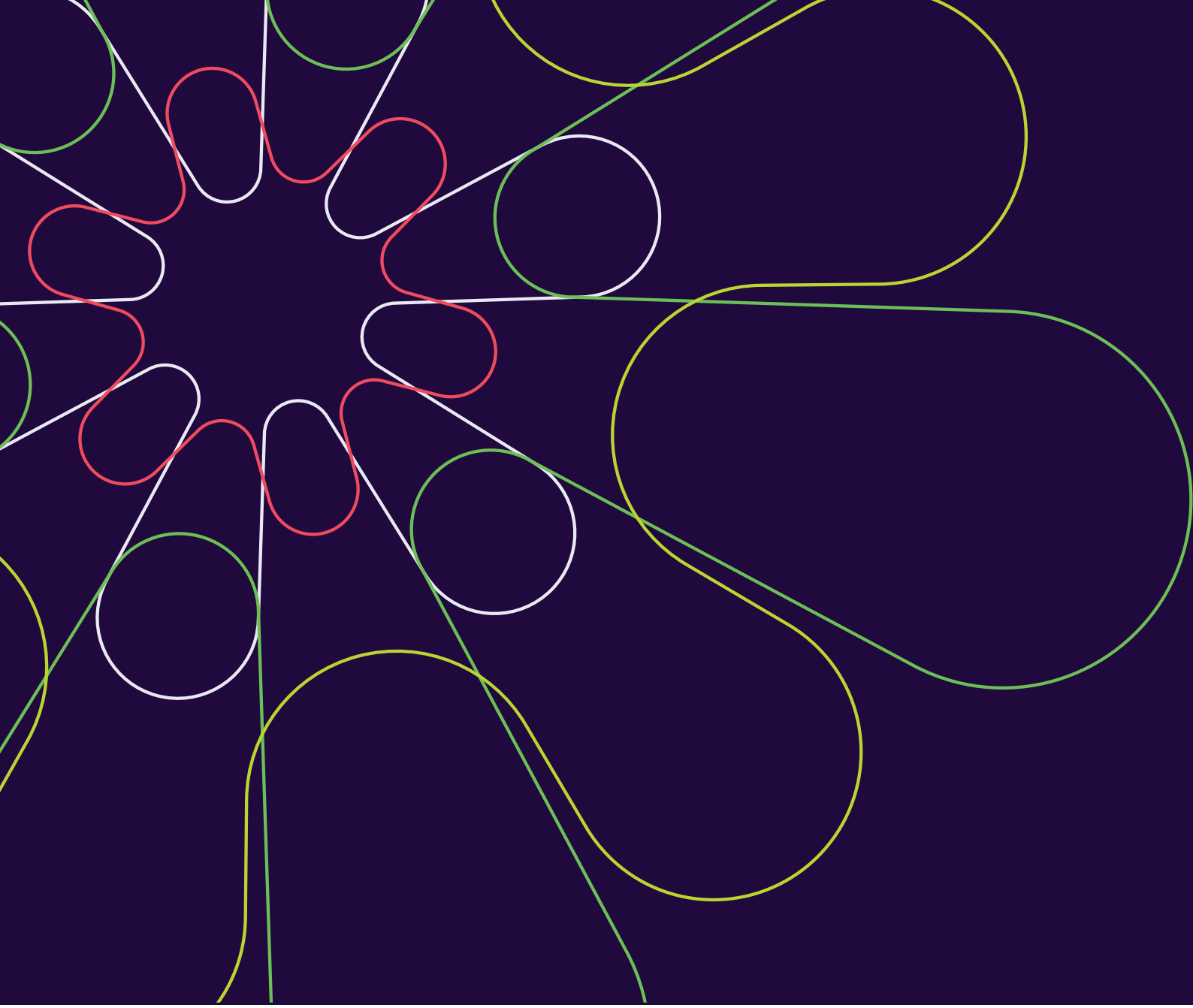

Credential in Breast Disease Management for Breast Clinicians

Implementation May 2019 – Updated 1 September 2025

November 2025

The Royal College of Radiologists

NATIONAL BREAST IMAGING ACADEMY

The Association of Breast Clinicians

Contents

01 Introduction

1.1 The purpose and objective of the credential

The purpose of this credential is to standardise and formalise training for breast clinicians across the UK. A clearly defined training pathway and scope of practice that is recognised on a national level ensuring that breast screening and symptomatic units have the workforce they need to support and lead their services. 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, Breast Clinicians work as independent practitioners administering their own practice.

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

Training is 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.

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1.2 The need for the credential

The credential was developed and launched in 2019 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. 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, the increased use of breast MRI and image-guided excisions and a drive towards breast conservation surgery using multiple localisation techniques are also impacting on the demand being put on breast imaging services. This increase in complexity means a better, more accurate screening and symptomatic breast service is being provided, but it cannot be fully delivered without an increased workforce.

