



GUIDANCE TO CANDIDATES AND TRAINERS
for
DIPLOMA of EXPERT PRACTICE
in
MOHS HISTOLOGICAL PROCEDURES

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Institute of Biomedical Science
12 Coldbath Square
London
EC1R 5HL

Tel: 020 7713 0214 ext 142
Email: examinations@ibms.org

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Please note:

1. On a case-by-case basis, the quality assurance of the dissection and preparation of tissue specimens performed by biomedical scientists, who hold the Diploma of Expert Practice in Mohs Histological Procedures, remains the responsibility of the reporting consultant surgeon.
2. This candidate guidance must be read in conjunction with the other supporting documents pertinent to this diploma:
 - Training Logbook for the Institute Diploma of Expert Practice in Mohs Histological Procedures

DIPLOMA OF EXPERT PRACTICE in MOHS HISTOLOGICAL PROCEDURES

INTRODUCTION

The Institute’s Diploma of Expert Practice in Mohs Histological Procedures provides evidence of the attainment of both the necessary scientific and clinical knowledge and practical competence required within the modules studied. Possession of this diploma will evidence you have the knowledge and skills to undertake a role in a Mohs histology service.

The Institute’s professional qualification structure (below) indicates the position of a Diploma of Expert Practice



AIMS

1. To develop the professional knowledge and skills of a candidate beyond a Specialist Diploma to a higher level of professional practice
2. To enable successful candidates to undertake a role that involves the evaluation and appropriate tissue handling and processing of Mohs samples
3. To enable successful candidates to offer expert professional advice
4. To enable successful candidates to participate in the training of biomedical scientists and specialist trainee medical staff in Mohs histological procedures

LEARNING OUTCOMES

Individuals awarded the Diploma of Expert Practice in Mohs Histological Procedures will be able to:

1. Demonstrate expert professional skills and knowledge in a highly specialist area of practice beyond those required of biomedical scientists in histopathology working at the level of a Specialist Diploma
2. Demonstrate understanding of the physiological and pathological processes associated with skin
3. Accurately describe the macroscopic appearances of specimens using appropriate terminology
4. Use specialised practical skills to dissect specimens to enable accurate histological reporting
5. Demonstrate the ability to operate autonomously within limits of their own competence, seeking advice from a consultant pathologist when needed
6. Engage in critical dialogue and work collaboratively with other healthcare professionals to provide a high quality Mohs service
7. Continue to develop their own area of practice by keeping up-to-date their professional knowledge and skills

ELIGIBILITY CRITERIA

Mohs histology 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 Diploma of Expert Practice in Mohs Histological Procedures are:

- registration with the HCPC as a biomedical scientist
- Membership (MIBMS) or Fellowship (FIBMS) of the Institute of Biomedical Science
- have at least two-years whole time equivalent post-registration experience in histology
- have at least two years current practical experience in Mohs procedures

CONSULTANT SURGEON SUPERVISOR

A biomedical scientist considering undertaking training for the Diploma of Expert Practice in Mohs Histological Procedures requires a named consultant surgeon supervisor. This is essential in ensuring that a 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 surgeon must be registered on the specialist register with the GMC, currently assessing specimens from Mohs practices, meet the minimum British Society of Dermatological Surgery (BSDS) CPD requirements and participate in an appropriate EQA scheme.

The named surgeon must:

1. Guide and direct the training process
2. Regularly review progress during the training period, which must include direct observation of practical skills and evidence of case reviews
3. Set agreed learning plans with candidate
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 named surgeon and the biomedical scientist in training must comply with all relevant IBMS and BSDS guidelines and standards.

BIOMEDICAL SCIENTIST SUPERVISOR

Ideally a biomedical scientist supervisor would be an individual who had already successfully completed the training course and obtained a Diploma of Expert Practice. This may not always be possible, especially if the candidate is the first person to attempt the training programme within their laboratory. In such circumstances, a biomedical scientist supervisor must be a member of staff who has sufficient experience to enable them to guide and advise the candidate in all aspects of the training programme. They must also have authority to assign appropriate resources to the candidate and their training programme.

