Clinical Oncology
The Royal College of Radiologists

Clinical Oncology
Specialty Training Curriculum

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Contents

1. Introduction

1.1 The purpose of the curriculum

The purpose of the clinical oncology curriculum is to produce doctors with the generic professional and specialty-specific capabilities to manage cancer patients with a wide range of tumour types through the full disease pathway. They will collaborate with and co-ordinate a variety of professionals within multi-disciplinary teams (e.g. medical oncologists, surgeons, physicians, clinical nurse specialists, radiologists, medical physicists, pathologists, palliative care teams) to ensure the successful delivery of complex, multi-modality management plans that address the holistic needs of the patient and are personalised to their co-morbidities and wishes.

The curriculum provides training in the management of all types of cancer and the acute disease- and treatment-related complications, including inpatient acute oncology services, with the ultimate objective of producing pluripotent clinical oncologists who at the time of completion of training will be equipped with the transferable skills that allow them to manage any tumour site. Whilst as a consultant, clinical oncologists will focus on the specialist treatment of one or two cancer types; they will also provide specialist input to the acute management of patients with cancer and its treatment-related complications. The curriculum ensures that they will be able to maintain the skills and flexibility required to adapt to the needs of the local service at the time and in the future.

Cancer care is delivered in a wide number of settings from technologically advanced state of the art tertiary stand-alone cancer centres to peripherally based services closer to patients' homes. The wide variation in infrastructure and treatment settings means there is no single delivery model that will be universal throughout the country and local solutions will need to be developed to cope with variations in staffing, skill mix, population density etc. The curriculum aims to produce clinical oncologists who are flexible and adaptable with the ability to rapidly incorporate robust new evidence into clinical practice whilst ensuring the effective management of available resources, personnel and skill mix.

Clinical oncologists will be trained to have a sound understanding of the scientific principles that underlie cancer and the treatments they prescribe including cancer biology, pharmacology of systemic anti-cancer therapies, radiobiology, radiation physics and interpreting research results to inform decision-making. Given the pace of change in oncology, the curriculum will provide trainees with the aptitude for continual professional development including taking an active role in clinical trials and adopting appropriate technology, skills and treatments.

Specialty training in clinical oncology will include exposure to a broad spectrum of tumour types across the breadth of oncology and differing provider locations.

1.2 The need for the curriculum

The NHS Five Year Forward update plan published in 2017[1] identified improving cancer services and outcomes for patients as one of the four major priorities for the health service and this was reaffirmed in the NHS Long Term Plan[2]. In line with this, a number of key reviews including the National Cancer Strategy[3], the cancer delivery plans for Scotland[4], Wales[5] and Northern Ireland[6], the Health Education England (HEE) Cancer Workforce Strategy[7] and the Cancer Research UK workforce

review[8] have all clearly identified a need for more specialist oncologists to meet the anticipated increase in demand for non-surgical oncology services.

Drivers for this increasing demand are described below. Skill mix in oncology is mature and welcomed by all professions. Whilst some of the extra workload will be deliverable in collaboration with other professional groups, even with maximal skill mix, the consultant non-surgical oncologist workforce will need to expand.

- Cancer is predominantly a disease of the elderly and as population life expectancy increases, so will the incidence and prevalence of malignant disease. One in two people born after 1960 will develop a malignancy in their lifetime. Elderly patients often have other co-morbidities and social complexities which will greatly increase the support required to safely deliver all treatment modalities.
- With a commitment to facilitate the earlier diagnosis of cancer, we will see an increase in the number of patients presenting with localised disease, needing more combined modality therapy to cure.
- More than half of those diagnosed with cancer will now survive for at least 10 years placing an increased emphasis on survivorship, care in the community and the long-term management of the late effects of cancer and its treatments.
- The development of acute oncology services (AOS) for the emergency management of patients presenting with problems directly related to treatment toxicities, disease progression or new diagnoses of malignant disease is ongoing. This ensures the most effective route to diagnosis and suitable treatment, including end of life care. This will lead to better support of and a reduction in pressure on more general acute medical services.
- The evidence-base and development pipeline for systemic anti-cancer therapies (SACT) will continue to evolve at a rapid pace. A significant proportion of agents in the current National Institute for Health and Care Excellence (NICE) assessment pipeline are novel “first-in-class” drugs. The increase in SACT options means that more patients can be treated and further lines of treatment offered to individual patients.
- Advances in radiotherapy techniques and artificial intelligence (AI) have also progressed rapidly over the past few years and will continue to do so, requiring service development including quality assurance and in the case of radiotherapy techniques additional planning time.
- Recent technological advances in cancer genomics will drive personalised medicine with treatments being used increasingly more selectively for the specific patients most likely to benefit. The implementation of personalised medicine will place further demand on the oncologist workforce both in its requirement for a more in-depth understanding of the scientific basis of treatments, the ability to communicate this to patients, carers and relatives and in ensuring all patients have access to the appropriate therapeutic options.
- Driving research across all disciplines will remain a key component of the clinical oncology work-force both to improve patient outcomes (in terms of survival and quality of life) and also to maximise resource utilisation. The majority of clinical oncologists are actively involved in clinical trials which are rapidly increasing in number, requiring extra clinician input and time.

This curriculum aims to produce clinical oncologists, focussed on delivering patient centred care (pre-, during and post-treatment), who have the specialist expertise required to manage the site-specialised needs of complex cancer care as well as the acute medical skills to manage the acute unscheduled care of cancer patients. It supports the development of clinicians who are flexible enough to shape the service in a location non-specific fashion and to adapt to its changing needs, assimilating and incorporating new evidence rapidly and utilising skill mix where possible. Finally, it promotes the leadership, training and supervision of other medical professionals in advanced practice roles to expand skill mix, expediting the patient pathway to improve patient experience, as well as managing service demand.

1.3 Scope of training

Specialty training in clinical oncology is an indicative five-year programme that will include exposure to all tumour types, body systems and patient groups with the objective of producing clinical oncologists who on completion of training will be equipped to deliver a general, acute and emergency service for cancer patients.

The curriculum will produce clinical oncologists who can lead the effective multi-disciplinary management of the complex and diverse set of diseases that comprise 'cancer', providing a holistic and patient-centred approach to care throughout the patient journey from diagnosis to cure/survivorship and/or end-of-life care. They will share the generic professional capabilities expected of all doctors; have a range of capabilities in common with other specialties, notably medical oncology; and have relevant specialty-specific capabilities.

1.4 Training pathway

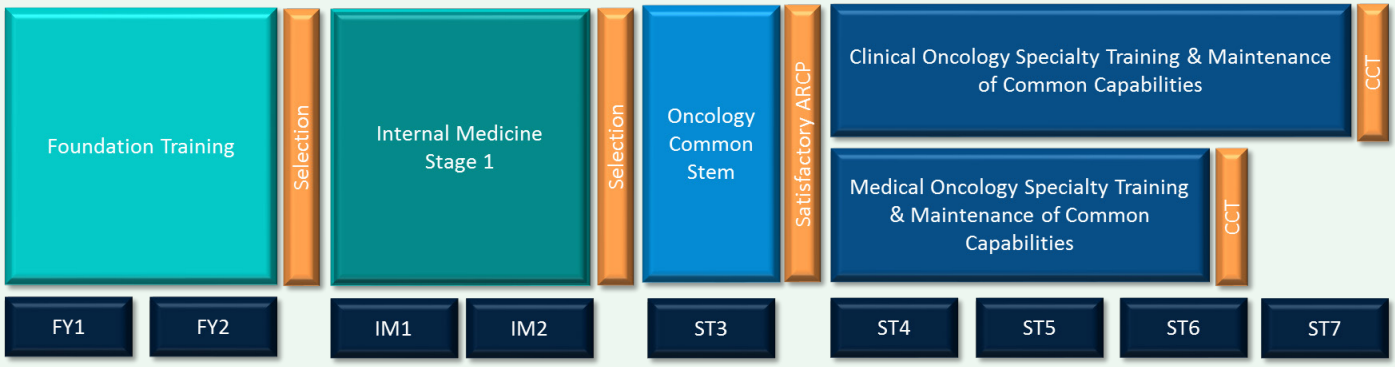
Clinical and medical oncologists work closely together as part of the wider cancer team to deliver the non-surgical components of cancer treatment plans. The curricula for clinical oncology and medical oncology have been aligned to reflect this relationship and include aspects of common training that constitute the Oncology Common Stem (OCS). This should improve transferability and flexibility for trainees wishing to move between the two specialties.

There are individual entry points into OCS for clinical and medical oncology following completion of the foundation training programme and an indicative 2 years of Internal Medicine Stage 1, or equivalent, as a minimum. All trainees entering either clinical oncology or medical oncology training must have acquired the full MRCP(UK) diploma. Trainees may have gained additional experience in other programmes before commencing clinical or medical oncology training.

The OCS has an indicative duration of one year, during which the primary focus will be on the development of the generic capabilities-in-practice (CiPs) expected of all doctors, and of common CiPs relating to the key areas of overlap between the two specialties. Following the successful completion of OCS, clinical oncology trainees will complete a subsequent specialty-specific programme of training with an indicative duration of a further four years, where the primary focus is on the acquisition of specialty-specific CiPs with further development and consolidation of common and generic CiPs. Medical oncology trainees will complete a similar specialty-specific programme of training, with an indicative duration of a further three years. The training pathway diagram

in Figure 1 illustrates this structure based on a trainee meeting the minimum entry requirements. Successful completion of the OCS will equip trainees with the necessary capabilities to progress to ST4 in either clinical oncology or medical oncology.

Figure 1: Training pathway for clinical oncology and medical oncology



Clinical oncology trainees are required to enrol with the RCR and become trainee members of the RCR prior to the commencement of their training. Trainees are required to maintain RCR membership, including the full payment of all applicable fees, throughout training for the RCR to be able to recommend them as eligible for award of a certificate of completion of training (CCT).

1.4.1 Less than full time training

Trainees are entitled to opt for less than full-time training programmes at the discretion of their local deanery and in compliance with current guidance from the GMC. Less than full-time trainees should assume that their clinical training will be of a duration pro-rata with the indicative time for full-time trainees, but this should be reviewed in accordance with the Gold Guide (A Reference Guide for Postgraduate Specialty Training in the UK)[9] published by the Conference Of Postgraduate Medical Deans. They should also 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 the equivalent stage.

1.5 Capabilities in Practice

To achieve CCT trainees are expected to demonstrate the capabilities described by the generic and specialty-specific high level outcomes, or 'capabilities in practice' (CiPs), as detailed below:

1.5.1 Generic Capabilities in Practice

1. Able to successfully function within NHS organisational and management systems
2. Able to deal with ethical and legal issues related to clinical practice
3. Communicates effectively and is able to share decision making, while maintaining appropriate situational awareness, professional behaviour and professional judgement
4. Is focussed on patient safety and delivers effective quality improvement in patient care

5. Carrying out research and managing data appropriately
6. Acting as a clinical teacher and clinical supervisor

1.5.2 Oncology Capabilities in Practice

7. Applying knowledge and understanding of the scientific principles that underpin malignancy for the provision of high-quality and safe patient-centred cancer care.
8. Delivering the acute oncology take, managing oncological emergencies and providing oncology advice to other healthcare professionals as part of an Acute Oncology Service and managing the AOS team
9. Providing continuity of care to oncology in-patients to include the effective management of disease and treatment-related complications, the acutely deteriorating patient and the palliative care/end-of-life needs of those with advanced cancer
10. Working effectively within and contributing expert opinion to the tumour site-specific multi-disciplinary team (MDT) meeting to inform evidence-based management plans individualised to the needs of each patient, leading discussions where appropriate
11. Assessing patients at all stages of the cancer pathway from diagnosis to end-of-life care, considering the holistic needs of individuals and the additional needs of vulnerable groups to formulate patient-centred management plans
12. Safely and effectively delivering, and managing patients receiving, standard systemic anticancer therapies (SACT) in the curative, neo-adjuvant, adjuvant and palliative settings
13. Acting as an advocate for health promotion and high-quality cancer survivorship, advising on cancer prevention, management of long-term treatment-related sequalae and patient self-management strategies

1.5.3 Clinical Oncology – Specific Capabilities in Practice

14. Correctly interpreting radiological imaging for accurate target volume and organ-at-risk definition in radiotherapy planning
15. Safely and effectively delivering, and managing patients receiving, a course of radical and combined modality radiotherapy (to include consideration and utilisation of emerging techniques)
16. Safely and effectively delivering, and managing patients receiving, a course of palliative radiotherapy
17. Safely and effectively delivering, and managing patients receiving, a course of radioisotope therapy using an unsealed source to include post-therapy radiation protection measures
18. Safely and effectively managing patients treated with brachytherapy and their complications
19. Participating in clinical research trials and developing guidelines and protocols to safely implement new radiotherapy/combined modality regimens/techniques

1.6 Flexibility of training

The curriculum supports flexibility and transferability of outcomes across related specialties and disciplines, reflecting key interdependencies between the clinical oncology curriculum and other training programmes, outlined below.