Breast clinicians support both clinical and breast imaging services, offering a holistic approach to all aspects of breast disease management which is of considerable benefit to patients. Additionally, they offer support for genetics referrals, deliver mainstreaming genetic testing, 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 advanced breast cancer
- Clinical radiology out with breast imaging modalities.

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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 learners must be based in a unit which already undertakes the training and assessment of clinical radiology learners. 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

To achieve CCT residents are expected to demonstrate the capabilities described by the The terms “specialty-specific” and “learner” 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 “learner” is used, it refers to those undergoing training in this credential.

Learners undertaking this credential will not be rotating in the same way as radiology specialty learners 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. Learners may have gained additional experience in other programmes (eg 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 learners 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 RCR’s membership department to apply.

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1.8 Enrolment with the Association of Breast Clinicians (ABC)

Credential learners are expected to enrol with the ABC as members prior to the commencement of their training. As members of the ABC, the credential learners will have full access to the members' pages of the ABC website, training resources and network opportunities within the professional group. A mentoring scheme for learners, involving breast clinicians also trained through the credential will be facilitated.

1.9 National Breast Imaging Academy (NBIA)

The National Breast Imaging Academy (NBIA) supports learners and supervisors. Further details and educational resources are detailed on the NBIA website. These include NBIA on-line e-learning modules, mapped to the credential, which are available through the e-learning hub.

1.10 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. There may be a need for flexibility within this suggested timeline due to training or other departmental constraints; however, all elements should be completed within the indicative time frame. Demonstrable progression with generic and specific skills through the three-year programme is outlined in section 4.3.

1.11 Capabilities in practice

To achieve the credential, learners 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.

1.11.1 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.

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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.

1.11.2 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 may have varying health and safety risks. These need to be weighed up with the clinical benefits when the breast clinician advises 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 optimise 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 and reports for MDT meetings and present 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 to the MDT and include examination findings and/or risk factors for breast disease.

12. Understand the prognostic and biological factors that influence oncological treatments for patients with early and advanced breast cancer.
    Working within the MDT, breast clinicians must understand the oncological treatment options available and explain to patients and colleagues the prognostic and biological factors that influence these options.

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

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Breast clinicians should provide breast cancer risk assessment and suggest strategies such as lifestyle advice to modify risk. They should understand the screening and risk reducing options available to women 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 screening patients. They communicate findings and relevant clinical information to patients and referrers as required in a timely and appropriate manner, safeguarding clinical and imaging information.*

1.12 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 learners 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.

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Figure 1: The nine domains of Generic Professional Capabilities

02 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, learners 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 learners 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. Learners 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 learners meet each CiP is stage dependent and is expected to progress in a spiral fashion throughout training. Learners will develop at different rates and may be able to demonstrate a higher level of progress in some CiPs compared to others. Excellent learners 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 learners 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.

02

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

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

02

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

02

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 eg 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

02

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 eg postgraduate certificate, Masters etc

Mapping to GPCs

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

02

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 learners 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

02

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

02

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 may have varying health and safety risks. These need to be weighed up with the clinical benefits when the breast clinician advises 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 purpose, benefits and limitations of breast screening as well as the pitfalls such as anxiety, false positive recall 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

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

02

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

- Adopt a safe, systematic approach to interpretation of imaging based on a sound understanding of breast anatomy (including normal variants and artefacts), physiology and pathology
- Formulate a clinically useful written report targeted appropriately to the referrer, providing where appropriate a refined differential diagnosis and/or conclusion, and demonstrate clinical judgement by providing recommendations for further investigation and/or management
- Demonstrate insight into diagnostic certainty and clearly communicate this within written and verbal reports
- Communicate pertinent clinical and imaging findings in a time-appropriate manner and using appropriate multidisciplinary terminology including established 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

Suggested evidence

- Mini-IPX
- CbD
- DOPS
- MDTA
- MSF
- Logbook of anonymised reports
- Evidence of screening mammography outcomes, including cancer detection rates, missed cancers from eg KC62 annual returns data or Breast Screening Information System (BSIS)
- Reflection on single reader detected or missed cancers
- Evidence of participation in unit review of interval cancers and false negative assessments
- 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

02

CiP 8

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

02

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, needle aspirations and lesion localisations
- 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

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

02

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 optimise 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

02

CiP 11

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

Expansion

Breast clinicians review and scrutinise imaging and reports for MDT meetings and present 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 to the MDT and include examination findings and/or risk factors for breast disease.

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 from triple assessment
- 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
- Reflections

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

02

CiP 12

Understand the prognostic and biological factors that influence oncological treatments for patients with early and advanced breast cancer.

Expansion

Working within the MDT, breast clinicians must understand the oncological treatment options available and explain to patients and colleagues the prognostic and biological factors that influence these options.

