The Association of Breast Clinicians

The Royal College of Radiologists

Credential in Breast Disease Management for Breast Clinicians

May 2019

www.rcr.ac.uk

Contents

1. Introduction

1.1 Purpose and objective of the credential

The purpose of this credential is to standardise and formalise training for breast clinicians across the UK. This will create a clearly defined training pathway and scope of practice that is recognised on a national level, ensuring that the breast screening and symptomatic units have the workforce they need to support and lead the service. The credential curriculum provides a training framework, describing the standard required to achieve recognition and the expected levels of progress during training.

First introduced in 1987 to aid the introduction of the NHS Breast Screening Programme (NHSBSP), breast clinicians form an integral part of the multidisciplinary breast disease management team, working in symptomatic and breast screening units across the UK. They are medical practitioners who, following a period of training, provide a holistic approach to the investigation and management of breast disease, and are expert in triple assessment of symptoms.

In addition to being an integral part of the multidisciplinary team, they are also able to work as independent practitioners administering their own practice.

The credential will deliver run-through training with progression evaluated by formative and summative assessment, with annual review.

Training will be supported by experienced trainers to ensure practice is compliant with the rigorous standards of the NHSBSP and completion of training will be partly benchmarked against the NHSBSP standards.

1.2 Need for the credential

The credential has been developed in response to patient, population, professional, workforce and service needs.

Expansion of the NHSBSP, demographic change and a significant increase in symptomatic referrals are increasing demand on breast imaging services. This increased demand is being exacerbated by workforce shortages caused, in part, by a higher than average retirement rate across all disciplines practising in breast imaging. This is happening because the majority of the workforce entered the NHSBSP when it was established in the 1980s and are therefore now reaching retirement age.

Increasing complexity in technology, such as the addition of tomosynthesis and contrast-enhanced mammography, and the increase in the use of breast MRI and image-guided excisions, is also impacting on the demand being put on breast imaging services. This increase in complexity means a better, more accurate screening and symptomatic breast imaging service is being provided, but it cannot be fully delivered without an increased workforce.

Breast clinicians support both the clinical and breast imaging services, offering a holistic approach to all aspects of breast disease management which is of considerable benefit to patients. They offer support for genetics referrals, run family history clinics and are a key factor in the delivery of cancer targets.

1.3 Scope of training

Following completion of the credential, breast clinicians will be able to provide a holistic approach to the investigation and management of breast disease. They will be expert in triple assessment attributed to the development of skills in:

- clinical examination
- delivery and interpretation of imaging including mammography and ultrasound
- the use of interventional procedures both within the NHS symptomatic clinic and the NHSBSP
- management of benign breast disease and women at increased risk of developing breast cancer.

In addition to being an integral part of the multidisciplinary team, they will also be able to work as independent practitioners administering their own practice.

Notable exclusions include:

- operative/surgical breast management, although image-guided vacuum excisions and other minor procedures are included
- clinical/medical oncology breast treatments, although training will include assessing response to treatment, the management of patients with complications of treatment and follow-up post treatment
- clinical management of metastatic breast cancer
- clinical radiology outwith breast imaging modalities.

1.4 Overlap with clinical radiology specialty training

The content of the credential includes considerable overlap with the clinical radiology curriculum, including the scientific basis of imaging (physics), generic professional capabilities and the specific breast radiology content.

To ensure adequate quality assurance of the training being undertaken, credential trainees must be based in a unit which already undertakes the training and assessment of clinical radiology trainees. This will ensure that training and assessment is being delivered to the same standard as that of a GMC-approved CCT programme and overseen by GMC-approved trainers.

1.5 Explanation of terminology used

The terms “specialty-specific” and “trainee” are usually associated with GMC-recognised specialties and the doctors undergoing training in those specialties. While this credential is not in a GMC-recognised specialty, it was felt that using similar terminology would be beneficial. Therefore, in this document where the term “specialty-specific” is written it means “specific to this credential” and where the term “trainee” is used, it refers to those undergoing training in this credential.

Trainees undertaking this credential will not be rotating in the same way as radiology specialty trainees, or undertaking distinct time-bound posts. Rather they will be learning different imaging modalities, procedures and clinical skills concurrently. Therefore, in this document the phrase “elements of training” refers to the different imaging modalities, procedural skills and the other non-imaging skills included in the curriculum.

1.6 Eligibility and entry requirements

Training in the credential can be entered following completion of the foundation training programme (FY1 and FY2) or equivalent, as a minimum. Trainees may have gained additional experience in other programmes (e.g. general practice, internal medicine, surgery etc.) before undertaking the credential. A detailed person specification for entry on to the credential training programme is available.

1.7 Enrolment with The Royal College of Radiologists (RCR)

Credential trainees are required to enrol with the RCR as associate members prior to the commencement of their training, and maintain RCR membership throughout training, in order for the RCR to be able to recognise completion of their training in the credential.

Once enrolled they will be given access to an e-portfolio account and be entitled to standard RCR benefits of membership, including access to all the RCR's e-learning resources.

Please contact the Membership Department to apply.

1.8 Enrolment with the Association of Breast Clinicians (ABC)

Credential trainees are expected to enrol with the ABC as members prior to the commencement of their training. As members of the ABC, the credential trainees will have full access to the members' pages of the ABC website.

1.9 Structure of training

The indicative duration of training from entry onto the credential training programme to completion is three years in full-time training. The first year has a focus on clinical skills, through supervised clinical teaching and genetic risk assessment clinics. Core radiology physics teaching will lead up to the First FRCR Examination physics module. The later years in training are more imaging focussed whilst maintaining and developing clinical and risk skills. Demonstrable progression with generic and specific skills through the three year programme is outlined in section 4.3.

1.10 Capabilities in Practice

To achieve the credential trainees are expected to demonstrate the capabilities described by the generic and specialty-specific high level outcomes, or 'capabilities in practice' (CiPs), as detailed below. For simplicity, breast clinician practice is referred to in this document as a specialty, whilst acknowledging that it is not a GMC-recognised specialty.

1.10.1 Generic capabilities in practice

1. Demonstrate the professional values and behaviours expected of all doctors as outlined in 'Good medical practice' (GMP).

   As doctors, breast clinicians adhere to the principles of GMP as stipulated by the GMC.

2. Successfully function within the health service and healthcare systems in the UK.

   Like all senior doctors working within the NHS, breast clinicians need to understand organisational and management systems so that they can engage positively with them and optimise patient care.

3. Engage in reflection, clinical governance and quality improvement processes to ensure good practice.

Breast clinicians are expected to stay up to date with their knowledge and skills, and look for ways to improve the quality of their services.

4. Engage in evidence-based practice and safeguard data, including imaging data.

   Breast clinicians require the skills used by all doctors to practise evidence-based medicine.

5. Act as a clinical teacher and supervisor.

   Breast clinicians should be available to teach medical students, junior doctors and other healthcare professionals.

6. Show proficiency in working well within a multidisciplinary team, communicate effectively with colleagues and demonstrate the skills required to lead a team.

   Breast disease management relies on a multi-professional team and good communication is an essential component of sound practice, team working and patient centred care. Breast clinicians must be able to resolve conflict, develop good working relationships and support team development, and possess the qualities and behaviours necessary to lead but also to follow, when necessary, in dealing with difficult situations and conflicting attitudes.

1.10.2 Specialty-specific capabilities in practice

7. Appropriately select and tailor breast imaging to patient context and the clinical question(s).

   Breast clinicians will discuss clinical cases with referrers and allied imaging professionals and advise on appropriate imaging according to the individual patient, clinical background and the clinical question posed. Imaging investigations have varying health and safety risks that need to be considered. Breast clinicians weigh up the relative clinical risk/benefit when advising on imaging according to clinical information provided by referrers.

8. Provide timely, accurate and clinically useful reports on imaging studies.

   Breast clinicians provide actionable reports on imaging studies that are performed on symptomatic and/or screening patients depending on local services. They will discuss findings with referrers as required. They will be able to report mammography, ultrasound of the breast and ultrasound of the axilla. They should be capable of making recommendations regarding onward imaging investigations, imaging follow up and/or other clinical management based on their expert knowledge.

9. Appropriately manage clinical and imaging workload according to clinical need, urgency and professional expertise.

   Breast clinicians will be able to manage outpatient clinics, perform image-guided procedures and use the triple assessment model for symptomatic patients.

10. Evaluate image quality and utilise the knowledge of imaging sciences to optimise image quality.

    Breast clinicians need to be able to evaluate image quality and utilise knowledge of imaging physics to maximise the diagnostic certainty of an imaging test.

11. Lead, work within and effectively contribute to a multidisciplinary team (MDT) meeting.

Breast clinicians review and scrutinise imaging of cases to be discussed at MDT meetings and present relevant findings pertinent to clinical decision-making. They will provide explicit recommendations regarding onward imaging investigations and/or follow up based on their expert knowledge.

Breast clinicians should present clinical cases with examination findings and/or risk factors for breast disease to the MDT.

12. Explain to patients and colleagues the use of prognostic and biological factors that influence oncological treatments for patients with early and metastatic breast cancer.

    Working within the MDT, and at the forefront of diagnosis, breast clinicians must understand the oncological treatment options available to patients with malignant breast disease and appropriately advise on these as part of the MDT.

13. Provide accurate risk assessment and instigate appropriate surveillance, counselling and tertiary referral for women at higher than population risk of breast cancer.

