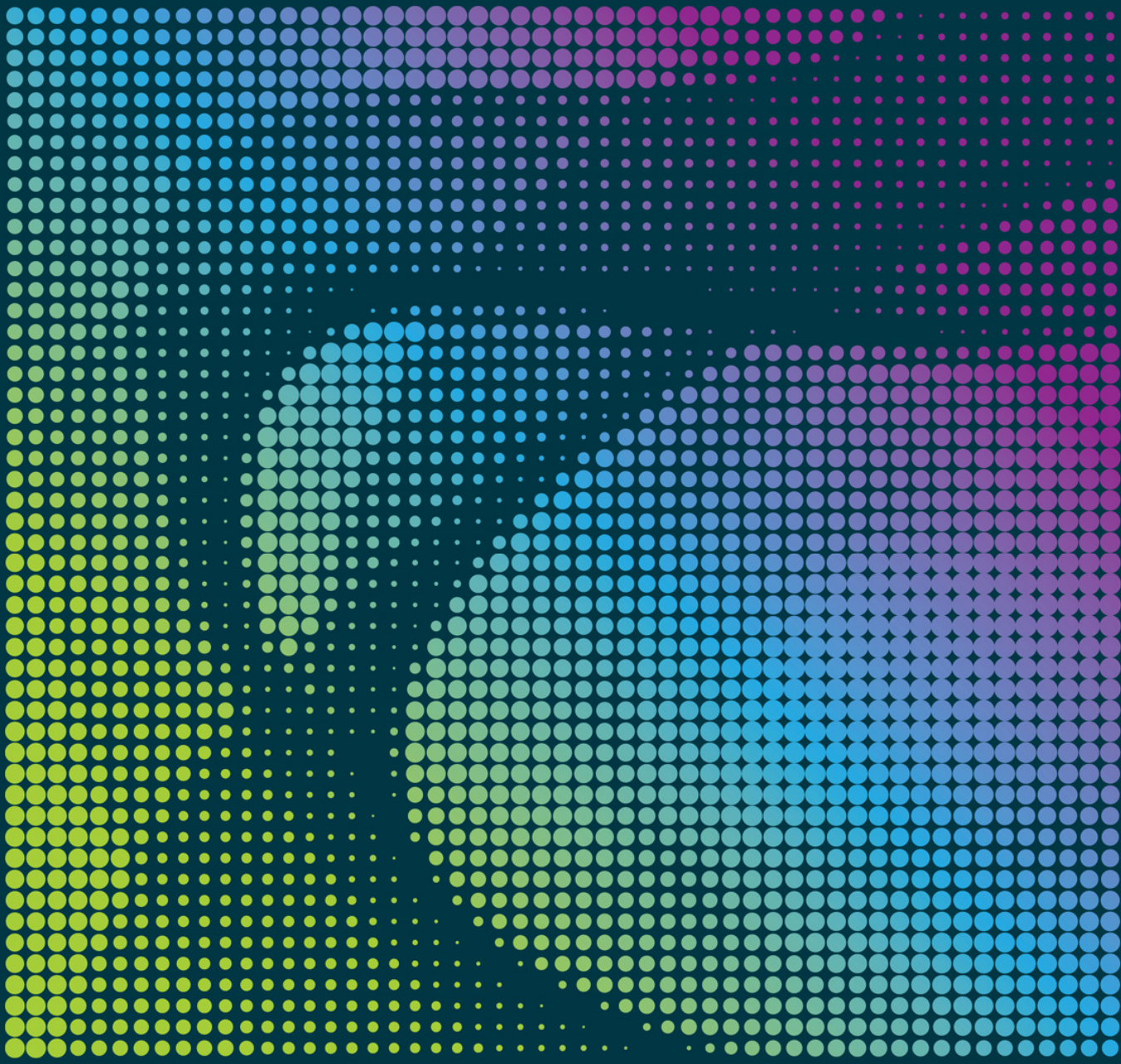
ROYAL COLLEGE OF
PHYSICIANS OF IRELAND

HIGHER SPECIALIST TRAINING IN MEDICAL ONCOLOGY



This curriculum of training in Medical Oncology was developed in 2010 and undergoes an annual review by Prof Desmond Carney, National Specialty Director, and Dr. Ann O'Shaughnessy, Head of Education and Professional Development. The curriculum was approved by ICHMT.

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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 describes the knowledge, skills, attitudes and behaviours expected by patients and society from individuals during the practice of their profession (*as a doctor*). It includes such concepts as:

- The skills of lifelong learning and the maintenance of competence
- Information literacy
- Ethical behaviour
- Integrity, honesty
- Altruism
- Service to, justice and respect for others
- Adherence to professional codes

Entry Requirements

Applicants for Higher Specialist Training (HST) in Medical Oncology must have completed a **minimum** of two years Basic Specialist Training (BST) in approved posts and obtained the MRCPI or (UK).

BST* should consist of a minimum of 24 months involved with direct patient care.

BST in General Internal Medicine (GIM) is defined as follows:

- A minimum of 24 months in approved posts, with direct involvement in patient care and offering a wide range of experience in a variety of specialties.
- At least 12 of these 24 months must be spent on a service or services in which the admissions are acute and unselected.
- For further information please review the BST curriculum

Those who do not hold an MRCP or MCPUK must provide evidence of equivalent qualification.

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 acquisition of 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.

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. 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.

Flexible Training

Trainees who are unable to work full-time are entitled to opt for flexible training programmes. EC Directive 93/16/EEC requires that:

Part-time training shall meet the same requirements as full-time training, from which it will differ only in the possibility of limited participation in medical activities to a period of at least half of that provided for full-time trainees;

The competent authorities shall ensure that the total duration and quality of part-time training of specialists are not less than that of full-time trainees.

The above provision must be adhered to. A flexible trainee should undertake a *pro rata* share of the out-of-hours duties (*including on-call and other out of hours commitments*) required of their full-time colleagues in the same programme and at an equivalent stage.

For details of appointment and funding arrangements for flexible trainees, please see the current issue of the HST training Handbook.

Training Programme

The training programme offered will provide opportunities to fulfil all the requirements of the curriculum of training for Medical Oncology programmes will offer posts in both general hospitals and teaching 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 or, in the case of GIM, the Regional Specialty Advisor. 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.

Teaching, Research & Audit

All trainees are required to participate in teaching. They should also receive basic training in research methods, including statistics, so as to be capable of critically evaluating published work.

A period of supervised research relevant to Medical Oncology is considered highly desirable and will contribute up to 12 months towards the completion of training. Some trainees may wish to spend two or three years in research leading to a MSc, MD, or PhD, by stepping aside from the programme for a time. Additional educational credit may be granted at the discretion of the NSD and STC for clinical work relevant to the Curriculum undertaken during the second and subsequent years of this research, up to a maximum of six months credit. For those intending to pursue an academic path, an extended period of research may be necessary in order to explore a topic fully or to take up an opportunity of developing the basis of a future career. Such extended research may continue after the CSCST is gained. However, those who wish to engage in clinical medical practice must be aware of the need to maintain their

clinical skills during any prolonged period concentrated on a research topic, if the need to re-skill is to be avoided.

Given the small population of Ireland and the structure of our health services it has been the tradition for those aspiring to consultant appointments to pursue much of their specialist training abroad. Given that medical oncology is in a state of transitional development in Ireland and given the rapidity of development and change within the specialty, it is envisaged that trainees will be required and encouraged to undertake much of the higher phase of their specialist training in major centres in Europe, North America or elsewhere abroad. Suitable arrangements will have to be made for the recognition of such training when undertaken in recognised international centres of excellence

Trainees are required to engage in audit during training and to provide evidence of having completed the process.

"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 confirm these competencies during Higher Specialist Training.

Logbook

Up-to-date training records and a portfolio of achievements will be maintained by the trainee throughout HST. The training records will be countersigned as appropriate by the trainers to confirm the satisfactory fulfilment of the required training experience and the acquisition of the competencies set out in the Medical Oncology Curriculum. They will remain the property of the trainee and must be produced at the annual assessment review.

Each trainee is responsible for maintaining an up-to-date record of progress through training and compiling a portfolio of achievements for presentation at annual assessment review. The trainee also has a duty to maximise opportunities to learn, supplementing the training offered with additional self-directed learning in order to fulfil all the educational goals of the curriculum. Trainees must co-operate with other stakeholders in the training process. It is in a SpR's own interest to maintain contact with the Medical Training Office and Dean of Higher Specialist Training, and to respond promptly to all correspondence relating to training. "Failure to co-operate" will be regarded as, in effect, withdrawal from the HST's supervision of training (*see the HST Training Handbook*).

At annual review, the Training Record will be examined. The results of any assessments and reports by educational supervisors, filed in the portfolio submitted, together with other material capable of confirming the trainee's achievements, will be reviewed.

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.

Annual Review – The PeTRA Process

An annual review of progress through training will be undertaken on behalf of HST. The training record will be examined at the review. Assessments and reports by educational supervisors, confirmation of achievements and the contents of the portfolio will be reviewed. A decision is made regarding progress, as detailed in the Training Handbook. At some or all of these annual reviews a non-specialty assessor will be present capable of addressing core competencies. An external assessor will participate in the penultimate year review (PYA) which is held to a standard format usually 12-18 months before the planned end of training. The award of a CSCST will be determined by a satisfactory outcome after completion of the entire series of PeTRA assessments.
Each year trainees undergo a formal review by a panel including the Dean, the National Specialty Director, and whenever possible, a representative member from another specialty. The panel will review in detail the training record, will explore with the trainee the range of experience and depth of understanding which has been achieved and consider individual trainer's reports. Attendance by the trainer is highly desirable and essential for the first year and PYA assessments. An opportunity is also given to the trainee to comment on the training being provided; identifying in confidence any deficiencies in relation to a particular post.