Descriptors

- Explain clinical and radiological findings, the rationale behind treatment options and their risks, thereby facilitating informed patient choice
- Understand and be able to counsel about the short- and long-term effects of adjuvant treatments including endocrine therapy, chemotherapy and radiotherapy
- Use appropriate preventative strategies when required
- Maintain knowledge of local and national guidelines, alongside current peer- reviewed literature to ensure recommendations about treatment regimes are evidence-based, clinically relevant and safe
- Within the scope of local practice, participate 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

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CiP 13

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

Expansion

Breast clinicians should provide breast cancer risk assessment and suggest strategies such as lifestyle advice to modify risk. They should understand the screening and risk reducing options available to women at increased risk of breast malignancy.

Descriptors

- Have knowledge of current NICE guidelines for Familial Breast Cancer
- Ability to draw and interpret a family pedigree
- Know how to use recommended software programmes to analyse risk eg CanRIsk and then to stratify risk accordingly
- Explain lifestyle risks and strategies to modify risk
- Recognise women at increased risk of breast cancer who may be eligible for screening and/or genetic testing
- Organise moderate and high-risk screening in secondary care, and the referral of women at very high risk (VHR) to the NHSBSP
- 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
- Explain the benefits and limitations of genetic testing to patients and refer eligible high-risk patients to a tertiary care genetics clinic via local pathways
- 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 VHR breast screening programme and NICE guidance
- Maintain knowledge of hereditary breast cancer: Highly penetrant and moderate risk gene mutations and cumulative effect of SNPs
- 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 chemoprevention and provide patients at increased risk with the information needed to make an informed decision about taking medication to reduce the risk of breast cancer
- Understand the indications for, and implications of, risk reducing mastectomy and oophorectomy 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 in the breast cancer pathway. Have knowledge of the eligibility criteria for gene panel testing, including the R208

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
- Certificates of completion of NBIA and Cancer Genetics modules

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CiP 13

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 screening patients. They communicate findings and relevant clinical information to 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
- Be proficient in history taking and clinical examination of the breast contributing to the 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 and offer an opinion
- About this in the MDT
- Understand the indications for and limitations of fine needle cytology testing
- 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

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CiP 14

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

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

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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 and/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 learners 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 including:
   - 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
   - Medication and hormonal therapies
3. Develop knowledge of the conditions associated with higher than population risk for breast cancer and consider strategies for those women as follows:
   - Risk modification strategies
   - Breast screening
   - Additional or alternative breast imaging
   - Chemoprevention
   - Genetic counselling and testing
   - Risk reducing mastectomy
   - Gynaecological surgery and fertility management
4. Understand the principles of surgical and oncological treatments to be used for early, locally advanced, and advanced 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.

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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/advanced Benign breast lesions Indeterminate and high risk associated lesions Axillary node conditions Implant rupture Complications of reconstruction Male breast conditions Latrogenic 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/mutations in genes
Cancer risk and genetics	Population or Low risk women Moderate/high or very high risk women Potential gene mutation carrier families Gene mutation carriers Previous mantle radiotherapy or whole body irradiation Women with breast cancer who may meet criteria for mainstreaming R208 panel testing	BRCA1/BRCA2 ATM, CHEK2, PALB2 PTEN Cpwdens TP53 Li-Frameni CDH1 STK11, BARD1 RAD51C/ RAD51D Peutz Jegher 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	Early breast cancer Locally advanced breast cancer Locally recurrent breast cancer Regional recurrent breast cancer Advanced breast cancer Late effects of radiotherapy

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2.4 Practical procedures

The following list details procedures that all learners are expected to have evidenced experience of. It is expected that learners 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
Breast tomosynthesis
Have a working knowledge of the following:
Magnetic resonance imaging
Contrast-enhanced 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

03 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 standards set out pertain to breast clinicians.

Training will take place in breast units offering screening and symptomatic services with additional support from other breast MDT members such as genetics and oncology. For the purposes of educational supervision, learners 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 depend on learners 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 that unnecessary duplication and educationally unrewarding experiences are avoided.

The curriculum will be delivered through a variety of learning experiences and will allow learners 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 basis of imaging [physics] examination) to experiential learning 'on the job'. The proportion of time allocated to different learning methods may vary depending on the element of training (eg imaging, clinical, risk assessment and management). The clinical timetable/job plan should be constructed to enable learners to experience the full range of educational and training opportunities available and meet the annual indicative 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 learner will learn.

