oncologist.

Cancer is one of the National Health and Medical Research Council (NHMRC) health priority areas. It represents a high and increasing burden of disease and suffering in the community as incidence and survival rates rise. Drug treatment of cancer will become the norm over time, rather than an accessory to traditional methods.

Current strengths and challenges of the specialty

- Medical oncology treatments have developed in the era of the randomised trial and there is high level evidence to support many interventions.
- Clinical work can cover the full spectrum of cancers, but there is also scope for a high degree of subspecialisation according to tumour type or research interest, particularly in larger centres.
- Medical oncologists work as part of a multidisciplinary team to provide multimodality care for patients.
- Medical oncologists have ample opportunities for laboratory and clinical research and there are many opportunities to design and participate in clinical trials research of international standard.
- There are many opportunities to work and study overseas and regular national and international meetings are an essential and stimulating part of keeping up to date with both global and local developments in the specialty.

In common with other medical professionals, medical oncologists face the challenges of:

- managing an ever increasing, more demanding workload allied to a growth in consumer demand
- responding to the changing patterns of health and illness within our society
- incorporating advances in medical technology
- maintaining professional standards and assimilating and utilising new knowledge, information and workplace

practices

- responding to changing legislative and funding requirements
- working within a multisystem/multidisciplinary/multi-team environment.

In particular the specialty faces the following challenges:

- workforce shortages. As the population ages and cancer becomes both more common and more treatable, the need for medical oncologists will increase. Current assessment by the Australian Medical Workforce Advisory Committee is that 40 more medical oncologists are needed now, with a further increase over the next 10 years. Funding for additional training jobs remains problematic, as does the ability to attract trainees
- workload is generally high. Associated workforce shortages in nursing and other medical disciplines also impact on teams
- burnout has been described, and relates to the emotional demands of managing patients with cancer, as well as system factors
- the increasing cost of cancer drugs will impact on opportunities to deliver optimal care. Privatisation has been encouraged to move drug costs to the Pharmaceutical Benefits Scheme, but may limit training opportunities and research. This is compounded by issues of interactions with drug regulatory agencies
- the need to keep up with development in the area mandates good postgraduate education
- increasing demand for skilled communication will require training at all levels
- rural services need further development
- referral from other specialties can be limited by inappropriate nihilism.

Public perceptions of the specialty

The public perception of a medical oncologist's role is influenced by the following factors:

- medical oncologists are known as the 'chemo doctors' and perceptions of the toxicity of chemotherapy colour this label
- there is limited public/governmental awareness of the critical role of clinical trials in furthering knowledge in this area
- patients and families perceive medical oncologists as busy, but interested in and skilled in all facets of their care, and committed to maximising both survival and quality of life
- involvement of medical oncologists in lobbying for cancer drug availability has increased awareness of the specialty.

Actual/potential areas of conflict

Amongst the key issues arising at the moment that may impact upon the specialty and its practice is the need to:

- lobby relevant government bodies to allocate more resources in areas such as cancer workforce, cancer services and cancer drug availability
- address the impact that changes in the way that medical oncology is viewed by the public and the medical profession will have on medical oncology in the future
- address the impact of increasing privatisation on training opportunities.

CURRICULUM OVERVIEW

Medical Oncology – Advanced Training Curriculum

This curriculum outlines the broad concepts, related learning objectives and the associated theoretical knowledge, clinical skills, attitudes and behaviours required and commonly utilised by medical oncology physicians within Australia and New Zealand.

The purpose of Advanced Training is for trainees to build on the cognitive and practical skills acquired during Basic Training. At the completion of the Medical Oncology Advanced Training Program, trainees should be competent to provide at consultant level, unsupervised comprehensive medical care in medical oncology.

Attaining competency in all aspects of this curriculum is expected to take three years of training. It is expected that all teaching, learning and assessment associated with the medical oncology curriculum will be undertaken within the context of the physician's everyday clinical practice and will accommodate discipline-specific contexts and practices as required. As such it will need to be implemented within the reality of current workplace and workforce issues and the needs of health service provision.

There may be learning objectives that overlap with or could easily relate to other domains; however, to avoid repetition, these have been assigned to only one area. In practice, however, it is anticipated that within the teaching/learning environment, the progression of each objective would be explored.

Note: The curricula should always be read in conjunction with the relevant College Training Handbook available on the College website.

Professional Qualities Curriculum

The Professional Qualities Curriculum (PQC) outlines the range of concepts and specific learning objectives required by, and utilised by, all physicians, regardless of their specialty or area of expertise. It spans both the Basic and Advanced Training programs and is also utilised as a key component of the Continuing Professional Development (CPD) program.

Together with the various Basic and Advanced Training Curricula, the PQC integrates and fully encompasses the diagnostic, clinical, and educative-based aspects of the physician's/paediatrician's daily practice.

Each of the concepts and objectives within the PQC will be taught, learnt and assessed within the context of everyday clinical practice. It is important, therefore, that they be aligned with, and fully integrated into, the learning objectives within this curriculum.

EXPECTED OUTCOMES AT THE COMPLETION OF TRAINING

Graduates from this training program will be equipped to function effectively within the current and emerging professional, medical, and societal contexts. At the completion of their overall training program, it is expected that a new Fellow will:

- have knowledge of the nature, pathology, natural history, epidemiology, and genetics of human malignant disease
- have experience in the methods of investigation and management of patients with malignancy, including screening for early detection and diagnosis by appropriate methods such as clinical examination, pathological techniques, and imaging procedures
- have an adequate understanding of the pharmacology, pharmacokinetics, use and side effects of anti-neoplastic drugs, including cytotoxics, hormonal therapies, molecular targeted agents and biological agents
- be proficient in the prevention and treatment of the complications of malignant disease
- have experience in the supportive management of cancer patients, including symptom palliation and rehabilitation with particular emphasis on psychological and social support
- display high levels of communication skills
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- have an understanding of the importance of a multidisciplinary approach to the management and treatment of malignant disease
- have an understanding of evolving areas of medical oncology, including geriatric oncology, adolescent/young adult patients, and survivorship issues
- have an understanding of the role of radiotherapy in the management of patients with cancer
- have an understanding of the role of palliative care in the management of patients with cancer
- have an understanding of haematology practice with special reference to the haematological side effects of treatments and the management of haematological malignancies
- be familiar with the role of curative and palliative surgery in the management of patients with malignancy
- have experience in the development of new agents, including protocol development and implementation
- have an understanding of the appropriate methods of statistical design and analysis, so as to evaluate research reports with an appropriate depth of understanding.

CURRICULUM THEMES AND LEARNING OBJECTIVES

Each of the curriculum documents has been developed using a common format, thereby ensuring a degree of consistency and approach across the spectrum of training.

Domains

The domains are the broad fields which group common or related areas of learning.

Themes

The themes identify and link more specific aspects of learning into logical or related groups.

Learning Objectives

The learning objectives outline the specific requirements of learning. They provide a focus for identifying and detailing the required knowledge, skills and attitudes. They also provide a context for specifying assessment standards and criteria as well as providing a context for identifying a range of teaching and learning strategies.

LEARNING OBJECTIVES TABLES

DOMAIN 1	SCIENTIFIC BASIS FOR MEDICAL ONCOLOGY
Theme 1.1	The Biology of Cancer
Learning Objective	
1.1.1	Explain the biology of cancer and the disease process
DOMAIN 2	PUBLIC HEALTH ISSUES RELEVANT TO THE MEDICAL ONCOLOGIST
Theme 2.1	Epidemiology
Learning Objective	
2.1.1	Discuss cancer epidemiology
Theme 2.2	Cancer Prevention
Learning Objective	
2.2.1	Explain the principles of cancer prevention
Theme 2.3	Cancer Screening
Learning Objective	
2.3.1	Explain the application of cancer screening, early detection principles and methods
Theme 2.4	Policy and Provision of Cancer Care
Learning Objectives	
2.4.1	Recognise the role of government and identify legal aspects in the provision of health care
2.4.2	Identify cancer related agencies
DOMAIN 3	PROFESSIONAL QUALITIES SPECIFIC TO MEDICAL ONCOLOGY
Theme 3.1	Communication and Counselling
Learning Objective	
3.1.1	Manage the psychosocial care of cancer patients and their carers/families
Theme 3.2	Principles and Conduct of Oncology Clinical Research
Learning Objective	
3.2.1	Describe the principles and conduct of oncology clinical trials
3.2.2	Explain statistical methods relevant to the design and conduct of oncology clinical trials
3.2.3	Discuss the conduct and reporting of clinical research

DOMAIN 4	BASIC PRINCIPLES IN THE MANAGEMENT OF CANCER
Theme 4.1	Assessment, Investigations, and Procedures
Learning Objectives	
4.1.1	Define the basis for diagnosis, staging, and follow-up of malignant disease
4.1.2	Perform procedures required for the diagnosis, treatment and supportive and palliative care of cancer patients
Theme 4.2	Treatment and General Management
Learning Objectives	
4.2.1	Describe the importance of a multidisciplinary approach to the management and treatment of malignant disease
4.2.2	Identify and define the pharmacological (i.e. systemic) management of patients with cancer
4.2.3	Define and describe the aspects of supportive care for cancer symptoms and treatment side effects
4.2.4	Describe the late effects of treatment and survivorship issues
4.2.5	Identify and manage oncological emergencies
4.2.6	Describe the role of the different therapeutic modalities (i.e. other than systemic agents) in cancer treatment
4.2.7	Provide palliative and end-of-life care
4.2.8	Discuss issues relating to the use of complementary and alternative therapies by cancer patients
DOMAIN 5	SPECIFIC CANCERS - MULTIDISCIPLINARY MANAGEMENT AND TREATMENT
Theme 5.1	Knowledge and Skills Common to the Management of all Cancers
Learning Objective	
5.1.1	Assess, manage, and treat malignant disease
Theme 5.2	Cancer in Specific Areas of the Body
Learning Objectives	
5.2.1	Assess, manage, and treat colorectal cancer
5.2.2	Assess, manage, and treat breast cancer
5.2.3	Assess, manage, and treat lung cancer
5.2.4	Assess, manage, and treat ovarian cancer
5.2.5	Assess, manage, and treat prostate cancer

