



**Clinical  
Oncology**

The Royal College of Radiologists

# Clinical Oncology Curriculum

Mapping of the 2021  
curriculum outcomes  
to the 2016 curriculum  
competences

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**24.02.2020**

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# Contents

|   |  |    |
|---|--|----|
| 1 | Introduction                                       | 5  |
| 2 | Underpinning attitudes and behaviours              | 6  |
|   | 2.1 Personal behaviour                             | 6  |
|   | 2.2 Time management and decision making            | 8  |
|   | 2.3 Decision making and clinical reasoning         | 9  |
|   | 2.4 The patient as central focus of care           | 10 |
|   | 2.5 Patient safety                                 | 11 |
|   | 2.6 Team working                                   | 12 |
|   | 2.7 Principles of quality and safety improvement   | 13 |
|   | 2.8 Audit  | 15 |
|   | 2.9 Complaints and medical error                   | 16 |
|   | 2.10 Communication with colleagues and cooperation | 17 |
|   | 2.11 Medical ethics and confidentiality            | 18 |
|   | 2.12 Medical ethics and conflict of duty           | 19 |
|   | 2.13 Medical ethics and autonomy and capacity      | 20 |
|   | 2.14 Medical ethics and end of life issues         | 21 |
|   | 2.15 Valid consent                                 | 22 |
|   | 2.16 Legal framework for practice                  | 23 |
|   | 2.17 Ethical research                              | 24 |
|   | 2.18 Evidence and guidelines                       | 26 |
|   | 2.19 Continuing professional development           | 27 |
|   | 2.20 Teaching                                      | 28 |
|   | 2.21 Management and NHS structure                  | 30 |
| 3 | Introductory module                                | 32 |
|   | 3.1 Authorising chemotherapy                       | 32 |
|   | 3.2 Prescribing chemotherapy                       | 33 |
|   | 3.3 Safety in radiation treatment                  | 33 |
|   | 3.4 Outpatient consultation                        | 34 |
|   | 3.5 Breaking bad news                              | 35 |
| 4 | Oncology emergencies syllabus                      | 36 |
|   | 4.1 Infections                                     | 36 |
|   | 4.2 Spinal cord compression                        | 37 |
|   | 4.3 Cancer related venothromboembolism (VTE)       | 38 |
|   | 4.4 Superior vena cava obstruction (SVCO)          | 39 |
|   | 4.5 Metabolic disorders                            | 39 |
|   | 4.6 Organ failure                                  | 40 |
|   | 4.7 Reduced conscious level                        | 40 |

---

---

## Contents

|      |   |    |
|------|---|----|
| 5    | Site-specific learning outcomes   | 41 |
| 5.1  | Radiology   | 41 |
| 5.2  | Diagnosis and staging   | 41 |
| 5.3  | Prognosis   | 42 |
| 5.4  | Genetics  | 42 |
| 5.5  | Discussion of treatment options   | 43 |
| 5.6  | Multi-disciplinary team (MDT) meetings  | 43 |
| 5.7  | Evaluating research   | 44 |
| 5.8  | First line chemotherapy   | 45 |
| 5.9  | Discussing treatment options  | 45 |
| 5.10 | Initiating chemotherapy   | 46 |
| 5.11 | Managing patients receiving chemotherapy  | 46 |
| 5.12 | Initiating hormonal therapy   | 47 |
| 5.13 | Managing patients receiving hormonal therapy                                    | 47 |
| 5.14 | Assessing patients for biological therapy                                       | 48 |
| 5.15 | Consent for biological therapy  | 48 |
| 5.16 | Initiating biological therapies   | 49 |
| 5.17 | Managing patients receiving biological therapies                                | 49 |
| 5.18 | Assessing patients for radiotherapy   | 50 |
| 5.19 | Consent for radiotherapy  | 50 |
| 5.20 | Radiotherapy treatment strategy   | 51 |
| 5.21 | Radiotherapy treatment volume   | 52 |
| 5.22 | Radiotherapy treatment plan   | 52 |
| 5.23 | Prescribing palliative radiotherapy   | 53 |
| 5.24 | Prescribing radical radiotherapy  | 53 |
| 5.25 | Modifying radiotherapy for individual patients                                  | 54 |
| 5.26 | Verifying radiotherapy treatments   | 54 |
| 5.27 | Principles of proton therapy  | 55 |
| 5.28 | Clinical implications of brachytherapy  | 55 |
| 5.29 | Performing a brachytherapy procedure  | 56 |
| 5.30 | Prescribing brachytherapy using an unsealed source                              | 57 |
| 5.31 | Assessing and managing patients undergoing radiotherapy                         | 58 |
| 5.32 | Modifying a course of radiotherapy  | 58 |
| 5.33 | Assessing patients for combined modality therapy                                | 58 |
| 5.34 | Emerging techniques   | 59 |
| 5.35 | Obtaining informed consent for clinical trials and maintaining research records | 59 |
| 5.36 | Diagnosing relapse  | 59 |
| 5.37 | Developing a management plan for patients whose disease has relapsed            | 60 |
| 5.38 | Assessing patients for second and further lines of systemic anticancer therapy  | 60 |
| 5.39 | Adjusting a chemotherapy regimen according to patient fitness                   | 61 |

---

---

## Contents

|  |    |
|--|----|
| 5.40 Assessing response to second and subsequent lines of chemotherapy                     | 61 |
| 5.41 Recognising when further chemotherapy is inappropriate                                | 61 |
| 5.42 Assessing patients with relapsed cancer for palliative radiotherapy                   | 62 |
| 5.43 Identifying when patients with relapsed disease require referral to another specialty | 62 |
| 5.44 Managing physical symptoms of patients with relapsed cancer                           | 63 |
| 5.45 Providing psychological support for patients with relapsed cancer and their families  | 64 |
| 5.46 Co-ordinating social/financial support  | 64 |
| 5.47 Making clinical decisions in situations of uncertainty                                | 65 |

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## 1. Introduction

The curriculum provides both trainers and trainees with information about the requirements of the training programme, setting a clear picture of what is to be achieved by each level of training.

This mapping document provides trainees already in training, and their supervisors, with a way of identifying how previously achieved competences contribute to progress as defined by the new curriculum.

The new curriculum represents a radical change in how the curriculum content is presented. Mapping from a competency-based framework to a high level outcomes is not straightforward and it is not always possible to map like to like. However, the underlying content of the curriculum is largely unchanged and trainees transitioning to the new curriculum will be able to use this document to identify how their prior learning allows them to meet the requirements of the new curriculum.

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## 2. Underpinning attitudes and behaviours

### 2.1 Personal behaviour

| Knowledge, skills and behaviours from 2016 curriculum  | Location in 2021 Curriculum |
|--|-----------------------------|
| To demonstrate the behaviours that will enable the doctor to become a senior leader able to deal with complex situations and difficult behaviours and attitudes. To work increasingly effectively with many teams and to be known to put the quality and safety of patient care as a prime objective. To demonstrate the attributes of someone who is trusted to be able to manage complex human, legal and ethical problem. To be someone who is trusted and is known to act fairly in all situations |                             |
| Defines the concept of modern medical professionalism  | CiPs 1, 2, 3, 4             |
| Outlines the relevance of professional bodies (Royal Colleges, NHSMEE , GMC, Postgraduate Deaneries, BMA, medical defence societies, etc..)  | CiP 1                       |
| Practises with professionalism, showing: <ul style="list-style-type: none"> <li>▪ integrity</li> <li>▪ compassion</li> <li>▪ altruism</li> <li>▪ continuous improvement</li> <li>▪ aspiration to excellence</li> <li>▪ respect of cultural and ethnic diversity</li> <li>▪ regard to the principles of equity</li> </ul>   | CiPs 2, 3, 4, 7, 9, 11, 13  |
| Works in partnership with patients and members of the wider healthcare team  | CiPs 1, 3                   |
| Liaises with colleagues to plan and implement work rotas   | CiPs 1, 3, 8, 10, 11,       |
| Promotes awareness of the doctor's role in utilising healthcare resources optimally and within defined resource constraints  | CiP 1                       |
| Recognises and responds appropriately to unprofessional behaviour in others  | CiPs 1, 3, 4                |
| Recognises personal beliefs and biases and understand their impact on the delivery of health services  | CiPs 3, 4                   |
| Refers patients on appropriately where personal beliefs and biases could impact upon professional practice   | CiPs 3, 4                   |
| Uses all healthcare resources prudently and appropriately  | CiPs 1, 4                   |
| Improves clinical leadership and management skill  | CiPs 1, 6                   |
| Recognises situations when it is appropriate to involve professional and regulatory bodies   | CiPs 1, 2, 4                |
| Acts as a leader, mentor, educator and role model where appropriate  | CiPs 1, 6, 13               |

| Knowledge, skills and behaviours from 2016 curriculum  | Location in 2021 Curriculum |
|--|-----------------------------|
| <p>Continues to:</p> <ul style="list-style-type: none"> <li>▪ Deal with inappropriate patient and family behaviour</li> <li>▪ Respect the rights of children, elderly, people with physical, mental, learning or communication difficulties</li> <li>▪ Adopt an approach to eliminate discrimination against patients from diverse backgrounds including age, gender, race, culture, disability, spirituality and sexuality</li> <li>▪ Place needs of patients above own convenience</li> <li>▪ Behave with honesty and probity</li> <li>▪ Act with sensitivity in a non-confrontational manner</li> </ul> | <p>CiPs 1, 2, 3, 4, 11</p>  |
| <p>Accepts mentoring as a positive contribution to promote personal professional development</p>   | <p>CiPs 1, 6</p>            |
| <p>Participates in professional regulation and professional development</p>  | <p>CiPs 1, 6</p>            |
| <p>Takes part in 360 degree feedback as part of appraisal</p>  | <p>CiPs 1, 6</p>            |
| <p>Promotes the right for equity of access to healthcare</p>   | <p>CiPs 4, 12</p>           |
| <p>Demonstrates reliability and accessibility throughout the healthcare team</p>   | <p>CiPs 1, 3</p>            |

## 2.2 Time management and decision making

| Knowledge, skills and behaviours from 2016 curriculum   | Location in 2021 Curriculum |
|---|-----------------------------|
| To prioritise and organise clinical and clerical duties to optimise patient care and makes appropriate decisions to optimise the effectiveness of the clinical team |                             |
| Illustrates the need to prioritise work according to urgency and importance   | CiPs 3, 4                   |
| Illustrates the roles, competences and capabilities of other professionals and support workers  | CiP 1                       |
| Outlines techniques for improving time management   | CiPs 1, 3                   |
| Demonstrates the importance of prompt investigation, diagnosis and treatment in patient management  | CiPs 3, 4                   |
| Maintains focus on individual patient needs whilst balancing competing pressures  | CiP 4                       |
| Organises and manages workload effectively and flexibly.  | CiP 3                       |
| Makes appropriate use of other professionals and support workers  | CiPs 1, 3, 4                |
| Works flexibly and deals with tasks in an effective and efficient fashion   | CiPs 1, 3                   |
| Recognises when you or others are falling behind and take steps to rectify the situation  | CiPs 3, 4, 6                |
| Communicates changes in priority to others  | CiP 3                       |
| Remains calm in stressful or high pressure situations and adopt a timely, rational approach   | CiPs 3, 4                   |
| Appropriately recognises and handles uncertainty within the consultation  | CiPs 3, 4                   |