With the introduction of the OCS and alignment of common areas throughout the clinical oncology and medical oncology curricula, transferability between clinical oncology and medical oncology at any stage of training will be facilitated with the formal recognition of attainment of oncology capabilities common to both specialties. This builds on the existing use of the Accreditation of Transferable Competences Framework which recognises previous training.

Any trainee wishing to transfer specialty between clinical and medical oncology would be required to do so in open competition, through the existing national recruitment process. This applies to trainees at any stage of training, including those at the end of OCS. However, this training pathway promotes the recognition of capabilities, rather than simply time served, giving oncology trainees the confidence that were they to switch specialty there would be the appropriate acknowledgment of the relevance of their training thus far.

There is overlap between parts of the haematology, palliative medicine and other medical and surgical specialty curricula. The generic CiPs have been developed in partnership with the Joint Royal Colleges of Physicians Training Board (JRCPTB) and align directly with the generic CiPs in the Internal Medicine Stage 1 curriculum and those of the other medical specialties. This will facilitate transferability between clinical oncology and these medical specialties.

1.7 Generic professional capabilities and good medical practice

The GMC has developed the Generic professional capabilities (GPC) framework[10] with the Academy of Medical Royal Colleges (AoMRC) to describe the fundamental, career-long, generic capabilities required of every doctor. The framework describes the requirement to develop and maintain key professional values and behaviours, knowledge, and skills, using a common language. GPCs also represent a system-wide, regulatory response to the most common concerns about patient safety and fitness to practise within the medical profession. The framework will be relevant at all stages of medical education, training and practice.

Good medical practice (GMP)[11] is embedded at the heart of the GPC framework. In describing the principles, duties and responsibilities of doctors, the GPC framework articulates GMP as a series of achievable educational outcomes to enable curriculum design and assessment.

The GPC framework describes nine domains (shown in Figure 2) with associated descriptors outlining the 'minimum common regulatory requirement' of performance and professional behaviour for those completing a CCT or its equivalent. These attributes are common, minimum and generic standards expected of all medical practitioners achieving a CCT or its equivalent.

The domains and subsections of the GPC framework are directly identifiable in the clinical oncology curriculum. They are mapped to each of the generic and specialty CiPs, which are in turn mapped to the assessment blueprints. This is to emphasise that they must be demonstrated at every stage of training as part of the holistic development of responsible professionals.

This approach will allow early detection of issues most likely to be associated with fitness to practise and to minimise the possibility that any deficit is identified during the final phases of training.

Figure 2: The nine domains of Generic Professional Capabilities[6]

This purpose statement has been endorsed by the GMC's Curriculum Oversight Group and confirmed as meeting the needs of the health services of the countries of the UK.

2 Content of learning

The practice of clinical oncology requires generic, common oncology and clinical oncology specialty-specific knowledge, skills and attitudes to diagnose, and manage, patients referred with underlying malignancies. It involves particular emphasis on the reasoning behind management decisions, communicating uncertainty and working with the multi-disciplinary team to ensure appropriate speciality opinion or care is sought when required.

To achieve CCT trainees are expected to demonstrate achievement of the generic, oncology and clinical oncology-specific high level outcomes, known as 'capabilities in practice' or 'CiPs'. The CiPs describe the professional capabilities required of a consultant clinical oncologist. Each CiP has a number of descriptors that underpin it, is mapped to the GMC's Generic Professional Capabilities and accompanied by suggested evidence that may demonstrate progress towards achieving this CiP.

The descriptors are intended to provide guidance to trainees and trainers about the range of clinical contexts which may support achievement of the CiPs, however they are not intended to be prescriptive and do not provide an exhaustive list. Trainees may demonstrate their progress against the CiPs in a variety of different ways, reflecting their strengths, areas of interest and the resources available to them, and should be encouraged to find innovative ways to achieve this. They may also complete activities that provide evidence for more than one CiP.

The level at which trainees meet each CiP is stage dependent and is expected to progress in a spiral fashion throughout training. Trainees will develop at different rates and may be able to demonstrate a higher level of progress in some CiPs compared to others. Excellent trainees may be able to evidence higher achievement at an earlier stage, provide a broader portfolio of evidence, or provide evidence that shows a deeper level of learning. The programme of assessment that forms part of this curriculum outlines the minimum expected levels of achievement at each stage of training. Assessment will require clinical and educational supervisors to make entrustment decisions on the level of supervision required for each CiP or underlying activity at each stage of training. More detail is provided in the programme of assessment section of the curriculum.

2.1 Generic CiPs

CiP 1

Able to function successfully within NHS organisational and management systems

Descriptors

- Aware of and adheres to the GMC professional requirements
- Aware of public health issues including population health, social detriments of health and global health perspectives
- Demonstrates effective clinical leadership
- Demonstrates promotion of an open and transparent culture
- Keeps practice up to date through learning and teaching
- Demonstrates engagement in career planning
- Demonstrates capabilities in dealing with complexity and uncertainty
- Aware of the role of and processes for commissioning

Suggested evidence

- MCR
- MSF
- Active role in governance structures
- Management course
- End of placement reports

Mapping to GPCs

- Domain 1: Professional values and behaviours
- Domain 3: Professional knowledge
  - professional requirements
  - national legislative requirements
  - the health service and healthcare systems in the four countries
- Domain 9: Capabilities in research and scholarship

CiP 2

Able to deal with ethical and legal issues related to clinical practice

Descriptors

- Aware of national legislation and legal responsibilities, including safeguarding vulnerable groups
- Behaves in accordance with ethical and legal requirements
- Demonstrates ability to offer apology or explanation when appropriate
- Demonstrates ability to lead the clinical team in ensuring that medical legal factors are considered openly and consistently

Suggested evidence

- MCR
- MSF
- CbD
- Mini-CEX
- End of placement reports

Mapping to GPCs

- Domain 3: Professional knowledge
  - professional requirements
  - national legislative requirements
  - the health service and healthcare systems in the four countries
- Domain 4: Capabilities in health promotion and illness prevention
- Domain 7: Capabilities in safeguarding vulnerable groups
- Domain 8: Capabilities in education and training
- Domain 9: Capabilities in research and scholarship

CiP 3

Communicates effectively and is able to share decision making, while maintaining appropriate situational awareness, professional behaviour and professional judgement

Descriptors

- Communicates clearly with patients and carers in a variety of settings
- Communicates effectively with clinical and other professional colleagues
- Identifies and manages barriers to communication (e.g. cognitive impairment,speech and hearing problems, capacity issues)
- Demonstrates effective consultation skills including effective verbal and non-verbal interpersonal skills
- Shares decision making by informing the patient, prioritising the patient's wishes, and respecting the patient's beliefs, concerns and expectations
- Shares decision making with children and young people
- Applies management and team working skills appropriately, including influencing, negotiating, re-assessing priorities and effectively managing complex, dynamic situations

Suggested evidence

- MCR
- MSF
- Mini-CEX
- End of placement reports ES report

Mapping to GPCs

- Domain 2: Professional skills
  - practical skills
  - communication and interpersonal skills
  - dealing with complexity and uncertainty
  - clinical skills (history taking, diagnosis and medical management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable disease)
- Domain 5: Capabilities in leadership and teamworking

CiP 4

Is focused on patient safety and delivers effective quality improvement in patient care

Descriptors

- Makes patient safety a priority in clinical practice
- Raises and escalates concerns where there is an issue with patient safety or quality of care
- Demonstrates commitment to learning from patient safety investigations and complaints
- Shares good practice appropriately
- Contributes to and delivers quality improvement
- Understands basic Human Factors principles and practice at individual, team, organisational and system levels
- Understands the importance of non-technical skills and crisis resource management
- Recognises and works within limit of personal competence

Suggested evidence

- MCR
- MSF
- QIPAT
- End of placement reports

Mapping to GPCs

- Domain 1: Professional values and behaviours
- Domain 2: Professional skills
  - practical skills
  - communication and interpersonal skills
  - dealing with complexity and uncertainty
  - clinical skills (history taking, diagnosis and medical management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable disease)
- Domain 3: Professional knowledge
  - professional requirements
  - national legislative requirements
  - the health service and healthcare systems in the four countries
- Domain 4: Capabilities in health promotion and illness prevention
- Domain 5: Capabilities in leadership and teamworking
- Domain 6: Capabilities in patient safety and quality improvement
  - patient safety
  - quality improvement

CiP 5

Carrying out research and managing data appropriately

Descriptors

- Manages clinical information/data appropriately
- Understands principles of research and academic writing
- Demonstrates ability to carry out critical appraisal of the literature
- Understands the role of evidence in clinical practice and demonstrates shared decision making with patients
- Demonstrates appropriate knowledge of research methods, including qualitative and quantitative approaches in scientific enquiry
- Demonstrates appropriate knowledge of research principles and concepts and the translation of research into practice
- Follows guidelines on ethical conduct in research and consent for research
- Understands public health epidemiology and global health patterns
- Recognises potential of applied informatics, genomics, stratified risk and personalised medicine and seeks advice for patient benefit when appropriate

Suggested evidence

- MCR
- MSF
- GCP certificate
- Evidence of literature search and critical appraisal of research
- Use of clinical guidelines
- QIPAT
- Evidence of research activity
- End of placement reports

Mapping to GPCs

- Domain 3: Professional knowledge
  - professional requirements
  - national legislative requirements
  - the health service and healthcare systems in the four countries
- Domain 7: Capabilities in safeguarding vulnerable groups
- Domain 9: Capabilities in research and scholarship

CiP 6

Acting as a clinical teacher and clinical supervisor

Descriptors

- Delivers effective teaching and training to medical students, junior doctors and other health care professionals
- Delivers effective feedback with action plan
- Able to supervise less experienced trainees in their clinical assessment and management of patients
- Able to supervise less experienced trainees in carrying out appropriate practical procedures
- Able to act a clinical supervisor to doctors in earlier stages of training

Suggested evidence

- MCR
- MSF
- TO
- Relevant training course
- End of placement reports

Mapping to GPCs

- Domain 1: Professional values and behaviours
- Domain 8: Capabilities in education and training

2.2 Oncology CiPs

CiP 7

Applying knowledge and understanding of the scientific principles that underpin malignancy for the provision of high-quality and safe patient-centred cancer care

Descriptors

- Demonstrates knowledge of cancer biology at a molecular and cellular level and understands how this translates into targets for systemic anti-cancer treatments
- Demonstrates knowledge of radiation biology and understands how this translates into acute and late radiotherapy reactions to underpin their safe and effective management
- Demonstrates knowledge and understanding of the clinical pharmacology of systemic anti-cancer therapies to underpin their safe and effective use and the appropriate management of complications
- Demonstrates knowledge and understanding of the physics relevant to radiotherapy
- Demonstrates knowledge and understanding of the design and organization of clinical trials and the relevant statistical methodology to correctly interpret results and critically appraise the evidence base
- Demonstrates knowledge and understanding of causation and risk factors for developing cancer to be able to advise on appropriate strategies to reduce these
- Demonstrates knowledge and understanding of the principles underpinning cancer screening programmes to be able to counsel patients appropriately

Suggested evidence

- Attendance at an appropriate oncology course
- FRCR part 1/SCE examinations
- GCP certificate
- CbD
- DOST
- DORPS
- End of placement reports

Mapping to GPCs

- Domain 3: Professional knowledge
  - professional requirements
  - national legislative requirements
- Domain 4: Capabilities in health promotion and illness prevention

CiP 8

Delivering the acute oncology take, managing oncological emergencies and providing oncology advice to other healthcare professionals as part of an Acute Oncology Service and managing the AOS team