5.2.6	Assess, manage, and treat testicular cancer
5.2.7	Assess, manage, and treat carcinomas of unknown primary site
5.2.8	Assess, manage, and treat melanoma and other skin cancers
5.2.9	Assess, manage, and treat other gastrointestinal cancers
5.2.10	Assess, manage, and treat head and neck cancers
5.2.11	Assess, manage, and treat other genito-urinary cancers
5.2.12	Assess, manage, and treat other gynaecologic cancers
5.2.13	Assess, manage, and treat mesothelioma and other tumors of the thoracic cavity
5.2.14	Assess, manage, and treat sarcomas
5.2.15	Assess, manage, and treat endocrine cancers
5.2.16	Assess, manage, and treat central nervous system malignancies
5.2.17	Assess, manage, and treat hematological malignancies

DOMAIN 1	SCIENTIFIC BASIS OF MEDICAL ONCOLOGY	
Theme 1.1	The Biology of Cancer	
Learning Objective 1.1.1	Explain the biology of cancer and the disease process	
Knowledge		
<ul style="list-style-type: none"> recognise the biology of normal cells including: <ul style="list-style-type: none"> the process of cell division and apoptosis the role of intracellular signalling, signal transduction, transcription and growth factors identify the properties of a cancer cell that differentiate it from a normal cell explain the basic processes of carcinogenesis and tumour growth including: <ul style="list-style-type: none"> the mechanisms of tumour cell invasion metastasis angiogenesis recognise the mechanisms of cell adhesion and contact inhibition discuss gene structure, organisation, expression, and regulation, including: <ul style="list-style-type: none"> the role of DNA and protein synthesis, breakage and repair the molecular mechanisms of mutagenesis the role of tumour suppressor genes and oncogenes and how these relate to inherited cancer and cytogenetics explain the cell cycle, its control by oncogenesis, and interaction with therapy interpret tumour cell kinetics, proliferation and programmed cell death, and the balance between cell death and cell proliferation recognise molecular techniques, including: <ul style="list-style-type: none"> polymerase chain reaction chromosomal analyses other techniques of molecular and tumour cell biology 		
Tumour immunology		
<ul style="list-style-type: none"> recognise cellular and humoral components of the immune system identify regulatory action of cytokines on the immune system discuss the inter-relationship between tumour and host immune systems, including: <ul style="list-style-type: none"> antigenicity, immune-mediated antitumour cytotoxicity the direct action of cytokines on tumours. 		
Teaching and Learning Methods	Assessment Criteria	Assessment Methods
<ul style="list-style-type: none"> text books participation in Basic Sciences of Oncology Course (BSOC) journal clubs 	<ul style="list-style-type: none"> application to clinical practice and research 	<ul style="list-style-type: none"> supervisor's reports record of attendance at journal club meetings completion of BSOC

DOMAIN 2		PUBLIC HEALTH ISSUES RELEVANT TO THE MEDICAL ONCOLOGIST	
Theme 2.1		Epidemiology	
Learning Objective 2.1.1		Discuss cancer epidemiology	
Knowledge		Skills	
<ul style="list-style-type: none"> evaluate the aetiology of genetic and environmental factors in oncogenesis, including: <ul style="list-style-type: none"> how viral, chemical, and radiation carcinogens cause cancer how chromosomal abnormalities contribute to cancer the role of cytogenetics assess risk factors that predispose to subsequent malignancy, including: <ul style="list-style-type: none"> genetic dietary occupational environmental previous malignancy previous therapy recognise basic epidemiological factors identify incidence, prevalence, and mortality associated with the most common malignancies worldwide and within Australia/New Zealand identify trends in cancer incidence and mortality worldwide and within Australia/New Zealand recognise descriptors of disease. 		<ul style="list-style-type: none"> access epidemiological data from local and international sources define and calculate measures of frequency of disease, including: <ul style="list-style-type: none"> risks rates incidence prevalence define, calculate and understand use of measures of association between risk factors and disease (relative risk, odds ratio). 	
Teaching and Learning Methods		Assessment Criteria	Assessment Methods
<ul style="list-style-type: none"> text books journal clubs conferences 		<ul style="list-style-type: none"> application to clinical practice and research 	<ul style="list-style-type: none"> supervisor's reports record of attendance at journal club meetings record of attendance at conferences

DOMAIN 2		PUBLIC HEALTH ISSUES RELEVANT TO THE MEDICAL ONCOLOGIST	
Theme 2.2		Cancer Prevention	
Learning Objective 2.2.1		Explain the principles of cancer prevention	
Knowledge		Skills	
<ul style="list-style-type: none"> • identify the value and methods of prevention in cancer development • discuss risk factors for malignancy, including: <ul style="list-style-type: none"> • diet • smoking • alcohol • sun exposure • assess primary, secondary, and tertiary preventive measures that may be taken to prevent cancer development, including: <ul style="list-style-type: none"> • health promotion • screening • prophylactic interventions such as surgery and chemoprevention • recognise worldwide national cancer control programs • use available resources. 		<ul style="list-style-type: none"> • counsel patients appropriately regarding risk factors for subsequent malignancy • apply cancer prevention strategies at a clinical level • recognise the need to make referrals to other health care professionals • recognise and promote cancer prevention strategies • ask patients about their information needs. 	
Teaching and Learning Methods	Assessment Criteria	Assessment Methods	
<ul style="list-style-type: none"> • text books • journal clubs • conferences 	<ul style="list-style-type: none"> • application to clinical practice and research 	<ul style="list-style-type: none"> • supervisor's reports • record of attendance at journal club meetings • record of attendance at conferences 	

DOMAIN 2		PUBLIC HEALTH ISSUES RELEVANT TO THE MEDICAL ONCOLOGIST	
Theme 2.3		Cancer Screening	
Learning Objective 2.3.1		Explain the application of cancer screening, early detection principles and methods	
Knowledge		Skills	
<ul style="list-style-type: none"> • evaluate principles of screening and risk assessment and their application • identify sensitivity and specificity of screening tests employed and the cost-benefit ratio • recognise situations in which screening has a well defined role and situations in which the role of screening is unclear or not defined • outline familial cancer syndromes • explain the principles and indications for genetic screening and counselling. 		<ul style="list-style-type: none"> • elicit a focussed clinical history that identifies risk factors for the patient and their family • assess the risk of malignancy for a patient and their family • assess the genetic risk of malignancy in a patient and their family • assess the impact of a diagnosis and identified risk on a patient and their family. 	
Teaching and Learning Methods	Assessment Criteria	Assessment Methods	
<ul style="list-style-type: none"> • clinical practice guidelines – <i>Familial Aspects of Cancer: a guide to clinical practice</i> • text books • conferences 	<ul style="list-style-type: none"> • application to clinical practice and research • application to patient management 	<ul style="list-style-type: none"> • supervisor’s reports • case notes review • record of attendance at conferences 	

DOMAIN 2		PUBLIC HEALTH ISSUES RELEVANT TO THE MEDICAL ONCOLOGIST	
Theme 2.4		Policy and Provision of Cancer Care	
Learning Objective 2.4.1		Recognise the role of government and identify legal aspects in the provision of health care	
Attitude		Advocate for patients where necessary	
Knowledge		Skills	
<ul style="list-style-type: none"> outline the structure of Australian and New Zealand health care systems identify health care responsibilities and expenditure of different levels of government within Australia/ New Zealand discuss Australian Health Care Agreements/New Zealand equivalent outline health care systems in countries such as USA, Canada and the UK outline casemix funding outline drug approval and marketing processes in Australia/New Zealand recognise the differences between countries with respect to new drug development and approval mechanisms explain issues surrounding cancer drug approval and prescribing identify government programs and policies which affect the health of cancer patients explain requirements for obtaining informed consent for treatment recognise legal issues relating to anticancer treatment recognise legal issues relating to institution and withdrawal of life support systems explain government policies on cancer notification describe legislation relating to opioid prescribing describe privacy legislation. 		<ul style="list-style-type: none"> recognise similarities and differences between the Australian and New Zealand health care systems and also between countries such as the USA, Canada and the UK recognise the benefits and negative effects of casemix funding prescribe therapies, taking into account relevant regulatory requirements manage patients appropriately with regard to legislative and institutional requirements practice in accordance with regulatory, legislative, and institutional requirements. 	
Teaching and Learning Methods	Assessment Criteria	Assessment Methods	
<ul style="list-style-type: none"> institutional protocols 	<ul style="list-style-type: none"> practice methods 	<ul style="list-style-type: none"> supervisor's reports 	

DOMAIN 2	PUBLIC HEALTH ISSUES RELEVANT TO THE MEDICAL ONCOLOGIST
Theme 2.4	Policy and Provision of Cancer Care
Learning Objective 2.4.2	Identify cancer related agencies
Knowledge	Skills
<ul style="list-style-type: none"> identify local agencies/organisations with a role in cancer control, research, and/or treatment recognise major international agencies/organisations with a role in cancer control, research, and/or treatment. 	<ul style="list-style-type: none"> source information relating to cancer control, research, treatment, and patient support.

