GUIDANCE TO CANDIDATES AND TRAINERS

for

ADVANCED SPECIALIST DIPLOMA

in

SPECIMEN DISSECTION

BREAST PATHOLOGY

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Please note the following:

1. On a case-by-case basis, the quality assurance of the dissection of tissue specimens performed by biomedical scientists, who hold the Advanced Specialist Diploma in Specimen Dissection Breast Pathology, remains the responsibility of the reporting consultant pathologist

2. This candidate guidance must be read in conjunction with the other supporting documents pertinent to this diploma:
   - Principles of Good Practice for Biomedical Scientist involvement in Histopathological Dissection
   - Training Logbook for the IBMS Advanced Specialist Diploma in Breast Pathology Specimen Dissection

ADVANCED SPECIALIST DIPLOMA IN SPECIMEN DISSECTION
BREAST PATHOLOGY

INTRODUCTION

The Institute's Advanced Specialist Diploma in Specimen Dissection - Breast Pathology provides evidence of the attainment of both the necessary scientific and clinical knowledge underpinning the practice of breast pathology specimen dissection, with the practical competence required to accurately dissect all breast specimens whether benign or malignant. Possession of this diploma will enable you to apply for an appropriate post.

AIMS

1. To develop the professional knowledge and skills of candidates to a high level of professional practice

2. To enable successful candidates to undertake a role that involves the description, dissection and block sampling of all breast pathology specimens

3. To enable successful candidates to offer expert professional advice on breast pathology specimen dissection

4. To enable successful candidates to participate in the training of biomedical scientists and specialist trainee medical staff in breast pathology specimen dissection

LEARNING OUTCOMES

Individuals awarded the Advanced Specialist Diploma (ASD) in Specimen Dissection - Breast Pathology will be able to:

1. Demonstrate expert professional skills and advanced knowledge beyond those required of biomedical scientists in histopathology working at the level of the Diploma in Expert Practice in Histological Dissection

2. Demonstrate full understanding of the physiological and pathological processes associated with the breast

3. Accurately describe the macroscopic appearances of breast pathology specimens using appropriate terminology

4. Know and understand the role of mammography and other imaging methods in relation to the assessment of breast disease

5. Able to relate clinical/radiological/pathological correlations to complex breast pathology specimen dissection

6. Use highly specialised practical skills to dissect all breast specimens to enable accurate histological reporting

7. Produce high quality macroscopic and microscopic images of breast pathology specimens to enable correlation between the gross specimen, radiological findings and the final diagnosis

8. Demonstrate the ability to operate autonomously within limits of their own competence, seeking advice from a consultant pathologist when needed

9. Engage in critical dialogue and work collaboratively with other healthcare professionals to provide a high-quality service

10. Continue to develop their own area of practice by keeping their professional knowledge and skills up to date

ELIGIBILITY CRITERIA

The histological dissection of complex surgical lower gastrointestinal pathology specimens constitutes an expert role for biomedical scientists with the requirement to undertake additional duties and responsibilities as part of their professional practice. The minimum requirements for entry to a training programme for the Advanced Specialist Diploma in Specimen Dissection - Breast Pathology are:

- registration with the HCPC as a biomedical scientist

- Membership (MIBMS) or Fellowship (FIBMS) of the Institute of Biomedical Science

- hold the Institute Diploma of Expert Practice in Histological Dissection that must include success in the breast module

- have at least seven years whole time equivalent post-registration experience in histology

CONSULTANT PATHOLOGIST SUPERVISOR

A biomedical scientist undertaking training for the Advanced Specialist Diploma in Specimen Dissection - Breast Pathology requires a named consultant pathologist supervisor. This is essential in ensuring that the biomedical scientist in training has the necessary support and exposure to material and training to enable the acquisition of these advanced skills, knowledge and, ultimately to apply them in their professional practice.

The named consultant pathologist supervisor must be registered on the specialist register with the GMC, be currently reporting breast pathology, meet the minimum RCPath CPD requirements and participate in the NHS BSP EQA Scheme.
The consultant pathologist supervisor must:

1. Guide and direct the training process

2. Regularly review progress during the training period. This must include work-based assessments and evidence of case reviews

3. Set agreed learning plans with biomedical scientist

4. Be able to arrange for the biomedical scientist to obtain training in all the required areas

5. Inspect the portfolio prior to submission to the Institute to ensure it meets the requirements specified in the guidance to candidates

6. Sign the declaration in the logbook to confirm that the candidate has undergone training, and in his/her opinion is competent and ready to sit the examination

The consultant pathologist supervisor and the biomedical scientist in training must comply with all relevant IBMS and RCPath guidelines and standards.