    Familial breast cancer risk poses a major source of anxiety amongst a well woman population. Breast clinicians provide accurate assessment of breast cancer risk, provide lifestyle advice and understand the screening and risk-reducing options available to woman at increased risk of breast malignancy.

14. Explain the impact of benign, uncertain and malignant breast pathologies on the diagnostic pathway and correlate these with clinical and radiological findings.

    Breast clinicians provide expert opinion on clinical findings of symptomatic and/or screening patients. They will communicate findings and relevant clinical information with patients and referrers as required in a timely and appropriate manner, safeguarding clinical and imaging information.

1.11 Generic professional capabilities and good medical practice

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

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

The GPC framework describes nine domains with associated descriptors outlining the 'minimum common regulatory requirement' of performance and professional behaviour for those completing a CCT or its equivalent. Although not leading to the award of a CCT, this curriculum defines an expectation that credential trainees will meet a similar standard.

The 9 domains and 11 subsections of the GPC framework are directly identifiable in the credential's content of learning. They are mapped to each of the generic and specialty CiPs which in turn are mapped to the assessment blueprints. This is to emphasise that they must

be demonstrated at every stage of training as part of the holistic development of responsible professionals.

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

Figure 1: The nine domains of Generic Professional Capabilities

2. Content of learning

Practising as a breast clinician requires the generic and specific knowledge, skills, attitudes and procedural competency to diagnose and manage patients with breast disease. The breast clinician will use imaging to investigate a wide range of symptoms and conditions and perform image-guided procedures. It involves particular emphasis on diagnostic reasoning, communicating uncertainty, risk analysis and working within a multidisciplinary team to ensure appropriate care pathways are achieved in all patients.

To complete the credential, trainees are expected to demonstrate achievement of the generic and specialty-specific CiPs. The CiPs describe the professional capabilities required of a breast clinician. Each CiP has an expansion that provides further detail of the CiP, and a number of descriptors that underpin the CiP.

Each CiP is also mapped to the GMC's Generic Professional Capabilities and accompanied by suggested methods of formative assessment that may support progress towards achieving this CiP.

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

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

2.1 Generic Capabilities in Practice

CiP 1: Demonstrate the professional values and behaviours expected of all doctors as outlined in Good Medical Practice (GMP).

Expansion

As doctors, breast clinicians adhere to the principles of 'Good medical practice' as stipulated by the GMC.

Descriptors

- Make the care of and effective communication with patients their first concern
- Provide a good standard of practice and care
- Take prompt action if patient safety, dignity or comfort is being compromised
- Protect and promote the health of patients and the public
- Treat patients as individuals and respect their dignity, showing sensitivity to religious, cultural and socioeconomic factors
- Work in partnership with patients
- Work with colleagues in the ways that best serve patients' interests
- Be honest and open and act with integrity
- Never discriminate unfairly against patients or colleagues
- Never abuse your patients' trust in you or the public's trust in the profession

Suggested evidence

- Multi-source feedback (MSF)
- Mini-Imaging Interpretation Exercise (Mini-IPX)
- Direct Observation of Procedures (DOPS)
- Multidisciplinary Team Assessment (MDTA)
- Patient feedback
- Mandatory hospital training

CiP 1: Demonstrate the professional values and behaviours expected of all doctors as outlined in Good Medical Practice (GMP).

Mapping to GPCs

- Domain 1: Professional values and behaviours
- Domain 2: Professional skills
  - Practical skills
  - Communication and interpersonal skills
  - Dealing with complexity and uncertainty
  - Clinical skills
- Domain 3: Professional knowledge
  - Professional requirements
  - National legislative requirements
- Domain 4: Capabilities in health promotion and prevention
- Domain 5: Capabilities in leadership and teamworking
- Domain 6: Capabilities in patient safety and quality improvement
  - Patient safety
  - Quality improvement
- Domain 7: Capabilities in safeguarding vulnerable groups
- Domain 8: Capabilities in education and training
- Domain 9: Capabilities in research and scholarship

CiP 2: Successfully function within the health service and healthcare systems in the UK.

Expansion

Like all senior doctors working within the NHS, breast clinicians need to understand organisational and management systems so that they can engage positively with them and optimise patient care.

Descriptors

- Understand the structure and organisation of the health service and healthcare systems including the independent sector and the wider healthcare landscape
- Understand how services are commissioned, funded and audited
- Understand how services are deemed to be clinically effective and cost effective
- Understand how resources are managed, being aware of competing demands and the importance of avoiding waste
- Understand the concept of health screening and appraise whether a proposed screening test is appropriate in the context of population or high-risk assessment
- Understand the processes relating to Duty of Candour, in particular those involved in breast screening
- Apply equality and diversity frameworks and ensure that an equal, non-discriminatory approach is adopted in interactions with both patients and colleagues
- Demonstrate appropriate awareness of, and maintain a professional approach to the use of, social media and public communications
- Adhere to all relevant professional communication policies

Suggested evidence

- Reflection
- Leadership/management courses/modules
- Case-based Discussion (CbD)
- Duty of Candour training

Mapping to GPCs

- Domain 1: Professional knowledge
- Domain 4: Capabilities in health promotion and illness prevention

CiP 3: Engage in reflection, clinical governance and quality improvement processes to ensure good practice.

Expansion

Breast clinicians are expected to stay up to date with their knowledge and skills, and look for ways to improve the quality of their services.

Descriptors

- Facilitate and lead on quality improvement and audit projects to improve patient care
- Promote a culture of openness and accountability including awareness of the duty of candour to patients, particularly in a screening setting
- Appropriately raise concerns including errors
- Share good practice
- Advocate clinical quality improvement
- Engage in clinical governance meetings including interval cancer review/discrepancy meetings/Radiology Events and Learning Meetings (REALMS)
- Demonstrate commitment to continuing professional development by maintaining and/or developing skills relevant to breast disease management and local service need
- Appropriately raise concerns regarding negative professional behaviour e.g. bullying
- Proactively design, implement, complete and evaluate QI project(s) as part of an MDT

Suggested evidence

- Quality Improvement Project and Audit Assessment Tool (QIPAT)
- Reflection
- Evidence of attendance at clinical governance and/or discrepancy meetings
- Evidence of interval cancer review
- Attendance at human factors training

Mapping to GPCs

- Domain 1: Professional values and behaviours
- Domain 2: Professional skills
  - Practical skills
- Domain 3: Professional knowledge
  - Professional requirements
- Domain 5: Capabilities in leadership and team working
- Domain 6: Capabilities in patient safety and quality improvement
  - Patient safety
  - Quality improvement

CiP 4: Engage in evidence-based practice and safeguard data, including imaging data.

Expansion

Breast clinicians require the skills used by all doctors to practise evidence-based medicine.

Descriptors

- Demonstrate an understanding of the principles of research, research methods and the translation of research into clinical practice
- Identify and critically appraise literature to inform practice
- Interpret and communicate research evidence in a meaningful way to patients to support them in making informed decisions about treatment
- Apply information governance principles to safeguard imaging data in the context of research
- Apply current guidance for high-risk women to inform practice
- Engage in clinical research and trials, maintaining ethical practice
- Adhere to Data Protection Regulations and be familiar with Freedom of Information regulations
- Understand the role of the Caldicott Guardian within an institution

Suggested evidence

- Acquire certification in 'Good Clinical Practice'
- Reflection
- Attendance and participation in a journal club
- Presentation and/or publication of research
- Attendance of research meetings and/or courses
- Postgraduate qualifications e.g. postgraduate certificate, Masters etc.

Mapping to GPCs

- Domain 3: Professional knowledge
  - National legislative requirements
- Domain 9: Capabilities in research and scholarship

CiP 5: Act as a clinical teacher and supervisor.

Expansion

Breast clinicians should be available to teach medical students, junior doctors and other healthcare professionals.

Descriptors

- Provide teaching, supervision and assessment of clinical trainees and other healthcare professionals
- Understand the role of and develop the ability to act as a clinical supervisor to the standard required by the GMC
- Apply information governance principles to safeguard clinical and imaging data in the context of education

Suggested evidence

- Teaching observation (TO)
- Reflection
- Evidence of delivering undergraduate/postgraduate teaching
- Evidence of teaching and/or assessment design/management/governance
- Learner feedback forms
- Postgraduate qualification in medical education

Mapping to GPCs

- Domain 1: Professional values and behaviours
- Domain 2: Professional skills
  - Practical skills
  - Communication and interpersonal skills
- Domain 3: Professional knowledge
  - Professional requirements
  - National legislative requirements
- Domain 5: Capabilities in leadership and team working
- Domain 8: Capabilities in education and training

CiP 6: Show proficiency in working well within a multidisciplinary team, communicate effectively with colleagues and demonstrate the skills required to lead a team.

Expansion

Breast disease management relies on a multi-professional team and good communication is an essential component of sound practice, team working and patient centred care. Breast clinicians must be able to resolve conflict, develop good working relationships and support team development, and possess the qualities and behaviours necessary to lead but also to follow, when necessary, in dealing with difficult situations and conflicting attitudes.