Descriptors

- Safely assesses and manages the immediate and ongoing care of patients presenting acutely with complications of cancer and its treatment
- Coordinates targeted investigation and rapid triage of patients presenting with a possible new diagnosis of malignancy, malignancy of undefined origin (MUO) and carcinoma of unknown primary (CUP)
- Liaises effectively with other specialist services as appropriate, supporting ongoing management
- Assesses the appropriate ceiling of care taking the cancer context and the holistic patient assessment into account and sensitively discusses this with the patient and their advocates
- Participates effectively in decision-making with regard to resuscitation, including decisions not to attempt cardiopulmonary resuscitation (CPR), and communicates sensitively with patients and their advocates in regard to these decisions
- Ensures clear and adequate documentation of an acute event, appropriate follow up plans and clear and timely communication with community based teams and the responsible specialist team
- Understands the local and regional Acute Oncology Service and communicates effectively between the elements of the service, community based services, specialist teams and patients
- Leads the Acute Oncology team when appropriate to monitor, maintain and develop a high quality service

Suggested evidence

- Mini-CEX
- CbD
- MSF
- MCR
- ACAT
- End of placement report

Mapping to GPCs

- Domain 1: Professional values and behaviours
- Domain 2: Professional skills
  - practical skills
  - communication and interpersonal skills
  - dealing with complexity and uncertainty
  - clinical skills
- Domain 3: Professional knowledge
  - professional requirements
  - national legislative requirements
- Domain 5: Capabilities in leadership and team working

CiP 9

Providing continuity of care to oncology in-patients to include the effective management of disease and treatment-related complications, the acutely deteriorating patient and the palliative care/end-of-life needs of those with advanced cancer

Descriptors

- Ensures continuity of patient care through safe and effective handover to hospital and community-based teams
- Safely and effectively manages disease and treatment-related complications in oncology patients taking into consideration acute and chronic medical co-morbidities and liaising with relevant specialty services when required
- Promptly identifies the acutely deteriorating patient, institutes the appropriate initial medical management and seeks appropriate advice, including from other specialties
- Knows the prognoses and treatment options of different cancers and considers these, together with individual patient factors and wishes, to decide on an appropriate ceiling of care, including escalation to HDU/ITU
- Understands current guidance regarding CPR orders, participates in shared decision-making and involves other relevant professionals in complex cases
- Communicates and works effectively with relevant multi-professional teams to provide appropriate holistic in-patient care and safe and timely hospital discharge
- Effectively manages the common physical symptoms in patients with advanced cancer, recognising the role for pain management, supportive medications, palliative radiotherapy and other approaches. Liaises with specialist palliative care teams when required
- Recognises when a patient is approaching the end of life, communicates effectively and compassionately with patients and carers regarding advanced care planning and individualised end of life care plans

Suggested evidence

- MSF
- CbD
- Mini-CEX
- ACAT
- MCR
- End of placement report

Mapping to GPCs

- Domain 2: professional skills
  - practical skills
  - communication and interpersonal skills
  - dealing with complexity and uncertainty
  - clinical skills
- Domain 5: capabilities in leadership and teamworking

CiP 10

Working effectively within and contributing expert opinion to the tumour site-specific multi-disciplinary team (MDT) meeting to inform evidence-based management plans individualised to the needs of each patient, leading discussions where appropriate

Descriptors

- Presents new cases to the MDT in a clear and concise manner highlighting the relevant points and questions to be answered
- Understands the indications for all treatment options available for different types and stages of cancer within the tumour site, applying relevant guidelines and the most up-to-date evidence base to give an informed oncology opinion
- Assesses the risks and benefits of treatment options for each patient considering disease stage, tumour biology and individual patient factors to formulate an appropriate personalised management plan
- Recognises the limitations of clinical guidelines in cases of uncertainty or complexity
- Communicates views and recommendations clearly, promptly and effectively to all members of the MDT
- Respects the expertise, viewpoints and responsibilities of all MDT members and helps foster a supportive and collaborative environment for open discussion
- Understands the local, regional and supra-regional MDT network and communicates effectively between the elements of the service

Suggested evidence

- CbD
- Mini-CEX
- MSF
- MCR
- Patient feedback
- End of placement reports

Mapping to GPCs

- Domain 3: Professional knowledge
  - professional requirements
  - national legislative requirements
  - the health service and healthcare system in the four countries
- Domain 5: Capabilities in leadership and team working

CiP 11

Assessing patients at all stages of the cancer pathway from diagnosis to end-of-life care, considering the holistic needs of individuals and the additional needs of vulnerable groups to formulate patient-centred management plans to the needs of each patient, leading discussions where appropriate

Descriptors

- Formulates a holistic patient-centred diagnostic and management plan
- Determines when genetic testing and/or referral for genetic counselling is appropriate
- Correctly interprets the results of clinical, pathological, genomic and radiological investigations to accurately diagnose and stage cancer
- Accurately assesses the role of all treatment modalities relevant to the individual patient and ensures multidisciplinary team involvement
- Selects the most appropriate treatment regimen and associated supportive measures according to best available evidence, holistic patient assessment and patient preferences
- Applies evidence-based practice to management decisions
- Discusses prognosis and treatment aims with patients, giving due consideration to their values and priorities
- Understands and discusses the potential effects of treatment on fertility and pregnancy and where applicable refers for consideration of fertility preservation
- Ensures equitable patient access to relevant clinical trials
- Obtains informed consent, ensuring that patients have sufficient information and time to consider risks and benefits, including the possibility of no treatment
- Where patients lack capacity to give informed consent, make appropriate ‘best interest’ decisions, involving all relevant parties
- Recognises the psychological, financial and social impact of cancer on patients and their families and signpost to sources of ongoing support
- Recognises when further or continuing treatment is no longer appropriate and sensitively discusses this with patients and their advocates
- Recognises the need for tailored support for specific and/or vulnerable groups, showing sensitivity to issues of equality and diversity
- Recognises the limitations of clinical guidelines in certain complex situations

CiP 11

Suggested evidence

- CbD
- Mini-CEX
- DOST
- MSF
- MCR
- ACAT
- FRCR/SCE examinations
- End of placement report
- Patient feedback

Mapping to GPCs

- Domain 1: Professional values and behaviours
- Domain 2: Professional skills
  - practical skills
  - communication and interpersonal skills
  - dealing with complexity and uncertainty
  - clinical skills
- Domain 3: Professional knowledge
  - professional requirements
  - national legislative requirements
- Domain 5: Capabilities in leadership and team working
- Domain 7: Capabilities in safeguarding vulnerable groups
- Domain 9: Capabilities in research and scholarship

CiP 12

Safely and effectively delivering, and managing patients receiving, standard systemic anticancer therapies (SACT) in the curative, neo-adjuvant, adjuvant and palliative settings

Descriptors

- Selects the most appropriate SACT regimen and associated supportive measures for the clinical situation according to available evidence, MDT discussion and holistic patient assessment
- Modifies approach to address the specific needs of individual patients, including vulnerable groups
- Clearly communicates the benefits and risks of available treatment options, including those available within clinical trials, to enable informed consent
- Applies the knowledge of mechanisms of action and treatment toxicities to pre-empt, monitor and manage these in patients receiving SACT
- Co-ordinates the appropriate investigations, procedures and logistic arrangements required for SACT delivery
- Generates a SACT prescription that is safe and accurate
- Evaluates toxicity and response during treatment and adapts SACT/supportive measures accordingly, balancing treatment goals with patient safety and priorities
- Assesses and reports SACT toxicity according to regulatory and, where relevant, research governance processes
- Collaborates effectively with members of the multi-disciplinary team when patients are receiving SACT as part of a multi-modality treatment pathway
- Pro-actively liaises with the relevant teams when SACT is completed or discontinued to enable co-ordinated ongoing management

Suggested evidence

- Mini-CEX
- CbD
- DOST
- ACAT
- MSF
- MCR
- End of placement report
- Local/national SACT competency assessment
- FRCR/SCE examinations

CiP 12

Mapping to GPCs

- Domain 1: Professional values and behaviours
- Domain 2: Professional skills
  - practical skills
  - communication and interpersonal skills
  - dealing with complexity and uncertainty
  - clinical skills
- Domain 3: Professional knowledge
  - professional requirements
  - national legislative requirements
- Domain 5: Capabilities in leadership and team working
- Domain 6: Capabilities in patient safety and quality improvement
- Domain 9: Capabilities in research and scholarship

CiP 13

Acting as an advocate for health promotion and high-quality cancer survivorship, advising on cancer prevention, management of long-term treatment-related sequalae and patient self-management strategies

Descriptors

- Recognises the factors affecting global cancer health inequalities and the social determinants of health, including physical, economic and cultural factors, which impact on cancer risks
- Can give personalised risk reduction advice to patients taking into account lifestyle, environmental and genetic factors
- Is able to formulate a patient-centred follow up plan for patients who have completed a course of cancer treatment
- Promotes survivorship following cancer treatment
- Pro-actively manages and educates patients about the long-term sequalae of cancer treatments, in conjunction with other health professionals where relevant
- Provides specialist advice to other health professionals regarding cancer risks and appropriate investigation of patients following cancer treatment

Suggested evidence

- Mini-CEX
- CbD
- MSF
- MCR
- ACAT
- End of placement report
- Patient feedback

CiP 13

Mapping to GPCs

- Domain 1: Professional values and behaviours
- Domain 2: Professional skills
  - practical skills
  - communication and interpersonal skills
  - dealing with complexity and uncertainty
  - clinical skills
- Domain 3: Professional knowledge
  - national legislative requirements
- Domain 4: Capabilities in health promotion and illness prevention
- Domain 5: Capabilities in leadership and team working
- Domain 6: Capabilities in patient safety and quality improvement
  - patient safety
- Domain7: Capabilities in safeguarding vulnerable groups
- Domain 8: Capabilities in education and training

2.3 Clinical oncology-specific CiPs

CiP 14

Correctly interpreting radiological imaging for accurate target volume and organ-at-risk definition in radiotherapy planning

Descriptors

- Accurately recognises the radiological anatomy visible on optimal imaging modalities
- Uses diagnostic imaging (with the aid of the imaging reports) to identify cancer pathology on radiotherapy planning scans and appropriately defines target volumes, organs at risk and normal anatomical structures.
- Reviews imaging with a radiologist in cases of complexity or uncertainty

Suggested evidence

- Mini-CEX
- CbD
- DORPs
- Final FRCR examination
- End of placement reports

Mapping to GPCs

- Domain 1: Professional values and behaviours
- Domain 2: Professional skills
  - Practical skills
  - Communication and interpersonal skills
  - Dealing with complexity and uncertainty
- Domain 3: Professional knowledge
  - Professional requirements
  - National legislative requirements
- Domain 5: Capabilities in leadership and team working

CiP 15

Safely and effectively delivering, and managing patients receiving, a course of radical and combined modality radiotherapy (to include consideration and utilisation of emerging techniques)

Descriptors

- Determines the most appropriate dose/fractionation regime for the clinical situation and patient factors, including concomitant systemic therapy
- Takes into account when radiotherapy has been given previously (possibly for a separate cancer diagnosis) and demonstrates an understanding of how this may impact on current treatment decisions
- Identifies and organises appropriate investigations and procedures required prior to treatment
- Determines the most appropriate radiotherapy treatment strategy to include patient position, immobilization techniques, methods of tumour localization and radiotherapy delivery techniques
- Accurately determines appropriate target volumes and organs at risk for the chosen regimen of radical radiotherapy
- Critically evaluates a radiotherapy treatment plan
- Evaluates digitally reconstructed radiographs and on-line portal imaging to assess accuracy of patient set-up and verify a treatment plan and recommends adjustments if required
- Assesses patients undergoing radical radiotherapy and manages acute radiotherapy reactions appropriately, including dose or volume adjustment in cases of severe toxicity
- Recognises the detrimental impact of treatment prolongation on radiotherapy efficacy and has strategies for dealing with gaps in treatment
- Assesses patients following radical radiotherapy in the out-patient clinic, recognises and manages acute and late toxicities, and refers to relevant specialists if required

Suggested evidence

- Mini-CEX
- CbD
- DORPs
- Final FRCR examination
- End of placement reports

CiP 15

Mapping to GPCs

- Domain 1: Professional values and behaviours
- Domain 2: Professional skills
  - Practical skills
  - Communication and interpersonal skills
  - Dealing with complexity and uncertainty
  - Clinical skills
- Domain 3: Professional knowledge
  - Professional requirements
  - National legislative requirements
  - The health service and healthcare system in the four countries
- Domain 5: Capabilities in leadership and team working
- Domain 6: Capabilities in Patient safety Quality improvement
  - patient safety