DOMAIN 3	PROFESSIONAL QUALITIES SPECIFIC TO MEDICAL ONCOLOGY
Theme 3.1	Communication and Counselling
Learning Objective 3.1.1	Manage the psychosocial care of cancer patients and their carers/families
Attitude	Exhibit empathy and respect towards patients
Knowledge	Skills
<ul style="list-style-type: none"> recognise the psychosocial impact of cancer and indications for intervention discuss cultural issues that impact on the management of the disease recognise spiritual conflicts associated with the diagnosis and treatment of cancer identify adaptive and maladaptive behaviour in coping with the disease recognise coping mechanisms of patients and families within the context of cancer diagnosis explain issues involved in end-of-life care discuss the impacts on sexuality and possible dysfunction as a result of the disease process, treatment, or psychological effects recognise indications for the use of psychotropic drugs outline the bereavement process outline the physician's personal coping 	<ul style="list-style-type: none"> undertake precise, sensitive, and comprehensive questioning of the patient, to elicit relevant and related features of the case. Consider the age, state of the patient and multicultural factors elicit accurate and salient information about patient's history and social circumstances with sensitivity perform a thorough, focussed, sensitive, systematic, and accurate clinical examination prepare a patient for investigations by providing accurate information about the procedure and obtain informed consent communicate with patients and their carers about: <ul style="list-style-type: none"> cancer diagnosis and prognosis cancer treatment and side effects cancer clinical trials transition to palliative care and end-of-life issues cancer pain adverse events

DOMAIN 3	PROFESSIONAL QUALITIES SPECIFIC TO MEDICAL ONCOLOGY	
Theme 3.1	Communication and Counselling	
Learning Objective 3.1.1	Manage the psychosocial care of cancer patients and their carers/families	
<ul style="list-style-type: none"> integrate family members, pastoral care, nursing support, hospice, and cancer support groups in the multidisciplinary treatment of patients provide available information and support resources for patients and their carers/families. 	<ul style="list-style-type: none"> exhibit consideration of the patient's age, status, cultural, and social circumstances when determining treatment communicate with patients in a culturally competent manner recognise and manage cancer and post cancer distress, anxiety, depression, and anger inspire confidence and allay fears of patients communicate and work in a multidisciplinary team, recognising the need to make referrals to other health care professionals recognise anxiety, depression, and screen for psychosocial distress listen carefully and actively to the patient about their concerns, ideas, and expectations provide honest and comprehensive information to patients explain information clearly, using appropriate language verify patient's understanding of information provided recognise the range of emotions displayed by a patient, taking into consideration cultural and ethnic variations advise patients and families of resources for information and support safeguard confidentiality. 	
Teaching and Learning Methods	Assessment Criteria	Assessment Methods
<ul style="list-style-type: none"> clinical practice guidelines: <i>Clinical Practice Guidelines for the Psychosocial Care of Adults with Cancer</i> attendance at communication skills workshops (CSW) 	<ul style="list-style-type: none"> patient management communication with patient 	<ul style="list-style-type: none"> supervisor's reports attendance at CSW

DOMAIN 3		PROFESSIONAL QUALITIES SPECIFIC TO MEDICAL ONCOLOGY	
Theme 3.2		Principles and Conduct of Oncology Clinical Research	
Learning Objective 3.2.1		Describe the principles and conduct of oncology clinical trials	
Attitude		Demonstrate an ethical approach in the conduct and reporting of medical research	
Knowledge		Skills	
<ul style="list-style-type: none"> define the features and aims of phase I, II, and III trials recognise the ethical, regulatory, and legal issues involved in study design assess criteria for defining response to therapy identify tools used to assess quality of life outline the basics of statistics, including: <ul style="list-style-type: none"> statistical methods requirements for patient numbers in designing studies interpretation of data evaluate toxicity assessment and grading recognise the role and functioning of the institutional review board and ethical committees obtain informed consent from patients explain government regulatory mechanisms of surveillance identify mechanisms of support for clinical research assess cost and cost-effectiveness of therapy recognise the principles for the development and conduct of clinical trials through international cooperative groups or in-house protocols. 		<ul style="list-style-type: none"> critically appraise the scientific value of clinical trials and published articles and their influence on daily practice educate patients regarding possible clinical trial participation. 	
Teaching and Learning Methods		Assessment Criteria	
<ul style="list-style-type: none"> text books participation in Australia and Asia Pacific Clinical Oncology Research Development (ACORD) workshop 		<ul style="list-style-type: none"> participation in research projects research presentations 	
		Assessment Methods	
		<ul style="list-style-type: none"> supervisor's reports record of presentations/publications 	

DOMAIN 3		PROFESSIONAL QUALITIES SPECIFIC TO MEDICAL ONCOLOGY	
Theme 3.2		Principles and Conduct of Oncology Clinical Research	
Learning Objective 3.2.2		Explain statistical methods relevant to the design and conduct of oncology clinical trials	
Attitude		Demonstrate an ethical approach in the conduct and reporting of medical research	
Knowledge		Skills	
<ul style="list-style-type: none"> explain sampling and variability, the construction of confidence intervals, and p-values explain potential for bias to distort estimates of association, and methods to prevent this identify confounding factors and methods to control their effects use multivariable procedures to control for confounding factors discuss the concept and use of the T-test and associated confidence interval outline the concept and use of the chi-squared test, associated confidence interval, and the relationship to epidemiological measures such as relative risk recognise the problems with performing many significance tests within a study use parametric and non-parametric tests identify correlation and linear regression explain survival data concepts, including: <ul style="list-style-type: none"> censoring survival curves and their interpretation comparison of survival curves of two groups evaluate sample size and power/precision in the planning of a study, including the consequences of a study with inadequate power conduct systematic reviews conduct Cochrane reviews. 		<ul style="list-style-type: none"> interpret p-values and other statistical measures calculate sensitivity, specificity, and positive and negative predictive values recognise situations where non-parametric tests should be applied in place of parametric tests identify confounding factors and implement methods to control their effects identify the appropriate multivariable procedure to use for a given scenario assess a review as being systematic or otherwise employ the steps involved in completing a Cochrane review critically appraise a systematic review. 	
Teaching and Learning Methods	Assessment Criteria	Assessment Methods	
<ul style="list-style-type: none"> text books participation in ACORD workshop 	<ul style="list-style-type: none"> participation in research projects research presentations 	<ul style="list-style-type: none"> supervisor's reports record of presentations/publications 	

DOMAIN 3	PROFESSIONAL QUALITIES SPECIFIC TO MEDICAL ONCOLOGY	
Theme 3.2	Principles and Conduct of Oncology Clinical Research	
Learning Objective 3.2.3	Discuss the conduct and reporting of clinical research	
Attitude	Demonstrate an ethical approach in the conduct and reporting of medical research	
Knowledge	Skills	
<ul style="list-style-type: none"> describe the principles of grant writing identify reporting principles and guidelines explain requirements for obtaining informed consent from patients. 	<ul style="list-style-type: none"> write grant applications write articles prepare abstracts make oral and visual presentations collaborate in clinical research to improve cancer outcomes discuss possible participation in clinical trials with patients obtain informed consent from patients for participation in clinical trials write a research protocol write a plain language statement. 	
Teaching and Learning Methods	Assessment Criteria	Assessment Methods
<ul style="list-style-type: none"> participation in ACORD workshop 	<ul style="list-style-type: none"> participation in research projects research presentations 	<ul style="list-style-type: none"> supervisor's reports record of presentations/publications

DOMAIN 4		BASIC PRINCIPLES IN THE MANAGEMENT OF CANCER	
Theme 4.1		Assessment, Investigations, and Procedures	
Learning Objective 4.1.1		Define the basis for diagnosis, staging and follow-up of malignant disease	
Knowledge		Skills	
<ul style="list-style-type: none"> recognise indications for and risks of investigations and procedures identify the importance of cytology or biopsy as the basis for a definite diagnosis of cancer discuss the proper approach for obtaining a tissue diagnosis for patients in whom a diagnosis of cancer is suspected discuss the role of the pathologist in confirming the diagnosis of cancer and determining the severity and extent of disease recognise the latest pathological techniques and the contribution of these techniques to the staging and management of patients with cancer use laboratory testing techniques in the staging and follow-up of patients evaluate the utility and limitations of markers, including: <ul style="list-style-type: none"> serum tumour markers cell membrane markers DNA markers recognise the tumour-node-metastasis (TNM) staging system and how to stage a cancer patient identify indications for clinical, radiographic, and nuclear medicine imaging procedures in the diagnosis, staging, and follow-up of patients with malignant disease. 		<ul style="list-style-type: none"> formulate a plan of investigation and management discuss treatment options and prognosis with patients select laboratory tests for staging and follow-up of patients interpret marrow aspirations, biopsy material, and surgical specimens in consultation with a pathologist stage a patient according to the TNM staging system assess a patient's response to treatment using appropriate tests. 	
Teaching and Learning Methods		Assessment Criteria	Assessment Methods
<ul style="list-style-type: none"> on the job ward rounds clinical practice guidelines journal clubs conferences 		<ul style="list-style-type: none"> application to patient management 	<ul style="list-style-type: none"> supervisor's reports case presentations case notes review record of attendance at journal clubs record of attendance at conferences

DOMAIN 4		BASIC PRINCIPLES IN THE MANAGEMENT OF CANCER	
Theme 4.1		Investigations, Procedures, and Treatments	
Learning Objective 4.1.2		Perform procedures required for the diagnosis, treatment, and supportive and palliative care of cancer patients	
Attitude		Exhibit empathy and respect towards patients and colleagues	
Knowledge		Skills	
<ul style="list-style-type: none"> • explain biopsy and cytology methods • apply paracentesis techniques • outline lumbar puncture procedures and techniques • outline bone marrow aspiration technique • describe the side effects and complications of each procedure. 		<ul style="list-style-type: none"> • perform a biopsy • perform fine needle aspiration cytology • treat effusions by paracentesis, needle or intercostal catheter • perform a bone marrow aspiration and trephine • interpret marrow aspirations, biopsy material, and surgical specimens in consultation with a pathologist • perform a lumbar puncture and administer chemotherapy by that route • access and care for indwelling venous catheters • use a subcutaneous device to administer medication • recognise and solve the complications of a subcutaneous device • administer chemotherapy through an Ommaya reservoir • assess risks of diagnostic and treatment procedures • communicate risks of diagnostic and treatment procedures to patients • obtain a patient's informed consent for procedures • identify and manage the side effects or complications of each procedure • coordinate staff involved in a procedure or care of a patient after a procedure is completed • handle and dispose of chemotherapeutic and biologic agents in accordance with safety requirements • recognise impact of disease and treatment, such as issues relating to sexuality for gynaecological patients and stomas for colorectal patients • perform procedures carefully, safely and in accordance with protocols • recognise occupational health and safety issues and adhere to safety requirements. 	