3.1 Work-based experiental learning

The content of work-based experiential learning is decided by the local training team. This should include active participation in:

- 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 learner undertaking an increasing independence and ability to deal with complex cases

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- Risk Assessment (Family history) 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
- 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 learner undertaking an increasing number of radiological tasks
- Oncology sessions: In order to understand this element of the curriculum and input this knowledge to the MDT and clinical scenarios, supernumerary/observational 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 learner 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 learners (eg 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

Learners 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 host sites for this programme have agreed to support credential learners in accessing and attending the following courses and meetings:

Essential (all learners are required to attend)

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

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Desirable (all learners are encouraged to attend within their local contractual leave agreement):

- British Society of Breast Radiology annual scientific meeting
- Symposium Mammographicum (held in conjunction with the Association of Breast Clinicians)
- Risk Assessment or cancer risk course
- Association of Breast Surgery conference or study days
- Team skills, leadership or management course
- Good Clinical Practice for research
- Courses and study days on breast disease diagnosis and treatment
- Any other curriculum enhancing meeting, study day or course (eg a human factors training).

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: Learners 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 learners to learn with their peers. Local postgraduate teaching opportunities allow learners of varied levels of experience to come together for small group sessions. Examination preparation encourages the formation of self-help groups and learning sets. Additional opportunity for peer directed learning will be convened through the National Breast Imaging Academy and the Association of Breast Clinicians
- 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 learner having a radiological teacher for each breast imaging modality for work-based experiential teaching
  - Each learner having a clinical teacher for each non-radiological component of training, eg clinical and risk assessment
  - Structured teaching sessions by clinical supervisors, local training programmes or other postgraduate opportunities.

04 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. The programme of assessment aims to:

- Enhance learning by providing formative assessment, enabling learners 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 learners and motivating them to ensure they receive suitable training and experience
- Ensure that learners possess the essential underlying knowledge required for practice as a breast clinician
- Assess learners' actual performance in the workplace
- Demonstrate learners have acquired the GPCs and meet the requirements of GMP
- Provide robust, summative evidence that learners 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 learners who should be advised to consider changes of career direction/may benefit from careers counselling
- Recognise and acknowledge the potential for excellence and where learners are performing over and above expectations for their stage of training.

Accountable, professional judgement is central to ensuring that learners 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 different individual methods of assessment, covering both summative and formative assessment. Assessment will take place throughout the credential programme allowing learners to continually gather evidence, and to provide the formative feedback essential to improving clinical practice. Continuous review and assessment is a fundamental part of training. Credential learners are expected to demonstrate improvement and progression during each stage of training. It is important that learners 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 (eg through the blueprinting of assessment system to the CiPs).

A range of assessments, based on the judgement of many assessors on multiple occasions, are required. Assessments provide the evidence necessary 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

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judgement of a learner's performance supported by workplace-based assessments. Such an approach will prevent any individual having undue influence regarding a learner's progression.

Credential learners 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 learners 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 learner'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 learner's own self-assessment. Assessment of the CiPs, or aspects of the CiPs, should take place throughout training and include formative feedback to the learner 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 learners to take on the 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	Novice	Requires support and guidance throughout
2	Developing	working towards competency, with some support and guidance needed
3	Capable	possesses adequate skills to act independently and seeks support and guidance if required
4	Expert	highly skilled and able to lead and support others

Table 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 supervisor is physically present and provides direct supervision
3	Entrusted to act with indirect/minimal supervision	The supervisor is not present in the room but is present within the clinic. They are immediately available to provide advice and can attend physically if required to provide direct supervision
4	Entrusted to act unsupervised	The learner is working independently

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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)	4	4	4	Award of credential
2. Successfully function within the health service and healthcare systems in the UK	2	3	4	
3. Engage in reflection, clinical governance and quality improvement processes to ensure good practice	2	3	4	
4. Engage in evidence-based practice and safeguard data, including imaging data	3	3	4	
5. Act as a clinical teacher and supervisor	2	3	4	
6. Show proficiency in working well within a multi-disciplinary team, communicate effectively with colleagues and demonstrate the skills required to lead a team	3	3	4	

Table 11: Progression grid for specialty-specific CiPs

Generic 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. Working within and on behalf of the MDT, explain to patients the broader principles of oncological treatments for 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

In the same way that the CiPs are assessed, the learner's ability in imaging investigations, key procedures, clinical skills and family history evaluation will be assessed by reviewing a range of key skills and evidence of progress to make an overall judgement about a learner'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 Educational Supervisor and take account of workplace-based assessments, supervisors' reports, summative assessment and the learner's

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own self-assessment. Assessment of skill in these areas should take place on a regular basis throughout training and include formative feedback to the learner on their performance.

The same scale (level 1-4) that is used to assess the specialty-specific CiPs can be applied to the assessment of these other areas of learning. This reflects the need for supervisors to make entrustment decisions about the ability of learners 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, clinical skills and family history assessment 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	
Ultrasound-guided localization	1	2	4	
Stereotactic-guided intervention	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 learners 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 learner 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, learners will be given access to the RCR's e-portfolio. It is a record of a learner's development and progress towards achieving the CiPs. All supervisor meetings, personal development plans and WPBAs should be recorded in the e-portfolio. Learners are encouraged to reflect on their learning experiences and to record these in the e-portfolio.

