



**INSTITUTE
OF MEDICINE**

ROYAL COLLEGE OF
PHYSICIANS OF IRELAND

HIGHER SPECIALIST TRAINING IN

MEDICAL ONCOLOGY



This curriculum of training in Medical Oncology was developed in 2010 and undergoes an annual review by Dr Miriam O'Connor and Prof Liam Grogan National Specialty Directors, Dr Ann O'Shaughnessy, Head of Education, and by the Medical Oncology Training Committee. The curriculum is approved by the Institute of Medicine.

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Introduction

A trainee in Medical Oncology must have expertise in the management of cancer patients. The management of care should be based on well-established standards and should ensure that the patient is cared for as a whole person. This care involves clinical and other investigations, management of the complications of the disease and its treatment and the provision of appropriate emotional, social and psychological support for patients and their families.

The medical oncologist is an essential member of the cancer team and is frequently the central figure in the provision of total care for the cancer patient in the multidisciplinary setting.

Besides these specialty specific elements, trainees in Medical Oncology must also acquire certain core competencies which are essential for good medical practice. These comprise the generic components of the curriculum.

Aims

Upon satisfactory completion of specialist training in Medical Oncology, the doctor will be **competent** to undertake comprehensive medical practice in that specialty in a **professional** manner, unsupervised and independently and/or within a team, in keeping with the needs of the healthcare system.

Competencies, at a level consistent with practice in the specialty of Medical Oncology, will include the following:

- Patient care that is appropriate, effective and compassionate dealing with health problems and health promotion.
- Medical knowledge in the basic biomedical, behavioural and clinical sciences, medical ethics and medical jurisprudence and application of such knowledge in patient care.
- Interpersonal and communication skills that ensure effective information exchange with individual patients and their families and teamwork with other health professionals, the scientific community and the public.
- Appraisal and utilisation of new scientific knowledge to update and continuously improve clinical practice.
- The ability to function as a supervisor, trainer and teacher in relation to colleagues, medical students and other health professionals.
- Capability to be a scholar, contributing to development and research in the field of Medical Oncology.
- Professionalism.
- Knowledge of public health and health policy issues: awareness and responsiveness in the larger context of the health care system, including e.g. the organisation of health care, partnership with health care providers and managers, the practice of cost-effective health care, health economics and resource allocations.
- Ability to understand health care and identify and carry out system-based improvement of care.

Professionalism

Being a good doctor is more than technical competence. It involves values – putting patients first, safeguarding their interests, being honest, communicating with care and personal attention, and being committed to lifelong learning and continuous improvement. Developing and maintaining values are important; however, it is only through putting values into action that doctors demonstrate the continuing trustworthiness with the public legitimately expect. According to the Medical Council, Good Professional Practice involves the following aspects:

- Effective communication
- Respect for autonomy and shared decision-making
- Maintaining confidentiality
- Honesty, openness and transparency (especially around mistakes, near-misses and errors)
- Raising concerns about patient safety
- Maintaining competence and assuring quality of medical practice

Entry Requirements

Applicants for Higher Specialist Training (HST) in Medical Oncology must have a certificate of completion Basic Specialist Training (BST) in General Internal Medicine) and obtained the MRCPI.

Those who do not hold a BST certificate and MRCPI must provide evidence of equivalency.

Entry on the training programme is at year 1. Deferrals are not allowed on entry to Higher Specialist Training.

Exposure to medical oncology at SHO grade is desirable but not essential before entry to specialist training.

Duration & Organisation of Training

The duration of HST in Medical Oncology is 4 years, one year of which may be gained from a period of full-time research.

Essential Training: Trainees must attend study days as advised by the National Speciality Director.

During the initial two years of training the trainee must acquire a sound theoretical knowledge of cancer biology and the scientific principles of therapy. Simultaneously the trainee must acquire basic clinical skills in the non-surgical management of cancer. Dominant among these will be the use of chemotherapy, aspects of palliative care including symptom control, the common complications of malignancy and the common side-effects associated with cancer therapy. The trainee must also learn good communication skills and the capacity to educate the patient regarding his/her illness.

A basic understanding of radiotherapy both radical and palliative should be acquired. This should include dosing, scheduling, clinical indications, limitations and short-term and long-term toxicities. This should be achieved by working jointly with radiation oncologist in a multidisciplinary setting.

The final 2 years of training will allow trainees to extend the range and depth of experience and knowledge. Trainees should have more primary responsibility for patient care with a relaxation of consultant supervision. Recording of further experience and skills should take place in the training record and, where areas of weakness in training to date exist, deficiencies should be corrected. To allow trainees to develop specialist interests, site-specialisation experience should be an integral part of this phase of training.

In addition to these general principles, training should include:

- Assessment of new patients, including presentation of their history and clinical findings and a plan of management.
- Planning and delivery of treatment under supervision.
- Follow up and assessment of outcome.
- Pathology review meetings.
- Radiology meetings.
- Involvement in discussions on clinical trials and the development of treatment protocols.
- Recording of data for clinical trials plus experience of data management and clinical research methodology.
- Relevant clinical research.

Additional specific skills which the trainee should acquire during the final two years of training include:

- Complex and intensive chemotherapy regimens, e.g. for high grade lymphoma, testicular cancers.
- High dose chemotherapy and stem cell support in the context of research trials.
- Supportive care following intensive and high dose chemotherapies.
- Clinical trial design (phase I, II, III).
- Novel therapies, including for example new drugs, infusional chemotherapy, biological agents.
- The management of rare tumours.

While no particular order or sequence of training will be imposed and programmes offered should be flexible i.e. capable of being adjusted to meet trainees' needs, trainees must spend the first two years of training in clinical posts in Ireland before undertaking any period of research or out of programme clinical experience (OCPE). The earlier years will usually be directed towards acquiring a broad general experience of Medical Oncology under appropriate supervision. An increase in the content of hands-on experience follows naturally, and, as confidence is gained and abilities are acquired, the trainee will be encouraged to assume a greater degree of responsibility and independence.

If an intended career path would require a trainee to develop further an interest in a sub-specialty within Medical Oncology this should be accommodated as far as possible within the training period, re-adjusting timetables and postings accordingly.

Generic knowledge, skills and attitudes support competencies which are common to good medical practice in all the Medical and related specialties. It is intended that all Specialist Registrars should re-affirm those competencies during Higher Specialist Training. No time-scale of acquisition is offered, but failure to make progress towards meeting these important objectives **at an early stage** would cause concern about a SpR's suitability and ability to become independently capable as a specialist.

Training Programme

The training programme offered will provide opportunities to fulfil all the requirements of the curriculum of training for Medical Oncology in accredited training hospitals. Each post within the programme will have a named trainer/educational supervisor and programmes will be under the direction of the National Specialty Director for Medical Oncology. Programmes will be as flexible as possible consistent with curricular requirements, for example to allow the trainee to develop a sub-specialty interest.

The experience gained through rotation around different departments is recognised as an essential part of HST. A Specialist Registrar may **not** remain in the same unit for longer than 2 years of clinical training; or with the same trainer for more than 1 year.

Where an essential element of the curriculum is missing from a programme, access to it should be arranged, by day release for example, or if necessary by secondment.

Assessment Process

The methods used to assess progress through training must be valid and reliable. The Medical Oncology Curriculum has been re-written, describing the levels of competence which can be recognised. The assessment grade will be awarded on the basis of direct observation in the workplace by consultant supervisors. Time should be set aside for appraisal following the assessment e.g. of clinical presentations, case management, observation of procedures.

As progress is being made, the lower levels of competence will be replaced progressively by those that are higher. Where the grade for an item is judged to be deficient for the stage of training, the assessment should be supported by a detailed note which can later be referred to at annual review. The assessment of training may utilise the Mini-CEX, DOPS and Case Based Discussions (CBD) methods adapted for the purpose. These methods of assessment have been made available by HST for use at the discretion of the NSD and nominated trainer. They are offered as a means of providing the trainee with attested evidence of achievement in certain areas of the Curriculum e.g. competence in procedural skills, or in generic components. Assessment will also be supported by the trainee's portfolio of achievements and performance at relevant meetings, presentations, audit, in tests of knowledge, attendance at courses and educational events.

The American Society of Clinical Oncology (ASCO) Medical Oncology In-Training Examination and the European Society of Medical Oncology (ESMO) examinations are listed as assessment methods in the specialty section of this curriculum. These exams will not be used as a certifying or qualifying examination but are to be used as a self- assessment tool designed to gauge knowledge in Medical Oncology.

Generic Components

This chapter covers the generic components which are relevant to HST trainees of all specialties but with varying degrees of relevance and appropriateness, depending on the specialty.

As such, this chapter needs to be viewed as an appropriate guide of the level of knowledge and skills required from all HST trainees with differing application levels in practice.

Good Professional Practice

Objective: Trainees must appreciate that medical professionalism is a core element of being a good doctor and that good medical practice is based on a relationship of trust between the profession and society, in which doctors are expected to meet the highest standards of professional practice and behaviour.

Medical Council Domains of Good Professional Practice: Relating to Patients, Communication and Interpersonal Skills, Professionalism, Patient Safety and Quality of Patient Care.

KNOWLEDGE

Effective Communication

- How to listen to patients and colleagues
- The principles of open disclosure
- Knowledge and understanding of valid consent
- Teamwork
- Continuity of care

Ethics

- Respect for autonomy and shared decision making
- How to enable patients to make their own decisions about their health care
- How to place the patient at the centre of care
- How to protect and properly use sensitive and private patient information in accordance with data protection legislation and how to maintain confidentiality
- The judicious sharing of information with other healthcare professionals where necessary for care following Medical Council Guidelines
- Maintaining competence and assuring quality of medical practice
- How to work within ethical and legal guideline when providing clinical care, carrying research and dealing with end of life issues

Honesty, openness and transparency (mistakes and near misses)

- Preventing and managing near misses and adverse events.
- When and how to report a near miss or adverse event
- Incident reporting; root cause and system analysis
- Understanding and learning from errors
- Understanding and managing clinical risk
- Managing complaints
- Following open disclosure practices
- Knowledge of national policy and National Guidelines on Open Disclosure

Raising concerns about patient safety

- Safe working practice, role of procedures and protocols in optimal practice
- The importance of standardising practice through the use of checklists, and being vigilant
- Safe healthcare systems and provision of a safe working environment
- Awareness of the multiple factors involved in failures
- Knowledge and understanding of Reason's Swiss cheese model
- Understanding how and why systems break down and why errors are made
- Health care errors and system failures
- Human and economic costs in system failures
- The important of informing a person of authority of systems or service structures that may lead to unsafe practices which may put patients, yourself or other colleagues at risk
- Awareness of the Irish Medical Councils policy on raising concerns about safety in the environment in which you work

SKILLS

- Effective communication with patients, families and colleagues
- Co-operation and collaboration with colleagues to achieve safe and effective quality patient care
- Being an effective team player
- Ethical and legal decision making skills
- Minimising errors during invasive procedures by developing and adhering to best-practice guidelines for safe surgery
- Minimising medication errors by practicing safe prescribing principles
- Ability to learn from errors and near misses to prevent future errors
- Managing errors and near-misses
- Using relevant information from complaints, incident reports, litigation and quality improvement reports in order to control risks
- Managing complaints
- Using the Open Disclosure Process Algorithm

ASSESSMENT & LEARNING METHODS

- Consultant feedback at annual assessment
- Workplace based assessment e.g. Mini-CEX, DOPS, CBD
- Educational supervisor's reports on observed performance (in the workplace): prioritisation of patient safety in practice
- RCPI HST Leadership in Clinical Practice
- RCPI Ethics programmes
- Medical Council Guide to Professional Conduct and Ethics
- Reflective learning around ethical dilemmas encountered in clinical practice
- Quality improvement methodology course - recommended

Infection Control

Objective: To be able to appropriately manage infections and risk factors for infection at an institutional level, including the prevention of cross-infections and hospital acquired infection

Medical Council Domains of Good Professional Practice: Patient Safety and Quality of Patient Care; Management (including Self-Management).