DOMAIN 4	BASIC PRINCIPLES IN THE MANAGEMENT OF CANCER	
Theme 4.1	Investigations, Procedures and Treatments	
Learning Objective 4.1.2	Perform procedures required for the diagnosis, treatment, and supportive and palliative care of cancer patients	
Teaching and Learning Methods	Assessment Criteria	Assessment Methods
<ul style="list-style-type: none"> • observation • simulations 	<ul style="list-style-type: none"> • performance of procedures within clinical practice 	<ul style="list-style-type: none"> • observation and simulations • supervisor's reports

DOMAIN 4	BASIC PRINCIPLES IN THE MANAGEMENT OF CANCER	
Theme 4.2	Treatment and General Management	
Learning Objective 4.2.1	Describe the importance of a multidisciplinary approach to the management and treatment of malignant disease	
Knowledge	Skills	
<ul style="list-style-type: none"> • recognise the contributions of the different medical subspecialties in diagnosing, assessing disease stages, and treatment of malignant disease and complications • explain the benefits and limitations of each treatment modality • identify the role of allied health professionals in the total care of the cancer patient, including: <ul style="list-style-type: none"> • oncology nurses • pharmacists • rehabilitation medicine practitioners • palliative care providers • dietetic • psychosocial services. 	<ul style="list-style-type: none"> • interact with medical subspecialists and allied health practitioners in all disciplines relevant to cancer treatment • formulate a treatment plan for each patient that encompasses the input of all the relevant disciplines • provide medical care using the principles of multidisciplinary care and tumour streams • work with multidisciplinary cancer teams • summarise clinical information and present to other professionals • prepare, facilitate, and present cases at multidisciplinary meetings, and document decisions • write letters and documentation in patient records, including chemotherapy orders • communicate with GPs and/or other providers of post-discharge and continuing care • recognise the need to make referrals to other health care professionals. 	

DOMAIN 4		BASIC PRINCIPLES IN THE MANAGEMENT OF CANCER	
Theme 4.2		Treatment and General Management	
Learning Objective 4.2.1		Describe the importance of a multidisciplinary approach to the management and treatment of malignant disease	
Teaching and Learning Methods	Assessment Criteria	Assessment Methods	
<ul style="list-style-type: none"> • participation in multidisciplinary meetings • clinical practice guidelines • journal clubs • conferences 	<ul style="list-style-type: none"> • application to patient management • participation in multidisciplinary meetings • interactions with other health professionals 	<ul style="list-style-type: none"> • supervisor's reports • record of attendance at multidisciplinary meetings • case presentations at multidisciplinary meetings • record of attendance at journal club meetings and conferences • case notes review 	

DOMAIN 4		BASIC PRINCIPLES IN THE MANAGEMENT OF CANCER	
Theme 4.2		Treatment and General Management	
Learning Objective 4.2.2		Identify and define the pharmacological (i.e. systemic) management of patients with cancer	
Knowledge		Skills	
<p>Anticancer agents</p> <ul style="list-style-type: none"> • describe the indications and goals of treatment with anticancer agents in primary and recurrent malignant disorders • use anticancer agents in the neo-adjuvant, concomitant (concurrent) and adjuvant setting • describe role of anticancer drugs as radiation sensitising agents • recognise the importance of dosing and treatment delay of specific anticancer agents • identify the potential effect of a patient's comorbid medical conditions on the toxicity and efficacy of treatment • explain special conditions that influence the treatment of the growing population of older people with malignant disorders 		<ul style="list-style-type: none"> • select drugs and non-pharmacological treatments based on the cancer diagnosis • prescribe and safely administer anticancer agents • handle and dispose of chemotherapeutic and biologic agents in accordance with safety requirements • assess patients with comorbid medical conditions in order to determine the risk/benefit ratio of treatment with anticancer agents • diagnose and manage extravasation • utilise an analytical and scientific approach to problem-solving and adopt a range of problem-solving skills. 	

DOMAIN 4	BASIC PRINCIPLES IN THE MANAGEMENT OF CANCER	
Theme 4.2	Treatment and General Management	
Learning Objective 4.2.2	Identify and define the pharmacological (i.e. systemic) management of patients with cancer	
<ul style="list-style-type: none"> describe the pharmacokinetics, pharmacogenomics and pharmacology of the various anticancer agents describe and recognise the toxicity profile of each anticancer agent, including: <ul style="list-style-type: none"> long-term hazards how to adapt the dose and treatment schedule according to the patient in case of organ dysfunction how to handle these complications <p>Biologic and molecular targeted agents</p> <ul style="list-style-type: none"> identify activities and indications for biologic and molecular targeted therapy, including: <ul style="list-style-type: none"> cytokines tyrosine kinase inhibitors monoclonal antibodies hematopoietic growth factors recognise the spectrum of specific side effects, their management, and therapeutic combinations with chemotherapy outline the basic concepts of targeted molecular therapies, including: <ul style="list-style-type: none"> monoclonal antibodies tumour vaccines cellular therapy molecular targeted therapy discuss the requirements for the handling and disposal of cytotoxic and biological agents. 		
Teaching and Learning Methods	Assessment Criteria	Assessment Methods
<ul style="list-style-type: none"> text books literature reviews journal clubs conferences occupational health and safety legislation 	<ul style="list-style-type: none"> patient management prescribing and management of pharmacological therapies for cancer 	<ul style="list-style-type: none"> supervisor's reports case notes review record of attendance at journal clubs and conferences

DOMAIN 4		BASIC PRINCIPLES IN THE MANAGEMENT OF CANCER	
Theme 4.2		Treatment and General Management	
Learning Objective 4.2.3		Define and describe the aspects of supportive care for cancer symptoms and treatment side effects	
Attitude		Exhibit empathy and respect towards colleagues, recognise safety issues	
Knowledge		Skills	
<ul style="list-style-type: none"> discuss the role and importance of supportive therapy during anticancer therapy describe the different supportive treatments and their limitations and side effects describe palliative therapy and symptom control <p>Nausea and vomiting</p> <ul style="list-style-type: none"> describe the various aetiologies of nausea and vomiting in patients with malignancies recognise the mechanism of action and pharmacology of anti-emetic agents and their use in daily clinical practice <p>Infections and neutropaenia</p> <ul style="list-style-type: none"> outline the diagnosis, management, and prevention of infections and neutropaenic fever in all types of cancer patients identify the indications for use of haemopoietic growth factors <p>Thrombocytopenia</p> <ul style="list-style-type: none"> assess indications and complications of platelet transfusions and options regarding preparation and administration of these products <p>Anaemia</p> <ul style="list-style-type: none"> assess indications and complications of red blood cell transfusions and options regarding preparation and administration of these products outline the use of erythropoietin <p>Marrow and peripheral blood progenitor cells</p> <ul style="list-style-type: none"> recognise methods for marrow and peripheral blood progenitor cell procurement and cryopreservation <p>Organ protection</p> <ul style="list-style-type: none"> outline the use of organ protective measurements and treatments explain side effects of different organ protective agents 		<ul style="list-style-type: none"> use supportive therapy during anticancer therapy use anti-emetic agents in clinical practice diagnose and treat infections differentiate between infectious mucositis and mucositis caused by anticancer agents diagnose and treat extravasation identify the clinical presentations that require immediate intervention identify the required therapy in the acute and chronic setting identify and manage paraneoplastic syndromes communicate with GPs and/or other providers of post-discharge and continuing care adopt a multidisciplinary team approach to cancer treatment, palliation of symptoms and side effects recognise the need to make referrals to other health care professionals. 	

DOMAIN 4		BASIC PRINCIPLES IN THE MANAGEMENT OF CANCER	
Theme 4.2		Treatment and General Management	
Learning Objective 4.2.3		Define and describe the aspects of supportive care for cancer symptoms and treatment side effects	
<ul style="list-style-type: none"> discuss gonad preservation to ensure the fertility of the patient (cryopreservation techniques) <p>Mucositis</p> <ul style="list-style-type: none"> recognise the need for pain medication and topical anaesthetics as palliation for mucositis caused by anti cancer agents <p>Malignant effusions</p> <ul style="list-style-type: none"> recognise the signs and symptoms of ascites, pleural and pericardial effusions, listing treatments and their indications <p>Extravasation</p> <ul style="list-style-type: none"> recognise the importance of prevention in extravasation <p>Paraneoplastic syndromes</p> <ul style="list-style-type: none"> explain the remote effects of malignancy potentially manifested in every organ system identify malignancies most commonly associated with the individual syndromes and outline the management of each syndrome <p>Nutritional support</p> <ul style="list-style-type: none"> identify indications for, and complications of, enteral and parenteral support <p>Rehabilitation</p> <ul style="list-style-type: none"> discuss the role of physical therapy, especially in the post-operative period describe the roles of occupational therapy and speech pathology. 			
Teaching and Learning Methods		Assessment Criteria	Assessment Methods
<ul style="list-style-type: none"> guidelines: <i>Acute pain management: Scientific evidence</i> text books literature reviews ward rounds journal club conferences 		<ul style="list-style-type: none"> management of patient symptoms and treatment side effects interaction with other health care professionals 	<ul style="list-style-type: none"> supervisor's reports record of attendance at journal club meetings and conferences case notes review

DOMAIN 4		BASIC PRINCIPLES IN THE MANAGEMENT OF CANCER	
Theme 4.2		Treatment and General Management	
Learning Objective 4.2.4		Describe the late effects of treatment and survivorship issues	
Attitude		Communicate effectively and sensitively with patients	
Knowledge		Skills	
<p>Long-term complications</p> <ul style="list-style-type: none"> recognise long-term and late complications of each treatment modality employed explain the risk of treatment-induced cancers, including acute myeloid leukaemia after chemotherapy and radiation induced sarcomas explain endocrine dysfunctions, including: <ul style="list-style-type: none"> hypothyroidism after neck radiation sterility with chemotherapy metabolic syndrome post chemotherapy discuss chemoprevention measures discuss testing and intervals for follow-up <p>Genetic counselling</p> <ul style="list-style-type: none"> recognise the genetic factors which increase risk of cancer in the patient and the patient's family outline the principles for genetic screening and counselling <p>Health maintenance</p> <ul style="list-style-type: none"> identify risk factors for subsequent malignancy including: <ul style="list-style-type: none"> diet smoking alcohol sun exposure recognise the principles of counselling. 		<ul style="list-style-type: none"> counsel patients regarding possible long-term and late complications of treatment and risk factors for subsequent malignancy assess increased risk of cancer in the patient and the patient's family. 	
Teaching and Learning Methods		Assessment Criteria	Assessment Methods
<ul style="list-style-type: none"> text books on the job journal club conferences 		<ul style="list-style-type: none"> patient management 	<ul style="list-style-type: none"> supervisor's reports record of attendance at journal club meetings and conferences