LABORATORY REQUIREMENTS

The laboratory where the training is undertaken should be a United Kingdom Accreditation Service (UKAS) registered laboratory. The laboratory must also have appropriate Institute training approval. The laboratory manager must support the training of biomedical scientists in complex specimen dissection.

DELIVERY OF TRAINING

Training must be delivered in accordance with the IBMS/RCPath training logbook for the Advanced Specialist Diploma in Specimen Dissection - Breast Pathology. Completion of training is evidenced by submission of the signed logbook and compilation of a portfolio that contains evidence of regular assessments of competence in dissecting appropriate breast pathology specimens by a named consultant pathologist supervisor. If the repertoire of the training laboratory is not comprehensive enough to allow exposure to the widest spectrum of breast pathology, it is considered good practice for biomedical scientists to visit other laboratories to share expertise and to learn different techniques. This may require the delivery of training by individuals other than the named consultant pathologist supervisor, who must also conduct appropriate assessments of competence as described below.

The sub-speciality training component of this training programme is best served by participation in current specialist breast pathology and related activities, in close association with a consultant specialising in this area. The overall aim of the training programme is to develop advanced knowledge, attitudes and dissection skills in breast pathology. Training of biomedical scientists in dissection of complex breast specimens must not detract from the training of specialist trainee medical staff in these areas.

ON-GOING ASSESSMENT OF COMPETENCE

In-house assessments of competence must be an interactive continuous process between the supervising pathologist and the biomedical scientist which must include formal observation of practical skills, case-based discussion or equivalent processes. Regular reviews of progress are essential for the setting of agreed learning plans and as part of an on-going personal development plan.

PORTFOLIO OF EVIDENCE

The compilation of a portfolio is a means of clearly organising and recording achievements and should demonstrate a range of competencies, skills, experience and an overall reflective approach to learning. This must also include a record of any formal assessments carried out during the training period.

The portfolio must be submitted to the Institute, along with the training logbook, as part of the evidence for completion of training in breast pathology specimen dissection prior to the examination. The portfolio must contain:

- four different case studies that reflect the case mix within breast pathology encountered by the biomedical scientist during the training period. The significance of histopathology within the context of the 'patient pathway' from initial clinical presentation through surgical operation to treatment should provide the framework for each case. Details about possible differential diagnoses should be included to show understanding of the clinical/pathological context of the cases. At least two of the cases must correlate patient and specimen radiology with gross and dissected appearances and with subsequent histological diagnosis

- a log of the case repertoire encountered during the full period of training and demonstrating at least two years of practice of complex specimen dissection of breast pathology from categories D & E, detailing the scope and number of specimens dissected and presented in module format. This should include evidence of adverse incidents and examples of 'best' practice

- a record of training programmes or courses attended

- evidence of regular case review with the supervising pathologist(s) that should demonstrate critical evaluation of the dissection of breast pathology specimens by the biomedical scientist. The case review will also show evidence of knowledge and understanding of the patient's diagnosis and the possible impact on their subsequent treatment and outcome. This should form part of the evidence for continuing audit of the biomedical scientist in training

- a record of multidisciplinary team meetings (MDT) attended and evidence of the candidate's involvement in these meetings

- details of any seconded experience

- formal on-going observation and assessment of the practical skills of the biomedical

scientist carried out by consultant pathologist supervisor(s) during training period.[1] This should be in the form of the inclusion the following work-based assessments (WBAs):

- six Direct Observation of Practical Skills (DOPS)
- three Evaluations of Clinical Events (ECE's), and
- three Case Based Discussions (CBD's). [2]

- one 360-degree Multisource Feedback (MSF) should take place, reflecting on the two years of evidence collection before portfolio submission.
- at least three audits (one of personal practice, one of clinical practice and one of service practice) against local or nationally published performance targets.
- reflection on the whole learning process

Evidence in the portfolio should be accompanied by a written commentary indicating how and why particular evidence was included and its relationship to the training objectives. It may include digital microscopic images, flow diagrams or handouts from power-point presentations to accompany the written work.

