The Royal College of Pathologists

Pathology: the science behind the cure

Curriculum for specialty training in Forensic Histopathology

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INTRODUCTION

Forensic histopathology in the UK is a CCT specialty in its own right. The specialty requires a component of basic histopathology training (at least satisfactory completion of stages A and B) encompassing surgical pathology, autopsy and cytopathology. This curriculum replaces the previous approved subspecialty curriculum of forensic pathology. 'Forensic Pathology' is sometimes used in this curriculum to recognise that this is the term used by current practitioners in the established specialist field.

The award of the Certificate of Completion of Training (CCT) or the Certificate of Eligibility for Specialist Registration (CESR) through the Combined Programme (CP) route will require evidence of satisfactory completion of training in both *Good Medical Practice* and the core aspects of forensic histopathology, which are outlined in this curriculum. Doctors who are applying for entry to the Specialist Register via the award of a Certificate of Eligibility for Specialist Registration (CESR) will be evaluated against the *Good Medical Practice* and core aspects of the curriculum.

The curriculum and assessment system meets the General Medical Council's (GMC) Standards for Curricula and Assessment Systems (April 2010). In addition, the curriculum complies with the training framework A Reference Guide for Postgraduate Specialty Training in the UK.

For trainees with an NTN or NTN (A) in an approved UK training programme, the curriculum is integrated with and supported by the following documents in order to produce a coordinated training package for the award of the CCT. The relevant package includes:

- a blueprint for the forensic histopathology assessment system (including stages A and B for histopathology) (this demonstrates how the College assessments and examinations test the structure of the curriculum)
- multi-source feedback
- Histopathology Stage A Examination
- regulations and guidelines for Fellowship exams
- Learning Environment for Pathology Trainees (LEPT) which provides an electronic means of recording progress in training
- Annual Review of Competence Progression (ARCP) guidance

Doctors applying for a CESR in forensic histopathology must be able to demonstrate equivalence to the requirements for the award of a forensic histopathology CCT. Such doctors are strongly advised to read the information available on the GMC website. In addition, the following guidance is available from the College and should also be carefully followed in the preparation of a CESR application:

- general guidance on evidence to submit with applications for a CESR in forensic histopathology (specialty-specific guidance)
- guidance for CESR applicants in specialties and subspecialties overseen by The Royal College of Pathologists
- CESR curriculum vitae guidance.

Entry requirements

Trainees are eligible for entry to a forensic histopathology training programme following satisfactory completion of a UK foundation training programme or after demonstrating equivalent competencies, and following successful completion of at least stages A and B of the histopathology

programme including passes in the Stage A histopathology examination and Part 1 FRCPath examination i.e. normally at ST3 level. Information regarding entry to ST1 training in England and Wales is available from the NHS Histopathology Training Schools. Scottish and Northern Irish ST1 trainees do not enter specific training schools, but the programme is otherwise identical.

Duration of training

The Royal College of Pathologists anticipates that 5 years and 6 months would normally be required to satisfactorily complete the forensic histopathology curriculum to the required depth and breadth and achieve a CCT or CESR (CP). This includes at least two years of histopathology training.

The CCT in forensic histopathology will be awarded on the recommendation of The Royal College of Pathologists following:

- evidence of satisfactory completion of the forensic histopathology curriculum and the minimum training period
- satisfactory outcomes in the requisite number of workplace-based assessments (including multi-source feedback)
- attainment of the College's Stage A Examination
- FRCPath by examination in forensic pathology or FRCPath in histopathology, paediatric pathology or neuropathology and the Royal College of Pathologists Diploma in Forensic Pathology
- acquisition of Annual Review of Competence Progression (ARCP) outcome 6.

Further detailed information about the annual progression points including assessment requirements that will enable progression at each ARCP, as well as the completion of the CCT or CESR(CP) is available on the College website.

STAGES OF TRAINING AND LEARNING

The curriculum is divided into four stages; A–D. Trainees may not progress to the next stage of training until they have satisfactorily completed the preceding stage. Stages A and B represent core histopathology training which is uncoupled from stages C and D of forensic histopathology training. Trainees should gain appropriate experience within their programme to achieve all necessary curricular objectives.

It is strongly recommended that during stages B–C, trainees should take increasing levels of responsibility for their work as they progress towards independent practice which should be agreed with the relevant educational supervisor, and with the agreement of the relevant Coroner or Procurator Fiscal.

Throughout training, trainees should maintain a training portfolio; this is available online in the form of the RCPath Learning Environment for Pathology Trainees (LEPT) here. A forensic histopathology logbook should be kept to support LEPT and the trainee's range of experience and allow their supervisor to

Stage A

Stage A of training is 12 months whole-time equivalent.

The aims of this stage are to provide:

- a structured introduction to histopathology (including cytopathology and autopsy pathology)
- a short practical introduction to paediatric pathology (either stage A *or* B, recommended 2 weeks total)
- a short practical introduction to neuropathology (either stage A *or* B, recommended 2 weeks total)

Competences required to exit stage A:

- independent cut-up of most simple specimens (e.g. appendicectomy, cholecystectomy, skin biopsies, etc.)
- independent cut-up of common larger specimens (e.g. colectomy for cancer, simple nephrectomy, breast lumpectomy, etc.)
- ability to write an appropriate report for a wide range of histopathology and cytopathology specimens (common biopsies, common cancer resections, e.g. colorectal carcinoma, fine needle aspiration specimens)
- ability to demonstrate time management and task prioritisation (e.g. prioritisation of specimens for cut-up and reporting, timely turn-around of reporting histopathology or cytopathology specimens, keeping LEPT entries up to date)
- independent evisceration and dissection of a straightforward autopsy
- ability to write an autopsy report including appropriate clinicopathological correlation for a straightforward case.

Minimum practical experience:

• surgical histopathology	500 cases
• cytopathology	150 cervical and 150 non-cervical cytopathology cases, which may either be new screening or diagnostic cases, or be seen in the context of teaching sets with appropriate structured feedback from an experienced trainer
• autopsy pathology	20 autopsies
• audit	completion of 1 audit.

Assessments:

• workplace-based assessments	18 in total, 12 directed (see Appendix 4)
• multi-source feedback	1 completed and satisfactory
• Stage A Examination	pass
• educational supervisor's report	satisfactory
• ARCP	satisfactory outcome (1 or 2).

Stages B–D: general advice regarding time spent in stages

Stage B of training will be spent as part of a histopathology training programme (12-18 months). Stages C and D will be undertaken following successful completion of stage B (see below) and application and entry to a forensic histopathology training programme. There is a degree of flexibility in the time spent in these stages, relative to each other. The time spent in training in stages C and D will usually amount to 42 months, if stage B is completed in 12 months. However, trainees entering a forensic histopathology training program with additional histopathology, paediatric pathology or neuropathology training and experience, can have this competency mapped in relation to training time in stages C and D.

Stage B

Stage B of training is a minimum of 12 months and a maximum of 18 months whole time equivalent, unless extended training is required.

The aims of this stage are to:

- broaden experience and understanding of histopathology
- provide a short practical introduction to paediatric pathology (either stage A *or* B, recommended 2 weeks total)
- provide a short practical introduction to neuropathology (either stage A *or* B, recommended 2 weeks total)
- develop a basic knowledge base in cytopathology and autopsy pathology

Competencies required to exit stage B:

- independent cut-up of all simple specimens
- independent cut-up of all common larger specimens (including mastectomy, prostatectomy, complex hysterectomy specimens, etc)
- ability to primary screen cervical samples
- ability to write an appropriate report for a wide range of histopathology and cytopathology specimens (including more complex specimens than those described for stage A above)
- ability to demonstrate effective time management and task prioritisation
- independent evisceration and dissection of more complex autopsies (see those described as ‘Complex post-mortems for observation’ in stage A curriculum content)
- ability to write an autopsy report including appropriate clinicopathological correlation for a more complex case (as described above).

Minimum practical experience (based on 12 months spent in stage; increased pro rata for extended stage):

• surgical histopathology	750 cases
• cytopathology	200 cervical and 200 non-cervical cytopathology cases, which may either be new screening or diagnostic cases, or be seen in the context of teaching sets with appropriate structured feedback from an experienced trainer
• autopsy pathology	20 adult autopsies, 2 paediatric/ perinatal autopsies
• audit	completion of 1 audit in stage.

Assessments:

- workplace-based assessments — 18 in total, 12 directed (see Appendix 4)
- FRCPath Part 1 — pass (can be attempted any time after entry to stage B)
- educational supervisor's report — satisfactory
- ARCP — satisfactory outcome (1 or 2).

Stage C

Stage C of training is usually a minimum of 30 months whole time equivalent. This should include 3 months of paediatric pathology and 3 months of neuropathology. The trainee would not sit FRCPath Part 2 before completion of a minimum of 24 months in stage C.

The aims of this stage are to;

- develop increasing levels of confidence and the ability to undertake complex forensic post-mortem investigations and autopsies (including those involving paediatric and neuropathology)
- demonstrate a level of knowledge and skill consistent with practise as a consultant undertaking autopsies for the National Health Service or Her Majesty's Coroner/Procurator Fiscal
- demonstrate the ability to carry out and report autopsies independently including the interpretation of relevant histopathology and other specialist investigations
- demonstrate a working knowledge of the Coroners Rules and experience of the proceedings in the Coroner's Court in their jurisdictions, and knowledge of the role of the Procurator Fiscal in the investigation of deaths and proceedings of Fatal Accident Inquiries.
- demonstrate a working knowledge of the Human Tissue Act (and the Scottish equivalent) and the health and safety regulations relevant to autopsy practice
- develop experience of teaching autopsy technique to histopathology trainees
- demonstrate knowledge of the requirements of the Code of Practice and Performance Standards.

Competencies required to exit stage C:

- ability to technically carry out all autopsies including criminal cases, complex post operative deaths and road traffic fatalities (Section 20 cases).
- ability to provide expert investigation at scenes of suspicious deaths
- ability to report appropriate autopsy histopathology and to interpret other relevant specialist investigations, including radiology
- ability to appropriately refer cases and investigations to a more experienced colleague for specialist/second opinion
- ability to demonstrate excellent time management and task prioritisation in relation to autopsy practice (including ability to recognise which autopsies need to be undertaken as a matter of priority, e.g. for issues relating to faith)
- ability to function effectively/competently in a Coroner's Court/Fatal Accident Inquiry
- ability to teach in workplace and formal settings.

Minimum practical experience (per 12 month period in stage: increased pro rata for extended stage):

• autopsy	at least 80 autopsies performed and reported by the trainee - with a full and proportionate range of different case types i.e. if Stage C is completed in 3 years, a minimum of 240 autopsies should have been undertaken. Additionally the trainee should have some involvement in, and experience of, a significant number and range of homicides.
• attendance at court	experience of attendance at, and where applicable giving evidence at court (including Coroner's Court/Fatal Accident Inquiry)
• audit/presentation of a research project at a scientific meeting	completion of 1 during stage
• scene attendance/interpretations	5

Assessments

• workplace-based assessments	24 in total, 18 directed (during stage – average of 8 per year)
• multi-source feedback	1 completed with a satisfactory outcome in stage C of training
• FRCPath Part 2	pass (earliest opportunity is after 2 years of forensic pathology training, 24 months in stage C)
• Educational supervisor's report	satisfactory
• ARCP	satisfactory outcomes (1 or 2).

Stage D

Stage D of training is a minimum of 6 months whole time equivalent.

In order to complete stage D of forensic histopathology training, trainees must have satisfactorily completed:

- a total of at least 66 months training
- all areas of the forensic histopathology curriculum.
- an additional three months training in a specialty area relevant to the forensic histopathology curriculum e.g. cardiac pathology, neuropathology, paediatric pathology, histopathology, radiology (undertaken either in stage C or D).
- an expert witness training course approved by the Forensic Pathology SAC (undertaken in either stage C or D).

The aims of this stage are achieved by following a specific training plan to be formulated by the local Training Committee and require trainees to:

- demonstrate a level of knowledge and skill consistent with practise as a consultant forensic pathologist
- demonstrate the ability to work independently
- develop experience of teaching trainees
- develop experience in court
- demonstrate evidence of the above achievements in a training portfolio.

Competencies required to exit stage D (which must show development beyond stage C):

- demonstrate proficiency to consultant level in the autopsy techniques, skills and interpretation, required for the pathological investigation of deaths requiring medico-legal scrutiny, in all age groups, involving all organ systems and in all states of preservation

- proficiency to consultant level in the evaluation and recording of a death scene, the examination of the body *in situ* and the retrieval of evidence
- the ability to provide evidence impartially, justifying any opinions given from a balanced interpretation of cited medical literature and validated experience
- the ability to be able to work within the judicial system giving appropriate consideration to process, continuity and disclosure
- the ability to demonstrate appropriate time management and task prioritisation for the stage of training
- to demonstrate a level of knowledge and skill consistent with practice as a consultant forensic pathologist
- to demonstrate evidence of the above achievements in a training portfolio.

Practical experience per 6 month period in stage (increased pro rata for extended stage):

• Autopsies	50
• scene attendance/interpretations	5
• higher court exposure	5 (in stages C and D,)
• audit and/or research project presentation	completion of 1 during stage
• attendance at multidisciplinary case conferences (counsel/police/forensic specialist)	completion of 8 in stages C and D

Assessments:

• workplace-based assessments	4 in each 6 month period (as agreed with Educational Supervisor, see Appendix 4)
• multi-source feedback	1 completed in stage D and satisfactory
• educational supervisor's report	satisfactory
• ARCP	satisfactory outcome (6)

Training programmes

Training programmes will be quality assured by the GMC. Training posts and programmes will be recommended for approval by the relevant Postgraduate Deanery with input from The Royal College of Pathologists.

Training programmes should include suitable rotational arrangements to cover all the necessary areas of the curriculum, in particular paediatric and neuropathology experience and sufficient exposure to suspicious deaths both in terms of numbers and types of homicide such that each trainee gains the breadth of training required for satisfactory completion of the curriculum. The exact arrangements may vary according to the size of the department and its workload.

The structure and operation of the training programme is the responsibility of a Specialty Training Committee (STC), which will ensure that every trainee is provided with an appropriate range of educational experience to complete their training. For the foreseeable future, local Forensic programmes will be managed as part of the relevant Postgraduate Deanery School of Pathology, and/or Histopathology Training Committee, which will incorporate the Forensic Training Programme Director and any other relevant Forensic Pathology representatives.

The local Programme Director is responsible for the overall progress of the trainee and will ensure that the trainee satisfactorily covers the entire curriculum by the end of the programme. Also it is the responsibilities of the GMC to quality assure post-graduate deaneries who are responsible for the quality assurance of training programmes.

Each trainee should have an identified educational supervisor at every stage of their training. The educational supervisor is the consultant under whose direct supervision the trainee is working. A trainer is any person involved in training the trainee [e.g. consultant, SOCO, forensic scientist, senior police officer, clinical scientist, senior biomedical scientist (BMS)]. A trainee may be trained by a number of trainers during their training.