Descriptors

- Promote and actively participate in multidisciplinary and interprofessional team working, communicate effectively and recognise and respect the roles of all members of the team
- Allow all voices within the multidisciplinary team to be heard and considered and foster an atmosphere of collaboration
- Critically appraise performance of colleagues, peers and systems, appropriately escalate concerns and promote an open and transparent culture of learning and development
- Show awareness of own leadership style and how this impacts on others
- Demonstrate flexibility in leadership behaviour and ability to adapt techniques and approaches to improve engagement and to manage complex and dynamic situations
- Supervise, challenge and mentor colleagues and peers to enhance performance
- Recognise own limitations and comprehend situations where others are better equipped to lead or where delegation is appropriate

Suggested evidence

- MSF
- Mini-IPX
- DOPS
- MDTA
- Team dynamics / Human Factors / Leadership course

Mapping to GPCs

- Domain 1: Professional values and behaviours
- Domain 2: Professional skills
  - Practical skills
  - Communication and interpersonal skills
  - Dealing with complexity and uncertainty
- Domain 5: Capabilities in leadership and team working
- Domain 6: Capabilities in patient safety and quality improvement
  - Patient safety

2.2 Specialty-specific Capabilities in Practice

CiP 7: Appropriately select and tailor breast imaging to patient context and the clinical question(s).

Expansion

Breast clinicians will discuss clinical cases with referrers and allied imaging professionals and advise on appropriate imaging according to the individual patient, clinical background and the clinical question posed. Imaging investigations have varying health and safety risks that need to be considered. Breast clinicians weigh up the relative clinical risk/benefit when advising on imaging according to clinical information provided by referrers.

Descriptors

- Collaborate effectively with referrers to determine the most appropriate imaging pathway for a given presentation
- Exercise evidence-based practice by utilising current peer-reviewed literature to inform imaging selection for all patient groups
- Understand the limitations of imaging within breast screening, its benefits and pitfalls including false positive recall, anxiety and missed diagnosis
- Safeguard patients and act in accordance with current safety guidelines and legislation in respect of ionising radiation and other imaging techniques/equipment
- Be able to advise referrers and patients regarding radiation exposure tailored to individual clinical contexts to facilitate informed decision-making
- Understand technological advances and emerging technologies within breast imaging that could influence patient management now and in the future

Suggested evidence

- Mini-IPX
- DOPS
- CbD
- First FRCR Physics module
- IR(ME)R training certificate
- Conference or imaging course attendance

CiP 7: Appropriately select and tailor breast imaging to patient context and the clinical question(s).

Mapping to GPCs

- Domain 1: Professional values and behaviours
- Domain 2: Professional skills
  - Practical skills
  - Communication and interpersonal skills
  - Dealing with complexity and uncertainty
  - Clinical skills
- Domain 3: Professional knowledge
  - Professional requirements
  - National legislative requirements
- Domain 4: Capabilities in health promotion and prevention
- Domain 5: Capabilities in leadership and team working
- Domain 6: Capabilities in patient safety and quality improvement
  - Patient safety
- Domain 7: Capabilities in safeguarding vulnerable groups
- Domain 8: Capabilities in education and training
- Domain 9: Capabilities in research and scholarship

CiP 8: Provide timely, accurate and clinically useful reports on imaging studies.

Expansion

Breast clinicians provide actionable reports on imaging studies that are performed on symptomatic and / or screening patients depending on local services. They will discuss findings with referrers as required. They will be able to report mammography, ultrasound of the breast and ultrasound of the axilla. They should be capable of making recommendations regarding onward imaging investigations, imaging follow up and/or other clinical management based on their expert knowledge.

Descriptors

- Based on a sound understanding of breast anatomy (including normal variants and artefacts), physiology and pathology, adopt a safe, systematic approach to interpretation of imaging
- Formulate a clinically useful written report targeted appropriately to the referrer, providing where appropriate a refined differential diagnosis, and demonstrate clinical judgement by providing recommendations for further investigation and/or management
- Communicate pertinent clinical and imaging findings in a time-appropriate manner and using appropriate multidisciplinary terminology including established suspicion grading systems
- Demonstrate insight into level of personal expertise and appropriately refer / seek second opinion
- Identify and appropriately respond to imaging findings that raise safeguarding concerns
- Demonstrate insight into diagnostic certainty and clearly communicate this within written and verbal reports

Suggested evidence

- Mini-IPX
- CbD
- DOPS
- MDTA
- MSF
- Logbook of anonymised reports
- Evidence of screening mammography outcomes, including cancer detection rates, missed cancers from e.g. KC62 annual returns data
- Reflection on single reader detected or missed cancers
- Evidence of participation in PERFORMS (or equivalent) in years 2 and 3
- Logbook of ultrasound cases, showing increasing competence, complexity and independence
- Formal mammography or ultrasound course

CiP 8: Provide timely, accurate and clinically useful reports on imaging studies.

Mapping to GPCs

- Domain 1: Professional values and behaviours
- Domain 2: Professional skills
  - Practical skills
  - Communication and interpersonal skills
  - Dealing with complexity and uncertainty
  - Clinical skills
- Domain 3: Professional knowledge
  - National legislative requirements
- Domain 5: Capabilities in leadership and teamworking
- Domain 7: Capabilities in safeguarding vulnerable groups

CiP 9: Appropriately manage clinical and imaging workload according to clinical need, urgency and professional expertise.

Expansion

Breast clinicians will be able to manage outpatient clinics, perform image-guided procedures and use the triple assessment model for symptomatic patients.

Descriptors

- Explain imaging examinations, risks and findings facilitating informed patient choice
- Produce reports in a timely manner according to clinical need in the context of urgent assessment
- Maintain knowledge and skills required to interpret and report imaging in an evolving technological field
- Obtain informed consent for relevant clinical examinations, imaging investigations and/or procedures from all patients including vulnerable groups, showing sensitivity to issues of equality and diversity
- Implement current health and safety and infection control techniques in the context of imaging examinations / procedures
- Perform or arrange (as appropriate) image-guided biopsies, drainage and lesion localization
- Demonstrate insight into level of personal expertise and appropriately refer / seek second opinion

Suggested evidence

- DOPS
- Mini-IPX
- CbD
- Image-guided intervention course
- Reflective / analysed logbook of interventional procedures showing increasing competency, complexity and independence

CiP 9: Appropriately manage clinical and imaging workload according to clinical need, urgency and professional expertise.

Mapping to GPCs

- Domain 1: Professional values and behaviours
- Domain 2: Professional skills
  - Practical skills
  - Communication and interpersonal skills
  - Dealing with complexity and uncertainty
  - Clinical skills
- Domain 3: Professional knowledge
  - Professional requirements
  - National legislative requirements
  - The health service and healthcare systems in the four countries
- Domain 4: Capabilities in health promotion and illness prevention
- Domain 6: Capabilities in patient safety and quality improvement
  - Patient safety
- Domain 7: Capabilities in safeguarding vulnerable groups

CiP 10: Evaluate image quality and utilise the knowledge of imaging sciences to optimise image quality.

Expansion

Breast clinicians need to be able to evaluate image quality and utilise knowledge of imaging physics to maximise the diagnostic certainty of an imaging test.

Descriptors

- Evaluate image quality and feed back to the imaging team appropriately to facilitate maintenance of equipment and/or improve practice
- Understand the quality assurance mechanisms in place within the NHSBSP which are designed to optimise image quality in a screening population
- Appropriately refer to image quality within written reports when there is impact on diagnostic certainty
- Adhere to local and national guidance on IR(ME)R

Suggested evidence

- FRCR part 1 physics exam
- IR(ME)R training certificate
- Anonymised reports
- DOPS
- Review technical recalls

Mapping to GPCs

- Domain 1: Professional values and behaviours
- Domain 2: Professional skills
  - Communication and interpersonal skills
  - Dealing with complexity and uncertainty
- Domain 3: Professional knowledge
- Domain 4: Capabilities in health promotion and illness prevention
- Domain 6: Capabilities in patient safety and quality improvement
  - Patient safety
  - Quality improvement

CiP 11: Lead, work within and effectively contribute to a multidisciplinary team (MDT) meeting.

Expansion

Breast clinicians review and scrutinise imaging of cases to be discussed at MDT meetings and present relevant findings pertinent to clinical decision-making. They will provide explicit recommendations regarding onward imaging investigations and/or follow up based on their expert knowledge.
Breast clinicians should present clinical cases with examination findings and/or risk factors for breast disease to the MDT.

Descriptors

- See descriptors for CiP 6 plus:
- Be proficient in reviewing imaging studies to provide an answer to a clinical question posed by the MDT
- Integrate clinical, pathological and radiological information to refine a differential diagnosis
- Correlate clinical and radiological findings with pathology reports to facilitate correct decision-making on behalf of patients
- Contribute to the decision-making of the MDT by clearly articulating a clinical opinion
- Maintain knowledge of local and national guidelines alongside current peer-reviewed literature to ensure recommendations are evidence-based, clinically relevant and safe

Suggested evidence

- MDTA
- MSF
- DOPs
- Mini-IPX
- CbD
- Reflection

CiP 11: Lead, work within and effectively contribute to a multidisciplinary team (MDT) meeting.

Mapping to GPCs

- Domain 1: Professional values and behaviours
- Domain 2: Professional skills
  - Practical skills
  - Communication and interpersonal skills
  - Dealing with complexity and uncertainty
  - Clinical skills
- Domain 3: Professional knowledge
  - Professional requirements
  - National legislative requirements
  - The health service and healthcare systems in the four countries
- Domain 4: Capabilities in health promotion and prevention
- Domain 5: Capabilities in leadership and team working
- Domain 6: Capabilities in patient safety and quality improvement
  - Patient safety

CiP 12: Explain to patients and colleagues the use of prognostic and biological factors that influence oncological treatments for patients with early and metastatic breast cancer.