CASE STUDIES

The four different case studies reports will be appropriate to the complexity of the specimen and be at least 1000 ± 10% words in length. They should be prepared using aspects of the following format to bring a whole case history together supplemented by comments on options available to clinicians as the case progresses. Each case study must be your own work and also include:

- patient clinical history
- macroscopic description of gross specimen
- correlation of any clinical/radiological/ findings with the pathology specimen
- details of dissection procedure
- block selection – number and area sampled

[1] This version of the Guidance has removed the requirement for there to be observations carried out by an external observer. This was removed because of the practical difficulties of arranging such an observation.
[2] These forms are available on the Institute Website on the ASD page

- requirements for extra blocks (if applicable) in light of additional patient information
- correlation of the relevance of macroscopic description and block selection to final diagnosis and subsequent patient management
- details of possible differential diagnoses (if applicable) where they show a critical understanding of the clinical/pathological context
- the timeline from surgery/reception to the final MDT outcome
- knowledge and reasoned argument of sufficient depth and clarity
- adequate and appropriate references to key sources of information

The following section provides further guidance on the content of a case study:

PRE-ANALYSIS

Details of presenting symptoms and any additional relevant clinical history should be used to introduce the case. The clinical symptoms may be expanded upon and any additional laboratory tests, including previous biopsy or surgery should be critically discussed. Radiology or ultrasound results may also be involved at this stage. The surgical procedure selected and the subsequent removal of tissue for histological examination should be put into context with the patient's overall treatment plan, e.g. results may be discussed at a MDT meeting to include compliance with the appropriate cancer standards.

ANALYSIS

The way the specimen is handled when it arrives in the cellular pathology laboratory should be discussed, e.g. whether fresh or formalin fixed, to include accurate description and details of the dissection process, macroscopic description and blocks taken. Evaluation and impact of radiological findings and clinical history should be demonstrated. The main histological features should be discussed and details of the stains and antibodies used on the case should be explained to show evidence of slide review. Where a panel of markers has contributed to the final diagnosis this should be discussed, together with possible options for other specialised tests.

POST ANALYSIS

The outcomes for the patient should be discussed to include evidence of follow-up treatment, and the relationship of that treatment to the diagnosis. This should include a record of any MDT discussions and the outcomes.

COMPLETION OF TRAINING

Once the named consultant pathologist supervisor and the laboratory manager are satisfied that the training is complete, the candidate may contact the Institute for an examination application form. The candidate will be notified when the application has been accepted and will then be required to submit a completed portfolio by a specified date. Progression to the end point assessment for the Advanced Specialist Diploma in Specimen Dissection - Breast Pathology is dependent upon the satisfactory assessment of the portfolio.

Success in the examination will be recognised by the awarding of the Advanced Specialist Diploma in Specimen Dissection - Breast Pathology.

END POINT ASSESSMENT

1. Successful portfolio assessment
2. Written examination including case-based scenarios
3. *Viva voce* examination including case-based scenarios and defence of the portfolio

ASSESSMENT OF THE PORTFOLIO

Once submitted, the portfolio will be independently assessed by two members of the Conjoint Examination Board, using the following categories:

- case log
- case review
- case studies
- formative assessments
- audit
- tutorials and training sessions
- general overview of portfolio

There are a total of 29 standards across the above categories that must be met in order to achieve a pass and progress to the end point assessment.

Notes: All evidence submitted as part of the portfolio must conform to the General Data Protection Regulations (2016). All evidence that may identify an individual which is submitted as part of a portfolio must be made anonymous, but in such a way that allows identification to be re-established subsequently if appropriate. The use of a marker pen to blank out this information is often insufficient and its use is therefore discouraged and the use of correction fluid or tape is not permitted.

ASSESSMENT STANDARDS

The portfolios are assessed using the following standards:

Case Log

1. The log is clearly laid out and accessible

2. The log must reflect a variety of cases in order to assess candidates' scope of professional practice

3. The mix of cases is in accordance with the system being studied for

Case Review

4. There is evidence that regular case reviews have taken place

5. The reviews are clearly laid out and accessible

6. There is a clear indication of the purpose of case review and that this has been undertaken by the candidate and the consultant pathologist supervisor

7. It is clear from the evidence presented that the candidate has an understanding of the impact of laboratory tests on diagnosis, treatment and prognosis of patients

8. The reviews show clearly that points of interest have been used as a positive learning experience

9. Evidence of MDT discussion of cases dissected by the biomedical scientist in training together with the minutes and outcomes included. Attendance at MDTs must be regular enough to ensure appropriate discussions take place and during training will require the biomedical scientist to attend at least 10 MDT meetings per year, where the cases dissected by them are discussed