A decision on progress through training is reached at each of these annual assessments. The determination and the evidence considered is entered on one of a set of standard PeTRA Forms as follows:

successful completion of a year of training – **PeTRA Form C**

completion but with a need for additional targeted training – **PeTRA Form C_1**

repeat training year – **PeTRA Form C_2**

T the penultimate year assessment (*the PYA*) reviews the evidence provided in the logbook on the results of the assessment methods employed (*see above*); the evidence provided will be further questioned during the assessment. At the PYA, the panel identifies the residual training outstanding, advising adjustments to the training schedule as necessary, and finally confirming the estimated date for completion (***PeTRA Form T and CSCST issuance***).

Facilities

A consultant trainer/educational supervisor has been identified for each approved post. He/she will be responsible for ensuring that the educational potential of the post is translated into effective training which is being fully utilized. The training objectives to be secured should be agreed between trainee and trainer at the commencement of each posting in the form of a written training plan. The trainer will be available throughout, as necessary, to supervise the training process.

All training locations approved for HST have been inspected by the medical training department. Each must provide an intellectual environment and a range of clinical and practical facilities sufficient to enable the knowledge, skills, clinical judgement and attitudes essential to the practice of Medical Oncology to be acquired.

Physical facilities include the provision of sufficient space and opportunities for practical and theoretical study; access to professional literature and information technologies so that self-learning is encouraged and data and current information can be obtained to improve patient management.

Trainees in Medical Oncology should have access to an educational programme of e.g. lectures, demonstrations, literature reviews, multidisciplinary case conferences, seminars, study days etc, capable of covering the theoretical and scientific background to the specialty. Trainees should be notified in advance of dates so that they can arrange for their release. For each post, at inspection, the availability of an additional limited amount of study leave for any legitimate educational purpose has been confirmed. Applications, supported if necessary by a statement from the consultant trainer, will be processed by the relevant employer.

Teaching, Learning & Assessment Methods

Teaching, Learning & Assessment Methods

This section relates to the clinical competencies that are required for your training. During your training you will be assessed by methods such as miniCEx, DOPS and

Case Based Discussion. It is extremely important that you read this so that you are aware of the requirements of your training.

Record of Training

The evidence required to confirm progress through training includes:

- Details of the post(s) occupied, the training plan agreed with weekly timetables and duty rosters; case-mixes and volumes, numbers of practical procedures and outcomes.
- Confirmation of attendance at events in the educational programme, at departmental and inter-departmental meetings and other (optional) educational events.
- Confirmation (certificates) of attendance at subject–based/skills-training/instructional courses; (certificate or diploma from appropriate authority).
- Recorded attendance at conferences and meetings.
- A properly completed logbook with entries capable of testifying to the training objectives which have been attained and the standard of performance achieved.
- Evidence of regular contact with trainers, i.e. appraisals; confirmation of workplace/clinical encounters significant in relation to activities specified in the curriculum.
- Evidence of personal study, e.g. journals taken, membership of specialist society, web-based research, special interest developed.
- CPD/CME activity, returns, study leave records.
- Copies/examples of material prepared for presentation e.g. for audit, teaching, best-practice development, collection of cases, topic reviews, output from research.
- Educational supervisor's reports on **observed** performance (in the workplace): of duties, practical procedures, of presentations made and teaching activity: of advising and working with others, of standards of case notes, correspondence, communication with others e.g. at handover. Results of Mini-CEx, CBDs and DOPS encounters.
- Collective opinions – as used to ascertain a range of generic skills e.g. professionalism, maintaining trust.
- Result (diploma, certificate from recognised body) of completed knowledge–based test and/or practical examination.

Assessment of Competencies

The competencies to be acquired during training are listed within the Generic and Specialty Sections of this Curriculum.

The competencies will be assessed on a regular basis during your training programme and must be documented in the Training Record (*Logbook*). Progress through training is confirmed by entries which must be authenticated/ countersigned by the educational supervisors.

Documents which provide evidence of satisfactory completion of other necessary components of the curriculum must be filed in the portfolio of achievements compiled by the trainee and reviewed annually.

A report from the educational supervisor will be included. This will be prepared following appraisal, based on his/her assessment of observed performances by the trainee of practical procedures and other duties. The standard of case notes, summaries, correspondence and other material, of presentational ability can also be the subjects of such report, as could the trainee's enthusiasm, judgement, team working or professionalism.

The trainer's report will also be based on a structured pro-forma, as used in the short form of clinical evaluation exercise (*Mini-CEx*); following observation and appraisal of the

performance of a procedure (*DOPS*); and after discussion of the (*clinical*) reasoning involved in the management of a problem faced by a trainee (*Case-Based Discussion, CBD*).

The results of any summative tests of knowledge taken, e.g. *MCQs and problem-solving tests, including self-administered tests,* should be filed and retained. Confirmation of the acquisition at a particular stage of a specified professional examination may be required in order to make progress towards the completion of training.

Learning Methods

This section gives examples of the learning methods that can be used as guidance to acquire competencies as they appear in the curriculum.

Experiential:

- Working under supervision
- Documenting/reporting progress (*case notes*), preparing summaries (*discharge notes*) other professional correspondence; communicating information to patients/to other health professionals.
- Consults, referrals between departments, handover, providing cross-cover.
- (*In certain specialties*), procedure room and investigation/assessment sessions offer practical opportunities to learn and develop skills under supervision and to exercise judgement when to seek assistance.

Self-directed learning:

- Curriculum-based personal study *e.g. textbooks, journals, literature search, retrieval of web-based information.*
- Information gathering and evaluation
- Active participation in audit
- Tests of knowledge

Group learning:

- Workplace discussions
- Multidisciplinary meetings
- Programmed meetings within the workplace

Performance based:

- Observing, learning, assisting, performing, demonstrating a technique or practical procedure.
- Simulations, role-play

Learning through teaching and research:

- Teaching, giving tutorials, lecturing.
- Mentoring and supervising junior colleagues and other staff.
- Presenting at meetings - local and international.
- Research
- Publication

External Courses:

- Specialty study/training days
- Attending mandatory and non-mandatory courses
- Attendance at seminars, relevant conferences, regional, national and international meetings.

Reflection:

- In your logbook there is an area to record reflections on training, learning, clinical events and career discussions. In recent years the importance of reflecting as part of the learning process on what you are doing has been shown to improve professional practice. Reflection on what you know and don't know helps to understand that learning is individual and reflection of professional activities can be used to highlight your strengths, weaknesses and areas for development.

Assessment Methods

Mini-CEx

Definition: Mini-CEx is designed to provide feedback on skills essential to the provision of good clinical care by observing an actual clinical encounter.

Description: The mini-CEx is a "snapshot" of a doctor/patient interaction and is based on a 15 minute observation of a single interaction. It is designed to assess the clinical skills and behaviors of trainees assessing such skills as history taking, physical examination skills, clinical judgement, professionalism, organisation/efficiency and overall clinical care. Not all elements will be assessed on each occasion. Immediate feedback should be provided after each encounter by the observer assessing the trainee.

Frequency of assessment: At least two miniCEx assessments should take place in each year of training. Where appropriated, one should be based in an outpatient setting and one in an acute setting. The assessments include assessment of skills in history taking, physical examination, appropriate use of investigations, cost-effectiveness, interpretation of investigations, making medical notes, making a diagnosis, treatment and management of disease, appropriate referral to other specialities, standards of care.

Competencies assessed:

- Consideration/Professionalism:
- Recognises/accepts patient's rights (to consent, confidentiality, information). Establishes trust, shows professional approach.
- Communication:
    - Informs, explains, advises using appropriate language. Obtains consent, enlists patient's co-operation.
- Interviewing Skills:
    - Active" listening facilitating relevance; effectively using questions, responding to non-verbal clues.
- Examination Skills:
    - Prepares patient, minimises discomfort/unease. Proceeds logically, efficiently, thoroughly, completely.
- Judgement:
- Correctly identifies/lists problems, prioritises actions in realistic and timely schedule.

Opportunities for assessment: The assessment should take place in the usual place of work (*in-patient*, *clinic, office or department*) where the assessor must directly **observe** the trainee's performance.

DOPS:

Definition: Directly Observed Procedural Skills (DOPS) is a method, similar to the mini-CEX that has been designed specifically for the assessment of practical skills. DOPS assess the capabilities of a trainee while they perform a procedure.

Description: The DOPS is a structured assessment of actual performance. Each DOPS should represent a different procedure. The trainee chooses the timing, procedure and observer.

Frequency of Assessments: The number and frequency of assessments of procedural skills will vary from specialty to specialty.

Competencies assessed:

- Understanding of Procedure:
    - Relevant anatomy; purpose, indications, contra-indications; outcomes, risks, complications; choice of methods available, technique of procedure.
- Consideration for the Patient:
    - Gives reassurance, minimises discomfort, explains procedure fully; confirms informed consent obtained.
- Preparation:
    - First re-checks all relevant details correct. Safety check; instrumentation, equipment (drugs); positioning; cleansing/aseptic technique; sedation, analgesia, anaesthesia confirmed.
- Professional/technical ability:
    - Dexterity, accuracy, efficiency; obtains, interprets diagnostic material/information; informs, directs staff courteously; recognises own limitations; seeks help where appropriate; manages risk.
- Post-Procedure:
    - Completes documentation; regulates recovery phase, observations; anticipates/deals with complications. Informs/counsels patient/relatives.
- Overall ability to perform Procedure:
    - Ability to complete/undertake procedure; technical abilities as demonstrated; appropriately confident, team/ leadership skills.