KNOWLEDGE

Within a consultation

- The principles of infection control as defined by the HIQA
- How to minimise the risk of cross-infection during a patient encounter by adhering to best practice guidelines available, including the 5 Moments for Hand Hygiene guidelines
- The principles of preventing infection in high risk groups e.g. managing antibiotic use to prevent *Clostridium difficile*
- Knowledge and understanding of the local antibiotic prescribing policy
- Awareness of infections of concern, e.g. MRSA, *Clostridium difficile*
- Best practice in isolation precautions
- When and how to notify relevant authorities in the case of notifiable infectious disease
- Understanding the increased risk of infection to patients in surgery or during an invasive procedure and adhering to guidelines for minimising infection in such cases
- The guidelines for needle-stick injury prevention and management

During an outbreak

- Guidelines for minimising infection in the wider community in cases of communicable diseases and how to seek expert opinion or guidance from infection control specialists where necessary
- Hospital policy/seeking guidance from occupational health professional regarding the need to stay off work/restrict duties when experiencing infections the onward transmission of which might impact on the health of others

SKILLS

- Practicing aseptic techniques and hand hygiene
- Following local and national guidelines for infection control and management
- Prescribing antibiotics according to antibiotic guidelines
- Encouraging staff, patients and relatives to observe infection control principles
- Communicating effectively with patients regarding treatment and measures recommended to prevent re-infection or spread
- Collaborating with infection control colleagues to manage more complex or uncommon types of infection including those requiring isolation e.g. transplant cases, immunocompromised host
- In the case of infectious diseases requiring disclosure:
 - Working knowledge of those infections requiring notification
 - Undertaking notification promptly
 - Collaborating with external agencies regarding reporting, investigating and management of notifiable diseases
 - Enlisting / requiring patients' involvement in solving their health problems, providing information and education
 - Utilising and valuing contributions of health education and disease prevention and infection control to health in a community

ASSESSMENT & LEARNING METHODS

- Consultant feedback at annual assessment
- Workplace based assessment e.g. Mini-CEX, DOPS, CBD
- Educational supervisor's reports on observed performance (in the workplace): practicing aseptic techniques as appropriate to the case and setting, investigating and managing infection, prescribing antibiotics according to guidelines
- Completion of infection control induction in the workplace
- Personal Protective Equipment Training Course (In hospital)

Self-Care and Maintaining Well-Being

Objectives:

1. To ensure that trainees understand how their personal histories and current personal lives, as well as their values, attitudes, and biases affect their care of patients so that they can use their emotional responses in patient care to their patients' benefit
2. To ensure that trainees care for themselves physically and emotionally, and seek opportunities for enhancing their self-awareness and personal growth

Medical Council Domains of Good Professional Practice: Patient Safety and Quality of Patient Care, Relating to Patients, Communication and Interpersonal Skills, Collaboration and Teamwork, Management (including self-management).

KNOWLEDGE

- Self-awareness including preferences and biases
- Personal psychological strengths and limitations
- Understand how personality characteristics, such as need for approval, judgemental tendencies, needs for perfection and control etc., affect relationships with patients and others
- Knowledge of core beliefs, ideals, and personal philosophies of life, and how these relate to own goals in medicine
- Know how family-of-origin, race, class, religion and gender issues have shaped own attitudes and abilities to discuss these issues with patients
- Understand the difference between feelings of sympathy and feelings of empathy
- Know the factors between a doctor and patient that enhance or interfere with abilities to experience and convey empathy
- Understanding of own attitudes toward uncertainty and risk taking and own need for reassurance
- How own relationships with certain patients can reflect attitudes toward paternalism, autonomy, benevolence, non-maleficence and justice
- Recognise own feelings in straightforward and complex patient-doctor interactions
- Recognising the symptoms of stress and burn out

SKILLS

- Exhibiting empathy and showing consideration for all patients, their impairments and attitudes irrespective of cultural and other differences
- Ability to create boundaries with patients that allow for therapeutic alliance
- Challenge authority appropriately from a firm sense of own values and integrity and respond appropriately to situations that involve abuse, unethical behaviour and coercion
- Recognise own limits and seek appropriate support and consultation
- Work collaboratively and effectively with colleagues and other members of health care teams
- Manage effectively commitments to work and personal lives, taking the time to nurture important relationship and oneself
- Ability to recognise when falling behind and adjusting accordingly
- Demonstrating the ability to cope with changing circumstances, variable demand, being prepared to re-prioritise and ask for help
- Utilising a non-judgemental approach to patient's problem
- Recognise the warning signs of emotional ill-health in self and others and be able to ask for appropriate help
- Commitment to lifelong process of developing and fostering self-awareness, personal growth and well being
- Be open to receiving feedback from others as to how attitudes and behaviours are affecting their care of patients and their interactions with others
- Holding realistic expectations of own and of others' performance, time-conscious, punctual
- Valuing the breadth and depth of experience that can be accessed by associating with professional colleagues

ASSESSMENT & LEARNING METHODS

- On-going supervision
- RCPI Ethics programmes
- Wellness Matters Course
- RCPI HST Leadership in Clinical Practice course

Communication in Clinical and Professional Setting

Objective: To demonstrate the ability to communicate effectively and sensitively with patients, their relatives, carers and with professional colleagues in different situations.

Medical Council Domains of Good Professional Practice: Relating to Patients; Communication and Interpersonal Skills.

KNOWLEDGE

Within a consultation

- How to effectively listen and attend to patients
- How to structure an interview to obtain/convey information; identify concerns, expectations and priorities; promote understanding, reach conclusions; use appropriate language.
- How to empower the patient and encourage self-management

Difficult circumstances

- Understanding of potential areas for difficulty and awkward situations
- How to negotiate cultural, language barriers, dealing with sensory or psychological and/or intellectual impairments and how to deal with challenging or aggressive behaviour
- Knowing how and when to break bad news
- How to communicate essential information where difficulties exist, how to appropriately utilise the assistance of interpreters, chaperones, and relatives.
- How to deal with anger and frustration in self and others
- Selecting appropriate environment; seeking assistance, making and taking time

Dealing with professional colleagues and others

- How to communicate with doctors and other members of the healthcare team
- How to provide a concise, written, verbal, or electronic, problem-orientated statement of facts and opinions
- The legal context of status of records and reports, of data protection confidentiality
- Freedom of Information (FOI) issues
- Understanding of the importance of legible, accessible, records to continuity of care
- Knowing when urgent contact becomes necessary and the appropriate place for verbal, telephone, electronic, or written communication
- Recognition of roles and skills of other health professionals
- Awareness of own abilities/limitations and when to seek help or give assistance, advice to others; when to delegate responsibility and when to refer

Maintaining continuity of care

- Understanding the relevance of continuity of care to outcome, within and between phases of healthcare management
- The importance of completion of tasks and documentation, e.g. before handover to another team, department, specialty, including identifying outstanding issues and uncertainties
- Knowledge of the required attitudes, skills and behaviours which facilitate continuity of care including, being available and contactable, alerting others to avoid potential confusion or misunderstanding through communications failure

Giving explanations

- The importance of possessing the facts, and of recognising uncertainty and conflicting evidence on which decisions have to be based
- How to secure and retain attention avoiding distraction
- Understanding how adults receive information best, the relative value of the spoken, written, visual means of communication, use of reinforcement to assist retention
- Knowledge of the risks of information overload
- Tailoring the communication of information to the level of understanding of the recipient
- Strategies to achieve the level of understanding necessary to gain co-operation and partnership; compliance, informed choice, acceptance of opinion, advice, recommendation

Responding to complaints

- Value of hearing and dealing with complaints promptly; the appropriate level, the procedures (departmental and institutional); sources of advice, and assistance available
- The importance of obtaining and recording accurate and full information, seeking confirmation from multiple sources
- Knowledge of how to establish facts, identify issues and respond quickly and appropriately to a complaint received

SKILLS

- Ability to appropriately elicit facts, using a mix of open and closed-ended questions
- Using “active listening” techniques such as nodding and eye contact
- Giving information clearly, avoiding jargon, confirming understanding, ability to encourage co-operation, compliance; obtaining informed consent
- Showing consideration and respect for other’s culture, opinions, patient’s right to be informed and make choices
- Respecting another’s right to opinions and to accept or reject advice
- Valuing perspectives of others contributing to management decisions
- Conflict resolution
- Dealing with complaints
- Communicating decisions in a clear and thoughtful manner
- Presentation skills
- Maintaining (legible) records
- being available, contactable, time-conscious
- Setting realistic objectives, identifying and prioritising outstanding problems
- Using language, literature (e.g. leaflets) diagrams, educational aids and resources appropriately
- Establish facts, identify issues and respond quickly and appropriately to a complaint received
- Accepting responsibility, involving others, and consulting appropriately
- Obtaining informed consent
- Discussing informed consent
- Giving and receiving feedback

ASSESSMENT & LEARNING METHODS

- Mastering Communication course (Year 1)
- Consultant feedback at annual assessment
 - Workplace based assessment e.g. Mini-CEX, DOPS, CBD
 - Educational supervisor’s reports on observed performance (in the workplace): communication with others e.g. at handover. ward rounds, multidisciplinary team members
- Presentations
- RCPI Ethics programmes
- RCPI HST Leadership in Clinical Practice Course

Leadership

Objective: To have the knowledge, skills and attitudes to act in a leadership role and work with colleagues to plan, deliver and develop services for improved patient care and service delivery.

Medical Council Domains of Good Professional Practice: Patient Safety and Quality of Patient Care; Communication and Interpersonal Skill; Collaboration and Teamwork; Management (including Self-Management); Scholarship.

KNOWLEDGE

Personal qualities of leaders

- Knowledge of what leadership is in the context of the healthcare system appropriate to training level
- The importance of good communication in teams and the role of human interactions on effectiveness and patient safety

Working with others

- Awareness of own personal style and other styles and their impact on team performance
- The importance of good communication in teams and the role of human interactions on effectiveness and patient safety

Managing services

- The structure and function of Irish health care system
- Awareness of the challenges of managing in healthcare
 - Role of governance
 - Clinical directors
- Knowledge of planning and design of services
- Knowledge and understanding of the financing of the health service
 - Knowledge of how to prepare a budget
 - Defining value
 - Managing resources
- Knowledge and understanding of the importance of human factors in service delivery
 - How to manage staff training, development and education
- Managing performance
 - How to perform staff appraisal and deal effectively with poor staff performance
 - How to rewards and incentivise staff for quality and efficiency

Setting direction

- The external and internal drivers setting the context for change
- Knowledge of systems and resource management that guide service development
- How to make decisions using evidence-based medicine and performance measures
- How to evaluate the impact of change on health outcomes through ongoing service evaluation

SKILLS

- Effective communication with patients, families and colleagues
- Co-operation and collaboration with others; patients, service users, carers colleagues within and across systems
- Being an effective team player
- Ability to manage resources and people
- Managing performance and performance indicators

Demonstrating personal qualities

- Efficiently and effectively managing one-self and one's time especially when faced with challenging situations
- Continues personal and professional development through scholarship and further training and education where appropriate
- Acting with integrity and honesty with all people at all times
- Developing networks to expand knowledge and sphere of influence
- Building and maintaining key relationships
- Adapting style to work with different people and different situations
- Contributing to the planning and design of services

ASSESSMENT & LEARNING METHODS

- Mastering Communication course (Year 1)
- RCPI HST Leadership in Clinical Practice (Year 3 – 5)
- Consultant feedback at annual assessment
- Workplace based assessment e.g. Mini-CEX, DOPS, CBD
- Educational supervisor's reports on observed performance (in the workplace): on management and leadership skills
- Involvement in hospital committees where possible e.g. Division of Medicine, Drugs and Therapeutics, Infection Control etc.