Expansion

Working within the MDT, and at the forefront of diagnosis, breast clinicians must understand the oncological treatment options available to patients with malignant breast disease and appropriately advise on these as part of the MDT.

Descriptors

- Explain clinical and radiological findings, the rationale behind treatment options and their risks, facilitating informed patient choice
- Understand and be able to counsel about the short and long term effects of adjuvant treatments including endocrine treatments, chemotherapy and radiotherapy and use appropriate preventative strategies when required
- Maintain knowledge of local and national guidelines surrounding treatment regimes, alongside current peer-reviewed literature to ensure recommendations are evidence-based, clinically relevant and safe
- Within the scope of local practise, partake in oncological research, including counselling and consenting for trials, imaging, image-guided interventions and data acquisition

Suggested evidence

- CbD
- Attendance at Breast Oncology training / updates
- DOPS
- Clinical Exercise (CEX)
- Evidence of involvement in oncological research
- Anonymised GP communication detailing treatment options following consultation

Mapping to GPCs

- Domain 1: Professional values and behaviours
- Domain 2: Professional skills
  - Communication and interpersonal skills
  - Dealing with complexity and uncertainty
- Domain 3: Professional knowledge
  - Professional requirements
  - National legislative requirements
  - The health service and healthcare systems in the four countries
- Domain 5: Capabilities in leadership and team working
- Domain 6: Capabilities in patient safety and quality improvement
  - Patient safety
- Domain 9: Capabilities in research and scholarship

CiP 13: Provide accurate risk assessment and instigate appropriate surveillance, counselling and tertiary referral for women at higher than population risk of breast cancer.

Expansion

Familial breast cancer risk poses a major source of anxiety amongst a well woman population. Breast clinicians provide accurate assessment of breast cancer risk, provide lifestyle advice and understand the screening and risk reducing options available to women at increased risk of breast malignancy.

Descriptors

- Ability to draw and interpret a family pedigree and have knowledge of recommended software programmes to analyse risk
- Stratify risk according to national guidelines and recognise women who have a higher than population risk of breast cancer who may be eligible for screening and/or genetic testing
- Organise moderate/high-risk screening in secondary care and the referral of very high-risk screening to the NHSBSP
- Explain the benefits and limitations of genetic testing to patients and facilitate eligible patient access to genetic testing in tertiary care via local pathways
- Understand the importance of moderate and high-risk screening, the limitations of imaging modalities employed, their benefits and pitfalls including false positive recall, anxiety and missed diagnosis
- Understand the structure and organisation of moderate and high-risk breast screening including the role of primary care, family history breast clinics, genetic services, the NHS very-high-risk breast screening programme and NICE guidance
- Maintain knowledge of hereditary breast cancer and genetic testing relating to high-risk breast cancer genetic mutations
- Understand the concept of risk stratification and polygenic familial risk, the multifactorial nature of breast cancer risk and how a family history assessment is a proxy for testing this risk
- Understand the indications for, and implications of, risk reducing surgery, including gynaecological interventions and the role of the MDT in this scenario
- Understand how to use genomic data in clinical care and the role of the Mainstreaming Cancer Genetic Programme

Suggested evidence

- CbD
- DOPS
- Attendance at family history/high-risk course (optional)
- Logbook of Family history/risk assessment cases detailing referral pathways, reference to the use of national guidelines/risk analysis software and showing increased complexity in case selection in year 2

CiP 13: Provide accurate risk assessment and instigate appropriate surveillance, counselling and tertiary referral for women at higher than population risk of breast cancer.

Mapping to GPCs

- Domain 2: Professional skills
  - Communication and interpersonal skills
  - Dealing with complexity and uncertainty
  - Clinical skills
- Domain 3: Professional knowledge
  - Professional requirements
  - National legislative requirements
  - The health service and healthcare systems in the four countries
- Domain 4: Capabilities in health promotion and illness prevention
- Domain 5: Capabilities in leadership and team working
- Domain 6: Capabilities in patient safety and quality improvement
  - Patient safety
- Domain 7: Capabilities in safeguarding vulnerable groups

CiP 14: Explain the impact of benign, uncertain and malignant breast pathologies on the diagnostic pathway and correlate these with clinical and radiological findings.

Expansion

Breast clinicians provide expert opinion on clinical findings of symptomatic and/or screening patients. They will communicate findings and relevant clinical information with patients and referrers as required in a timely and appropriate manner, safeguarding clinical and imaging information.

Descriptors

- Understand the anatomy, physiology and pathology of the breast in benign, uncertain and malignant conditions and the routes of presentation of these conditions to the NHS
- Be proficient in history taking and clinical examination of the breast contributing to the diagnosis and diagnostic pathway
- Be proficient in advising patients on the management of benign and malignant conditions of the breast
- Understand the need for clinico-radiological concordance in the context of pathology results
- Work within best practice guidelines regarding triple assessment
- Be proficient in communication with patients and relatives, showing sensitivity to issues of equality and diversity, particularly when breaking bad news and including situations involving vulnerable groups
- Understand the indications for and limitations of cytology

Suggested evidence

- Communications skills course
- Reflective / analysed logbook of clinical cases detailing typical and atypical presentations of breast conditions detailed in section 2.3
- DOPS
- CEX
- Mini-IPX
- CbD
- Patient feedback
- MSF

CiP 14: Explain the impact of benign, uncertain and malignant breast pathologies on the diagnostic pathway and correlate these with clinical and radiological findings.

Mapping to GPCs

- Domain 1: Professional values and behaviours
- Domain 2: Professional skills
  - Practical skills
  - Communication and interpersonal skills
  - Dealing with complexity and uncertainty
  - Clinical skills
- Domain 3: Professional knowledge
  - Professional requirements
  - National legislative requirements
  - The health service and healthcare systems in the four countries
- Domain 4: Capabilities in health promotion and illness prevention
- Domain 5: Capabilities in leadership and team working
- Domain 6: Capabilities in patient safety and quality improvement
  - Patient safety
- Domain 7: Capabilities in safeguarding vulnerable groups

2.3 Presentations and conditions

Within the scope of work of a breast clinician, clinical radiology forms the backbone of clinical work and utilises a range of imaging modalities and techniques to identify and characterise pathology in the breast and axilla. Any attempt to comprehensively list all clinical presentations, pathological conditions and imaging modalities and techniques would be extensive but inevitably incomplete and would rapidly become out of date.

The tables below outline the key clinical presentations and conditions presenting to a breast clinician which will require clinical examination, investigation and imaging. Particular presentations and conditions are listed either because they are common or serious. The tables are not comprehensive and must be viewed as a guide and interpreted with common sense.

As a guide it is expected that trainees will:

1. be familiar with the normal anatomy and tissue types in the breast and axilla.
2. develop knowledge of the clinical history, examination and imaging findings of the pathological processes affecting the breast and axilla as follows:
    - Congenital / developmental conditions
    - Trauma
    - Infection
    - Inflammation
    - Neoplasia
    - Autoimmune disorders
    - Blood vessels / blood diseases
    - Endocrine diseases
    - Iatrogenic conditions including those relating to breast implants and reconstruction
    - Pregnancy associated conditions
    - Genetic / inherited conditions
3. Develop knowledge of the conditions associated with higher than population risk for breast cancer and consider strategies for those women as follows:
    - Breast screening
    - Additional or alternative breast imaging
    - Chemoprevention
    - Genetic counselling and testing
    - Gynaecological surgery and fertility management
4. Understand the principles of surgical and oncological treatments to be used for primary and metastatic breast cancer, such as
    - Mastectomy
    - Wide Local Excision
    - Oncoplastic techniques
    - Reconstructive techniques
    - Surgery for locally recurrent disease

- Axillary surgery
- Endocrine therapies
- Radiotherapy
- Chemotherapy
- Immunotherapies
- The role of palliative care

Table 1: Presentations and conditions in breast diagnosis

Specialist Area	Develop an appropriate clinical and imaging strategy for the following presentations	Recognise clinical and imaging features of the following conditions
Breast diagnosis	Breast lump Axillary lump Breast pain Breast erythema Skin changes Nipple inversion Nipple discharge Implant related concerns Male breast concerns Recall from screening	Breast malignancy – In-situ / invasive – Loco-regional / metastatic Benign breast lesions Indeterminate and risk-associated lesions Axillary nodal conditions Implant rupture Complications of reconstruction Male breast conditions Iatrogenic breast conditions

Table 2: Presentations and conditions in cancer risk and genetics

Specialist Area	Develop an appropriate clinical strategy for the following presentations	Have knowledge of the following conditions / gene abnormalities
Cancer risk & genetics	Population risk women Raised risk women Potential gene carrier families Gene carriers Previous mantle radiotherapy or whole body irradiation	BRCA1 / BRCA2 PALB2 CHEK2 ATM Peutz Jeghers Cowden syndrome Li Fraumeni CDH1 Multifactorial risk factors Polygenic inheritance

Table 3: Presentations and conditions in oncology

Specialist Area	Recognise the presentations of the following conditions and understand the appropriate clinical strategies
Oncology	Primary early breast cancer Primary locally advanced breast cancer Locally recurrent breast cancer Regional recurrent breast cancer Metastatic breast cancer Late effects of radiotherapy

2.4 Practical procedures

The following list details procedures that all trainees are expected to have evidenced experience of. It is expected that trainees will engage with these procedures variably during the three year training period, initially developing the awareness for each procedure, progressing through supervised practice to being able to perform independently.

