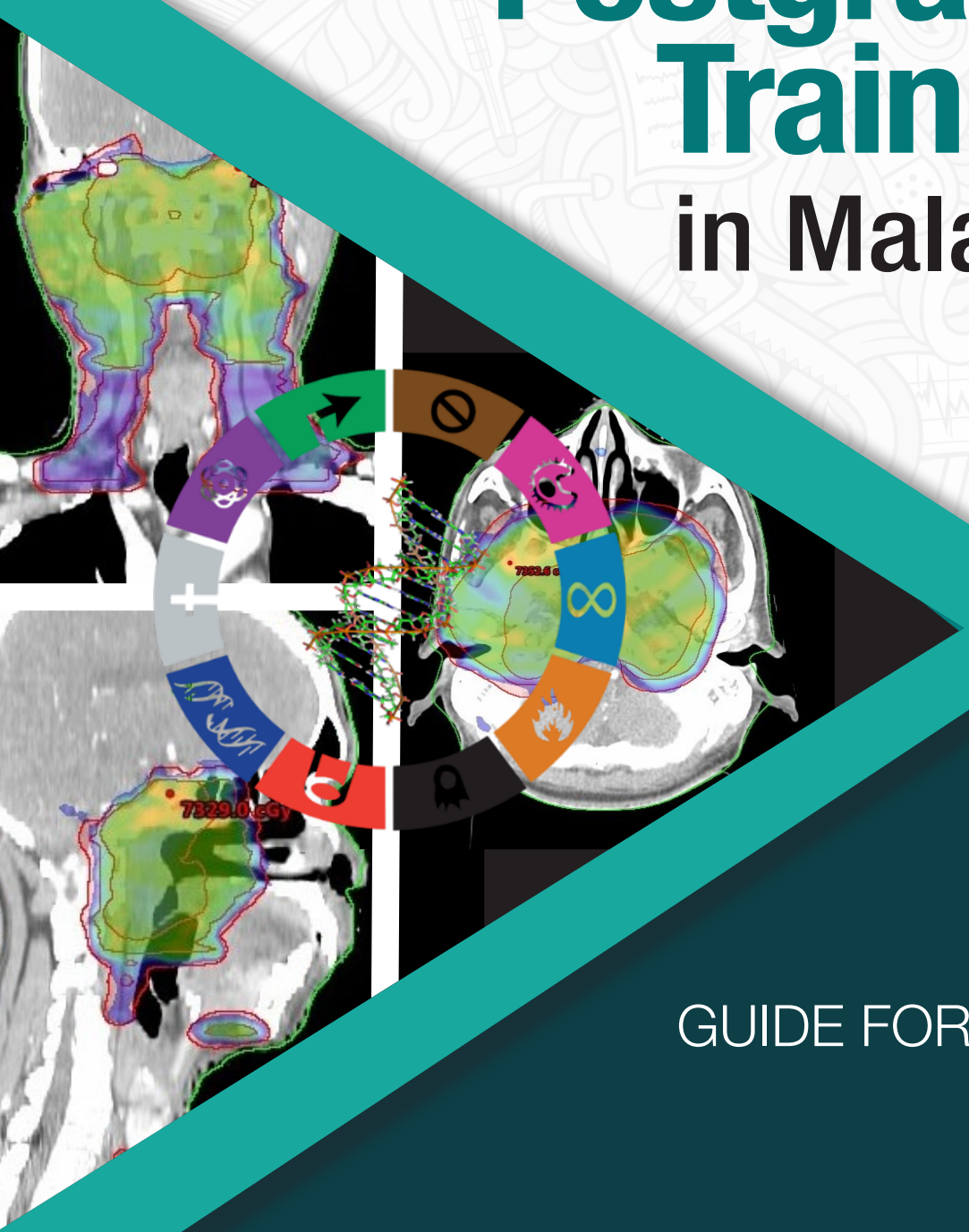
Clinical Oncology Postgraduate Training in Malaysia



GUIDE FOR APPLICANTS

VERSION 1, 2020

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Preface

What is this document?

This document is a guide for those applying to enter postgraduate training in Clinical Oncology. It contains information on the entry requirements for the specialty training programme, the selection process and what the training entails. It is an extract from the National Postgraduate Curriculum for Clinical Oncology Malaysia (NPCOM), and provides key summaries about the training, structure, syllabus and assessments.

The National Postgraduate Medical Curriculum

The National Postgraduate Curriculum for Clinical Oncology Malaysia (NPCOM) is part of the National Postgraduate Medical Curriculum. It is the product of a collaborative effort by members of the Curriculum Committee appointed by the Specialty Conjoint Committee for Clinical Oncology, which consists of oncologists from the Ministry of Education (MOE), and the Ministry of Health (MOH).

This will be the common curriculum for training in Clinical Oncology. Trainees have the option to train either through a university Master's Degree programme and take the Master of Clinical Oncology (MCO) examination, or to train within the Ministry of Health parallel programme and take the Fellowship of Royal College of Radiologists (FRCR) examination which is a United Kingdom (UK) examination.

This single curriculum sets the standard for all postgraduate Clinical Oncology training so as to deliver high quality, effective, safe and specialised cancer care across the whole of Malaysia.

The writers

The development of this curriculum for Clinical Oncology is the product of a collaborative effort of a team of clinical oncologists from the Ministry of Education and the Ministry of Health. The authors and contributors were selected and supported by the Specialty Conjoint Committee for Clinical Oncology. They are acknowledged below.