Opportunities for assessment: While supervising, assisting, observing actual performance in appropriate setting (office, theatre, day procedure, ICU etc.). The assessment should be made under appropriate conditions e.g. with all equipment and personnel necessary to support the procedure.

Case Based Discussion (CBD)

Definition: Case-based discussion (CBD) is used to enable the documenting of conversations about, and presentations of, cases by trainees. This activity happens throughout training, but is rarely conducted in a way that provides systematic assessment and structured feedback. CBD is used to evaluate core skills that can be demonstrated during an interactive discussion based on a single case in which the trainee has been actively involved.

Description: CBD is designed to assess clinical decision-making and the application or use of medical knowledge in relation to patient care for which the trainee has been directly responsible. It also enables the discussion of the ethical and legal framework of practice, and in all instances, it allows trainees to discuss why they acted as they did. Although the primary purpose is not to assess medical record keeping, as the actual record is the focus for the discussion, the assessor can also evaluate the record keeping in that instance. The case for discussion can either be selected by the trainee or chosen by the assessor. The assessment will be based on oral discussion and written information available. It includes a bi-lateral (trainee's and trainer's) critical appraisal of the reasoning and judgements made, and of the management of the case. Whenever possible the assessment should include issues such as disease notification, health promotion and screening.

Frequency of Assessment: This method of assessment has not been validated as yet, however it is a very useful method and can be easily incorporated into journal clubs, post-graduate teaching sessions or on-line etc

Competencies assessed:

- **Problem Definition:**
  - All relevant facts established, from current/previous history, investigations, interventions; reports, correspondence reviewed.
- **Record Keeping**:
  - Legible, tidy, legally defensible records seen.
- **Reasoning:**
  - Appropriately selected, sequenced investigations/procedures planned. Evidence-based, logical judgements made; (differential) diagnosis established; action plan made with realistic goals.
- **Case Management**:
  - Effective, safe (responsible) prescribing; aware of protocols/guidelines, best practice; monitoring progress, handling complications/mistakes; timely, appropriate referrals, case closure.
- **Reflective Practice:**
  - Shows analytical, constructive approach to case, willingness to learn; acknowledges and prepared to consider other management options; aware of change, possible advances, when to seek help.

Opportunities for assessment: The presentation should take place in a suitable environment, with due consideration given to the patient's sensitivities, to confidentiality e.g. in any ward or clinical setting; an office, side- or seminar-room may be found convenient. Case presentations and discussions, e.g. at handover, ward-rounds (inter-) departmental meeting.

Mandatory Training Courses:

(Note: this list only included the generic mandatory courses)

Mandatory Communication course:
To be completed in Year 1. Communication skills will be assessed as part of the miniCEX.

Audit:
Mandatory 1/2 day on audit to be completed in Year 1.
Audit reports are submitted on a yearly basis

Ethics:
Four mandatory ethics days are to be completed during the training programme. - Ethics & Law, Ethics in Research and Professionalism. The fourth day 'End of life' is for all specialties except Public Health Medicine, Occupational Medicine and Histopathology who have a speciality specific ethics day.

Leadership Skills:
Mandatory 3 day course to be taken in year 3 - 5.

ACLS:
ACLS compliant in appropriate specialties

Specialty Study Days:

The number and topics of the specialty study days are listed as part of the specialty curricula.

Annual Assessments

Consultant feedback:
End of year assessment completed by the Trainers include assessment in areas such as: Team working skills, Leadership skills, Handling of complaints, conflict management
Questions such as the following are included in the assessment form:

- Have there been any complaints from nursing staff, AHP, patients regarding this trainee or their team?
- If so:
    - How did the trainee respond to a complaint about a member of his/her team?
    - How did the trainee respond to a complaint against him/her?.
- Have you any serious issue with your SpR?
- Where there any instances of serious conflict?
- Do you think he/she behaved appropriately?

Audit:
It is difficult to complete the audit cycle in a one year period. Each year the trainee should take part in an audit - either to develop and start an audit or to review and change practice as a result of an audit - the complete audit cycle should be understood. In hospitals that have audit systems set up, the trainee should complete a full audit.
Trainees will be required to submit a full audit report and will be encouraged to present audit results at local, national or international meetings.

Attendance at In- Hospital Speciality Radiology conferences

Time spent in Laboratory/Pathology or attendance at Laboratory/Pathology conferences (Depending on specialty)

Committee membership :
Many specialty curricula have identified participation in committees.

Teaching skills
Number of undergraduate and postgraduate tutorials, number of membership tutorials.

Presentations/Publications

On-Call take

GENERIC COMPONENTS

Communication & Interpersonal Skills

Objective: *To be able to communicate effectively and sensitively with patients, their relatives, carers and with professional colleagues in different situations.*

Medical Council Domains of Good Professional Practice: *No. 2: Relating to Patients; No 3. Communication and Interpersonal Skills.*

KNOWLEDGE

Within a consultation

- How to structure an interview to obtain/convey information; how to identify concerns, expectations, priorities; how to promote understanding, reach conclusions; use/choose appropriate language. Knowledge of procedures/investigations available and alternative options; of strategies to promote compliance through understanding of objectives.
- Able to elicit facts, question using open, followed by closed questions; "active listening". Gives information clearly, avoids jargon, confirms understanding, is able to encourage co-operation, compliance; obtain informed consent.
- Considerate, shows respect for other's culture, opinions, patient's right to be informed, make choices.

In difficult circumstances

- Understands potential areas for difficulty "awkward situations", knows how and when to break bad news, how to circumvent cultural, language barriers, deal with sensory or mental impairments, how to deal with challenging or aggressive behaviour.
- Able to communicate essential information where difficulties exist, appropriately uses assistant, interpreter, chaperone, relatives. Able to deal with anger, frustration in self and others.
- Selects an appropriate environment; seeks assistance, makes and takes time. Avoids unrealistic optimism or pessimism.
- Respects another's right to opinions and to accept or reject advice.

With professional colleagues and others

- How best and when to communicate with doctors and other members of the healthcare team; how to provide concise, problem-orientated statement of facts and opinions *(written, verbal or electronic)*. Knows legal context status of records and reports, of data protection *(confidentiality)*, Freedom of Information (FOI) issues.
- Understands relevance to continuity of care and the importance of legible, accessible, authenticated records. Knows when urgent contact becomes necessary and the appropriate place for verbal, telephone, electronic, written communication.
- Communicates effectively, promptly; recognises roles and skills of other health professionals.
- Able to judge own abilities/limitations and when to seek help or give assistance, advice to others; when to delegate responsibility, when to refer.
- Values perspectives of others contributing to management decisions.

In maintaining continuity of care

- Understands the relevance to outcome of continuity of care, within and between phases of healthcare management.
- The importance of completion of tasks and documentation *e.g. before handover (to another team, department, specialty)*, of identifying outstanding issues, uncertainties.
- Maintains *(legible)* records, is available, contactable, time-conscious, sets *(and attempts to reach)* realistic objectives, identifies/prioritises outstanding problems.
- Alert to avoid potential confusion or misunderstanding through communications failure.

Giving explanations

- The importance of possessing the full facts, and of recognising uncertainty and conflicting evidence on which decisions have to be based.
- How to secure, retain attention avoid distraction. Understand how adults receive information best, the relative value of the spoken, written, visual means of communication, use of reinforcement to assist retention. Risk of information overload.
- Need to interpret results, significance of findings, diagnosis, to explain objectives, limitations, risks of treatment, in terms and by means adjusted to recipients' ability to comprehend.
- Uses language, literature *(leaflets)* diagrams, educational aids and resources appropriately.
- Able to achieve level of understanding necessary to achieve co-operation *(compliance, informed choice, acceptance of opinion, advice, recommendation)*.
- Prepared to discuss, repeat information, resolve uncertainty, confusion, respond to questioning, challenge.

Responding to complaints

- Value of hearing and dealing with complaints promptly; the appropriate level, the procedures *(departmental and institutional)*; sources of advice, assistance available.
- The importance of obtaining and recording accurate and full information, seeking confirmation from multiple sources.
- Able to establish facts, identify issues and respond quickly and appropriately to a complaint received.
- Accepts responsibility, involves others, consults appropriately.
- Open, prepared to accept criticism, acknowledge shortcomings where they exist, offer an apology.

SKILLS

- Communication
- Conflict resolution
- Dealing with complaints
- Communicate decisions in a clear and thoughtful manner
- Presentation skills

ASSESSMENT & LEARNING METHODS

- 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

Professionalism & Autonomy

Objective: *To have the knowledge, skills and attitudes to act in a professional manner at all times and in partnership with patients and colleagues. To develop the attributes of someone trusted to be able to manage complex human, legal and ethical problems.*

Medical Council Domains of Good Professional Practice: *No. 1 Patient Safety and Quality of Patient Care; No 2. Relating to Patients; No. 7 Professionalism*

KNOWLEDGE

Patient Centred Care;

- The provision of Patient Centre Care should be at the core of the service a doctor provides
- To put the quality and safety of patient care as a prime objective

Behaviour in the workplace;

- ***Relationships with patients***
  - Know patients' rights e.g. to be informed sufficiently to enable them to be involved in decisions about their treatment and care. Know boundaries limiting consultations including ethical, duty of care.
  - How to deal with inappropriate behaviour *e.g. aggression, threats, violence, harassment, racism.*
  - Potential obstacles *e.g. cultural, educational, ethical – also preconceptions and prejudices.*
  - Ensures confidentiality, respects privacy. Focuses investigation on patient's needs and expectations. Shows sensitivity, develops empathy but avoids personal involvement.
  - Non-judgemental in approaching patient's perceived problems. Prepared to accommodate idiosyncrasies, respecting patients as individuals. Altruistic.