If there is a breakdown of relationship between a trainee and their educational supervisor, the trainee should, in the first instance seek advice from their training programme director. If the matter is not resolved to the trainee's satisfaction, then he/she should seek further advice from the head of pathology school. As a last resort, trainees can seek advice from the College through the appropriate College specialty advisors.

Training regulations

This section of the curriculum outlines the training regulations for forensic histopathology. In line with GMC guidance this reflects the regulation that only training that has been prospectively approved by GMC can lead towards the award of the CCT. Training that has not been prospectively approved by GMC can still be considered but the trainee's route of entry to the Specialist Register changes to CESR through the CP route.

i. Less than full-time training

'Less than full-time training' (previously referred to as flexible training) is the term used to describe doctors undertaking training on a basis that is less than full-time, normally between five and eight sessions per week. In exceptional circumstances, trainees may be allowed to undertake training at less than 50% of full-time. These circumstances should be considered by the trainee's Deanery and should have the support of the Postgraduate Dean or their Deputy. A placement at less than 50% of full time should be for a maximum of 12 months and should be subject to regular review.

The aim of less than full-time training is to provide opportunities for doctors in the NHS who are unable to work full time. Doctors can apply for less than full-time training if they can provide evidence that "training on a full-time basis would not be practicable for well-founded individual reasons".

Less than full-time trainees must accept two important principles:

- part-time training shall meet the same requirements (in depth and breadth) as full-time training
- the total duration and quality of part-time training of specialists must be not less than those of a full-time trainee.

In other words, a part-time trainee will have to complete the minimum training time for their specialty pro rata.

Prior to beginning their less than full-time training, trainees must inform the Training Department at The Royal College of Pathologists in order that the Histopathology College Specialty Advisory Committee (CSTC) and/or the Forensic Pathology SAC can ensure that their less than full-time training programme will comply with the requirements of the CCT. The documentation towards a less than full-time training application will be collected and checked to ensure compliance and a revised provisional CCT date issued. It must also be ensured that the less than full-time training post is

approved as part of a GMC approved training programme. Separate guidance and an application form are available on the College website for this purpose.

ii. Time Out of Training

The GMC have provided guidance on the management of absences from training and their effect on a trainee's Certificate of Completion of Training (CCT) date. The GMC guidance states that within each 12 month period where a trainee has been absent for a total of 14 days or more (when a trainee would normally be at work), a review to determine if the trainee's CCT date should be extended is triggered. The absence includes all forms of absence such as sickness, maternity, compassionate paid/unpaid leave etc but does not include study or annual leave or prospectively approved Out of Programme Training/ research. The administration of the absence and any extension to training will be undertaken by the relevant Deanery in consultation with the relevant College/Faculty where necessary. The GMC support Deaneries implementing this guidance flexibly to reflect the nature of the absence, the timing and the affect of the absence on the individuals' competence. Each trainee's circumstances is to be considered on an individual basis and that any changes to CCT date will reflect the trainee's demonstration of competence.

iii. Acting up as a Consultant (AUC)

A doctor in training can apply to the Dean to take time out of programme and credit the time towards CCT/CESR(CP) as an AUC. Where the AUC is in the same training programme, then prospective approval is not needed from the GMC. If it is a different training programme, the usual Out of Programme (OOP) process applies. When you are acting up as a consultant, there will need to be appropriate supervision in place and approval will only be considered if the acting up placement is relevant to gaining the competences, knowledge, skills and behaviours required by the curriculum. AUC posts can only be taken in the final year of specialty training.

iv. Research

Some trainees may wish to spend a period of time in research after entering forensic histopathology training as out-of-programme research (OOPR).

Research undertaken prior to entry to a forensic histopathology training programme

Trainees who have undertaken a period of research that includes clinical work directly relevant to the histopathology or forensic histopathology curriculum prior to entering a histopathology training programme can have this period recognised towards an entry on the Specialist Register. However, as the research is unlikely to have been prospectively approved by the GMC, their route of entry to the Specialist Register will be through the CESR.

Research undertaken following entry to a histopathology or forensic histopathology training programme

Trainees who undertake a period of OOPR after entering a histopathology or forensic histopathology training programme and obtaining their National Training Number (NTN) can have up to 1 year accepted by the Forensic Pathology SAC towards their CCT. In order to be eligible to have this period of research recognised towards the award of the CCT, trainees must have their OOPR approved prospectively before beginning their research. However, trainees must be able to demonstrate that they have achieved, or will be able to achieve, all requirements of the curriculum. Prior to beginning the period of research, trainees must agree the OOPR with their deanery and inform the Training Department at The Royal College of Pathologists in order that the forensic pathology SAC can ensure that the trainee will comply with the requirements of the CCT programme. The period of research must include clinical or laboratory work directly relevant to the forensic histopathology curriculum. The documentation towards a CCT recommendation will be collected by the Training Department at the College, checked to ensure compliance and a revised provisional CCT date

issued. It must be ensured that, following deanery agreement and acceptance from the forensic pathology SAC, the GMC prospectively approve the OOPR in order that the period can count towards a CCT. Separate guidance and an application form are available on the College website for this purpose.

v. Academic trainees

Trainees who intend to pursue a career in academic or research medicine may undertake specialist training in forensic histopathology. Such trainees will normally be clinical lecturers and hold an NTN(A). It is expected that such trainees should complete the requirements of the forensic histopathology curriculum in addition to their academic work. However, the content of their training, while meeting the requirements of the curriculum, will have to take into account their need to develop their research and the provisional CCT date should be amended accordingly. NTN(A) holders in forensic histopathology should consult the Training Department at the College on an individual basis with regard to the agreement of their provisional CCT date.

vi. Overseas training

Overseas training undertaken prior to entry to a forensic histopathology training programme

Some trainees may have undertaken a period of histopathology or forensic histopathology training overseas prior to entering a forensic histopathology training programme in the UK. Such trainees must enter a forensic histopathology training programme at ST3. Trainees can have this period recognised towards an entry on the Specialist Register but their route of entry to the Specialist Register will be through the CESR.

Overseas training undertaken following entry to a forensic histopathology training programme

Some trainees may wish to spend a period of training overseas as out of programme training (OOPT) after entering a histopathology training programme in the UK. Trainees can have up to one year of training overseas accepted towards their training. In order to be eligible to have this period of training recognised towards the award of the CCT, trainees must have their OOPT overseas training approved prospectively by GMC before beginning their overseas training. Prior to beginning the period of overseas training, trainees must agree the OOPT with their deanery and inform the Training Department at The Royal College of Pathologists that they will be undertaking overseas training in order that the Forensic Pathology SAC can ensure that the trainee will comply with the requirements of the CCT programme. The documentation towards a CCT recommendation will be collected by the Training Department at the College, checked to ensure compliance and a revised provisional CCT date issued. It must be ensured that, following Deanery agreement and acceptance from the Histopathology CSTC or Forensic Pathology SAC, GMC prospectively approves the OOPT in order that the period can count towards a CCT. Separate guidance and an application form are available on the College website for this purpose.

Trainees must have their OOPT agreed by the relevant Deanery, accepted by the Forensic Pathology SAC and approved by GMC before beginning their overseas training.

vii. Related clinical training

During their forensic histopathology training, some trainees may wish to spend a prolonged period of training in a related specialty such as paediatric pathology, neuropathology or an appropriate clinical specialty e.g. critical care, radiology or accident and emergency medicine. This is acceptable and should be undertaken as out-of-programme clinical experience (OOPE). However, such a period of training, although useful to the individual trainee in

broadening their understanding of the relationship between forensic histopathology and these specialties will not be approved by the Forensic Pathology SAC towards the requirements of the CCT.

RATIONALE

Purpose of the curriculum

The purpose of the curriculum for specialty training in forensic histopathology is to set the standards required by The Royal College of Pathologists and GMC for attainment of the award of the CCT or CESR(CP) in forensic histopathology, and to ensure that trainees are fully prepared to provide a high quality service at consultant level. In addition, the curriculum also sets the standards against which CESR applicants will be judged.

The educational programme provides:

- the experience required to become technically competent in practical work, and to master the underlying analytical and clinical principles
- the opportunity to gain knowledge of specialist areas such as neuropathology and paediatric pathology
- training in the communication and teaching skills necessary for effective practice
- the opportunities to develop to the required standard the ability to provide expert opinion in forensic pathology
- opportunities to acquire the management skills to lead a department providing an effective service
- experience of research and development projects and critical assessment of published work so as to contribute in a team and individually to the development of the service and specialty
- the framework for continued professional development (CPD) including life-long habits of reading, literature searches, consultation with colleagues, attendance at scientific meetings and the presentation of scientific work
- practical experience of clinical governance and audit (specialist and multidisciplinary) through evaluation of practice against the standards of evidence-based medicine.

Clinical governance is defined by the Department of Health as ‘a framework through which NHS organisations are accountable for continuously improving the quality of their services and safeguarding high standards of care, by creating an environment in which excellence in clinical care will flourish’. Trainees must become familiar with the lines of accountability, quality improvement programmes, clinical audit, evidence-based practice, clinical standards and guidelines, managing risk and quality assurance programmes. Training in these areas will continue throughout all stages of the curriculum.

Aims and objectives

On completion of the forensic pathology training programme, the trainee must have acquired and be able to demonstrate:

- proficiency in the autopsy techniques required for the pathological investigation of deaths requiring medico-legal scrutiny including criminal cases, in all age groups involving all organ systems and in all states of preservation. (Trainees should ensure that they undertake enough autopsies to achieve a high level of competence to reflect the nature of their work as a forensic pathologist)
- proficiency in the evaluation and recording of a death scene, the examination of the body in situ and the retrieval of evidence
- the ability to provide evidence impartially, justifying any opinions given from a balanced interpretation of cited medical literature and validated experience
- the ability to be able to work within the judicial system giving appropriate consideration to process, continuity and disclosure.

The award of a CCT or CESR(CP) will indicate suitability for independent professional practice as a consultant forensic pathologist. During training, trainees will be able to use the curriculum and feedback from assessments to monitor their progress towards this goal. All assessments and examinations will be based on curricular objectives and competencies.

Curriculum development

The curriculum for forensic pathology as a sub specialty of Histopathology was originally developed in 2005 (with subsequent review and amendments made in 2007 and 2008) by the Histopathology CATT and the Curriculum Review Group, with input from the Specialty Advisory Committees (SAC) on Histopathology and Paediatric Pathology; the Cytopathology Subcommittee and Examination Panels of The Royal College of Pathologists In addition, the College's Lay Advisory Committee (LAC) and Trainee Advisory Committee (TAC) were consulted. In producing the forensic histopathology curriculum stages A and B of the 2010 histopathology curriculum were incorporated with and expansion and development of the previously approved forensic pathology sub specialty curriculum. A draft version of the curriculum was published on the College website for consultation with College Fellows and Registered Trainees on 16 January 2012 for a 2-week period.

Minor changes have now been made to this curriculum in consultation with the Forensic Pathology Specialty Advisory Committee (SAC).

The curriculum will allow trainees to take control of their own learning and to measure achievement against objectives. It will help in the formulation of a regularly updated education plan in conjunction with an educational supervisor and the local Specialty Training Committee (STC).

CONTENT OF LEARNING

The curriculum details the level of knowledge and its application, skill and professional behaviour that a trainee should acquire and demonstrate in practice to provide a high quality service at consultant level. The professional practice aspect of the curriculum aims to ensure that doctors trained to the Royal College of Pathologists' curriculum in forensic histopathology are competent practitioners, partners and leaders and with suitable attributes for assisting the Justice System.

The general professional and specialty-specific content of the curriculum is outlined below.

1. Basic knowledge and skills
2. Core histopathology including surgical pathology, autopsy and cytopathology to end of stage B.
3. Specialist areas of forensic histopathology (stages C and D).
4. Generic skills required for forensic histopathology, in accordance with *Good Medical Practice* (see Appendix 5).

The curriculum also outlines the knowledge, skills, behaviours and expertise that a trainee is expected to obtain in order to achieve the award of the CCT or CESR (CP)

Additional guidance is provided for ST1 and ST2 training (see Appendix 1), outlining the sequencing and learning for this period of training. For training in ST3–5, it is expected that every trainee should undertake the core training outlined in pages 24-47), but it is recognised that the sequencing of learning and experience will differ according to the programme. The curriculum maps components of *Good Medical Practice* against the clinical components of forensic histopathology.

The recommended learning experiences are listed in section 7.

Upon satisfactory completion of the forensic histopathology training programme, the trainee must have acquired and be able to demonstrate:

- appropriate professional behaviour to be able to work as a consultant forensic pathologist
- good working relationships with colleagues and the appropriate communication skills required for the practice of forensic histopathology
- the knowledge, skills and attitudes to act in a professional manner at all times
- the knowledge, skills and behaviours to provide appropriate teaching and to participate in effective research to underpin forensic histopathology practice
- an understanding of the context, meaning and implementation of clinical governance
- management skills required for the running of a forensic pathology unit/department.
- familiarity with the Code of Practice and Performance Standards document, health and safety regulations along with relevant legislation as applied to the work of a Forensic Histopathologist.

PURPOSE OF ASSESSMENT

The Royal College of Pathologists' mission is to promote excellence in the practice of pathology and to be responsible for maintaining standards through training, assessments, examinations and professional development.
The purpose of The Royal College of Pathologists' assessment system in forensic histopathology is to:

- indicate suitability of choice at an early stage of the chosen career path
- indicate the capability and potential of a trainee through tests of applied knowledge and skill relevant to the specialty
- demonstrate readiness to progress to the next stage(s) of training having met the required standard of the previous stage
- provide feedback to the trainee about progress and learning needs
- support trainees to progress at their own pace by measuring a trainee's capacity to achieve competencies for their chosen career path
- help to identify trainees who should change direction or leave the specialty
- promote and encourage learning
- enable the trainee to collect all necessary evidence for the ARCP
- gain Fellowship of The Royal College of Pathologists
- provide evidence for the award of the CCT
- assure the public that the trainee is ready for and capable of unsupervised professional practice.

A blueprint of the forensic histopathology assessment system is available on the College and GMC website.

Methods of assessment

Trainees will be assessed in a number of different ways during their training. Satisfactory completion of all assessments and examinations will be monitored as part of the ARCP process and will be one of the criteria upon which eligibility to progress will be judged. Passes in the Stage A Examination and the FRCPath/Diploma examination are required as part of the eligibility criteria for the award of the CCT.

Stage A Examination

Trainees must pass the Stage A examination as one of the requirements for satisfactory completion of stage A of training.

Workplace-based assessment

Trainees will be expected to undertake workplace-based assessment throughout their training in forensic histopathology. In general, workplace-based assessments are designed to be formative in nature; as such they are best suited to determine educational progress in different contexts. To this end, it is strongly recommended that workplace-based assessment be carried out regularly throughout training to assess and document a trainee's progress. However, a minimum number of 'satisfactory' workplace-based assessments should be completed during each stage of training.