## 2.3 Decision making and clinical reasoning

| Knowledge, skills and behaviours from 2016 curriculum  | Location in 2021 Curriculum    |
|--|--------------------------------|
| To develop the ability to formulate a diagnostic and therapeutic plan for a patient according to the clinical information available. To develop the ability to prioritise the diagnostic and therapeutic plan. To be able to communicate a diagnostic and therapeutic plan appropriately |                                |
| Recognises the psychological component of disease and illness presentation   | CiPs 3, 7                      |
| Recognises how to use expert advice, clinical guidelines and algorithms  | CiPs 3, 7, 8, 13               |
| Recognises and appropriately responds to sources of information accessed by patients   | CiPs 3, 4                      |
| Incorporates an understanding of the psychological and social elements of clinical scenarios into decision making through clinical reasoning   | CiPs 1, 3, 4, 11, 13           |
| Comprehends the need to determine the best value and most effective treatment both for the individual patient and for a patient cohort   | CiPs 1, 4, 7, 8, 9, 10, 11     |
| Constructs an appropriate management plan in conjunction with the patient, carers and other members of the clinical team and communicates this effectively to the patient and carers where relevant  | CiPs 1, 3, 4, 8, 9, 10, 11, 13 |
| Applies the relevance of an estimated risk of a future event to an individual patient  | CiP 13                         |
| Searches and comprehends medical literature to guide reasoning   | CiPs 1, 7                      |
| Recognises the difficulties in predicting occurrence of future events  | CiPs 3, 7                      |
| Shows willingness to facilitate patient choice   | CiPs 1, 4, 13                  |
| Shows willingness to search for evidence to support clinical decision making   | CiPs 1, 7                      |

## 2.4 The patient as central focus of care

| Knowledge, skills and behaviours from 2016 curriculum   | Location in 2021 Curriculum |
|---|-----------------------------|
| To prioritise the patient's wishes encompassing their beliefs, concerns expectations and needs  |                             |
| Outlines health needs of particular populations, e.g. ethnic minorities, and recognises the impact of health beliefs, culture and ethnicity on presentations of physical and psychological conditions | CiPs 4, 11                  |
| Describes sources of information and support for patients   | CiPs 3, 4, 13               |
| Gives adequate time for patients and carers to express their beliefs ideas, concerns and expectations   | CiPs 3, 4                   |
| Ascertains the desire of the patient for information  | CiPs 3, 4                   |
| Tailors the discussion and written information to the patients' requirements  | CiPs 3, 4, 11               |
| Supports patients and carers where relevant to comply with management plans   | CiPs 3, 4, 13               |
| Encourages patients to voice their preferences and personal choices about their care  | CiPs 3, 4                   |
| Responds to questions honestly and seeks advice if unable to answer   | CiP 3                       |
| Recognises the duty of the medical professional to act as patient advocate  | CiPs 4, 13                  |
| Treats patients with respect and without discrimination, is polite, considerate and honest, shows respect for dignity and privacy.  | CiPs 3, 4                   |
| Treats patients fairly and as individuals   | CiPs 3, 4                   |
| Encourages patients to take an interest in their health and take action to improve and maintain it  | CiPs 4, 13                  |

## 2.5 Patient safety

| Knowledge, skills and behaviours from 2016 curriculum  | Location in 2021 Curriculum |
|--|-----------------------------|
| To prioritise patient safety throughout all clinical practice.   |                             |
| Outlines the conditions required to maintain a safe working environment  | CiPs 1, 2, 4, 7, 12         |
| Describes the toxicities of systemic therapies and safe handling of cytotoxic drugs  | CiPs 3, 7, 9, 12            |
| Describes the principles of radiation protection, including statutory frameworks and local rules                           | CiP 7                       |
| Works with colleagues in the healthcare team to ensure that patient care is organised in a way that ensures patient safety | CiPs 3, 4                   |
| Recognises and responds to a patient's deterioration or lack of response to therapy  | CiPs 3, 4                   |
| Improves patients' and colleagues understanding of the risks associated with treatment                                     | CiPs 3, 8, 9, 10            |
| Ensures that procedures for safe practice are followed   | CiPs 1, 4, 7                |
| Maintains a high level of safety awareness at all times  | CiPs 4, 12                  |
| Takes appropriate action when concerns are raised about own performance or that of colleagues                              | CiPs 1, 2, 4                |
| Continues to be aware of own limitations and operates within these   | CiP 1                       |

## 2.6 Team working

| Knowledge, skills and behaviours from 2016 curriculum   | Location in 2021 Curriculum |
|---|-----------------------------|
| To develop the ability to work well in a variety of different teams. To develop leadership skills required to lead a team to be more effective and able to deliver better patient care  |                             |
| Describes the roles and responsibilities of members of the healthcare team  | CiPs 1, 10                  |
| Outlines factors adversely affecting a doctor's and team performance and methods to rectify these   | CiPs 1, 6, 10               |
| Practises with attention to providing good continuity of care   | CiPs 13, 14                 |
| Creates accurate attributable patient notes, including appropriate use of electronic clinical record systems  | CiPs 1, 3                   |
| Delivers detailed hand over between shifts and areas of care  | CiPs 1, 3                   |
| Demonstrates leadership and management in the following areas: <ul style="list-style-type: none"> <li>▪ Coordinates and leads a team based approach to patient care</li> <li>▪ Providing education and training for junior colleagues and other members of the healthcare team</li> <li>▪ Dealing with deteriorating performance of colleague (e.g. stress, fatigue)</li> <li>▪ Delivering high quality care</li> </ul> | CiPs 1, 3, 6, 8, 10         |
| Leads and participates in multi disciplinary team meetings  | CiPs 3, 10                  |
| Delegates appropriately whilst providing appropriate supervision to less experienced colleagues   | CiPs 3, 6                   |
| Encourages an open environment to foster and explores concerns and issues about the functioning and safety of team working  | CiPs 1, 4                   |
| Recognises limits of own professional competence and only practise within these   | CiPs 3, 4                   |
| Demonstrates assertiveness when appropriate   | CiP 3                       |
| Recognises and respects the request for a second opinion  | CiPs 3, 4                   |
| Recognises the importance of induction for new members of a team  | CiPs 1, 4                   |
| Recognises the importance of prompt and accurate information sharing with the multi disciplinary and Primary Care teams following hospital discharge  | CiPs 1, 4, 10, 13           |

## 2.7 Principles of quality and safety improvement

| Knowledge, skills and behaviours from 2016 curriculum   | Location in 2021 Curriculum |
|---|-----------------------------|
| To recognise the desirability of monitoring performance, learning from mistakes and adopting no blame culture in order to ensure high standards of care and optimise patient safety |                             |
| Describes local and national significant event reporting systems (NCEPOD, IRMER, morbidity and mortality, etc..) and how this is dealt with within clinical oncology departments    | CiPs 1, 3                   |
| Outlines local health and safety protocols (fire, radiation protection, etc..)  | CiPs 1, 4                   |
| Understands risks associated with radiation, chemotherapy and biological therapies and mechanisms to reduce risk  | CiPs 1, 4                   |
| Outlines potential Quality Improvement and Service Improvement tools such as Plan Do Study Act (PDSA), capacity and demand measurement, root cause analysis and audit               | CiPs 1, 4                   |
| Demonstrates knowledge of sources of further support such as the NHS Institute for Innovation and Improvement and the Institute for Health Improvement                              | CiPs 1, 4                   |
| Adopts strategies to reduce risk  | CiP 4                       |
| Recognises that governance safeguards high standards of care and facilitates the development of improved clinical services  | CiPs 1, 4                   |
| Recognise importance of evidence-based practice in relation to clinical effectiveness   | CiPs 1, 3                   |
| Reflects regularly on own standards of medical practice in accordance with GMC guidance on licensing and revalidation   | CiPs 1, 3                   |
| Demonstrates a willingness to adhere to departmental protocols  | CiP 1                       |
| Develops reflection in order to achieve insight into own professional practice  | CiP 3                       |
| Demonstrates personal commitment to improve own performance in the light of feedback and assessment   | CiP 3                       |

| Knowledge, skills and behaviours from 2016 curriculum   | Location in 2021 Curriculum |
|---|-----------------------------|
| <p>Demonstrates a willingness to participate in, contribute to, respond positively to outcomes of safety and quality improvement strategies, e.g.</p> <ul style="list-style-type: none"> <li>▪ reporting adverse clinical incidents and taking part in the subsequent investigation in serious incidents</li> <li>▪ Audit of personal and departmental and directorate performance</li> <li>▪ Errors / discrepancy meetings</li> <li>▪ Critical incident and near miss reporting</li> <li>▪ Unit morbidity and mortality meetings</li> <li>▪ Local and national databases</li> <li>▪ Quality Improvement Project</li> </ul> | <p>CiPs 1, 3, 4, 5</p>      |
| <p>Engages with an open no blame culture</p>  | <p>CiP 1</p>                |

## 2.8 Audit

| Knowledge, skills and behaviours from 2016 curriculum  | Location in 2021 Curriculum |
|--|-----------------------------|
| To be able to undertake a clinical audit and complete an audit cycle.  |                             |
| Defines the difference between audit and research  | CiPs 3, 5                   |
| Discusses the nature of the audit cycle, including the steps involved in the audit cycle and its role in improving patient care and services   | CiPs 3, 4, 5                |
| Identifies appropriate data collection, statistical and analytical methods for use in auditing practice  | CiP 5                       |
| Discusses change management and the importance of reducing resistance to change  | CiPs 1, 3                   |
| Describes the working and use of national and local databases for audit, e.g. cancer registries, cancer minimum dataset, cancer waiting times, NCEPOD  | CiPs 3, 5                   |
| Designs, implements and completes audit cycles, including: <ul style="list-style-type: none"> <li>▪ Identifying an appropriate subject for audit</li> <li>▪ Identifying suitable guidelines to audit against</li> <li>▪ Designing a form for collection of relevant data</li> <li>▪ Interpreting the data extracted and comparing this with the guidelines and reaching conclusions using appropriate statistical and analysis methods</li> <li>▪ Developing an action plan</li> <li>▪ Presenting the data, conclusions and possible action plan to an audit meeting</li> <li>▪ Identifying the change in outcomes required</li> <li>▪ Identifying the change in processes required to achieve those outcomes</li> <li>▪ Negotiating with the individuals who can deliver those changes</li> </ul> | CiPs 3, 5                   |
| Contributes to local and national audit projects appropriately, e.g. NCEPOD  | CiPs 3, 5                   |
| Supports audit within the MDT  | CiPs 5, 10                  |
| Recognise the need for audit in clinical practice to promote standard setting and quality assurance  | CiPs 1, 5                   |
| Shows willingness to support changes identified as necessary by audits   | CiPs 1, 5                   |

## 2.9 Complaints and medical error

| Knowledge, skills and behaviours from 2016 curriculum  | Location in 2021 Curriculum |
|--|-----------------------------|
| To recognise the causes of error and to learn from them. To realise the importance of honesty and effective apology. To take a leadership role in the handling of complaints |                             |
| Describes the local complaints procedure   | CiP 2                       |
| Recognises factors likely to lead to complaints (poor communication, dishonesty, clinical errors, adverse clinical outcomes etc..)   | CiP 3                       |
| Outlines the principles of an effective apology  | CiP 2                       |
| Identifies sources of help and support for patients and self when a complaint is made about self or a colleague  | CiP 1                       |
| Contributes to processes whereby complaints are reviewed and learned from  | CiP 1                       |
| Recognises when something has gone wrong and identifies appropriate staff to communicate with  | CiPs 1, 3                   |
| Delivers an appropriate apology and explanation (either of error or for process of investigation of potential error and reporting of the same)                               | CiPs 2, 3                   |
| Distinguishes between system and individual errors (personal and organisational)   | CiPs 1, 3                   |
| Shows an ability to learn from previous error  | CiP 3                       |
| Adopts behaviour likely to prevent causes for complaints   | CiPs 3, 4                   |
| Deals appropriately with concerned or dissatisfied patients or relatives   | CiPs 1, 3, 4                |
| Acts with honesty and sensitivity in a non-confrontational manner  | CiP 1                       |
| Recognises the impact of complaints and medical error on staff, patients, and the National Health Service  | CiPs 1, 3                   |
| Contributes to a fair and transparent culture around complaints and errors   | CiP 2                       |
| Recognises the rights of patients, family members and carers to make a complaint   | CiPs 3, 4                   |
| Recognises the impact of a complaint upon self and seeks appropriate help and support  | CiP 1                       |