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Introduction

Purpose of this guide

The purpose of this guide is to navigate prospective applicants wishing to pursue a career in Clinical Oncology. It summarises the key aspects of the Clinical Oncology curriculum, (entry requirements, process, training structure, assessments, some documentation and exit criteria), and provides a guide on how to prepare and proceed with the application.

What is Clinical Oncology?

Clinical oncology is a speciality that utilises radiotherapy and systemic therapy in the management of patients with cancer. Clinical oncologists are specialists trained in both radiation therapy and systemic therapy which includes chemotherapy, hormonal therapy, targeted therapy and immuno-oncology drugs. Oncologists manage patients with cancer from diagnosis to treatment and further care, in close collaboration with other specialised disciplines e.g. surgery, and non-government organisations e.g. hospice groups. The aim is to provide comprehensive care and support for patients and families during an extremely difficult time in their lives.

Size of the specialty

There are at present approximately 100 oncologists practising in Malaysia (NSR, 30 June 2020). About a third (33%), are working in public hospitals which treat the majority of patients. The International Atomic Energy Agency (IAEA) recommended ratio is 10 oncologists to one million population and based on our current population of about 32 million, over 300 oncologists are required. The demand is likely to increase with population expansion, an aging society and increasing incidence of cancer secondary to lifestyle change. There is a large shortfall both in the number of oncologists as well as in the demographics of where they are practising. As the concentration of oncologists is in urban hospitals, remote areas are often not being directly served and access to care is limited. There is an urgent need to increase the number of oncologists and widen the coverage so as to provide better care across Malaysia.

Unique features of Clinical Oncology

Comprehensive, 720° patient care

Oncology deals with all aspects of the patient's treatment (360°) but unlike many specialties, it also offers care for the remaining lives of patients and their families (720°). Many patients perceive themselves to be incurable when they first receive their diagnosis but rapid advances in treatment modalities make cancer cure a possibility, giving much hope to these patients to achieve long-term remissions and survival.

Patient-oriented and individualised treatment

Treatment decision is tailored to the individual patient's disease and treatment factors, as well as patient's wishes, goals and social circumstances. There are often several comparable treatment options and the patient's preference is an important factor in decision-making. Consideration for the physical, social, psychological, emotional, and financial status of the patient can play a part in the overall management plan.

Multidisciplinary approach

Clinical oncologists work as a team in close collaboration with specialists in cancer care from other disciplines e.g. surgery, radiology, interventional radiology, nuclear medicine, pathology, palliative care, internal medicine, rehabilitation, anaesthesiology, etc. Within its own discipline, clinical oncologists work closely with various allied staff and professionals such as medical physicists, therapy radiographers and oncology nurses.

Rapidly-advancing field

The progress in oncological sciences and treatment is very rapid and is supported by very

active research and advances in technology. There are continuous breakthroughs in the understanding of the underlying genomics and identification of new predictive biomarkers and therapies which improve treatment precision and outcome. The technology for radiotherapy planning and delivery is increasing in sophistication which facilitates highly accurate and safe treatment.

Advocacy

Oncologists have a key role in working with various patient advocacy groups to educate members and guide research activities. There are many support groups and non-government organisations globally that raise funds for cancer care, treatments and research. They also play important roles in actively promoting and facilitating cancer screening, in addition to providing moral and emotional support to the cancer patients and families.

Why choose Clinical Oncology as a career?

Receiving a cancer diagnosis often causes fear and anxiety which significantly affects patients' psychosocial well-being and often has a large impact on their family, social, and occupational environments. A good and caring oncologist can often make a difference in patients' lives even when a cure may not be the goal. The doctor-patient relationship formed is usually much deeper than in many other specialties. Oncologists find themselves educating and empowering their patients to make informed choices concerning their own care. They spend a considerable amount of time addressing issues which can be emotionally challenging and are required to interact with patients with compassion whilst delivering the best possible outcome. Doctors who are passionate about making a difference will find this aspect of the specialty very motivating and satisfying. It is extremely rewarding to care for patients whom others may have given up hope on.

Rapidly advancing technologies in Clinical Oncology, as well as research breakthroughs require the oncologists to keep up-to-date with progress, making it an exciting continuous life-long learning experience. It is essential for oncologists to keep abreast with the latest advancements in oncology, as changes in management of cancer are quite common. This specialty provides the opportunity to develop clinical and scientific skills and has the potential for academic and research opportunities.

If you like the personal interaction with patients and families, welcome the challenge of formulating individual treatment plans, have an interest in clinical research, and enjoy working in a team, then Clinical Oncology is the specialty for you. This is one discipline in which the doctor has the opportunity to 'touch a patient's life'.

1. The Clinical Oncology Programme

Training pathways

There are two pathways for attaining the qualification as a specialist in Clinical Oncology; the MCO pathway, a degree through the Ministry of Education (MOE), and the FRCR pathway, a qualification through the Ministry of Health (MOH) parallel pathway. The NPCOM integrates both pathways within a single curriculum and except for the examinations, the content and features of training are aligned. The entry requirements, entry process, syllabus, training format, assessment tools and exit criteria are similar for both (Figure 1). Training for the MCO pathway is conducted completely locally. Trainees in the FRCR pathway who have done at least two years local training and passed the first FRCR examination may continue training in selected UK centres under scholarships from *Bahagian Pengurusan Latihan (BPL),* MOH.