Case Studies

10. Studies are neat, well laid out and of appropriate length, including timeline from surgery to final MDT outcome

11. Details of clinical presentation, including correlation of any clinical and radiological findings performed are included in each study

12. Details of the dissection process including block selection – number and area sampled, and macroscopic description with relevant correlation to final diagnosis

13. Where appropriate, there is differential diagnosis and discussion of reasons

14. Details of appropriate ancillary tests, management, treatment and follow-up are presented in each case study

15. Illustrations or images when used, are relevant and of high quality

16. The case mix matches the requirements set out in the logbook

Formative Assessments

17. It is clear from the evidence presented that systematic and periodic review of the candidate's performance throughout the training period has been undertaken by the consultant pathologist supervisor

18. It is clear from the evidence that the consultant pathologist supervisor has observed the entire range of specimens

19. It is evident from the details presented how the candidate's practice has evolved over the course of the training period by the inclusion of incident logs and a minimum of 12 work-based assessments (six DOPs, three ECE's and three CBD's)

Audit

20. It is clear from the evidence presented that the candidate has gathered relevant data and understands the principles of personal, clinical and service audits

21. There is evidence of critical evaluation and implementation of audit outcomes where appropriate

Tutorials and Training Sessions

22. A record of training programmes, short courses, tutorials and in-house training sessions attended or delivered by the candidate has been included.

23. Examples are accompanied by evidence of reflection on the learning outcomes.

General Overview

24. The portfolio is neat and tidy

25. There is a useful and accurate index

26. Sections are easily found and correctly labelled

27. The portfolio is written in English prose with the correct use of grammar and punctuation

28. There is no evidence of plagiarism

29. Evidence presented is relevant, of good quality and there is an indication of reflection

Portfolios will be awarded a 'pass' or marked as 'refer' or 'fail'.

Pass

Candidates whose portfolio is marked as a pass will be notified of their eligibility to enter the examination. It is normal practice for candidates to enter the examination in the same year that their portfolio is judged to have passed but candidates may, on request, defer their first attempt at the examination until the following year.

Refer

On review the portfolio examiners may decide that a portfolio has not yet met the required standards but is close to doing so. These portfolios will be marked as a 'refer'. In these circumstances individuals will be notified by the Institute of the shortcomings and will be given a further four weeks to address these issues. The additional evidence must be submitted by the deadline stated by the Institute at which time it will be re-assessed. At this point the portfolio will be either be awarded a 'pass' or 'fail'.

If a candidate does not submit the additional evidence by the deadline stated by the Institute this will result in an automatic fail but these candidates will be able to re-submit in the following year.

Fail

Candidates whose examination portfolio is deemed to have significant deficiencies (three or more of the portfolio assessment indicator standards not being met) and therefore not to have met the requirements of the qualification the portfolio will be marked as a fail. These candidates will not be permitted at this stage to proceed to sit the examination.

Portfolios that contain any evidence that breaches data confidentiality will be marked as a fail

Resubmission of Portfolios

Candidates who wish to resubmit their portfolio for assessment will be required to address the deficiencies identified by the assessors and submit the portfolio the following year by the stated deadline, accompanied by the portfolio re-assessment fee. In addition, candidates who re-submit their portfolio must ensure that the evidence presented within the revised portfolio is up-to-date and reflects the training and experience gained in the period since the initial assessment of the portfolio. Candidates should ensure that they clearly identify the revised or additional information when they re-submit their portfolios.

After resubmission and reassessment any portfolios that are still deemed not to have met the requirements of the qualification will be again marked as a fail. These portfolios are not valid for a further re-submission and candidates must re-apply to undertake the qualification and must construct a new portfolio for assessment.

Written Examination

The proposed format of this paper is to cover scenarios encountered in the advanced dissection of breast pathology specimen dissection from any specimen categories and may also include questions on clinical governance, pathological processes or relevant topical matters.

This examination will last 90 minutes and its format will vary dependent on the questions asked. The candidate will be expected to answer all questions set.

Format of *viva voce*

The portfolio would be the framework for the *viva voce* examination, using the case studies and other evidence to base any associated questions upon. It is expected that the academic rigour of the *viva voce* would be that used when defence of a doctoral qualification is being undertaken and would last 45-60 minutes.