- ***Working with colleagues***
  - Know the potential roles and contributions of other specialists – medical, surgical, general practitioners and of other hospital or community-based agencies *e.g. social services, also patient support groups and other providers of care.*
  - How to arrange cover, safeguarding the handover process, know where responsibility begins and ends, when and where to seek advice.
  - Aware of the extent and limitations of own areas of practice/expertise; recognises and respects others' inputs, capabilities; is able to work co-operatively with other health professionals; refers, delegates appropriately.
  - Realistically schedules and completes tasks and provides full documentation for handover, referral; strives to maintain continuity and standard of care especially across shifts and when arranging rotas and covering absences.
  - Conscientious, reliable, responsible and professional at all times, considerate, shows respect for opinions of others, values good advice, accepts constructive criticism.

Creating an environment conducive to learning and improvement

- Endeavours to foster an environment conducive to learning
- Shares knowledge with trainees, students and other members of the multidisciplinary team
- Encourages and is open to reflective practice
- Seeks out role models and learns from the best practice behaviours of others.
- Participates in quality assurance and clinical improvement systems & training
- Uses evidence based practice in decision making
- Participates in journal clubs, case presentations, grand rounds

Time management & continuity of care

- Is punctual for duty, meetings, handovers and other duties
- Prioritises workload
- Delegates when appropriate to do so
- Knows when to calls for help
- Ensures satisfactory handover to ensure continuity of caret
- Ensures satisfactory transfer of patients to other medical teams or services when required
- Makes adequate arrangements to cover holidays, study and other leave

Honesty & Integrity

- Acts with honesty and integrity at all times in the delivery of patient care and in working with professional colleagues
- Acts fairly in all situations.

Moral Reasoning & Legal and ethical issues (see also Ethics section)

- Describes and demonstrates an understanding of the main principles of medical ethics including autonomy, justice and confidentiality
- Understands correct procedures for obtaining consent (for treatment, investigations, procedures, research project, post mortem). Legal responsibilities surrounding death/disease certification; regarding mental illness; referrals to coroner; also in criminal cases.
- Understands issues surrounding confidentiality, disclosure/release of information; discovery (FOI) of records. Legal and ethical issues in context of resuscitation, organ donation/transplantation.
- Able to complete certificates, documents, respects patient's wishes, rights, but accepts a doctor's (legal) obligations to society. Able to obtain/provide in full, information relevant to consent.
    - Alert to possible legal implications and ethical aspects of actions
    - Ensures privacy when discussing sensitive issues
    - Seeks timely advice where patient abuse is suspected

Team working and leadership

- How teams work, know how to assign individual and collective responsibilities which respect an individual's *(professional)* status within a team. How to set goals, initiate/ co-ordinate action, audit performance, give feedback, e.g. developing guidelines, protocols.
- Positively contributes to planning, motivating, organising activity, employs negotiating, human relations, interpersonal skills appropriately.
- Able to set and apportion individual and team objectives, energise and fortify others to sustain efforts to achieve goals, appraise performance.
- Co-operates as team player; respects the contributions, expertise of others; tolerant but determined as team leader.
- Adopts a holistic approach to patient care
- Knowledge of principles of audit and self assessment

Health-Physical health and Handling Stress & Fatigue

- Know how stress can affect performance, how to reduce stress and develop coping mechanisms to deal with pressure. When to enlist support.
- Understand the relevance of personal health to performance at work: the risks of self-medication, potential for drug and alcohol abuse: know that support is available from Occupational Health Services.
- Able to recognise, cope with stress; asks for help when necessary, is aware of responsibility *(to others)* of having health problems dealt with. Willing to take time off; and, if necessary, re-train/redevelop skills.

Commitment to Continuous Improvement in Health care Systems

- Understands the principles of quality and safety improvement
- Participates in quality improvement activities, including standard setting, follows established practice guidelines, research and audit
- Undergoes training in this area where appropriate

SKILLS

- Professionalism
- Multidisciplinary team working
- Ethical issues
- Leadership
- Time management
- Stress management

ASSESSMENT & LEARNING METHODS

- RCPI Ethics programme: Ethics I, Ethics II, Ethics III and Ethics IV (mandatory)
- 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
- Leadership Programme (Year 3 – 5)

Maintaining Good Practice

Objective: *To adopt the habits of lifelong learning, and to appreciate and implement the practices of clinical governance.*

Medical Council Domains of Good Professional Practice: *No. 1 Patient Safety and Quality of Patient Care, No. 6 Scholarship, No 7 Professionalism, No 8 Clinical Skills*

KNOWLEDGE

Lifelong learning

- Aware of CME/CPD obligations, systems/process for competence assurance/revalidation. Understand the role of appraisal, assessment methods available their application.
    - Sources, resources, opportunities for self-directed and group learning including IT. Know how adults learn.
    - Recognises and makes effective use of learning opportunities, maximises the potential for personal study, plans personal development.
    - Self motivated, inquisitive, eager to learn.

Application of clinical governance

- Understand the principles of evidence-based practice, clinical audit and effectiveness, the development/application of best-practice protocols.
- Able to appraise and apply data from research, and to use audit to establish best practice and clinical effectiveness. Utilizes and practices evidence-based medicine.
- Accepts the need for reflective practice and to critically evaluate own work and make changes.

Risk management

- Systems, procedures for identifying *(clinical)* risk; correct procedures and action when things go wrong; how to handle complaints.
- Employes procedures and policy for accidents, injuries; for confirming skill and staffing levels, arranging cross-cover, on-call, for supervision.
- Potential complications or side effects of treatments, procedures and investigations; importance of accurate, recent information and available records. The assessment of risk, relative risk.
- Able to assess, anticipate, risks; recognise failure. Openly discuss bad outcomes, locate system weakness, analyse critical incidents.
- Able to discuss potential risks *e.g. with patients, to analyse and balance risk with benefit.* Able to learn from previous experience, from complaints received, errors.
- Is honest in recognising misjudgements.

Evidence, audit, guidelines

- 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.
- Capable of accessing relevant data (library, internet use). Able to appraise available evidence critically.
- Able to complete an audit cycle relevant to practice; to develop, evaluate, review and update a set of guidelines.
- Uses evidence / guidelines appropriately having due regard for the individual.

SKILLS

- Personal development planning
- Evidence -based practice
- Risk Management
- Audit
- Research

ASSESSMENT & LEARNING METHODS

- Record of attendance at journal clubs, medical grand rounds, SpR teaching sessions, local and national academic meetings
- Record of attendance at CME accredited international meetings
- Attendance at local radiology conferences
- Time spent in laboratory or attendance at laboratory conferences
- Audit Study Day (Year 1)
- Annual Audit
- Leadership Skills Course (Year 3- 5)
- Research Publications
- Consultant feedback at annual assessment
- Workplace based assessment e.g Mini-Cex, DOPS, CBD

Standards Of Care

Objective: *To be able to assess patients' problems investigate and treat them appropriately, efficiently, and consistently over time.*

Medical Council Domains of Good Professional Practice: *No. 1 Patient Safety and Quality of Patient Care; No. 2 Relating to Patients; No. 3 Communication and Interpersonal Skills;, No. 4 Collaboration and Teamwork:, No. 5 Management (including Self Management; No. 8 Clinical Skills,*

KNOWLEDGE

History taking and examination

- Diagnostic significance of patterns of symptoms, pathophysiology and physical signs.
- Able to take and analyse a clinical history and perform a reliable and appropriate examination, arrive at a differential diagnosis.
- Exhibit empathy and show consideration for all patients, their impairments and attitudes irrespective of cultural and other differences.

Investigation, indications, risks, cost-effectiveness

- Understand the pathophysiological basis of the investigation undertaken.
- Know and be able to explain the procedure for the commonly used investigations, preparations, effects or risks, the reason for the investigation, the information sought and its relevance to management.
- Sensitivity and specificity of results, possible interferences, artefacts.
- Able to understand significance, interpret and explain results of investigations.
- Shows logical approach in choosing, sequencing and prioritising investigations.
- Able to liaise, discuss, negotiate effectively with those undertaking the investigation.
- Careful to select investigations appropriately, considering (*patients'*) needs, risks, value.

Treatment and management of disease

- Understand the pharmacology, therapeutics of treatments prescribed, choice of routes of administration, dosing schedules, compliance strategies; the objectives, risks and complications of treatment cost-effectiveness. Natural history of diseases; quality of life concepts.
- Able to assess accurately patient's needs, to prescribe administer, deliver, arrange treatment; recognise and deal with reactions / side effects. Sets realistic therapeutic goals, utilizes rehabilitation services, palliative care appropriately.
- Able to discuss rationale, objectives, risks and alternative options openly, taking into account patients' / their relatives' attitudes, beliefs or other philosophical concepts.
- Recognises that the degrading effects of illness, especially incapacity which is chronic, impacts on relationships and family, having financial as well as social effects.
- Discusses, plans, delivers care appropriate to patient's needs and wishes.

Disease prevention and health education

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

- Able to advise on and promote lifestyle change, stopping smoking, control of alcohol intake. Able to assess and explain risk, encourage positive e.g. *immunisation* and negative preventive measures.
- Enlists / requires patients' involvement in solving their health problems, provides information, education. Avails of support provided by voluntary agencies and patient support groups, as well as expert services e.g. detoxification / psychiatric services.
- Non-judgemental approach to patient's problem: values contributions of health education and disease prevention to health in a community.