Both pathways require a minimum training duration of four years, with the maximum being seven years.

Phases of training

The training is made up of two stages which correspond to years 1 to 4. In year one, trainees learn the basic science subjects which underpin the essential basic knowledge. Clinical training occurs throughout the four years in order to develop increasing levels of competency in the management of tumour sites using various therapy and skills. Trainees also need to carry out a research project throughout the four years. This is summarised in Table 1.

Figure 1. Clinical Oncology training flowchart integrating both MCO and FRCR examinations within a unified curriculum (National Postgraduate Curriculum of Clinical Oncology Malaysia)

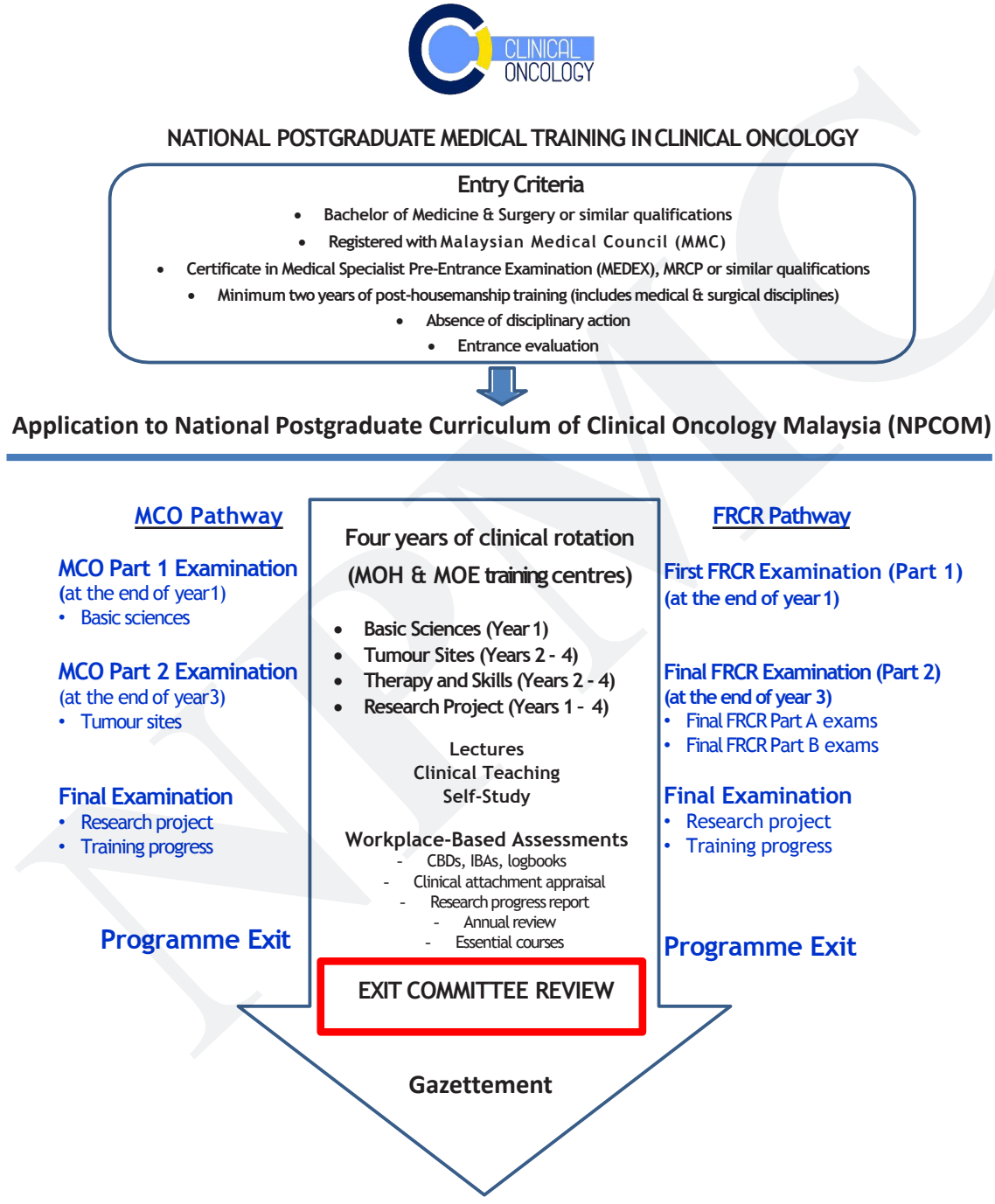


Table 1: Phases of training in Clinical Oncology Curriculum

Stages	Years	Description	Assessments
Pre	**0**	**Prior to entry into training**	**Entrance evaluation**
STAGE 1	**Year 1**	Teaching in basic sciences - anatomy, cancer biology, cancer pathology, medical statistics, pharmacology, radiobiology, and radiotherapy physics. Clinical training with various assessment tools* to cover all the aspects of non-surgical cancer treatment for different tumour sites with an emphasis on radiotherapy and use of systemic therapy. Workplace-based assessments and documentation in a logbook of procedures and clinical skills undertaken will be carried out throughout the whole duration of the programme.	Continuous assessments Part One Examination
STAGE 2	**Year 2** **Year 3**	Conduct research project. Clinical training with various assessment tools* to cover all of the aspects of non-surgical cancer treatment for different tumour sites with an emphasis on radiotherapy and use of systemic therapy. Workplace-based assessments and documentation in a logbook of procedures and clinical skills undertaken will be carried out throughout the whole duration of the programme.	Continuous assessments Part Two Examination
	Year 4	Continue with clinical training and assessment. Submission of workplace-based assessment and research project.	Continuous assessments Final Examination

*Refer to Table 3 for assessment tools and their timelines

2. Entry Requirements

Candidates are expected to meet the essential entry requirements of the training programme. They are divided into qualifications and professional experience.