## 2.10 Communication with colleagues and cooperation

| Knowledge, skills and behaviours from 2016 curriculum  | Location in 2021 Curriculum |
|--|-----------------------------|
| To recognise and accept the responsibilities and role of the doctor in relation to other healthcare professionals. To communicate succinctly and effectively with other professionals as appropriate   |                             |
| Demonstrates an understanding of the section in "Good Medical Practice" on Working with Colleagues, in particular: <ul style="list-style-type: none"> <li>▪ The roles played by all members of a multi-disciplinary team</li> <li>▪ The principles of effective inter-professional collaboration to optimise patient care</li> </ul> | CiPs 1, 3, 4, 10            |
| Describes the principles of confidentiality that provide boundaries to communicate   | CiPs 2, 3                   |
| Outlines techniques to manage anger and aggression in self and colleagues  | CiP 3                       |
| Describes responsibility of the doctor in the management of physical and/or mental ill health in self and colleagues.  | CiP 3                       |
| Communicates accurately, clearly, promptly and comprehensively with relevant colleagues in a timely manner   | CiP 3                       |
| Outlines procedures for seeking patient consent for disclosure of information and situations where consent while desirable is not obligatory   | CiPs 1, 3, 4                |
| Employs behavioural management skills with colleagues to prevent and resolve conflict and enhance collaboration  | CiPs 1, 3                   |
| Shows awareness of the importance of multi-disciplinary teamwork, including adoption of a leadership role when appropriate but also recognising where others are better equipped to lead   | CiPs 1, 3, 10               |
| Fosters a supportive and respectful environment where there is open and transparent communication between all team members   | CiPs 1, 2                   |
| Ensures appropriate confidentiality is maintained during communication with any member of the team   | CiP 3                       |
| Recognises the need for a healthy work/life balance for the whole team   | CiP 3                       |
| Accepts additional duties in situations of unavoidable and unpredictable absence of colleagues ensuring that the best interests of the patient are paramount   | CiP 4                       |

## 2.11 Medical ethics and confidentiality

| Knowledge, skills and behaviours from 2016 curriculum  | Location in 2021 Curriculum |
|--|-----------------------------|
| To know, understand and apply appropriately the principles, guidance and laws regarding medical ethics and confidentiality   |                             |
| Outlines and follows the guidance given by the GMC on confidentiality  | CiP 1                       |
| Defines the principles of Information Governance   | CiP 5                       |
| Uses and shares information with the highest regard for confidentiality, and encourages such behaviour in other members of the team                                  | CiP 5                       |
| Recognise the problems posed by disclosure in the public interest, without patient's consent   | CiPs 2, 4                   |
| Uses and promotes strategies to ensure confidentiality is maintained e.g. anonymisation  | CiPs 2, 4, 5                |
| Counsels patients on the need for information distribution within members of the immediate healthcare team   | CiPs 4, 5                   |
| Counsels patients, family, carers and advocates tactfully and effectively when making decisions about resuscitation status, and withholding or withdrawing treatment | CiP 4                       |
| Encourages informed ethical reflection in others   | CiPs 2, 3                   |
| Shows willingness to seek advice of peers, legal bodies and the GMC where there are ethical dilemmas regarding confidentiality and information sharing               | CiPs 2, 3                   |
| Respects patients' requests for information not to be shared, unless this puts the patient, or others, at risk of harm   | CiP 4                       |
| Shows willingness to share information with patients about their care, unless they have expressed a wish not to receive such information                             | CiP 4                       |

## 2.12 Medical ethics and conflict of duty

| Knowledge, skills and behaviours from 2016 curriculum  | Location in 2021 Curriculum |
|--|-----------------------------|
| To know, understand and apply appropriately the principles and guidance regarding conflicts between different ethical duties           |                             |
| Discusses the conflict between ethical duties both to the individual and between the individual patient and broader notions of justice | CiP 2                       |
| Recognises the complexity of decision making where conflicting duties are at stake and justifies a decision on ethical grounds         | CiP 2                       |
| Explains to patients and their relatives concerns about treatments that are not normally funded  | CiPs 3, 4                   |
| Recognise the factors influencing ethical decision making, including religion, personal and moral beliefs, cultural practices          | CiP 2                       |
| Shows willingness to seek the opinion of others when making decisions about ethical issues   | CiPs 1, 2                   |
| Respects opinions of others, including patients, when making decisions about ethical issues  | CiPs 1, 2, 4                |

## 2.13 Medical ethics and autonomy and capacity

| Knowledge, skills and behaviours from 2016 curriculum  | Location in 2021 Curriculum |
|--|-----------------------------|
| To know, understand and apply appropriately the principles and guidance regarding the concepts of autonomy and capacity.                                   |                             |
| Discusses the value and limitations of promotion of autonomy in medicine.  | CiPs 2, 4                   |
| Describes the components necessary for informed consent  | CiP 2                       |
| Describes the tests for Assessing Capacity   | CiP 2                       |
| Accepts the need to respect competent refusal  | CiPs 2, 4                   |
| Discusses the principles and implications of the Mental Capacity Act, advanced refusals, enduring power of attorney, independent mental capacity advocates | CiP 2                       |
| Communicates honestly with patients and their relatives about their disease, benefits and side-effects of treatment and their prognosis                    | CiPs 3, 4                   |
| Negotiates with relatives to avoid collusion with them to deny the patient information about their illness   | CiPs 3, 4                   |
| Assesses capacity and understands the legal and moral implications of its presence and absence.  | CiPs 2, 4                   |
| Treats patients with respect and without discrimination, is polite, considerate and honest, and shows respect for dignity and privacy.                     | CiP 4                       |
| Treats patients fairly and as individuals  | CiP 4                       |

## 2.14 Medical ethics and end of life issues

| Knowledge, skills and behaviours from 2016 curriculum   | Location in 2021 Curriculum |
|---|-----------------------------|
| To understand the ethical and legal issues at the end of life and the concepts of acts, omissions and double effect   |                             |
| Defines the standards of practice defined by the GMC when deciding to withhold or withdraw life-prolonging treatment  | CiP 1                       |
| Appreciates that both acts and omissions carry moral and legal culpability but that whilst allowing patients to die may be defensible, killing them is not. | CiPs 1, 2                   |
| Accepts that omissions are not legitimate where there is a clear duty to act  | CiP 1                       |
| Defines the doctrine of double effect   | CiP 2                       |
| Discusses the current guidance on DNAR orders and controversies about these   | CiPs 1, 2                   |
| Discusses the arguments for and against euthanasia and describes the legal position   | CiP 2                       |
| Identifies sources of advice for complex ethical/legal issues   | CiP 2                       |
| Applies clear and logical thinking around legal and ethical issues at the end of life   | CiP 2                       |
| Documents the issues and views that have been considered, the decisions reached and the reasoning behind those decisions in complex end of life decisions.  | CiP 2                       |
| Seeks, listens to and values other people's opinions in complex end of life decisions   | CiPs 2, 3                   |
| Show willingness to seek the opinion of others when making decisions about resuscitation status, and withholding or withdrawing treatment                   | CiPs 3, 4                   |
| Values consensus in complex end-of-life decision making   | CiPs 1, 4                   |

## 2.15 Valid consent

| Knowledge, skills and behaviours from 2016 curriculum   | Location in 2021 Curriculum |
|---|-----------------------------|
| To obtain valid consent from the patient  |                             |
| Outlines the GMC guidance on consent  | CiP 1                       |
| Gives the patient and his/her carers the information and time required to make an informed decision                     | CiPs 3, 4                   |
| Provides a balanced honest view of treatment options  | CiPs 1, 3                   |
| Respects the patient's rights to autonomy   | CiP 4                       |
| Shows willingness to seek advice or offer the patient a second opinion where appropriate                                | CiPs 3, 4                   |
| Only obtains consent for procedures which they are not competent to perform, in accordance with GMC/regulatory guidance | CiPs 1, 3                   |

## 2.16 Legal framework for practice

| Knowledge, skills and behaviours from 2016 curriculum  | Location in 2021 Curriculum |
|--|-----------------------------|
| To understand the legal framework within which healthcare is provided in the UK and/or devolved administrations in order to ensure that personal clinical practice is always provided in line with this legal framework  |                             |
| Illustrates that all decisions and actions must be in the best interests of the patient  | CiPs 1, 4                   |
| <p>Describes the legislative framework within which healthcare is provided in the UK and/or devolved administrations, including:</p> <ul style="list-style-type: none"> <li>▪ death certification and the role of the Coroner/Procurator Fiscal</li> <li>▪ child protection legislation</li> <li>▪ mental health legislation (including powers to detain a patient and giving emergency treatment against a patient's will under common law);</li> <li>▪ advanced directives and living Wills</li> <li>▪ withdrawing and withholding treatment</li> <li>▪ decisions regarding resuscitation of patients</li> <li>▪ medical risk and driving</li> <li>▪ Data Protection and Freedom of Information Acts</li> <li>▪ IRMER</li> </ul> | CiP 2                       |
| Outlines sources of medical legal information  | CiP 2                       |
| Describes disciplinary processes in relation to medical malpractice  | CiP 2                       |
| Outlines the role the medical practitioner in relation to personal health and substance misuse, including understanding the procedure to be followed when such abuse is suspected.   | CiPs 1, 2                   |
| Cooperates with other agencies with regard to legal requirements   | CiP 2                       |
| Prepares appropriate medical legal statements for submission to the Coroner's Court, Procurator Fiscal and other legal proceedings and is prepared to present such material in court   | CiP 2                       |
| Practices and promotes accurate documentation within clinical practice   | CiP 2                       |
| Show willingness to seek advice from the employer, appropriate legal bodies (including defence societies), and the GMC on medico-legal matters   | CiPs 1, 2                   |
| Incorporates legal principles into day to day practice   | CiP 2                       |
| Demonstrates that all decisions and actions must be in the best interests of the patient   | CiP 4                       |

## 2.17 Ethical research

| Knowledge, skills and behaviours from 2016 curriculum   | Location in 2021 Curriculum |
|---|-----------------------------|
| To ensure that research is undertaken using relevant ethical guidelines   |                             |
| Outlines the GMC guidance on good practice in research  | CiP 1                       |
| Describes the components of GCP   | CiP 1                       |
| Describes the background behind ethical codes for scientific research (Nuremberg, Helsinki etc.)  | CiP 5                       |
| Defines the difference between audit and research   | CiP 5                       |
| Demonstrates a knowledge of research principles   | CiP 5                       |
| Outlines the principles of formulating a research question and designing a project  | CiP 5                       |
| Comprehends principal qualitative, quantitative, bio-statistical and epidemiological research methods   | CiP 5                       |
| Describes the mechanism of ethical approval for research studies  | CiP 5                       |
| Outlines sources of research funding  | CiP 5                       |
| Discusses the ethical rationale and values the importance of scientific research  | CiP 5                       |
| Discusses the potential for conflicting ethical values between patient care and scientific research and how these are resolved                  | CiP 5                       |
| Uses critical appraisal skills and applies these when reading literature  | CiP 5                       |
| Demonstrates the ability to write a scientific paper  | CiP 5                       |
| Applies for appropriate ethical research approval   | CiP 5                       |
| Understands the difference between population-based assessment and unit-based studies and be able to evaluate outcomes for epidemiological work | CiP 5                       |



| Knowledge, skills and behaviours from 2016 curriculum  | Location in 2021 Curriculum |
|--|-----------------------------|
| Assesses research against the criteria to determine whether it is ethical, including: <ul style="list-style-type: none"> <li>▪ Social/ Scientific value</li> <li>▪ Scientific validity</li> <li>▪ Fair subject selection</li> <li>▪ Favourable risk/ benefit ratio</li> <li>▪ Independent review</li> <li>▪ Informed consent</li> <li>▪ Respect for potential and enrolled subjects</li> </ul> | CiP 5                       |
| Follows guidelines on ethical conduct in research and consent for research   | CiP 5                       |
| Shows willingness to encourage and take part in research   | CiP 5                       |