CiP 16

Safely and effectively delivering, and managing patients receiving, a course of palliative radiotherapy

Descriptors

- Takes a relevant history and performs an appropriate clinical examination to make an accurate assessment of symptoms to assist in defining the area to be treated
- Determines the most appropriate radiotherapy treatment strategy to include patient position, immobilization techniques and field arrangement
- Determines the most appropriate dose / fractionation regime for the clinical situation
- Appropriately defines and arranges palliative fields with adequate margins around target sites to allow for internal organ motion and set-up variation
- Understands the risks of re-treatment with radiotherapy based on normal tissue tolerances, accurately assesses when re-treatment is acceptable and counsels the patient appropriately
- In cases of re-treatment, is able to calculate EQD2 (or BED) for planned and previous treatments to ensure maximum tolerated dose is not exceeded, taking into account expected recovery over time and seeking advice from colleagues where appropriate
- Safely prescribes supportive treatment

Suggested evidence

- Mini-CEX
- CbD
- DORPs
- Final FRCR examination
- End of placement reports

Mapping to GPCs

- Domain 1: Professional values and behaviours
- Domain 2: Professional skills
  - Practical skills
  - Communication and interpersonal skills
  - Dealing with complexity and uncertainty
  - Clinical skills
- Domain 3: Professional knowledge
  - Professional requirements
  - National legislative requirements
- Domain 6: Capabilities in Patient safety Quality improvement
  - patient safety

CiP 17

Safely and effectively delivering, and managing patients receiving, a course of radioisotope therapy using an unsealed source to include post-therapy radiation protection measures

Descriptors

- Able to identify patients suitable for treatment with unsealed radio-isotope therapy
- Exercise evidence based practice to determine the most appropriate radio-isotope, delivery system and radiation dose for the clinical situation.
- Practices holistically and considers patient factors and preference in choice of treatment.
- Understands the radiation protection measures required following therapy and is able to communicate them appropriately
- Identifies and organises appropriate investigations and procedures required prior to treatment
- Communicates effectively with the wider team to ensure the availability of all required facilities and personnel
- Understands how to safely prescribe radio-isotopes and supportive medications
- Is able to recognise and manage any acute and late complications of treatment
- Understands legislation governing the use of unsealed radio-isotope sources in hospitals in the UK

Suggested evidence

- Mini-CEX
- CbD
- Final FRCR examination
- End of placement reports

Mapping to GPCs

- Domain 1: Professional values and behaviours
- Domain 2: Professional skills
  - Practical skills
  - Communication and interpersonal skills
  - Clinical skills
- Domain 3: Professional knowledge
  - Professional requirements
  - National legislative requirements
- Domain 4: Capabilities in health promotion and illness prevention
- Domain 5: Capabilities in leadership and team working
- Domain 6: Capabilities in Patient safety Quality improvement
  - patient safety

CiP 18

Safely and effectively managing patients treated with brachytherapy and their complications

Descriptors

- Able to identify patients suitable for brachytherapy treatment based on evidence, availability and patient factors
- Determines the most appropriate dose/fractionation regime according to the evidence base, the chosen source and delivery system and any patient factors
- Identifies and organises appropriate investigations and procedures required prior to treatment
- Communicates effectively with the wider team to ensure the availability of all required facilities and personnel
- Understands how the procedure should be performed and the rules for implantation as per the dosimetry system used
- Correctly determines the volume to be treated and the organs at risk for the procedure
- Appropriately evaluates a brachytherapy treatment plan in line with consensus guidelines and employs suitable strategies to improve an inadequate plan
- Understands how to safely prescribe the radiation dose according to plan constraints
- Understands the radiation protection measures required following a brachytherapy procedure and is able to communicate them appropriately
- Able to recognise and appropriately manage any acute and late complications of treatment
- Understands and applies legislation governing the use of sealed brachytherapy sources in hospitals in the UK

Suggested evidence

- Mini-CEX
- CbD
- DORPs
- First FRCR examination
- Final FRCR examination
- End of placement reports

CiP 18

Mapping to GPCs

- Domain 1: Professional values and behaviours
- Domain 2: Professional skills
  - Practical skills
  - Communication and interpersonal skills
  - Dealing with complexity and uncertainty
  - Clinical skills
- Domain 3: Professional knowledge
  - Professional requirements
  - National legislative requirements
- Domain 6: Capabilities in Patient safety Quality improvement
  - patient safety

CiP 19

Participating in clinical research trials and developing guidelines and protocols to safely implement new radiotherapy/combined modality regimens/techniques

Descriptors

- Understands and adheres to the laws, frameworks and guidelines which govern the set up and delivery of clinical trials
- Understands and adheres to trial protocols
- Understands and follows the correct safety reporting requirements, including reporting mechanisms for any deviations from protocol or adverse events
- Understands the roles and responsibilities of national organisations involved in oncology trials, including radiotherapy trials quality assurance (RTTQA)
- Demonstrates knowledge of available new radiotherapy techniques and potential benefits and risks

Suggested evidence

- Mini-CEX
- GCP certificate
- QIPAT
- End of placement reports

Mapping to GPCs

- Domain 3: Professional knowledge
  - Professional requirements
  - National legislative requirements
  - The health service and healthcare system in the four countries
- Domain 4: Capabilities in health promotion and illness prevention
- Domain 5: Capabilities in leadership and team working
- Domain 6: Capabilities in Patient safety Quality improvement
  - patient safety
  - quality improvement
- Domain 8: Capabilities in education and training
- Domain 9: Capabilities in research and scholarship

Key to suggested evidence			
ACAT	Acute care assessment tool	**MCR**	Multiple consultant report
CbD	Case-based discussion	**Mini-CEX**	Mini clinical evaluation exercise
DORPS	Direct observation of radiotherapy planning skills	**MSF**	Multi-source feedback
DOST	Direct observation of systemic therapy	**QIPAT**	Quality improvement project and audit assessment tool
FRCR	Fellowship of the Royal College of Radiologists	**SCE**	Specialty certificate examination
GCP	Good clinical practice	**TO**	Teaching observation

2.4 The scientific basis of cancer and its treatments

During the oncology common stem trainees should build an understanding of the scientific basis of cancer and its treatments, as this underpins all aspects of oncology practice. This should be delivered through a formal programme of teaching comprising an indicative minimum of 160 hours including lectures, tutorials and practical sessions, covering the following topics:

- normal and malignant cell and molecular biology
- cancer causation, risk factors and screening
- radiation biology
- physics as applied to radiotherapy
- clinical pharmacology of systemic anti-cancer therapies
- clinical trials methodology and medical statistics

The First FRCR examination taken in ST4 assesses this knowledge. More detail on the examination can be found in the programme of assessment and on the RCR website.

2.5 Acute oncology presentations

Trainees need to be able to manage acute oncology services and to diagnose and manage acute presentations and conditions. Table 1 below outlines the patient groups covered by this service, together with examples of commonly associated acute conditions/presentations.

The range of possible presentations in these groups of patients covers the breadth of acute medicine and any attempt to comprehensively list all presentations and conditions would be extensive, but inevitably incomplete. The examples given are those which are cancer or cancer treatment-related, and either common or serious. Our approach is to provide guidance rather than exhaustive detail and this table should be interpreted with common sense.

Table 1: acute oncology patient groups and commonly associated presentations and conditions

Acute oncology patient group	Commonly associated acute conditions/presentations
Acutely unwell adult patients who present as an emergency and have a suspected new diagnosis of cancer	▪ Investigation of imaging suggestive of metastatic cancer ▪ Identification of the primary site of origin in those where metastatic cancer confirmed ▪ Management of metastatic cancer in those in whom a primary site of origin cannot be identified
Acutely unwell adult patients who are currently receiving systemic anti-cancer treatment and/or radiotherapy.	▪ Infection in immuno-compromised patients ▪ Immune toxicities ▪ Specific-organ damage e.g. pneumonitis, nephropathy, hepatic failure, cardiotoxicity, ▪ Tumour lysis syndrome ▪ Acute radiation side effects e.g. mucositis, GI/GU effects, cutaneous toxicity
Acutely unwell adult patients who have a known cancer diagnosis and may be suffering from acute complications of cancer	▪ Pain ▪ Malignant spinal cord compression ▪ Superior vena cava obstruction ▪ Cancer-related venous thromboembolism ▪ Metabolic disorders e.g. hypercalcaemia, hyponatraemia ▪ Seizures, reduced GCS ▪ Para-neoplastic syndromes

2.6 Tumour types

2.6.1 Tumour types in the OCS year

It is important to note that all of the CiPs are intended to be developed throughout higher specialty training. The focus in the OCS year is on the common oncology CiPs, but these will continue to be developed throughout higher training. As such, there is no content of the curriculum which is unique to the OCS year.

During this year, trainees should rotate through posts and tumour types that allow them to attain the required levels of progression for the common oncology CiPs (see Table 5), allowing broad exposure at an appropriate level to acute oncology, systemic anti-cancer therapies, radiation-based treatments and patients on clinical trials.

2.6.2 Tumour types in ST4-ST7

It is expected that trainees will complete posts covering the majority of tumour types prior to sitting the FRCR 2B examination in ST6. This will ensure that trainees have the broad based knowledge required for progression into the final year of training, where it is expected that they will focus on developing a more in depth knowledge of a small number of tumour types.

It is understood that some trainees may not have direct clinical experience of uncommon tumours, including paediatric tumours, however it is expected that they will have an understanding of, and be able to apply general principles to these tumour types.

2.7 Emerging technology

Trainees are expected to keep up to date with, embrace and evaluate emerging technologies and should be prepared to adapt these tools into clinical practice once validated. This includes, but is not limited to, genomics and artificial intelligence (AI).

2.7.1 Genomics

Genomics is one of the main drivers towards delivering precision medicine and genomic data is increasingly being used to inform diagnosis, treatment selection and patient management. Trainees should have an appreciation of:

- the use of genomic data to inform diagnosis, identify personalised treatment options, and to predict and monitor treatment response
- the opportunities provided by genomics for targeted treatment to improve response and reduce side effects
- the application of genomic profiling to the design of clinical trials
- the need to promote equal access to genomic testing

2.7.2 AI

AI tools are being developed to assist with diagnosis and treatment of cancer. Trainees should have an appreciation of:

- the basic statistics needed to interpret a clinical trial involving the testing of AI
- the basic concepts of radiomics to aid diagnosis/ prognosis
- automated support, including limitations, of various parts of the radiotherapy clinical work-flow: target and tissue segmentation, treatment planning, radiotherapy delivery, and treatment response assessment
- how machine learning detects patterns in large volumes of high-dimensional data and the limitations in translating these into the clinical setting

2.8 Breadth of training

2.8.1 Mandated Training

Acute oncology

Training in acute oncology is a mandatory part of the curriculum for all trainees from ST3 to ST6 and trainees should develop capabilities in acute oncology longitudinally throughout training. It is not expected that trainees will develop the ability to practise independently in all aspects of this CiP in the OCS year alone.

Acute oncology service models vary according to regional service configurations and resources. They are delivered by multi-professional teams in a wide variety of settings from specialist teams in tertiary cancer centres, to supporting acute and general medical teams in district general hospitals. Acute oncology training may be delivered in this full range of settings, supervised and assessed by any appropriately qualified member of the acute oncology team. This is not limited to clinical oncology or medical oncology consultants provided that there are clear educational objectives linked to this CiP, effective feedback to trainees and opportunity for development in this area of practice.

Ring-fenced time for acute oncology training should be included in trainees' timetables. On call provision alone is not sufficient to constitute acute oncology training.

Further guidance on acute oncology training can be found on the RCR website, along with links to national guidance on acute oncology services.

Good clinical practice (GCP)

It is mandatory for trainees to be up to date with Good Clinical Practice training through the entirety of their training. They are expected to build on the knowledge acquired from this by actively participating in trial recruitment, with the help of the local research team infrastructure.

2.8.2 Academic training

All trainees are required to demonstrate an understanding of research methodology and critical appraisal linked to clinical practice. All trainees should develop their critical appraisal skills and regularly appraise and discuss current research papers – for example as part of regular journal clubs.

Trainees may choose to undertake a combined clinical and academic training programme and some trainees may opt to do research leading to a higher degree without being appointed to a formal academic programme. The four nations have different arrangements for academic training and doctors in training should consult their training programme director (TPD) or deanery for further guidance.