Table 4: Imaging examinations and procedures for breast clinicians

Perform the following imaging examinations and procedures:
Breast ultrasound
Axillary ultrasound
Ultrasound-guided drainage of cyst and abscess
Ultrasound-guided biopsy
Ultrasound-guided sampling for cytology
Stereotactic or tomosynthesis-guided biopsy
Ultrasound-guided localization
Stereotactic- guided localization
Have a working knowledge of the indications for and techniques involved in:
Vacuum assisted excision
MRI biopsy

Table 5: Imaging modalities for breast clinicians

Interpret the following:
Breast ultrasound
Axillary ultrasound
Full field digital mammography
Have a working knowledge of the following:
Breast tomosynthesis
Magnetic resonance imaging
Contrast-enhanced spectral mammography

Table 6: Procedures related to breast cancer risk analysis

Perform breast cancer risk analysis as follows:
Draw and interpret a pedigree
Use software packages designed to classify risk

Table 7: Clinical skills for breast clinicians

Clinical skills:
Be proficient in clinical examination of the breast and axilla
Use appropriate descriptors of a breast mass to facilitate multidisciplinary understanding
Perform clinically-guided core or punch biopsy
Perform sampling techniques required for cytological analysis

3. Teaching and learning methods

Responsibility for delivering the training needed to meet the credential requirements rests with the employers. The GMC's Promoting Excellence standards set out requirements for the management and delivery of postgraduate medical education and training and these should apply equally for this credential. The Gold Guide provides further guidance on the management and expectations of training, although not all of its rules will apply to breast clinicians.

Training will normally take place in a mix of breast screening units, symptomatic units and radiology departments with support from other members of the extended breast multidisciplinary team such as genetics and oncology. For the purposes of educational supervision, trainees will be affiliated to radiology training programmes and structures. Clinical supervisors may be drawn from the radiology training programme or from the screening and symptomatic units, and may be practising breast clinicians, breast radiologists, breast surgeons or clinical geneticists.

Progression through the credential programme will be determined by annual (or more frequent) reviews of progression (see section 4.5) and the training requirements for each indicative year of training are summarised in the progression grids (see sections 4.3 and 4.4). The successful completion of the credential will be dependent on achieving the expected level in all CiPs and procedural skills. The programme of assessment will be used to monitor and determine progress through the programme.

The sequence of training should ensure appropriate progression in experience and responsibility. The training to be provided in each element of training is defined to ensure that, during the programme, the entire curriculum is covered and also that unnecessary duplication and educationally unrewarding experiences are avoided.

The curriculum will be delivered through a variety of learning experiences and will allow trainees to achieve the capabilities described through a variety of learning methods. There will be a balance of different modes of learning from formal teaching programmes (specifically for the scientific basic of imaging [physics] examination) to experiential learning 'on the job'. The proportion of time allocated to different learning methods may vary depending on the nature of the element of training (e.g. imaging, clinical, genetics etc.). The clinical timetable / job plan should be constructed to enable trainees to experience the full range of educational and training opportunities available and meet the curriculum objectives. There will be robust arrangements for quality assurance in place to ensure consistent implementation of the curriculum.

This section identifies the types of situations in which a trainee will learn.

3.1 Work-based experiential learning

The content of work-based experiential learning is decided by the local faculty but includes active participation in:

- Radiological sessions with gradual reduction in supervision according to increasing competence as judged by trainers (apprenticeship model): A major component of training in clinical radiology is achieved by the apprenticeship system with the trainee undertaking an increasing number of radiological tasks
- Clinical sessions with gradual reduction in supervision according to increasing competence as judged by trainers (apprenticeship model): A major component of

training in clinical medicine or surgery is achieved by the apprenticeship system with the trainee undertaking an increasing independence and ability to deal with complex cases

- Family History / risk assessment sessions: Under the guidance of an experienced breast surgeon, breast clinician, geneticist or other doctor these clinical sessions will provide real life scenarios and hands on training in this element of the curriculum
- Oncology sessions: In order to understand this element of the curriculum and input this knowledge to the MDT and clinical scenarios, supervised / supernumerary attachments within a clinical breast oncology setting will provide necessary learning
- Multidisciplinary team meetings: These inter-disciplinary meetings provide excellent learning opportunities.

The degree of responsibility taken by the trainee will increase as competency increases. There should be appropriate levels of supervision throughout training with increasing independence and responsibility as learning outcomes are achieved.

3.2 Formal postgraduate teaching

Formal postgraduate teaching can take a variety of forms and may include:

- A programme of formal, regular teaching sessions to cohorts of trainees (e.g. physics teaching organised by the local school of radiology)
- Case presentations
- Journal clubs
- Research and audit projects
- Lectures and small group teaching
- Grand Rounds
- Radiological skills demonstrations and teaching
- Joint meetings with clinical specialties.

3.3 Independent self-directed learning

Trainees will use this time in a variety of ways depending upon their stage of learning. Suggested activities include:

- Preparation for assessment and examination
- Reading, including journals and web-based material
- E-learning including R-ITI and NBIA authored e-learning resources
- Maintenance of personal portfolio (self-assessment, reflective learning, personal development plan)
- Audit, quality improvement and research projects
- Achieving personal learning goals beyond normal expectation.

3.4 Formal study courses and meetings

The pilot sites for this programme have agreed to support credential trainees in accessing and attending the following courses and meetings:

Essential (all trainees are required to attend)

- A national, annual conference, such as the ABC study day and workshop
- Advanced communication skills workshop during year 2 or 3
- Regional / local physics teaching in preparation for FRCR Physics examination during year 1
- Undertaking of the FRCR Physics examination.

Desirable (all trainees are encouraged to attend):

- British Society of Breast Radiology annual scientific meeting
- Symposium Mammographicum (held in conjunction with the Association of Breast Clinicians)
- Family history or cancer risk course
- Association of Breast Surgery conference or study days
- Team skills, leadership or management course
- Good Clinical Practice for research
- Tomosynthesis training course
- Regional NHSBSP Multidisciplinary Quality Assurance meetings
- Courses and study days on breast disease diagnosis and treatment
- Any other curriculum enhancing meeting, study day or course.

3.5 Learning experiences

Clinical and educational supervisors are encouraged to identify learner-centred educational opportunities in the course of clinical work, maximising the wide variety of learning opportunities in the workplace. These may include:

- Learning from practice: Trainees will spend a large proportion of work-based experiential learning involved in supervised clinical and radiological practice in a hospital setting. Learning will involve closely supervised practice until competences are achieved. The learning environment will be in all areas of the breast department and in other areas where breast related services are provided
- Learning with peers: There are many opportunities for trainees to learn with their peers. Local postgraduate teaching opportunities allow trainees of varied levels of experience to come together for small group sessions. Examination preparation encourages the formation of self-help groups and learning sets
- Learning in formal situations: There are many opportunities for formal teaching in the local postgraduate teaching sessions and at regional, national and international meetings
- Personal study: Time will be provided during training for personal study. It may be possible for longer periods of private study to be offered as part of study leave

- Specific teacher inputs: Individual breast units will identify where specific teacher inputs will be provided. These will vary from unit to unit. Examples include:
  - Each trainee having a radiological teacher for each breast imaging modality for work-based experiential teaching
  - Each trainee having a clinical teacher for each non-radiological component of training, e.g. clinical and risk assessment
  - Structured teaching sessions by clinical supervisors, local training programmes or other postgraduate opportunities.

4 Programme of assessment

4.1 Purpose of assessment

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

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

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

4.2 Programme of assessment

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

A range of assessments, based on the judgement of many assessors, on multiple occasions, are needed to generate the necessary evidence required for global judgements to be made about satisfactory performance, progression in, and completion of, training. The educational supervisor will ensure that there is a local faculty of trainers capable of building a balanced judgement of a trainee's performance supported by workplace based assessments. Such an approach will prevent any individual having undue influence regarding a trainee's progression.

Credential trainees have a personal responsibility to undertake self-assessment as an integral part of their professional life. It is good educational practice for this to be stated clearly and discussed fully during induction. Throughout their careers, doctors should strive to improve their performance to ensure their progression from competence, through proficiency, to expertise. The programme of assessment is designed to recognise and give trainees the opportunity to demonstrate excellence.

4.3 Assessment of CiPs

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

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

Table 8 shows the scale and descriptors used to assess the generic CiPs and Table 9 shows the scale and descriptors used to assess the specialty specific CiPs.

Table 8: Level descriptors for generic CiPs

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

Table 9: Level descriptors for specialty-specific CiPs, procedures and clinical skills

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

The expectations of progress against the CiPs for each stage of training are outlined in the progression grids that make up Table 10 and Table 11. The level described for each CiP is the minimum expected by the end of that year of training.