DOMAIN 4	BASIC PRINCIPLES IN THE MANAGEMENT OF CANCER	
Theme 4.2	Treatment and General Management	
Learning Objective 4.2.5	Identify and manage oncological emergencies	
Attitude	Exhibit a calm and systematic approach to managing oncological emergencies	
Knowledge	Skills	
<ul style="list-style-type: none"> recognise clinical presentations that require immediate intervention, including: <ul style="list-style-type: none"> spinal cord compression superior vena cava obstruction cardiac tamponade hypercalcemia febrile neutropenia tumour lysis syndrome assess therapy requirements in the acute and chronic setting. 	<ul style="list-style-type: none"> manage oncological emergencies identify clinical presentations that require immediate intervention. 	
Teaching and Learning Methods	Assessment Criteria	Assessment Methods
<ul style="list-style-type: none"> hospital protocols 	<ul style="list-style-type: none"> management of oncological emergencies 	<ul style="list-style-type: none"> supervisor's reports case notes review simulations

DOMAIN 4	BASIC PRINCIPLES IN THE MANAGEMENT OF CANCER	
Theme 4.2	Treatment and General Management	
Learning Objective 4.2.6	Describe the role of the different therapeutic modalities (i.e. other than systemic agents) in cancer treatment	
Attitude	Exhibit empathy and respect towards colleagues	
Knowledge	Skills	
<p>Surgery</p> <ul style="list-style-type: none"> discuss indications and contraindications of surgery explain the role of surgery in the staging, cure, and palliation of patients with malignant diseases analyse indications of organ preservation and the sequencing of surgery with other treatment modalities outline the risks and benefits of surgery as a definitive treatment and as an adjunct to radiotherapy and/or anticancer agents 	<ul style="list-style-type: none"> formulate treatment plans for patients with the appropriate selection and sequencing of different therapeutic modalities explain issues of quality control in surgery and assess adequacy of surgical interventions manage patients with acute and late radiation toxicities utilise a multidisciplinary team approach to cancer treatment 	

DOMAIN 4		BASIC PRINCIPLES IN THE MANAGEMENT OF CANCER	
Theme 4.2		Treatment and General Management	
Learning Objective 4.2.6		Describe the role of the different therapeutic modalities (i.e. other than systemic agents) in cancer treatment	
<ul style="list-style-type: none"> interpret post-operative complications <p>Radiotherapy</p> <ul style="list-style-type: none"> describe principles of radiation biology and the indications for radiation therapy as a curative and palliative modality describe principles of treatment planning and dosimetry define the sequencing of radiotherapy with surgery and/or anticancer agents describe the rationale and indications for concurrent radiation therapy and chemotherapy recognise acute and late effects of radiation therapy. 		<ul style="list-style-type: none"> recognise the need to make referrals to other health care professionals. 	
Teaching and Learning Methods		Assessment Criteria	
<ul style="list-style-type: none"> supervisor's reports case notes review record of attendance at journal clubs, multidisciplinary meetings and conferences 		<ul style="list-style-type: none"> participation in BSOC participation in multidisciplinary meetings clinical practice guidelines journal clubs conferences 	
		Assessment Methods	
		<ul style="list-style-type: none"> supervisor's reports case notes review record of attendance at journal clubs, multidisciplinary meetings and conferences 	

DOMAIN 4		BASIC PRINCIPLES IN THE MANAGEMENT OF CANCER	
Theme 4.2		Treatment and General Management	
Learning Objective 4.2.7		Provide palliative and end-of-life care	
Attitude		Exhibit empathy and respect towards colleagues and patients	
Knowledge		Skills	
<ul style="list-style-type: none"> explain principles of palliative and end-of-life care recognise palliative care as an integrated part of medical oncology that has a multidisciplinary dimension describe palliative therapy. <p>Pain management</p> <ul style="list-style-type: none"> outline the World Health Organisation pain ladder 		<ul style="list-style-type: none"> determine when palliative care is indicated implement palliative and end-of-life care in clinical practice assess location and severity of pain manage cancer pain with the available modalities and recognise when a referral for an invasive palliative intervention is indicated 	

DOMAIN 4		BASIC PRINCIPLES IN THE MANAGEMENT OF CANCER	
Theme 4.2		Treatment and General Management	
Learning Objective 4.2.7		Provide palliative and end-of-life care	
<ul style="list-style-type: none"> describe the pharmacology and toxicity of the opiate narcotics and other analgesics <p>Other symptoms</p> <ul style="list-style-type: none"> explain palliative measures for other symptoms including: <ul style="list-style-type: none"> respiratory tract gastrointestinal tract neurological symptoms cutaneous and mucosal symptoms anorexia cachexia. 		<ul style="list-style-type: none"> select palliative measures for other symptoms discuss palliative care with patients discuss end-of-life/not for CPR issues with patients and their carers/family choose a multidisciplinary team approach to cancer treatment and palliation of symptoms and side effects recognise the need to make referrals to other health care professionals provide honest and comprehensive information to patients explain information clearly using appropriate language. 	
Teaching and Learning Methods		Assessment Criteria	Assessment Methods
<ul style="list-style-type: none"> clinical practice guidelines - <i>Therapeutic guidelines: Palliative Care</i> CSW journal clubs conferences 		<ul style="list-style-type: none"> patient management communication with patient interaction with other health professionals 	<ul style="list-style-type: none"> supervisor's reports participation in communication skills workshops

DOMAIN 4		BASIC PRINCIPLES IN THE MANAGEMENT OF CANCER	
Theme 4.2		Treatment and General Management	
Learning Objective 4.2.8		Discuss the issues relating to the use of complementary and alternative therapies by cancer patients	
Attitude		Exhibit empathy and respect towards patients	
Knowledge		Skills	
<ul style="list-style-type: none"> recognise the prevalence and use of complementary and alternative medicine (CAM) therapies identify interactions with standard therapies. 		<ul style="list-style-type: none"> discuss use of CAM therapies with patients refer patients to high quality information on CAM therapies. 	

DOMAIN 4	BASIC PRINCIPLES IN THE MANAGEMENT OF CANCER	
Theme 4.2	Treatment and General Management	
Learning Objective 4.2.8	Discuss the issues relating to the use of complementary and alternative therapies by cancer patients	
Attitude	Exhibit empathy and respect towards patients	
Teaching and Learning Methods	Assessment Criteria	Assessment Methods
<ul style="list-style-type: none"> journal club conferences 	<ul style="list-style-type: none"> patient management 	<ul style="list-style-type: none"> supervisor's reports

DOMAIN 5	SPECIFIC CANCERS – MULTIDISCIPLINARY MANAGEMENT AND TREATMENT	
Theme 5.1	Knowledge and Skills Common to the Management of all Cancers	
Learning Objective 5.1.1	Assess, manage, and treat malignant disease	
Attitude	Exhibit empathy and respect towards patients and other health professionals	
Knowledge	Skills	
<ul style="list-style-type: none"> recognise the importance of family history discuss the major surgical approaches to the disease recognise the potentially curative role of surgery and the relative roles of combined modality therapy, including adjuvant and neoadjuvant chemotherapy recognise the role of palliative chemotherapy and other supportive measures recognise the role of combined modality therapy in organ preservation identify the need for combination therapy in advanced disease outline the current evidence for the role of screening explain the roles of surgery, radiotherapy, and chemotherapy in diagnosis, staging, and treatment of the disease identify the risk factors and rationale for screening as well as its chemoprevention 	<ul style="list-style-type: none"> formulate an investigation and management plan with the appropriate selection and sequencing of therapeutic modalities diagnose, stage, and follow-up patients provide medical care using the principles of multidisciplinary care and tumour streams communicate with and provide psychosocial care to patients and their families implement pharmacological management plan implement supportive care for a patient perform procedures required for the diagnosis, treatment, and supportive and palliative care of cancer patients manage late effects of treatment and survivorship issues exhibit an analytical and scientific approach to problem solving and adopt a range of problem solving skills perform procedures carefully and safely in accordance with protocols 	

DOMAIN 5	SPECIFIC CANCERS – MULTIDISCIPLINARY MANAGEMENT AND TREATMENT	
Theme 5.1	Knowledge and Skills Common to the Management of all Cancers	
Learning Objective 5.1.1	Assess, manage and treat malignant disease	
Attitude	Exhibit empathy and respect towards patients and other health professionals	
	<ul style="list-style-type: none"> recognise the role of surgery in: <ul style="list-style-type: none"> making the diagnosis curative resection management palliation. 	<ul style="list-style-type: none"> identify when organ preservation is an option.

HIERARCHY OF LEARNING IMPORTANCE (HLI)	
E - Essential	Core or underpinning, must be known and readily applied at the appropriate level in a range of contexts, will form a major part of assessment
I - Important	Should be known or be able to be readily accessed, significantly enhances understanding of the field, may be an important component of broader assessments

DOMAIN 5	SPECIFIC CANCERS – MULTIDISCIPLINARY MANAGEMENT AND TREATMENT	
Theme 5.2	Cancer in Specific Areas of the Body	
Learning Objective 5.2.1	Assess, manage, and treat colorectal cancer	HLI = E
Knowledge		
<ul style="list-style-type: none"> recognise the importance of surgical staging define the indications for adjuvant therapies in colon and rectal cancers define the role of chemotherapy in advanced metastatic disease define the molecular pathways and the role of molecular targeted agents in treatment explain heritable types of colon cancer, differences in their patterns of spread, and management principles recognise the risk factors and rationale for screening for colorectal cancer, as well as its chemoprevention identify the importance of family history and the role of genetic testing. 		