Quality Improvement

Objective: To demonstrate the ability to identify areas for improvement and implement basic quality improvement skills and knowledge to improve patient safety and quality in the healthcare system.

Medical Council Domains of Good Professional Practice: Patient Safety and Quality of Patient Care; Communication and Interpersonal Skills; Collaboration and Teamwork; Management; Relating to Patients; Professionalism

KNOWLEDGE

Personal qualities of leaders

- The importance of prioritising the patient and patient safety in all clinical activities and interactions

Managing services

- Knowledge of systems design and the role of microsystems
- Understanding of human factors and culture on patient safety and quality

Improving services

- How to ensure patient safety by adopting and incorporating a patient safety culture
- How to critically evaluate where services can be improved by measuring performance, and acting to improve quality standards where possible
- How to encourage a culture of improvement and innovation

Setting direction

- How to create a 'burning platform' and motivate other healthcare professionals to work together within quality improvement
- Knowledge of the wider healthcare system direction and how that may impact local organisations

SKILLS

- Improvement approach to all problems or issues
- Engaging colleagues, patients and the wider system to identify issues and implement improvements
- Use of quality improvement methodologies, tools and techniques within every day practice
- Ensuring patient safety by adopting and incorporating a patient safety culture
- Critically evaluating where services can be improved by measuring performance, and acting to raise standards where possible
- Encouraging a culture of improvement and innovation

Demonstrating personal qualities

- Encouraging contributions and involvement from others including patients, carers, members of the multidisciplinary team and the wider community
- Considering process and system design, contributing to the planning and design of services

ASSESSMENT & LEARNING METHODS

- RCPI HST Leadership in Clinical Practice
- Consultant feedback at annual assessment
- Involvement in hospital committees where possible e.g. Division of Medicine, Drugs and Therapeutics, Infection Control etc.

Scholarship

Objective: To develop skills in personal/professional development, teaching, educational supervision and research

Medical Council Domains of Good Professional Practice: Scholarship

KNOWLEDGE

Teaching, educational supervision and assessment

- Principles of adult learning, teaching and learning methods available and strategies
- Educational principles directing assessment methods including, formative vs. summative methods
- The value of regular appraisal / assessment in informing training process
- How to set effective educational objectives and map benefits to learner
- Design and delivery of an effective teaching event, both small and large group
- Use of appropriate technology / materials

Research, methodology and critical evaluation

- Designing and resourcing a research project
- Research methodology, valid statistical analysis, writing and publishing papers
- Ethical considerations and obtaining ethical approval
- Reviewing literature, framing questions, designing a project capable of providing an answer
- How to write results and conclusions, writing and/or presenting a paper
- How to present data in a clear, honest and critical fashion

Audit

- Basis for developing evidence-based medicine, kinds of evidence, evaluation; methodologies of clinical trials
- Sources from which useful data for audit can be obtained, the methods of collection, handling data, the audit cycle
- Means of determining best practice, preparing protocols, guidelines, evaluating their performance
- The importance of re-audit

SKILLS

- Bed-side undergraduate and post graduate teaching
- Developing and delivering lectures
- Carrying out research in an ethical and professional manner
- Performing an audit
- Presentation and writing skills – remaining impartial and objective
- Adequate preparation, timekeeping
- Using technology / materials

ASSESSMENT & LEARNING METHODS

- An Introduction to Health Research (online)
- Performing audit course (online)
- Effective Teaching and Supervising Skills course (online) - recommended
- Educational Assessment Skills course - recommended
- Health Research Methods for Clinicians - recommended

Management

Objective: To understand the organisation, regulation and structures of the health services, nationally and locally, and to be competent in the use and management of information on health and health services, to develop personal effectiveness and the skills applicable to the management of staff and activities within a healthcare team.

Medical Council Domains of Good Professional Practice: Management.

KNOWLEDGE

Health service structure, management and organisation

- The administrative structure of the Irish Health Service, services provided in Ireland and their funding and how to engage with these for best results
- Department of Health, HSE and hospital management structures and systems
- The national regulatory bodies, health agencies and patient representative groups
- Understanding the need for business plans, annual hospital budgets, the relationship between the hospital and PCCC

The provision and use of information in order to regulate and improve service provision

- Methods of collecting, analysing and presenting information relevant to the health of a population and the apportionment of healthcare resources
- The common ways in which data is presented, knowing of the sources which can provide information relevant to national or to local services and publications available

Maintaining medical knowledge with a view to delivering effective clinical care

- Understanding the contribution that current, accurate knowledge can make to establishing clinical effectiveness, best practice and treatment protocols
- Knowledge of sources providing updates, literature reviews and digests

Delegation skills, empowerment and conflict management

- How to assess and develop personal effectiveness, improve negotiating, influencing and leadership skills
- How to manage time efficiently, deal with pressure and stress
- How to motivate others and operate within a multidisciplinary team

SKILLS

- Chairing, organising and participating in effective meetings
- Managing risks
- Managing time
- Delegating tasks effectively
- Managing conflicts
- Exploring, directing and pursuing a project, negotiating through the relevant departments at an appropriate level
- Ability to achieve results through an understanding of the organisation and its operation
- Ability to seek / locate information in order to define an issue needing attention e.g. to provide data relevant to a proposal for change, establishing a priority, obtaining resources
- Ability to make use of information, use IT, undertake searches and obtain aggregated data, to critically evaluate proposals for change e.g. innovative treatments, new technologies
- Ability to adjust to change, apply management, negotiating skills to manage change
- Appropriately using management techniques and seeking to improve these skills and personal effectiveness

ASSESSMENT & LEARNING METHODS

- Mastering Communication course
- Performing audit course (online)
- RCPI HST Leadership in Clinical Practice
- Annual audit
- Consultant feedback on management and leadership skills
- Involvement in hospital committees

Standards of Care

Objective: To be able to consistently and effectively assess and treat patients' problems

Medical Council Domains of Good Professional Practice: Patient Safety and Quality of Patient Care; Relating to Patients; Communication and Interpersonal Skills; Collaboration and Teamwork: Management (including Self-Management); Clinical Skills.

KNOWLEDGE

Diagnosing Patients

- How to carry out appropriate history taking
- How to appropriately examine a patient
- How to make a differential diagnosis

Investigation, indications, risks, cost-effectiveness

- The pathophysiological basis of the investigation
- Understand the clinical significance of reference ranges, positive and negative predictive value and potential risks of inappropriate tests
- The procedures for commonly used investigations, common or/and serious risks
- Understanding of the sensitivity and specificity of results, artefacts, PPV and NPV
- Understanding significance, interpreting and explaining results of investigations
- Logical approach in choosing, sequencing and prioritising investigations

Treatment and management of disease

- Natural history of diseases
- Quality of life concepts
- How to accurately assess patient's needs, prescribe, arrange treatment, recognise and deal with reactions / side effects
- How to set realistic therapeutic goals, to utilise rehabilitation services, and use palliative care approach appropriately
- Recognising that illness (especially chronic and/or incapacity) has an impact on relationships and family, having financial as well as social effects e.g. driving

Disease prevention and health education

- Screening for disease: methods, advantages and limitations
- Health promotion and support agencies; means of providing sources of information for patients
- Risk factors, preventive measures, and change strategies applicable to smoking, alcohol, drug abuse, and lifestyle
- Disease notification; methods of collection and sources of data

Notes, records, correspondence

- Functions of medical records, their value as an accurate up-to-date commentary and source of data
- An understanding of the need and appropriate use of problem-orientated discharge notes, letters, more detailed case reports, concise out-patient reports and focused reviews
- Appreciating the importance of up-to-date, easily available, accurate information, and the need for communicating promptly e.g. with primary care

Prioritising, resourcing and decision taking

- How to prioritise demands, respond to patients' needs and sequence urgent tasks
- Establishing (clinical) priorities e.g. for investigations, intervention; how to set realistic goals; understanding the need to allocate sufficient time, knowing when to seek help
- Understanding the need to complete tasks, reach a conclusion, make a decision, and take action within allocated time
- Knowing how and when to conclude

Handover

- Know what are the essential requirements to run an effective handover meeting
 - Sufficient and accurate patients information
 - Adequate time
 - Clear roles and leadership
 - Adequate IT
- Know how to prioritise patient safety
 - Identify most clinically unstable patients
 - Use ISBAR (Identify, Situation, Background, Assessment, Recommendations)
 - Proper identification of tasks and follow-ups required
 - Contingency plans in place
- Know how to focus the team on actions
 - Tasks are prioritised
 - Plans for further care are put in place
 - Unstable patients are reviewed

Relevance of professional bodies

- Understanding the relevance to practice of standards of care set down by recognised professional bodies – the Medical Council, Medical Colleges and their Faculties, and the additional support available from professional organisations e.g. IMO, Medical Defence Organisations and from the various specialist and learned societies

SKILLS

- Taking and analysing a clinical history and performing a reliable and appropriate examination, arriving at a diagnosis and a differential diagnosis
- Liaising, discussing and negotiating effectively with those undertaking the investigation
- Selecting investigations carefully and appropriately, considering (patients') needs, risks, value and cost effectiveness
- Appropriately selecting treatment and management of disease
- Discussing, planning and delivering care appropriate to patient's needs and wishes
- Preventing disease using the appropriate channels and providing appropriate health education and promotion
- Collating evidence, summarising, recognising when objective has been met
- Screening
- Working effectively with others including
 - Effective listening
 - Ability to articulate and deliver instructions
 - Encourage questions and openness
 - Leadership skills
- Ability to prioritise
- Ability to delegate effectively
- Ability to advise on and promote lifestyle change, stopping smoking, control of alcohol intake, exercise and nutrition
- Ability to assess and explain risk, encourage positive behaviours e.g. immunisation and preventive measures
- Involve patients' in solving their health problems, by providing information and education
- Availing of support provided by voluntary agencies and patient support groups, as well as expert services e.g. detoxification / psychiatric services
- Act in accordance with, up to date standards on palliative care needs assessment
- Valuing contributions of health education and disease prevention to health in a community
- Compile accurate and appropriate detailed medical notes and care reports including the results of examinations, investigations, procedures performed, sufficient to provide an accurate, detailed account of the diagnostic and management process and outcome, providing concise, informative progress reports (both written and oral)
- Transfer information in an appropriate and timely manner

- Maintaining legible records in line with the Guide to Professional Conduct and Ethics for Registered Medical Practitioners in Ireland
- Actively engaging with professional/representative/specialist bodies

ASSESSMENT & LEARNING METHODS

- Consultant feedback
- Workplace based assessment e.g. Mini-CEX, DOPS, CBD
- Educational supervisor's reports on observed performance (in the workplace)
- Annual Audit
- Medical Council Guide to Professional Conduct and Ethics

Dealing with & Managing Acutely Ill Patients in Appropriate Specialties

Objectives: To be able to assess and initiate management of patients presenting as emergencies, and to appropriately communicate the diagnosis and prognosis. Trainees should be able to recognise the critically ill and immediately assess and resuscitate if necessary, formulate a differential diagnosis, treat and/or refer as appropriate, elect relevant investigations and accurately interpret reports.