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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 learner has met all the generic and specialty-specific CiPs.

It is the learner's responsibility to ensure the e-portfolio is kept up to date, arrange assessments and ensure they are recorded, prepare drafts of supervisor 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 supervisor reviews. They are also expected to update the learner's record of progress through the credential, write end-of-year reviews and supervisor's reports.

Supervisors and annual review panels may use the e-portfolio to monitor the progress of learners 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 learners must pass the Scientific Basis of Imaging (Physics) module of the RCR's First FRCR Examination. This examination tests knowledge through multiple-choice questions (MCQ) and is a key indicator of progress.

Learners 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 learners 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 learner'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 learners 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 learner 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 learners may/will undertake many more, as the WPBAs are the vehicles by which the learner will guarantee one-to-one teaching and ensure appropriate curriculum coverage during their clinical attachments.

LTFT learners will be expected to undertake the requirements for assessment on a pro-rata basis and to spread the balance of workplace-based assessments evenly, as set out in the Gold Guide, and panel reviews must not exceed expectations beyond this pro-rata basis as a basis for decision making. However, LTFT learners are also encouraged to undertake more than the minimum number of WPBAs (and at least the same minimum number of WPBAs as full-time learners) in each calendar year on the basis that the numbers are low and WPBAs provide a useful learning opportunity.

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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. Learners should agree the timing, problem and assessor, although assessors may also carry out unscheduled assessments. Learners should receive immediate feedback to aid learning.

Learners 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 learner in undertaking a procedure, against a structured checklist. The learner receives immediate feedback to identify strengths and areas for development.

Learners 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. DOPS may be used to inform decisions about when a learner can be regarded as competent to perform a procedure independently.

Case-based Discussion (CbD)

The CbD assesses the performance of a learner 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 learners. 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.

Learners 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.

Ultrasound Case Study

The Ultrasound (US) case study assesses the performance of a learner in their management of an US case and provides feedback 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, US cases by learners. Feedback for the US case study should cover the learner's medical record keeping, clinical assessment, investigations and referrals, management plans, future planning and follow up, and their overall clinical judgement. It should include discussion of the learner's reflection and self-assessment and identify the learner's strengths and areas for development in these categories. An action plan for further development and review of this should be agreed. Learners should complete a minimum of 10 (typical findings) case studies in their second year of training and a minimum of 15 (typical and atypical findings) in their third year. These should be spaced out appropriately.

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 learner receives immediate feedback to aid learning. The mini-CEX can be used at any time and in any setting when there is a learner and patient interaction, and an assessor is available.

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Learners 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 learner, derived from a number of colleagues. For each assessment, the learner should nominate 15 raters. 'Raters' are individuals with whom the learner works, including supervising consultants, breast clinicians, doctors in training more senior than the learner 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 learner will not see the individual responses by raters. Feedback is given to the learner 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 learner's competence in completing an audit or quality improvement project. The assessment can be based on review of audit or quality improvement documentation or presentation at a meeting. If possible, the learner should be assessed on the same audit or quality improvement project by more than one assessor.

All learners are expected to complete an audit or quality improvement project for each year within the programme. Learners should show how they have instigated, collated and presented a piece of work. They should, reflect on the impact of the work completed, including any changes in clinical management.

Multidisciplinary Team Assessment (MDTA)

The MDT Assessment Tool is designed to provide feedback on a learner's ability to contribute effectively to multidisciplinary team working and to assume a leadership role in multidisciplinary meetings.

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 learners on their competence at teaching. It evaluates the competence of a learner 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 learner, which has been observed by the assessor. The process should be learner-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.

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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. PERFORMS provides a valuable opportunity for reflection and learning.

Logbooks

Many elements of training require learners to use logbooks to create evidence of achievement and to aid the learning journey. Templates for different elements of training such as ultrasound and family history, will be available to learners in the e-portfolio.

All data within logbooks should be anonymised.

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. Learners may set any reflections recorded in the e-portfolio to private so that they can only be viewed by the learner 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 Structured Report (ESSR)

It is a mandatory requirement of the educational supervisor to submit the ESSR to the e-portfolio ahead of the panel review. A satisfactory panel review cannot be achieved without an ESSR.