Notes, records, correspondence

- Understand the functions of medical records, their value as an accurate up-to-date commentary and source of data.
- Understand the need and place for problem-orientated discharge notes, letters, more detailed case reports, concise out-patient reports, focused reviews.
- Compiles adequate case notes, with results of examinations, investigations, procedures performed, sufficient to provide an accurate, detailed account of the diagnostic and management process and outcome. Provides concise, informative progress reports orally.
- Maintains legible, authenticated records, uses dictation, telephone, e-mail appropriately.
- Appreciates importance of up-to-date, accurate information, its availability, transfer and the need for communicating promptly *e.g. with primary care*.

Time management and decision taking

- How to prioritise demands, respond to patients' needs, sequence urgent tasks. Understand how to establish (*clinical*) priorities *e.g. for investigations, intervention; how to set realistic goals; understand the need to allocate sufficient time, know when to seek help.*
- Understands the need to complete tasks, reach a conclusion, make a decision, take action with allocated time.
- Able to recognise when falling behind and can adjust accordingly; able to cope with changing circumstances, variable demand, prepared to re-prioritise and ask for help.
- Able to collate evidence, summarise, recognise when objective has been gained
- Knows how and when to conclude, disengage.
- Has realistic expectations of own and of others' performance. Time-conscious, punctual.

Relevance of professional bodies

- Understand 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.*
- Actively engages with professional/representative/specialist bodies.
- Values the breadth and depth of experience that can be accessed by associating with professional colleagues.

SKILLS

- History taking and examination
- Appropriate use of investigations
- Treatment and management of disease
- Disease notification
- Health promotion
- Screening
- Study Day - Disease prevention & health education
- Personal and professional organsation and planning; goal setting, time management

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)
- Study Days
- Annual Audit

Patient Safety

Objective: *To ensure patient safety is at the core of the health service provided by designing safe systems and processes of care and understanding the role of healthcare systems and human factors in adverse events and errors.*

Medical Council Domains of Good Professional Practice: *No. 1 Patient Safety and Quality of Patient Care.*

KNOWLEDGE

Safe Systems, Competency and Safe practice

- Understands multiple factors involved in failures;
- Safe Healthcare Systems-a Safe working environment
- The relationship between 'Human factors' and patient safety
    - Safe working practice. Role of procedures and protocols in optimal practice
- Patient safety relevance in health care and its role in minimizing the incidence and impact of adverse events and maximize recovery from them.
- Knowledge and understanding of the Swiss cheese model.
- Health care errors and system failures; human and economic costs; blame culture

Communication

- Disclosure – know the principles of open disclosure
- Knowledge and understanding of valid consent
- Teamwork
- Continuity of care

Near Misses and adverse events

- Knowledge of preventing and managing near misses and adverse events. Incident reporting; root cause analysis. Understanding and learning from errors
- Understands and manages clinical risk
- Manages complaints
- Knows when and how to report a near miss or adverse event

Quality improvement

- Standardises common processes and procedures – checklists, vigilance
- Evidence based care
- Infection control; healthcare associated infections
- Patient safety and invasive procedures.
- Improvement medication safety; safe prescribing; common medication errors
- Ethical behaviour

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
- Understand how and why systems break down and why errors are made
- Be able to learn from errors and near misses to prevent future errors
- Know how to use relevant information from complaints, incident reports, litigation and quality improvement reports to control risks
- Minimise infection through improved infection control practice
- Minimise errors during invasive procedures by developing and adhering to best-practice guidelines for safe surgery.
- Minimise medication errors by practicing safe prescribing principles

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): prioritization of patient safety in practice
- RCPI Patient safety on-line course (recommended)
- Completion of infection control induction in the workplace

Therapeutics and Safe Prescribing

Objective: *To progressively develop your 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: *No. 1 Patient Safety and Quality of Patient Care.*

KNOWLEDGE

- Indications, contraindications, side effects, drug interaction, dosage and route of administration of commonly used drugs
- Knowledge of prescribing for common medical conditions
- Knows range of adverse drug reactions to commonly used drugs, including complementary medicines
- Identifies common prescribing hazards
- Identifies high risk medications
- Knows drugs requiring therapeutic drug monitoring and interprets results
- Knows the effects of age, body size, organ dysfunction and concurrent illness or physiological state e.g. pregnancy on drug distribution and metabolism relevant to the trainees practice
- Recognise the roles of regulatory agencies involved in drug use, monitoring and licensing (e.g. IMB , and hospital formulary committees
- Knows procedure for monitoring, managing and reporting adverse drug reaction

SKILLS

- Knows how to write a prescription
- Prescribes appropriately in the elderly, childhood, pregnancy and breast feeding
- Make appropriate dose adjustments following therapeutic drug monitoring, or physiological change (e.g. deteriorating renal function)
- Review the continuing need for long term medications relevant to the trainees clinical practice
- Anticipate and avoid defined drug interactions, including complementary medicines
- Advise patients (and carers) about important interactions and adverse drug effects
- Provide comprehensible explanations to the patient, and carers when relevant, for the use of medicines
- Open to advice and input from other health professionals on prescribing
- Participates in adverse drug event reporting

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): prioritization of patient safety in prescribing practice

Infection Control

Objective: *To be able to manage and control infection in patients, including controlling the risk of cross –infection, appropriately managing infection in individual patients, and within the wider community to manage the risk posed by communicable diseases.*

Medical Council Domains of Good Professional Practice: *No. 1 Patient Safety and Quality of Patient Care; No. 5 Management (including Self Management).*

KNOWLEDGE

Within a consultation

- Understand the principles of infection control as defined by the HIQA
- How to minimize the risk of cross-infection during a patient encounter by adhering to best practice guidelines available
- Treat and manage infection in the individual patient
- Understand the principles of preventing infection in high risk groups e.g managing antibiotic use to prevent Clostridium difficile) Knowledge and understanding the local antibiotic prescribing policy
- Aware of infections of concern, eg MRSA, C Difficile,
- Understands best practice in isolation precautions
- Knows when and how to notify relevant authorities in the case of infectious disease requiring disclosure

In surgery or during an invasive procedure

- Understands the increased risk of infection in these patients and adheres to guidelines for minimizing infection in such cases
- Knows the guidelines for needle stick injury prevention and management

During an outbreak

- Adheres to guidelines for minimizing infection in the wider community in cases of communicable diseases and seeks expert opinion or guidance from infection control specialists where necessary

SKILLS

- Practices aseptic techniques, hand hygiene
- Follows guidelines for infection control and management
- Prescribes antibiotics according to antibiotic guidelines Encourages all staff, patients and relatives to observe infection control principles
- Communicates effectively with patients regarding treatment and measures recommended to prevent re-infection or spread
- Collaborates with infection control colleagues to manage more complex or uncommon types of infection including those requiring isolation eg transplant cases, immunocompromised host
- In the case of infectious diseases requiring disclosure:
    - Has knowledge of the diseases requiring disclosure and undertakes notification promptly
    - Collaborates with external agencies regarding reporting, investigating and management of notifiable diseases .
    - Able to advise patients on lifestyle change to minimize the risk of re-infection or spread of infection,
    - Enlists / requires patients' involvement in solving their health problems, provides information, education.

- Avails of support provided by voluntary agencies and patient support groups, as well as expert services where appropriate
- Non-judgemental approach to patient's problem:
- Utilises and values 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

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: *No.1 Patient Safety and Quality of Patient Care; No. 3 Communication and Interpersonal Skill; No. 4 Collaboration and Teamwork; No. 5 Management (including Self Management); No 6 Scholarship.*

KNOWLEDGE

Demonstrating Personal Qualities

- Develops self-awareness and understanding of personal style and its impact on others
- Efficiently and effectively manages 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
- Acts with integrity and honesty with all people at all times

Working with others

- Develops networks to expand knowledge and sphere of influence
- Builds and maintains key relationships. Adapts style to work with different people and different situations
- Encourages contributions from others including patients, carers, members of the multidisciplinary team and the wider community
- Aware of own personal style and other styles and their impact on team performance. Understands the importance of good communication in teams and the role of human factors on effectiveness and patient safety

Managing Services

- Knows and understands the structure and function of Irish Health Care System
- Aware of the challenges of managing in healthcare
    - Role of Governance
    - Clinical Directors
- Can contribute to the planning and design of services
- Knows and understands the financing of the health service
    - Preparing a budget
    - Defining value
    - Managing resources
- Knows and Understands the importance of human factors in service delivery.
    - Manages staff training, development and education
- Managing performance
    - Performs staff appraisal and deals effectively with poor staff performance
    - Rewards and incentivises staff for quality and efficiency

Improving Services

- Ensures patient safety by adopting and incorporating a patient safety culture
- Critically evaluates where services can be improved by measuring performance, and acting to raise standards where possible Encourages a culture of improvement and innovation
- Facilitating transformation by creating and living a vision

Setting Direction

- Identifies the external and internal drivers setting the context for change
- Applys knowledge and evidence of systems and resource management to guide service development
- Makes decisions using evidence based medicine and performance measures
- Evaluates 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 Being able to managing resources and people
- Managing performance, performance indicators
- How to write and develop a service plan
- How to prepare and manage a budget

ASSESSMENT & LEARNING METHODS

- Communication course (Year 1)
- Leadership course (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.