2.8.3 Recommended training

The final year of training is an important milestone in preparing for upcoming consultant jobs. Trainees are encouraged to use this year to develop the skills required for the next stage in their career to incorporate a higher level of engagement with leadership, management and local clinical governance policies.

Training programme directors/educational supervisors should provide individualised support to plan this year, in order to ensure areas of interest/requiring further development are covered in these final placements prior to obtaining CCT.

3 Teaching and learning

The oncology common stem (OCS) is followed by trainees in both clinical oncology and medical oncology during ST3 and will take an indicative period of one year. During this stage of training, trainees will focus on achieving the generic and common oncology CiPs. From ST4 – ST7 (an indicative period of four years) trainees will complete clinical oncology specialty training, during which they will work towards achieving the clinical oncology-specific CiPs while also continuing to develop their capabilities in the generic and common oncology CiPs.

During the OCS and clinical oncology specialty-specific training, clinical attachments should last a minimum of three months, and if possible longer, to ensure that the trainee has the opportunity to follow patients through a course of treatment. Ideally, each attachment should expose trainees to no more than two tumour types, or exceptionally three. This allows the trainee to gain an appropriate depth of knowledge and experience of each tumour type. There must be a sufficient clinical case-load for the number of trainees working in a training department, so that each trainee has the opportunity to acquire appropriate experience. A training programme should provide experience in all branches of clinical oncology as described in section 2 and enable achievement of the CiPs in the context of a wide range of malignancies.

Trainees in ST7 should gain experience in at least two tumour site-specialist areas with clinical attachments of a minimum of six months in each tumour site.

The curriculum will be delivered through a variety of learning experiences and will allow trainees to achieve the capabilities described through a variety of learning methods. There will be a balance of different modes of learning from formal teaching programmes to experiential learning 'on the job'. The proportion of time allocated to different learning methods may vary depending on the nature of the attachment within a rotation. Clinical and educational supervisors are encouraged to identify learner-centred educational opportunities in the course of clinical work, maximising the wide variety of learning opportunities in the workplace.

Information about the organisation and delivery of training, and the roles of different bodies, can be found in the Gold Guide and the RCR's Specialty Training Handbook[12].

3.1 Taking time out of programme

There are a number of circumstances when a trainee may seek to spend some time out of specialty training, such as undertaking a period of research, taking up a fellowship post or exploring global health opportunities. All such requests must be agreed by the postgraduate dean in advance and trainees are advised to discuss their proposals as early as possible. Full guidance on taking time out of programme can be found in the Gold Guide and on the RCR website.

3.2 Acting up as a consultant

A trainee who has passed the Final FRCR Examination may spend up to three months, during the final year of specialist training, "acting-up" as a consultant, provided that a consultant supervisor is identified for the post and satisfactory progress is made. As

long as the trainee remains within an approved training programme, the GMC does not need to approve this period of “acting up” and their original CCT date will not be affected. More information on acting up as a consultant can be found in the Gold Guide.

4 Programme of assessment

4.1 Purpose of assessment

The programme of assessment refers to the integrated framework of exams, assessments in the workplace and judgements made about a trainee during their training. The purpose of the programme of assessment is to robustly evidence, ensure and clearly communicate the expected levels of performance at critical progression points, and to demonstrate satisfactory completion of training as required by the curriculum. In order to achieve this, the programme of assessment aims to:

- enhance learning by providing formative assessment, enabling trainees to receive immediate feedback, understand their own performance and identify areas for development
- drive learning and enhance the training process by making it clear what is required of trainees and motivating them to ensure they receive suitable training and experience
- ensure that trainees possess the essential underlying knowledge required for clinical oncology
- assess trainees' actual performance in the workplace
- demonstrate trainees have acquired the GPCs and meet the requirements of GMP
- provide robust, summative evidence that trainees are meeting the curriculum standards during the training programme
- inform the annual review of competency progression (ARCP), identifying any requirements for targeted or additional training where necessary and facilitating decisions regarding progression through the training programme
- identify trainees who may benefit from careers counselling
- recognise and acknowledge the potential for excellence and where trainees are performing over and above expectations for their stage of training

Accountable, professional judgment is central to ensuring that trainees have demonstrated the CiPs and met the expected levels of performance set out in the curriculum. The programme of assessment details how professional judgements are used and collated to support decisions on progression and satisfactory completion of training.

4.2 Programme of assessment

The programme of assessment is comprised of several different types of summative and formative assessment.

Formative assessment will take place throughout the training programme to allow trainees to continually gather evidence of learning and to provide the formative feedback essential to improving clinical practice. Continuous review and assessment is a fundamental part of clinical oncology training. Trainees are expected to demonstrate improvement and progression during each attachment. It is important that they arrange and undertake assessments in a timely and educationally appropriate manner, spread throughout the training year. All assessments, including those conducted in the workplace, are linked to the relevant CiPs (e.g. through the blueprinting of assessment system to the CiPs).

A range of assessments, based on the judgement of many assessors, on multiple occasions, are needed to generate the necessary evidence required

for global judgements to be made about satisfactory performance, progression in, and completion of, training. The TPD will ensure that there is a local faculty of trainers capable of building a balanced judgement of a trainee's performance supported by workplace based assessments. Such an approach will prevent any individual having undue influence regarding a trainee's progression.

Summative assessment through formal examination takes place in ST4 and ST6. The purpose of the examination at ST4 is to ensure that all trainees have an appropriate understanding of the sciences that underpin clinical oncology. This understanding forms the foundation of clinical oncology practice and its application is reinforced by formative workplace based assessment. The examinations at ST6 assess the ability of trainees to manage patients with cancer prior to development of advanced tumour site-specialist expertise.

Trainees have a personal responsibility to undertake self-assessment and reflection as an integral part of their professional life. It is good educational practice for this to be stated clearly and discussed fully during induction.

4.3 Assessment of CiPs

Assessment of the CiPs involves looking across a range of key skills and evidence of progress to make an overall judgement about a trainee's achievement of the CiPs in the context of their clinical practice at the current stage of training. This will be informed by the professional judgement of the trainer and take account of workplace based assessment, supervisors' reports, summative assessment and the trainee's own self assessment via the MSF and reflections entered into the e-portfolio. Assessment of the CiPs, or aspects of the CiPs, should take place throughout training and include formative feedback to the trainee on their performance.

Different scales will be used to assess generic and specialty-specific CiPs, reflecting the need for supervisors to make entrustment decisions about the ability of trainees to take on the particular responsibilities or tasks described in the specialty-specific CiPs, and the level of supervision that they require, as appropriate to their stage of training.

Table 2 shows the scale and descriptors used to assess the generic CiPs and Table 3 shows the scale and descriptors used to asses the specialty specific CiPs.

Table 2: Level descriptors for generic CiPs

Level	Descriptors	
1	**Novice**	requires support and guidance throughout
2	**Developing**	working towards competency, with some support and guidance needed
3	**Capable**	possesses adequate skills to act independently and seeks support and guidance if required
4	**Expert**	highly skilled and able to lead and support others

Table 3: Level descriptors for specialty-specific CiPs

Level	Descriptors	
1	**Entrusted to observe only**	No provision of direct clinical care
2	**Entrusted to act with direct supervision**	The supervising doctor is physically within the hospital or other site of patient care and is immediately available to provide direct supervision.
3	**Entrusted to act with indirect/ minimal supervision**	The supervising doctor is not physically present within the hospital or other site of patient care, but is immediately available by means of telephone and/or electronic media, to provide advice and can attend physically if required to provide direct supervision.
4	**Entrusted to act unsupervised**	The trainee is working independently and at a level equivalent to a consultant

The expectations of progress against the CiPs for each stage of training are outlined in the progression grids that make up Table 4-Table 6. These show the minimum expectation for the end of the named stage of training. Trainees may show progress beyond the level shown for some CiPs and exceptional trainees may show progress beyond the level shown in a number of CiPs. Exceptional performance can be recorded in the clinical and educational supervisors' reports.

Table 4: Progression grid for generic CiPs, showing minimum expected progress at the end of each stage of training

	OCS	Clinical Oncology Training				
Generic CiP	**ST3**	**ST4**	**ST5**	**ST6**	**ST7**	**CCT**
1. Able to successfully function within NHS organisational and management systems	2	3	3	4	4	Critical progression point
2. Able to deal with ethical and legal issues related to clinical practice	2	3	3	4	4	
3. Communicates effectively and is able to share decision making, while maintaining appropriate situational awareness, professional behaviour and professional judgement	2	3	3	4	4	
4. Is focused on patient safety and delivers effective quality improvement in patient care	2	3	4	4	4	
5. Carrying out research and managing data appropriately	2	2	3	4	4	
6. Acting as a clinical teacher and clinical supervisor	2	3	3	3	4	

Table 5: Progression grid for common oncology CiPs, showing minimum expected progress at the end of each stage of training

	OCS	Clinical Oncology Training				
Oncology CiP	**ST3**	**ST4**	**ST5**	**ST6**	**ST7**	**CCT**
7. Applying knowledge and understanding of the scientific principles that underpin malignancy for the provision of high-quality and safe patient-centred cancer care.	2	3	3	3	4	Critical progression point
8. Delivering the acute oncology take, managing oncological emergencies and providing oncology advice to other healthcare professionals as part of an Acute Oncology Service and managing the AOS team	3	3	3	3	4	
9. Providing continuity of care to oncology in-patients to include the effective management of disease and treatment-related complications, the acutely deteriorating patient and the palliative care/end-of-life needs of those with advanced cancer	3	3	3	3	4	
10. Working effectively within and contributing expert opinion to the tumour site-specific multi-disciplinary team (MDT) meeting to inform evidence-based management plans individualised to the needs of each patient, leading discussions where appropriate	1	2	2	3	4	
11. Assessing patients at all stages of the cancer pathway from diagnosis to end-of-life care, considering the holistic needs of individuals and the additional needs of vulnerable groups to formulate patient-centred management plans	2	3	3	3	4	
12. Safely and effectively delivering, and managing patients receiving, standard systemic anticancer therapies (SACT) in the curative, neo- adjuvant, adjuvant and palliative settings	2	3	3	3	4	
13. Acting as an advocate for health promotion and high-quality cancer survivorship, advising on cancer prevention, management of long- term treatment-related sequalae and patient self-management strategies	2	3	3	3	4	

Table 6: Progression grid for clinical oncology-specific CiPs, showing minimum expected progress at the end of each stage of training

	OCS	Clinical Oncology Training				
Clinical Oncology-Specific CiP	**ST3**	**ST4**	**ST5**	**ST6**	**ST7**	**CCT**
14. Correctly interpreting radiological imaging for accurate target volume and organ-at-risk definition in radiotherapy planning		2	3	3	4	Critical progression point
15. Safely and effectively delivering, and managing patients receiving, a course of radical and combined modality radiotherapy (to include consideration and utilisation of emerging techniques)		2	2	3	4	
16. Safely and effectively delivering, and managing patients receiving, a course of palliative radiotherapy		2	3	4	4	
17. Safely and effectively delivering, and managing patients receiving, a course of radioisotope therapy using an unsealed source to include post-therapy radiation protection measures		1	2	3	3	
18. Safely and effectively managing patients treated with brachytherapy and their complications		1	2	3	3	
19. Participating in clinical research trials and developing guidelines and protocols to safely implement new radiotherapy/ combined modality regimens/techniques		1	2	2	3	

4.4 Critical progression points

A critical progression point is a point in a curriculum where a trainee transitions to higher levels of professional responsibility or enters a new or specialist area of practice, including successful completion of training. These transitions are often associated with an increase in potential risk to patients or those in training, so they need to be carefully managed and decisions to progress need to be based on robust evidence of satisfactory performance. Clinical oncology training progresses in a spiral manner, therefore it is difficult to identify a set point where responsibility increases significantly. For this reason, completion of training is the only critical progression point in clinical oncology training.

4.5 Evidence of progress

Clinical oncology practice will be assessed using an integrated package of formative workplace based assessments (WPBAs) and summative examination of knowledge and skills, which will sample across the curriculum. The assessments are supported by structured feedback and are fit for purpose, having undergone evaluation in terms of their feasibility, reliability, validity and reproducibility.

The methods of assessment listed in this section of the curriculum will provide evidence of progress; with the requirements for each stage of training stipulated in the progression grids for the generic CiPs, specialty-specific CiPs (see section 4.3). Evidence of progress may also be gathered from other sources and trainees are encouraged to demonstrate their progress against the CiPs in a variety of different ways, reflecting their strengths, areas of interest and the resources available to them. The trainee will collect evidence to support their self-assessment, and the educational supervisor will use it to reach a global assessment.