## 2.18 Evidence and guidelines

| Knowledge, skills and behaviours from 2016 curriculum  | Location in 2021 Curriculum |
|--|-----------------------------|
| To make the optimal use of current best evidence in making decisions about the care of patients<br>To develop the ability to construct evidence based guidelines and protocols in relation to medical practise |                             |
| Outlines the principles of critical appraisal  | CiPs 1, 6                   |
| Describes the advantages and disadvantages of different study methodologies (quantitative and qualitative) for different types of questions  | CiP 6                       |
| Outlines levels of evidence and quality of evidence  | CiP 6                       |
| Demonstrates how to apply statistics in scientific medical practice  | CiP 6                       |
| Distinguishes between the use and differences between the basic measures of risk and uncertainty   | CiP 6                       |
| Describes the role and limitations of evidence in the development of clinical guidelines and protocols   | CiPs 1, 5                   |
| Describes how guidelines and protocols are developed (e.g. NICE and SIGN)  | CiP 1                       |
| Searches the medical literature including use of PubMed, Medline, Cochrane reviews and the internet  | CiPs 1, 5                   |
| Appraises retrieved evidence to address a clinical question  | CiPs 1, 6                   |
| Applies conclusions from critical appraisal into patient care  | CiPs 1, 6                   |
| Contributes to the construction, review and updating of local (and national) guidelines of good practice   | CiPs 1, 2                   |
| Aims for best clinical practice (clinical effectiveness) at all times, as informed by evidence based medicine  | CiP 1                       |
| Recognises knowledge gaps and seeks to address them  | CiP 1                       |
| Keeps up to date with national reviews, key new relevant research, and guidelines of practice (e.g. NICE and SIGN)   | CiP 1                       |
| Recognises the need to practise outside clinical guidelines at times   | CiPs 1, 4                   |
| Communicates information about risk and risk-benefit trade-offs, in ways appropriate for the individual patient  | CiPs 3, 4                   |
| Encourages discussion amongst colleagues on evidence-based practice  | CiPs 1, 3, 6                |

## 2.19 Continuing professional development

| Knowledge, skills and behaviours from 2016 curriculum   | Location in 2021 Curriculum |
|---|-----------------------------|
| To be able to take responsibility for personal learning and continuing professional development |                             |
| Describes how adults learn and how principles relate to personal development                    | CiP 1                       |
| Outlines the structure of an effective appraisal interview                                      | CiPs 1, 6                   |
| Differentiates between appraisal and assessment and performance review                          | CiP 1                       |
| Discusses who to refer to if problems are identified during training                            | CiPs 1, 6                   |
| Develops personal development plan and portfolio to ensure continuing personal development      | CiP 1                       |
| Uses workplace-based assessments and appraisals as an opportunity for personal development      | CiP 1                       |
| Uses different learning methods effectively to develop personal skills and knowledge            | CiP 1                       |
| Shows willingness to seek and learn from feedback   | CiP 1                       |
| Show willingness to undertake workplace-based assessments                                       | CiP1                        |
| Encourages discussions colleagues with colleagues to share knowledge and understanding          | CiPs 1, 3                   |
| Maintains honesty and objectivity during appraisal and assessment                               | CiPs 1, 6                   |
| Recognises the importance of personal development in guiding good professional behaviour        | CiPs 1, 6                   |
| Demonstrates a willingness to advance own educational capability through continuous learning    | CiP 1                       |

## 2.20 Teaching

| Knowledge, skills and behaviours from 2016 curriculum  | Location in 2021 Curriculum |
|--|-----------------------------|
| To be able to deliver teaching in a variety settings   |                             |
| Describes how adults learning principles relate to medical education   | CiPs 1, 6                   |
| Demonstrates knowledge of relevant developments and challenges in medical education  | CiP 6                       |
| Describes the assessment system and its place in relation to formative and summative assessment  | CiPs 1, 6                   |
| Demonstrates an understanding of the place of workplace based assessments  | CiPs 1, 6                   |
| Identifies learning needs of others and self and varies teaching format appropriately  | CiP 6                       |
| Structures and delivers clinical teaching sessions effectively, including: <ul style="list-style-type: none"> <li>▪ Small group teaching</li> <li>▪ Presentations</li> <li>▪ Lectures</li> <li>▪ Bed side teaching sessions</li> <li>▪ Appropriate design and use of audiovisual aids</li> <li>▪ Allowing active audience participation</li> </ul> | CiP 6                       |
| Communicates feedback effectively and appropriately  | CiPs 3, 6                   |
| Undertakes supervision, workplace-based assessments, appraisal, mentoring as appropriate   | CiP 6                       |
| Recognises the trainee in difficulty and take appropriate action, including where relevant referral to other services  | CiPs 4, 6                   |
| Leads departmental teaching programmes including journal clubs   | CiP 6                       |
| Participates in strategies aimed at improving patient education, e.g. talking at support group meetings  | CiPs 4, 6                   |
| Maintains dignity and safety of patients at all times when discharging educational duties  | CiPs 4, 6                   |
| Shows willingness to seek and learn from feedback  | CiPs 1, 6                   |
| Demonstrates willingness to teach trainees and other health and social workers in a variety of settings  | CiP 6                       |

| Knowledge, skills and behaviours from 2016 curriculum   | Location in 2021 Curriculum |
|---|-----------------------------|
| Demonstrates consideration for learners, including their emotional, physical and psychological well being with their development needs. | CiP 6                       |
| Acts to ensure equality of opportunity for students, trainees, staff and professional colleagues  | CiPs 1, 6                   |
| Shows willingness to undertake assessment of workplace-based assessments  | CiP 6                       |
| Maintains honesty and objectivity during appraisal and assessment   | CiP 6                       |
| Recognises the importance of personal development in guiding trainees in aspects of good professional behaviour                         | CiP 6                       |

## 2.21 Management and NHS structure

| Knowledge, skills and behaviours from 2016 curriculum  | Location in 2021 Curriculum |
|--|-----------------------------|
| To understand the structure of the NHS and the management of local healthcare systems in order to be able to participate fully in managing healthcare provision  |                             |
| Outlines the guidance given on management and doctors by the GMC   | CiP 1                       |
| Understands the local structure of NHS systems in your locality, recognising potential differences between the four countries of the UK  | CiP 1                       |
| Evaluates major national reports on cancer care e.g. Cancer Reform Strategy, National Radiotherapy Advisory Group and National Chemotherapy Advisory Group reports   | CiP 1                       |
| Evaluates possible future developments in the organisation of cancer services  | CiPs 1, 2, 4                |
| Describes the local structure of NHS systems in the locality, including the department's management and committee structure recognising the potential differences between the four countries of the UK   | CiP 1                       |
| Describes how cancer services are commissioned for patients  | CiP 1                       |
| Understands the consistent debates and changes that occur in the NHS including the political, social, technical, economic, organisational and professional aspects that can impact on provision of service   | CiP 1                       |
| Describes the principles of: <ul style="list-style-type: none"> <li>▪ Clinical coding</li> <li>▪ European Working Time Regulations including rest provisions</li> <li>▪ NHS finance and budgeting</li> <li>▪ Consultant contract and the contracting process</li> <li>▪ Resource allocation</li> <li>▪ The role of the independent sector as providers of healthcare</li> <li>▪ Patient and public involvement processes and role</li> <li>▪ Recruitment and appointment procedures</li> </ul> | CiP 1                       |
| Participates in managerial meetings  | CiP 1                       |
| Works with stakeholders to create and sustain a patient-centred service  | CiPs 1, 3, 4                |
| Analyses information and uses it appropriately to promote service developments   | CiPs 1, 5                   |
| Prioritises use of resources, including allocating beds and making best use of staffing resources, particularly when these are stretched by competing demands  | CiPs 1, 4                   |

| Knowledge, skills and behaviours from 2016 curriculum  | Location in 2021 Curriculum |
|--|-----------------------------|
| Recognises the importance of equitable allocation of healthcare resources and of commissioning   | CiP 1                       |
| Recognises the role of doctors as active participants in healthcare systems  | CiP 1                       |
| Responds appropriately to health service objectives and targets and take part in the development of services   | CiP 1                       |
| Recognises the role of patients and carers as active participants in healthcare systems and service planning   | CiPs 1, 4                   |
| Takes an active role in promoting the best use of healthcare resources   | CiP 1                       |
| Shows willingness to improve leadership and managerial skills (e.g. management courses) and engage in leadership and management of the service (e.g. to be a member of departmental and cancer network committees) | CiPs 1, 6                   |

### 3. Introductory module

#### 3.1 Authorising chemotherapy

| Knowledge, skills and behaviours from 2016 curriculum   | Location in 2021 Curriculum |
|---|-----------------------------|
| To be able to review a patient receiving cytotoxic chemotherapy.<br>To authorise the next cycle of previously-prescribed treatment, enabling treatment to proceed |                             |
| Describes safe handling of cytotoxic drugs  | CiPs 7, 12                  |
| Describes the methods of calculating the correct dose of chemotherapy   | CiPs 7, 12                  |
| Describes the possible side effects of treatment  | CiPs 7, 9, 11, 12           |
| Takes a focused history to ensure that patient's condition has not changed since treatment was prescribed   | CiPs 8, 9, 11, 12           |
| Identifies when the dose should be reduced or the cycle delayed   | CiPs 8, 9, 12               |
| Elicits patient and carers concerns about treatment and ensures that they are addressed appropriately   | CiPs 4, 8, 9, 11, 12        |
| Ensures that patient has all relevant written information regarding treatment, especially emergency contact instructions  | CiPs 8, 12                  |
| Remains open to advice from other health professionals on chemotherapy issues   | CiPs 8, 9, 12               |



### 3.2 Prescribing chemotherapy

| Knowledge, skills and behaviours from 2016 curriculum   | Location in 2021 Curriculum |
|---|-----------------------------|
| To be able to prescribe cytotoxic chemotherapy within local guidelines, continuing a planned course of treatment (but not initiate first cycle of treatment)      |                             |
| Describes the common side effects of chemotherapy in common use   | CiP 12                      |
| Describes the use of supportive measures both pharmacological and non pharmacological to treat toxic effects of chemotherapy                                      | CiPs 7, 8, 9, 12            |
| Describes methods of assessing tumour response  | CiP 12                      |
| Defines the effects of age, body size, organ dysfunction and concurrent illnesses on drug distribution and metabolism of cytotoxic drugs                          | CiPs 7, 11, 12              |
| Describes interactions between chemotherapy and other commonly prescribed drugs   | CiPs 7, 8, 9, 11, 12        |
| Takes a focused history and performs a relevant examination to assess tumour response, side effects of treatment, patient's performance status and co-morbidities | CiPs 11, 12                 |
| Assesses toxicity of the previous cycle of chemotherapy   | CiP 12                      |
| Modifies the dose of chemotherapy correctly in response to clinical findings and laboratory parameters  | CiP 12                      |
| Ensures appropriate arrangements are in place for subsequent patient review   | CiPs 11, 12                 |
| Uses electronic prescribing system where available to improve patient safety  | CiP 12                      |
| Ensures treatment information is shared promptly and accurately with patient's GP and other specialties involved in supporting the patient                        | CiPs 9, 11, 12              |

### 3.3 Safety in radiation treatment

| Knowledge, skills and behaviours from 2016 curriculum  | Location in 2021 Curriculum |
|--|-----------------------------|
| To be aware of issues of patient and personal safety with regard to radiation treatment        |                             |
| Describes IRMER regulations and the procedures in place in the department to comply with these | CiPs 17, 18                 |
| Identifies the requirement for an ARSAC certificate  | CiPs 17, 18                 |