The educational supervisor draws together the results of a learner's educational activities to give an overview of their progress in a formal ESSR to inform the learner's annual panel review of progress. The overall judgment of a learner will include a triangulated view of the doctor's performance, which will include their participation in educational activities, supervisor meetings, the assessment process and recording of this in the e-portfolio. The ESSR 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 learners will undertake more, as the WPBAs are the vehicles by which the learner 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	Year2	Year3
Mini-IPX	4	6	6
DOPS	4	6	6
CbD	6	6	4
Mini-CEX	6	6	4
MSF	1	1	1

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Minimum number of workplace based assessments

	Year 1	Year2	Year3
QIPAT [1]	1	1	1
MDTA	0	2	2
TO	0	0	2
Minimum number of imaging investigations and procedures			
Mammography [2]		2500	5000
Ultrasound [3]	250 supervised	500 supervised 10 case studies (typical findings)	500 independent 15 case studies (typical and atypical findings)
Interventional procedures (includes all those listed in Table 4)		50 supervised	50 independent
Other requirements and milestones			
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 learner 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 learner 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 learner 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 12 .

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

4.6 Decisions on progress (panel review)

Individual progress will be monitored through regular panel review. This process will be used to integrate and systematically review evidence about a learner'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.

Panel review will be conducted at least annually, although more frequent review may be recommended according to learner need. Learners are not expected to attend panel reviews. The evidence to be reviewed by the panel, prior to the formal panel review, should be collected in the learner's e-portfolio. We strongly recommend that learners have an informal e-portfolio review with their educational supervisor prior to the panel review. These provide opportunities for early detection of learners who are failing to gather the required evidence. The number of supervisors meetings required are detailed in pages 47 and 48 (section 5.3 Supervisor meetings).

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The requirements for a progression 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 learners, 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.

Progress into the next year of training is dependent on meeting curriculum requirements for the year of training being assessed. Where full curriculum requirements have not been met, there will be one of two outcomes:

- Conditional progress into the next stage of training: The review panel will make specific recommendations to the learner and their educational supervisor who should then work together to formulate an action plan to support development of missing capabilities. The action plan should be shared with the review panel and progress will be assessed as appropriate within the next year of training.
- Directed training without progression: the panel may judge that an additional period of training is required to allow the learner to develop the required capabilities. The learner will not progress to the next year of training. Specific recommendations will be made to the learner 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 assessed as appropriate within the next stage of training. The maximum additional training time is 12 months whole time equivalent.

4.7 Local appraisal

The review panel will only be assessing the learner's progress through training. It is therefore essential that learners 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 will be undertaken by a second panel consisting of members who were not part of the original panel review.

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.

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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				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				
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	
12. Working within and on behalf of the MDT, explain to patients the broader principles of oncological treatments for early and advanced 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	

05 Supervision and feedback

This section of the curriculum describes how learners 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 learner. Learner 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 learners are undergoing workplace-based assessments, in the workplace setting, and through discussions with supervisors, trainers, assessors and those within the team. Learners 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 learner and case mix undertaken. As training progresses the learner should have the opportunity for increasing autonomy, consistent with safe and effective care for the patient.

Organisations must make sure that each learner breast clinician has access to four concurrent supervisors;

- An educational supervisor to oversee the learner's overall progress
- A radiology clinical supervisor to oversee their training in imaging and related responsibilities
- A clinical skills clinical supervisor to oversee their training in surgical clinics and related responsibilities
- A risk assessment clinical supervisor to oversee their training in family history training and related responsibilities.

Depending on local arrangements, a clinical supervisor may also act an educational supervisor. Learners should meet with their supervisors upon commencement of their training. It is expected that evidence of this be uploaded within the first six weeks. Learners typically retain the same supervisors for the duration of their training.

Educational and clinical supervisors are expected to be formally recognised by the GMC to carry out their roles. Non-GMC accredited practitioners may also act as clinical supervisors (only for the family history element), provided it is within their area of expertise. It is essential that training in assessment is provided for trainers and learners 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.

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Opportunities for feedback to learners 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 learners. Supervisors are encouraged to offer advice, a mentor system and a counselling service during the year. Learners are encouraged to utilise the ABC for additional mentorship. The oversight board provides guidance to learners and trainers throughout the programme. The following milestones should be acknowledged:

- The learner should meet with their educational supervisor at the start of their appointment, and again after three months
- The learner'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 learner, and the educational supervisor should be in place. There should be support available to learners 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 learner doctors
- Learners 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 learner's educational supervisor and the designated clinical governance lead. In keeping with the principles of Good Medical Practice, learners 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 across all elements of training. The educational supervisor regularly meets with the learner breast clinician 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 learner's progression at the end of each element of training.

The educational supervisor should meet regularly with the learner to review induction, feedback on performance, outcomes of assessments, and career advice. The educational supervisor must complete the following three items annually in the learner's e-portfolio:

1. A start of year review meeting report
2. A mid-year review meeting report
3. An end of year educational supervisor's structured report (ESSR). The ESSR plays a pivotal role and should be completed prior to the annual panel review.