Marking Structure

All portfolios and examination papers are marked by two examiners, referring to a third, independent, examiner if appropriate. All marks are subject to moderation and ratification by the Institute's Examination Board.

Pass mark

Candidates will be required to achieve a minimum of 60% overall and a minimum of 50% in each of the written paper and oral assessment.

Administration Processes Relating to Qualification

Application Process

Application forms are available on the Institute's web site. The completed application together with the correct fee must be returned to the Institute. Fees can be paid for through the provision of a personal cheque, credit or debit card payment or by a purchase order from your Hospital Trust. For information about fees, please refer to the Institute website or contact the Head of Examinations using the contact details below. Once accepted, candidates will be sent a confirmation of candidacy and a reminder of the submission deadline for examination portfolios.

Deferrals and Withdrawals

Candidates who wish to defer entry to an examination must contact the Institute a minimum of six weeks prior to the date of the examination will be entitled to a full transfer of their fees. Any deferrals made after this deadline will only be entitled to a 50% fee transfer unless proven mitigating circumstances exist. A maximum of two deferrals is permitted.

Candidates wishing to withdraw from an examination at any time will not be entitled to any reimbursement of the examination fee unless proven mitigating circumstances exist.

Mitigating Circumstances

Any mitigating circumstances, which may affect examination performance or attendance, must be put in writing to the Institute, with the inclusion of any supporting evidence, e.g. doctor's certificate. Once written evidence is received the matter will be brought to the attention of the relevant examination board for consideration. Candidates who are unable to attend the examination for a reason deemed acceptable by the examination board may defer entry to the following year without financial penalty.

Enquiries

All enquiries relating to this Advanced Specialist Diploma must be addressed to:
Head of Examinations
Institute of Biomedical Science
12 Coldbath Square
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Tel: 020 7713 0214 ext 142
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REFERENCES

The training programme for biomedical scientists wishing to obtain the Advanced Specialist Diploma in Breast Pathology Specimen Dissection has been guided by recommendations made by the following reports, documents and guidelines:

- the final report from the Royal College of Pathologists and Institute of Biomedical Science Working Group on the implementation of the extended role of the biomedical scientists in specimen description, dissection and sampling (2004)

- Modernising Pathology Services. DH (2004)

- Institute of Biomedical Science and Royal College of Pathologists training logbook for the Advanced Specialist Diploma in Specimen Dissection - Breast Pathology (2019)

- Pathology reporting of breast disease in surgical excision specimens incorporating the dataset for histological reporting of breast cancer (high-res), June 2016 https://www.rcpath.org/resourceLibrary/g148-breastdataset-hires-jun16-pdf.html

- Guidelines for non-operative diagnostic procedures and reporting in breast cancer screening - June 2016 https://www.rcpath.org/resourceLibrary/g150-non-op-reporting-breast-cancer-screening-jun16-pdf.html

INDICATIVE READING LIST

Abrahams PH, Spratt JD, Loukas M, Van Schoor AN. *McMinn's and Abrahams' Clinical Atlas of Human Anatomy.* 8th ed. Elsevier; 2019.

Allen DC, Cameron RI. (Eds.) *Histopathology Specimens: Clinical, Pathological and Laboratory Aspects*. 3rd ed. Springer-Verlag London Ltd; 2017.

Brierley J, Gospodarowicz MK, Wittekind C. (Eds.) *TNM Classification of Malignant Tumours*. 8th ed. Wiley-Blackwell; 2016.

Dabbs D. *Breast Pathology.* 2nd ed. Elsevier; 2016.

Goldblum JR, Lamps LW, McKenny JK, Myers JL. *Rosai and Ackerman's Surgical Pathology*. 11th ed. Elsevier; 2017.

Hicks DG, Lester SC. *Diagnostic Pathology: Breast*. 2nd ed. Elsevier; 2016.

Hoda SA, Brogi E, Koerner FC, Rosen PP. *Rosen's Breast Pathology.* 4th ed. Lippincott Williams and Wilkins; 2014.

Orchard G, Nation B. (Eds.) *Histopathology (Fundamentals of Biomedical Science)* 2nd ed. OUP Oxford; 2017.

Shousha S. (Ed.) *Breast Pathology: Problematic Issues*. Springer International Publishing; 2017.

Survarna K, Layton C, Bancroft J. *Bancroft's Theory and Practice of Histological Techniques.* 8th ed. Elsevier; 2018.