## 3.4 Outpatient consultation

| Knowledge, skills and behaviours from 2016 curriculum  | Location in 2021 Curriculum |
|--|-----------------------------|
| To be able to structure an outpatient consultation and to communicate with patients, and carers where appropriate, clearly and in an empathetic manner |                             |
| Recognises that patients do not present a history in a structured fashion  | CiPs 3, 11                  |
| Recognises that patient's wishes and beliefs and the history should inform examination and investigations  | CiPs 3, 11                  |
| Discusses the need for targeted clinical examination   | CiPs 3, 11                  |
| Discusses the limitations of physical examination and the need for appropriate investigations to confirm a diagnosis                                   | CiPs 3, 11                  |
| Assesses and summarises the previous hospital notes  | CiP 3                       |
| Greet patient appropriately and establishes a rapport, overcoming barriers to communication  | CiPs 3, 11                  |
| Elicits patient's main concerns  | CiPs 3, 11                  |
| Performs focused history and examination   | CiPs 3, 11                  |
| Determines the level of information the patient wishes to receive  | CiPs 3, 11, 12              |
| Explains the current situation to the patient and if necessary breaks bad news   | CiPs 3, 11, 12              |
| Negotiates agreed outcomes with the patient  | CiPs 3, 11                  |
| Organises appropriate investigations, treatment and referrals to other professionals   | CiPs 3, 11                  |
| Communicates clearly in the notes and in the letter to the referring doctor and GP   | CiPs 3, 11, 12              |
| Treats patients with respect and without discrimination, is polite, considerate and honest, shows respect for dignity and privacy.                     | CiPs 3, 11, 12              |
| Treats patients fairly and as individuals  | CiP 3                       |
| Shows empathy with the patient's situation and offers appropriate emotional support  | CiPs 3, 11                  |
| Ensures appropriate personal language and behaviour  | CiPs 3, 11, 12              |
| Shows willingness to provide the patient with a second opinion   | CiPs 3, 11                  |

| Knowledge, skills and behaviours from 2016 curriculum  | Location in 2021 Curriculum |
|--|-----------------------------|
| Uses different methods of ethical reasoning to come to a balanced decision where complex and conflicting issues are involved | CiPs 2, 3                   |
| Behaves in accordance with Good Medical Practice   | CiPs 3, 12                  |

### 3.5 Breaking bad news

| Knowledge, skills and behaviours from 2016 curriculum  | Location in 2021 Curriculum |
|--|-----------------------------|
| To be able to skilfully deliver bad news using appropriate strategies according to the needs of the patients             |                             |
| Describes models of breaking bad news  | CiP 3                       |
| Discusses the range of likely reactions to bad news  | CiP 3                       |
| Discusses the different connotations of bad news depending on the context, individual, social and cultural circumstances | CiPs 3, 8, 9, 11, 12        |
| Recognises the impact of bad news on the patient, carers, staff members and self   | CiPs 3, 8, 9, 11, 12        |
| Structures interview appropriately and ensures that patient has the necessary support during the interview               | CiPs 3, 11                  |
| Responds to verbal and non-verbal cues from patient and carers   | CiPs 3, 11                  |
| Elicits patient's main concerns  | CiPs 3, 8, 9, 11, 12        |
| Determines the level of information the patient wishes to receive  | CiPs 3, 8, 9, 11, 12        |
| Explains situation to the patient and carers using appropriate language  | CiPs 3, 8, 9, 11, 12        |
| Encourages questioning and ensures patient understands information given   | CiPs 3, 8, 9, 11, 12        |
| Ensures that appropriate on going support and follow up arrangements are in place  | CiPs 3, 8, 9, 11, 12        |
| Respects the different ways that patients react to bad news  | CiP 3                       |
| Shows empathy with the patient's situation and offers appropriate emotional support                                      | CiP 3                       |
| Shows respect for the opinions of other team members regarding a patient's likely and on going response to bad news      | CiPs 3, 8, 9, 11            |
| Encourages team working to ensure that patients receiving bad news have appropriate support                              | CiPs 3, 8, 9, 11            |

## 4. Oncology emergencies syllabus

### 4.1 Infections

| Knowledge, skills and behaviours from 2016 curriculum   | Location in 2021 Curriculum |
|---|-----------------------------|
| To be able to diagnose and manage infections, especially in immunocompromised patients                              |                             |
| Lists the infections that occur commonly in cancer patients undergoing treatment and describes how to diagnose them | CiPs 8, 9, 12               |
| Quotes/states the antibiotic, antiviral and antifungal policies of the hospital                                     | CiPs 8, 9, 12               |
| Takes a focused history and performs a focused examination  | CiPs 3, 8, 9                |
| Requests appropriate investigations and interprets imaging  | CiPs 8, 9, 11, 12           |
| Resuscitates patients and prescribes appropriate supportive care and antibiotics                                    | CiPs 8, 9                   |
| Evaluates the importance of prognosis in influencing escalation of treatment  | CiPs 8, 9                   |
| Recognises when escalation of care to HDU/ITU is indicated and appropriate  | CiPs 8, 9                   |
| Discusses treatment with patient and carers   | CiPs 8, 9, 11, 12           |
| Determines and institutes initial clinical management and liaises with other specialities as appropriate            | CiPs 9, 10, 11, 12          |

## 4.2 Spinal cord compression

| Knowledge, skills and behaviours from 2016 curriculum                                    | Location in 2021 Curriculum |
|--|-----------------------------|
| To be able to diagnose and manage spinal cord compression                                |                             |
| Describes the symptoms and signs of spinal cord compression                              | CiPs 8, 9                   |
| Identifies the appropriate radiological investigations                                   | CiPs 8, 9                   |
| Describes the roles of steroids, surgery, radiotherapy and rehabilitation                | CiPs 8, 9, 16               |
| Assesses the level of spinal cord compression clinically                                 | CiPs 8, 9                   |
| Interprets MRI imaging   | CiPs 14                     |
| Discusses options with patient and colleagues and recommends most appropriate management | CiPs 8, 9, 16               |
| Plans radiotherapy treatment under appropriate supervision                               | CiPs 16                     |
| Plans appropriate supportive care/rehabilitation   | CiPs 8, 9, 16               |

## 4.3 Cancer related venothromboembolism (VTE)

| Knowledge, skills and behaviours from 2016 curriculum  | Location in 2021 Curriculum |
|--|-----------------------------|
| To be able to manage cancer related veno-thromboembolic events   |                             |
| Describes the symptoms, signs, laboratory and imaging findings (including incidental / unsuspected VTE )   | CiPs 8, 9                   |
| Describe the management with reference to local, national and international guidelines where available   | CiPs 8, 9                   |
| Performs a focused history and examination and is able to develop a differential diagnosis clinically  | CiPs 8, 9                   |
| Determines the blood tests and imaging studies required and interprets them  | CiPs 8, 9                   |
| Evaluates the treatment options and how the patient's prognosis and bleeding risk may influence these  | CiPs 8, 9                   |
| Determines and institutes initial clinical management and liaises with other specialities as appropriate<br>Outlines the follow-up arrangements for the patient including any root-cause analyses process/ audit process | CiPs 8, 9, 12               |
| Recognises when escalation of care to HDU/ITU is indicated and appropriate   | CiPs 8, 9                   |

#### 4.4 Superior vena cava obstruction (SVCO)

| Knowledge, skills and behaviours from 2016 curriculum  | Location in 2021 Curriculum |
|--|-----------------------------|
| To be able to diagnose and manage SVCO   |                             |
| Describes the symptoms and signs of SVCO   | CiPs 8, 9, 11               |
| Lists the differential diagnosis   | CiPs 8, 9, 11               |
| Describes the role of different treatment modalities   | CiPs 8, 9, 11               |
| Performs a focussed history and examination and recognises the diagnosis clinically                                | CiPs 8, 9, 11               |
| Interprets imaging   | CiPs 8, 9, 11               |
| Discusses diagnostic and treatment options with patient and colleagues and recommends the most appropriate pathway | CiPs 8, 9                   |
| Plans radiotherapy/chemotherapy treatment as appropriate, under supervision  | CiPs 12, 15, 16             |

#### 4.5 Metabolic disorders

| Knowledge, skills and behaviours from 2016 curriculum   | Location in 2021 Curriculum |
|---|-----------------------------|
| To be able to diagnose and manage metabolic disorders commonly associated with cancer, including hypercalcaemia, hyperuricaemia, tumour lysis syndrome, hypo/hyperglycaemia and hyperbilirubinaemia |                             |
| Describes the symptoms, signs and laboratory findings of metabolic disorders associated with cancer   | CiPs 8, 9, 11               |
| Lists the differential diagnosis of the possible causes   | CiPs 8, 9, 11               |
| Describes measures to reduce the risk of occurrence where appropriate   | CiPs 8, 9, 11               |
| Determines the blood tests and imaging studies required to establish a diagnosis and interprets them  | CiPs 8, 9, 11               |
| Determines and institutes initial clinical management and liaises with other specialities as appropriate  | CiPs 8, 9, 11               |
| Recognises when escalation of care to HDU/ITU is indicated and appropriate  | CiPs 8, 9                   |

## 4.6 Organ failure

| Knowledge, skills and behaviours from 2016 curriculum   | Location in 2021 Curriculum |
|---|-----------------------------|
| To be able to manage major organ failure: respiratory/cardiovascular failure, renal failure and hepatic failure |                             |
| Describes the symptoms, signs, laboratory and imaging findings  | CiPs 8, 9, 11               |
| Lists the differential diagnosis of the possible causes   | CiPs 8, 9                   |
| Performs a focused history and examination and is able to develop a differential diagnosis clinically           | CiPs 8, 9                   |
| Determines the blood tests and imaging studies required and interprets them                                     | CiPs 8, 9                   |
| Evaluates the treatment options and how the patient's prognosis influences these                                | CiPs 8, 9                   |
| Determines and institutes initial clinical management and liaises with other specialities as appropriate        | CiPs 8, 9                   |
| Recognises when escalation of care to HDU/ITU is indicated and appropriate                                      | CiPs 8, 9                   |

## 4.7 Reduced conscious level

| Knowledge, skills and behaviours from 2016 curriculum   | Location in 2021 Curriculum |
|---|-----------------------------|
| To be able to manage major organ failure: respiratory/cardiovascular failure, renal failure and hepatic failure |                             |
| Describes the symptoms, signs, laboratory and imaging findings  | CiPs 8, 9                   |
| Lists the differential diagnosis of the possible causes   | CiPs 2, 8, 9                |
| Performs a focused history and examination and is able to develop a differential diagnosis clinically           | CiPs 8, 9                   |
| Determines the blood tests and imaging studies required and interprets them                                     | CiPs 8, 9                   |
| Evaluates the treatment options and how the patient's prognosis influences these                                | CiPs 8, 9, 11, 12           |
| Determines and institutes initial clinical management and liaises with other specialities as appropriate        | CiPs 8, 9, 12               |
| Recognises when escalation of care to HDU/ITU is indicated and appropriate                                      | CiPs 8, 9                   |



## 5. Site-specific learning outcomes

### 5.1 Radiology

| Knowledge, skills and behaviours from 2016 curriculum                             | Location in 2021 Curriculum |
|---|-----------------------------|
| To be able to relate clinical and radiological anatomy to diagnosis and therapy   |                             |
| Describes clinical and radiological anatomy                                       | CiPs 14, 15, 16             |
| Identifies landmarks, key structures including vessels, lymph nodes on CT and MRI | CiPs 14, 15, 16             |
| Interprets X-ray, CT, MRI and PET imaging   | CiPs 14, 15, 16             |