Table 10: Progression grid for generic CiPs

Generic CiP	Year 1	Year 2	Year 3	
1. Demonstrate the professional values and behaviours expected of all doctors as outlined in Good Medical Practice (GMP)	2	2	3	Award of credential
2. Successfully function within the health service and healthcare systems in the UK	2	2	3	
3. Engage in reflection, clinical governance and quality improvement processes to ensure good practice	2	2	3	
4. Engage in evidence-based practice and safeguard data, including imaging data	1	2	3	
5. Act as a clinical teacher and supervisor	1	2	3	
6. Show proficiency in working well within a multi-disciplinary team, communicate effectively with colleagues and demonstrate the skills required to lead a team	2	2	3	

Table 11: Progression grid for specialty-specific CiPs

Specialty-specific CiP	Year 1	Year 2	Year 3	
7. Appropriately select and tailor breast imaging to patient context and the clinical question(s)	2	3	4	Award of credential
8. Provide timely, accurate and clinically useful reports on imaging studies	1	2	4	
9. Appropriately manage clinical and imaging workload according to clinical need, urgency and professional expertise	1	2	4	
10. Evaluate image quality and utilise the knowledge of imaging sciences to optimise image quality	3	4	4	
11. Lead, work within and effectively contribute to a multidisciplinary team (MDT) meeting	2	3	4	
12. Explain to patients and colleagues the use of prognostic and biological factors that influence oncological treatments for patients with early and metastatic breast cancer	1	2	4	
13. Provide accurate risk assessment and instigate appropriate surveillance, counselling and tertiary referral for women at higher than population risk of breast cancer	3	4	4	
14. Explain the impact of benign, uncertain and malignant breast pathologies on the diagnostic pathway and correlate these with clinical and radiological findings	3	3	4	

4.4 Assessment of ability in imaging, procedures and clinical skills

As for the assessment of the CiPs, assessment of the trainee's ability in imaging investigations, key procedures and clinical skills involves looking across a range of key skills and evidence of progress to make an overall judgement about a trainee's achievement in the context of their clinical practice at the current stage of training. This will be informed by the professional judgement of the trainer and take account of workplace based assessment, supervisors' reports, summative assessment and the trainee's own self-assessment. Assessment of skill in these areas should take place throughout training and include formative feedback to the trainee on their performance.

The same scale that is used to assess the specialty-specific CiPs can be applied to the assessment of ability in imaging investigations, procedures and clinical skills. This reflects the need for supervisors to make entrustment decisions about the ability of trainees to take

on particular responsibilities or tasks and the level of supervision they require, as appropriate to their stage of training.

Table 9 shows the scale and descriptors that should be used. Table 12 and Table 13 outline the expectations of progress in imaging investigations, procedures and clinical skills for each stage of training. The level described for each area is the minimum expected by the end of that year of training.

Table 12: Progression grid for imaging examinations and procedures

Imaging examination and procedures	Year 1	Year 2	Year 3	
Breast ultrasound	2	3	4	Award of credential
Axillary ultrasound	2	3	4	
Ultrasound-guided drainage of cyst and abscess	1	2	4	
Ultrasound-guided biopsy	1	2	4	
Stereotactic-guided biopsy	1	2	4	
Ultrasound-guided localization	1	2	4	
Stereotactic-guided localization	1	2	4	
Draw and interpret a pedigree	3	4	4	

Table 13: Progression grid for clinical skills

Clinical skills	Year 1	Year 2	Year 3	
Clinical examination of the breast and axilla	3	4	4	Award of credential
Clinically-guided core or punch biopsy	1	2	4	
Sampling techniques for cytological analysis	1	2	4	

4.5 Evidence of progress

Practice will be assessed using an integrated package of formative workplace based assessments (WPBAs), reflective logbooks and summative examination of the scientific basis of imaging (physics). The assessments are supported by structured feedback and are fit for purpose, having undergone evaluation in terms of their feasibility, reliability, validity and reproducibility in relation to specialty training in clinical radiology and clinical oncology.

The methods of assessment listed in this section of the curriculum will provide evidence of progress, with the requirements for each stage of training stipulated in the progression grids (see sections 4.3 and 4.4). Evidence of progress may also be gathered from other sources and trainees are encouraged to demonstrate their progress against the CiPs in a variety of different ways, reflecting their strengths, areas of interest and the resources available to them. The trainee will collect evidence to support their self-assessment, and the educational supervisor will use it to reach a global assessment.

4.5.1 E-portfolio

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

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

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

Supervisors and annual review panels may use the e-portfolio to monitor the progress of trainees undertaking the credential. The RCR will use summarised, anonymous data from the e-portfolio to support its work in quality assurance.

4.5.2 Summative assessment

Credential trainees must pass the Scientific Basis of Imaging (Physics) module of the RCR's First FRCR Examination. This examination tests knowledge through multiple choice and single best answer (SBA) questions and is a key indicator of progress.

Trainees are allowed a maximum of three attempts at the examination and it is normally expected to be achieved within the first year of training. Additional attempts will only be granted in exceptional circumstances.

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

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

4.5.4 Formative assessment

Workplace based assessment (WPBA) is the cornerstone of assessment for day-to-day practice. Reflection and feedback is an integral component to all WBPAs to enhance and drive learning. The assessments should be seen as opportunities for identifying strengths and areas for further development; they are not tests that must be passed.

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

A range of assessment tools are available to support WPBA and these are listed below. Minimum numbers of each type of WPBA are given (and detailed in Table 14), although it is anticipated that trainees may/will undertake many more, as the WPBAs are the vehicles by which the trainee will guarantee one-to-one teaching and ensure appropriate curriculum coverage during their clinical attachments.

Mini-Imaging Interpretation Exercise (Mini-IPX)

This tool evaluates an observed radiology interpretation/reporting episode. The mini-IPX can be used at any time and in any setting when an assessor is available. Assessors must be trained in giving feedback and understand the role of assessment. Different assessors should be used for each mini-IPX wherever possible. Trainees should agree the timing, problem and assessor, although assessors may also carry out unscheduled assessments. Trainees should receive immediate feedback to aid learning.

Trainees should complete a minimum of four mini-IPXs in their first year of training followed by a minimum of six in each of their second and third years. These should be spaced out appropriately. Mini-IPXs should sample across different imaging modalities as appropriate and as detailed in Table 5.

Direct Observation of Procedures (DOPS)

The DOPS is an assessment tool designed to assess the performance of a trainee in undertaking a procedure, against a structured checklist. The trainee receives immediate feedback to identify strengths and areas for development.

Trainees should complete a minimum of four DOPS in their first year of training followed by a minimum of six in each of their second and third years. These should be spaced out appropriately. DOPS should sample across different procedures as appropriate and as detailed in Table 4, Table 6 and Table 7.

Case-based Discussion (CbD)

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

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

Trainees should complete a minimum of six CbDs in each of their first and second years of training followed by a minimum of four in their third year. These should be spaced out appropriately. CbDs should sample across the CiPs as appropriate.

Mini-Clinical Evaluation Exercise (CEX)

This tool evaluates a clinical encounter with a patient to provide an indication of competence in skills essential for good clinical care such as history taking, examination and clinical reasoning. The trainee receives immediate feedback to aid learning. The mini-CEX can be used at any time and in any setting when there is a trainee and patient interaction and an assessor is available.

Trainees should complete a minimum of six mini-CEXs in each of their first and second years of training followed by a minimum of four in their third year. These should be spaced out appropriately. Mini-CEXs should sample across different clinical skills as appropriate and as detailed in Table 7.

Multi-Source Feedback (MSF)

This tool is a method of assessing generic skills such as communication, leadership, team working, reliability etc. across the domains of Good Medical Practice. This provides systematic collection and feedback of performance data on a trainee, derived from a number of colleagues. For each assessment, the trainee should nominate 15 raters. 'Raters' are individuals with whom the trainee works, including supervising consultants, breast clinicians, doctors in training more senior than the trainee under assessment where available, and experienced radiographic, nursing or allied health professional colleagues.

The recommended mix of raters/assessors is:

- 4-6 senior doctors
- 0-2 doctors in training (depending on local availability)
- 2–4 radiographers
- 2–4 nurses/allied health professionals
- 2–4 other team members including clerks, secretaries and auxiliary staff

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

MSF should usually take place once a year, although the educational supervisor may choose to recommend an additional MSF to investigate a relevant behavioural issue or check progress after an adverse MSF. It is mapped to a self assessment tool with identical domains.

Quality Improvement Project and Audit Assessment Tool (QIPAT)

The QIPAT is designed to assess a trainee's competence in completing an audit or quality improvement project. The assessment can be based on review of audit or quality improvement

documentation or on a presentation at a meeting. If possible, the trainee should be assessed on the same audit or quality improvement project by more than one assessor.

All trainees are expected to complete an audit or quality improvement project for each year within the programme. Trainees should show how they have instigated, collated and presented a piece of work, as well as reflected upon any changes in clinical management as a result of work completed.

Multidisciplinary Team Assessment (MDTA)

The MDT Assessment Tool is designed to provide feedback on a trainee's ability to contribute effectively to multidisciplinary team working and to assume a leadership role in multidisciplinary meetings. As with other WPBAs it is based on the assessor observing a trainee and providing feedback.

MDTAs are optional in the first year of training but a minimum of two per year are expected in each of the second and third years.

Teaching Observation (TO)

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

Teaching observations are optional in the first and second years of training but a minimum of two is expected in the third year.

PERFORMS

PERFORMS is a nationally recognised tool for monitoring mammography interpretation. It is undertaken regularly by all readers within the NHSBSP and should be undertaken in years 2 and 3 of this programme to objectively assess mammography interpretation performance. Training sets are available which are a valuable learning opportunity.