Qualifications

- Bachelor of Medicine, Bachelor of Surgery or similar qualification
- Registered with Malaysian Medical Council as per Medical Act 1971
- Possess a valid certificate for Medical Specialist Pre-Entrance Examination (MedEX) or MRCP or similar qualification

Professional Experience

Candidates are required to have a minimum of two years post-housemanship clinical experience which must include a minimum of 6 months in medicine **AND** a minimum of 6 months in surgery, with active medical and surgical on-call. This is required to attain the minimum level of clinical competency prior to entry into training. This experience must be within five years from the point of entry. Candidates must not have any disciplinary issues.

Essential Learning Activities (ELA)

Entry Essential Learning Activities (ELAs) are clinical activities that prospective trainees should be able to perform in a trustworthy manner by the time they enter the postgraduate training in Clinical Oncology. An ELA is the identification and description of a clinical task in such a way that the trainee is fully aware of the knowledge, skills and attitudes (KSA) needed to complete the task, and the trainer is fully aware of what needs to be observed to deem the task is completed to a professional level (Frostick and Pitts, 2017). Candidates must demonstrate a minimum level of clinical competency and the knowledge, skills and attitudes required when carrying out the tasks and responsibilities. ELAs also serve as learning opportunities for trainees as they perform the tasks and receive feedback on their performance.

There are seven Entry ELAs for Clinical Oncology:

ELA 1	Assessment of a patient with cancer
ELA 2	Assessment and management of pain
ELA 3	Management of severe infection
ELA 4	Diagnosis and management of thromboembolic event
ELA 5	Assessment and management of acute upper gastrointestinal bleeding
ELA 6	Initial management of hypercalcaemia
ELA 7	Management of acute hypersensitivity reaction

Candidates are expected to be competent in all of the entry level ELAs to qualify for entry into NPCOM training programme. This competency is assessed at the entrance evaluation via Objective Structured Clinical Examination (OSCE). The description of all Entry ELAs can be found in the appendices of this document.

3. Entry Process

A summary of the entry process and timeline is shown in the table 2 below.

Table 2: Application entry process and timeline for NPCOM

	MCO Pathway	FRCR Pathway
Advertisement	Advertisement for MOH scholarship is announced on the MOH website.	Information is available at MOH oncology training centres[1].
Application	Applications for study leave and MOH scholarship are made online at ehlp.moh.gov.my The application can be made throughout the year but should be completed by July of the year prior to the start of training.	Application into training programme to the JLKPP[2] at each training centre. The application can be made throughout the year but should be completed by July of the year prior to the start of training.
Private applicants[3]	Applications to the Faculty of Medicine, Universiti Malaya, online at http://ips.um.edu.my The application can be made throughout the year but should be completed by July of the year prior to the start of training.	Not applicable for FRCR Pathway in NPCOM.
Short-listing of Applicants[4]	Eligible applicants are informed by email and are invited to attend the entrance evaluation. By the end of October.	
Entrance Evaluation[4]	Interview and OSCE based on Entry Level ELAs. By January each year.	
Selection of Candidates[4]	By February each year.	
Offer to Enter Training	By April each year.	
Enrolment	Trainees must register at the university by the specified date.	Trainees must register with the BPP[5], MOH by the specified date.
Induction at Training Centres	Register at the university. June each year	Report to the training centres. June each year

[1]MOH oncology training centres with systemic therapy and radiotherapy facilities
[2]JLKPP 'Jawatankuasa Latihan Kepakaran' Parallel Pathway
[3]Candidates who are not under MOH sponsorship
[4]By a joint MOE-MOH committee
[5]BPP 'Bahagian Perkembangan Perubatan'

MOH candidates applying for the MCO pathway can direct enquiries to Bahagian Pengurusan Latihan (BPL), MOH.

Candidates will be allocated training centres after selection, and the training centre allocation is final. The offer letter will be mailed to successful candidates who must confirm their acceptance within the stipulated timeframe.