4.5.1 e-portfolio

On enrolling with the RCR trainees will be given access to the RCR's e-portfolio. This is a record of a trainee's development and progress towards achieving the CiPs. All appraisal meetings, personal development plans and WPBAs should be recorded in the e-portfolio. Trainees are encouraged to reflect on their learning experiences and to record these in the e-portfolio.

The e-portfolio provides a record of objective evidence of capability to work in a range of clinical settings and of satisfactory performance. It will contribute to the educational supervisor's report and ARCP. Successful completion of the curriculum requires evidence, recorded in the e-portfolio, that the trainee has met all of the generic and specialty-specific CiPs.

It is the trainee's responsibility to ensure the e-portfolio is kept up to date, arrange assessments and ensure they are recorded, prepare drafts of appraisal forms, maintain their personal development plan, and record their reflections on learning and their progress through the curriculum. It is the supervisor's responsibility to use the evidence recorded in the e-portfolio (such as outcomes of assessments, reflections and personal development plans) to inform appraisal meetings. They are also expected to update the trainee's record of progress through the curriculum, write end-of-attachment appraisals and supervisor's reports.

Deaneries, TPDs, college tutors and ARCP panels may use the e-portfolio to monitor the progress of trainees for whom they are responsible. The RCR will use summarised, anonymous data from the e-portfolios to support its work in quality assurance.

4.5.2 Summative Assessment

There are a number of components to summative assessment in clinical oncology training, which together qualify trainees for the award of Fellowship of the Royal College of Radiologists (FRCR).

The First FRCR examination assesses knowledge of the sciences that underpin clinical oncology practice, i.e. physics, medical statistics, clinical pharmacology, cancer biology and radiobiology. Each subject is assessed by single best answer (SBA) questions. As the knowledge assessed in this examination is essential to clinical oncology practice, this examination must be completed by the end of ST4.

The second examination is divided into Part A and Part B. It covers all areas of oncology and assesses the knowledge and skills required to manage patients with cancer. It comprises two components: SBA questions (Part A) and a multi-station exam (Part B). The knowledge and skills assessed in this examination are essential as a basis for developing advanced tumour site-specialist expertise; therefore the examination must be completed by the end of ST6.

Further guidance for trainees on the structure and content of these exams is available on the RCR website.

Those assessment tools which are not identified individually as summative will contribute to summative judgements about a trainee's progress as part of the programme of assessment. A suitable number and range of these will ensure reliable assessment of progress and achieve coverage of the curriculum.

4.5.3 Formative Assessment

Workplace based assessment (WPBA) is the cornerstone of assessment for day-to-day practice. Reflection and feedback is an integral component to all WBPAs to enhance and drive learning. The assessments should be seen as opportunities for identifying strengths and areas for further development; they are not tests that must be passed. Activities to be assessed should be agreed in advance and it is the responsibility of the trainee to arrange this. Assessments should be spread appropriately throughout the training year.

In order for trainees to maximise benefit, reflection and feedback should take place as soon as possible after an assessment. Feedback should be of high quality and should include an action plan for future development. Both trainee and trainer should recognise and respect cultural differences when giving and receiving feedback.

A range of assessment tools are available to support WPBA and these are listed below. Indicative minimum numbers of each type WPBA are given, although it is anticipated that trainees may/will undertake more, as the WPBAs are the vehicles by which the trainee will guarantee one-to-one teaching and ensure appropriate curriculum coverage during their clinical attachments.

LTFT trainees will be expected to undertake the indicative requirements for assessment on a pro rata basis and to spread the balance of workplace based assessments evenly, as set out in the Gold Guide, and ARCP panels must not set expectations beyond this pro-rata number as a basis for decision-making. However, LTFT trainees are also encouraged to undertake more than the minimum number of WPBAs (and at least the

same minimum number of WPBAs as full time trainees) in each calendar year on the basis that the numbers are low and WPBAs provide useful learning opportunities.

Assessment and feedback may be performed by appropriately trained consultants, more senior oncology trainees and other health professionals, e.g. chemotherapy nurse specialists, radiotherapy medical physicists or radiographers, with relevant expertise in the area being assessed. During ST3 and ST4, a minimum of 50% of WPBA must be undertaken by consultant oncologists and during ST5-ST7 a minimum of 75% of WPBA must be undertaken by consultant clinical oncologists.

The WPBAs will be spread throughout each clinical attachment to ensure that progress is being made and to allow trainees' development needs to be identified. The required WPBAs will be reviewed with the trainee's educational and clinical Supervisor(s) at each appraisal meeting. As trainees progress through training, the complexity of the clinical problems addressed during WPBAs should increase.

Mini clinical evaluation exercise (mini-CEX)

This tool evaluates a clinical encounter with a patient to provide an indication of competence in skills essential for good clinical care such as history taking, examination and clinical reasoning. The mini-CEX can be used at any time and in any setting when there is a trainee and patient interaction and an assessor is available. Assessors must be trained in giving feedback and understand the role of assessment. Trainees should agree the timing, problem and assessor, although assessors may also carry out unscheduled assessments. Trainees should receive immediate feedback to aid learning.

A minimum of two mini-CEX should be completed in each year of training.

Direct observation of systemic therapy (DOST)

The DOST is an assessment tool designed to assess the performance of a trainee in undertaking, authorising, prescribing and taking consent for systemic therapy, against a structured checklist. The trainee receives immediate feedback to identify strengths and areas for development.

A minimum of two DOST should be completed in each year of training.

Direct observation of radiotherapy planning skills (DORPS)

The DORPS is a structured checklist for assessing the performance of a trainee in undertaking radiotherapy planning. Assessors must be trained both in radiotherapy planning and feedback methodology. Trainees should agree the timing and assessor, although assessors may also carry out unscheduled assessments. Trainees should receive immediate feedback to identify strengths and areas for development.

A minimum of two DORPS should be completed during the OCS year and a minimum of four in each year from ST4-ST6. In ST7 a minimum of six DORPS should be completed.

Case-based discussion (CbD)

The CbD assesses the performance of a trainee in his or her management of a patient, and it provides an indication of competence in areas such as clinical reasoning, decision-making and application of medical knowledge in relation to patient care.

It also serves as a method to document conversations about, and presentations of, cases by trainees. The CbD should include discussion about a written record (such as written case notes, outpatient letters or discharge summaries). A typical encounter might be when presenting newly-referred patients in the outpatient department.

A minimum of two CbD should be completed during the OCS year, to include one involving a patient on a clinical trial. A minimum of 4 CbD should be completed in every subsequent year.

Acute care assessment tool (ACAT)

The ACAT is designed to be used for providing feedback to trainees on supervised aspects of acute oncology provision. This may include an on call shift, ward rounds, handover or in reach to the medical assessment unit (MAU) or covering a day's management of admissions and ward work. The ACAT looks at clinical assessment and management, decision making, team working, time management, record keeping and handover for the whole time period and multiple patients.

A minimum of one ACAT should be completed in each of the OCS, ST5 and ST6.

Multi-source feedback (MSF)

This tool is a method of assessing generic skills such as communication, leadership, team working and reliability, across the domains of Good Medical Practice. It provides objective systematic collection and feedback of performance data on a trainee, derived from a number of colleagues. 'Raters' are individuals with whom the trainee works, and include consultants, more senior trainees, administration staff, and other allied professionals. Raters should be agreed with the educational supervisor at the start of the training year. A minimum of 12 raters must respond to complete the MSF. The recommended mix of raters/assessors is:

- 2–4 senior doctors
- 2–4 doctors in training
- 2–4 radiographers
- 2–4 nurses/allied health professionals
- 2–4 other team members including clerks, secretaries and auxiliary staff

The trainee will not see the individual responses by raters. Feedback is given to the trainee by the educational supervisor.

One MSF should be completed in OCS, ST5 and ST7. Consultants that have completed the MCR may also contribute to the MSF.

Multiple consultant report (MCR)

The MCR captures the views of consultant supervisors on a trainee's clinical performance and should include feedback from 4-6 consultants who have directly worked with the trainee in the preceding 12 months. The MCR summary sheet details the feedback received, outcomes for clinical areas and comments which will give valuable insight to how well the trainee is performing, highlighting

areas of excellence and areas of support required. MCR feedback will be available to the trainee and included in the educational supervisor's report.

One MCR should be completed in OCS and ST6. The MCR in ST3 should include at least one clinical oncology consultant and one medical oncology consultant. Consultants that have completed the MSF may also contribute to the MCR.

Quality improvement project and audit assessment tool (QIPAT)

The QIPAT is designed to assess a trainee's competence in completing an audit or quality improvement project. The assessment can be based on a review of audit or quality improvement documentation or on a presentation at a meeting. If possible the trainee should be assessed on the same audit or quality improvement project by more than one assessor. Trainees should show how they have instigated, collated and presented a piece of work, as well as reflected upon any changes in clinical management as a result of work completed.

Two QIPAT should be completed between ST4 and ST7.

Teaching observation (TO)

The TO form is designed to provide structured, formative feedback to trainees about their competence at teaching. It evaluates the competence of a trainee to deliver a teaching episode in a wide variety of settings. The TO can be based on any instance of formalised teaching undertaken by the trainee that has been observed by the assessor. The process should be trainee-led (identifying appropriate teaching sessions and assessors).

A minimum of one TO should be completed in ST5 and one in ST7.

Educational supervisor's report

The educational supervisor will periodically (at least annually) draw together the results of a trainee's educational activities to give an overview of their progress in a formal structured educational supervisor's report. The overall judgment of a trainee will include a triangulated view of the doctor's performance, which will include their participation in educational activities, appraisals, the assessment process and recording of this in the e-portfolio. The educational supervisor's report can incorporate commentary or reports from longitudinal observations, such as from supervisors or formative assessments demonstrating progress over time.

4.6 Decisions on progress (ARCP)

Individual progress will be monitored by the annual review of competence progression (ARCP). The ARCP is not an assessment; it is a review of the evidence of training and assessment. The ARCP process is described in the Gold Guide and should be used to integrate and systematically review evidence about a doctor's performance and progress in a holistic way to facilitate decisions regarding progression through training, as well as identifying any requirements for targeted or additional training where necessary.

Individual deaneries are responsible for organising and conducting ARCPs. The RCR recommends that the postgraduate dean should collaborate with the TPD and the regional specialty adviser (RSA) when overseeing these reviews. The

RCR offers every deanery the services of an external RSA to provide "externality" to the ARCP process. More details can be found on the RCR website.

The evidence to be reviewed by ARCP panels should be collected in the trainee's e-portfolio. We strongly recommend that trainees have an informal e-portfolio review prior to ARCP, either with their educational supervisor or arranged by their TPD. These provide opportunities for early detection of trainees who are failing to gather the required evidence for ARCP.

In order to guide trainees, supervisors and the ARCP panel, the RCR has produced ARCP decision aids which set out the requirements for a satisfactory ARCP outcome at the end of each indicative training year. It is important to note that while the decision aids describe the indicative minimum requirements for progression, they are provided as guidance only. Trainees may be able to provide evidence that they have made the required progress in other ways. ARCP panels should use professional judgement and consider the trainee's e-portfolio as a whole, including the quality of assessments as well as the quantity, to inform decisions on trainee progression. The ARCP decision aids are available on the RCR website.

Trainees who meet the requirements for progression across all domains within the decision aid will advance into the next year of training (Outcome 1). Where these requirements are not met, progression will be informed by some or all of the following (the decision being undertaken by the ARCP panel): lack of curriculum coverage; inadequate or poor outcomes in workplace based assessments and/ or examinations; and areas of concern within the educational supervisor's report. This will result in one of two outcomes:

- conditional progress into the next year of training (Outcome 2): A specific action plan will be formulated with the trainee to redress deficiencies in performance. Progress will be re-assessed as appropriate within the next year of training.
- directed training without progression (Outcome 3): If the trainee is so far short of the objectives for their stage of training such as to prevent them continuing into the next stage of training, directed training is recommended to achieve those objectives. The RCR recommends that repetition of the entire indicative year should only be recommended for exceptional reasons.

4.7 Assessment blueprints

Table 7 shows the possible methods of assessment for each CiP. It is not expected that every method will be used for each competency and additional evidence may be used to help make a judgement on capability.