Medical Council Domains of Good Professional Practice: Patient Safety and Quality of Patient Care, Clinical Skills.

KNOWLEDGE

Management of acutely ill patients with medical problems

- Presentation of potentially life-threatening problems
- Indications for urgent intervention, the additional information necessary to support action (e.g. results of investigations) and treatment protocols
- When to seek help, refer/transfer to another specialty
- ACLS protocols
- Ethical and legal principles relevant to resuscitation and DNAR in line with National Consent Policy
- How to manage acute medical intake, receive and refer patients appropriately, interact efficiently and effectively with other members of the medical team, accept/undertake responsibility appropriately
- Management of overdose
- How to anticipate / recognise, assess and manage life-threatening emergencies, recognise significantly abnormal physiology e.g. dysrhythmia and provide the means to correct e.g. defibrillation
- How to convey essential information quickly to relevant personnel: maintaining legible up-to-date records documenting results of investigations, making lists of problems dealt with or remaining, identifying areas of uncertainty; ensuring safe handover

Managing the deteriorating patient

- How to categorise a patients' severity of illness using Early Warning Scores (EWS) guidelines
- How to perform an early detection of patient deterioration
- How to use a structured communication tool (ISBAR)
- How to promote an early medical review, prompted by specific trigger points
- How to use a definitive escalation plan

Discharge planning

- Knowledge of patient pathways
- How to distinguish between illness and disease, disability and dependency
- Understanding the potential impact of illness and impairment on activities of daily living, family relationships, status, independence, awareness of quality of life issues
- Role and skills of other members of the healthcare team, how to devise and deliver a care package
- The support available from other agencies e.g. specialist nurses, social workers, community care
- Principles of shared care with the general practitioner service
- Awareness of the pressures/dynamics within a family, the economic factors delaying discharge but recognise the limit to benefit derived from in-patient care

SKILLS

- BLS/ACLS (or APLS for Paediatrics)
- Dealing with common medical emergencies
- Interpreting blood results, ECG/Rhythm strips, chest X-Ray, CT brain
- Giving clear instructions to both medical and hospital staff
- Ordering relevant follow up investigations
- Discharge planning, including complex discharge
- Knowledge of HIPE (Hospital In-Patient Enquiry)
- Multidisciplinary team working
- Communication skills
- Delivering early, regular and on-going consultation with family members (with the patient's permission) and primary care physicians
- Remaining calm, delegating appropriately, ensuring good communication
- Attempting to meet patients'/ relatives' needs and concerns, respecting their views and right to be informed in accordance with Medical Council Guidelines
- Establishing liaison with family and community care, primary care, communicate / report to agencies involved
- Demonstrating awareness of the wide ranging effects of illness and the need to bridge the gap between hospital and home
- Categorising a patients' severity of illness
- Performing an early detection of patient deterioration
- Use of structured communication tools (e.g. ISBAR)

ASSESSMENT & LEARNING METHODS

- ACLS course
- Record of on call experience
- Mini-CEX (acute setting)
- Case Based Discussion (CBD)
- Consultant feedback

Therapeutics and Safe Prescribing

Objective: To progressively develop ability to prescribe, review and monitor appropriate therapeutic interventions relevant to clinical practice in specific specialities including non-pharmacological therapies and preventative care.

Medical Council Domains of Good Professional Practice: Patient Safety and Quality of Patient Care.

KNOWLEDGE

- Pharmacology, therapeutics of treatments prescribed, choice of routes of administration, dosing schedules, compliance strategies; the objectives, risks and complications of treatment cost-effectiveness
- Indications, contraindications, side effects, drug interaction, dosage and route of administration of commonly used drugs
- Commonly prescribed medications
- Adverse drug reactions to commonly used drugs, including complementary medicines
- Identifying common prescribing hazards
- Identifying high risk medications
- Drugs requiring therapeutic drug monitoring and interpretation of results
- The effects of age, body size, organ dysfunction and concurrent illness or physiological state e.g. pregnancy on drug distribution and metabolism relevant to own practice
- Recognising the roles of regulatory agencies involved in drug use, monitoring and licensing e.g. IMB, and hospital formulary committees
- Procedure for monitoring, managing and reporting adverse drug reaction
- Effects of medications on patient activities including potential effects on a patient's fitness to drive
- The role of The National Medicines Information Centre (NMIC) in promoting safe and efficient use of medicine
- Differentiating drug allergy from drug side effects
- Know the difference between an early and late drug allergy, and drug side-effects
- Good Clinical Practice guidelines for seeing and managing patients who are on clinical research trials
- Best practice in the pharmacological management of cancer pain
- The management of constipation in adult patients receiving palliative care

SKILLS

- Writing a prescription in line with guidelines
- Appropriately prescribing for the elderly, children and pregnant and breast feeding women
- Making appropriate dose adjustments following therapeutic drug monitoring, or physiological change (e.g. deteriorating renal function)
- Reviewing and revising patients' long term medications
- Anticipating and avoiding defined drug interactions, including complementary medicines
- Advising patients (and carers) about important interactions and adverse drug effects including effects on driving
- Providing comprehensible explanations to the patient, and carers when relevant, for the use of medicines
- Being open to advice and input from other health professionals on prescribing
- Participating in adverse drug event reporting
- Take and record an accurate drug allergy history and history of previous side effects

ASSESSMENT & LEARNING METHODS

- Consultant feedback
- Workplace based assessment e.g. Mini-CEX, DOPS, CBD
- Educational supervisor's reports on observed performance (in the workplace): prioritisation of patient safety in prescribing practice
- Guidance for health and social care providers - Principles of good practice in medication reconciliation (HIQA)

Specialty Section

The American Society of Clinical Oncology (ASCO) Medical Oncology In-Training Examination and the European Society of Medical Oncology (ESMO) examinations are listed as assessment methods in the specialty section of this curriculum. These exams will not be used as a certifying or qualifying examination but are to be used as a self-assessment tool designed to gauge knowledge in Medical Oncology.

Basic Scientific Principles

Objective: As a foundation for treating malignant disease, the trainee should understand and be able to apply the biology of cancer, the principles of therapy, and the proper conduct and interpretation of clinical research and therapeutic trials.

Cancer biology

Objective: To demonstrate knowledge and application of the biology of normal cells and the basic processes of carcinogenesis

KNOWLEDGE

- Gene structure, organisation, expression, and regulation
- Cell cycle, its control by oncogenesis, and its interaction with therapy; tumour cell kinetics, proliferation, programmed cell death and the balance between cell death and cell proliferation

SKILLS

- Application of cancer biology principles the management of malignant diseases
- Familiarity with molecular techniques, such as the polymerase chain reaction (PCR), chromosomal analyses and other techniques of molecular and tumour cell biology
- Demonstrate the application of cancer biology in determining the malignant process and in guiding the development of therapeutic strategies

ASSESSMENT & LEARNING METHODS

- Case Based Discussion (CBD)
- Study Day
- Annual: American Society of clinical Oncology (ASCO) Medical Oncology In-Training Examination
- Year 3 – 4 : European Society of Medical Oncology (ESMO) examination
- Non-clinical DOPS
 - Chemotherapy prescribing

Tumour Immunology

Objective: To understand the inter-relationship between tumour and host immune systems

KNOWLEDGE

- Cellular and humoral components of the immune system and the regulatory action of cytokines
- Tumour antigenicity, immune-mediated antitumour cytotoxicity and the direct effect of cytokines on tumours

SKILLS

- To apply above knowledge in the management of patients with malignancy
- Appreciation of how knowledge of tumour immunology has guided therapy to date and the importance of using emerging knowledge in the area to patients' advantage

ASSESSMENT & LEARNING METHODS

- CBD
- Study Day
- Annual: American Society of clinical Oncology (ASCO) Medical Oncology In-Training Examination
- Year 3 – 4: European Society of Medical Oncology (ESMO) examination

Aetiology, Epidemiology, Screening and Prevention

Objective: To demonstrate an understanding and application of the aetiological, genetic and environmental factors in relation to the risk of malignancy, screening and preventive strategies

KNOWLEDGE

- Aetiology and of genetic and environmental factors in oncogenesis
- Epidemiological factors and descriptors of disease
- Principles of screening and risk assessment.
- The principles and indications for genetic screening and counselling
- The value of prevention and primary, secondary and tertiary preventive measures that may be taken to prevent cancer deaths

SKILLS

- Provide appropriate advice on environmental factors, genetic risks, screening, and prevention
- Recognise of the supreme importance of preventive measures in addressing the global cancer problem
- Recognise situations in which screening benefit is unclear or not defined

ASSESSMENT & LEARNING METHODS

- CBD
- Study Day
- Annual: American Society of clinical Oncology (ASCO) Medical Oncology In-Training Examination
- Year 3 – 4: European Society of Medical Oncology (ESMO) examination
- Mini-CEX
 - Providing advice on screening

Clinical research including statistics

Objective: To demonstrate an ability to participate in, design and conduct clinical trials and to provide an exposure to the development and conduct of such trials e.g. through international cooperative groups or in-house protocols

KNOWLEDGE

- Clinical trial design, phase I-II-III trials, the ethical, regulatory and legal issues involved in study design approval and regulation
- Basic statistics, statistical methods. Requirements for patient numbers, analysing and proper interpretation of data
- Criteria for defining response to therapy. Tools used to assess quality of life. Toxicity assessment and grading. Measurement of costs and the cost effectiveness of therapy
- Government regulatory mechanisms of surveillance

SKILLS

- The ability to critically evaluate the scientific value of published articles and their influence on daily clinical practice
- Demonstrate an ability to write research grants and access mechanisms of obtaining support for clinical research
- Obtain informed consent from patients
- Prepare abstracts, oral and visual presentations
- Demonstrate excellent scientific research and report-writing skills Recognition of the importance of cancer clinical trials to the development of cancer therapies.

ASSESSMENT & LEARNING METHODS

- CBD
- Ethics III - Research
- Research Activities
- Presentations/Publications
- Health Research Methods for Clinicians (optional)
- Annual: American Society of clinical Oncology (ASCO) Medical Oncology In-Training Examination
- Year 3 – 4: European Society of Medical Oncology (ESMO) examination

Basic Principles in the Management and Treatment of Malignant Disease

Objective: Providing best-practice management of malignant disease requires co-ordinated expertise from many different medical specialties; patients are best managed in an integrated, multidisciplinary approach. The trainee must be able to recognise the contributions that other specialties can make in diagnosing, staging and treating a patient with malignant disease as well as complications and any co-morbid conditions. Trainees, in formulating a treatment plan, must know how to take account of co-morbidities especially in the growing population of elderly patients with cancer.

Pathology/Laboratory Medicine/Molecular Biology

Objective: To be able to interpret and apply pathology and laboratory findings and results in the effective management of patients with malignant diseases in conjunction with the pathologist and relevant laboratory scientists

KNOWLEDGE

- The role of the pathologist in confirming the diagnosis of cancer and in determining the severity and extent of disease
- New pathology techniques and the contribution of these techniques to the staging and management of patients with cancer
- Understand that the definite diagnosis of cancer is based on the interpretation of cytology or biopsy material.