Logbooks

Many elements of training require trainees to use logbooks to create evidence of achievement and to aid the learning journey. The logbook is not simply a record of cases seen or procedures performed, it should act as a tool for reflection and critical analysis of relevant literature, widening the scope of learning and developing academic skills. Literature should be referenced within logbook cases and may relate to imaging or clinical findings, technology usage or other relevant learning points such as educational theory.

Templates for different elements of training such as ultrasound and family history, will be available to trainees in the e-portfolio. Increased complexity of cases included in the logbook and inclusion of atypical presentations is encouraged in the later months of each element of training to demonstrate progression.

All data within logbooks should have patient identifiable information removed, including those on images when applicable. Colleagues and employing trusts should not be directly identifiable.

Reflection

The e-portfolio contains a number of documents to support reflection, including blank reflection forms and templates that provide prompts for different types of reflection. Trainees may set any reflections recorded in the e-portfolio to private so that they can only be viewed by the trainee or make them available to their supervisors. Further guidance on effective reflection and recording of this in the e-portfolio is available on the RCR website.

Educational Supervisor's Report

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

4.5.5 Indicators of progress

Workplace based assessments should be undertaken in a timely and educationally appropriate manner throughout the training year. Table 14 details the minimum number of each assessment that is required in each year of training.

Although minimum numbers of each type of WPBA are given, it is anticipated that trainees may/will undertake many more, as the WPBAs are the vehicles by which the trainee will guarantee one-to-one teaching and ensure appropriate curriculum coverage during their clinical attachments.

Table 14 also shows the minimum expected number of imaging investigations and interventional procedures that are expected in each year of training and indicates at what point in training other milestones are expected to be achieved.

Table 14: Assessments, procedures and milestones by year of training

Minimum number of workplace based assessments			
	Year 1	**Year 2**	**Year 3**
Mini-IPX	4	6	6
DOPS	4	6	6
CbD	6	6	4
Mini-CEX	6	6	4
MSF	1	1	1
QIPAT [1]	1	1	1
MDTA	0	2	2
TO	0	0	2
Minimum number of imaging investigations and procedures			
	Year 1	**Year 2**	**Year 3**
Mammography [2]		2500	5000
Ultrasound [3]	250 supervised	500 supervised 25 case studies (typical findings)	500 independent 25 case studies (typical & atypical findings)
Interventional procedures (includes all those listed in Table 4)		50 supervised	50 independent
Other requirements and milestones			
	Year 1	**Year 2**	**Year 3**
First FRCR Examination Physics Module	Pass		
PERFORMS		Regularly undertaken as part of practice	
Research	Participation in a piece of research		

1 includes quality improvement or audit project

2 In Year 1 it is expected that the trainee will demonstrate evidence of understanding of the principles of mammography, indications and limitations. In Years 2 and 3 the number of mammograms read must be accompanied by outcomes and evidence of reflection on single reader detection and missed cancers.

3 In Year 1 it is expected that the trainee will demonstrate evidence of understanding of the principles of breast ultrasound, indications and limitations. The case studies should be recorded in a reflective logbook and should evidence knowledge of typical findings in Year 2, and both typical and atypical findings in Year 3. In Year 3 the 500 independent ultrasounds should include complex cases.

4.5.6 Non-imaging skills

In Year 1 it is expected the trainee will acquire the necessary clinical skills relating to CiP 13 and CiP 14. These should be evidenced using the workplace based assessments blueprinted in Table 15 and should be being performed at the level described in Table 13.

In Year 2 increasing independent practice should be evidenced by similar methods.

4.6 Decisions on progression

Individual progress will be monitored through regular review. This process will be used to integrate and systematically review evidence about a doctor's performance and progress in a holistic way to facilitate decisions regarding progression through training, as well as identifying any requirements for targeted or additional training where necessary.

To ensure consistency of standards and impartiality in this new programme, the review of doctors following this programme will be carried out by a national panel constituted by the Credential Project Board. The panel will meet at the following intervals from the start of the pilot programme in August 2019:

- February 2020 (6 months into training)
- July 2020 (1 year into training)
- July 2021 (2 years into training)
- July 2022 (3 years into training – completion of the pilot)

Additional review panels may become necessary as the pilot progresses. This will be decided by the Credential Project Board.

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

The review panel will be convened at the RCR in London. Trainees will not be expected to attend in person or via videoconference unless there are specific issues or concerns to discuss. The panel will review evidence in the e-portfolio, including educational supervisors' reports. More detail about the review process and the panel is available on the RCR website.

The requirements for a satisfactory outcome at the end of each training year are detailed in Table 10, Table 11, Table 12, Table 13 and Table 14. These should be used to guide trainees, supervisors and the review panel. For ease of reference the five tables have been extracted into a separate document which is available to download from the RCR website.

Satisfactory progression across all domains will lead to progress into the next year of training. Unsatisfactory progression will be informed by some or all of the following (the decision being undertaken by the review panel): failure to reach the expected level of entrustment by the end of the training year; inadequate or poor outcomes in workplace based assessments and/or examinations; and areas of concern within the educational supervisor's report. This will result in one of two outcomes:

- Conditional progress into the next stage of training: The review panel will make specific recommendations to the trainee and their educational supervisor who should then work together to formulate an action plan to redress deficiencies in performance. The action plan should be shared with the review panel and progress will be re assessed as appropriate within the next year of training.
- Directed training without progression: If the trainee is so far short of the objectives for their stage of training such as to prevent them continuing into the next stage of training, the panel may recommend directed training to achieve those objectives. Specific recommendations will be made to the trainee and their educational supervisor who should then work together to formulate an action plan. The action plan should be shared with the review panel and progress will be re-assessed as appropriate within the next stage of training. The review panel recommends that repetition of a period of training should only be recommended for exceptional reasons and only when the trainee is demonstrating full engagement in training and at the discretion of the employer. The maximum additional time allowable above and beyond completion of three years whole time equivalent training is 12 months whole time equivalent.

If progression has been unsatisfactory and progress into the next stage of training is conditional this would normally be reviewed at the next set review date (e.g. after another six months or one year depending on stage of training). Any additional interim review will only be expected in exceptional circumstances.

4.7 Local appraisal

The review panel will only be assessing the trainee's progress through training. It is therefore essential that trainees maintain their connection with the GMC for revalidation purposes through an appropriate designated body and engage with that organisation's governance systems for annual appraisal and revalidation.

4.8 Appeals

There are formal mechanisms for appealing against decisions taken at all stages of training. Appeals related to examination results are conducted by the RCR; information can be obtained from the Examinations section of the RCR website. Appeals against a decision of the review panel or against failure to award the credential will be undertaken by an independent panel consisting of the following representatives:

- A breast radiologist not sitting on the credential project board or from a pilot site
- A breast clinician not from a pilot site
- A representative of the RCR
- A lay representative
- The Lead Dean for radiology

Decisions will be made solely on the outcomes of competency progression.

4.9 Assessment blueprints

Table 15 shows the possible methods of assessment for each CiP. It is not expected that every method will be used for each competency and additional evidence may be used to help make a judgement on capability.

Table 15: Blueprint of WPBAs and examination to the generic and specialty-specific CiPs

	Mini-IPX	DOPS	CbD	CEX	MSF	QIPAT	MDTA	TO	PERFORMS Training Sets	Reflective logbook	First FRCR Examination Scientific Basis of Imaging (Physics) module
Generic CiPs											
1. Demonstrate the professional values and behaviours expected of all doctors as outlined in Good Medical Practice (GMP)	X	X			X		X				
2. Successfully function within the health service and healthcare systems in the UK					X	X					
3. Engage in reflection, clinical governance and quality improvement processes to ensure good practice						X			X	X	
4. Engage in evidence-based practice and safeguard data, including imaging data						X				X	
5. Act as a clinical teacher and supervisor					X			X			
6. Show proficiency in working well within a multidisciplinary team, communicate effectively with colleagues and demonstrate the skills required to lead a team	X	X			X		X				

Table 15: Continued

	Mini-IPX	DOPS	CbD	CEX	MSF	QIPAT	MDTA	TO	PERFORMS Training Sets	Reflective logbook	First FRCR Examination Scientific Basis of Imaging (Physics) module
Specialty Specific CiPs											
7. Appropriately select and tailor breast imaging to patient context and the clinical question(s)	X	X	X								
8. Provide timely, accurate and clinically useful reports on imaging studies	X	X	X		X		X		X	X	
9. Appropriately manage clinical and imaging workload according to clinical need, urgency and professional expertise	X	X	X							X	
10. Evaluate image quality and utilise the knowledge of imaging sciences to optimise image quality		X									X
11. Lead, work within and effectively contribute to a multi-disciplinary team (MDT) meeting	X	X	X		X		X			X	

Table 15: Continued

	Mini-IPX	DOPS	CbD	CEX	MSF	QIPAT	MDTA	TO	PERFORMS Training Sets	Reflective logbook	First FRCR Examination Scientific Basis of Imaging (Physics) module
Specialty Specific CiPs											
12. Explain to patients and colleagues the use of prognostic and biological factors that influence oncological treatments for patients with early and metastatic breast cancer		X	X	X							
13. Provide accurate risk assessment and instigate appropriate surveillance, counselling and tertiary referral for women at higher than population risk of breast cancer		X	X							X	
14. Explain the impact of benign, uncertain and malignant breast pathologies on the diagnostic pathway and correlate these with clinical and radiological findings	X	X	X	X	X					X	

5 Supervision and feedback

This section of the curriculum describes how trainees will be supervised, how they will receive feedback on performance, and the requirements for trainers.