Table 7: Blueprint of WPBAs and examinations to the generic, oncology and specialty specific CiPs

	MSF	Mini-CEX	CbD	DORPS	MCR	DOST	ACAT	QIPAT	Teaching observation	First FRCR Examination	Final FRCR Examination
Generic CiPs											
1. Able to successfully function within NHS organisational and management systems	X				X						
2. Able to deal with ethical and legal issues related to clinical practice	X	X	X	X	X					X	
3. Communicates effectively and is able to share decision making, while maintaining appropriate situational awareness, professional behaviour and professional judgement	X	X			X	X	X				
4. Is focussed on patient safety and delivers effective quality improvement in patient care	X	X	X	X	X	X	X	X			X
5. Carrying out research and managing data appropriately	X				X			X	X		
6. Acting as a clinical teacher and clinical supervisor	X				X				X		
Oncology CiPs											
7. Applying knowledge and understanding of the scientific principles that underpin malignancy for the provision of high-quality and safe patient-centred cancer care.		X	X	X	X	X	X			X	X
8. Delivering the acute oncology take, managing oncological emergencies and providing oncology advice to other healthcare professionals as part of an Acute Oncology Service and managing the AOS team	X	X	X	X	X		X				X

	MSF	Mini-CEX	CbD	DORPS	MCR	DOST	ACAT	QIPAT	Teaching observation	First FRCR Examination	Final FRCR Examination
Oncology CiPs											
9. Providing continuity of care to oncology in-patients to include the effective management of disease and treatment-related complications, the acutely deteriorating patient and the palliative care/end-of-life needs of those with advanced cancer	X	X	X	X	X	X	X				X
10. Working effectively within and contributing expert opinion to the tumour site-specific multi-disciplinary team (MDT) meeting to inform evidence-based management plans individualised to the needs of each patient, leading discussions where appropriate	X	X	X		X		X				X
11. Assessing patients at all stages of the cancer pathway from diagnosis to end-of-life care, considering the holistic needs of individuals and the additional needs of vulnerable groups to formulate patient-centred management plans	X	X	X	X	X	X	X				X
12. Safely and effectively delivering, and managing patients receiving, standard systemic anticancer therapies (SACT) in the curative, neo-adjuvant, adjuvant and palliative settings	X	X	X	X	X	X	X				X
13. Acting as an advocate for health promotion and high-quality cancer survivorship, advising on cancer prevention, management of long-term treatment-related sequalae and patient self-management strategies	X	X	X		X	X	X				

	MSF	Mini-CEX	CbD	DORPS	MCR	DOST	ACAT	QIPAT	Teaching observation	First FRCR Examination	Final FRCR Examination
Clinical Oncology Specific CiPs											
14. Correctly interpreting radiological imaging for accurate target volume and organ-at-risk definition in radiotherapy planning		X	X	X							X
15. Safely and effectively delivering, and managing patients receiving, a course of radical and combined modality radiotherapy (to include consideration and utilisation of emerging techniques)		X	X	X			X				X
16. Safely and effectively delivering, and managing patients receiving, a course of palliative radiotherapy		X	X	X		X	X			X	X
17. Safely and effectively delivering, and managing patients receiving, a course of radioisotope therapy using an unsealed source to include post-therapy radiation protection measures		X	X	X		X	X			X	X
18. Safely and effectively managing patients treated with brachytherapy and their complications		X	X	X		X	X				X
19. Participating in clinical research trials and developing guidelines and protocols to safely implement new radiotherapy/ combined modality regimens/techniques		X	X					X			

5 Supervision and feedback

5.1 Feedback

Access to high quality, supportive, timely and constructive feedback is essential for the professional development of the trainee. Trainee reflection is an important part of the feedback process and exploration of that reflection with the trainer should be a two way dialogue. Effective feedback is known to enhance learning and combining self-reflection to feedback promotes deeper learning. This process should take place throughout training in both formal and informal settings. Opportunities for feedback will arise during appraisal meetings, when trainees are undergoing workplace-based assessments, in the workplace setting, through discussions with supervisors, trainers, assessors and those within the team, and through the ARCP. Trainees must develop the ability to seek and respond to feedback on clinical practice from a range of individuals.

Trainers should be supported to deliver valuable and high quality feedback. This can be by providing face to face training to trainers. Trainees would also benefit from such training as they frequently act as assessors to junior doctors, and all involved could also be shown how best to carry out and record reflection.

5.2 Supervision

All elements of work in training posts must be appropriately supervised, with the level of supervision varying depending on the experience of the trainee, the clinical context and the case mix of patients. Outpatient and radiotherapy planning supervision must routinely include the opportunity to discuss all cases if required. As training progresses the trainee should have the opportunity for increasing autonomy, consistent with safe and effective care for the patient.

Organisations must make sure that each doctor in training has access to a named clinical supervisor and a named educational supervisor. It is preferred that a trainee has a single named educational supervisor for the duration of training. The clinical supervisor will change for each post and will usually be the consultant to whom a radiology trainee is directly responsible for that post.

Educational and clinical supervisors need to be formally recognised by the GMC to carry out their roles. It is essential that training in assessment and feedback is provided for trainers and trainees in order to ensure that there is complete understanding of the assessment system, assessment methods, their purposes and use. Training will ensure a shared understanding and a consistency in the use of the WPBA and the application of standards.

All clinical oncology educational and clinical supervisors must have received additional training in those areas of supervision specific to clinical oncology. The RCR holds regular training days to address this, however it is expected that all clinical and educational supervisors attend relevant training courses to keep up to date and support revalidation as a trainer.

5.2.1 Educational supervisor

The educational supervisor is central to the trainee's learning experience, and is appropriately trained to be responsible for the overall supervision and management of a doctor's educational progress during the course of their training. The educational

supervisor is regularly meets with the doctor in training to help plan their training, review progress and agree learning outcomes, as well as providing advice and support. The educational supervisor is responsible for the educational agreement, and for bringing together all relevant evidence to form a summative judgement about progression at the end of the placement or a series of placements.

The educational supervisor is integral to the appraisal process. A trainee appraisal with the educational supervisor will include feedback on performance, review of outcomes of assessments, induction to posts and career advice.

The postgraduate deaneries should recognise the active role of educational supervisors in training and offer appropriate support. Local education providers must ensure that educational supervisors have adequate support and resources to undertake their training role, including time in their job plan. This will include training in equality and diversity.

The educational supervisor will:

- ensure that the programme is appropriate for the doctor's needs and provides full curriculum coverage, including clinical attachments to be undertaken and appropriate audit/quality improvement, teaching and management experience
- be responsible for the trainee's educational agreement
- review trainees' learning needs in the light of achieved goals and set educational objectives
- help the trainee to formulate their personal learning and development plan, ensuring appropriate curriculum coverage and including appropriate audit/quality improvement, teaching and management experience
- ensure that the trainee is meeting with their clinical supervisor(s) on a regular basis, that clinical supervisors understand the trainee's educational needs, and that an appropriate learning and development plan is in place for each clinical attachment
- carry out and/or collate assessments from clinical supervisors, trainers and other assessors
- review the trainee's e-portfolio, ensuring that appropriate work-place based assessments have been undertaken
- conduct appraisals and give supportive feedback
- complete the structured supervisor's report at the end of each year of training prior to the ARCP
- help the trainee to access career management advice.
- provide advice and support to the trainee as required
- support the trainee through any difficulty and meet with the trainee if concerns arise about their performance
- contact the employer and the postgraduate dean should the level of performance of a trainee gives rise for concern
- tell the trainee the content of any information about them that is given to someone else
- ensure that all training opportunities meet the requirements of equality and diversity legislation

The educational supervisor, when meeting with the trainee, should discuss issues of clinical governance, risk management and the report of any untoward clinical incidents involving the trainee. If the clinical supervisor should have any concerns about the performance of the trainee, or there were issues of doctor or patient safety, these would be discussed with both the trainee and the educational supervisor. In turn the educational supervisor may consult with the trainee and the TPD/Head of School. These processes, which are integral to trainee development, must not detract from the statutory duty of the employer to deliver effective clinical governance through its management systems.

5.2.2 Clinical supervisor

There must be at least one named clinical supervisor for each clinical attachment. Where a trainee is working with more than one consultant covering the same tumour site, only one of these consultants needs to act as the clinical supervisor. In contrast, where rotation includes more than one tumour site each covered by different consultants, the trainee should ideally have a separate clinical supervisor for each major tumour site within the rotation. If there is no trained Clinical Supervisor available for a clinical attachment, the responsibilities for clinical supervision should be undertaken by the trainee's Educational Supervisor.

The arrangements for supervision should be agreed by the educational supervisor, clinical supervisor and the trainee concerned. The duration of responsibility should be defined at the beginning of the period.

A clinical supervisor will usually be the consultant to whom a trainee is directly responsible for their clinical work and there will be frequent contact between them. They will be appropriately trained to lead on reviewing the trainee's practice throughout a post and will provide constructive feedback, as well as contributing to the educational supervisor's report.

Local education providers must ensure that clinical supervisors have adequate support and resources, including time in their job plan to undertake their training role. This will include training in equality and diversity.

The clinical supervisor will:

- ensure that the trainee is never put in a situation where they are asked to work beyond their competence without appropriate support and supervision. Patient safety must be paramount at all times
- meet with the trainee at the beginning of each post to discuss what is expected in the post, learning opportunities available and the trainee's learning needs
- agree how the learning objectives for this period of training will be met and confirm how formative feedback and summative judgements will be made
- ensure that other colleagues with whom the trainee is working in the site-specialist team understand the trainee's educational needs if appropriate
- ensure that the clinical experience available to the trainee is appropriate and properly supervised
- monitor, support and assess the trainee's day-to-day clinical and professional work, ensuring that the trainee is making the necessary progress

- undertake and facilitate WPBA
- meet with the trainee on a regular basis and provide regular feedback on their performance
- ensure that all training opportunities meet the requirements of equality and diversity legislation
- notify the Educational Supervisor if the trainee's performance, health or conduct gives rise to concern. The Educational Supervisor has responsibility for ensuring that these issues are addressed
- complete an end of post review form for each post

5.2.3 Trainees

Trainees should make the safety of patients their first priority. Furthermore, trainees should not be practising in clinical scenarios which are beyond their experiences and competences without supervision. Trainees should actively devise individual learning goals in discussion with their trainers and should subsequently identify the appropriate opportunities to achieve said learning goals. Trainees should plan their WPBAs accordingly to enable their WPBAs to collectively provide a picture of their development during a training period. Trainees should actively seek guidance from their trainers in order to identify the appropriate learning opportunities and plan the appropriate frequencies and types of WPBAs according to their individual learning needs. It is the responsibility of trainees to seek feedback following learning opportunities and WPBAs. Trainees should self-reflect and self-evaluate regularly with the aid of feedback. Furthermore, trainees should formulate action plans with further learning goals in discussion with their trainers.

5.3 Appraisal

A formal process of appraisals and reviews underpins training. This process ensures adequate supervision during training, provides continuity between posts and different supervisors, and is one of the main ways of providing feedback to trainees. Arranging a review is primarily the responsibility of the trainee. A "typical" year of appraisals involving both clinical and educational supervisors is illustrated in Figure 3. All appraisals should be recorded in the e-portfolio.