The biomedical scientist supervisor must be aware of the requirements of the diploma and must:

- monitor the candidates scope of practice
- ensure that due diligence is paid to all aspects of clinical governance
- ensure that all appropriate health and safety procedures are carried out
- ensure that the candidate keeps and updates a professional portfolio of evidence
- ensure that appropriate liaison occurs between the candidate and the named surgeon
- ensure that the candidate has and takes the opportunity to engage with other healthcare professionals

LABORATORY REQUIREMENTS

The laboratory where the training is undertaken should be a United Kingdom Accreditation Service (UKAS) / CPA (Clinical Pathology Accreditation (UK) Ltd) registered laboratory.

The laboratory must also have appropriate Institute training approval. The laboratory manager must support the training of biomedical scientists in Mohs histological techniques.

DELIVERY OF TRAINING

Training must be delivered in accordance with the IBMS training logbook for the Diploma of Expert Practice in Mohs Histological Procedures. 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 Mohs histological procedures by a named surgeon.

If the repertoire of the training laboratory is not comprehensive enough to allow exposure to the widest spectrum of specimens it is considered good practice for biomedical scientists to visit other laboratories to share expertise and to learn different techniques. This might require the delivery of training by individuals other than the named surgeon (surgeons or biomedical scientists), and who may also conduct appropriate assessments of competence as described below.

The overall aim of the training programme is to develop specialist knowledge, attitudes and dissection skills in Mohs histological procedures.

ONGOING ASSESSMENT OF COMPETENCE

In-house assessments of competence must be an interactive continuous process between the supervising surgeon and the biomedical scientist which must include the use of direct 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 ongoing 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.

It must be submitted to the Institute, along with the Training Logbook, as part of the evidence for completion of training in Mohs histological procedures prior to the examination.

In addition to the common requirements in the generic guidance, the portfolio must contain:

- four different case studies that reflect the case mix and specimen types 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 of complexities of any given case should be highlighted in order to display an understanding of the processes and procedures of histological evaluation of Mohs tissue samples.
- a log of the case repertoire encountered during the full period of training and demonstrating at least two years of current practice in Mohs histological procedures 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 named surgeon that should demonstrate critical evaluation of the Mohs histological procedures undertaken 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
- details of any seconded experience

- formal observation of the practical skills of the biomedical scientist must include on-going assessment carried out by the named surgeon during training
- details of in-house assessments and audit of personal practice against any locally 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 learning outcomes. 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 this qualification and the complexity of the specimen, and must be at least 1000 \pm 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 also include:

- patient clinical history
- macroscopic details and range tissue types of gross specimen
- details of tissue data recording procedure
- block orientation and embedding
- requirements for additional blocks following further tissue removal (if applicable) in light of confirmation of residual tumour presence
- correlation of the relevance of tissue cryotomy and straining to final slide production and details on how this affects microscopic interpretation and ultimately patient management
- details of the significance of patient selection for Mohs procedures and also demonstration of a critical understanding of the clinical/pathological context
- knowledge and reasoned argument of sufficient depth and clarity
- adequate and appropriate references to key sources of information

The following sections provide further guideline to content of a case study:

PRE-ANALYSIS

Details of 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 previous surgery 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 laboratory should be discussed, e.g. whether fresh or formalin fixed (Slow Mohs) to include accurate details of the tissue registration process, tissue orientation, embedding, cryotomy and rapid staining procedures. An appreciation of the microscopic features for food tissue preparation and slide selection should be shown. The main histological features should be discussed and details of the stains and antibodies (rapid frozen section immunocytochemistry or in the cases of Slow Mohs) used on the case should be explained to show evidence of slide review together with possible options of 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 surgeon 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 examination for the Diploma of Expert Practice in Mohs Histological Procedures is dependent upon the satisfactory assessment of the portfolio.

Success in the examination will be recognised by the awarding of the Diploma of Expert Practice in Mohs Histological Procedures.

Please note: candidates must sit the examination (first attempt) within 5 years of being issued a training log.

END POINT ASSESMENT

1. Successful portfolio assessment
2. Written examination comprising of one two-hour paper covering the mandatory modules

ASSESSMENT OF THE PORTFOLIO

Once submitted, the portfolio will be independently assessed by two examiners, using the following categories:

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

Notes:

All evidence submitted as part of the portfolio must conform to the Data Protection Act (2003). All evidence that may identify an individual which is submitted as part of the 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 discouraged
- the use of correction fluid or tape is not permitted

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 written examination.