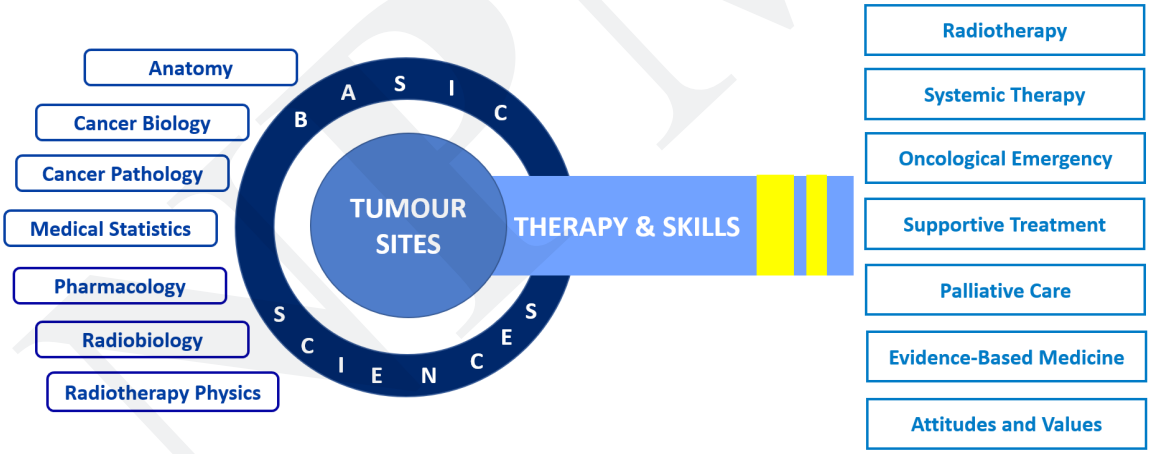
4. Syllabus

The syllabus defines what will be taught and learned throughout training in Clinical Oncology. It outlines the required subjects and competencies, and guides both trainees and trainers on the knowledge, skills, attitudes and values to be learned and developed at each phase of the programme. The objective is to produce clinical oncologists that have the required knowledge, skills and attitudes to treat and manage patients with cancer effectively and efficiently in a compassionate manner.

Clinical Oncology encompasses a wide spectrum of cancer treatments. This includes not only radiotherapy and systemic therapy but also other related treatments such as supportive treatment and palliative care.

The Clinical Oncology syllabus is constructed based on the lock and key model to represent the concept of targeted therapy and precision medicine in oncology (Figure 2). At the centre of the lock and key model are the tumour sites. This reflects the focus of the syllabus as the management of oncology patients is fundamentally based on the types of cancer. Competency in basic sciences, therapy and skills is crucial to ensure a good fit to the management of each tumour site.

Figure 2. The lock and key model of Clinical Oncology syllabus. It brings together three modules - basic sciences, and therapy and skills into the management of tumour sites



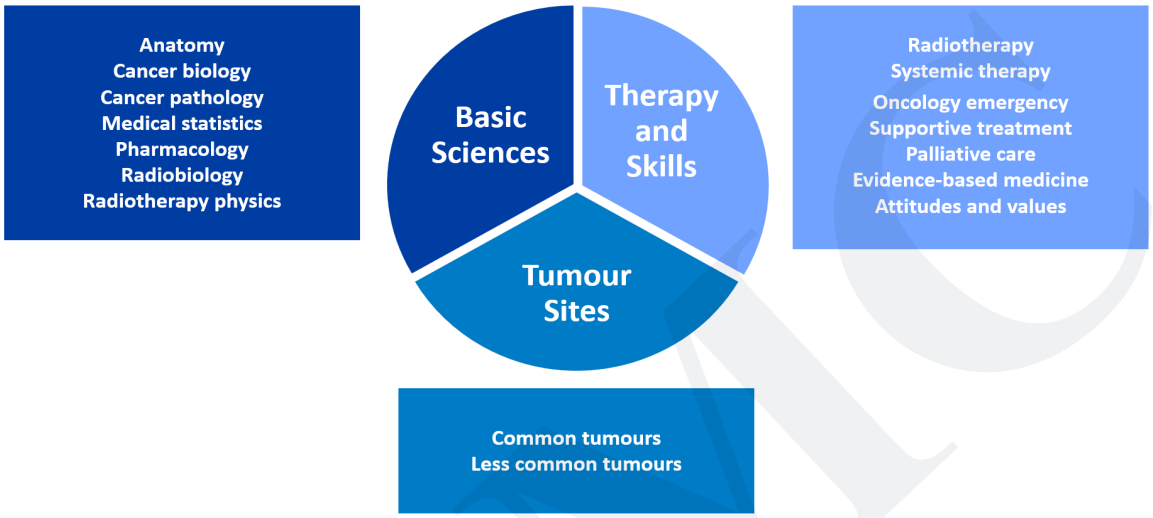
There are three modules with a number of subjects under each module (Figure 3). Basic sciences form the first module. This is the core knowledge relevant to the practices of Clinical Oncology and comprise of seven subjects; anatomy, cancer biology, cancer pathology, medical statistics, pharmacology, radiobiology, and radiotherapy physics.

The second module covers therapy and skills. It comprises of the essential knowledge and skills required in oncology care. They are divided into seven subjects which include; radiotherapy, systemic therapy, oncological emergency, supportive therapy, palliative care, evidence-based medicine and attitudes and values.

The third module is tumour sites. Treatment of cancer is individualised based on the sites of the tumour and takes into account treatment

and patient factors, as well as tumour characteristics.

Figure 3. The Clinical Oncology syllabus: Three modules (basic sciences, therapy and skills, and tumour sites), showing the subjects for each module.



5. Assessment Tools

Assessment is an essential part of training and reflects the activities that the trainee will perform as a clinical oncologist. These include clinical activities relating to the care of individual patients, and non-clinical activities relating to administrative and organisational tasks, and academic skills.

The assessment strategy has three primary functions:

1. To encourage and monitor learning, identify training gaps and generate the evidence of competency.
2. To assess whether the trainee is ready to progress to the next level of the programme.
3. To generate and evaluate evidence that the trainee is able to care for patients in a safe and effective way as a specialist.

There are primarily two types of assessments :

1. Workplace Based Assessment (WBA)

   These are continuous assessment to facilitate and improve learning by providing trainees immediate feedback in a real clinical environment, provide reflections, measure their performance and identify areas of development.