These will include:

- case-based discussion (CbD)
- directly observed practical skills (DOPS)
- evaluation of clinical events (ECE)
- multi-source feedback (MSF) (minimum of 3 during training).

Specific guidance for each stage is provided in Appendix 4.

Further separate guidance is provided about the method and required frequencies of these assessments.

FRCPath examination

The major summative assessments will occur during stage B (FRCPath Part 1 examination) and towards the end of stage C (FRCPath Part 2 examination). Those individuals who hold the FRCPath in histopathology, paediatric pathology or neuropathology may alternatively have their competences in forensic histopathology assessed by the College Diploma in Forensic Pathology.

The expectation for medical candidates in UK GMC-approved training programmes is that they should normally pass the FRCPath Part 2 examination within seven years of passing the FRCPath Part 1. However, there will be circumstances where the guidelines will need to be applied flexibly and candidates who feel that they will not be able to comply with this timescale should contact the RCPath Examinations Department for further advice.

Examination results are evaluated after each session and an annual review of validity and reliability is undertaken and reported to the Examinations Committee.

EVIDENCE OF COMPETENCE

Annual Review of Competence Progression (ARCP)

The ARCP is an annual opportunity for evidence gathered by a trainee, relating to the trainee's progress in the training programme, to document the competences that are being gained. Evidence of competence will be judged based on a portfolio of documentation, culminating in an Educational Supervisors Structured Report.

Separate ARCP guidance is available on the College website. A copy of all ARCP forms issued to the trainee must be provided to The Royal College of Pathologists prior to recommendation for the award of the CCT. Lack of progress, identified by the issue of an ARCP outcome 3 or 5 and necessitating additional training to rectify deficiencies will lead to the extension of training. Training leading to the issue of an ARCP 3 or 5 and necessitating additional training will not be recognised towards the award of the CCT. Evidence of ARCP outcome 6 is required as part of the evidence for the award of the CCT.

MODELS OF LEARNING

There are three broad categories of learning which trainees employ throughout training – instructionalist model, constructionist model and the social learning model. The models of learning can be applied to any stage of training in varying degrees.

Most of the curriculum will be delivered through work-based experiential learning, but the environment within the department should encourage independent self-directed learning and make opportunities for relevant off-the-job education by making provision for attendance at local, national and, where appropriate, international meetings and courses. Independent self-directed learning should be encouraged. It is the trainee's responsibility to seek opportunity for experiential learning. The rotas should also be arranged in such a way that trainees have time available for participation in research projects as part of their training.

Learning for knowledge, competence, performance and independent action will be achieved by assessment and graded responsibility, allowing trainees at various stages of training to acquire responsibility for independent practice. Assessment will be set by The Royal College of Pathologists in the form of workplace-based assessment including multi-source feedback, the Stage A examination and the FRCPath examination.

LEARNING EXPERIENCES

The following teaching/learning methods will be used to identify how individual objectives will be achieved.

a. **Routine work:** the most important learning experience will be day-to-day work. Forensic histopathology trainees are amongst the most closely supervised groups in postgraduate medical training. This close supervision allows frequent short episodes of teaching, which may hardly be recognised as such by trainees.

b. **Textbooks:** forensic pathology departments/units have a wide range of reference textbooks and journals available. These allow trainees to 'read around' routine cases. Forensic histopathology is a subject requiring a great deal of background learning and reading, as well as the practical experience gained within day-to-day working, and trainees should take every advantage to 'read around' their subject.
c. **Private study:** more systematic reading of textbooks and journals will be required in preparation for examinations.
d. **Case reviews and other departmental teaching sessions:** these occur on a regular basis in most departments.
e. **Regional training courses:** these are valuable learning opportunities. Trainees should be released from service duties to attend.
f. **National training courses:** these are particularly helpful during preparation for the FRCPath Part 2 examination. In addition to providing specific teaching, they also allow trainees to identify their position in relation to the curriculum and their peers.
g. **Scientific meetings:** research and the understanding of research are essential to the practice of forensic histopathology. Trainees should be encouraged to attend and present their work at relevant meetings.
h. **Discussion with Anatomical Pathology Technicians (APTs):** APT staff can provide excellent training, particularly in relation to mortuary methods and health and safety.
i. **Attachment to other departments:** attachments of this kind will be required if a training programme cannot offer the full range and depth of experience needed to complete the curriculum. They will also be beneficial for those trainees in their final year of training who wish to experience working practices in other areas of the country before taking up a consultant post.
j. **Learning with peers.**
k. **Work-based experiential learning.**
l. **Formal postgraduate teaching.**
m. **Independent self-directed learning.**
n. **Formal study.**

It must be ensured that the appropriate teaching and learning methods are employed for each area of the curriculum.

SUPERVISION AND FEEDBACK

Specialist training must be appropriately supervised by the senior medical staff on a day-to-day basis under the direction of a designated educational supervisor and a Specialty Training Committee that links to the appropriate Postgraduate Deanery.

Supervision has more than one meaning in forensic histopathology. Trainees will work under consultant supervision in the histopathology and autopsy services, gradually widening their knowledge and experience in each area so that by the time they have passed the FRCPath Part 2 examination and completed stage D of training, they are able to work independently. The day-to-day supervised training will be supplemented by more formal teaching and on regionally and nationally organised training courses (see above).

If an autopsy report generated by the trainee states that they have been supervised by a consultant, this is usually taken to mean that the consultant has supervised the autopsy and the reported findings are agreed with the trainee. It also implies that the consultant accepts the autopsy findings, the microscopic examination and the results of other investigations as accurate. However, there is also a more general level of supervision in day-to-day work. A trainee may ask for assistance at any time if a case with which they are dealing is unfamiliar or unusual. In the mortuary, a trainee competent

in basic autopsy practice will be able to seek advice if an unusual or unexpected finding is encountered. Supervision also extends to working relationships and communication within and beyond the forensic pathology department/unit.

Educational supervision is a fundamental conduit for delivering teaching and training. It takes advantage of the experience, knowledge and skills of educational supervisors/trainers and their familiarity with clinical situations. It ensures interaction between an experienced clinician and a doctor in training. This is the desired link between the past and the future of medical practice, to guide and steer the learning process of the trainee.

Clinical supervision is also vital to ensure the high quality service of doctors in training.

The College expects all doctors reaching the end of their training to demonstrate competence in clinical supervision before the award of the CCT. The College also acknowledges that the process of gaining competence in supervision starts at an early stage in training with foundation doctors supervising medical students and specialty registrars supervising more junior trainees.

The role of the educational supervisor is to:

- have overall educational and supervisory responsibility for the trainee in a given post
- ensure that the trainee is familiar with the curriculum relevant to the year/stage of training of the post
- ensure that the trainee has appropriate day-to-day supervision appropriate to their stage of training
- ensure that the trainee is making the necessary clinical and educational progress during the post
- ensure that the trainee is aware of the assessment system and undertakes it according to requirements
- act as a mentor to the trainee and help with both professional and personal development
- agree a training plan (formal educational contract) with the trainee and ensure that an induction (where appropriate) has been carried out soon after the trainee's appointment
- discuss the trainee's progress with each trainer with whom a trainee spends a period of training
- undertake regular formative/supportive appraisals with the trainee (two per year, approximately every 6 months) and ensure that both parties agree to the outcome of these sessions and keep a written record
- regularly inspect the trainee's training record, inform trainees of their progress and encourage trainees to discuss any deficiencies in the training programme, ensuring that records of such discussions are kept
- keeps the STC Chair informed of any significant problems that may affect the individual's training.

In order to become an educational supervisor, a consultant must have a demonstrated interest in teaching and training, appropriate access to teaching resources, be involved in and liaise with the appropriate regional training committees and be involved in annual reviews and liaise closely with the Specialty Training Committee. Educational supervisors are expected to keep up-to-date with developments in postgraduate medical training (e.g. by attending Deanery and national training the trainer courses), have access to the support and advice of their senior colleagues regarding any issues related to teaching and training and to keep up-to-date with their own professional development.

MANAGING CURRICULUM IMPLEMENTATION

The curriculum outlines the minimum forensic histopathology training requirements for delivery in a regional training programme. It guides educational supervisors as to what is required to deliver the curriculum and guides trainees in the learning and assessment methods required for satisfactory completion of training.

Delivery of the depth and breadth of forensic histopathology training outlined in the curriculum is the responsibility of the local Postgraduate Deanery. This is likely to be achieved in the short term future through the structures that are already in place for Histopathology, i.e. the Deanery Postgraduate Pathology School, the local Histopathology Specialty Training Committee, where this exists, and a named Forensic Training Programme Director or Lead. The Programme Director must ensure that each post or attachment within the programme is approved by the General Medical Council. Heads of Pathology School (HOPS) or Leads have a strategic overview of training in the Pathology specialties. They are responsible for ensuring that the delivery of education and training meets the College and GMC agreed curriculum and is provided to the standards set by the College and GMC.

It is the responsibility of the GMC and Deaneries to quality assure training programmes to ensure training programmes across the UK are able to deliver a balanced programme of training.

It is the responsibility of the educational/clinical supervisor of a particular post or attachment within a programme to ensure that the training delivered in their post meets the requirements of the relevant section(s) of the curriculum. The educational supervisor must undertake regular educational appraisal with their trainee, at the beginning, middle and end of a section of training, to ensure structured and goal-oriented delivery of training.

Trainees must register with The Royal College of Pathologists on appointment to a forensic histopathology training programme. It is the trainee's responsibility to familiarise themselves with the curriculum and assessment requirements both for the satisfactory completion of each stage of training and the award of the CCT or CESR(CP). They must be familiar with all aspects of the assessment system; workplace-based assessment including multi-source feedback, the Stage A examination and the FRCPath examination. It is the trainee's responsibility to ensure that they apply in good time for any assessments and examinations that demand an application. Trainees must also make appropriate use of the LEPT system.

CURRICULUM REVIEW AND UPDATING

The curriculum will be evaluated and monitored by The Royal College of Pathologists as part of continuous feedback from STCs, the Forensic Pathology SAC, Programme Directors, Regional Specialty Advisors, trainers and trainees.

The curriculum will be formally reviewed in the first instance by the Forensic Pathology SAC within 2 years of publication.

Any significant changes to the curriculum will need the approval of The Royal College of Pathologists' Council and the GMC.

EQUALITY AND DIVERSITY

The following is an extract from The Royal College of Pathologists' *Diversity and Equality Policy and approach*. A full copy of the policy is available on the College website.

The Royal College of Pathologists is committed to the principle of diversity and equality in employment, membership, academic activities, examinations and training. As part of this commitment we are concerned to inspire and support all those who work with us directly and indirectly.

Integral to our approach is the emphasis we place on our belief that everyone should be treated in a fair, open and honest manner. Our approach is a comprehensive one and reflects all areas of diversity, recognising the value of each individual. We aim to ensure that no one is treated less favourably than another on the grounds of sex, race, age, sexual orientation, gender reassignment, disability, pregnancy & maternity, religion and belief and marriage and civil partnership. Our intention is to reflect not only the letter but also the spirit of equality legislation.

Our policy will take account of current equality legislation and good practice as outlined in the Equality Act 2010 which supersedes/includes all previous legislation.

The Training Department collects information about the gender and ethnicity of trainees as part of their registration with the College. This information is recorded by the College and statistics published on an annual basis in the annual report. Further information about the monitoring activities of the College trainees, candidates and Fellows are available in the College policy.

ACKNOWLEDGEMENTS

The extensive work of the histopathology curriculum team is acknowledged. This curriculum builds on their considerable work and for example, the stages A and B (core histopathology) curriculum are reproduced in its entirety. We also wish to acknowledge the work of the Forensic Pathology sub-committee especially Dr Marjorie Turner and Dr Paul Johnson with the support of Dr David Bailey, Director of Training and Assessment, Joanne Brinklow, Head of Educational Standards and Jenny Maddocks, Training Manager.

APPENDIX 1 CURRICULUM CONTENT FOR STAGES A AND B – CORE HISTOPATHOLOGY

All forensic histopathology trainees are expected to undertake training in the basic knowledge and skills of histopathology. This includes surgical pathology, basic autopsy (during stages A and B) and cytopathology. The trainee should also acquire the generic skills required for histopathology proportionate to the stage of training, in accordance with *Good Medical Practice*.

Forensic histopathology trainees are expected to have achieved the histopathology skills and attributes to a minimum of those expected by the end of stage B of the histopathology curriculum before entering forensic histopathology training. The forensic histopathology curriculum thus includes the training requirements in stages A and B of the histopathology curriculum.

stages C and D of the curriculum focus on the knowledge, skills and attributes required to be able to attain CCT (or CESR) in forensic histopathology and thus practise at consultant level.

Expected training during Stage A/ST1 of training

There is no intention to use this appendix as a measure of aptitude or achievement. It is simply an indication of the range and level of experience that could be reasonably expected of a trainee in stage A. In serving as an indicator, the surgical pathology list should be interpreted in the light of workload and case-mix in the training department. Surgical specimens considered 'routine' in some departments, e.g. an oesophagectomy, would be infrequent in others. Thus, its inclusion in the list does not mean that experience of this specimen type is mandatory, only that a stage A trainee should be familiar with the handling and reporting of similar major resection specimens from cancer cases. Naturally, some cancer specimens (e.g. pancreatectomy or laryngectomy) are considered too complex for a stage A trainee to dissect independently.

Some experience of specialised areas of pathology is also expected during stage A and trainees should spend a short period of attachment to neuropathology and paediatric pathology.

The level of knowledge gained within each of the areas described below will vary between trainees. However, for each disease process listed, it is recommended that the trainee possesses at least a basic level of knowledge within the following eight categories.

- Epidemiology
- Aetiology
- Pathogenesis
- Clinical features
- Pathological features (macroscopic and microscopic)
- Natural history
- Management options
- Major complications of therapy

System	Macroscopic pathology	Microscopy	Knowledge base
General	Correctly identify patient details relevant to each specimen Correctly orientate specimens Open fresh specimens Correctly obtain fresh tissue for touch preparation, freezing, electron microscopy etc.	Sets up a microscope correctly Recognise normal histology and normal variations of common tissue types Select/identify appropriate histochemical stains for glygogen, fat, mucins and amyloid Familiarity with basic immunohistochemical markers for major tissue and tumour types	Normal anatomy and histology Pathological basis of disease Common pathological abnormalities

	Ink excision margins Lymph node anatomy and dissection in cancer specimens	and interpretation of a basic panel of immunohistochemical markers on an undifferentiated tumour	
Breast	Mastectomy. Wide local excision for macroscopic tumour Axillary lymph node dissection Screening specimen for microcalcification	Diagnose invasive cancer on needle biopsy Report mastectomy or wide local excision specimens	Ductal carcinoma in situ, invasive ductal carcinoma, invasive lobular carcinoma, fibrocystic change, fibroadenoma

It is important that sufficient basic knowledge of major pathological processes is gained at this early stage. This should include topics such as: causes of and responses to cellular injury, acute and chronic inflammation, neoplasia, the effects of genetics and the environment in health and disease, infections and the basics of immunology.