Management Information Systems & Management Skills

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: *No. 5 Management.*

KNOWLEDGE

Health service structure, management and organisation

- The administrative structure of the Health Service, services provided in Ireland and their funding. Department of Health, HSE and Hospital Management structures and systems. The National Regulatory Bodies, health agencies and patient representative groups.
- Can explore, direct, pursue a project, negotiating through the relevant department at an appropriate level. Able to *"operate the system"*. Understand the need for business plans, annual hospital budgets, the relationship between the hospital and PCCC.
- Recognises the advantage of understanding the administrative machinery of the Health Services.

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. Know of the sources which can provide information relevant to national or to local services, publications available.
- Able 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.

Obtaining information of value in maintaining medical knowledge with a view to delivering effective clinical care

- Understands the contribution that current, accurate knowledge can make to establishing clinical effectiveness, best practice, treatment protocols. Know sources providing updates, literature reviews and digests.
- Able 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*.
- Embraces principles of clinical governance.

Delegation skills, empowerment and conflict management

- How to assess, develop personal effectiveness, improve negotiating, influencing and leadership skills. How to manage time more efficiently, deal with pressure and stress. How to motivate and operate within a multidisciplinary team.
- Able to adjust to change, apply management/leadership, negotiating skills to manage change. Self-awareness, able to recognise strengths and weaknesses.
- Appropriately values and uses management techniques and seeks to improve these skills and personal effectiveness.

Leadership

- How to maintain, improve working relationships within a team; appropriately recognise roles, skills, status. Know when and what to delegate, provide support, appraise.
- Motivates and empowers others, knows when help is needed. Able to foresee, forestall, manage conflict.
- Sensitive to and aware of the needs of others.

SKILLS

- Risk Management
- Leadership skills
- Time management
- Delegation skills
- Conflict management
- Clinical governance
- Audit

ASSESSMENT & LEARNING METHODS

- Communication course (Year 1)
- Audit course (Year 1)
- Leadership course (Year 3 – 5)
- Annual audit
- Consultant feedback at annual assessment on management and leadership skills
- Involvement in hospital committees

Teaching & Research

***Objective**: To recognise the opportunities for personal/professional development that exist for medical teachers, educational supervisors and from involvement with research.*

***Medical Council Domains of Good Professional Practice**: No. 6 Scholarship.*

KNOWLEDGE

Teaching, educational supervision and assessment

- Know principles of adult learning, teaching and learning methods available and strategies; educational principles directing assessment, methods, formative vs. summative. Value of regular appraisal / assessment in informing training process.
- Able to identify educational objective. Able to design and deliver an effective teaching event, both small and large group. Uses technology / materials effectively. Adequate preparation, timekeeping.
- Appreciates benefit to learner is key objective of teaching sessions, key resource is adequate knowledge of subject.

Research, methodology and critical evaluation

- How to design and resource a research project, how to obtain ethical approval. Research methodology, valid statistical analysis, writing and publishing papers. Ethical considerations, declaring an interest.
- Reviewing the literature, framing the question, designing a project capable of providing an answer. Able to derive results and conclusions, able to write or present a paper.
- Intellectually honest.
- Present data in a clear, honest and critical fashion.

SKILLS

- Bed-side undergraduate and post graduate teaching
- Lectures
- Ethics of research
- Presentation and writing skills

Ethics

***Objectives**: Medicine is predominantly concerned with the diagnosis and treatment of illness. Besides the pathological processes involved and the physical impact of each condition, the requirements for practising medicine in a fair, competent and ethical manner must be understood before a doctor is ready for independent practice.*
*Upon satisfactory completion of specialist training, 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 Irish healthcare system.*

***Medical Council Domains of Good Professional Practice**: No. 1 Patient Safety and Quality of Patient Care; No. 3 Communication and Interpersonal Skill; No. 6 Scholarship; No. 7 Professionalism.*

KNOWLEDGE

- Knowledge of 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 informational exchange with individual patients and their families and teamwork with other health professionals, the scientific community and the public.
- Professionalism.

Ethics I: Professionalism

***Objectives:** To explore the relationship between ethics of healthcare delivery and professionalism including the challenges and the impact of current developments*

KNOWLEDGE

- Knowledge, skills, attitudes and behaviours expected by patients and society from individuals during the practice of their profession (as a doctor).
    - The skills of lifelong learning and the maintenance of competence
    - Information literacy
    - Ethical behaviour
    - Integrity, honesty
    - Altruism
    - Service to, justice and respect for others
    - Adherence to professional code
- Leadership and Accountability
- Role of the Clinical Director
- Dignity & Respect
- Conflicts of interest
- Personal scope of practice & boundaries
- Adverse Events- open communication when adverse events occur
- Discussing errors

Ethics II: Ethics & Law

***Objectives**: To explore the relationship between ethics of healthcare and law including the challenges and the impact of current developments*

KNOWLEDGE

- Ethical patient care and Irish Law including:
- Informed consent
- Consent and capacity
- Disclosure
- Medical Practitioner's Act
- Malpractice
- Misconduct
- Confidentiality
- Data protection
- Coroner's System
- Medical Council Ethical Guide

Ethics III: Research

***Objectives**: To explore the ethics of healthcare research including the challenges and the impact of current developments*

KNOWLEDGE

- Principles of research
- Un-ethical conduct
- Genetics
- The Importance of Research in Health Care
- Dept of Health and Children Research Action Plan-implications for researchers
- Reasons for Research being Ethically Regulated
- Genetics
- Researching vulnerable groups
- Data Research/Protection and confidentiality
- Patient information bill
- Human Tissue Act
- Role of Research Ethics Committee
- Conflict of interest

Ethics IV: End of Life

Objectives: *To explore the ethics of end of life challenges and the impact of current developments*

KNOWLEDGE

- Euthanasia/Terminal Sedation
- Artificial nutrition/hydration
- Resuscitation issues
- Advanced Directives
- Organ donation
- Death Certification/Coronial System
- Prolongataion
- Futility
- Decision making process

SKILLS

- Recognises the dying patient
- Communicates bad news sensitively
- Explores the options for managing the dying patient including DNR and advanced directives
- To incorporate the above ethical concepts in their everyday practice

ASSESSMENT & LEARNING METHODS

- RCPI Ethics programme: Ethics I, Ethics II, Ethics III and Ethics IV (Mandatory)
- Note of examples of ethical dilemmas encountered in training
- Consultant feedback at annual assessment
- Workplace based assessment e.g CBD
- Educational supervisor's reports on observed performance (in the workplace

Dealing with and Management of Acutely ill Patients in Appropriate Specialties

Objective: *To have the knowledge and skills to be able to assess and initiate management of patients presenting as emergencies with the problems outlined below. For each scenario, trainees should in particular gain knowledge and skills to recognise the critically ill and:*

Immediately assess and resuscitate if necessary.
Formulate a differential diagnosis, treat and/or refer as appropriate.
Select relevant investigations and accurately interpret reports.

Communicate the diagnosis and prognosis – see Generic Skills.

Medical Council Domains of Good Professional Practice: *No. 1 Patient Safety and Quality of Patient Care, No. 8 Clinical Skills*

KNOWLEDGE

Management of acutely ill patients with medical problems

- Know how potentially life-threatening problems present; know the indications for urgent intervention, additional information necessary to support action (*e.g. results of investigations*) and treatment protocols (*see Addendum*).
- Know when to seek help, refer/transfer to another specialty. Know ACLS protocols. Know the ethical and legal principles relevant to resuscitation and DNR orders.
- Able to manage acute medical intake, to receive and refer patients appropriately, to interact efficiently and effectively with other members of the medical team, accept/undertake responsibility appropriately.
- Able 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*.
- Able to convey essential information quickly to relevant personnel: maintains legible up-to-date records documenting results of investigations. Lists of problems dealt with or remaining, identifies areas of uncertainty; ensures safe handover.
- Remains calm, delegates appropriately, ensures good communication. Tries to meet patient's/ relatives' needs and concerns, respecting their views and right to be informed.

Discharge planning

- Distinguish between illness and disease, disability and dependency. Understand the potential impact of illness and impairment on activities of daily living, family relationships, status, independence. Be aware of quality of life issues.
- Know role and skills of other members of the healthcare team, how to devise and deliver a care package. Know the support available from other agencies *e.g. specialist nurses, social workers, community care.* Understand the principles of shared care with the general practitioner service.
- Show awareness of the pressures/dynamics within a family, the economic factors delaying discharge but recognise the limit to benefit derived from in-patient care. Establish liaison with family and community care, primary care, communicate / report to agencies involved.
- Demonstrates can awareness of the wide ranging effects of illness and the need to bridge the gap between hospital and home.

SKILLS

- ACLS
- Deal with common medical emergencies
- Interpretation of blood results, ECG/Rhythm strips, Chest X-Ray, CT Brain
- Give clear instructions to both medical and hospital staff
- Order relevant follow up investigations
- Discharge planning
- Knowledge of patient pathways
- Knowledge of HIPE
- Multidisciplinary team working
- Communication
- Early regular and on-going consultation with family members and primary care physicians

ASSESSMENT & LEARNING METHODS

- Certified ACLS
- Record of on call
- miniCEX (acute setting) - each year
- Case based discussions
- Consultant feedback at annual assessment

Specialty Section for Medical Oncology

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 the biology of cancer, the principles of therapy, and the proper conduct and interpretation of clinical research and therapeutic trials..*

Cancer biology

Objective: *Knowledge of the biology of normal cells and the basic processes of carcinogenesis.*

KNOWLEDGE

- Understanding of gene structure, organisation, expression, and regulation.
- Understanding of the cell cycle, its control by oncogenesis, and its interaction with therapy is important.
- Understand tumour cell kinetics, proliferation, and programmed cell death, and the balance between cell death and cell proliferation.