2. Examinations

   These are written and clinical examinations on knowledge and clinical skills, to provide evidence demonstrating that trainee has met the curriculum standard at the different stages of training.

The assessment tools used in the training are shown in Table 3.

Table 3: Assessment tools and their timelines

Assessment Tools and Records	Timelines
Workplace-based assessments (WBA) Case-based discussion (CBD) Intervention-based assessment (IBA)	Throughout training
Log of clinical experience Radiotherapy logbook Systemic therapy logbook	Throughout training
Progress review Clinical Attachment Appraisal (CAA) Annual review of Clinical Oncology Training Portfolio (COTPort)	 At least six-monthly during each clinical rotation Annually throughout training
Research progress report	Six-monthly until completion of project

continued

Assessment Tools and Records	Timelines
Examinations	
Part One examination	At the end of Year One
Part Two examination	At the end of Year Three
Final examination	At the end of Year Four
Clinical Oncology Training Portfolio (COTPort) Logbooks of radiotherapy and systemic therapy experience Records of workplace-based assessments Records of research projects Records of courses attended Review of professional behaviour via records of attendance to classes etc. Progress in examinations	Acquired and compiled throughout training and formally assessed at annual review.

Examinations – MCO Pathway

The Part One Examination is a written examination to assess knowledge in basic science subjects - cancer biology, cancer pathology, medical statistics, pharmacology, radiobiology and radiotherapy physics. It comprises of multiple-choice questions (MCQs), and structured short-answer questions (SAQs).

The Part Two Examination consists of both written and clinical components testing the knowledge, skills and attitudes in relation to tumour site management. It covers the application of basic sciences and oncology-related knowledge, including radiotherapy, systemic therapy, interpersonal and communication skills, professionalism and research. The written component comprises of multiple-choice questions (MCQs), and case-oriented questions (COQs). The clinical component includes clinical short cases and an objective structured clinical examination (OSCE), designed to assess competencies in tumour site management.

The Final Examination includes both a formal review of training progress based on workplace-based assessment and the assessment of the research report.

Examinations – FRCR Pathway

The Part One Examination (First FRCR Examination), is a written examination assessing basic science subjects. The Part Two Examination (Final FRCR) is divided into Part A consisting of written component and Part B which examines the clinical component. The scope of the examination is similar to that of MCO Part Two Examination. The Final Examination is the same as that of MCO Pathway.

Workplace-based Assessment

The purpose of WBA is to facilitate and improve learning by providing trainees immediate feedback in a real clinical environment, provide reflections, measure their performance and identify areas for improvement.

Workplace-based assessments involve several progression checkpoints to ascertain trainees' learning objectives have been achieved based on the training content and their respective timelines. Each trainee is required to participate actively

in clinical sessions and to complete WBAs as required by the specified timelines. Their records should demonstrate that the rate of completion is satisfactory, the levels of performance are at the required standard and are improving to confirm that learning is taking place.

Throughout each clinical rotation, performance and progress are evaluated regularly using case-based discussions (CBDs), intervention-based assessments (IBAs), and logbooks. This regular assessment and feedback help to continuously monitor the learning process while guiding trainees to learn more effectively through reflection.

The trainee's overall progress is also assessed during annual review. The aim of this review is to ensure that trainees have attained the expected level of competency consistent with their year of training. It also allows trainees to check on their progress throughout their training.

All records of assessment and progress will be reviewed at the end of training by the exit committee before trainees are awarded the certificate that marks the successful completion of training.

6. Appendices

Essential Learning Activities (Entry Level)

Entry Essential Learning Activity 1

Activity	Assessment of a patient with cancer
Description	To take a focused history, carry out the relevant physical examination and review relevant investigations in a patient with cancer diagnosis.

All items on the table below are examples, they do not constitute an exhaustive list in any aspect

Knowledge Know, Facts, Information	**Skill** Do, Practical, Psychomotor, Techniques	**Attitudes + Values** Feel, behaviours displaying underlying values or emotions
Current five most common cancers in Malaysia – diagnosis, pattern of spread, staging investigation, symptomatology General cancer treatment: surgery, chemotherapy, radiotherapy, hormone therapy Common side effects of cancer treatment	Communicate with patients, families and other medical staff Obtain relevant information from patient and family Interpret relevant documents & investigation results Conduct focused physical examination Manage time	Courteous Empathetic Patient Thorough Honest Kind Efficient
Examples of Behaviours		
Positive Things that should be done, correct techniques or practices, things a trainee might do right	**Negative** Things that should not be done, incorrect techniques or practices, things a trainee might do wrong	**Negative Passive** Things that may be forgotten or omitted that constitute incorrect or substandard care, things a trainee forget to do
Clarifies the relationship between patients and accompanying persons Puts the patient and family at ease Observes privacy & confidentiality Uses appropriate language and non-verbal communication: eye contact, gestures, sitting position Protects patient's modesty Requests a chaperon Uses suitable terms to address the patient Establishes patient's understanding of the diagnosis	Talks only to the family, not to the patient Dismisses patient's symptoms Dismisses patient's emotions Uses medical jargon Causes pain during examinations Reports wrong findings Reports findings from examination / procedures which are not done Patronises patients Raises unrealistic expectations Closes consultations abruptly	Does not introduce oneself Fails to ask relevant questions Does not ask for symptoms of metastasis Does not ask permission from the patient before performing physical examination Does not do the relevant examination e.g. per-rectal examination for a patient with rectal cancer Misses obvious signs or findings Does not review relevant documents & investigation results Does not ask if patient or family have any questions or concerns
Assessment / Evidence		
1) Workplace-based assessment 2) OSCE		

Entry Essential Learning Activity 2

Activity	Assessment and initial management of pain
Description	To identify pain, type and severity of pain, assess the cause, start or modify analgesics and manage the potential side effects of analgesics.