Surgical pathology

System	Macroscopic pathology	Microscopy	Knowledge base
Upper gastrointestinal tract	Oesophagectomy gastrectomy Antrectomy	Recognise Helicobacter associated gastritis; oesophageal and gastric malignancy on biopsy Report oesophageal and gastric malignancy resection specimens	Helicobacter associated gastritis, reactive gastritis, Barrett's oesophagus, oesophageal carcinoma, gastric carcinoma, coeliac disease, duodenitis
Lower gastrointestinal tract	Colectomy/proctectomy for cancer or inflammatory bowel disease Appendicectomy Polypectomy	Recognise colorectal carcinoma on biopsy Identify presence of inflammatory bowel disease (IBD) and attempt to classify type on biopsy Distinguish hyperplastic () from adenomatous polyps Recognise high-grade dysplasia Report colorectal carcinoma resection specimen	Appendicitis, inflammatory bowel disease. Not otherwise specified (NOS), hyperplastic polyp, adenomatous polyp, high-grade dysplasia, colorectal carcinoma
Respiratory	Bronchial biopsies	Recognise presence of the common	Squamous cell carcinoma, small cell carcinoma, adenocarcinoma, metastatic

	Open biopsy of lung Pneumonectomy or lobectomy Pleural biopsy specimens	subtypes of primary lung cancer in biopsies Recognise the presence of metastatic cancer in the lung	carcinoma, vasculitis, interstitial pneumonia Mesothelioma

System	Macroscopic pathology	Microscopy	Knowledge base
Skin	Accurate gross description of skin lesions Appropriate handling of orientated or complex skin specimens	Diagnose basic skin cancer types including squamous cell carcinoma, basal cell carcinoma and typical cases of melanoma Recognise presence of severely atypical features in naevi Adequate morphological description of features seen in an inflammatory skin biopsy	Basal cell carcinoma, squamous cell carcinoma, melanoma, melanocytic naevi, haemangioma, seborrhoeic keratosis, actinic keratosis, chronic dermatitis NOS, epidermal inclusion cysts, dermatofibroma
Lymphoreticular pathology	Lymph node for neoplastic and non-neoplastic disease Gain experience of examining bone marrow trephine biopsies, where locally available Take in tissue for supplementary techniques (e.g. flow cytometry	Screen lymph node dissections and for metastatic tumour Recognise common reactive node patterns including follicular hyperplasia and sinus histiocytosis Detect high-grade lymphoma, common types of low-grade lymphoma and Hodgkin's disease in lymph node specimens and marrow biopsies	Follicular hyperplasia, sinus histiocytosis, high-grade lymphoma, common types of low-grade lymphoma, Hodgkin's disease, granulomatous diseases, metastatic carcinoma
ENT **Head and neck**	Mucosal biopsy Tonsillectomy Nasal polypectomy Salivary gland tumour	Recognise reactive changes in tonsils; distinguish from high-grade lymphoma Identify main types of salivary gland tumour	Simple nasal polypi, pleomorphic adenoma, adenocarcinoma, Warthin's tumour

System	Macroscopic pathology	Microscopy	Knowledge base
Female genital tract	Hysterectomy and/or salpingo-oophorectomy for malignant or benign disease Cervical loop/cone biopsy	Recognise leiomyomata, secretory and proliferative endometrium, endometrial and cervical carcinoma Report hysterectomy and/or salpingo-oophorectomy	Leiomyoma, secretory and proliferative endometrium, endometrial atrophy, endometrial carcinoma, cervical carcinoma, chronic cervicitis, ovarian cystic follicles/theca cysts, ovarian cystadenoma, ovarian cystadenocarcinoma
Liver and gall bladder	liver biopsy Resections for metastatic tumour Cholecystectomy	Report cholecystectomies Recognise normal liver on needle biopsy. Value of special stains Identify presence of cirrhosis, hepatitis or metastatic tumour in needle biopsy	Chronic cholecystitis, cholesterolosis Steatosis, cirrhosis NOS, chronic hepatitis NOS, metastatic carcinoma
Cardiovascular system	Blood vessels, including temporal artery biopsy	Recognise inflammation in temporal artery specimen	For example, temporal arteritis, atheroma
Male genital tract	Vas deferens Prostate biopsies and chippings Orchidectomy and if available prostatectomy specimens	Report normal vas deferens Recognise presence of cancer in prostatic needle biopsies Report orchidectomy Recognise seminoma, embryonal carcinoma	Prostatic adenocarcinoma, benign prostatic hyperplasia. Germ cell tumours
Endocrine pathology	Thyroidectomy Parathyroidectomy	Recognise normal thyroid and parathyroid Recognise nodular colloid goitre	Nodular colloid goitre Know main types of carcinoma

System	Macroscopic pathology	Microscopy	Knowledge base
Soft tissue	Soft tissue tumour resection, simple (i.e. lumpectomy)	Recognise morphological features suggestive of main subtypes of tumours (i.e. lipomatous, fibromatous, myomatous, neural, vascular characteristics)	Lipoma, angiolipoma, neurofibroma, dermatofibroma Recognise high-grade sarcoma Knowledge of immunohistochemical techniques to apply

			Understand value of cytogenetics
Neuropathology	Neurosurgical tumour resection and biopsy specimens	Distinguish intrinsic from metastatic tumours of the brain Recognise benign tumours of the meninges and peripheral nerves	Knowledge of the classification of tumours of the central nervous system Understand the value of immunohistochemistry in the diagnosis of CNS tumours
Renal and urological pathology	Renal biopsies Bladder biopsies Nephrectomy specimens	Assess deviation from normal histology Recognise presence of cancer in bladder biopsies Recognise glomerular changes that might indicate glomerulonephritis, e.g. hypercellularity, crescent formation Report nephrectomy	Bladder carcinoma, renal cell carcinoma, chronic pyelonephritis Understand the value of immunohistochemistry and electron microscopy in the diagnosis of glomerulonephritis
Osteoarticular pathology	Handling a bone-biopsy	Normal bone Normal synovium	Osteoporosis versus osteomalacia Main types of primary bone tumours Use of calcified versus de-calcified sections
Paediatric pathology	Description and processing of biopsy specimens Examination, description and sampling of placentas Examination, description and sampling of other specimens only under direct consultant supervision	Recognise common inflammatory and neoplastic conditions occurring in childhood	Common paediatric tumours, e.g. neuroblastoma, nephroblastoma, rhabdomyosarcoma Awareness of special stains in paediatric pathology Understand value of cytogenetics

Autopsy pathology

It is envisaged that trainees will perform at least 20 autopsies during stage A. Stage A trainees should begin to understand the level of certainty with which macroscopic features can be interpreted at autopsy and when histological examination of autopsy tissues is important. They should begin to recognise histological changes that occur due to post-mortem artefact.

Systems	Anatomical features and dissection technique Trainees should be able to demonstrate:	Clinicopathological knowledge base
General	Methods for identification of the patient External examination including breast examination Removal of organs Organ weights	Procedures for obtaining consent for autopsy. Workings of the coroner's (or procurator fiscal's) system Full details of current practice for retention of organs and tissues Knowledge of normal organ weights
Cardiovascular	Excision of heart Master one technique for the dissection of the heart Anatomy of the coronary arteries, their ostia and branches Dissection of aorta and major abdominal branches	Normal, age-related and pathological abnormalities of cardiac valves Identification of acute and healed myocardial infarcts, macroscopically and histologically Assessment of ventricular thickness and atrial and ventricular dilatation Pulmonary embolism
Respiratory system	Removal of lungs from mediastinum Dissection of pulmonary vessels and major bronchi Dissection of individual lobes	Identification of respiratory tract infection and pneumonia Assessment of chronic bronchitis, emphysema and lung fibrosis Appearances of primary and secondary lung tumours
Upper gastrointestinal tract	Removal and dissection of oesophagus, stomach and duodenum in continuity Identification of ampulla of Vater	Range of appearances due to autolysis in stomach. Identification of oesophageal varices, gastric erosions and peptic ulcers Assessment of pyloric stenosis

Lower gastrointestinal tract	Identification and dissection of superior mesenteric artery Examination of intestinal mucosal surface	Identification of colonic diverticula Identification of bowel necrosis and distinction from autolysis or post-mortem change
Hepatobiliary system	Removal of liver and its dissection Identification of portal and hepatic veins Dissection of gall bladder, common bile duct, and pancreatic ducts	Assessment of hepatic congestion and dilatation of hepatic veins Appearances of intra- and extra-hepatic ducts Identification of secondary tumours Identification of hepatic cirrhosis
Nervous system	Removal of brain Dissection of circle of Willis and venous sinuses One method for sectioning of cerebral and cerebellar hemispheres and brain stem	Sites of berry aneurysms Identification of old and recent cerebral infarcts Assessment of cerebral and cerebellar atrophy Taking of 'key' blocks for histological examination
Urogenital system	Dissection of renal arteries and veins and ureters Removal of kidneys, examination of cut surfaces and renal pelvises Examination of bladder mucosa and identification of ureteric orifices Examination of the prostate gland Examination of the testes and female genital system	Estimation of degree of cortical atrophy Identification and assessment of cortical scarring and cyst formation. Hydronephrosis and ureteric dilatation Prostatic disease
Endocrine system	Removal of pituitary Identification of parathyroid glands and dissection of thyroid Removal of adrenal glands	Size and overall appearance of thyroid gland Size of parathyroid glands Adrenal cortical hyperplasia or adrenal atrophy
Lympho-reticular system	Examine all lymph node groups (e.g. mediastinal or para-aortic) for evidence of lymphadenopathy Examination of the spleen Exposure of vertebral bone marrow	Significance of lymphadenopathy in different anatomical sites Clinical explanation for splenic enlargement or atrophy Identification of secondary deposits in vertebral bone marrow

Musculoskeletal system	Identify fractures Explore sites of recent internal fracture fixation	Osteoporosis
Report	Preparation of report according to consultant's protocol and with reference to College's Guidelines on Autopsy Practice, 2002 and Best Practice Scenarios, 2005 Include the cause of death in the Office of National Statistics (ONS) format and a clear clinicopathological summary	Detailed list of all macroscopic abnormalities Summary relating abnormalities to aspects of clinical history (wherever possible) Appropriate tissue blocks for histology (with appropriate consent)

Complex post-mortem examinations

These autopsies and special techniques are not part of the stage A curriculum. However stage A trainees may take the opportunity to observe or assist in these examinations should the opportunity arise.

Assessment of traumatic injury, e.g. after road traffic accident
Methods of sampling for toxicology, e.g. in suicide, drug overdose
HIV, HCV and tuberculosis infected persons
Maternal deaths
Removal of eyes, dissection of middle ear
Removal of spinal cord
Post-mortem examination in haemopoietic malignancy, including sampling of bone marrow from iliac crests and femur
Post-mortem examination of a decomposed body
Post-mortem examination in a case of suspected drowning
External examination of a body by a forensic pathologist
Post-mortems in patients dying after complex cardiothoracic surgery
Assessment of the changes following complicated gastrointestinal surgery
Paediatric/perinatal autopsy

Cytopathology: General cytopathology

Category	Topic	Knowledge base Trainees should be able to demonstrate their knowledge of or ability to:
General cytology	Microscopy	Set up a microscope How to screen a slide
	Technical aspects	Sampling devices used and the fixation of specimens Seen and has a basic knowledge of the range of methods for converting a raw sample into a slide
	Confidentiality	The importance of confidentiality in cytology practice
	Morphology	The components of a cell The differences in morphology in air dried and fixed preparations The nuclear features used to diagnose malignancy Features used to determine differentiation of a neoplasm The appearances of common organisms

Cytopathology: Cervical cytopathology

Category	Topic	Knowledge base Trainees should be able to demonstrate their knowledge of or ability to:
Cervical cytology	Cervical screening	The pathogenesis of cervical carcinoma The process by which cervical screening prevents the development of cervical carcinoma The roles of the various disciplines involved in delivering the cervical screening programme, e.g. General Practitioners, Public Health, Laboratories, Colposcopy Units, Gynaecologists The numerical reporting system, patient call and recall mechanisms, failsafe

	Technical aspects	Liquid-based cytology techniques
	Normal	Recognise normal cellular components in cervical specimens
	Adequacy	The methods and rationale for sampling the cervix The principles of assessing adequacy of a cervical specimen
	Benign cellular changes	The physiology and recognition of squamous metaplasia Iatrogenic changes which may occur in the cervix Recognise common morphological changes seen in inflammation
	Borderline nuclear changes	Circumstances in which this category is used and the implications of its use
	Cervical intraepithelial neoplasia (CIN, CGIN) and dyskaryosis	Criteria for diagnosis of dyskaryosis Features used to grade dyskaryosis Typical examples of dyskaryosis Criteria for diagnosis of glandular abnormality
	Squamous carcinoma and adenocarcinoma	Criteria for diagnosis of possibly invasive lesions
	Management of women with abnormal smears and colposcopy	The implications of reporting abnormal smears, and awareness of the role of colposcopy in the diagnosis and management of cervical disease

	Quality assurance including internal quality control (IQC), external quality assurance (EQA) and audit	Quality Assurance procedures involved in cervical screening, including internal quality control (IQC), external quality assurance (EQA) and audit Current national quality standards and indicators

Cytopathology: Non-cervical cytopathology

Category	Topic	Knowledge base Trainees should be able to demonstrate their knowledge of or ability to:
Non-cervical cytology	Interpretation	Recognise normal cell populations and the typical patterns of the common benign and malignant neoplasms seen in the respiratory tract, effusions and urine The role of needle aspirate samples from lung, breast, thyroid, salivary gland, lymph node and other sites The structuring of reports and have an appreciation of the clinical uses of cytopathology and the consequence of reports – positive and negative
	Reporting	Correlation with histology where available

CURRICULUM CONTENT FOR STAGE B / ST2

1. GOOD CLINICAL CARE

Objective: to demonstrate adequate knowledge and skills and appropriate attitudes in routine clinical/forensic work appropriate to this stage of training.

The Forensic Histopathology trainee will be expected to reach and be able to demonstrate the knowledge, skills and attributes in surgical pathology, molecular pathology, basic autopsy and cytopathology to the level of completion of stage B of Histopathology training. In effect a year's additional training following the successful completion of stage A training.