SKILLS

- Apply knowledge of cancer biology to understanding and devising strategies for management of malignant diseases
- Familiar with molecular techniques, such as the polymerase chain reaction (*PCR*), chromosomal analyses and other techniques of molecular and tumour cell biology.
- An appreciation of the importance of knowledge of cancer biology in understanding the malignant process and in guiding the development of therapeutic strategies.

ASSESSMENT & LEARNING METHODS

- Case Based 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

Tumour Immunology

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

KNOWLEDGE

- Basic knowledge of the cellular and humoral components of the immune system and the regulatory action of cytokines.
- Tumour antigenicity, immune-medicated 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

- Case Based 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

Aetiology, epidemiology, screening and prevention

Objective: *To understand and be able to advise on the aetiological, genetic and environmental factors in relation to the risk of malignancy; screening and preventive strategies.*

KNOWLEDGE

- Understanding of the aetiology and of genetic and environmental factors in oncogenesis.
- Basic knowledge of epidemiological factors and descriptors of disease.
- Understand the basic principles of screening and risk assessment. Knowledge of the situations in which screening benefit is unclear or not defined.
- 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.
- Recognition of the supreme importance of preventive measures in addressing the global cancer problem

ASSESSMENT & LEARNING METHODS

- Case Based 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

Clinical research including statistics

Objective: *To understand the design and conduct of 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. Costs and the cost effectiveness of therapy.
- Government regulatory mechanisms of surveillance.
- The ability to critically evaluate the scientific value of published articles and their influence on daily clinical practice.
- Grant writing and awareness of mechanisms of obtaining support for clinical research.

SKILLS

- Obtaining informed consent from patients.
- Preparing abstracts, oral and visual presentations, writing articles.
- Recognition of the importance of cancer clinical trials to the development of cancer therapies.
- The requirement to participate, where possible, in cancer clinical trials activity.
- The need to interpret published data in a professional manner.

ASSESSMENT & LEARNING METHODS

- Case Based Discussion
- Study Day
- Research Activities
- Presentations
- Publications
- Research skills course (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: *The proper management of malignant disease enlists and co-ordinates 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 understand and value the information that can be provided by the pathologist and the laboratory and to use these services effectively in the management of patients with malignant diseases.*

KNOWLEDGE

- Understand the role of the pathologist in confirming the diagnosis of cancer and in determining the severity and extent of disease.
- Familiar with newer pathology techniques and the contribution of these techniques to the staging and management of patients with cancer.
- Knowledge of what laboratory testing is appropriate in the staging and follow-up of patients.
- Understand that the definite diagnosis of cancer is based on the interpretation of cytology or biopsy material.

SKILLS

- Review biopsy material and surgical specimens with a pathologist.
- Appreciate the utility of markers (*serum tumour markers, cell membrane markers, DNA markers*) and recognise their limitations.
- Appreciates the need for close 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.
- Appreciation the importance of effective use of laboratory services.

ASSESSMENT & LEARNING METHODS

- Case Based 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

Staging

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

KNOWLEDGE

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

SKILLS

- How to assess response to treatment using above tests.
- Appreciate the importance of staging in guiding the approach to treatment.
- Recognises the need to involve other professionals in determining the stage of disease.
- Appreciation that knowledge of the equipment technology and skills required to deliver staging information must be regularly updated

ASSESSMENT & LEARNING METHODS

- Case Based 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 contra indications 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 and SKILLS

Surgery

- Understanding, by interacting with surgical teams, 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.
- 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.
- Open-ness to and capacity to work in multidisciplinary team context

Radiation oncology

- Understand the 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.
- Open-ness 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

- Trainees should know what supportive therapy is available during anticancer treatment. They should know 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 & 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.
    - Appreciation of 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.
    - Appreciation of 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
    - Appreciation of the appropriate use of high-dose strategies and timely referral of patients for such treatment when indicated.

- **Organ Protection**
  - Know and understand the use user 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**
    - Have a working knowledge of the 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**
    - Trainees should know 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, psychologist (see generic section).
    - 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 physical therapy (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

- Case Based 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

Management and Treatment of Individual Cancers

Objective: *Having understood the general principles on which the management of a malignant disease is based, the trainee should be familiar with specific details of the treatment of individual cancer types and aware of considerations unique to each particular malignant disease. For a specific disease, the trainee should know and understand the relevance of epidemiology, genetics, pathophysiology and likely presenting symptoms and signs; the diagnostic work-up and treatment required and 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 types encountered are lung, colorectal and breast cancers, though others such as malignant lymphomas and unknown primary tumours are increasingly diagnosed. The incidence of such cancers indicates that a knowledge of their management is of great importance for trainees. Other diseases such as germ cell tumours are also very 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 must 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. Research interests and the desire to sub-specialise will determine the sphere of clinical activity for many trainees in their later years of training.

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

SKILLS

- Be able to recognise, confirm 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 such additional supporting measures, palliative and end-of-life-care as may at times be necessary.

ASSESSMENT & LEARNING METHODS

- Case Based 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

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*).
- When organ preservation may be an option.
- Aware of the need for follow-up in the management of these patients and of risks of second malignancies

SKILLS

- Know how a proper head and neck examination is performed.
- Able to utilize staging as the basis for selecting surgery and/or radiation therapy as definitive treatment, chemotherapy and palliation in more advanced disease.
- Anti-cancer agent administration.
- Understands the impact of disease on patient and family.
- Appropriately enlists other experts in the care and rehabilitation of the patient.

ASSESSMENT & LEARNING METHODS

- Case Based 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

Lung cancer and mesothelioma

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

KNOWLEDGE

Small-cell lung cancer

- Know and understand the multimodality approach necessary in limited-stage disease.
- Know and understand the role of chemotherapy in patients with advanced disease.
- The indications for central nervous system treatment.
- Anti-cancer agent administration.
- Use of supportive and palliative care measures.
- Understands the impact of the disease on patient and family.
- Ensures 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.
- Know and understand the place and value of surgery, chemotherapy and/or radiation therapy in localized disease, (*often as combined-modality treatment*).
- The role of chemotherapy and/or radiation therapy in the palliation of advanced disease.

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.
- Appreciates the impact of disease on patient and family

SKILLS

- 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

- Case Based 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

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 and SKILLS

Oesophageal cancers

- Trainees should appreciate the risk factors for oesophageal cancer.
- Know the indications for endoscopy and value in the diagnosis and staging of the disease.
- Trainees should learn the indications for nutritional support.

Gastric cancer

- Trainees should know risk factors unique for gastric cancer.
- They should know the role of genetic testing.
- Know and understand major surgical approaches to the disease and recognise the potentially curative role of surgery and combined modality therapy.

Colorectal cancer

- Know and understand the risk factors and the rationale for screening for colorectal cancer, as well as the place of chemoprevention.
- Know and appreciate the value and place of genetic testing.
- 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 metastic disease.

Anal Cancer

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

Hepatobiliary cancers

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

Pancreatic cancer

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

SKILLS

- Anti-cancer agent administration.
- Active in the use of supportive and palliative care measures, especially nutritional support.
- Genetic counselling and genetic testing.
- Recognises 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
- Recognises 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 had a curative role but can provide palliation.
- Encourages close working with radiation oncology to deliver combined modality (*non-surgical*) treatment
- Appreciates the importance of measures to relieve biliary tract obstruction through interventional techniques and employs where indicated.

ASSESSMENT & LEARNING METHODS

- Case Based 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

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

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

Urothelial cancers

- Know the risk factors for urothelial cancers.
- Appreciate 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.
- Understand the place of 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

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

Germ cell tumours

- Trainees should know the utility of tumour markers in the diagnosis, prognosis, and follow-up of patients.
- Know and be able to 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

- Case Based 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

Gynaecologic malignancies

Objective: *To know the risk factors and hormonal influences on the development and progression of gynaecological malignancies and the importance of correct staging in determining the strategy for management in each particular case.*

KNOWLEDGE and SKILLS

Ovarian cancer

- Understand that a predisposition to ovarian cancer may be inherited.
- Know and understand the place of appropriate surgical procedures in staging an in the initial treatment of patients and subsequent systemic management.

Uterine cancer

- The role of hormones in the aetiology and progression, and of hormonal therapies in the management of endometrial cancers.
- Understands the potentially curative role of surgery in early-stage disease and the value of radiation therapy in a multidisciplinary approach to more advanced disease; also the role of chemotherapy and hormone therapy in the management of both local and metastatic disease.

Cervical cancer

- Know the unique risk factors for cervical cancer.
- Appreciate that correct staging is the basis for selecting surgery and/or radiation therapy as curative therapy.
- Understands the role of chemotherapy in the management of local disease when combined with radiotherapy and its place in the treatment of advanced disease

Vulval and vaginal cancer

- Know about the risk of induction of clear-cell carcinoma of the vagina in women whose mothers received diethylstilbestrol during pregnancy.
- Understand the principles of proper surveillance and management of these individuals.
- Recognise the curative role of surgery in early-stage disease and the need for combination therapy in advanced disease.

SKILLS

- Recognise and appreciate the indications for chemotherapy in localised and in advanced disease.
- Anti-cancer agent administration.
- Use of supportive and palliative care measures especially nutritional support.
- Genetic counselling and genetic testing.
- Appropriate engagement in multidisciplinary care.
- Appreciates need to encourage disease prevention through screening / vaccination.

ASSESSMENT & LEARNING METHODS

- Case Based 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

Breast cancer

Objective: *To understand the risk factors, the benefits of screening for breast cancer, importance of early diagnosis and treatment. To be able to advise on management taking into account prognostic and other factors influencing decisions regarding treatment*

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.