All items on the table below are examples, they do not constitute an exhaustive list in any aspect

Knowledge Know, Facts, Information	**Skill** Do, Practical, Psychomotor, Techniques	**Attitudes + Values** Feel, behaviours displaying underlying values or emotions
Types of pain Anatomy relevant to pain e.g. dermatome Causes /pathophysiology of pain Basic pharmacology of analgesics Investigations in a patient with pain Pain score WHO analgesic ladder	Reassure patient Assess and score pain level Assess impact of pain on patient's functions Take pain and drug history Examine the relevant systems Determine the cause of pain Prescribe treatment Manage side effects of analgesics Administer analgesics in acute setting Formulate plan to assess/monitor analgesic response	Empathy Thorough Confident Patient
Examples of Behaviours		
Positive Things that should be done, correct techniques or practices, things a trainee might do right	**Negative** Things that should not be done, incorrect techniques or practices, things a trainee might do wrong	**Negative Passive** Things that may be forgotten or omitted that constitute incorrect or substandard care, things a trainee forget to do
Takes drug history Examines patient gently Asks about the impact of pain on activities of daily living Prescribes appropriate medication Explains how to take analgesics Explains the side effects	Causes pain to patient Scores pain level wrongly Dismisses patient's pain Conducts an inadequate examination	Misses important signs Misses co-morbidities affecting analgesic selection Does not prescribe supportive treatment for analgesic side effects Does not arrange the relevant investigation Does not have a clear plan to monitor pain control
Assessment / Evidence		
1) Workplace-based assessment 2) OSCE		

Entry Essential Learning Activity 3

Activity	Management of severe infection
Description	To identify, assess and manage patients with severe infection especially from febrile neutropenia induced by chemotherapy

All items on the table below are examples, they do not constitute an exhaustive list in any aspect

Knowledge Know, Facts, Information	**Skill** Do, Practical, Psychomotor, Techniques	**Attitudes + Values** Feel, behaviours displaying underlying values or emotions
Causes/sources of infection Common infective organisms Comorbidities which may aggravate the infection Relevant investigations Febrile neutropenia Line-related infection Septicaemic shock Antimicrobials and resistant organisms Hand hygiene and infection control policy Antibiotic guidelines	Elicit signs Identify source Assess severity Arrange relevant investigations Take blood culture Institute prompt treatment Escalate level of care Choose route of antibiotic administration	Thorough Sense of urgency Responsible Trustworthy Teamwork and collaboration Attentive
Examples of Behaviours		
Positive Things that should be done, correct techniques or practices, things a trainee might do right	**Negative** Things that should not be done, incorrect techniques or practices, things a trainee might do wrong	**Negative Passive** Things that may be forgotten or omitted that constitute incorrect or substandard care, things a trainee forget to do
Performs thorough assessments Looks for the cause of infection Arranges septic work up Initiates immediate treatment Escalates care when required Takes history of allergy Reviews vital signs Involves other relevant teams	Attends to the patient too slowly Performs aseptic technique poorly Prescribes antibiotics incorrectly	Misses important physical signs Does not take blood culture from indwelling catheter site / chemoport Does not follow isolation procedures Fails to review investigation results
Assessment / Evidence		
1) Workplace-based assessment 2) OSCE		

Entry Essential Learning Activity 4

Activity	Diagnosis and initial treatment of thromboembolic event
Description	To identify, assess and manage a thromboembolic event

All items on the table below are examples, they do not constitute an exhaustive list in any aspect

Knowledge Know, Facts, Information	**Skill** Do, Practical, Psychomotor, Techniques	**Attitudes + Values** Feel, behaviours displaying underlying values or emotions
Diagnosis Aetiology Risk factors Anatomy of the vascular system Symptomatology Investigations Types of thromboembolic event Treatment options Resuscitation	Formulate differential diagnoses Arrange relevant investigations Start appropriate anticoagulant Assess cardiovascular status Check for interaction of anticoagulant with patient's other ongoing medications including chemotherapy Formulate plan to monitor treatment	Thorough Responsive Sense of urgency Teamwork and collaboration
Examples of Behaviours		
Positive Things that should be done, correct techniques or practices, things a trainee might do right	**Negative** Things that should not be done, incorrect techniques or practices, things a trainee might do wrong	**Negative Passive** Things that may be forgotten or omitted that constitute incorrect or substandard care, things a trainee forget to do
Arranges investigations promptly Escalates level of care as indicated Involves the relevant teams Discusses the potential risks of anticoagulation	Makes a wrong diagnosis Prescribes wrong dose of anticoagulant Starts treatment too slowly	Does not establish risk factors Misses important clinical signs Does not monitor anticoagulant use Does not inform patient about duration of treatment Does not check for possible drug interaction especially with systemic therapy
Assessment / Evidence		
1) Workplace-based assessment 2) OSCE		

Entry Essential Learning Activity 5

Activity	Initial management of acute upper gastrointestinal (GI) bleeding
Description	To diagnose, assess and manage patients with acute upper GI bleeding