DOMAIN 5	SPECIFIC CANCERS – MULTIDISCIPLINARY MANAGEMENT AND TREATMENT	
Theme 5.2	Cancer in Specific Areas of the Body	
Learning Objective 5.2.1	Assess, manage, and treat colorectal cancer	HLI = E
Teaching and Learning Methods	Assessment Criteria	Assessment Methods
<ul style="list-style-type: none"> clinical practice guidelines – <i>Clinical practice guidelines for the prevention, early detection and management of colorectal cancer</i> clinical clerking text books participation in multidisciplinary meetings journal clubs conferences 	<ul style="list-style-type: none"> patient management management of patient symptoms and treatment of side effects performance of necessary diagnostic and treatment procedures interaction with patient and health professionals 	<ul style="list-style-type: none"> supervisor’s reports case notes review presentations record of attendance at journal clubs and conferences

DOMAIN 5	SPECIFIC CANCERS – MULTIDISCIPLINARY MANAGEMENT AND TREATMENT	
Theme 5.2	Cancer in Specific Areas of the Body	
Learning Objective 5.2.2	Assess, manage, and treat breast cancer	HLI = E
Knowledge		
<ul style="list-style-type: none"> explain the epidemiology of breast cancer, and the relevance and impact of screening discuss the importance of family history and the role for genetic testing and counselling describe the role of screening investigations, including: <ul style="list-style-type: none"> mammogram ultrasound magnetic resonance imaging (MRI) scan of the breast recognise the pathologic and prognostic features that assist in determining the indications for therapy: <ul style="list-style-type: none"> in the adjuvant and neoadjuvant setting for locally advanced and metastatic disease manage pre-neoplastic lesions 		

DOMAIN 5		SPECIFIC CANCERS – MULTIDISCIPLINARY MANAGEMENT AND TREATMENT	
Theme 5.2		Cancer in Specific Areas of the Body	
Learning Objective 5.2.2		Assess, manage, and treat breast cancer	HLI = E
Knowledge			
<ul style="list-style-type: none"> explain the principles of surgical management and indications for: <ul style="list-style-type: none"> conservation surgery mastectomy breast reconstruction sentinel lymph node biopsy axillary surgery discuss issues that affect the choice of primary treatment, including the value of determination of hormone receptors and human epidermal growth factor receptor 2 (HER2) status recognise the benefits and toxicities of hormone therapy and/or chemotherapy in advanced disease identify the indications for adjuvant therapy summarise the role of chemotherapy regimens describe the issues of hormone replacement therapy and pregnancy in a patient with a history of breast cancer. 			
Teaching and Learning Methods		Assessment Criteria	Assessment Methods
<ul style="list-style-type: none"> clinical practice guidelines - <ul style="list-style-type: none"> <i>Clinical practice guidelines for the management of early breast cancer</i> <i>Clinical practice guidelines for the management of advanced breast cancer</i> <i>Psychosocial clinical practice guidelines: information, support and counselling for women with breast cancer</i> <i>Clinical practice guidelines for the management and support of younger women with breast cancer</i> clinical clerking text books participation in multidisciplinary meetings journal clubs conferences 		<ul style="list-style-type: none"> patient management management of patient symptoms and treatment side effects performance of necessary diagnostic and treatment procedures interaction with patient and health professionals 	<ul style="list-style-type: none"> supervisor’s reports case notes review presentations record of attendance at journal clubs and conferences

DOMAIN 5		SPECIFIC CANCERS – MULTIDISCIPLINARY MANAGEMENT AND TREATMENT	
Theme 5.2		Cancer in Specific Areas of the Body	
Learning Objective 5.2.3		Assess, manage, and treat lung cancer	HLI = E
Knowledge			
<ul style="list-style-type: none"> define the epidemiology and risk factors for developing lung cancer identify the differences between small-cell lung cancer and non-small-cell lung cancer <p>Small-cell lung cancer</p> <ul style="list-style-type: none"> apply a multimodality approach to limited-stage disease recognise the role of chemotherapy in patients with advanced disease assess indications for central nervous system treatment and prophylaxis <p>Non-small-cell lung cancer</p> <ul style="list-style-type: none"> recognise criteria of inoperability and the surgical and nonsurgical staging of patients with localised disease identify value of surgery, chemotherapy, and radiation therapy in localised disease, often given as combined modality treatment explain the role of chemotherapy and/or radiation therapy in the palliation of advanced disease define the role of molecular targeted agents in the treatment of advanced disease. 			
Teaching and Learning Methods		Assessment Criteria	Assessment Methods
<ul style="list-style-type: none"> clinical practice guidelines – <i>Clinical practice guidelines for the prevention, diagnosis and management of lung cancer</i> clinical clerking text books participation in multidisciplinary meetings journal clubs conferences 		<ul style="list-style-type: none"> patient management management of patient symptoms and treatment side effects performance of necessary diagnostic and treatment procedures interaction with patient and health professionals 	<ul style="list-style-type: none"> supervisor’s reports case notes review presentations record of attendance at journal clubs and conferences

DOMAIN 5	SPECIFIC CANCERS – MULTIDISCIPLINARY MANAGEMENT AND TREATMENT	
Theme 5.2	Cancer in Specific Areas of the Body	
Learning Objective 5.2.4	Assess, manage, and treat ovarian cancer	HLI = E
Knowledge		
<ul style="list-style-type: none"> explain the heritable predisposition to ovarian cancer, the epidemiology and risk factors, the importance of family history, and the role of genetic testing recognise the role of surgical procedures in the initial staging and treatment of patients and subsequent systemic treatment, including the role of interval debulking surgery identify the indications for chemotherapy in localised and advanced disease explain the importance of integrated clinical care in achieving optimal clinical outcomes describe the current evidence for the role of screening. 		
Teaching and Learning Methods	Assessment Criteria	Assessment Methods
<ul style="list-style-type: none"> clinical practice guidelines – <i>Clinical practice guidelines for the management of women with epithelial ovarian cancer</i> clinical clerking text books participation in multidisciplinary meetings journal clubs conferences 	<ul style="list-style-type: none"> patient management management of patient symptoms and treatment side effects performance of necessary diagnostic and treatment procedures interaction with patient and health professionals 	<ul style="list-style-type: none"> supervisor’s reports case notes review presentations record of attendance at journal clubs and conferences

DOMAIN 5	SPECIFIC CANCERS – MULTIDISCIPLINARY MANAGEMENT AND TREATMENT	
Theme 5.2	Cancer in Specific Areas of the Body	
Learning Objective 5.2.5	Assess, manage, and treat prostate cancer	HLI = E
Knowledge		
<ul style="list-style-type: none"> explain the epidemiology, risk factors, genetic associations, and the role of screening in prostate cancer recognise the role of prostate-specific antigen in screening, diagnosis, management, and follow-up of patients with prostate cancer explain the importance of histological grading recognise the role of observation, surgery, or radiation therapy in the management of early stage disease discuss the application of hormone therapy and chemotherapy in advanced disease. 		

DOMAIN 5		SPECIFIC CANCERS – MULTIDISCIPLINARY MANAGEMENT AND TREATMENT	
Theme 5.2		Cancer in Specific Areas of the Body	
Learning Objective 5.2.5		Assess, manage, and treat prostate cancer	HLI = E
Teaching and Learning Methods	Assessment Criteria	Assessment Methods	
<ul style="list-style-type: none"> clinical clerking text books participation in multidisciplinary meetings journal clubs conferences 	<ul style="list-style-type: none"> patient management management of patient symptoms and treatment side effects performance of necessary diagnostic and treatment procedures interaction with patient and health professionals 	<ul style="list-style-type: none"> supervisor’s reports case notes review presentations record of attendance at journal clubs and conferences 	

DOMAIN 5		SPECIFIC CANCERS – MULTIDISCIPLINARY MANAGEMENT AND TREATMENT	
Theme 5.2		Cancer in Specific Areas of the Body	
Learning Objective 5.2.6		Assess, manage, and treat testicular cancer	HLI = E
Knowledge			
Teaching and Learning Methods	Assessment Criteria	Assessment Methods	
<ul style="list-style-type: none"> explain the epidemiology and risk factors recognise the International Germ Cell Collaborative Group classification for classifying germ cell tumour patients identify the utility of tumour markers in the diagnosis, prognosis, and follow-up of patients recognise the roles of surgery, surveillance, radiotherapy, and chemotherapy in diagnosis, staging, and treatment of the disease. 			
<ul style="list-style-type: none"> clinical clerking text books participation in multidisciplinary meetings journal clubs conferences 	<ul style="list-style-type: none"> patient management management of patient symptoms and treatment side effects performance of necessary diagnostic and treatment procedures interaction with patient and health professionals 	<ul style="list-style-type: none"> supervisor’s reports case notes review presentations record of attendance at journal clubs and conferences 	

DOMAIN 5		SPECIFIC CANCERS – MULTIDISCIPLINARY MANAGEMENT AND TREATMENT	
Theme 5.2		Cancer in Specific Areas of the Body	
Learning Objective 5.2.7		Assess, manage, and treat carcinomas of unknown primary site	HLI = E
Knowledge			
<ul style="list-style-type: none"> recognise the epidemiology and risk factors for carcinoma of unknown primary site explain the importance of the tumour histopathology, pathologic analysis, and tumour markers in directing diagnostic investigations describe the settings in which treatment may affect survival and when it is palliative explain the role and planning of palliative therapy. 			
Teaching and Learning Methods		Assessment Criteria	Assessment Methods
<ul style="list-style-type: none"> clinical clerking text books participation in multidisciplinary meetings journal clubs conferences 		<ul style="list-style-type: none"> patient management management of patient symptoms and treatment side effects performance of necessary diagnostic and treatment procedures interaction with patient and health professionals 	<ul style="list-style-type: none"> supervisor’s reports case notes review presentations record of attendance at journal clubs and conferences

DOMAIN 5	SPECIFIC CANCERS – MULTIDISCIPLINARY MANAGEMENT AND TREATMENT	
Theme 5.2	Cancer in Specific Areas of the Body	
Learning Objective 5.2.8	Assess, manage, and treat melanoma and other skin cancers	HLI = I
Knowledge		
<ul style="list-style-type: none"> recognise the epidemiology and risk factors of skin cancer and the application to primary prevention <p>Melanoma</p> <ul style="list-style-type: none"> explain the varied clinical appearance of primary melanomas and their precursor lesions, such as dysplastic nevus recognise the appearance of skin lesions that are potentially malignant describe the importance of tumour depth, accurate histological assessment, and other prognostic factors in assessing prognosis explain the role of surgery in making the diagnosis and curative resection explain the role and indications for systemic therapy, including: <ul style="list-style-type: none"> biologic therapies in the adjuvant setting in early and advanced disease the potential risks and benefits of chemotherapy in advanced disease molecular targeted agents describe the primary prevention of melanomas and the recognition and counselling of patients at high risk for developing melanomas <p>Basal cell and squamous cell cancers</p> <ul style="list-style-type: none"> recognise the clinical appearance of these lesions recognise their association with sun exposure and identify the long-term complications of cancer therapy. 		
Teaching and Learning Methods	Assessment Criteria	Assessment Methods
<ul style="list-style-type: none"> clinical practice guidelines - <i>Clinical practice guidelines for the management of cutaneous melanoma</i> clinical clerking text books participation in multidisciplinary meetings journal clubs conferences 	<ul style="list-style-type: none"> patient management management of patient symptoms and treatment side effects performance of necessary diagnostic and treatment procedures interaction with patient and health professionals 	<ul style="list-style-type: none"> supervisor’s reports case notes review presentations record of attendance at journal clubs and conferences