SURGICAL PATHOLOGY

The level required is to the end of stage B

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Basic knowledge	Possess sufficient general clinical knowledge including major changes in trends of diagnosis and treatment Possess sufficient knowledge of normal anatomy, physiology and pathophysiology Possess the knowledge contained in and be able to operate within the tissue pathways and datasets documents produced by the Royal College of Pathologists and any updates of these documents	Develop the ability to solve complex clinical (and research, when applicable) problems by applying sound knowledge of basic principles without the requirement always to rely on 'pattern matching'	Understand importance of integration of clinical and pathological data for accurate diagnosis

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Surgical cut-up **('General')**	Understand principles of specimen dissection, macroscopic description and block selection in neoplastic and non-neoplastic disease Stages B–D: understand principles of dissection of all major cancer resection specimens and tissue sampling to enable completion of RCPath's *Standards and Datasets for Reporting Cancers*	Possess sufficient manual dexterity to perform dissection safely and accurately, without damage to tissues	Understand importance of accuracy and requirement for attention to detail during specimen description and block selection Understands importance of ensuring that request form and specimen identification is accurate and the requirement to identify and resolve any errors or discordance

Laboratory processes	Understand the principles of laboratory processing within surgical pathology and cytopathology	Stage A: one week's or equivalent experience of laboratory processing including section cutting	Respect the work of the technical staff in preparing slides for viewing
Surgical reporting ('General')	Understand the principles of microscopy Knowledge of the microscopic features of the range of normality within tissues as well as the major common pathological processes and patterns of disease Stage A: See *Appendix 1*	Be able to set up a microscope with ergonomic safety and operate it effectively Be able to recognise the microscopic features of tissue structure in normality and disease, as appropriate to one's level of experience Able to complete RCPath Standards and Datasets for Reporting Cancers	Understand requirement for attention to detail during surgical reporting and the need for correlation with the clinical situation Demonstrate an understanding of the importance of surgical pathology to clinicians and patients (e.g. timeliness and accuracy of reporting)
Special techniques	Understand principles of 'special' histochemical and immunohisto-chemical methods Understand principles of common molecular pathology techniques Understand principles of electron microscopy	Know when to resort to special techniques Be able to recognise histological features of histochemical and immunohisto-chemical stains in normal and diseased tissues	Understand cost–benefit issues when considering the use of additional techniques Stages B–D: initiate special techniques in preparation of cases

MOLECULAR PATHOLOGY

This section lists the required basic knowledge in molecular methods and their applications, both potential and actual, within Histopathology. The section is focussed on DNA- and RNA-based techniques. The level required is to stage B.

Subject	Knowledge	Skills and knowledge application	Attitudes
Fundamentals of molecular biology	Understanding of the origins and consequences of germline variation and somatic mutations, including DNA methylation and gene expression changes	Ability to understand origins of and justifications for molecular tests	Ability to understand and explain the underlying principles of molecular genetics and molecular pathology
Fundamentals of databases and bioinformatics	Knowledge of basic molecular database	Ability to retrieve relevant data from public sources	Appreciation of state of knowledge and how to update that knowledge
Sample preparation	Knowledge of how histological samples are taken AND prepared, and how nucleic acids are extracted from them	Ability to undertake the appropriate sample collection, retrieval and preparation for the common molecular tests, whether performed on extracted nucleic acid or *in situ*	Ability to relate histological sample types and availability to the molecular analyses which might be performed on them
Molecular techniques	The principles of the most up-to-date molecular methods	Knowledge of sequencing, PCR, microarrays (DNA and RNA), *in situ* hybridisation, mutation detection	Appreciation of the available technologies
Available tests	Knowledge of molecular tests currently performed on histological samples, including the limitations of those tests, and of tests which are anticipated in the near future	Ability to assess the demand for molecular tests and the modes of supply	Appreciation of how molecular methods can contribute to patient care and could do so in the future

BASIC AUTOPSY

This section of the curriculum incorporates the basic autopsy practice competences that all trainees will acquire. It will come from apprenticeship training, reading, formal tuition and the practical experience from the minimum 20 adult autopsies per annum and 2 Paediatric/Perinatal autopsies that all trainees will undertake until satisfactory completion of stage B. The forensic histopathology trainee should have reached, and be able to demonstrate this level before entering the forensic histopathology training programme. Ideally, most of these autopsies would be consented clinical autopsies, where histopathological and other analyses can be pursued to explore the pathologies and pathogeneses that lead to death. In practice, most of the autopsies will probably be medico-legal where the identification and exclusion of unnatural causes of death paramount because the availability of autopsy training opportunities is variable geographically, the educational supervisors and programme directors have a significant role in ensuring that adequate experience is obtained by all trainees.

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Pathological basis of disease	A wide knowledge of the pathological basis of disease and the macroscopic/microscopic pathology of various types of death	Basic standard of practice in the techniques used for identifying morphological abnormalities at autopsy examination	A desire to learn about common disease processes through the autopsy
General	Possess knowledge of anatomy, macroscopic features of major disease processes and common tissue dissection techniques relevant to autopsy practice Have some understanding of the training undertaken by anatomical pathology technologists (APTs) and the role that they can appropriately play within all aspects of the mortuary function (see www.aaptuk.org)	Demonstrate manual dexterity sufficient to perform autopsies safely and to demonstrate the major abnormalities Liaise with the APTs to maximise the autopsy learning opportunities	Be able to identify and address the questions and issues raised by the death Welcome clinicians and other appropriate visitors to the mortuary to share knowledge Demonstrate an understanding of the importance of autopsy findings to clinicians and relatives

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Clinical liaison	Have an understanding of the use of clinical information and the health record in autopsy examination	Be able to interrogate the clinical and laboratory records and understand the utility and limitations associated with various types of investigation including imaging, microbiology and biochemistry Be able to identify issues to be addressed by the autopsy examination	Be conversant with current clinical practice Be able to liaise with clinical colleagues in order to obtain clinical information prior to autopsy
External examination	Familiarity with the RCPath's Best Practice Scenarios, 2005		Not to authorise an evisceration by others without personally examining the body first
Autopsy technique	Have knowledge of, and the ability to perform, autopsies in a variety of situations, such as the following: • cardiac disease of uncertain cause • endocrine/metabolic death • hepatic disease of unknown cause • intra-abdominal disease of unknown cause • neurological disease of unknown cause • renal disease of unknown cause • respiratory disease of unknown cause	Carry out a normal full evisceration Dissect the internal organs Describe the appearances accurately and succinctly Interpret the findings in the light of the clinical information available Present the findings to clinicians either immediately or later at a clinical meeting	
Deaths in the community	Have a basic knowledge of the aims of the autopsy and investigations required where death occurs in the community and there are no suspicious circumstances.		

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Microbiology	Knowledge of those areas of microbiology that are relevant to autopsy practice, e.g. sepsis, meningitis, pneumonia, endocarditis, tuberculosis, viral hepatitis	Ability to take appropriate samples	Ability to think laterally
Histopathology	Knowledge of the autopsy histological appearances of various common fatal conditions	Ability to select appropriate tissue blocks	Ability to think laterally
Other investigations	Knowledge of those areas of haematology, biochemistry, medical genetics and other investigative modalities that are relevant to autopsy practice	Ability to take appropriate samples	Ability to think laterally
Consent and legal obligations	Be conversant with current policy in relation to consent for autopsies and for tissue or organ retention (including the Human Tissue Act 2004) Be conversant with current policy in relation to tissue or organ donation Understand the legal basis of consent to autopsy examination and the circumstances in which consent is not required	Be able to obtain consent for autopsies and for further investigation of tissue or whole organs	Be able to give explanation to families of the reasons for, and – if requested – details of, the investigations required by an autopsy examination Be able to explain to families when tissue or organs may need to be sent away for expert review and options for funeral, disposal, etc Understand issues of autopsy consent, tissue/organ retention and Coroners'/Procurator Fiscals' practice Be aware of religious and cultural sensitivities relating to autopsy

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Health and safety	Be conversant with relevant protocols and documentation of departmental working practices, and be familiar with the practicalities of mortuary practice Have a working knowledge of the regulatory aspects of health and safety issues Be familiar with the documents: *Safe Working and Prevention of Infection in the Mortuary and Autopsy Suite* (Health Services Advisory Commission)	Be able to work in the mortuary in a safe way	Care for the safety of all staff and visitors in the mortuary
Medico-legal issues	Be familiar with the duty to report deaths to the Coroner/ Procurator Fiscal, the preliminary enquiries that may take place through the Coroner/ Procurator Fiscal system and entitlement to attend autopsy examination by interested parties Be conversant with current legislation and regulations relating to medico-legal autopsies and related matters Attend some inquests/Fatal Accident Inquiries to gain passive experience	A working knowledge of the law relating to death, the investigation of death and disposal of the dead (for those in Scotland, relevant documents in the Crown Office and Procurator Fiscal Service)	

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Reports	Familiarity with the RCPath's *Guidelines on Autopsy Practice*	Write a final gross and microscopic report with suitable summaries, according to the RCPath's *Guidelines on Autopsy Practice* Produce finished reports in a timely way	
Teaching	Be aware of the value of the autopsy as a teaching aid	Appropriate teaching skills	Be prepared to teach at every available opportunity
Feedback to families and other interested parties		Communication skills required to inform clinical colleagues and other non-clinical professionals involved in inquiries into deaths and assist in multidisciplinary mortality review	An ability to interpret autopsy findings in the context of past medical history, clinical progression of disease or injury and circumstances of death and an ability to communicate those findings and opinions fully, clearly and simply to those who need explanation of them

CYTOPATHOLOGY

Cervical and non-cervical cytopathology will be part of the general histopathology curriculum and assessment processes for stages A and B of training. Following successful completion of these stages, cervical cytopathology will be available as an optional training package, equivalent to 3 months of training. Histopathology relating to cervical screening and non-cervical cytopathology will continue to be part of the higher stages of the general histopathology curriculum and assessment processes.

Cervical cytology (stage B)

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Cervical screening programme	Rationale, methodology and organisation of the CSP Basic understanding of roles of component organisations, failsafe	Ability to source information on the CSP	Understand the importance of the CSP to the population
Specimen adequacy	Knowledge of features that are assessed to determine the adequacy of a cervical sample	Understand difficulties in producing rigid criteria for adequacy. Ability to recognise inadequate specimens	
Infections	Knowledge of features of infections in cervical samples.	Recognise typical morphological appearances of specific organisms commonly seen in cervical specimens, e.g. *Trichomonas*, *Candida*, herpes simplex, human papilloma virus, actinomyces	Understanding of the psychological effects on women of diagnosis of infections
Borderline nuclear changes	Understanding of criteria for diagnosis of borderline nuclear changes		Understanding of significance of diagnosis to women Awareness of uncertainty in diagnosis in some cases Awareness of the dangers of overcalling and under calling

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Dyskaryosis	Understand criteria for diagnosis and grading of squamous and glandular dyskaryosis	Recognise typical examples of mild, moderate and severe squamous dyskaryosis and endocervical cellular abnormalities	
Squamous carcinoma and adenocarcinoma	Knowledge of criteria for diagnosis of possibly invasive lesions	Recognise typical malignant cells of squamous, endocervical, endometrial and ovarian origin	
New technologies in cervical screening	Basic knowledge of automated screening devices and HPV testing Be aware of the process involved in approving new technologies for use in cervical screening		

Histopathology relating to cervical screening

The forensic histopathology trainee will be expected to have met and be able to demonstrate cervical screening knowledge, skills, attributes and techniques appropriate to the end of stage B training.

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Management of women with cervical smear abnormalities	Understanding of the NHS screening programmes as a patient centred multidisciplinary approach		
Audit (specific to screening programmes)	Knowledge of process of audit in cervical and breast screening Basic knowledge of guidelines for audit of invasive cervical cancer Awareness of quality assurance team	Demonstrate the ability to undertake clinical audit, normally by performing at least one clinical audit project per stage of training	Ethos of audit, openness and disclosure in cervical screening
New technologies	Keeping up with new developments through journals and other media		Culture of lifelong learning

Non-cervical cytology

The forensic histopathology trainee will be expected to have met and be able to demonstrate knowledge, skills, attributes and techniques in non-cervical cytology proportional to the end of stage B training.

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Technical aspects	Knowledge of preparation and staining techniques for common specimen types Knowledge of use of special techniques, e.g. immunocytochemistry	Ability to recognise faults and artefacts of preparation, e.g. air-drying Panels of antibodies for particular diagnostic applications, e.g. mesothelioma	Ability to work with BMS staff
Diagnosis	Features of malignancy in sites commonly investigated with cytopathology Features of specific non-malignant diagnoses, e.g. infection	Ability to diagnose malignancy with confidence in specimens from breast, gastrointestinal (GI) tract, respiratory tract, urinary tract, head and neck, lymphoreticular system, serous fluids and thyroid Ability to integrate clinical information and histology or other investigations into diagnosis Ability to recognise when definitive diagnosis is beyond capability	Care and attention to detail Acknowledgement of personal limitations Awareness of work within a multidisciplinary team Able to investigate discrepancies between histology and cytology findings
Reporting	Requirements for a report Relevant datasets Nationally recognised coding systems	Ability to write an accurate report that gives clinicians the information they need Knowledge of the likely outcome in terms of further investigation or management of the patient	Understand multidisciplinary approach to diagnosis and management Able to present cytological findings at a multidisciplinary team meeting

CURRICULUM CONTENT FOR STAGES C – D / ST3-6

Specialist areas of Forensic Histopathology training

After entering the Forensic Histopathology training programme, the trainee will be expected to attain the following knowledge, skills and competencies:

1. GOOD CLINICAL CARE

The basic autopsy component of the curriculum contains the basic knowledge and most of the attitudes required also for advanced autopsy training. However, forensic histopathology trainees will be required to demonstrate a high level of knowledge and expertise within all areas of autopsy practice, including autopsies in complex post-operative deaths, deaths in the community, non- natural deaths and homicides. The trainee will also need to acquire the knowledge, skills and attributes necessary to assess scenes of death, produce high quality medico-legal reports and opinions and give effective, balanced oral evidence in court. Relevant paediatric and neuropathology training and experience will also be required along with injury interpretation. The generic skills and attitudes for practice as a consultant pathologist will need to be acquired by the end of stage D. Trainees will require to have undertaken a total of 300 or more post-mortem examinations by the date of their CCT. These will include a wide and proportionate range of all types of cases.