### 5.2 Diagnosis and staging

| Knowledge, skills and behaviours from 2016 curriculum  | Location in 2021 Curriculum |
|--|-----------------------------|
| To be able to diagnose and stage cancer  |                             |
| Discusses the epidemiology and aetiology of the cancer, including: <ul style="list-style-type: none"> <li>the general principles of tumour biology</li> <li>the genetics of normal and malignant cells</li> <li>the causation of human cancers</li> <li>the normal and aberrant mechanisms of cell growth control</li> </ul> | CiPs 7, 10, 13              |
| Describes the indications for urgent referral by GP  | CiPs 3, 8, 9, 10, 11, 13    |
| Describes the staging and prognostic indices   | CiPs 7, 10, 13              |
| Describes the pathological techniques available and limitations of histology and immunohistochemistry and other specialist techniques, e.g. molecular biological techniques  | CiPs 7, 10, 13              |
| Performs a focussed history and examination  | CiPs 2, 3, 8, 9, 10, 11, 12 |
| Recommends appropriate diagnostic and staging investigations   | CiPs 2,3,8,9,10,11,12       |

### 5.3 Prognosis

| Knowledge, skills and behaviours from 2016 curriculum  | Location in 2021 Curriculum             |
|--|---|
| To be able to assess prognosis   |   |
| Describes factors that influence prognosis   | CiPs 4, 7, 8, 9, 10, 11, 12, 13, 15, 16 |
| Assesses the effect of performance status, stage, age, co-morbidity, histological type and other prognostic factors on outcome | CiPs 4, 7, 8, 9, 10, 11, 12, 13, 15, 16 |

### 5.4 Genetics

| Knowledge, skills and behaviours from 2016 curriculum   | Location in 2021 Curriculum |
|---|-----------------------------|
| To be able to assess if there is a significant genetic basis for the cancer   |                             |
| Describes the principles of cancer genetics   | CiPs 7, 11                  |
| Describes the features of the personal and family medical history that indicate a high risk of a genetic basis of the disease | CiPs 7, 11                  |
| Describes when referral for genetic counselling is appropriate  | CiPs 7, 11                  |
| Explains how a gene abnormality affects the patient's prognosis   | CiPs 7, 11                  |
| Recognises the impact that discovery of a genetic abnormality may have on the patient and his/her family                      | CiPs 7, 11                  |
| Acquires an accurate family history   | CiPs 7, 11                  |
| Discusses the possibility of referral for genetic counselling with the patient  | CiPs 7, 11                  |
| Explains to the patient how the treatment options may be altered by a genetic abnormality                                     | CiPs 7, 11                  |
| Demonstrates willingness to facilitate patient choice regarding decision to undergo genetic testing                           | CiPs 7, 11                  |

## 5.5 Discussion of treatment options

| Knowledge, skills and behaviours from 2016 curriculum   | Location in 2021 Curriculum                |
|---|--|
| To be able to discuss treatment options in the light of understanding of the prognosis  |  |
| Predicts the effects of treatment on prognosis  | CiPs 7, 8, 9, 10, 11, 12, 13, 15, 16       |
| Recognises when radical and when palliative treatments are appropriate  | CiPs 7, 8, 9, 10, 11, 12, 13, 15, 16       |
| Informs patients of treatment options and discusses individual risk/benefit   | CiPs 3, 4, 7, 8, 9, 10, 11, 12, 13, 15, 16 |
| Communicates appropriately with a wide variety of patients including: <ul style="list-style-type: none"> <li>working with interpreters to deal with patients from diverse backgrounds</li> <li>communicating with patients with special educational needs and their carers</li> </ul> | CiPs 3, 4, 7, 8, 9, 10, 11, 12, 13, 15, 16 |

## 5.6 Multi-disciplinary team (MDT) meetings

| Knowledge, skills and behaviours from 2016 curriculum   | Location in 2021 Curriculum            |
|---|--|
| To be able to take part in discussions in tumour-site specific MDT meetings                       |  |
| Describes the indications for treatment and the risks and benefits of different treatment options | CiPs 7, 8, 9, 10                       |
| Describes the results of major randomised trials that have influenced present practice            | CiPs 5, 7, 10, 13, 19                  |
| Describes major national guidelines   | CiPs 5, 7, 10, 13, 19                  |
| Assesses potential risks and benefits of treatment options for the individual patient             | CiPs 4, 5, 7, 8, 9, 10, 11, 15, 16, 19 |
| Discusses treatment options within the MDT meeting  | CiP 10                                 |

## 5.7 Evaluating research

| Knowledge, skills and behaviours from 2016 curriculum  | Location in 2021 Curriculum |
|--|-----------------------------|
| To be able to evaluate and synthesise research evidence to change practice                     |                             |
| Evaluates the published research evidence  | CiPs 5, 7, 11, 19           |
| Evaluates ongoing trials of both radiotherapy and systemic therapy                             | CiPs 5, 7, 11, 19           |
| Evaluates the national and international guidelines including NICE                             | CiPs 5, 7, 11, 19           |
| Discusses evidence at MDT with regard to specific patients                                     | CiPs 5, 7, 10, 11, 19       |
| Discusses involvement in clinical trials with colleagues                                       | CiPs 5, 7, 10, 11, 19       |
| Revises or develops departmental, evidence based guidelines for the management of tumour sites | CiPs 5, 7, 11, 19           |
| Formulates plans to introduce new treatments and techniques to a department                    | CiPs 5, 7, 11, 19           |

## 5.8 First line chemotherapy

| Knowledge, skills and behaviours from 2016 curriculum  | Location in 2021 Curriculum |
|--|-----------------------------|
| To be able to assess patients for first line chemotherapy  |                             |
| Describes the mode of action of cytotoxic drugs and the principles of clinical use of systemic therapies | CiPs 7, 12                  |
| Discusses the principles of pharmacokinetics and pharmacodynamics  | CiPs 7, 12                  |
| Describes drug protocols   | CiPs 7, 12                  |
| Evaluates the benefits and toxicity of chemotherapy  | CiPs 7, 8, 9, 10, 11, 13    |
| Decides which regimes are appropriate in the clinical situation  | CiPs 7, 8, 9, 10, 11, 13    |
| Describes tests, procedures or other arrangements required prior to therapy                              | CiPs 7, 8, 9, 10, 11, 13    |
| Elicits the patient's wishes with regard to the aims of treatment  | CiPs 7, 8, 9, 10, 11, 13    |
| Performs an appropriate history & examination  | CiPs 7, 8, 9, 10, 11, 13    |
| Assesses performance status and evaluates the information to inform the treatment plan                   | CiPs 7, 8, 9, 10, 11, 13    |

## 5.9 Discussing treatment options

| Knowledge, skills and behaviours from 2016 curriculum                                  | Location in 2021 Curriculum |
|--|-----------------------------|
| To be able to discuss treatment options in the light of understanding of the prognosis |                             |
| Describes the acute and long term risks of chemotherapy                                | CiPs 3, 8, 9, 10, 11, 13    |
| Describes the aims of treatment and the prognosis                                      | CiPs 3, 4, 8, 9, 10, 11, 13 |
| Explains these issues and the risk/benefit ratio to the patient                        | CiPs 3, 4, 8, 9, 10, 11, 13 |
| Completes the consent form accurately with the patient                                 | CiPs 3, 4, 8, 9, 10, 11, 13 |

## 5.10 Initiating chemotherapy

| Knowledge, skills and behaviours from 2016 curriculum   | Location in 2021 Curriculum |
|---|-----------------------------|
| To be able to prescribe the first course of chemotherapy  |                             |
| Describes the acute and long term side effects of the chemotherapy  | CiPs 7, 12                  |
| Describes the importance of biochemical, haematological and radiological parameters in determining dose of chemotherapy | CiPs 7, 12                  |
| Describes the supportive measures both pharmacological and non-pharmacological to treat toxic effects of chemotherapy   | CiPs 7, 12                  |
| Generates an appropriate systemic therapy prescription which is safe, accurate and meets local and national standards   | CiPs 1, 7, 12               |

## 5.11 Managing patients receiving chemotherapy

| Knowledge, skills and behaviours from 2016 curriculum   | Location in 2021 Curriculum |
|---|-----------------------------|
| To be able to manage patients undergoing radical and palliative chemotherapy treatment regimens             |                             |
| Describes the physiology of haemopoiesis  | CiP 7                       |
| Describes the clinical pharmacology and uses of steroids and anti-emetics                                   | CiPs 7, 12                  |
| Describes the acute and long term side-effects of chemotherapy  | CiPs 7, 12                  |
| Describes how to assess tumour response   | CiPs 11, 12                 |
| Develops a management plan for the patient during the chemotherapy including the management of side effects | CiPs 7, 8, 9, 11, 12        |
| Prescribes supportive treatments  | CiP 12                      |
| Judges when to stop or continue treatment   | CiPs 8, 9, 11, 12           |

## 5.12 Initiating hormonal therapy

| Knowledge, skills and behaviours from 2016 curriculum   | Location in 2021 Curriculum |
|---|-----------------------------|
| To be able to assess patients for treatment and prescribe hormonal therapy  |                             |
| Describes common drug protocols   | CiPs 7, 11, 12              |
| Evaluates the benefits and toxicity of treatment  | CiPs 7, 11, 12              |
| Decides which regimes are appropriate in the clinical situation   | CiPs 7, 11, 12              |
| Describes the tests, procedures and other arrangements required prior to and during therapy                           | CiP 12                      |
| Elicit the patient's wishes with regard to the aims of treatment  | CiPs 3, 11, 12              |
| Performs an appropriate history and examination   | CiPs 11,12                  |
| Assesses performance status   | CiPs 11, 12                 |
| Generates an appropriate systemic therapy prescription which is safe, accurate and meets local and national standards | CiPs 1, 7, 12               |

## 5.13 Managing patients receiving hormonal therapy

| Knowledge, skills and behaviours from 2016 curriculum   | Location in 2021 Curriculum |
|---|-----------------------------|
| To be able to manage patients undergoing hormonal therapy   |                             |
| Describes the acute and long term side-effects of hormonal therapy  | CiPs 7, 12                  |
| Describes how to assess tumour response   | CiPs 11, 12                 |
| Develops a management plan for the patient during hormonal therapy including the management of side effects | CiPs 7, 8, 9, 11, 12        |
| Prescribes supportive treatments  | CiP 12                      |
| Judges when to stop or continue treatment   | CiPs 8, 9, 11, 12           |
|   |                             |

## 5.14 Assessing patients for biological therapy

| Knowledge, skills and behaviours from 2016 curriculum   | Location in 2021 Curriculum |
|---|-----------------------------|
| To be able to assess patients for treatment with monoclonal antibodies, tyrosine kinase inhibitors, interferons, interleukins |                             |
| Describes the principles of biological and novel therapies  | CiP 7                       |
| Describes common drug protocols   | CiPs 7, 11, 12              |
| Evaluates the benefits and toxicity of treatment  | CiPs 7, 11, 12              |
| Decides which regimes are appropriate in the clinical situation   | CiPs 7, 11, 12              |
| Describes the tests, procedures and other arrangements required prior to therapy  | CiP 12                      |
| Elicits the patient's wishes with regard to the aims of treatment   | CiPs 3, 11, 12              |
| Performs an appropriate history and examination   | CiPs 11, 12                 |
| Assesses performance status   | CiPs 11, 12                 |

## 5.15 Consent for biological therapy

| Knowledge, skills and behaviours from 2016 curriculum  | Location in 2021 Curriculum |
|--|-----------------------------|
| To be able to consent patients for treatment with monoclonal antibodies, tyrosine kinase inhibitors, interferons, interleukins         |                             |
| Describes the acute and long term risks of treatment with monoclonal antibodies, tyrosine kinase inhibitors, interferons, interleukins | CiPs 7, 12                  |
| Describes the aims of treatment and the prognosis  | CiPs 7, 11, 12              |
| Explains about these issues and the risk/benefit ratio to the patient  | CiPs 3, 11, 12              |
| Completes the consent form accurately with the patient   | CiPs 3, 11, 12              |