DOMAIN 5	SPECIFIC CANCERS – MULTIDISCIPLINARY MANAGEMENT AND TREATMENT	
Theme 5.2	Cancer in Specific Areas of the Body	
Learning Objective 5.2.9	Assess, manage, and treat other gastrointestinal cancers	HLI = I
Knowledge		
<p>Oesophageal cancer</p> <ul style="list-style-type: none"> explain the epidemiology and risk factors for oesophageal cancer explain the indications for endoscopy in the diagnosis and staging of the disease identify the indications for nutritional support recognise the importance of combined modality therapy identify the role of palliative chemotherapy and other supportive care measures <p>Gastric cancer</p> <ul style="list-style-type: none"> explain the epidemiology and unique risk factors for gastric cancer describe the major surgical approaches to the disease including: <ul style="list-style-type: none"> recognition of the potentially curative role of surgery the relative roles of combined modality therapy in the adjuvant setting the role of palliative chemotherapy and other supportive measures <p>Hepatobiliary cancers</p> <ul style="list-style-type: none"> explain the epidemiology and risk factors for hepatobiliary cancers recognise the importance of alpha fetoprotein level in diagnosis, response assessment, and screening assess the curative role of surgery in localised disease and the role of systemic and intra-arterial chemotherapy manage disease prevention and recognise the role of vaccination against hepatitis B for liver cancer <p>Pancreatic cancer</p> <ul style="list-style-type: none"> outline risk factors for the development of pancreatic cancer explain the unique genetic aspects of pancreatic cancer discuss the roles of endoscopy and molecular diagnosis in pancreatic cancer recognise the curative role of surgery in rare cases and its potential to provide palliation in other patients recognise the palliative role of chemotherapy in advanced disease recognise the role of chemotherapy as adjuvant treatment for resected pancreatic cancer recognise the role of radiotherapy in treatment of pancreatic cancer <p>Anal cancer</p> <ul style="list-style-type: none"> recognise the association of human papilloma virus and anal cancer explain the role of combined modality therapy in organ preservation. 		

DOMAIN 5	SPECIFIC CANCERS – MULTIDISCIPLINARY MANAGEMENT AND TREATMENT	
Theme 5.2	Cancer in Specific Areas of the Body	
Learning Objective 5.2.9	Assess, manage, and treat other gastrointestinal cancers	HLI = I
Teaching and Learning Methods	Assessment Criteria	Assessment Methods
<ul style="list-style-type: none"> clinical clerking text books participation in multidisciplinary meetings journal clubs conferences 	<ul style="list-style-type: none"> patient management management of patient symptoms and treatment side effects performance of necessary diagnostic and treatment procedures interaction with patient and health professionals 	<ul style="list-style-type: none"> supervisor's reports case notes review presentations record of attendance at journal clubs and conferences

DOMAIN 5	SPECIFIC CANCERS – MULTIDISCIPLINARY MANAGEMENT AND TREATMENT	
Theme 5.2	Cancer in Specific Areas of the Body	
Learning Objective 5.2.10	Assess, manage, and treat head and neck cancers	HLI = I
Knowledge	Skills	
<ul style="list-style-type: none"> explain risk factors for head and neck cancers identify natural histories of the individual primary tumour sites describe clinical assessment methods, including head and neck examination identify the role of panendoscopy in staging recognise the importance of pathological assessment and recognition of nasopharyngeal carcinoma discuss the importance of staging as the basis for selecting surgery and/or radiation therapy as definitive treatment identify indications for organ preservation define the role of concurrent radiation and chemotherapy as definitive treatment of locally advanced disease 	<ul style="list-style-type: none"> perform a head and neck examination. 	

DOMAIN 5		SPECIFIC CANCERS – MULTIDISCIPLINARY MANAGEMENT AND TREATMENT	
Theme 5.2		Cancer in Specific Areas of the Body	
Learning Objective 5.2.10		Assess, manage, and treat head and neck cancers	HLI = I
Knowledge		Skills	
<ul style="list-style-type: none"> discuss the role of chemotherapy in the treatment of recurrent and metastatic disease explain the long-term management of head and neck cancer patients and the risk of second malignancies. 			
Teaching and Learning Methods	Assessment Criteria	Assessment Methods	
<ul style="list-style-type: none"> clinical clerking text books participation in multidisciplinary meetings journal clubs conferences 	<ul style="list-style-type: none"> patient management management of patient symptoms and treatment side effects performance of necessary diagnostic and treatment procedures interaction with patient and health professionals 	<ul style="list-style-type: none"> supervisor’s reports case notes review presentations record of attendance at journal clubs and conferences 	

DOMAIN 5		SPECIFIC CANCERS – MULTIDISCIPLINARY MANAGEMENT AND TREATMENT	
Theme 5.2		Cancer in Specific Areas of the Body	
Learning Objective 5.2.11		Assess, manage, and treat other genito-urinary cancers	HLI = I
Knowledge			
Renal cell cancer			
<ul style="list-style-type: none"> describe the epidemiology, gene pathways, and risk factors evaluate the role of imaging and biopsy in the diagnosis of renal cell cancer identify paraneoplastic aspects of the disease recognise the curative role of surgery in localised disease, and the potential benefits of surgery and radiotherapy in localised and metastatic disease explain the immunological basis of systemic therapy and the role of molecular targeted agents for advanced disease 			
Urothelial cancers			
<ul style="list-style-type: none"> recognise the patterns of spread and differences between localised and invasive disease for all sub-types, and the propensity for transitional-cell carcinoma to recur identify the role of urine cytology and cystoscopy in the staging and follow-up of patients discuss the role of intravesical therapy in the management of superficial bladder cancer, as well as the role of surgery in early-stage invasive cancers identify the role of combined modality therapy in localised invasive disease and the management of metastatic transitional-cell carcinoma 			
Penile cancer			
<ul style="list-style-type: none"> recognise the role of human papilloma virus in the aetiology of penile cancers explain the potentially curative role of combined modality treatment. 			
Teaching and Learning Methods		Assessment Criteria	Assessment Methods
<ul style="list-style-type: none"> clinical clerking text books participation in multidisciplinary meetings journal clubs conferences 		<ul style="list-style-type: none"> patient management management of patient symptoms and treatment side effects performance of necessary diagnostic and treatment procedures interaction with patient and health professionals 	<ul style="list-style-type: none"> supervisor’s reports case notes review presentations record of attendance at journal clubs and conferences

DOMAIN 5	SPECIFIC CANCERS – MULTIDISCIPLINARY MANAGEMENT AND TREATMENT	
Theme 5.2	Cancer in Specific Areas of the Body	
Learning Objective 5.2.12	Assess, manage, and treat other gynaecologic cancers	HLI = 1
Knowledge		
<p>Uterine cancer</p> <ul style="list-style-type: none"> • assess the role of hormones and hormonal therapies in the aetiology of endometrial cancers • recognise the curative role of surgery in early-stage disease and the value of radiation therapy in the multidisciplinary approach for treatment of advanced disease • identify the role of magnetic resonance imaging (MRI) pre-surgery and adequate pathological assessment post-surgery • describe the role of chemotherapy and hormone therapy in the management of local and metastatic disease <p>Cervical cancer</p> <ul style="list-style-type: none"> • recognise the role of the human papilloma virus in the aetiology of cervix cancer and the implications for prevention • explain the value of cervical screening as a model of successful screening in the prevention and identification of early disease • recognise the fall in incidence of advanced disease in developed countries • recognise staging as the basis for selecting surgery and/or radiation therapy as a curative treatment • discuss the role of chemotherapy in the management of both local disease combined with radiotherapy and in the treatment of advanced disease <p>Vulvar and vaginal cancers</p> <ul style="list-style-type: none"> • recognise the induction of clear-cell carcinoma of the vagina in women whose mothers received diethylstilbestrol during pregnancy • surveillance and management of these individuals • recognise the curative role of surgery in early-stage disease and the need for combination therapy in advanced disease <p>Gestational trophoblastic diseases</p> <ul style="list-style-type: none"> • recognise the epidemiology and pathology of these diseases (including hydatidiform mole and choriocarcinoma), and the role of beta-human chorionic gonadotropin (β-HCG) in diagnosis and follow-up • outline the rationale for risk classification according to prognostic scoring systems • discuss the role of chemotherapy, and identify the need for referral to centres experienced in management. 		