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Pathological basis of disease	An extensive knowledge of the pathological basis of disease and the macroscopic/microscopic pathology of various types of death Knowledge of the literature relating to controversial issues and to difficulties in interpreting subjective changes is necessary. Have a broad knowledge of techniques used in identifying morphological abnormalities	A high standard of practice in the techniques used for identifying morphological abnormalities at autopsy examination Practice at integrating multiple co-morbidities to fully explain a death	A desire to learn about common & less common disease processes through the autopsy Acceptance of uncertainty in determining the cause of death in some scenarios Willingness to discuss difficult cases with colleagues to optimise the diagnostic outcome

General	Possess a wide knowledge of anatomy, macroscopic features of major disease processes and common tissue dissection techniques relevant to autopsy practice	Demonstrate manual dexterity sufficient to perform complex autopsies safely and to demonstrate the major abnormalities	Be able to identify and address the questions and issues raised by the death Be responsible for identification of the deceased and to take ultimate responsibility for this

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
General continued	Have a good understanding of the training undertaken by anatomical pathology technologists (APTs) and the role that they can appropriately play within all aspects of the mortuary function (see www.aaptuk.org)	Liaise with the APTs to maximise the autopsy learning opportunities	Welcome clinicians and other appropriate visitors to the mortuary to share knowledge Demonstrate an understanding of the importance of autopsy findings to clinicians and relatives.
Clinical liaison	Have a good understanding of the use of clinical information and the health record in autopsy examination and understand the limitations placed on dissemination of autopsy examination information to third parties	Be able to interrogate the clinical and laboratory records and understand the utility and limitations associated with various types of investigation including imaging, microbiology and biochemistry Be able to identify issues to be addressed by the autopsy examination	Be conversant with current clinical practice Be able to liaise with clinical colleagues in order to obtain clinical information prior to autopsy Know the main side effects of common treatments and the major complications of most surgical procedures
External examination	Familiarity with the RCPath's *Guidelines on Autopsy Practice* and *Best Practice Scenarios*, 2005, along with the Codes of Practice and Performance Standards for Forensic Pathologists in England and Wales and Scotland.	The ability to describe succinctly and correctly the different forms of injury, look for external signs of natural and unnatural death and distinguish between genuine lesions and post-mortem artefact Practice at evaluating the morphological effects of resuscitation	Not to authorise an evisceration by others without personally examining the body first

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Advanced Autopsy technique	Have knowledge of, and the ability to perform, autopsies in a variety of situations, such as the following: • cardiac disease of uncertain cause • death after a period of intensive care • death associated with the use of potentially toxic therapeutic agents (e.g. anticoagulants, opiates, cytotoxics, etc.) • endocrine/metabolic death • hepatic disease of unknown cause • intra-abdominal disease of unknown cause • neurological disease of unknown cause • renal disease of unknown cause • respiratory disease of unknown cause • deaths related to anaphylaxis • the dissection of and testing of medical appliances, such as intravascular lines, drains and pacemakers	Carry out a normal full evisceration Dissect the internal organs Describe the appearances accurately and succinctly Interpret the findings in the light of the clinical information available Present the findings to e.g. police officers, clinicians and/or other investigators either immediately or later at a clinical or forensic meeting Ensure that special dissections are made in appropriate circumstances Have skills in techniques used in perioperative autopsies and autopsies following death in hospital, in a variety of situations such as: • iatrogenic deaths • intraoperative deaths • neurosurgical deaths • post-abdominal surgery deaths • post-cardiac surgery deaths • sudden unexpected death in hospital and the exclusion of hospital homicide • vascular surgery deaths	Desire to keep up to date with medical advances and their consequences for autopsy practice

Forensic scene assessment	Detailed knowledge of death scene investigation and familiarity with common scenarios Knowledge of the respective roles of the coroner/procurator fiscal, the police, the senior investigating officer, the crime scene manager, the scene of crime officer and the forensic scientist Knowledge of what to record at a scene, features to be sought and the taking and interpretation of temperatures, samples and trace evidence. How to minimise DNA contamination and how to examine and remove a body safely Knowledge of the use of other experts such as archaeologists, entomologists, odontologists and other, specialised forensic scientists	Ability to practise at crime scenes within expertise and to recognise need for other expertise Ability to retrieve trace evidence and formulate strategies for appropriate investigation and prioritisation of activities	Understands need for investigation of scenes by multidisciplinary team using appropriate expertise Understands the need to practise safely, and aims to maintain the dignity of the deceased and the privacy of the bereaved Understands the need for attention to detail and correlation with history Understands need for demonstration of continuity and disclosure Understands the benefits of working in a team
Forensic injury interpretation	Has a thorough knowledge of the typical patterns and appearances of injuries both in the living and the dead	Is able to describe, document and interpret injuries and recognise the significance in a medico-legal setting Aware of the need for medico-legal consent in clinical examination.	
Forensic Autopsy	Knowledge of forensic post-mortem	Able to carry out all required techniques	Works methodically and with attention

Practice	examination techniques e.g. facial dissection, eye removal, investigation of vertebral artery trauma Knowledge of the findings in homicides, suicides, accidents, the examination of skeletal or decomposed remains, mass disaster, maternal death, infant death, industrial and transportation deaths and deaths where other suspicious circumstances apply A knowledge of the aims of the autopsy in a range of other community deaths including alcohol misuse, fire deaths, the various types of asphyxial deaths, poisoning and drowning Knowledge of the investigation of hospital homicide, deaths following alleged medical negligence and a comprehensive knowledge of the effects of and complications of, medical treatment Detailed knowledge of autopsy histopathology (see appendix 1b) Knowledge of the Codes of Practice and Performance Standards for forensic pathology Knowledge of basic toxicology and pharmacokinetics including tolerance and post-mortem redistribution. Awareness of drug interactions, side effects, potential adverse reactions, toxic and fatal effects. Knowledge of	Able to detect abnormalities and interpret them correctly Able to record findings accurately and contemporaneously and to archive them appropriately Able to recognise and interpret the significance of all important microscopic tissue findings and lesions in autopsy practise including those with forensic relevance Able to provide appropriate samples and information Able to interpret drug levels and place them in a clinical and forensic context, in relation to the autopsy and clinical findings Able to provide appropriate samples and information. Able to interpret results within their clinical context Able to define roles and responsibilities when involving other expertise Able to apply the Codes of Practice and Performance Standards in Practice	to detail Develops and carries out defined strategies Able to refine or modify approach, as necessary Recognises own limitations and is able, where appropriate, to seek advice and assistance from others Understands need for confirmation and detailed documentation of positive and negative findings Recognises the central importance of histology in medico-legal post-mortem investigation Understands contextual nature of drug level interpretation and the need in selected cases for expert referral Uses adjunctive tests appropriately and can seek specialist assistance where necessary Distinguishes own field of expertise

	circumstances in which toxicological examination might be appropriate Knowledge of microbiology and virology that is relevant to autopsy practise such as sepsis, meningitis, pneumonia, endocarditis, tuberculosis, viral hepatitis, HIV disease Knowledge of the use of biochemistry, immunology, haematology and medical genetics in post-mortem examinations Knowledge of circumstances and findings requiring input from other experts Familiarity with imaging methods; thorough knowledge of their uses in autopsy practice Knowledge of appropriate investigation of families following deaths which may have a genetic basis (such as sudden cardiac death in the young)		from that of others Awareness of implications for other family members and a willingness to advise on appropriate screening/counselling services.
Forensic Neuropathology	A high standard is expected for the following areas: • The normal brain and spinal cord • Techniques for the removal and preservation of the brain, spinal cord and eye • Dissection, macroscopic and microscopic pathology of: • trauma/ischaemia/hypoxia/hypoglycaemia		

Forensic Paediatric Pathology	• sudden death of 'CNS origin' including deaths associated with epilepsy and other longstanding neurological disorders • alcohol, drugs of abuse and carbon monoxide Emphasis when assessing this will not be exclusively on correctness of diagnosis but to a significant degree on the identification of the abnormal, the instigation of appropriate strategies for further investigations and referral Knowledge of microbiology and virology that is relevant to neuropathology autopsy practise such as sepsis, meningitis, pneumonia, endocarditis, tuberculosis, viral hepatitis, HIV disease A high standard is expected for the following areas: • post-mortem techniques in paediatric pathology • Sudden Unexpected Death in Infancy (SUDI)/Sudden Infant Death Syndrome (SIDS) • other sudden, natural deaths (including those related to inherited disease) In addition, the following specific areas are included: • protocols for multi-agency investigation protocols for post-mortem examination sampling • examination for soft tissue injury		Understands the value of working with paediatric pathologists, neuropathologists and other members of a multidisciplinary team in appropriate cases such as deaths where non accidental injury is suspected

	(dissection, microscopy and ageing) • examination for fracture (dissection, removal, microscopy and ageing) to include skull, ribs and metaphyses • examination of the eyes (removal, dissection and microscopy for haemorrhage) • inflicted and accidental infant injury and non-accidental head injury, the examination of found fetal/neonatal remains and the determination of livebirth, age at 'death' and time since death		

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Consent and Legal Issue	Be conversant with current issues in relation to consent and the autopsy and clinical examination for medico-legal purposes (including the Human Tissue Act 2004) Be conversant with current policy in relation to tissue or organ donation Understand the legal basis of consent to autopsy examination and the circumstances in which consent is not required Be able to advise as to when an autopsy is not necessary or when its aims might be fulfilled by a limited examination.	Be able to obtain consent for retention of tissue for further investigation Be able to facilitate organ donation in appropriate cases	Be able to give explanation to families of the reasons for, and – if requested – details of, the investigations required by an autopsy examination Be able to explain to families when tissue or organs may need to be sent away for expert review and options for funeral, disposal, etc Understand issues of autopsy consent, tissue/organ retention and Coroners'/Procurator Fiscals' practice Understands the value of communication with the Coroner/Fiscal/families

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Health and safety	Knowledge of risks posed by bodies at scenes and in the post-mortem room Be conversant with relevant protocols and documentation of departmental working practices, and be familiar with the practicalities of mortuary practice Have a working knowledge of the regulatory aspects of health and safety issues, sufficient to be able to draw up a mortuary policy	Able to recognise hazards; perform risk assessments and identify safe systems of work in the individual case Be able to work at the scene and in the mortuary in a safe way	Take an active interest in safe working practices for all staff and visitors to the mortuary and at the scene Encourage by example the adoption of safe working practices by all staff.

	Be familiar with the document Safe Working and Prevention of Infection in the Mortuary and Autopsy Suite (Health Services Advisory Commission). Have some understanding of the design concepts of a modern mortuary. These are inextricably linked to health and safety issues. NHS Estates Building Note 20 specifically covers advice for modern mortuary design.		

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Medico-legal issues	Detailed knowledge of the Coroner and Procurator Fiscal systems in the UK (weighted towards area of practice) and an awareness of different systems abroad. This would include knowledge of the requirement to report certain categories of death, the preliminary enquiries that may take place through the systems and entitlement to attend autopsy examination by interested parties A detailed knowledge of appropriate guidelines and Codes of Practice relating to medico-legal post-mortem examinations Knowledge of the practicalities associated with/ and requirements for identification of bodies Detailed knowledge of the various techniques available for confirming or establishing identification Knowledge of police powers to seize and retain material Detailed knowledge of the retention of materials that may be required by the coroner/fiscal and/or police and the appropriate legislation Awareness of the need to facilitate where appropriate the removal of tissues for	Ability to practise informed by legal requirements and ethical principles Able to operate to relevant professional standards and within any codes of practice agreed or published by the College, specifically the Standards as set out in the Code of Practice Ability to practise informed by the coroners rules and Acts, Police and Criminal Evidence Act, Criminal Procedure and Investigations Act and other relevant law, regulation or policy Ability to give evidence honestly, impartially, clearly and simply	An impartial stance and a commitment to justification of any opinion from a balanced interpretation of medical literature A commitment to best autopsy practice Ability to incorporate changes in medico-legal practice and reform as they take place Understands the role of the expert witness in the court and criminal judicial systems Understands the value of uniform standards and the importance of practicing within agreed parameters Understands the importance of integrity and continuity of evidence, security of records, notes and samples and disclosure

	transplantation depending on the nature of the case A detailed knowledge of the legislative background to the investigation of death and authoritative guidelines or current policy related to death, disposal, certification, post mortem examination, consent, confidentiality, tissue retention, use of the health record, transplantation and regulation of the medical profession. This would include The Coroners' and Justice Act 2009, The Coroners (Investigation) Regulations 2013; The Coroners (Inquest) Regulations 2013 and any amendments and the Human Tissues Acts (2004 – England and Wales and 2006 – Scotland) and regulations pertaining to the Human Tissue Authority. Knowledge of the UK criminal and civil courts procedures, the roles of the prosecution and defence and the rules of evidence. Detailed knowledge of UK law relating to criminal evidence and of appropriate practices relating to report writing, notes, communications, materials and retained samples Knowledge of the role of the expert witness and the obligations placed on expert witnesses. Knowledge of the use of visual aids in the giving of testimony		

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Reports and opinion	A knowledge of College documents relating to the production of autopsy report Detailed knowledge of the RCPath's Guidelines on Autopsy Practice and Best Practice Scenarios, 2005 along with the Codes of Practice and Performance Standards for Forensic Pathology Knows how an expert is defined and what is required of the expert by the courts Knowledge of requirements for reports in Criminal Codes (Part 19, Criminal Procedure Rules and Part 19 Criminal Practice Directions	Write a final gross and microscopic report with suitable summaries, according to the RCPath's Guidelines on Autopsy Practice and in forensic cases according to the Codes of Practice and Performance Standards for Forensic Pathology Produce finished reports in a timely way Produce reports that address the issues and questions raised by a death, with acknowledgement of limitations as appropriate in respect of available evidence and consideration of other possible explanations and/or causes of death for the pathological findings	Caution in reiterating medical histories, especially where sensitive personal information is concerned An impartial stance and a commitment to justification of any opinion from a balanced interpretation of medical literature Understands the need to demonstrate the basis of expertise and its continuing validity, to keep within expertise and to justify opinion
Photography	See current GMC[1]and Home Office guidelines and the RCPath's Guidelines on Autopsy Practice	Be able to use a camera Be able to direct the appropriate taking of photographs illustrating injuries and other pathological findings	Be aware of confidentiality issues Be aware of the value of photography in illustrating autopsy findings to the court and other experts.