ASSESSMENT STANDARDS

The portfolios will be 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 modules 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 named surgeon
7. It is clear from the evidence presented that the candidate has an understanding of the impact of laboratory tests on diagnosis, treatment, monitoring and prognosis of patients
8. The reviews show clearly that points of interest have been used as a positive learning experience

Case Studies

9. Studies are neat, well laid out and of appropriate length, including timeline from surgery to final MDT outcome
10. Details of clinical presentation, including correlation of any clinical and/or radiological findings performed are included in each study
11. Details of the tissue orientation process, including where appropriate dealing with tissue transformation zones (ex. skin eyelid to conjunctiva tissue) and macroscopic and microscopic description, with relevant correlation to final tumour excision

12. Where appropriate, there is discussion of how to proceed with multifocal lesions or instances where excision of one tumour leads to involvement of another tumour unrelated to the first
13. Details of appropriate ancillary tests, management, treatment and follow-up are presented in each case study
14. Illustrations or images when used, are relevant and of high quality
15. The case mix matches the requirements set out in the training logbook

Formative Assessments

16. 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 surgeon supervisor/ laboratory manager
17. It is clear from the evidence that the named surgeon has observed the appropriate range of specimens from the repertoire of facial and head and neck sites, that the candidate has dealt with
18. 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 assessments of competence

Audit

19. There is evidence that the candidate understands the principles of audit (service and clinical) through the submission of at least three audits such as vertical, horizontal and health and safety audits
20. It is clear from the evidence presented that the candidate has gathered data relevant to his or her own practice
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 high quality, relevant and shows appropriate reflection

PORTFOLIOS

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

Portfolios that contain evidence that allows identification of a patient will be automatically referred and may not be resubmitted until the following year.

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 three 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.

Automatic 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.

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.

If following the assessment the candidate has not met all the standards and their portfolio is referred, or the two assessors' marks differ significantly, the portfolio will be reviewed by a third assessor and moderated accordingly.

WRITTEN EXAMINATION

This examination consists of one written paper as set out below. This paper lasts 120 minutes and covers the five mandatory modules (1 question per module) with candidates being expected to answer all questions.

The questions may vary in their format from short, multi-part or structured answer, or may be based on a diagram or sketch.

Candidates are strongly advised to use the past papers that can be found on the Institute website to help them prepare for the written examination.

Please note: candidates must sit the examination (first attempt) within five years of being issued a training log.

Marking Structure

All examination papers will be 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% in the written paper.

Re-sitting the examination

If a candidate fails to meet the pass mark stated above they will be able to re-sit the examination in the following series. Candidates will **NOT** be required to re-submit their portfolio as this is valid for up to four attempts at the examination.

A fee applies for re-sitting the examination. Application forms and details of the fee are available on the Institute's website or by contacting the Institute using the details on the inside of the front cover of this document.

COMPETENCES

In addition to a pass certificate, successful candidates who have completed the additional optional module will be provided with a supplementary certificate listing that module that the individual has been trained in and signed off as being competent to perform.

INDICATIVE READING LIST

Note: the book list below was current at the time of publication and will be reviewed annually, but if new editions of any quoted texts are published subsequently, please use the most up-to-date version.

Books

- Aasi S, Leffell D, Lazova R. *Atlas of Practical Mohs Histopathology*. Springer, 2013. ISBN-10: 1461451604
- Gross K, Steinman H (Eds.) *Mohs Surgery and Histopathology: Beyond the Fundamentals* - Cambridge University Press, 2009. ISBN-10: 0521888042
- Gross K, Steinman H, Rapini R. (Eds.) *Mohs Surgery: Fundamentals and Techniques* - Mosby, 1998. ISBN-10: 0323000126
- Lee S (Ed.) *Introduction to Mohs Cryotomy*. 1st World Library, 2006. ISBN-10: 1595408649
- Orchard G, Nation B. *Histopathology (Fundamentals of Biomedical Science)*. OUP, Oxford; 2011. ISBN-10: 0199574340 – Note that the second edition of this book will be published in 2016.
- Orchard G, Nation B. *Cellular Structure and Function (Fundamentals of Biomedical Science)*. OUP, Oxford: 2015. ISBN-10 : 0199652471

Websites

Institute of Biomedical Science www.ibms.org

British Society of Dermatological Surgery (BSDS): www.bsds.org.uk