SKILLS

- Request appropriate laboratory testing in the diagnosis, staging and follow-up of patients with malignant disease
- Review biopsy material and surgical specimens with a pathologist
- Appropriately utilise markers (serum tumour markers, cell membrane markers, DNA markers) and recognise their limitations
- Develop effective communication links working with the pathology laboratory in making the correct diagnosis on which treatment is based
- Recognises the need for multidisciplinary working towards refining diagnosis and developing and adopting new techniques

ASSESSMENT & LEARNING METHODS

- CBD
- Study Day
 - Safe Prescribing and Prescribing Chemotherapy course
- Annual: American Society of clinical Oncology (ASCO) Medical Oncology In-Training Examination
- Year 3 – 4: European Society of Medical Oncology (ESMO) examination
- Mini-CEX
 - MDT/Pathology meeting

Staging

Objective: To be able to apply the methods of staging malignant disease and to be able to instigate and apply these methods appropriately in management

KNOWLEDGE

- Tumour-node-metastasis (TNM) staging system and how to stage a cancer patient
- Indications for clinical, radiographic and nuclear medicine imaging procedures in the diagnosis, staging the follow-up of patients with malignant disease

SKILLS

- Assess response to treatment using above tests
- Integrate and apply staging information appropriately in guiding the approach to treatment
- Appropriately involve other professionals in determining the stage of disease
- Regularly update own skills and knowledge in staging technology and information in order to inform treatment decisions appropriately and effectively

ASSESSMENT & LEARNING METHODS

- CBD
- Mini-CEX
 - Lead MDT staging discussion
- Study Day
- Annual: American Society of clinical Oncology (ASCO) Medical Oncology In-Training Examination
- Year 3 – 4: European Society of Medical Oncology (ESMO) examination

Treatment Modalities

Objective: The indications and contraindications for the different treatments and care available for patients with malignant diseases; their risks and benefits, including the correct place and timing of surgery, radiotherapy, anti-cancer agents and biologic therapy within an integrated, planned approach to care

KNOWLEDGE

Surgery

- the indications for and contraindications to surgery
- The role of surgery in staging, cure and palliation of patients with malignant diseases
- The indications for organ preservation and the sequencing of surgery with other treatment modalities

SKILLS

- Able to recognise the risks and benefits of surgery with both as a definitive treatment and as an adjunct of radiotherapy and/or anticancer agents
- To be aware of potential postoperative complications and able to initiate appropriate action
- Openness to and capacity to work in multidisciplinary team context

Radiation oncology

- Principles of radiation biology and the indications for radiation therapy both as a curative and a palliative modality
- The principles of treatment planning and dosimetry
- When radiation therapy should be sequenced with surgery and or/anticancer agents
- Recognise both the acute and late effects on radiation therapy and initiate appropriate action
- Openness to and capacity to work in multidisciplinary team context

Anticancer agents

- The indications and goals of treatment with anticancer agents in primary and recurrent malignant disorders.
- The application of these agents in neo-adjuvant, concomitant, and adjuvant setting
- The indications for anticancer agents as radiation sensitizers
- The importance of dosing and treatment delay of specific anticancer agents
- The pharmacokinetics, pharmacogenomics and pharmacology of the various agents
- The toxicity profile for each anticancer agent, including long-term hazards
- Able to assess a patient's comorbid medical conditions in order to determine the risk/benefit ratio of treatment with anticancer agents for the individual patient
- How to adapt the dose and treatment schedule according to the individual patient in case of organ dysfunction, and how to handle treatment related complications
- Appreciates the inherent danger of anti-cancer agents and the need to apply safety measures
- Alert to the need for cross-checking and pharmacy support in this context

Biologic therapies

- The activities and indications for biologic therapies available including cytokines and haematopoietic growth factors
- The spectrum of specific side effects and their management
- Therapeutic use of biologic agents in combination with chemotherapy
- Understand basic concepts of targeted molecular therapies, such as monoclonal antibodies, tumour vaccines, cellular therapy, and gene-directed therapy
- Able to apply this knowledge in the planning of integrated therapeutic programmes of care
- Recognises the inherent danger of anti-cancer agents and the need to apply safety measures
- Alert to the need for cross-checking and pharmacy support in this context

Supportive measures

- Knowledge of what supportive therapy is available during anticancer treatment including the indications for these interventions, their limitations and side effects
- Ability to use supportive measures appropriately
- Appreciation of the importance of symptom control in easing the patient's cancer journey, for example: nausea and vomiting
- Aware of the various aetiologies of nausea and vomiting in patients with malignancies
- The mechanism of action and pharmacology of anti-emetic agents
- How to use anti-emetic measures in daily clinical practice
- Appreciation of the importance of symptom control in easing the patient's cancer journey

Infection & neutropenia

- The principles of diagnosis and management of infections and neutropenic fever in all types of cancer patients
- How to treat and prevent infections
- The indications for the use of haematopoietic growth factors
- Appropriate use of empiric antibiotic therapy
- Appropriate use of haemopoietic growth factors
- Risks of neutropenia and the importance of prevention of morbidity and mortality from sepsis in this context

Anaemia

- The indications and complications of red blood cell transfusions; the options regarding preparation
- The appropriate use of erythropoietin
- Correct and safe administration of these products
- The effects of anaemia on patients with cancer and especially cancer related fatigue

Thrombocytopenia

- The indications and complications of platelet transfusions
- The options regarding preparation and administration of these products
- Appropriate use of platelet transfusions
- The use of HLA matched platelet transfusions when required
- Appreciates the risks of bleeding in the context of low platelet count
- Ensures close working with transfusion services to optimise use of platelet transfusions

Marrow & peripheral blood progenitor cells

- The methods for marrow and peripheral-blood progenitor cells procurement, cryopreservation and administration
- Harvesting progenitor cells from peripheral blood and marrow
- Storage of progenitor cells in line with recommended standards
- The appropriate use of high-dose strategies and timely referral of patients for such treatment when indicated

Organ protection

- Know and understand the use of organ-protective measures and treatments
- The indications for and side-effects of different organ protective agents: the techniques of gonad preservation to help preserve fertility (e.g. cryopreservation techniques)
- Communication of issues to patients and families
- Liaison with relevant support services
- Recognises the importance of late-effects for those cured of their malignancy and preventing or compensating for these where possible

Mucositis

- Be aware of the need for pain medication and topical anaesthetics as palliation
- Be able to distinguish mucositis which is infectious from that caused by anticancer agents
- Appreciation of the importance of symptom control in easing the patient's cancer journey
- Appreciation of the relevance of mucositis to the risk of infection and bleeding

Malignant effusions

- The signs, symptoms, the treatments of ascites, pleural and pericardial effusions
- Be able to recognise and to treat effusions by paracentesis
- Recognises the capacity to relieve symptoms through effective treatment of effusions
- Alert to the potential life threatening aspects of pericardial or pleural effusions

Extravasation

- Understand the cause and know that prevention is the most important factor in management
- They should be able to diagnose and treat extravasation
- Recognises the devastating effect that extravasation may have and making every effort to prevent its occurrence

Oncologic emergencies

- For patients in whom an underlying diagnosis of cancer is suspected, the trainee should know the proper approach for obtaining urgently a tissue diagnosis
- What management is urgently required in the acute and in the chronic setting
- Be able to recognise those clinical presentations that require immediate intervention (e.g. spinal cord compression, pericardial tamponade)
- Understands that oncologic emergencies frequently arise and that their management must take account of the stage in the patient's cancer journey at which the emergency develops

Paraneoplastic syndromes

- Know and be able to recognise the “remote effects” of malignancy, as potentially manifest in every organ system
- Know which malignancies are most commonly associated with the individual syndromes
- The appropriate supportive management of each syndrome
- Treatment of the underlying malignancy
- Use of fluid and electrolyte replacement / restriction
- Use of bisphosphonates and the other agents to manage hypercalcaemia
- Alert to the possible presence of a paraneoplastic syndrome, particularly in relation to certain malignancies, which may explain why a patient is non-specifically unwell

Palliative care & end-of-life care

- Trainees should know what palliative measures are available and in what situations palliative care is required during management
- Able to determine when palliative measures are indicated
- Appreciates palliative care as an essential part of an integrated programme of medical oncology, and that it has a multidisciplinary dimension

Pain management

- World Health Organisation pain ladder and an understanding of the pharmacology and toxicity of the opiate narcotics and other analgesics
- Able to identify source and assess severity of pain
- Able to manage cancer pain with the available modalities
- Recognise when referral for an invasive palliative intervention is indicated
- Recognises the need to take control of pain management and review outcome of therapy on a regular basis

Other distressing symptoms

- Know how to approach end of life distress, systemic and local symptoms of the underlying malignancy and its treatment
- Able to palliate symptoms due to respiratory, gastrointestinal tract, neurologic, cutaneous and mucosal effects; anorexia, cachexia, thirst and dehydration
- Recognises the need to take control of symptom management and to enlist help of other services as required in the patient’s interests
- Know how to approach end of life distress, systemic and local symptoms of the underlying malignancy and its treatment
- Able to palliate symptoms due to respiratory, gastrointestinal tract, neurologic, cutaneous and mucosal effects; anorexia, cachexia, thirst and dehydration
- Recognises the need to take control of symptom management and to enlist help of other services as required in the patient’s interests

Communication

- How to communicate effectively with the patient and their carers and work together with other healthcare professionals in a team e.g. nurses, social workers, psychologists
- Able to communicate effectively with the patient and their family
- Able to break bad news and act appropriately in difficult situations
- Be available to patient and relatives and ensures setting is appropriate for communication
- Seeks help and support from other professionals and ensures self-protective measures are available

Rehabilitation

- Understand and recognise the role and place of physiotherapy (particularly in the postoperative setting), occupational therapy, clinical nutrition and speech therapy (including swallowing therapy) and be able to apply that knowledge to the management of the effects of malignant disease at successive stages
- Uses the full range of professional skills and resources available towards patient support and rehabilitation in an open and effective manner

ASSESSMENT & LEARNING METHODS

- CBD
 - Decisions to refer to other disciplines
 - Pain management
 - Complex cases
- Mini-CEX
 - Lead MDT
 - Discussing treatment options with patients
 - Assessment of pain/function
- Study Day
- Annual: American Society of clinical Oncology (ASCO) Medical Oncology In-Training Examination
- Year 3 – 4: European Society of Medical Oncology (ESMO) examination

Management and Treatment of Individual Cancers

Objectives:

Understand the general principles on which the management of a malignant disease is based by being familiar with

- a) specific details of the treatment of individual cancer types and
- b) have an awareness of considerations unique to each particular malignant disease.

For each specific disease, the trainee should know and understand the relevance of

- a) epidemiology, genetics, patho-physiology,
- b) likely presenting symptoms and signs,
- c) the diagnostic work-up and staging procedures,
- d) treatment required and
- e) follow-up which is necessary.

In each situation some items may be of greater or lesser importance in management, but in all cases optimal use must be made of the skills available within the multidisciplinary teams towards achieving the best outcomes for patients. The trainee must learn to educate and guide patients and their families in all aspects of care and management.

Malignant diseases vary in terms of incidence and prevalence throughout the world. In Ireland, the most common cancer types encountered are lung, colorectal, breast, prostate and gynaecological cancers though others such as malignant lymphomas and unknown primary tumours are increasingly diagnosed. The incidence of such cancers indicates that knowledge of their management is of great importance for trainees. Other diseases such as germ cell tumours are important in providing models of disease which can be cured by combination chemotherapy and even rare tumours such as gastrointestinal stromal tumours assume great importance in terms of their response to therapy focused on a specific molecular target.

While it is recognised that a trainee cannot encounter each and every cancer during training, experience should be gained in the management of a broad range of common cancers as well as the more unusual diseases treated at the various training centres.