5.1 Feedback

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

5.2 Supervision

All elements of work carried out in training posts must be supervised, with the level of supervision varying depending on the experience of the trainee and case mix undertaken. As training progresses the trainee should have the opportunity for increasing autonomy, consistent with safe and effective care for the patient.

Organisations must make sure that each doctor in training has access to a named clinical supervisor and a named educational supervisor. Depending on local arrangements these roles may be combined into a single role of educational supervisor. It is preferred that a trainee has a single named educational supervisor for the duration of training. The clinical supervisor may change and will usually be the consultant or breast clinician to whom a trainee is directly responsible for that element of training, in which case the clinical supervisor may be a different doctor for clinical, radiological and risk components of the training.

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

Opportunities for feedback to trainees about their performance will arise through the use of the WPBA, regular appraisal meetings with supervisors, other meetings and discussions with supervisors and colleagues, and feedback from annual review.

The first year can be a difficult year of transition for trainees. Undertaking training as part of a pilot scheme with a new curriculum may also create anxieties for trainees and trainers. Supervisors are encouraged to offer advice, a mentor system and a counselling service during the year. Trainees are encouraged to utilise the ABC for additional mentorship and contact with other pilot scheme trainees. The following milestones should be acknowledged:

- The trainee should meet with their educational supervisor at the start of their appointment, and again after three months
- The trainee's practice must be closely supervised and patient safety is of paramount importance. Such aspects are monitored by the clinical supervisor for each element of

training and documented in the e-portfolio. Formal mechanisms for feeding back any concerns raised by the clinical supervisor, to the trainee, and the educational supervisor should be in place. There should be support available to trainees who are unsuccessful in the First FRCR Examination physics module, with remedial training (if possible) to assist with their next attempt at the examination

- All training for the credential should be conducted in institutions with appropriate standards of clinical governance and that meet relevant Health and Safety standards for clinical areas. Training placements must also comply with the European Working Time Regulation for trainee doctors
- Trainees must work with a level of clinical supervision commensurate with their clinical experience and level of competence. This is the responsibility of the relevant clinical supervisor after discussion with the trainee's educational supervisor and the designated clinical governance lead. In keeping with the principles of Good Medical Practice, trainees should know that they must limit their clinical practice to within their level of clinical competence and seek help and support without hesitation.

5.2.1 Educational supervisor

The educational supervisor is appropriately trained to be responsible for the overall supervision and management of a doctor's educational progress during all elements of training. The educational supervisor regularly meets with the doctor in training to help plan their training, review progress and achieve agreed learning outcomes. The educational supervisor is responsible for the educational agreement, and for bringing together all relevant evidence to produce a structured report on the trainee's progression at the end of each element of training.

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

Local education providers must ensure that educational supervisors have adequate support and resources to undertake their role. This will include training in equality and diversity.

The educational supervisor will:

- ensure that the job plan is appropriate for the doctor's needs
- be responsible for the trainee's educational agreement
- meet with the trainee at least every four months to agree how the learning objectives for this period of training will be met and confirm how formative feedback and summative judgements will be made
- help trainees by reviewing their learning needs in the light of achieved goals
- carry out and/or collate assessments from clinical supervisors, trainers and other assessors
- review the trainee's e-portfolio
- conduct reviews and give supportive feedback on the results of MSF
- complete the structured supervisor's report prior to the review panel meeting (after 6 months, 1 year, 2 years and 3 years) as detailed under sections 4.4 and 4.5
- support the trainee through any difficulty

- tell the clinical director/lead, head of service or medical director and those responsible for training, of serious weaknesses in their trainee's performance that have not been dealt with
- tell the trainee the content of any information about them that is given to someone else
- ensure that all training opportunities meet the requirements of equality and diversity legislation
- give appropriate handover to the next educational supervisor, with the trainee's knowledge.

The educational supervisor, when meeting with the trainee, should discuss issues of clinical governance, risk management and the report of any untoward clinical incidents involving the trainee. The educational supervisor is part of the clinical speciality team. Thus, if the clinical directorate should have any concerns about the performance of the trainee, or there were issues of doctor or patient safety, these would be discussed with the educational supervisor. These processes, which are integral to trainee development, must not detract from the statutory duty of the employer to deliver effective clinical governance through its management systems.

5.2.2 Clinical supervisor

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

It is likely that the trainee will be undertaking training in more than one element at any one time and therefore have more than one clinical supervisor at any one time.

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

The clinical supervisor is responsible for:

- ensuring that their trainees are never put in a situation where they are asked to work beyond their competence without appropriate support and supervision. Patient safety must be paramount at all times
- guaranteeing suitable induction to the breast screening unit, breast symptomatic department, outpatient clinic or radiology department
- meeting with the trainee at the beginning of each element of training to discuss what is expected, learning opportunities available and the trainee's learning needs
- ensuring that the clinical experience available to the trainee is appropriate and properly supervised
- ensuring that all training opportunities meet the requirements of equality and diversity legislation
- monitoring, supporting and assessing the trainee's day-to-day clinical and professional work
- providing regular feedback on the trainee's performance

- undertaking and facilitating WPBA
- allowing the trainee to give feedback on the experience, quality of training and supervision provided
- discussing serious concerns with the educational supervisor about a trainee's performance, health or conduct
- meet with the trainee to assess whether they have met the necessary outcomes and complete an end of post appraisal form at the end of each element of training.

5.2.3 Trainees

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

5.3 Appraisal

A formal process of appraisals and reviews underpins training. This process ensures adequate supervision during training, provides continuity between different elements of training and different supervisors, and is one of the main ways of providing feedback to trainees. Arranging an appraisal or local review is primarily the responsibility of the trainee. All such meetings should be recorded in the e-portfolio.

Annual induction appraisal

When trainees start in a new training year, they must arrange a meeting with their educational supervisor. The induction appraisal is an essential starting point for negotiating educational goals and discussing learning opportunities, the assessment process and use of the e-portfolio. An educational agreement is signed between the educational supervisor and trainee and overarching educational aims for the year ahead should be agreed within a personal development plan (PDP).

Clinical supervisor: induction appraisal

When trainees start a new element of training, they must arrange a meeting with the appropriate clinical supervisor (this role may be discharged in some cases by the educational supervisor). The appraisal discussions should cover the educational objectives for that element of training and be used to inform the PDP.

Clinical supervisor: ad-hoc

Additional meetings during each element of training, although not mandatory are highly recommended. They give the trainee and clinical supervisor the opportunity to look at the

achievements of the trainee and highlight areas for future development, in terms of the PDP and curriculum CiPs.

Clinical supervisor: end of element appraisal

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

Educational supervisor's mid-year appraisal

A mid-year appraisal with the educational supervisor is an opportunity to look at the trainee's progress against the agreed educational objectives within the e-portfolio. It is at/around the time of this meeting that the MSF is undertaken. This will feed directly into the overarching review process detailed in section 4.5.

End of training year appraisal

The results of educational activities for an academic year will be drawn together and included in a formal structured educational supervisor's report. This will cover the overall performance of the trainee in each element of training. The overall judgment of a trainee, and the educational supervisor's recommendations of satisfactory completion of the year of training, will be based on a triangulated view of the doctor's performance and will be carried out by the national review panel. This will include their participation in educational activities, appraisals, the assessment process and recording of this in the e-portfolio.

6 Appendix: Equality and diversity

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

We believe that equality of opportunity is fundamental to all radiological and clinical practice and to the many and varied ways in which individuals become involved with the RCR, either as members of staff and Officers; as advisers from the medical profession or in a lay capacity; as members of the RCR's professional bodies or as specialty or breast clinician trainees and examination candidates.

Accordingly, it warmly welcomes contributions and applications from as diverse a population as possible, and actively seeks to recruit people to all its activities regardless of protected characteristic.

The employing trust for each pilot site is expected to ensure that breast clinician trainees in their employment are covered by local equality and diversity standards and that these are applied to the recruitment process as well as for the duration of training. In addition the RCR's quality assurance of training procedures will seek evidence of how each pilot site complies with the equality and diversity standards that are expected in all medical training as set by the GMC.

Compliance with anti-discriminatory practice will be assured either by the employing trust or by the RCR through:

- monitoring of recruitment processes;
- ensuring all RCR representatives have attended appropriate training sessions prior to appointment or within 12 months of taking up post;
- ensuring trainees have an appropriate, confidential and supportive route to report examples of inappropriate behaviour of a discriminatory nature. Employers must also ensure contingency mechanisms are in place if trainees feel unhappy with the response or uncomfortable with the contact individual;
- monitoring of FRCR examinations;
- ensuring all assessments discriminate on objective and appropriate criteria and do not unfairly disadvantage trainees with any of the Equality Act 2010 protected characteristics. All efforts shall be made to ensure the participation in training of people with a disability (other than that which would make it impossible to practise safely as a breast clinician) through reasonable adjustments.

The RCR takes its obligations under the relevant equal opportunities legislation seriously.

This includes ensuring that members of staff involved in the delivery of examinations receive appropriate briefing on the implications of equality and diversity in the treatment of candidates. Those appointed as examiners must demonstrate that they have undergone appropriate equality and diversity training and that they are willing to abide by good practice in these areas.

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

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

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

The Royal College of Radiologists. *Credential in Breast Disease Management for Breast Clinicians*. London: The Royal College of Radiologists, 2019.