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 learner's educational agreement

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- Meet with the learner at least every four months to agree how their learning objectives will be met and confirm how formative feedback and summative judgements will be made
- Help learners 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 learner's e-portfolio
- Conduct reviews and give supportive feedback on the results of MSF
- Complete the educational supervisors structured report (ESSR) at the end of each of year of training, prior to the review panel meeting as detailed under sections 4.4 and 4.5
- Ensure the learner, as a SAS doctor, understands that enrolment with Trust appraisal processes is required for revalidation purposes
- Support the learner through any difficulty
- Tell the clinical director/lead, head of service or medical director and those responsible for training, of serious weaknesses in their learner's performance that have not been dealt with
- Tell the learner 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 relevant supervisors, with the learner's knowledge.

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

5.2.2 Clinical supervisors

Learners typically undertake training in all three elements simultaneously. Each learner should have three concurrent clinical supervisors including:

- A radiology clinical supervisor to oversee their training in imaging and related responsibilities
- A clinical skills clinical supervisor to oversee their training in surgical clinics and related responsibilities
- A risk assessment clinical supervisor to oversee their training in family history training and related responsibilities.

A clinical supervisor will usually be the consultant or doctor to whom a learner is directly responsible for their clinical work and there will be frequent contact between them. Clinical supervisors will be appropriately trained to lead on reviewing the learner's practice throughout an element of training and will provide constructive feedback, as well as contributing to the learners e-portfolio. Each clinical supervisor must complete the following three items per training year in the learner's e-portfolio (totalling nine clinical supervisors' reports annually):

1. A start of year review meeting report
2. A mid-year review meeting report
3. An end-of-year clinical supervisor's report.

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.

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The clinical supervisor is responsible for:

- Ensuring that their learners 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
- Meeting with the learner at the beginning of each element of training to discuss what is expected, learning opportunities available and the learner's learning needs
- Ensuring that the clinical experience available to the learner is appropriate and properly supervised
- Ensuring that all training opportunities meet the requirements of equality and diversity legislation
- Monitoring, supporting and assessing the learner's day-to-day clinical and professional work
- Providing regular feedback on the learner's performance
- Undertaking and facilitating WPBA
- Allowing the learner to give feedback on the experience, quality of training and supervision provided
- Discussing serious concerns with the educational supervisor about a learner's performance, health or conduct
- Meet with the learner 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 Learners

Learners should make the safety of patients their first priority. Furthermore, learners should not be practising in clinical scenarios which are beyond their experiences and competences without supervision. Learners should actively devise individual learning goals in discussion with their trainers and should subsequently identify the appropriate opportunities to achieve said learning goals. Learners would need to plan their WPBAs accordingly to enable their WPBAs to collectively provide a picture of their development during a training period.

Learners 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 learners to seek feedback following learning opportunities and WPBAs. Learners should self-reflect and self-evaluate regularly with the aid of feedback. Furthermore, learners should formulate action plans with further learning goals in discussion with their trainers.

5.3 Supervisor meetings

A formal process of regular meetings and reviews underpin 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 learners. Arranging a meeting or local review is primarily the responsibility of the learner. All such meetings should be recorded in the e-portfolio.

Educational supervisor: induction meeting

When learners start in a new training year, they must arrange a meeting with their educational supervisor. The induction meeting 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 learner and overarching educational aims for the year ahead should be agreed within a personal development plan (PDP).

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Clinical supervisor: induction meeting

Learners should meet with each of their three clinical supervisors at the start of each year of training. The meeting discussion should cover the educational objectives for that element of training and be used to inform the PDP. A report for each meeting should be recorded in the learners e-portfolio.

Educational supervisor: mid-year meeting

A mid-year meeting with the educational supervisor is an opportunity to look at the learner'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.

Clinical supervisor: mid-year meeting

Learners should complete a mid-year meeting with each of their three clinical supervisors during each year of training. They give the learner and clinical supervisor the opportunity to look at the achievements of the learner and highlight areas for future development, in terms of the PDP and curriculum CiPs.

Educational supervisor: end of year meeting

The results of educational activities for an academic year will be drawn together and included in a formal educational supervisor's structured report. This will cover the overall performance of the learner in each element of training. The overall judgment of a learner, 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, supervisor meetings, the assessment process and recording of this in the e-portfolio.

Clinical supervisor: end of year meeting

Towards the end of each year of training, the learner and each clinical supervisor will meet again. 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 meeting form confirming satisfactory performance and progress. It should detail any outstanding issues that still need to be addressed.