KNOWLEDGE

In each context, besides specific considerations relevant to the management and treatment of the particular malignancy, the trainee should seek to:

- Know and understand the epidemiology and risk factors relevant to the development of malignancy
- Understand the place and value of screening for disease and the techniques involved
- Understand the diagnostic pathway & staging, treatment planning and delivery of treatment

SKILLS

- Recognise and establish the primary diagnosis and identify and assess any local or systemic complication in order to plan appropriate responses
- Recognise the importance of correctly staging a malignant disease in order to be able to select appropriately from the therapeutic options available
- Demonstrate sound judgement in selecting, planning and arranging treatments and in the provision of adequate support and continuing care for the patient
- Communicate effectively and consult with others across the multidisciplinary team
- Ensure that treatment plans are patient-centred and that patients and their carers are enabled and encouraged to contribute to decision-making, being capable of informed choice when therapeutic options are offered
- Accept responsibility as a medical oncologist for providing and arranging additional supporting measures such as palliative care as may at times be necessary

ASSESSMENT & LEARNING METHODS

- CBD
- Study Day
- Annual: American Society of clinical Oncology (ASCO) Medical Oncology In-Training Examination
- Year 3 – 4: European Society of Medical Oncology (ESMO) examination

Head and Neck Cancers

Objective: To be able to recognise and establish the diagnosis of cancer of the head and neck; to discuss, advise on and arrange treatment and support, as appropriate to the patient's needs, in the context of the multidisciplinary team.

KNOWLEDGE

- The risk factors for head and neck cancers and natural histories of the individual primary tumour sites
- Staging of head and neck cancers as the means of properly evaluating therapeutic options (panendoscopy is needed for staging)
- Organ preservation indications and options
- Continuing follow-up and in the management of these patients and of risks of second malignancies

SKILLS

- Perform a thorough physical head and neck examination
- Utilize staging as the basis for selecting surgery and/or radiation therapy as definitive treatment, chemotherapy and palliation in more advanced disease
- Administer anti-cancer agent
- Assess/evaluate the impact of disease on the patient and family and refer to other services where appropriate
- Appropriately enlist other experts in the care and rehabilitation of the patient

ASSESSMENT & LEARNING METHODS

- CBD
- Study Day
 - Safe Prescribing and Prescribing Chemotherapy
- Annual: American Society of clinical Oncology (ASCO) Medical Oncology In-Training Examination
- Year 3 – 4: European Society of Medical Oncology (ESMO) examination
- Mini-CEX
 - Head and neck examination
 - Communicating disease information
 - Leading MDT

Lung Cancer and Mesothelioma

Objective: To be able to recognise and confirm the diagnosis of lung cancer and of other non-lung intrathoracic malignancies; to discuss, give advice and arrange treatment and other support, as necessary for the patient's needs.

KNOWLEDGE

Small-cell lung cancer

- Appropriate patient selection and treatment of limited stage disease
- the role of chemotherapy in patients with advanced disease
- Indications for central nervous system treatment
- Use of supportive and palliative care measures
- Evaluate the impact of the disease on patient and family (Skill)
- Ensure close interaction with other disciplines notably radiation therapy

Non small-cell lung cancer

- The surgical and non-surgical staging of patients with localised disease.
- The criteria which define inoperability
- Appropriate follow-up of those treated for cure
- The role of chemotherapy and/or radiation therapy in the palliation of advanced disease
- Knowledge of various targets (established and emerging), relevant diagnostics and targeted and other therapy

Thoracic (non-lung) tumours e.g. mesothelioma and thymoma

- The risk factors for mesothelioma
- Criteria for operability, and the place and value of chemotherapy
- Anti-cancer agent administration
- Use of supportive and palliative care measures
- Evaluates the impact of disease on patient and family

SKILLS

Apply an evidence-based approach to decision making in the choice of surgery, chemotherapy and/or radiation therapy in localized disease, (often as combined-modality treatment) (skill)

- Anti-cancer agent administration
- Use of supportive and palliative care measures
- Understands the impact of the disease on patient and family
- Works in a multidisciplinary setting

ASSESSMENT & LEARNING METHODS

- CBD
- Study Day
 - Safe Prescribing and Prescribing Chemotherapy
- Annual: American Society of clinical Oncology (ASCO) Medical Oncology In-Training Examination
- Year 3 – 4: European Society of Medical Oncology (ESMO) examination
- Mini-CEX
 - Lead MDT

Gastrointestinal Cancer

Objective: To be aware of and appreciate the need to recognise the early signs of gastro-intestinal malignancies and be able to institute appropriate investigations. Be able to correctly diagnose end stage disease; discuss, advise on and arrange to provide treatment and any supportive measures necessary, including surgical treatment and/or combined-modality therapy consistent with the patient's needs.

KNOWLEDGE

Oesophageal cancers

- risk factors for oesophageal cancer
- indications for endoscopy and value in the diagnosis and staging of the disease
- The indications for nutritional support

Gastric cancer

- risk factors unique for gastric cancer
- genetic testing principles and application
- major surgical approaches to the disease and recognise the potentially curative role of surgery and combined modality therapy

Colorectal cancer

- risk factors and the rationale for screening for colorectal cancer, as well as the place of chemoprevention
- genetic testing principles and application
- Understand the importance of surgical staging in planning treatment, recognising the indications for adjuvant therapies e.g. in colon and rectal cancers and the role of chemotherapy in advanced metastatic disease

Anal Cancer

- the association of human papilloma virus with anal cancer and possible AIDS association

Hepatobiliary cancers

- epidemiology and risk factors for hepatobiliary cancers
- Application of alpha-fetoprotein in screening, diagnosis, and in response assessment
- the potential curative role and indications for surgery in localised disease
- the role of systemic and intra-arterial chemotherapy

Pancreatic cancer

- risk factors for the development of pancreatic cancer and the unique genetic aspects of pancreatic cancer

SKILLS

- Administer anti-cancer agent Enlist supportive and palliative care measures, especially nutritional support
- Genetic counselling and genetic testing
- Recognise the value of different treatment modalities and combined modality treatment in early stage disease as well as the place of palliative chemotherapy and supportive care measures in advanced disease
- Recognise the importance of a holistic approach to the management of this common disease
- Understand the role of endoscopy and of molecular diagnosis in pancreatic cancer
- Recognise that surgery rarely has a curative role but can provide palliation
- Encourages close working with radiation oncology to deliver combined modality (non-surgical) treatment
- Employs interventional techniques and measure to relieve biliary tract obstruction

ASSESSMENT & LEARNING METHODS

- CBD
- Study Day
 - Safe Prescribing and Prescribing Chemotherapy
- Annual: American Society of clinical Oncology (ASCO) Medical Oncology In-Training Examination
- Year 3 – 4: European Society of Medical Oncology (ESMO) examination
- Mini-CEX

Genito-Urinary Cancers

Objective: To know and be able to recognise the presenting features, remote effects and complications of genito-urinary cancers; the screening investigation, and management options available and be able to advise on the management of individual cases within the multidisciplinary team.

KNOWLEDGE

Renal cell cancer

- presentations and diagnostic approach to renal cell cancer
- paraneoplastic effects of the disease

Urothelial cancers

- risk factors for urothelial cancers
- the difference between localised and invasive disease and the propensity for transitional-cell carcinoma to recur and be multifocal
- The role of urine cytology and cystoscopy in the staging and follow-up of patients
- intravesical therapy in the management of superficial bladder cancer, and the role of surgery in early-stage invasive cancers

Penile cancer

- The role of human papilloma virus in the aetiology of penile cancer

Prostate cancer

- epidemiology of prostate cancer, the indications for prostate-specific antigen in screening and follow-up of patients
- histologic grading in management

Germ cell tumours

- utility of tumour markers in the diagnosis, prognosis, and follow-up of patients
- classify patients according to the International Germ Cell Collaborative Group classification

SKILLS

- Recognise the role of observation, surgery, or radiation therapy in early stage disease, and the application of hormone therapy and chemotherapy in advanced disease.
- Recognise the place of surgery, radiation therapy, and chemotherapy and appreciate that appropriate combination chemotherapy is curative in patients with advanced disease.
- Recognise the potentially curative role of combined modality treatment.
- Recognise the value of combined modality therapy in localised disease and in the management of metastatic transitional-cell carcinoma.
- Anti-cancer agent administration.
- Use of supportive and palliative care measures.
- Genetic counselling and genetic screening.
- Prevent / minimise late – effects of treatments where possible.
- Seeks a curative approach through cancer chemotherapy but appropriately engages multidisciplinary care where necessary.
- Appreciate the potentially curative role of surgery in localised disease and the value of biologic and molecularly targeted therapies in the palliation of advanced disease.
- Avoids nihilism in the context of emerging therapies with potential for clinical benefit.

ASSESSMENT & LEARNING METHODS

- CBD
- Study Day
- Annual: American Society of clinical Oncology (ASCO) Medical Oncology In-Training Examination
- Year 3 – 4: European Society of Medical Oncology (ESMO) examination

Gynaecologic Malignancies

Objective: To know the risk factors and genetic, hormonal and viral influences on the development and progression of gynaecological malignancies and the importance of correct staging in determining the management strategy in each particular case. To understand the screening investigation, and management options available and be able to advise on the management of individual cases within the multidisciplinary team. To understand current knowledge of the risk/benefit balance of systemic therapies whether given concomitantly with radical radiation to enhance cure, as neo-adjuvant or adjuvant therapy in first-line therapy, or for palliation of metastatic disease and be able to supervise the administration of that systemic therapy and manage patients receiving it

KNOWLEDGE and SKILLS

Ovarian cancer

- Know the histopathological subtypes of ovarian cancer and their implications for management and prognosis
- Have a basic understanding of the genetic predisposing conditions for ovarian cancer and the guidelines on which patients should be referred for genetic evaluation.
- Know the FIGO staging of ovarian cancer
- Know the data supporting appropriate surgical procedures in staging and therapy of ovarian cancer

Uterine cancer

- Know and understand the histopathological subtypes and grades of uterine malignancy and their implications for management and prognosis
- Know the role of hormones in the aetiology and progression, and of hormonal therapy in the management of endometrial carcinoma
- Understand the appropriate staging and surgical therapy of early-stage uterine carcinoma, the data for adjuvant radiation and /or systemic therapy and the role of chemotherapy and hormone therapy in the management of both local and metastatic disease

Cervical cancer

- Know the histopathological subtypes of cervical carcinoma and their implications for management and prognosis
- Know the current FIGO staging of cervix carcinoma as the basis for selecting surgery and/or radiation therapy as curative therapy
- Know the data to support the role of systemic therapy when combined with radiotherapy in the management of local disease and its place in the treatment of advanced disease

Vulval and vaginal cancer

- Understand the principles of proper surveillance and management of women with pre-malignant and malignant changes in the genital epithelium
- Recognise the curative role of surgery in early-stage disease and the limited role for systemic therapy

SKILLS

- Be able to recognise the indications for chemotherapy in localised and in advanced cancer of all gynaecological disease sites
- Be able to choose and prescribe systemic anti-cancer agents rationally and safely
- Be able to use supportive and palliative care measures appropriately and effectively, especially nutritional support
- Be able to refer patients with gynaecological cancer appropriately for genetic counselling and/or testing
- Understand the central role of multidisciplinary care in gynaecological patient care
- Appreciate the role of vaccination and screening in prevention and early detection

ASSESSMENT & LEARNING METHODS

- CBD
- Mini-CEX
- Study Day
- Annual: American Society of clinical Oncology (ASCO) Medical Oncology In-Training Examination
- Year 3 – 4: European Society of Medical Oncology (ESMO) examination

Breast Cancer

Objective: To understand the risk factors, the benefits of screening, value of early diagnosis and treatment and to develop treatment plan taking into account stage (neoadjuvant, adjuvant and metastatic settings), treatment options, prognostic factors and relevant other factors.