Teaching	The value of the autopsy as a teaching aid including to undergraduate and postgraduate students	Develop appropriate teaching skills	Be prepared to teach whenever feasible.
Communication	Knowledge of the use of, and limitations of, conferences and briefings. Appropriate conduct and record keeping in such meetings Knowledge of the value of visual and other aids in the presentation of complex issues	Ability to communicate clearly and authoritatively in stressful situations and to develop clear and sensible demarcation of responsibility within the multidisciplinary team involved in suspicious death investigation	Recognises the needs of the service including the Coroner/Procurator Fiscal, police, courts, doctors, bereaved specifically in understanding pathological findings and the opinions derived from them

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Inquests/ Fatal Accident Inquiries (FAI) and higher courts	Have a working knowledge of judicial process particularly within the Coroner's court and the FAI and the Crown and High Courts including the role of the pathologist/medical witness	Practical experience of judicial inquiries into deaths Be familiar with inquest/FAI procedures. Have experience observing and if appropriate giving evidence in Court including Crown/High Court and inquests/FAIs	Can maintain an impartial stance Skilled presentation of complex issues in a manner that is easily understood Recognises role as provider of information to the court and limitations of expertise An ability to identify public interest issues and to facilitate any investigations or opinions whose need is made clear by results of autopsy examination but which fall outside personal expertise
Feedback to families and other interested parties		Communication skills required to inform clinical colleagues and other non-clinical professionals involved in inquiries into deaths and assist in multidisciplinary mortality review	An ability to interpret autopsy findings in the context of past medical history, clinical progression of disease or injury and circumstances of death and an ability to communicate those findings and opinions fully, clearly and simply to those who need explanation of them Awareness of the needs and expectations of family members and be prepared to provide information when requested

Future developments	Have a knowledge of the concepts that underpin continuing professional development, revalidation and quality assurance Maintain an awareness of developments in the field and in legislation and regulations, that may lead to developments of or changes in practice	Be able to produce an appraisal portfolio, including Personal Development Plan	Approach appraisal in a positive and constructive fashion Be aware of the importance of maintaining Principles of Good Medical Practice as defined by the GMC Be aware of the importance of relicensing

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Audit (specific to autopsy)	Have knowledge of the role of confidential enquiries in the investigation of certain categories of death – National Confidential Enquiry into Patient Outcome and Death (NCEPOD), Confidential Enquiry into Maternal and Child Health (CEMACH) and Confidential Enquiry into Suicide and Homicide (CESH) – and the role of the autopsy within those investigations is necessary. Knowledge of value of auditing of post-mortem reports at both local and national level Have knowledge of the role of the critical conclusions check, corroboration, EQA and the second autopsy	Know where to find relevant information from the UK and other professional pathology associations elsewhere in the world Develop a critical approach to autopsy reports and how well they address the questions raised by a death Able to constructively review post-mortem reports	Review report in a fair and constructive manner Provides information and support to facilitate further examinations of the body and related materials e.g. case reviews or second autopsies

Health determinants and inequalities

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Nationality and culture	Recognise that good health includes both mental and physical health Recognise the relationship between health inequalities and wealth inequalities Be aware of social and cultural issues and practices such as: the impact of cultural beliefs and	Communicate effectively with patients from diverse backgrounds and those with special communication needs, such as the need for interpreters, etc Communicate effectively and respectfully with parents, carers, etc	Recognise issues of health that are related to social class

	practices on health outcomes health determinants that affect patients and communities the effects of social and cultural issues on access to healthcare, including an understanding of health issues of migrants and refugees Be aware of the national and international situation regarding the distribution of disease, the factors that determine health and disease, and major population health responses Be aware of the impact of globalisation on health, major causes of global morbidity and mortality, and effective and affordable interventions to reduce these Be aware of the impact on health of armed conflict, natural disasters and other social upheavals		

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Inequality and discrimination/ stigmatising	Be aware of the impact on health of armed conflict, natural disasters and other social upheavals Understand the implications of disability discrimination legislation for healthcare Recognise how health systems can discriminate against patients from diverse backgrounds, and how to work to minimise this discrimination. For example in respect of age, gender, race, culture, disability, spirituality, religion, and sexuality Recognise the stigmatising effects of some illnesses and work to help in overcoming stigma Recognise that people can be denied employment opportunities unnecessarily through myths, stigma, dogma and insufficient advocacy and support; be aware of the role of doctors and other services in combating this inequality Recognise the effects of exclusion and discrimination on physical and mental health	Respect diversity and recognise the benefits it may bring, as well as associated stigma Be aware of the possible influence of and sensitively include questions about socio-economic status, household poverty, employment status and social capital in taking a medical history Assess a person's ability to access various services in the health and social system and offer appropriate assistance Help to empower patients and negotiate complex systems to improve health and welfare including, where appropriate, the right to work Where values and perceptions of health and health promotion conflict, facilitate balanced and mutually respectful decision-making Identify and communicate effectively with influential decision-makers/facilitators of change	Respect diversity of status and values in patients and colleagues Adopt assessments and interventions that are inclusive, respectful of diversity and patient-centred

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Personal beliefs and biases	Recognise that personal beliefs and biases exist and understand their impact (positive and negative) on the delivery of health services Be aware of the impact of globalisation on health, major causes of global morbidity and mortality, and effective and affordable interventions to reduce these Be aware of similarities and distinctions between the beliefs and values of the doctor, the patient and the policy-makers	Recognise in routine practice the doctor's role as advocate and manager Advocate and facilitate appropriate self-care Recognise and be able to address the social, biological and environmental determinants of health (the bio-psycho-social model or the bio-socio-psycho-existentialist model) and collaborate with other professionals	Be confident and positive in one's own professional values Accept uncertainty Be aware of one's own behaviour and how it might impact on patients' health issues

Values, ethics and law	Ensure that all decisions and actions are in the best interests of the patient and the public good Be familiar with and uphold the rights of children and vulnerable adults Be familiar with and uphold the rights of disabled people to participate in healthy and rewarding employment Practise in accordance with an appropriate knowledge of contemporary legislation Act with appropriate professional and ethical conduct in challenging situations	Seek out and utilise opportunities for health promotion and disease prevention Based on an understanding of risk, be able to apply epidemiological principles and public health approaches so as to reduce and prevent disease and improve the health of populations Recognise important issues in preventative healthcare, for example in sexual health, substance abuse etc, and take opportunities to raise these issues in health promotion. For example, explain to parents who smoke the health risk that this poses to their children, including the effects of smoking on those exposed *in utero*	Respond to people in an ethical, honest, and non-judgmental manner Use appropriate methods of ethical reasoning to come to a balanced decision where complex and conflicting issues are involved

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Policy, research and change	Be aware of current UK screening programmes Be aware of issues that might affect health inequalities that are currently under debate regarding changes in the NHS, including the public policy process Be aware of and maintain an up to date knowledge of research evidence regarding the most important determinants of health Know how to access and use local health data Know how to access resources for community action and advocacy (e.g. resources, legislation, policy documents)	Be able to access and make use of appropriate population, demographic, socio-economic and health data Conduct an assessment of community health needs, and where appropriate apply these in practice	

2. MAINTAINING GOOD MEDICAL PRACTICE

Objective: to keep knowledge and skills and appropriate attitudes up to date.
New specialists will:

- take responsibility for and keep up-to-date in their own relevant professional and self-development, and facilitate that of others
- acknowledge that the balance of their skills and expertise will change as their careers progress and they specialise in certain areas of clinical practice
- trainees should hold at least one position of responsibility during training and attend at least one management course.

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Overall clinical judgement	Demonstrate sufficient clinical and pathology knowledge to enable integration of clinical data, medico-legal findings and pathological features	Correctly interpret test results and autopsy findings in the context of available clinical and background information	Critically appraise the available clinical and laboratory data in coming to diagnostic/treatment decisions
Recognise own limitations	Be aware of the extent of one's own limitations and know when to ask for advice		Consult and admit mistakes
Written records	Demonstrate knowledge of the appropriate content of clinical records Recognise the problems faced by people for whom English is not a first language Recognise the problems faced by people with educational and/or physical disabilities	Produce accurate reports with clear conclusions and other written correspondence	Reflect the importance of timely dictation, cost-effective use of medical secretaries and the growing use of electronic communication Be aware of the need for prompt and accurate communication with clinicians, investigating and legal personnel

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Decision making	Demonstrate in practice the clinical and forensic priorities for investigation and management	Analyse and manage clinical and medico-legal problems effectively	Be flexible and willing to change in the light of changing conditions/information Ask for help when necessary
Life-long learning	Demonstrate in practice the importance of continuing professional development	Recognise and use learning opportunities Use the potential of study leave to keep one up to date Able to maintain a professional portfolio Monitor own performance through audit and feedback	Be self-motivated and eager to learn Show willingness to learn from colleagues and to accept constructive feedback

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Good use of information technology	Use email, internet, fax and telephone Apply the principles of how to retrieve and utilise data recorded in clinical systems Apply the principles of literature searching using medical databases Demonstrate an understanding of the range of possible uses for clinical data and information and appreciate the dangers and benefits of aggregating clinical data Define the main features, responsibilities and liabilities in the UK and Europe pertaining to confidentiality Correctly apply the principles of healthcare-related coding systems, e.g. diagnostic coding within histopathology reports Demonstrate an understanding of the range of possible uses for clinical data and information and appreciate the advantages and disadvantages of aggregating clinical data Define the main features, responsibilities and liabilities in the UK and Europe pertaining to confidentiality	Demonstrate competent use of database, word processing and statistics programmes Find, access and evaluate websites and health-related databases (including literature searches) Apply the principles of confidentiality in the context of IT. Use digital imaging devices effectively and manage image resolution and colour-space Use videoconferencing and telepathology equipment when necessary Use data encryption and passwords appropriately Use coding systems effectively	Be prepared to use IT tools within a diagnostic and, where relevant, research setting e.g. video-conferencing and telepathology systems, however the pathologist must be fully aware of the issues around disclosure Demonstrate an understanding of the importance of accurate diagnostic coding Keep up-to-date with new developments within IT that are pertinent to histopathology Be prepared to invest time and effort in learning new IT skills as appropriate to one's role Be aware of ethical issues that might arise during the use of IT tools such as patient databases

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Good use of information technology (cont'd)	Apply the principles of videoconferencing and telepathology, including a recognition of the strengths and pitfalls of these systems		
The organisational framework for clinical governance and its application in practice	Demonstrate an understanding of these important aspects of clinical governance: • medical and clinical audit • research and development • integrated care pathways • evidence-based practice • clinical effectiveness • clinical risk systems • the procedures and the effective action when things go wrong in one's own practice or that of others • complaints procedures • risk assessments Explain the benefits a patient might reasonably expect from clinical governance	Be an active participant in clinical governance Undertake medical and clinical audit Be actively involved in audit cycles Be active in research and development Critically appraise medical data research Practise evidence-based medicine Aim for clinical effectiveness (best practice) at all times Educate self, colleagues and other healthcare/medico-legal professionals Deal with complaints in a focused and constructive manner Learn from complaints	Make the care of your patient your first concern Respect patients' privacy, dignity and confidentiality Be prepared to learn from mistakes, errors and complaints Recognise the importance of teamwork Share best practice with others

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Risk management	Demonstrate appropriate knowledge of such matters as health and safety policy, policies on needle stick injuries, note keeping, communications and staffing numbers Demonstrate appropriate knowledge of risk management issues pertinent to laboratory processing Demonstrate appropriate knowledge of risk assessment, perception and relative risk Be familiar with the complications and side effects of treatments and investigations	Confidently and authoritatively discuss relevant risks with patients and to obtain informed consent Balance risks and benefits with patients	Respect and accept patients' views and choices Be truthful and admit error to patients, relatives and colleagues
Evidence	Demonstrate an understanding of: • the principles of evidence-based medicine • types of clinical trial • types of evidence	Critically appraise evidence Be competent in the use of databases, libraries and the internet Discuss the relevance of evidence with individual patients or their families	Display a keenness to use evidence in the support of patient care and own decisions therein
Clinical audit	Competently utilise the audit cycle, data sources and data confidentiality Understand the principles of internal and external quality assurance	Be involved in ongoing audit Initiate and complete at least one clinical audit project per year (of which one may be in cytopathology)	Consider the relevance of audit to benefit patient care and individual performance (i.e. to clinical governance)

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Guidelines	Compare the advantages and disadvantages of guidelines	Demonstrate the ability to utilise guidelines Be able to contribute to the evolution of guidelines	Show regard for individual patient needs when using guidelines Show willingness to use guidelines as appropriate
Clinical audit	Describe the structure of the NHS, primary care groups and hospital Trusts Describe the local Trust's management structure (including chief executives, medical directors, clinical directors and the pathology laboratory) Explain finance issues in general in the NHS, especially budgetary management and commissioning Explain the importance of a health service for the population	Demonstrate developing skills in managing change and managing people Demonstrate developing interviewing techniques including those required for performance reviews Build a business plan Utilise one's position in the NHS to best effect	Show an awareness of equity in healthcare access and delivery Demonstrate an understanding of the importance of a health service for the population Show respect for others, ensuring equal opportunities

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Relevance of outside bodies	Demonstrate a knowledge and understanding of the role and relevance to professional life of: • The Medical Royal Colleges • General Medical Council (GMC) • Postgraduate Dean and Deaneries Clinical Pathology • Accreditation (UK) Ltd • Defence unions • British Medical Association (BMA) • Specialist societies • Home Office • College of Policing • Pathology Delivery Board, Registration Training and Disciplinary Functions of the Home Office • Crown Office and Procurator Fiscal Service • Public Prosecution Service for Northern Ireland (PPs) • NPCC • Forensic Science Regulator and Forensic Pathology Specialist Group • The Ministry of Justice • The Crown Prosecution Service • The Coroners' Society • Chief Coroner • Human Tissue Authority (HTA) • Criminal Cases Review Commission (and Scottish equivalence)	Recognise situations when it would be appropriate to involve these bodies and individuals	Be open to constructive criticism Accept professional regulation

	Demonstrate knowledge of central government health regulatory agencies [e.g. National Institute for Health and Clinical Excellence (NICE), Healthcare Commission (HCC), Care and Quality Commission (CQC), NHS Quality Improvement Scotland, National Patient Safety Agency (NPSA)]		
Media awareness	Recognise situations when it may be appropriate to implement such training and/or seek further advice from the Trust		Act professionally Be willing to ask for help

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Planning	Demonstrate knowledge of the structure, financing and operation of the NHS and its constituent organisations • ethical and equality aspects relating to management and leadership, e.g. approaches to use of resources/rationing; approaches to involving the public and patients in decision-making • business management principles: priority setting and basic understanding of how to produce a business plan • the requirements of running of a department, unit or practice relevant to the specialty Explain the concept of and principles of good information governance Maintain information security, including use of passwords and data encryption Demonstrate a working knowledge of the range of pathology-related material available on the internet Be able to find and evaluate specific resources, including molecular, image and text data Be aware of web-based IT tools	Develop and implement protocols and guidelines Analyse feedback and comments and integrate them into plans for the service	Demonstrate an awareness of equity in healthcare access and delivery

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Managing resources	Demonstrate an effective knowledge of: • efficient use of clinical resources in order to provide care • commissioning, funding and contracting arrangements relevant to the specialty • how financial pressures experienced by the specialty department and organisation are managed	Demonstrate the ability to: • use clinical audit with the purpose of highlighting resources required • manage time and resources effectively in terms of delivering services to patients	Show a commitment to the proper use of public money and take action when resources are not used efficiently or effectively Demonstrate awareness that in addition to patient specific clinical records, clinical staff also have responsibilities for other records (e.g. research)
Managing people	Demonstrate knowledge of: • relevant legislation (e.g. equality and diversity, health and safety, employment law) and local human resource policies • the duties, rights and responsibilities of an employer, and of a co-worker (e.g. looking after occupational safety of fellow staff) • individual performance review purpose, techniques and processes, including difference between appraisal, assessment and revalidation	Demonstrate the ability to: • prepare rotas; delegate; organise and lead teams • contribute to the recruitment and selection of staff • contribute to staff development and training, including mentoring, supervision and appraisal	Demonstrate: • a willingness to supervise the work of less experienced colleagues • commitment to good communication whilst also inspiring confidence and trust
Managing performance	Demonstrate knowledge of: • organisational performance management techniques and processes • how complaints arise and how they are managed	Demonstrate the ability to: • use and adhere to clinical guidelines and protocols, morbidity and mortality, reporting systems, and complaints management systems • improve services following evaluation/performance management	Respond constructively to the outcome of reviews, assessments or appraisals of performance Demonstrate an understanding of the needs and priorities of non-clinical staff