Annual Induction Appraisal

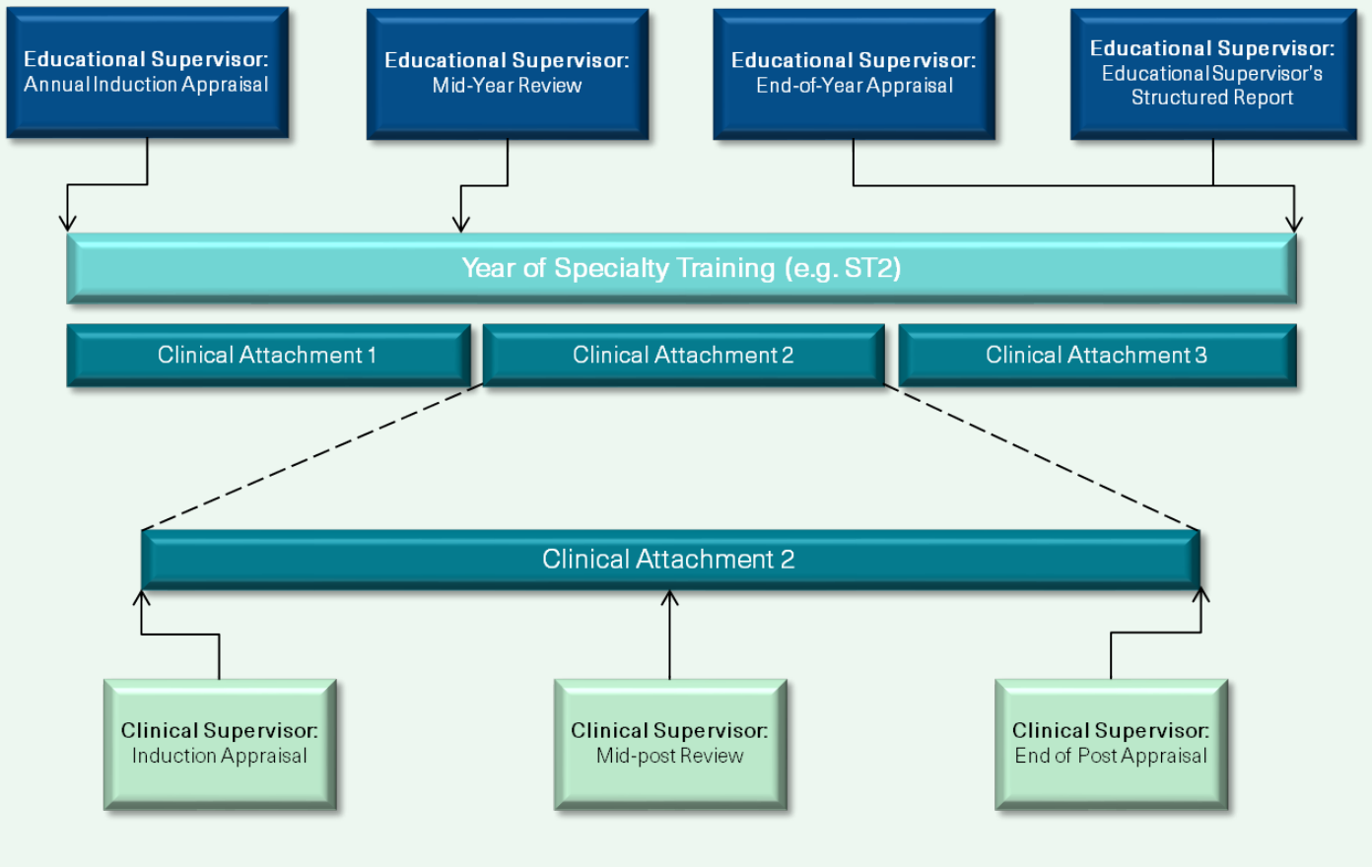
The trainee and Educational Supervisor should have an appraisal meeting at the beginning of each year to review the trainee's progress so far, set the learning objectives for the trainee to achieve over the course of the coming year and identify the learning opportunities presented by the clinical attachments that will be undertaken over the year. Reviewing progress through the curriculum will help trainees to compile an effective Personal Development Plan (PDP) of objectives for the upcoming year. This PDP should be agreed during the Annual Induction Appraisal. The trainee and supervisor should also both sign the educational agreement in the e-portfolio at this time, recording their commitment to the training process.

Clinical supervisor: induction appraisal

The trainee and Clinical Supervisor should have a meeting at the beginning of each attachment to review the trainee's progress so far, agree learning objectives for the attachment ahead and identify the learning opportunities presented. The PDP and

the learning objectives for the year should be reviewed. The clinical supervisor should also add learning objectives which are relevant to that particular attachment.

Figure 3: Appraisal meetings during a single training year (or equivalent for LTFT trainees)



Clinical supervisor: mid-attachment appraisal

A mid-point meeting during a clinical attachment, although not mandatory is highly recommended, particularly if either the trainee or clinical supervisor has training concerns. It gives the trainee and clinical supervisor the opportunity to review the PDP and e-portfolio, look at the progress of the trainee so far and highlight areas for future development.

Clinical supervisor: end of attachment appraisal

Towards the end of a placement, the trainee and clinical supervisor will meet again for an appraisal. They will review the e-portfolio, PDP and the results of assessments made during the placement. This process will involve review of comments from colleagues who have observed the doctor's performance in practice and/or in individual assessments. If the educational supervisor is different to the clinical supervisor, there should be a robust communication system to ensure a continuous, appropriate, and timely flow of evidence. This should include an 'end of attachment appraisal' document confirming satisfactory performance and progress. It should detail any outstanding issues that still need to be addressed. Further evidence of competence

in certain areas may be needed, such as planned workplace-based assessments, and these should be recorded. If there are significant concerns following the end of attachment appraisal then the educational supervisor and TPD should be informed.

Educational supervisor's mid-year review

A mid-year appraisal with the educational supervisor is an opportunity to review progress and provides a guide to the trainee and educational supervisor about what still needs to be done to achieve the learning objectives for the year. At this meeting trainees should review their PDP with their supervisor using evidence from the e-portfolio. Workplace-based assessments and progress through the curriculum can be reviewed to ensure trainees are making good progress, and attendance at educational events should also be reviewed.

End-of-year appraisal

The past year should be reviewed, including achievements, plus any areas which still need development or give cause for concern. The results of educational activities for an academic year will be drawn together and included in a formal structured educational supervisor's report. This will cover the overall performance of the trainee in each attachment. The overall judgment of a trainee, and the educational supervisor's recommendations of satisfactory completion of the year of training, will be based on a triangulated view of the doctor's performance. This will include their participation in educational activities, appraisals, the assessment process and recording of this in the e-portfolio. The outcome of the final appraisal discussion should be agreed by both the trainee and the educational supervisor and recorded in the structured supervisor's report in the e-portfolio. The end-of-year appraisal presents an opportunity to prepare for the ARCP.

6 Appendices

6.1 Curriculum development, implementation and review

6.1.1 Development

This curriculum was developed by the Clinical Oncology Curriculum Committee. This is a sub-committee of the Specialty Training Board of the Faculty of Clinical Oncology of the Royal College of Radiologists (STB) and reports to it. The members of the Curriculum Committee and STB have broad UK representation across the range of tumour sites and include consultants who are actively involved in teaching and training; trainees; service representatives; and lay persons. The oncology common stem was developed with colleagues from the Medical Oncology Specialty Advisory Committee (SAC) and JRCPTB.

Throughout the development of this curriculum, the Curriculum Committee has consulted widely with a range of stakeholders. These include: heads of training and heads of service in both clinical and medical oncology; the RCR Fellowship Examining Board and CO1, CO2A and CO2B Examination Boards; Regional Specialty Advisers; the STB; the RCR's Oncology Registrars' Forum; employers' groups, including NHS Employers and NHS England's Acute Oncology Subgroup; clinical directors; professional organisations such as the British Oncology Pharmacy Association; patient groups such as the NHS England Patient Experience Team; charities such as CRUK and Bowel Cancer UK; the RCR lay member network; those representing allied health professions e.g. the Society and College of Radiographers and the Institute of Physics and Engineering in Medicine; other royal colleges and specialty representatives including JRCPTB, RCPCH, RCOA, Faculty of Pain Medicine, Faculty of Intensive Care Medicine, Radiology, and Palliative Medicine; and the Medical Oncology SAC, including trainee representatives.

6.1.2 Implementation

This curriculum will be implemented in August 2021 and all trainees will move to this curriculum, unless they are due to CCT before 1st September 2022. All evidence currently recorded in the e-portfolio will remain and can be used to demonstrate achievement of the new CiPs.

A full suite of training materials is available to support trainees and trainers in the transition to this curriculum, including specific guidance for trainees who are LTFT, out of programme or on statutory leave. Further details can be found on the RCR website, along with documents mapping the competencies in the 2016 curriculum to the CiPs in this curriculum.

6.1.3 Intended use

The curriculum is freely available to trainees and trainers on the RCR and GMC websites. Both trainees and trainers are expected to have a good knowledge of the curriculum and should use it as a guide for their training programme. Clinical and educational supervisors should use the curriculum as the basis of their discussion with trainees, particularly during the appraisal process. Each trainee will demonstrate their engagement with the curriculum by maintaining an e-portfolio. The trainee will use the curriculum to develop learning objectives, self-assess accomplishments, and reflect on learning experiences.

The RCR will help to ensure that trainees experience training that reflects the curriculum through:

- RSAs who attend regular meetings at the RCR and who sit on the Deanery STCs
- provision of an e-portfolio which supports the curriculum including recording appraisals and workplace-based assessments
- provision of training and guidance on use of the curriculum, WPBA, the e-portfolio and supervisor roles
- quality assurance, including supporting the provision of external advisors for each training programme

6.1.4 Review

The STB is responsible for review of the curriculum. Clinical oncology is a constantly evolving specialty and as a result the curriculum is kept under constant review to ensure that clinical oncology training and education reflect modern practice. To allow the curriculum to respond appropriately to these changes, there are regular meetings of the Curriculum Committee, the Professional Support and Standards Board and the Specialty Training Board. These provide opportunities for the curriculum to be discussed, and amendments to be proposed and considered in advance of formal review. Trainers, tutors, regional specialty advisers, programme directors and examiners will also continue to be involved in review through their membership of relevant working parties and committees.

Curriculum evaluation will establish how trainees have responded to the curriculum and ensure that the curriculum facilitates practical delivery of the required training. The curriculum will be evaluated by means of a range of qualitative and quantitative data.

6.2 Equality and diversity

The Royal College of Radiologists will comply, and ensure compliance, with the requirements of the Equality Act 2010.

We believe that equality of opportunity is fundamental to all oncology practice and to the many and varied ways in which individuals become involved with the RCR, either as members of staff and Officers; as advisers from the medical profession or in a lay capacity; as members of the RCR's professional bodies or as radiologists in training and examination candidates. Accordingly, it warmly welcomes contributions and applications from as diverse a population as possible, and actively seeks to recruit people to all its activities regardless of protected characteristic.

Deanery quality assurance will ensure that each training programme complies with the equality and diversity standards in postgraduate medical training as set by GMC.

Compliance with anti-discriminatory practice will be assured through:

- monitoring of recruitment processes
- ensuring all RCR representatives have attended appropriate training sessions prior to appointment or within 12 months of taking up post
- ensuring trainees have an appropriate, confidential and supportive route to report examples of inappropriate behaviour of a discriminatory nature. Deaneries must also

ensure contingency mechanisms are in place if trainees feel unhappy with the response or uncomfortable with the contact individual

- monitoring of FRCR examinations
- ensuring all assessments discriminate on objective and appropriate criteria and do not unfairly disadvantage trainees with any of the Equality Act 2010 protected characteristics. All efforts shall be made to ensure the participation in training of people with a disability (other than that which would make it impossible to practise safely as a clinical oncologist) through reasonable adjustments.

The RCR takes its obligations under the relevant equal opportunities legislation seriously. This includes ensuring that members of staff involved in the delivery of examinations receive appropriate briefing on the implications of equality and diversity in the treatment of candidates. Those appointed as examiners must demonstrate that they have undergone appropriate equality and diversity training and that they are willing to abide by good practice in these areas.

The RCR has an Adjustments Procedure for FRCR Examinations published on our website which provides a formal means for candidates to submit a request for an adjustment to be applied in examinations to compensate for disability. All adjustment requests will be considered by the RCR in a fair and consistent way.

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6.3 Summary of changes

Table 8: Summary of changes to the curriculum text

Page	Section	Line	Change
48	4.5.2	11-12	"It comprises three components: SBA questions, a clinical examination and an oral examination." changed to "It comprises two components: SBA questions (Part A) and a multi-station exam (Part B). "
58	5.2.2	1-6	"There must be a named Clinical Supervisor for each tumour site-specific aspect of a clinical attachment. Where a trainee is working with more than one consultant covering the same tumour site, only one of these consultants will act as the Clinical Supervisor. In contrast, where a trainee is working with consultants covering different tumour sites both consultants should act as Clinical Supervisor for each specific tumour site." changed to "There must be at least one named clinical supervisor for each clinical attachment. Where a trainee is working with more than one consultant covering the same tumour site, only one of these consultants needs to act as the clinical supervisor. In contrast, where rotation includes more than one tumour site each covered by different consultants, the trainee should ideally have a separate clinical supervisor for each major tumour site within the rotation."

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The Royal College of Radiologists
63 Lincoln's Inn Fields
London WC2A 3JW

+44 (0)20 7405 1282
enquiries@rcr.ac.uk
www.rcr.ac.uk
@RCRadiologists

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