SKILLS

- Understands and is able to 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

- Case Based 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

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

- Situations predisposing to the development of primary bone sarcomas.
- Appreciate the pathologic spectrum of these lesions and the indications and considerations regarding surgery, limb preservation and adjuvant chemotherapy.
- Know the 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

- Case Based 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

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.
- Appreciate the value of tumour depth and other prognostic factors in assessing prognosis.
- Aware of the indications for biologic therapies in the adjuvant setting and the potential risks and benefits of chemotherapy in advanced disease.
- Working knowledge of the primary prevention of melanoma, the recognition and counselling of patients at high risk for developing melanoma.

Basal cell and squamous cell skin cancers

- Know that these cancers may be a long-term complication of cancer therapy or immunosuppression.
- Appreciate that their occurrence is associated with sun exposure.

SKILLS

- Able to recognise 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.
- Able to recognise the clinical appearances of non-melanoma skin cancers.
- Aware of importance of early diagnosis and referral to an appropriate colleague

ASSESSMENT & LEARNING METHODS

- Case Based 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

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

- Case Based 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

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

- Aware of the place and risks 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

- Case Based 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

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 analysis of specimens and tumour-markers in directing the work-ups.
- In particular, 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

- Case Based 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

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

- Trainees should be experienced with 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.
- Know the indications for high-dose therapy with progenitor cell support in patients with relapsed or refractory disease.
- Be aware of the long-term complications of treatment and appropriate follow-up assessment of patients.

Non-Hodgkin lymphoma

- Trainees should be familiar with 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.
- Know and understand the different types of lymphomas and when treatment is indicated or when observation is appropriate.
- Be aware of the association of lymphomas with HIV and with immunosuppression.
- Appreciation of 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

- Know the value of immunophenotyping in the diagnosis.
- Know 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.

Plasma cell dyscrasias

- Know how to identify and distinguish the plasma cell dyscrasias: *e.g. monoclonal gammopathy of undetermined significance (MGUS), lymphoplasmacytic lymphoma (Waldenstrom's macroglobulinaemia), plasmacytoma, multiple myeloma, POEMS (polyneuropathy, organomegaly, endocrinopathy, monoclonal protein, skin changes) and plasma cell leukaemia.*
- Know and understand the indications for treatment in each instance.

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 (Non mandatory)
- Case Based 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

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

- Case Based 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

Cancer and the Patient

Objective: *To recognise the potential 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 a malignant disease. To know the means and resources available to provide support 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

- Know of 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.
- Know of 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.
- Recognition that cancer impacts on sexuality and may result and may result in dysfunction as a result of the disease process, its treatment, or adverse psychological effects.
- An awareness of the issues involved in end of life care and have a 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 in a team.
- The trainee will undertake these assessments with, tact compassion and the necessary support from colleagues.

ASSESSMENT & LEARNING METHODS

- miniCEX
- Case Based 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

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

- Aware 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.
- 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*).
- The effects, side effects, risks and benefits of cancer treatment including surgery, radiotherapy and chemotherapy and the appropriate arrangements for follow-up.

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.
- 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~~s~~ systems in place to protect participants, confidentiality and ownership of information.
- Critical evaluation of own consulting skills.

ASSESSMENT & LEARNING METHODS

- Case Based 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

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

- To understand and be aware of the 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.
- Know the legal issues related to treatment e.g. informed consent, capacity and competency, confidentiality, living wills, withdrawal of life support.
- Understanding and an appreciation of the assessment of cost-effectiveness and cost-benefit in relation to the treatment of cancers; quality of life issues.
- Knowledge and 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

- Able to 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

- Case Based Discussion
- 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

- Know 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.
- Understand the use of the Ommaya reservoir for CSF sampling and the administration of intrathecal chemotherapy through this route and via lumbar puncture.
- Understand the principles of the design and conduct of clinical trials, the use and interpretation of statistical methods, and the recruitment and assessment of patients within them.

SKILLS

- Able to care for and access indwelling venous catheters and Hickman lines.
- Able to perform a lumbar puncture and to safely administer chemotherapy by that route and via an Ommaya Resevoir.
- Able to perform marrow aspiration and biopsy and have a basic knowledge of the histological interpretation of marrow samples.
- Anti-cancer agent administration.
- Obtain informed consent for procedures.
- Exercises 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
- Case Based 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

Minimum Requirements for Training

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	Form 052
Weekly Timetable (Sample Weekly Timetable for Post/Clinical Attachment)	Required	1	Training Post	Form 045
On Call Rota	Required	1	Training Post	Form 064
Section 2 - Training Activities				
Outpatient Clinics				
General Oncology (minimum 1 per week)	Required	40	Year of Training	Form 001
Sub Specialty	Required	1	Year of Training	Form 001
Ward Rounds/Consultations				Form 002
Consultant led (minimum 1 per week)	Required	40	Year of Training	Form 002
SpR led (1 per week)	Required	40	Year of Training	Form 002
Consultations	Required	1	Year of Training	Form 002
Emergencies/Complicated Cases				
(minimum to lead management in at least one of the following cases				
Neutropenic sepsis	Required	1	Training Programme	Form 003
Spinal Cord compression	Required	1	Training Programme	Form 003
SVC obstruction	Required	1	Training Programme	Form 003
Metabolic complications of cancer therapy	Required	1	Training Programme	Form 003
Procedures/Practical Skills/Surgical Skills				
Indirect Laryngoscopy	Required	1	Training Programme	Form 004
Serial measurements of palpable tumour masses	Required	1	Training Programme	Form 004
Fine needle aspiration biopsy	Required	1	Training Programme	Form 004
Therapeutic thoracenesis and paracentesis abdominis	Required	1	Training Programme	Form 004
Indwelling venous catheters and Hickman lines (5 over training)	Required	5	Training Programme	Form 004

Curriculum Requirement	Required/Desirable	Minimum Requirement	Reporting Period	Form Name
Ommaya Reservoir (5 over training)	Required	5	Training Programme	Form 004
Review of chemo prescribing (5 per year)	Required	5	Year of Training	Form 004
Anti-cancer agent administration (observe and review 5 per year)	Required	5	Year of Training	Form 004
Bone Marrow aspirate and biopsy (non Mandatory)	Desirable	1	Training Programme	Form 004
Additional/Special Experience Gained				
Palliative Care Medicine	Desirable	1	Training Programme	Form 005
MD management	Desirable	1	Training Programme	Form 005
Psychsocial management	Desirable	1	Training Programme	Form 005
Relatively Unusual Cases	Desirable	1	Training Programme	Form 019
Chronic Cases/Long term care (minimum 2 cases over training)	Required	2	Training Programme	Form 066
ICU/CCU	Required	1	Year of Training	Form 090
Management Experience	Desirable	1	Training Programme	Form 110
Section 3 - Educational Activities				
Mandatory Courses				
Mastering Communications (Year 1)	Required	1	Training Programme	Form 006
Audit	Required	1	Training Programme	Form 006
Leadership Skills (Year 3+)	Required	1	Training Programme	Form 006
Ethics I: Professionalism	Required	1	Training Programme	Form 006
Ethics II: Ethics & Law	Required	1	Training Programme	Form 006
Ethics III: Research	Required	1	Training Programme	Form 006
Ethics IV: End of Life	Required	1	Training Programme	Form 006
ACLS	Required	1	Training Programme	Form 006
Molecular Biology course	Required	1	Training Programme	Form 006
Non – Mandatory Courses	Desirable	1	Training Programme	Form 007
Study days	Required	30	Year of Training	Form 008
In-house activities				
Grand Rounds (attend minimum 6 per year)	Required	6	Year of Training	Form 011
Journal Clubs (attend minimum 2 per month)	Required	20	Year of Training	Form 011
Radiology conference	Required	1	Year of Training	Form 011

Curriculum Requirement	Required/Desirable	Minimum Requirement	Reporting Period	Form Name
Pathology conference	Required	1	Year of Training	Form 011
MDT meetings (attend minimum 1 per week)	Required	40	Year of Training	Form 011
Seminar	Required	1	Year of Training	Form 011
Lecture	Required	1	Year of Training	Form 011
Examinations				
American Society of Clinical Oncology (ASCO) Medical Oncology in training examination	Required	2	Training Programme	Form 012
European Society of Medical Oncology (ESMO) examination	Required	1	Year of Training	Form 012
Formal Teaching Activity (1 formal session per month)				
Lecture	Required	4	Year of Training	Form 013
Tutorial	Required	4	Year of Training	Form 013
Bedside Teaching	Required	4	Year of Training	Form 013
Research	Desirable	1	Training Programme	Form 014
Audit activities (1 per year either to start or complete)	Required	1	Year of Training	Form 015
Publications	Desirable	1	Year of Training	Form 016
Presentations (minimum 1 oral or poster presentation per year)	Required	1	Year of Training	Form 017
National/International meetings	Required	1	Year of Training	Form 010
Additional Qualifications	Desirable	1	Training Programme	Form 065
Committee Attendance	Desirable	1	Training Programme	Form 063
Section 4 - Assessments				
DOPS				
Indwelling venous catheters and Hickman lines	Required	1	Training Programme	Form 021
Ommaya Reservoir	Required	1	Training Programme	Form 021
Review of chemo prescribing	Required	1	Training Programme	Form 021
Bone Marrow aspirate and biopsy (non mandatory)	Required	1	Training Programme	Form 021
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;	Required	1	Year of Training	Form 020

Curriculum Requirement	Required/Desirable	Minimum Requirement	Reporting Period	Form Name
Psychosocial aspects; Ethics and legal issues				
Mini-CEX (At least two Mini-CEX assessments per year)	Required	2	Year of Training	Form 023