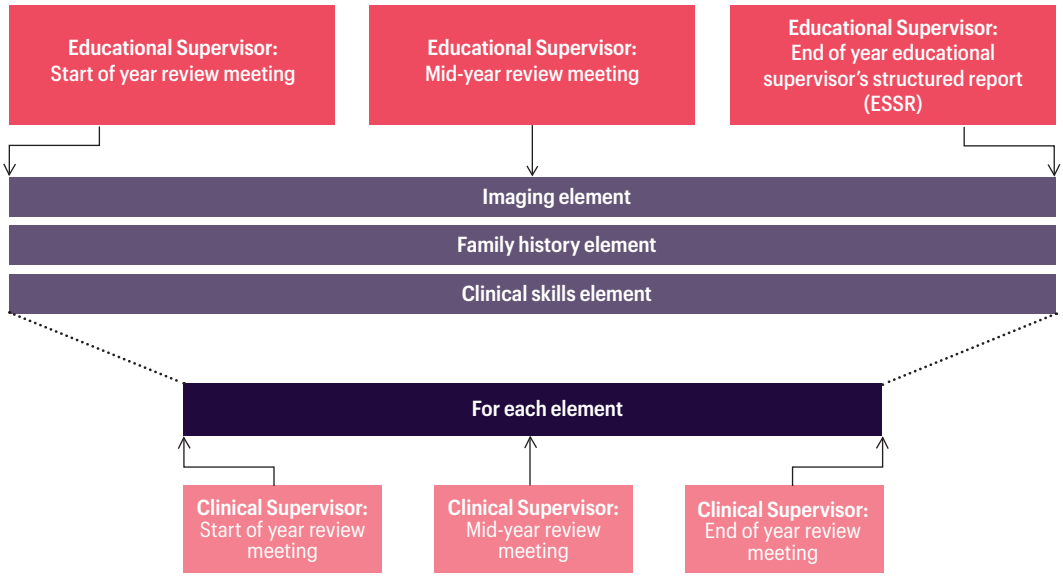

Figure 2: Meetings per credential training year

06 Appendices

Appendix 1: 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 learners 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 host site is expected to ensure that breast clinician learners 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, NHSE will seek evidence of how each host 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, NBIA, NHSE, 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 learners 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 learners 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 learners 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.

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Appendix 2: Credential Acronym list

Regulatory Bodies and Organisations

- ABC – Association of Breast Clinicians
- AoMRC – Academy of Medical Royal Colleges
- GMC – General Medical Council
- NBIA – National Breast Imaging Academy
- NHSBSP – National Health Service Breast Screening Programme
- RCR – Royal College of Radiologists

Curriculum and Competency Frameworks

- CiP – Capabilities in Practice
- CCT – Certificate of Completion of Training
- GMP – Good Medical Practice
- GPC – Generic Professional Capabilities

Assessment Tools

- CbD – Case-based Discussion
- CEX – Clinical Evaluation Exercise (Mini-CEX)
- DOPS – Direct Observation of Procedures
- Mini-IPX – Mini-Imaging Interpretation Exercise
- MDTA – Multidisciplinary Team Assessment
- MSF – Multi-Source Feedback
- PERFORMS – Personal Performance in Mammographic Screening
- QIPAT – Quality Improvement Project and Audit Assessment Tool
- TO – Teaching Observation

Examinations and Qualifications

- FRCR – Fellowship of the Royal College of Radiologists
- MCQ – Multiple-choice question (Physics exam format)

Training Tools and Platforms

- PDP – Personal development plan
- REALMS – Radiology Events and Learning Meetings
- WPBA – Workplace-Based Assessment

Clinical and Imaging Terms

- IR(ME)R – Ionising Radiation (Medical Exposure) Regulations
- KC62 – Annual return of screening data used to report cancer detection metrics
- MDT – Multidisciplinary Team
- US – Ultrasound

Training Grade

- FY1 and FY2 Foundation Year 1 and 2

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Appendix 3: Panel review information and checklist

Starting training

- Ensure your named educational and clinical supervisors are assigned on RCR's e-portfolio.
- Assessments should be completed and uploaded onto the e-portfolio on a regular basis and throughout each training year.

End of year reviews

- Panel reviews are generally held in the Spring (May/June) and Autumn (November).
- Learners should make sure all their training evidence is uploaded two weeks prior to the panel reviews.
- The Educational Supervisor Structure Report (ESSR) is pivotal for a satisfactory panel review.

Forms to complete

- Educational Supervisor's induction meeting (For year one only)
- Clinical Supervisor's induction meeting – to be completed with each of their three clinical supervisors (For year one only)
- Educational Supervisor's mid-year meeting
- Clinical Supervisor's mid-year meeting – to be completed with each of their three clinical supervisors
- Educational Supervisor's Structured Report
- Clinical Supervisor's end of year meeting – to be completed with each of their three clinical supervisors
- Workplace based assessments and logbooks (pro rata if training LTFT). For the number of assessments required per training year, please refer to page 41, table 14. It should be noted that these are minimum numbers only and to achieve the capabilities in practice (CiPs) to the required standard, further assessments may be required.

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