## 5.16 Initiating biological therapies

| Knowledge, skills and behaviours from 2016 curriculum  | Location in 2021 Curriculum |
|--|-----------------------------|
| To be able to prescribe the first course of treatment with monoclonal antibodies, tyrosine kinase inhibitors, interferons and interleukins   |                             |
| Describes the acute and long term side effects of the therapies  | CiPs 7, 12                  |
| Describes the importance of biochemical, haematological and radiological parameters in determining whether the treatment can be safely given | CiPs 7, 12                  |
| Describes the supportive measures both pharmacological and non-pharmacological to treat toxic effects of therapy                             | CiPs 7, 12                  |
| Generates an appropriate systemic therapy prescription which is safe, accurate and meets local and national standards                        | CiPs 1, 7, 12               |

## 5.17 Managing patients receiving biological therapies

| Knowledge, skills and behaviours from 2016 curriculum   | Location in 2021 Curriculum |
|---|-----------------------------|
| To be able to manage patients undergoing treatment with monoclonal antibodies, tyrosine kinase inhibitors, interferons and interleukins |                             |
| Describes the acute and long term side-effects of these therapies   | CiPs 7, 12                  |
| Describes how to assess tumour response   | CiPs 11, 12                 |
| Develops a management plan for the patient during the administration of the therapy including the management of side effects            | CiPs 7, 8, 9, 11, 12        |
| Prescribes supportive treatments  | CiP 12                      |
| Judges when to stop or continue treatment   | CiPs 8, 9, 11, 12           |

## 5.18 Assessing patients for radiotherapy

| Knowledge, skills and behaviours from 2016 curriculum   | Location in 2021 Curriculum |
|---|-----------------------------|
| To be able to assess patients for radical and palliative radiotherapy   |                             |
| Discusses basic physics relevant to radiotherapy, electromagnetic radiation and sub atomic particles and their interactions of with matter. | CiP 7                       |
| Discusses the indications for radiotherapy  | CiPs 11, 15, 16, 17, 18     |
| Describes its side effects  | CiPs 11, 15, 16, 17, 18     |
| Evaluates the benefits and toxicity of treatment  | CiPs 11, 15, 16, 17, 18     |
| Describes tests, procedures or other arrangements required prior to therapy   | CiPs 11, 14, 15, 16, 17, 18 |
| Elicit the patient's wishes with regard to the aims of treatment  | CiPs 3, 11                  |
| Performs an appropriate history and examination   | CiPs 11, 15, 16, 17, 18     |
| Assess performance status and use the information to inform the treatment plan  | CiPs 11, 15, 16, 17, 18     |

## 5.19 Consent for radiotherapy

| Knowledge, skills and behaviours from 2016 curriculum                | Location in 2021 Curriculum   |
|--|-------------------------------|
| To be able to obtain informed consent from patients for radiotherapy |                               |
| Describes the acute and long term risks of radiotherapy              | CiPs 3, 14, 15, 16, 17, 18    |
| Discusses the aims of treatment and the prognosis                    | CiPs 15, 16, 17, 18           |
| Explains these issues and the risk/benefit ratio with patients       | CiPs 3, 4, 14, 15, 16, 17, 18 |
| Completes the informed consent form accurately with the patient      | CiPs 2, 14, 15, 16, 17, 18    |

## 5.20 Radiotherapy treatment strategy

| Knowledge, skills and behaviours from 2016 curriculum  | Location in 2021 Curriculum |
|--|-----------------------------|
| To be able to develop a radiotherapy treatment strategy  |                             |
| Describes the principles of radiation dosimetry, the physics of teletherapy beams (x-rays), electron beam physics and radiotherapy planning                        | CiP 7                       |
| Describes the patient position and immobilization technique  | CiPs 14, 15, 18             |
| Describes the method of tumour localisation  | CiPs 14, 15, 16, 17, 18     |
| Evaluates the benefits and risks of the possible radiotherapy delivery techniques including consideration of beam arrangements static and rotational IMRT and SABR | CiPs 14, 15, 16, 18         |
| Describes the indications and aims of IGRT and evaluates the methods available   | CiPs 14, 15, 16             |
| Communicate effectively to the planning radiographers the imaging and treatment strategy   | CiPs 3, 6, 10               |
| Records all aspects of the planning process clearly  | CiP 3                       |

## 5.21 Radiotherapy treatment volume

| Knowledge, skills and behaviours from 2016 curriculum  | Location in 2021 Curriculum |
|--|-----------------------------|
| To be able to determine the gross tumour volume (GTV), clinical target volume (CTV), internal target volume (ITV), planning target volume (PTV), organs at risk (OAR) and planning organs at risk volume (PRV) as appropriate for radiotherapy |                             |
| Interprets diagnostic imaging (including CT, PET and MRI)  | CiP 14                      |
| Describes the use of cross-sectional imaging in planning   | CiP 14                      |
| Discusses the clinical and radiological parameters associated with 2-D, 3-D, 4-D planning in conformal radiotherapy, IMRT and VMAT   | CiPs 15, 16                 |
| Specifies the dose and tissue constraint for the organs at risk.   | CiPs 15, 16                 |
| Defines GTV, CTV, ITV and PTV  | CiPs 14, 15, 16             |
| Defines organs at risk, outlines them and defines planning organs at risk volume (PRV)   | CiPs 14, 15, 16             |
| Defines DVH planning constraints   | CiPs 7, 15, 16              |
| Balances tumour control against potential damage to organs at risk<br>Explains changes in dose constraints depending on dose per fraction based on application of radiobiology and tolerance doses   | CiPs 7, 15, 16              |

## 5.22 Radiotherapy treatment plan

| Knowledge, skills and behaviours from 2016 curriculum  | Location in 2021 Curriculum |
|--|-----------------------------|
| To be able to evaluate a radiotherapy treatment plan   |                             |
| Describes the ICRU guidelines  | CiPs 7, 15, 16, 17, 18      |
| Assesses critically the dose distribution within the treatment volume and organs at risk         | CiPs 7, 15, 16, 18          |
| Evaluates whether a treatment plan is adequate and develops ways of improving an inadequate plan | CiPs 15, 16, 18             |

## 5.23 Prescribing palliative radiotherapy

| Knowledge, skills and behaviours from 2016 curriculum  | Location in 2021 Curriculum |
|--|-----------------------------|
| To be able to prescribe appropriate dose and fractionation schedule for palliative radiotherapy  |                             |
| Describes the general principles of radiobiology, including normal tissue and population radiobiology                                    | CiPs 7, 16, 18              |
| Describes dose/fractionation schedules in common use.  | CiPs 7, 16, 18              |
| Decides an appropriate treatment schedule according to stage of disease, performance status of patients and concomitant systemic therapy | CiPs 4, 16, 18, 19          |

## 5.24 Prescribing radical radiotherapy

| Knowledge, skills and behaviours from 2016 curriculum  | Location in 2021 Curriculum |
|--|-----------------------------|
| To be able to prescribe appropriate dose and fractionation schedule for radical radiotherapy   |                             |
| Lists the parameters that should be included when writing a radiotherapy prescription  | CiPs 15, 18                 |
| Describes dose/fractionation schedules in common use.  | CiPs 7, 15, 18              |
| Decides an appropriate treatment schedule according to stage of disease, performance status of patients and concomitant systemic therapy | CiPs 4, 15, 18, 19          |

## 5.25 Modifying radiotherapy for individual patients

| Knowledge, skills and behaviours from 2016 curriculum   | Location in 2021 Curriculum |
|---|-----------------------------|
| To be able to modify treatment plans according to patient's individual needs, pre-morbid conditions etc |                             |
| Describes normal tissue morbidity and its impact on target volume definition.                           | CiPs 7, 15, 16, 18          |
| Describes risks of re-treatment with radiation based on normal tissue tolerance limits                  | CiPs 7, 15, 16, 18          |
| Judges how to modify treatment plans based on patient's co-morbidity                                    | CiPs 4, 15, 16, 17, 18      |
| Assesses when re-treatment is acceptable and prescribes appropriate dose and fractionation              | CiPs 4, 7, 15, 16, 18       |

## 5.26 Verifying radiotherapy treatments

| Knowledge, skills and behaviours from 2016 curriculum  | Location in 2021 Curriculum |
|--|-----------------------------|
| To be able to verify a treatment plan  |                             |
| Describes the processes that may be used to ensure that the radiotherapy prescription is correctly implemented | CiPs 4, 14                  |
| Describes the use of digitally reconstructed radiographs   | CiP 14                      |
| Describes the use of portal imaging  | CiP 14                      |
| Discusses the quality assurance of IMRT and VMAT plans   | CiPs 15, 16                 |
| Describes the type of IGRT techniques (planar and volumetric) and the value of each approach                   | CiPs 7, 15, 16              |
| Assesses accuracy of patient set-up and recommends adjustments   | CiPs 14, 15, 16             |

## 5.27 Principles of proton therapy

| Knowledge, skills and behaviours from 2016 curriculum                     | Location in 2021 Curriculum |
|---|-----------------------------|
| To be aware of the principles and clinical implications of proton therapy |                             |
| Describes the theoretical benefits and risks of proton therapy            | CiP 19                      |
| Discusses the indications for proton therapy                              | CiP 19                      |

## 5.28 Clinical implications of brachytherapy

| Knowledge, skills and behaviours from 2016 curriculum                                       | Location in 2021 Curriculum |
|---|-----------------------------|
| To be aware of the clinical implications of brachytherapy using sealed and unsealed sources |                             |
| Describes the principles of radiotherapy physics related brachytherapy                      | CiP 18                      |
| Discusses the indications for and aims of treatment   | CiP 18                      |
| Describes the methods available   | CiP 18                      |
| Describes the acute and long term toxicities and can discuss the organs at risk             | CiP 18                      |
| Describes the principles of dose prescription   | CiPs 7, 18                  |
| Describes the radiation protection issues   | CiPs 4, 18                  |
| Recognises requirement for ARSAC certificate  | CiP 2                       |
| Applies radiation protection principles when assessing patients receiving brachytherapy     | CiPs 2, 18                  |

## 5.29 Performing a brachytherapy procedure

| Knowledge, skills and behaviours from 2016 curriculum   | Location in 2021 Curriculum |
|---|-----------------------------|
| To be able to perform a brachytherapy procedure using sealed sources  |                             |
| Describes the relevant anatomy  | CiP 14                      |
| Describes the appropriate investigations prior to and after treatment   | CiP 11                      |
| Describes the patient position and any appropriate immobilisation techniques  | CiP 18                      |
| Discusses the radiation protection issues.  | CiP 18                      |
| Describes the concomitant therapies to reduce or treat toxicity   | CiP 18                      |
| Recognises requirement for ARSAC certificate  | CiP 18                      |
| Assesses individual patients and balances the benefits against the risks  | CiP 3                       |
| Elicit the patient's wishes with regard to the aims of treatment  | CiP 3                       |
| Explains the aims and risks to the patient and takes informed consent   | CiPs 3, 18                  |
| Communicate effectively with the radiographers, physicists, theatre staff, ward nurses with regards to the appropriate imaging and treatment strategy | CiP 3                       |
| Records all aspects of the process clearly  | CiP 5                       |
| Performs the procedure correctly  | CiP 18                      |
| Prescribes the radiation dose balancing tumour control against potential damage to the organs at risk   | CiP 18                      |
| Supports the patient through the treatment and side effects   | CiPs 13, 18                 |
| Advises the patient, their relatives and staff with regard to radiation protection issues   | CiPs 3, 18                  |
| Liaises with the radiation protection advisor, including radiation protection supervisors and medical physics experts                                 | CiPs 3, 18                  |