KNOWLEDGE

- Understand the importance of family history and the role for genetic testing and counselling
- Be aware of the issues that affect the choice of primary treatments, including the value of determination of receptors
- Protocols for elective chemotherapy regimens should be reviewed and understood
- Treatment planning across all settings: neoadjuvant, adjuvant, metastatic

SKILLS

- Understands and recognise the pathologic and prognostic features that assist in determining the indications for therapy, including how to manage preneoplastic lesions
- Appreciate the benefits of hormone therapy and/or chemotherapy in advanced disease and know the indications for adjuvant therapy
- A working knowledge in the interpretation of a mammogram, ultrasound, and magnetic resonance imaging scan of the breast
- Anti-cancer agent administration
- Genetic counselling and genetic testing
- Use of supportive and palliative care measures
- Appropriate engagement in multidisciplinary care

ASSESSMENT & LEARNING METHODS

- CBD
- Study Day
- Annual: American Society of clinical Oncology (ASCO) Medical Oncology In-Training Examination
- Year 3 – 4: European Society of Medical Oncology (ESMO) examination
- Mini-CEX
 - MDT discussion

Sarcomas

Objective: To know and appreciate the spectrum of the pathology of sarcomas in various locations and the considerations necessary in decisions regarding management of patients.

KNOWLEDGE

Bone sarcomas

- predisposing factors to the development of primary bone sarcomas
- pathologic spectrum of these lesions and the indications and considerations regarding surgery, limb preservation and adjuvant chemotherapy
- role of combined modality therapy in dealing with specific tumours

Soft tissue sarcomas

- The surgery appropriate for initial diagnosis
- Specific medical treatments available for gastrointestinal stromal tumours
- Recognise the place of chemotherapy, surgery, and radiation therapy

SKILLS

- Anti-cancer agent administration
- Genetic counselling and genetic testing
- Use of supportive and palliative care measures
- Appropriate engagement in multidisciplinary care

ASSESSMENT & LEARNING METHODS

- CBD
- Study Day
- Annual: American Society of clinical Oncology (ASCO) Medical Oncology In-Training Examination
- Year 3 – 4: European Society of Medical Oncology (ESMO) examination

Skin Cancers

Objective: To understand the risk factors and be able to recognise and differentiate the commoner skin malignancies. To be capable of evaluating prognostic and other factors which may influence the choice of treatments and giving advice appropriate to the patient's needs.

KNOWLEDGE

Melanoma

- Risk factors and the varied clinical appearance of primary melanomas and precursor lesions such as dysplastic naevi
- What surgical procedure is required in making diagnosis and for curative resection
- tumour depth and other prognostic factors in assessing prognosis
- indications for biologic therapies in the adjuvant setting and the potential risks and benefits of chemotherapy in advanced disease
- primary prevention of melanoma, the recognition and counselling of patients at high risk for developing melanoma

Basal cell and squamous cell skin cancers

- Predisposing role of cancer therapy or immunosuppression in development of skin cancer
- Appreciate that their occurrence is associated with sun exposure

SKILLS

- Differentiate lesions that are benign from those that are potentially malignant
- Anti-cancer agent administration
- Use of supportive and palliative care measures
- Appropriate engagement in multidisciplinary care
- Demonstrates breadth of approach to include focus on prevention
- recognise the clinical appearances of non-melanoma skin cancers
- Early engagement of appropriate MDT members including consultant dermatologist

ASSESSMENT & LEARNING METHODS

- CBD
- Study Day
- Annual: American Society of clinical Oncology (ASCO) Medical Oncology In-Training Examination
- Year 3 – 4: European Society of Medical Oncology (ESMO) examination
- Mini-CEX
 - Dermatology MDT

Endocrine Cancers

Objective: To understand the principles of diagnosis and recognise the presentations and syndromes that may arise as a result of cancer affecting the endocrine organs (adrenal, pancreas, pituitary, thyroid glands, APUD tumours including carcinoid and phaeochromocytoma, and the multiple endocrine neoplasia syndromes (MEN types 1 and types 2) and understand the role of specific therapies in the approach to treatment of particular cancers and the place for surgery, radiotherapy anticancer drugs and combinations of therapy in management.

KNOWLEDGE

- The specific diagnostic work-up and specific treatments for individual endocrine cancers
- Understand how an endocrine cancer may be part of a cancer syndrome due to specific inherited genetic mutations

SKILLS

- The use of anticancer drugs in the different endocrine cancers
- Genetic counselling and genetic testing
- Use of supportive and palliative measures
- Appropriate engagement in multidisciplinary care including endocrinology services

ASSESSMENT & LEARNING METHODS

- CBD
- Study Day
- Annual: American Society of clinical Oncology (ASCO) Medical Oncology In-Training Examination
- Year 3 – 4: European Society of Medical Oncology (ESMO) examination

Central Nervous System Malignancies

Objective: To be aware of the possible outcomes of treatment, and of the role, risks and complications of the various treatment modalities available, in primary and in metastatic CNS malignancies. To be able to advise on the management of patients with CNS malignancy within the multidisciplinary team.

KNOWLEDGE

- indications, contraindications and considerations of surgery, radiation therapy, and chemotherapy in primary and metastatic disease involving the central nervous system

SKILLS

- Anti-cancer agent administration
- Use of supportive and palliative measures
- Genetic counselling and genetic testing
- Appropriate engagement in multidisciplinary care
- Awareness of the potential personality change and the associated stress for patients and families

ASSESSMENT & LEARNING METHODS

- CBD
- Study Day
- Annual: American Society of clinical Oncology (ASCO) Medical Oncology In-Training Examination
- Year 3 – 4: European Society of Medical Oncology (ESMO) examination

Cancer of Unknown Primary Site

Objective: To be aware of and appreciate the importance of detailed analysis of pathological specimens and the value of tumour markers in deciding on the appropriate treatment and to be capable of interpreting and explaining findings in a multidisciplinary approach to management.

KNOWLEDGE

- Know the importance of tumour histopathology, pathologic (immunohistochemistry, molecular analysis) of specimens and tumour-markers in directing diagnosis and treatment planning
- To be able to differentiate situations in which treatment may affect survival from those when it is a palliative measure

SKILLS

- Anti-cancer agent administration
- Use of supportive and palliative measures
- Pursues the diagnosis and definition to an appropriate degree towards clarifying the capacity to intervene with therapy which has a meaningful effect on out-come
- Offers supportive / palliative care when appropriate

ASSESSMENT & LEARNING METHODS

- CBD
- Study Day
- Annual: American Society of clinical Oncology (ASCO) Medical Oncology In-Training Examination
- Year 3 – 4: European Society of Medical Oncology (ESMO) examination

Lymphoid Malignancies

Objective: To understand and be able to explain the means of staging and differentiating between the types of lymphoma, and their associations with immunosuppression. To understand the principles of management upon which effective treatment can be based. Able to recognise the place and value of radiation therapy, the role of chemotherapy and the application of biologic therapy: Know the effects, complications and risks of treatment. Trainees should be familiar with the Ann Arbor Staging and WHO Pathology and Genetics classification in terms of strengths, limitations and ongoing initiatives toward further refinement.

KNOWLEDGE

Hodgkin lymphoma

- The staging of Hodgkin Lymphoma and with staging methodologies
- Recognise the potential curative role of radiation therapy in early-stage disease and know the indications for chemotherapy alone or combined with radiation therapy in stages II, III and IV
- indications for high-dose therapy with progenitor cell support in patients with relapsed or refractory disease
- the long-term complications of treatment and appropriate follow-up assessment of patients

Non-Hodgkin lymphoma

- the WHO classification and the International Prognostic Index
- Recognise the curative role of chemotherapy in aggressive lymphomas and the value of high-dose therapy with stem-cell support in relapsed or refractory disease
- Differentiate between types of lymphomas and determine when treatment is indicated or when observation is appropriate
- Be aware of the association of lymphomas with HIV and with immunosuppression.
- roles and place of radiation therapy, surgery, chemotherapy and monoclonal antibodies in treatment
- Recognise the challenge and unique clinical properties of high-grade lymphomas such as Burkitt and Lymphoblastic lymphomas and the role for intensive treatment of these sub-types

Cutaneous T-cell lymphoma

- Immunophenotyping in diagnosis
- The roles of psoralen and ultraviolet A, radiation therapy, topical and systemic chemotherapy as well as other agents such as rexinoids in the management of patients

SKILLS

- Bone marrow aspirate and biopsy
- Anti-cancer agent administration
- Use of supportive measures
- Prevent / minimise late-effects where possible
- High-dose treatment strategies
- Recognises a curative approach is delivered through multidisciplinary care along with pathology, diagnostic imaging and radiation oncology

ASSESSMENT & LEARNING METHODS

- DOPS:
 - Bone marrow aspirate and biopsy
- CBD
- Study Day
- Annual: American Society of clinical Oncology (ASCO) Medical Oncology In-Training Examination
- Year 3 – 4: European Society of Medical Oncology (ESMO) examination

AIDS – Associated Malignancies

Objective: To appreciate the significance of increased risk of malignancy in the HIV – positive population, the indications for treatment and the increased risk of toxicity and complications in this group of patients.

KNOWLEDGE

- Know and be aware of the association of central nervous system tumours with immunosuppression and AIDS and the increased incidence of malignancy in the HIV+ population
- Know the indications for treatment of those malignancies and the potential for increased toxicities attributable to concurrent medical problems
- Know the appropriate prophylaxis and treatment for opportunistic infections

SKILLS

- Anti-cancer agent administration
- Use of HAART
- Use of supportive and palliative care measures
- Prevention of opportunistic infection
- Intrathecal therapy
- Appropriate engagement in multidisciplinary care especially with HIV/ Infectious Diseases Services

ASSESSMENT & LEARNING METHODS

- CBD
- Study Day
- Annual: American Society of clinical Oncology (ASCO) Medical Oncology In-Training Examination
- Year 3 – 4: European Society of Medical Oncology (ESMO) examination

Cancer and the Patient

Objective: To recognise the psychosocial impact of a diagnosis of cancer in patients and their relatives and to be able to respond appropriately. To be able to communicate effectively and in ways which promote and encourage understanding by patients and their carers of the implications of a diagnosis and of the realistic objectives, likely benefits and possible risks of treatment.

Psychosocial Aspects

Objective: To appreciate and be aware of the psychosocial effects of malignant disease. To know the means and resources available to provide support (psychological, social, spiritual, financial) for patients, their families and those involved in the care of people with cancer. To know when intervention is indicated and support required at all stages of disease.

KNOWLEDGE

- the ethnic and cultural issues that can impact on the management of disease and appreciate the spiritual conflicts that may be associated with the diagnosis and treatment of cancer.
- the resources available and how to integrate family members, pastoral care, social workers, psychological medicine, nursing support, hospice, and cancer support groups with the multidisciplinary treatment of patients.
- Recognise that cancer impacts on sexuality and may result in dysfunction as a result of the disease process, its treatment, or adverse psychological effects.
- Discuss the issues involved in end of life care and have knowledge and an understanding of the bereavement process

SKILLS

- Able to communicate effectively with patients and their families; able to break bad news and act appropriately in difficult situations
- Trainees should learn how to recognise adaptive and maladaptive behaviours in coping with the disease and how to encourage more acceptable coping mechanisms by patients and their families within the context of the cancer diagnosis
- Trainees should be familiar with the indications for and uses of psychotropic drugs
- Able to communicate and work together with other professional health carers within the team
- Able to provide self care

ASSESSMENT & LEARNING METHODS

- Mini-CEX
 - Communication skills
- CBD
- Study Day
- Annual: American Society of clinical Oncology (ASCO) Medical Oncology In-Training Examination
- Year 3 – 4: European Society of Medical Oncology (ESMO) examination
- Mastering Communications course (RCPI) Year 1

Patient Education

Objective: To be fully capable of explaining and providing advice on cancer risk, on screening methods and their application to populations; on chemoprevention, appropriate investigation and follow-up of those at risk. The cancer specialist should be able to explain the purpose of clinical trials of treatment and the regulatory methods by which they are properly conducted.