All items on the table below are examples, they do not constitute an exhaustive list in any aspect

Knowledge Know, Facts, Information	**Skill** Do, Practical, Psychomotor, Techniques	**Attitudes + Values** Feel, behaviours displaying underlying values or emotions
Diagnosis Aetiology Risk factors Symptomatology Anatomy of the potential source of bleeding Investigations Comorbidities Pathophysiology Complications Management Resuscitation	Ascertain the source of bleeding Assess the severity of condition Start acute management and resuscitation Arrange the appropriate investigation Interpret results Establish good venous access	Steady Sense of urgency Teamwork and collaboration Thorough Responsive Leadership
Examples of Behaviours		
Positive Things that should be done, correct techniques or practices, things a trainee might do right	**Negative** Things that should not be done, incorrect techniques or practices, things a trainee might do wrong	**Negative Passive** Things that may be forgotten or omitted that constitute incorrect or substandard care, things a trainee forget to do
Stabilises the patient Takes prompt action Refers patient to surgical and intensive care teams urgently Corrects coagulopathy Remains calm	Gives incorrect fluid regimen Allows the patient to continue oral intake Panics	Does not perform per rectal examination Does not recognise potential iatrogenic causes Does not withhold regular medications that may cause bleeding Does not insert nasogastric tube
Assessment / Evidence		
1) Workplace-based assessment 2) OSCE		

Entry Essential Learning Activity 6

Activity	Initial management of hypercalcaemia
Description	To diagnose, assess and manage hypercalcemia

All items on the table below are examples, they do not constitute an exhaustive list in any aspect

Knowledge Know, Facts, Information	**Skill** Do, Practical, Psychomotor, Techniques	**Attitudes + Values** Feel, behaviours displaying underlying values or emotions
Diagnosis Causes Risk factors Symptomatology Investigations Pathophysiology Calculation of corrected serum calcium Treatment	Assess severity Arrange relevant investigations Start optimal hydration regimen Monitor fluid balance Establish cause Monitor treatment response Formulate further management	Sense of urgency Thorough Responsible Reliable

Examples of Behaviours

Positive Things that should be done, correct techniques or practices, things a trainee might do right	**Negative** Things that should not be done, incorrect techniques or practices, things a trainee might do wrong	**Negative Passive** Things that may be forgotten or omitted that constitute incorrect or substandard care, things a trainee forget to do
Prescribes optimal hydration promptly Monitors fluid balance daily Monitors calcium level Monitors symptoms	Causes fluid overload Arranges wrong investigation Calculates calcium level wrongly Prescribes wrong dose of bisphosphonate	Does not establish cause of hypercalcemia Does not determine whether patient is on calcium supplement Does not advise patient on appropriate precautions to avoid future events

Assessment / Evidence

1) Workplace-based assessment
2) OSCE

Entry Essential Learning Activity 7

Activity	Management of acute hypersensitivity reaction
Description	To diagnose, assess and manage acute hypersensitivity reaction especially during chemotherapy infusion

All items on the table below are examples, they do not constitute an exhaustive list in any aspect

Knowledge Know, Facts, Information	**Skill** Do, Practical, Psychomotor, Techniques	**Attitudes + Values** Feel, behaviours displaying underlying values or emotions
Diagnosis Causes Risk factors Symptomatology Investigations Types of reaction Pathophysiology Treatment Resuscitation	Prompt diagnosis, stop offending drug immediately Assess severity Determine the cause Perform basic resuscitation including CPR* Administer rescue drugs appropriately Manage team members	Steady Sense of urgency Leadership Teamwork and collaboration Responsive
Examples of Behaviours		
Positive Things that should be done, correct techniques or practices, things a trainee might do right	**Negative** Things that should not be done, incorrect techniques or practices, things a trainee might do wrong	**Negative Passive** Things that may be forgotten or omitted that constitute incorrect or substandard care, things a trainee forget to do
Performs ABC* assessment Gives oxygen Establishes good venous access Gives clear instruction to support staff Ensures resuscitation trolley is at the bedside Discontinues potential causative agents	Panics Responds too slowly Performs inadequate resuscitation Gives inappropriate treatment	Does not recognise relevant signs Does not monitor vital signs Does not escalate care when required Does not refer to other supporting teams in timely manner
Assessment / Evidence		
1) Workplace-based assessment 2) OSCE		

*CPR - Cardiopulmonary resuscitation

*ABC - Airway breathing circulation

Glossary of terms

BPL	Bahagian Pengurusan Latihan
BPP	Bahagian Perkembangan Perubatan
CAA	Clinical Attachment Appraisal
CBD	Case-Based Discussion
COQ	Case-Orientated Questions
ELA	Essential Learning Activities
HLP	Hadiah Latihan Persekutuan
IBA	Intervention Based Assessment
IELTS	International English Language Testing System
JLKPP	Jawatankuasa Latihan Kepakaran Parallel Pathway
KSA	Knowledge, Skills, Attitudes
MedEx	Medical Specialist Pre-Entrance Examination
MMC	Malaysian Medical Council
MOE	Ministry of Education
MOH	Ministry of Health
NPCOM	National Postgraduate Curriculum for Clinical Oncology Malaysia
NSR	National Specialist Register
OSCE	Objective Structured Clinical Examination
SAQ	Short-Answer Question
UK	United Kingdom
UM	Universiti Malaya
WBA	Workplace-Based Assessment

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