DOMAIN 5		SPECIFIC CANCERS – MULTIDISCIPLINARY MANAGEMENT AND TREATMENT	
Theme 5.2		Cancer in Specific Areas of the Body	
Learning Objective 5.2.12		Assess, manage, and treat other gynaecologic cancers	HLI = I
Teaching and Learning Methods	Assessment Criteria	Assessment Methods	
<ul style="list-style-type: none"> clinical clerking text books participation in multidisciplinary meetings journal clubs conferences 	<ul style="list-style-type: none"> patient management management of patient symptoms and treatment side effects performance of necessary diagnostic and treatment procedures interaction with patient and health professionals 	<ul style="list-style-type: none"> supervisor's reports case notes review presentations record of attendance at journal clubs and conferences 	

DOMAIN 5		SPECIFIC CANCERS – MULTIDISCIPLINARY MANAGEMENT AND TREATMENT	
Theme 5.2		Cancer in Specific Areas of the Body	
Learning Objective 5.2.13		Assess, manage, and treat mesothelioma and other tumours of the thoracic cavity	HLI = I
Knowledge			
Teaching and Learning Methods	Assessment Criteria	Assessment Methods	
<ul style="list-style-type: none"> recognise the epidemiology and risk factors for mesothelioma, criteria for operability, and the value of chemotherapy recognise the role of surgery in diagnosis, management, and palliation explain the role of radiation therapy and chemotherapy in palliation of symptoms. 			
<ul style="list-style-type: none"> clinical clerking text books participation in multidisciplinary meetings journal clubs conferences 	<ul style="list-style-type: none"> patient management management of patient symptoms and treatment side effects performance of necessary diagnostic and treatment procedures interaction with patient and health professionals 	<ul style="list-style-type: none"> supervisor's reports case notes review presentations record of attendance at journal clubs and conferences 	

DOMAIN 5		SPECIFIC CANCERS – MULTIDISCIPLINARY MANAGEMENT AND TREATMENT	
Theme 5.2		Cancer in Specific Areas of the Body	
Learning Objective 5.2.14		Assess, manage, and treat sarcomas	HLI = I
Knowledge			
<ul style="list-style-type: none"> recognise the epidemiology and risk factors, including the predisposing situation and condition, in the development of primary bone sarcomas assess the pathological spectrum of bone sarcomas and how pathology influences the prognosis and patient management assess and institute correct investigations, including biopsy in a multidisciplinary setting identify the indications and considerations for limb preservation, including: <ul style="list-style-type: none"> adjuvant chemotherapy combined modality therapy for specific tumours recognise the role of surgery in initial diagnosis of soft-tissue sarcomas and the indications for limb preservation define the roles of chemotherapy, surgery, and radiation therapy, including the specific medical treatment available for gastrointestinal stromal tumours. 			
Teaching and Learning Methods		Assessment Criteria	Assessment Methods
<ul style="list-style-type: none"> clinical clerking text books participation in multidisciplinary meetings journal clubs conferences 		<ul style="list-style-type: none"> patient management management of patient symptoms and treatment side effects performance of necessary diagnostic and treatment procedures interaction with patient and health professionals 	<ul style="list-style-type: none"> supervisor's reports case notes review presentations record of attendance at journal clubs and conferences

DOMAIN 5		SPECIFIC CANCERS – MULTIDISCIPLINARY MANAGEMENT AND TREATMENT	
Theme 5.2		Cancer in Specific Areas of the Body	
Learning Objective 5.2.15		Assess, manage, and treat endocrine cancers	HLI = I
Knowledge			
<ul style="list-style-type: none"> identify endocrine cancers, including: <ul style="list-style-type: none"> adrenal, pancreas, pituitary, and thyroid gland amine precursor uptake decarboxylase (APUD) tumours including carcinoid and phaeochromocytoma multiple endocrine neoplasia syndromes recognise the epidemiology and risk factors, including awareness that endocrine cancer may be part of a cancer syndrome due to specific genetic defects identify the specific diagnostic work-up and treatment of endocrine cancers define the role of surgery in diagnosis, management, and palliation explain the role of anticancer drugs in the different endocrine cancers define the role of chemotherapy and radiation therapy, including radiopharmaceutical agents for metastatic disease. 			
Teaching and Learning Methods		Assessment Criteria	Assessment Methods
<ul style="list-style-type: none"> clinical clerking text books Participation in multidisciplinary meetings journal clubs conferences 		<ul style="list-style-type: none"> patient management management of patient symptoms and treatment side effects performance of necessary diagnostic and treatment procedures interaction with patient and health professionals 	<ul style="list-style-type: none"> supervisor’s reports case notes review presentations record of attendance at journal clubs and conferences

DOMAIN 5	SPECIFIC CANCERS – MULTIDISCIPLINARY MANAGEMENT AND TREATMENT	
Theme 5.2	Cancer in Specific Areas of the Body	
Learning Objective 5.2.16	Assess, manage, and treat central nervous system malignancies	HLI = I
Knowledge		
<ul style="list-style-type: none"> describe the roles of surgery, radiation therapy, and chemotherapy in primary and metastatic disease involving the central nervous system. 		
Teaching and Learning Methods	Assessment Criteria	Assessment Methods
<ul style="list-style-type: none"> clinical clerking text books clinical practice guidelines - <i>Clinical practice guidelines for the management of adult gliomas: astrocytomas and oligodendrogliomas (Australian Cancer Network 2009)</i> participation in multidisciplinary meetings journal clubs conferences 	<ul style="list-style-type: none"> patient management management of patient symptoms and treatment side effects performance of necessary diagnostic and treatment procedures interaction with patient and health professionals 	<ul style="list-style-type: none"> supervisor’s reports case notes review presentations record of attendance at journal clubs and conferences

DOMAIN 5	SPECIFIC CANCERS – MULTIDISCIPLINARY MANAGEMENT AND TREATMENT	
Theme 5.2	Cancer in Specific Areas of the Body	
Learning Objective 5.2.17	*Assess, manage, and treat haematological malignancies	HLI = I

Knowledge

Lymphomas

- explain the Ann Arbor Staging, World Health Organisation, and revised European-American lymphoma (REAL) pathology classifications as well as their strengths, limitations, and current initiatives to improve the staging classification
- recognise the clinical presentation of patients with Hodgkin’s disease, non-Hodgkin’s lymphoma, chronic lymphocytic leukaemia, and cutaneous lymphoma

Hodgkin’s Disease

- outline the staging of Hodgkin’s disease and the indications for surgical staging
- discuss the curative role of radiation therapy in early-stage disease
- identify the indications for chemotherapy in stages II, III and IV
- explain the long-term complications of treatment and what is entailed in the follow-up of patients
- assess the indications for marrow transplantation in patients with relapsed or refractory disease

Non-Hodgkins’s lymphoma

- recognise the association of lymphomas with HIV and immunosuppression
- describe the REAL classification and the International Prognostic Index Score
- explain the curative role of chemotherapy and the value of marrow transplantation in relapsed or refractory disease
- identify the different types of low-grade lymphomas, including:
 - knowledge of when treatment is indicated
 - when observation is appropriate
- recognise the roles of radiation therapy, surgery, and chemotherapy, including monoclonal antibodies in staging and treatment of intermediate grade non-Hodgkin’s lymphomas
- explain the unique clinical properties of high-grade lymphomas and the role for intensive treatment of this subgroup

Cutaneous T-cell lymphoma (useful)

- identify the clinical appearance of patients at different stages of the disease
- describe the value of immunophenotyping in diagnosis
- assess the roles of psoralen and ultraviolet-A light therapy, radiation therapy, and topical chemotherapy in the initial management of patients
- recognise the palliative roles of chemotherapy, biologic agents, and radiation therapy in advanced or refractory disease

DOMAIN 5	SPECIFIC CANCERS – MULTIDISCIPLINARY MANAGEMENT AND TREATMENT	
Theme 5.2	Cancer in Specific Areas of the Body	
Learning Objective 5.2.17	*Assess, manage, and treat haematological malignancies	HLI = I

Plasma cell dyscrasias (useful)

- identify the plasma cell dyscrasias including:
 - monoclonal gammopathy of unknown significance
 - Waldenstrom’s macroglobulinaemia
 - plasmacytoma, multiple myeloma
 - POEMS (polyneuropathy, organomegaly, endocrinopathy, monoclonal protein, skin changes)
 - plasma cell leukaemia
- define the investigations and clinical features of each condition and the indications for treatment in each instance

Leukaemia (useful)

- explain the pathologic and molecular biologic techniques used in the diagnosis of leukaemia including:
 - cytogenetics
 - immunophenotyping
 - polymerase chain reaction
- evaluate the current treatment recommendations and their applications for acute lymphoblastic and myeloid leukaemia in both the standard adult population and older people

Acute leukaemias and myelodysplasia (useful)

- identify the risk factors for developing leukaemia
- recognise the French-American-British classification and its implications for treatment and prognosis
- identify the potential use and complications of bone marrow transplantation in patients with leukaemia, and the value of differentiation therapy
- assess the distinguishing features of acute and chronic leukaemia on peripheral blood smear

Chronic Leukaemias (useful)

- explain the current therapeutic approaches in the treatment of chronic leukaemias in addition to the expectations of treatment
- define the indications for marrow transplantation

AIDS-associated malignancies (useful)

- recognise the association of central nervous system tumours with immunosuppression and AIDS
- explain the increased incidence of malignancy in the HIV-positive population
- identify the indications for treatment, and awareness of the potential for increased toxicities attributable to concurrent medical problems
- outline the use of prophylaxis and treatment for common opportunistic infections.

DOMAIN 5		SPECIFIC CANCERS – MULTIDISCIPLINARY MANAGEMENT AND TREATMENT	
Theme 5.2		Cancer in Specific Areas of the Body	
Learning Objective 5.2.17		*Assess, manage, and treat haematological malignancies	HLI = I
Teaching and Learning Methods		Assessment Criteria	Assessment Methods
<ul style="list-style-type: none"> clinical clerking text books clinical practice guidelines - <i>Clinical practice guidelines for the management of adult gliomas: astrocytomas and oligodendrogliomas (Australian Cancer Network 2009)</i> participation in multidisciplinary meetings journal clubs conferences 		<ul style="list-style-type: none"> patient management management of patient symptoms and treatment side effects performance of necessary diagnostic and treatment procedures interaction with patient and health professionals 	<ul style="list-style-type: none"> supervisor's reports case notes review presentations record of attendance at journal clubs and conferences
<p>*For noting: The Curriculum Development Committee acknowledges that trainees may not always receive optimal training in the management of haematological malignancies, and some components in 5.2.17 have been deemed as useful, but still important, areas in training. They will be particularly important for those trainees who are considering working in regional or smaller centers without haematological specialist support, and those with a special interest in treating haematological malignancies.</p>			

ACRONYMS AND INITIALISMS

APUD	amine precursor uptake decarboxylase
β-HCG	beta-human chorionic gonadotropin
BSOC	basic sciences of oncology course
CAM	complimentary and alternative medicine
CPR	cardiopulmonary resuscitation
CSW	communication skills workshop
HER2	human epidermal growth factor receptor 2
MRI	magnetic resonance imaging
REAL	revised European-American lymphoma
TNM	tumour-node-metastasis