KNOWLEDGE

- Awareness of the principles of genetic screening, the environmental and occupational risks and benefits of cancer treatment including surgery, radiotherapy and chemotherapy and the appropriate arrangements for follow-up
- The effects, side effects, risks and benefits of cancer therapies: surgery, radiotherapy and systemic anticancer drugs and the appropriate arrangements for follow-up
- Know the potential for long-term complications of treatment modalities employed e.g. the risk of treatment-induced cancers (acute myeloid leukaemia and myelodysplasia after chemotherapy, and radiation-induced sarcomas) and the potential for endocrine dysfunction (such as hypothyroidism after neck radiation and sterility following chemotherapy)

SKILLS

- Able to elicit relevant facts regarding family history, environmental and occupational factors; capable of evaluating possible inherited risk of cancer occurring in a patient
- Capable of counselling patients and families about known risk factors for subsequent malignancy such as diet, smoking, alcohol, sun exposure, previous therapy, previous malignancy
- Capable of counselling patients on common short and long term side effects of anticancer agents
- Know and be able to explain the role of prophylactic interventions such as chemoprevention and surgery e.g. oophorectomy
- Know and be able to explain the need for and purpose of clinical trial, the regulation-systems in place to protect participants, confidentiality and ownership of information
- Critical evaluation of own consulting skills

ASSESSMENT & LEARNING METHODS

- CBD
- Study Day
- Annual: American Society of clinical Oncology (ASCO) Medical Oncology In-Training Examination
- Year 3 – 4: European Society of Medical Oncology (ESMO) examination
- Mastering Communications (RCPI) Year 1
- Ethics I: Professionalism
- Mini-CEX

Ethical and Legal Issues

Objective: To be fully informed and cognisant of the ethical and legal frameworks within which the management of cancer patients must operate and of economic issues surrounding the provision of a service for patients. To apply the principles of good medical practice as set out in the Generic Section.

KNOWLEDGE

- ethical issues that may arise during the management of cancer patients e.g. patient's rights in decision-making (responsibility, competence); discontinuation of treatment, resuscitation guidelines and decision, conflicts of interest with relatives; ethical issues involved in the conduct of medical research
- the legal issues related to treatment e.g. informed consent, capacity and competency, confidentiality, living wills, withdrawal of life support
- assessment of cost-effectiveness and cost-benefit in relation to the treatment of cancers; quality of life issues
- experience of risk management and complaints procedures
- Knowledge and some experience of the financial management of cancer service provision and of the preparation of business plans

SKILLS

- critically evaluate new methods of treatment
- Demonstrate professionalism and humanity in caring for patients and in dealing with their own and their families' concerns
- Trainees must demonstrate professionalism and a humane approach in their care of patients and their families and operate within the defined ethical and legal framework

ASSESSMENT & LEARNING METHODS

- CBD
- Ethics I, II, III, IV
- Annual: American Society of clinical Oncology (ASCO) Medical Oncology In-Training Examination
- Year 3 – 4: European Society of Medical Oncology (ESMO) examination

Special Skills & Procedures

Objective: To acquire the special skills and be competent to perform the procedures necessary in the management of malignant diseases.

KNOWLEDGE

- How to prescribe and ensure the safe administration of anti-cancer agents
- The standard operating procedures for handling, dispensing, preparing and disposing of chemotherapeutic and biologic agents used in treatment
- The potential risks, including fatality and disability, of the incorrect use of intrathecal chemotherapy and be familiar with specialised protocols to ensure safety checks at every step leading to intrathecal chemotherapy administration
- The role of the Ommaya Reservoir for CSF sampling and the administration of intrathecal chemotherapy
- The principles of the design and conduct of clinical trials and the recruitment and assessment of patients participating within such trials according to Good Clinical Practice
- General knowledge of statistical methods and their application to clinical trial design, conduct, analysis, and interpretation

SKILLS

- To be able to assimilate and correlate clinical and laboratory information about a patient and produce a chemotherapy prescription that is safe, appropriate and capable of easy interpretation by other team members, including nursing and pharmacy staff (this may be in paper or electronic format)
- To perform marrow aspiration and biopsy and have a basic knowledge of the histological interpretation of marrow samples
- To obtain informed consent for procedures within the trainee's scope of competence
- To obtain informed consent for chemotherapy
- To perform a lumbar puncture and to administer intrathecal chemotherapy
- To exercise utmost care and applies strict guidelines to performance of the skills / procedures listed, to ensure benefit can accrue while the potential for harm is minimised

ASSESSMENT & LEARNING METHODS

- DOPS
 - Bone marrow aspiration and biopsy
 - Lumbar puncture and intrathecal chemotherapy administration
 - Chemotherapy prescription (non-clinical)
- CBD
- Study Day
- Annual: American Society of clinical Oncology (ASCO) Medical Oncology In-Training Examination
- Year 3 – 4: European Society of Medical Oncology (ESMO) examination

Documentation of Minimum Requirements for Training

- These are the minimum number of cases you are asked to document as part of your training. It is recommended you seek opportunities to attain a higher level of exposure as part of your self-directed learning and development of expertise.
- You should expect the demands of your post to exceed the minimum required number of cases documented for training.
- If you are having difficulty meeting a particular requirement, please contact your specialty coordinator

Curriculum Requirement	Required/Desirable	Minimum Requirement	Reporting Period	Form Name
Section 1 - Training Plan				
Personal Goals Plan (Copy of agreed Training Plan for your current training year signed by both Trainee & Trainer)	Required	1	Training Post	Personal Goals Form
On Call Rota	Required	1	Training Post	Clinical Activities
Section 2 - Training Activities				
Outpatient Clinics				Clinics
General Oncology (minimum 1 per week)	Required	40	Year of Training	
Sub Specialty Lung cancer clinic Breast cancer clinic Colon cancer clinic Prostate cancer clinic Gynaecological cancer clinic	Required	1	Year of Training	
Ward Rounds/Consultations				Clinical Activities
Consultant led (minimum 1 per week)	Required	40	Year of Training	
SpR led (1 per week)	Required	40	Year of Training	
Consultations/new referrals within hospital	Required	10	Year of Training	
Emergencies/Complicated Cases (minimum to lead management in at least one of the following cases)				Cases
Neutropenic sepsis	Required	20	Year of Training	

Curriculum Requirement	Required/Desirable	Minimum Requirement	Reporting Period	Form Name
Spinal Cord compression	Required	5	Year of Training	
SVC obstruction	Required	5	Year of Training	
Metabolic complications of cancer therapy (↑Ca ⁺⁺ ; renal failure, SIADH)	Required	5	Year of Training	
Procedures/Practical Skills/Surgical Skills				Procedures, Skills, & DOPS
Review of chemo prescribing (5 per year)	Required	5	Year of Training	
Bone Marrow aspirate and biopsy	Required	1	Training Programme	
Additional/Special Experience Gained				Cases
Palliative Medicine	Desirable	1	Training Programme	
MDT management – present and follow-through on patients included in MDT	Required	1	Training Programme	
Psychosocial management/ Assessment of patient needs	Desirable	1	Training Programme	
Relatively Unusual Cases Atypical presentations of malignancy Challenging care diagnostics, Rare/unusual complications of cancer treatment	Desirable	1	Training Programme	Cases
Chronic Cases/Long term care (minimum 2 cases over training)	Required	2	Training Programme	Cases
ICU/CCU	Required	1	Year of Training	Cases
Management Experience e.g: Managing SpR rotas/holidays donations/budgets Managing adverse events Managing complaints – personal/service	Desirable	1	Training Programme	Management Experience
Section 3 - Educational Activities				
Mandatory Courses				Teaching Attendance

Curriculum Requirement	Required/Desirable	Minimum Requirement	Reporting Period	Form Name
ACLS	Required	1	Training Programme	
Ethics Foundation	Required	1	Training Programme	
Ethics for General Medicine	Required	1	Training Programme	
An Introduction to Health Research Methods (year 1)	Required	1	Training Programme	
HST Leadership in Clinical Practice (year 3+)	Required	1	Training Programme	
Mastering Communications (Year 1)	Required	1	Training Programme	
Performing Audit (Year 1)	Required	1	Training Programme	
Safe Prescribing Systemic Anti-Cancer Therapy (Year 1)	Required	1	Training Programme	
Wellness Matters	Required	1	Training Programme	
Non – Mandatory Courses				Teaching Attendance
Health Research Methods for Clinicians	Desirable	1	Training Programme	
Study days	Required	30	Year of Training	Teaching Attendance
Participation at In-house activities minimum of 1 per month from the categories below:				Attendance at Hospital Based Learning
Grand Rounds (attend minimum 6 per year)	Required	6	Year of Training	
Journal Clubs (attend minimum 2 per month)	Required	20	Year of Training	
MDT meetings (attend minimum 2 per week) including pathology/radiology MDT	Required	40	Year of Training	
Seminar – oncology training lecture series	Required	1	Year of Training	

Curriculum Requirement	Required/Desirable	Minimum Requirement	Reporting Period	Form Name
Lecture	Required	1	Year of Training	
Examinations				Examinations
American Society of Clinical Oncology (ASCO) Medical Oncology in training examination, once per year	Required	1	Year of Training	
European Society of Medical Oncology (ESMO) examination – 1 at final year of training	Desirable	1	Final Year of Training	
Delivery of Teaching				Delivery of Teaching
Lecture	Required	4	Year of Training	
Tutorial	Required	4	Year of Training	
Bedside Teaching	Required	4	Year of Training	
Research	Desirable	1	Training Programme	Research Activities
Audit activities and Reporting (1 per year either to start or complete, Quality Improvement (QI) projects can be uploaded against audit)	Required	1	Year of Training	Audit & QI
Publications	Desirable	1	Year of Training	Additional Professional Experience
Presentations (minimum 1 oral or poster presentation per year)	Required	1	Year of Training	Additional Professional Experience
National/International meetings	Required	1	Year of Training	Additional Professional Experience
Cancer Trials Ireland				Additional Professional Experience
Meetings	Required	1	Training Programme	
Head office visit	Desirable	1	Training Programme	

Curriculum Requirement	Required/Desirable	Minimum Requirement	Reporting Period	Form Name
Additional Qualifications	Desirable	1	Training Programme	Additional Professional Experience
Committee Attendance	Desirable	1	Training Programme	Additional Professional Experience
Section 4 - Assessments				
DOPS				Procedures, Skills, & DOPS
Bone Marrow aspirate and biopsy	Required	1	Training Programme	
Non-clinical DOPS				procedures, Skills, & DOPS
Chemotherapy prescribing	Desirable	1	Training Programme	
CBD See the following examples: Cancer Biology; Tumour Immunology; Screening and prevention; Molecular Biology; Staging; Treatment Modalities; Head and Neck cancers; Lung Cancer and Mesothelioma; Gastrointestinal cancer; Genitourinary cancers; Gynaecologic malignancies; Breast cancer; Sarcomas; Skin cancers; Endocrine Cancers; Central nervous system malignancies; Cancers of unknown primary site; Lymphoid Malignancies; Aids associated malignancies; Psychosocial aspects; Ethics and legal issues	Required	5	Year of Training	Case Based Discussion
Mini-CEX	Required	5	Year of Training	Mini CEX
Quarterly Assessments/End-of-Post Assessments	Required	4	Year of Training	Quarterly Assessments/End-of-Post Assessments
End of Year Evaluation	Required	1	Year of Training	End of Year Evaluation