## 5.30 Prescribing brachytherapy using an unsealed source

| Knowledge, skills and behaviours from 2016 curriculum  | Location in 2021 Curriculum |
|--|-----------------------------|
| To be able to prescribe brachytherapy using an unsealed source   |                             |
| Describes the appropriate investigations prior to and after treatment  | CiP 17                      |
| Discusses the radiation protection issues  | CiP 17                      |
| Describes the concomitant therapies to reduce or treat toxicity  | CiP 17                      |
| Recognises the requirement for an ARSAC certificate  | CiP 17                      |
| Assesses individual patients and balances the benefits against the risks   | CiP 3                       |
| Elicits the patient's wishes with regard to the aims of treatment  | CiP 3                       |
| Explains the aims and risks to the patient and takes informed consent  | CiPs 3, 17                  |
| Communicates effectively with the planning radiographers, physicists and ward nurses as appropriate the treatment strategy | CiP 3                       |
| Records all aspects of the process clearly   | CiP 5                       |
| Administers the isotope safely   | CiP 17                      |
| Prescribes the dose balancing tumour control against potential damage to the organs at risk                                | CiP 17                      |
| Supports the patient through the treatment and side effects  | CiPs 13, 17                 |
| Advises the patient, their relatives and staff with regard to radiation protection issues                                  | CiPs 3, 17                  |
| Liaises with the radiation protection advisor, including radiation protection supervisors and medical physics experts      | CiPs 3, 17                  |
| Advises the patient, their relatives and staff with regard to radiation protection issues                                  | CiPs 3, 18                  |
| Liaises with the radiation protection advisor, including radiation protection supervisors and medical physics experts      | CiP3, 18                    |

### 5.31 Assessing and managing patients undergoing radiotherapy

| Knowledge, skills and behaviours from 2016 curriculum            | Location in 2021 Curriculum |
|--|-----------------------------|
| To be able to assess and manage patients undergoing radiotherapy |                             |
| Describes early reactions to radiotherapy and their management   | CiPs 3, 15, 16              |
| Assesses and treats patients in an on-treatment clinic           | CiPs 15,16                  |

### 5.32 Modifying a course of radiotherapy

| Knowledge, skills and behaviours from 2016 curriculum   | Location in 2021 Curriculum |
|---|-----------------------------|
| To be able to modify a course of radiotherapy treatment for individual patients according to severity of reactions including adjustment for gaps in treatment |                             |
| Discusses how radiobiological principles impact on radical radiotherapy   | CiPs 7, 15                  |
| Lists possible strategies for dealing with treatment gaps   | CiPs 7, 15                  |
| Judges how to modify a course of radiotherapy treatment depending on acute toxicity and unplanned gaps in treatment   | CiPs 7, 15                  |

### 5.33 Assessing patients for combined modality therapy

| Knowledge, skills and behaviours from 2016 curriculum   | Location in 2021 Curriculum |
|---|-----------------------------|
| To be able to assess patients for combined modality therapy   |                             |
| Discusses the interaction between chemotherapy and radiotherapy (before, during or following radiation) | CiPs 3, 15                  |
| Discusses the circumstances in which combined modality therapy might be considered                      | CiPs 11, 15                 |
| Elicits the patient's wishes with regard to the aims of treatment                                       | CiP 3                       |
| Discusses the side effects and risk/benefit ratio with patients   | CiPs 3,15                   |

### 5.34 Emerging techniques

| Knowledge, skills and behaviours from 2016 curriculum   | Location in 2021 Curriculum |
|---|-----------------------------|
| To be able to discuss treatment with protons or neutrons  |                             |
| Discusses the reasons why treatment with protons or neutrons treatments are sometimes desirable | CiPs 7, 15                  |
| Discusses the clinical indications for proton and neutron treatments                            | CiP 15                      |

### 5.35 Obtaining informed consent for clinical trials and maintaining research records

| Knowledge, skills and behaviours from 2016 curriculum  | Location in 2021 Curriculum |
|--|-----------------------------|
| To be able to consent patients for Phase II and Phase III trials and maintain appropriate research records |                             |
| Discusses research ethics  | CiPs 1, 2, 5, 19            |
| Describes Good Clinical Practice   | CiPs 5, 19                  |
| Discusses option of entering a clinical trial with the patient   | CiPs 5, 7, 11, 19           |

### 5.36 Diagnosing relapse

| Knowledge, skills and behaviours from 2016 curriculum   | Location in 2021 Curriculum |
|---|-----------------------------|
| To be able to diagnose relapse  |                             |
| Describes the signs and symptoms, changes in tumours markers and imaging findings that may be associated with relapse | CiPs 9, 11                  |
| Performs an appropriate history and examination   | CiPs 11, 16                 |
| Decides on appropriate investigations for patients suspected of having relapsed                                       | CiPs 8, 11, 12              |
| Interprets imaging (X-rays, CT, MRI, PET)   | CiP 14                      |

## 5.37 Developing a management plan for patients whose disease has relapsed

| Knowledge, skills and behaviours from 2016 curriculum   | Location in 2021 Curriculum |
|---|-----------------------------|
| To be able to develop a management plan for patients whose disease has relapsed.  |                             |
| Discusses the roles of surgery, interventional radiology, radiotherapy, chemotherapy, monoclonal antibodies, tyrosine kinase inhibitors, interferons, interleukins, symptom control and palliative care in patients with relapsed disease | CiPs 11, 12, 16             |
| Elicits the patient's wishes with regard to the aims of treatment   | CiP 3                       |

## 5.38 Assessing patients for second and further lines of systemic anticancer therapy

| Knowledge, skills and behaviours from 2016 curriculum  | Location in 2021 Curriculum |
|--|-----------------------------|
| To be able to assess patients for appropriate second and further lines of chemotherapy, monoclonal antibodies, tyrosine kinase inhibitors, interferons or interleukins |                             |
| Describes the molecular biology of chemotherapy drug resistance  | CiPs 7, 12                  |
| Discusses the role of 2nd and further lines of chemotherapy and monoclonal antibodies, tyrosine kinase inhibitors, interferons, interleukins                           | CiP 12                      |
| Discusses different patient motives (coping, survival enhancement, improvement of quality of life)   | CiPs 3, 9, 11, 12           |
| Assesses patient's fitness for treatments e.g., by performance status  | CiP 12                      |
| Prescribes common therapeutic regimes  | CiP 12                      |
| Assesses whether the outcomes of the therapy are meeting the patient's needs and discusses this with them  | CiPs 3, 10, 12              |

## 5.39 Adjusting a chemotherapy regimen according to patient fitness

| Knowledge, skills and behaviours from 2016 curriculum   | Location in 2021 Curriculum |
|---|-----------------------------|
| To be able to adjust choice of second and further lines of chemotherapy regimen according to patient fitness  |                             |
| Discusses the problems associated with treatment regimens in pre-treated patients, the elderly, those with comorbidity and patients with lower performance status | CiPs 3, 7, 9                |
| Modifies treatment plan appropriately for individual patients   | CiPs 2, 3, 4, 11, 12, 13    |
| Judges when to continue or stop treatment   | CiPs 10, 11, 12             |

## 5.40 Assessing response to second and subsequent lines of chemotherapy

| Knowledge, skills and behaviours from 2016 curriculum                        | Location in 2021 Curriculum |
|--|-----------------------------|
| To be able to assess response to second and subsequent lines of chemotherapy |                             |
| Discusses the aims of treatment  | CiP 3, 12                   |
| Assesses response according to RECIST criteria                               | CiP 14                      |

## 5.41 Recognising when further chemotherapy is inappropriate

| Knowledge, skills and behaviours from 2016 curriculum  | Location in 2021 Curriculum |
|--|-----------------------------|
| To be able to recognise when further or continuing chemotherapy is inappropriate                       |                             |
| Discusses the palliative options available to a patient who is not responding to /tolerating treatment | CiP 3, 9, 12                |
| Communicates bad news to the patient and their relatives   | CiP 3, 4                    |
| Negotiates stopping treatment with the patient and their relatives                                     | CiP 3, 4                    |
| Organises palliative supportive care   | CiP 8, 9, 10                |

## 5.42 Assessing patients with relapsed cancer for palliative radiotherapy

| Knowledge, skills and behaviours from 2016 curriculum                          | Location in 2021 Curriculum |
|--|-----------------------------|
| To be able to assess patients with relapsed cancer for palliative radiotherapy |                             |
| Discusses the radiobiological consequences of retreatment if appropriate       | CiPs 3, 7, 17               |
| Elicits the patient's wishes with regard to the aims of treatment              | CiPs 3, 4                   |
| Discusses the role of radiotherapy and risk/benefit with individual patients   | CiPs 15, 16, 17, 18         |

## 5.43 Identifying when patients with relapsed disease require referral to another speciality

| Knowledge, skills and behaviours from 2016 curriculum  | Location in 2021 Curriculum |
|--|-----------------------------|
| To be able to identify when patients with relapsed disease require referral to another speciality  |                             |
| Describes the indications for surgical, radiological intervention and high dose chemotherapy with autologous or allogeneic transplantation | CiPs 10, 12                 |
| Elicits the patient's wishes with regard to the aims of treatment  | CiPs 3, 11                  |
| Develops an appropriate treatment plan for individual patients   | CiPs 7, 11, 12              |

## 5.44 Managing physical symptoms of patients with relapsed cancer

| Knowledge, skills and behaviours from 2016 curriculum  | Location in 2021 Curriculum |
|--|-----------------------------|
| To be able to manage the physical symptoms of patients with relapsed cancer  |                             |
| Outlines the clinical pharmacology of analgesics, steroids and anti-emetics.   | CiP 8                       |
| Discusses the differential diagnosis of symptoms in patients with relapsed cancer both due to metastatic and the non-metastatic manifestations of malignancy | CiPs 8, 9, 10               |
| Describes the appropriate investigations   | CiP 14                      |
| Describes the treatment options available  | CiPs 7, 11                  |
| Performs a focused history and examination   | CiP 3,                      |
| Discusses the options with the patient   | CiPs 3, 7                   |
| Advises the patient as to the management plan most likely to improve their symptoms  | CiP 3                       |
| Prescribes drugs for palliation of symptoms including in the last few days of life   | CiPs 9, 2                   |

## 5.45 Providing psychological support for patients with relapsed cancer and their families

| Knowledge, skills and behaviours from 2016 curriculum   | Location in 2021 Curriculum |
|---|-----------------------------|
| To be able to provide psychological support for patients with relapsed cancer and their families                          |                             |
| Discusses the process of accepting a terminal prognosis, grieving and bereavement   | CiPs 3, 11                  |
| Discusses the role of the family, primary care, hospice, support groups palliative care teams, psychologist               | CiPs 9, 10                  |
| Describes the indications for and side effects of antidepressants and psychotropic medication                             | CiPs 9, 11                  |
| Describes cultural variation in ways of dealing with bereavement  | CiP 11                      |
| Supports patient and family to discuss the impact of the prognosis and to cope with denial, anger, and emotional distress | CiPs 3, 11                  |
| Negotiates satisfactory outcome to requests by relatives for collusion to hide the prognosis from the patient             | CiPs 3, 11                  |
| Liases with other professionals to develop a management plan  | CiPs 3, 10                  |
| Prescribes appropriate medication   | CiPs 12, 15, 17             |

## 5.46 Co-ordinating social/financial support

| Knowledge, skills and behaviours from 2016 curriculum  | Location in 2021 Curriculum |
|--|-----------------------------|
| To be able to co-ordinate social/financial support for patients with relapsed cancer   |                             |
| Discusses the roles of other professional groups – social workers, occupational therapists, physiotherapists, GPs, district nurses, MacMillan nurses | CiPs 8, 10,11               |
| Describes how to access financial support – attendance allowance under special rules   | CiP 13                      |
| Negotiates with the patient, family and other professional groups to develop an agreed package of care   | CiP 3                       |



## 5.47 Making clinical decisions in situations of uncertainty

| Knowledge, skills and behaviours from 2016 curriculum                                 | Location in 2021 Curriculum |
|---|-----------------------------|
| To be able to make clinical decisions in situations of uncertainty                    |                             |
| Discusses the evidence base   | CiPs 3, 5                   |
| Identifies the areas of uncertainty and methods of decreasing this                    | CiPs 7, 19                  |
| Evaluates the possible treatment options  | CiPs 3, 7                   |
| Discusses options with patient and advises on the predicted benefits and side effects | CiPs 3, 7, 8, 12, 13        |
| Supports the patient to make a decision   | CiP 11                      |



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