Identifying the contexts for change	Summarise: • the responsibilities of the various Executive Board members and Clinical Directors or leaders • the function and responsibilities of national bodies, such as DH, HCC, NICE, NPSA, NCAS; Royal Colleges and Faculties, specialty-specific bodies, representative bodies; regulatory bodies; educational and training organisations	Discuss the local, national and UK health priorities and how they impact on the delivery of healthcare relevant to the specialty Identify trends, future options and strategy relevant to the specialty and delivering patient services	Comply with national guidelines that influence healthcare provision Willingly articulate strategic ideas and use effective influencing skills
Applying knowledge and evidence	Demonstrate knowledge of: • patient outcome reporting systems within the specialty, and the organisation and how these relate to national programmes • research methods and how to evaluate scientific publications including the use and limitations of different methodologies for collecting data	Demonstrate the ability to: • compare and benchmark healthcare services • use a broad range of scientific and policy publications relating to delivering healthcare services	Evaluate issues and potential solutions before acting

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Making decisions	Demonstrate knowledge of: • how decisions are made by individuals, teams and the organisation • effective communication strategies within organisations	Demonstrate the ability to: • prepare properly for meetings – reading agendas, understanding minutes, action points and doing background research on agenda items • work collegiately and collaboratively with a wide range of people outside the immediate clinical setting	Demonstrate: • an appreciation of the importance of involving the public and communities in developing health services • willingness to participate in decision-making processes beyond the immediate clinical care setting
Evaluating impact	Demonstrate an understanding of: • impact mapping of service change • barriers to change • qualitative methods to gather the experience of patients and carers	Demonstrate the ability to: • evaluate outcomes and re-assess the solutions through research, audit and quality assurance activities • understand the wider impact of implementing change in healthcare provision and the potential for opportunity costs	Demonstrate a commitment to implementing proven improvements in clinical practice and services obtain the evidence base before declaring effectiveness of changes adopt attitudes and behaviours that assist dissemination of good practice

3. TEACHING AND TRAINING, APPRAISING AND ASSESSING

Objective: to demonstrate the knowledge, skills and attitudes to provide appropriate teaching and to participate in effective research.
New specialists will:

- be able to demonstrate the potential to teach and train effectively at all levels of undergraduate and postgraduate education where required
- demonstrate skills and strategies in the process of feedback to colleagues and trainees, ensuring positive and constructive outcomes
- be capable of judging competence and professional attributes in others.

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
To have the skills, attitudes and practices of a competent teacher	To have the skills, attitudes and practices of a competent teacher	Identify adult learning principles Identify learner needs Structure of a teaching activity Varied teaching strategies Identify learning styles Principles of evaluation	Facilitate learning process Identify learning outcomes Construct educational objectives Design and deliver an effective teaching event Communicate effectively with the learners Use effective questioning techniques Teach large and small groups effectively Select and use appropriate teaching resources Give constructive effective feedback Evaluate programmes and events Use different media for teaching that are appropriate to the teaching setting

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
To be able to plan and analyse a research project	Know the principles of performing a research study Know how to use appropriate statistical methods Know the principles of research ethics and the structure and function of local research ethics committees Know how to write a scientific paper Understand the principles of research funding and how to obtain it	Undertake systematic critical review of scientific literature Ability to frame questions to be answered by a research project Develop protocols and methods for research Be able to use databases Be able to accurately analyse data Be able to write a scientific paper Have good written and verbal presentation skills Be able to participate as part of a team involved in a research project or two case reports by the end of training, and be able to demonstrate their role in its publication or presentation	Demonstrate curiosity and a critical spirit of enquiry Ensure patient confidentiality Demonstrate knowledge of the importance of ethical approval and patient consent for clinical research Humility
Appraisal and assessment	Understand the concepts of appraisal and assessment Understand how to conduct an appraisal interview or assessment	Able to maintain an appraisal portfolio Develop the ability to undertake an effective appraisal or assessment	Demonstrate a positive attitude to appraisal Be aware of equality and diversity issues as they relate to appraisal

4. RELATIONSHIPS WITH SERVICE USERS

Objective: to ensure that the trainee has the knowledge, skills and attitudes to act in a professional manner at all times.
New specialists will:

- be skilled in building relationships of trust with patients and their families, through effective interpersonal skills, a courteous and compassionate approach, and respect for their privacy, dignity and cultural and religious beliefs
- follow the principles and legal aspects of consent and confidentiality
- be able to manage difficult and complex situations with patients and their families, to advise them appropriately and to manage complaints effectively.

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Patient safety	Understand the issues around patient safety and the role of the NPSA Be aware of the NPSA National Reporting and Learning System	Demonstrate awareness of patient safety in a practical situation	Show regard for patient safety
Continuity of care	Understand the relevance of continuity of care	Ensure satisfactory completion of reasonable tasks at the end of the shift/day with appropriate handover Ensure appropriate documentation of/for handover Make adequate arrangements to cover leave	Recognise the importance of punctuality and attention to detail Recognise the importance of communication with patients/carers

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Informed consent	Know the process for gaining informed consent Understand the principles of consent issues as relating to cellular pathology clinical practice and research Know how to gain consent for a research project	Give appropriate information in a manner patients understand and be able to gain informed consent from patients Demonstrate appropriate use of written material	Respect for patients' and relatives' points of view and wishes Consider the patient's needs as an individual
Confidentiality	Be aware of relevant strategies to ensure confidentiality Be aware of situations when confidentiality might be broken	Use and share all information appropriately Avoid discussing one patient in front of another Be prepared to seek patient's wishes before disclosing information	Respect the right to confidentiality
Within a consultation	Know how to structure the interview to identify the patient's: • concerns/problem list/priorities • expectations • understanding • acceptance	Listen Use 'open' questions followed by appropriate 'closed' questions/Avoid jargon and use familiar language Be able to communicate both verbally and in writing to patients whose first language may not be English in a manner that they understand Use interpreters appropriately and give clear information and feedback to patients and share information with relatives when appropriate Reassure 'worried well' patients	Demonstrate an understanding of the need for: • involving patients or their next of kin in decisions • offering choices • respecting patients views and that of their next of kin • dress and appearance that is appropriate to the clinical situation and patient

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Breaking bad news	Know how to structure the interview and where it should take place Be aware of the normal bereavement process and behaviour Have awareness of organ donation procedures and role of local transplant coordinators	Be able to break bad news in steps appropriate to the understanding of the individual and be able to support distress Avoid jargon and use familiar language Encourage questions Maintain appropriate hope whilst avoiding inappropriate optimism	Act with empathy, honesty and sensitivity
Complaints	Have awareness of the local complaints procedures Have an awareness of systems of independent review	Manage dissatisfied patients/relatives Anticipate potential problems	Act promptly and with honesty and sensitivity Be prepared to accept responsibility
Doctor-patient relationship	Understand all aspects of a professional relationship Establish the limiting boundaries surrounding the consultation Deal with challenging behaviour in patients who transgress those boundaries, e.g. aggression, violence, racism and sexual harassment	Help the patient appreciate the importance of cooperation between patient and doctor Develop the relationship that facilitates solutions to patient's problems Deal appropriately with behaviour falling outside the boundary of the agreed doctor–patient relationship in patients, e.g. aggression, violence, sexual harassment	Adopt a non-discriminatory attitude to all patients and recognise their needs as individuals Seek to identify the healthcare belief of the patient Acknowledge patient rights to accept or reject advice

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Educating patients about: • **disease** • **investigations** • **therapy**	Know investigation procedures including possible alternatives and choices Be aware of strategies to improve adherence to therapies	Give information to patients clearly in a manner that they can understand, including written information Encourage questions Negotiate individual treatment plans including action to be taken if patient deteriorates or improves	Consider involving patients in developing mutually acceptable investigation plans Encourage patients to access: • further information • patient support groups
Environmental and lifestyle risk factors	Understand the risk factors for disease including: • diet • exercise • social deprivation • occupation • substance abuse • behaviour	Advise on lifestyle changes Involve other healthcare workers as appropriate	Suppress any display of personal judgement

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Epidemiology and screening	Describe the methods of data collection and their limitations Formally notify diseases where this is require Apply principles of primary and secondary prevention and screening	Assess an individual patient's risk factors Encourage participation in appropriate disease prevention or screening programmes	Consider the: • positive and negative aspects of prevention • importance of patient confidentiality Respect patient choice
Legal issues	Understand the legal issues relating to surgical pathology and cytopathology reporting Know the legal responsibilities of completing death certificates Understand the legal framework of the Coronial/Procurator Fiscal system, including the types of deaths that should be referred to the Coroner/Procurator Fiscal	Liaison with the Coroner/Procurator Fiscal	Act with compassion at all times
Ensuring patient safety	Demonstrate knowledge of: • risk management issues pertinent to specialty, potential sources of risk and risk management tools, techniques and protocols • how healthcare governance influences patient care, research and educational activities at a local, regional and national level	Demonstrate the ability to: • report clinical incidents • assess and analyse situations, services and facilities in order to minimise risk to patients and the public. • monitor the quality of equipment and safety of environment relevant to the specialty	Demonstrate: • actively seeking advice/assistance whenever concerned about patient safety • willingness to take responsibility for clinical governance activities, risk management and audit in order to improve the quality of the service

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Critically evaluating	Demonstrate a good working knowledge of: • quality improvement methodologies including a range of methods of obtaining feedback from patients, the public and staff • the principles and processes of evaluation, audit, research and development, clinical guidelines and standard setting in improving quality	Demonstrate ability to: • undertake an audit project • contribute to meetings which cover audit, critical incident, report patient outcomes	Listen to and reflect on the views of patients and carers Deal with complaints in a sensitive and cooperative manner Act as an advocate for the service
Encouraging innovation	Apply a variety of methodologies for developing creative strategies for improving services	Demonstrate the ability to: • question existing practice in order to improve services • apply creative thinking approaches (or methodologies or techniques) in order to propose solutions to service issues	Demonstrate: • being open minded to new ideas • a proactive approach to new technologies and treatments • supporting colleagues to voice ideas
Facilitating transformation	Demonstrate knowledge of: • the implications of change on systems and people • project management methodology	Demonstrate the ability to: • provide medical expertise in situations beyond those involving direct care • make effective written and verbal presentations	Demonstrate: • being positive about improvement and change. • striving for continuing improvement in delivering patient care services

5. WORKING WITH COLLEAGUES

Objective: to demonstrate good working relationships with colleagues and appropriate communication skills.
New specialists will:

- strive for continuing improvement in all aspects of their work and that of colleagues while mindful of priorities and high standards
- have effective interpersonal skills which enable them to bring out the best in colleagues, to resolve conflicts when they arise and to develop working relationships within the team
- support teams that bring together different professions and disciplines and other agencies, to provide high quality healthcare
- develops an understanding of leadership by drawing on values, strengths and abilities to deliver high standards of care.

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Working with clinical teams and death investigators	Describe how a team works effectively Explain the roles and responsibilities of team members, especially within the department and within multidisciplinary teams Summarise the roles of other clinical specialties and their limitations Demonstrates knowledge of a wide range of leadership styles and approaches, and their applicability to different situations and people	Communicate effectively. Seek advice if unsure Recognise when input from another specialty is required for individual patients Work effectively with other healthcare professionals, including demonstration of material at MDT meetings Respect skills and contribution of colleagues Recognise and work within own limitations Recognise when to delegate Show leadership and supervise safely Stages B–D: delegate, show leadership and supervise safely Enable individuals, groups and agencies to implement plans and	Show respect for others opinions Be conscientious and work cooperatively Respect colleagues, including non-medical professionals, and recognise good advice Recognise and work within own limitations Show recognition of a team approach and willingness to consult and work as part of a team

		decisions Identify and prioritise tasks and responsibilities including to delegate and supervise safely	

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Communication with colleagues	Communicate with other members of the pathology department, other departments and other members of the MDT Communicate appropriately in writing, through letters and reports Justify when to phone a general practitioner (GP)	Use appropriate language Select an appropriate communication method	Be prompt and respond courteously and fairly
Complaints	Have awareness of the local complaints procedures Have an awareness of systems of independent review	Anticipate potential problems Manage dissatisfied colleagues	Act with honesty and sensitivity and promptly Be prepared to accept responsibility
Interactions between: • **hospital and GP** • **hospital and other agencies, e.g. social services** • **medical and surgical specialties** • **users of the forensic pathology service**	Describe how a team works effectively Explain the roles and responsibilities of team members, especially within the department and within multidisciplinary teams Summarise the roles of other clinical specialties and their limitations	Delegate, show leadership and supervise safely Communicate effectively Handover safely Seek advice if unsure Recognise when input from another specialty is required for individual patients Work effectively with GPs, other medical and surgical specialists and other healthcare professionals	Show respect for others opinions Be conscientious and work cooperatively Respect colleagues, including non-medical professionals, and recognise good advice Recognise and work within own limitations

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Creating an environment in which mistakes and mismanagement of patients can be openly discussed and lessons learned		Recognise the advantages and disadvantages of guidelines Report and investigate critical incidents Take appropriate action if you suspect you or a colleague may not be fit to practise	
Self-awareness	Demonstrate knowledge of • ways in which individual behaviours impact on others; personality types, group dynamics, learning styles, leadership styles • methods of obtaining feedback from others	Maintain and routinely practice critical self-awareness, including ability to discuss strengths and weaknesses with supervisor, recognising external influences and changing behaviour accordingly Show awareness of and sensitivity to the way in which cultural and religious beliefs affect approaches and decisions, and to respond respectfully	Adopt a patient-focused approach to decisions that acknowledges the right, values and strengths of patients and the public Recognise and show respect for diversity and differences in others
Self-management	Appropriately apply tools and techniques for managing stress Recognise the role and responsibility of occupational health and other support networks Recognise the limitations of self professional competence	Recognise the manifestations of stress on self and others and know where and when to look for support Balance personal and professional roles and responsibilities Prioritise tasks, having realistic expectations of what can be completed by self and others	Be conscientious, able to manage time and delegate appropriately Recognise personal health as an important issue

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Self-development	Describe local processes for dealing with and learning from clinical errors Acknowledge the importance of best practice, transparency and consistency	Use a reflective approach to practice with an ability to learn from previous experience Use assessment, appraisal, complaints and other feedback to discuss and develop an understanding of own development needs	Be prepared to accept responsibility Show commitment to continuing professional development which involves seeking training and self-development opportunities, learning from colleagues and accepting constructive criticism
Acting with integrity	Describe the professional, legal and ethical codes of the GMC, e.g. Fitness to Practise and any other codes pertaining to the trainee's specialty Summarise the key issues of prejudice and preferences within self, others, society and cultures	Recognise, analyse and know how to deal with unprofessional behaviours in clinical practice, taking into account local and national regulations Create open and non-discriminatory professional working relationships with colleagues Awareness of the need to prevent bullying and harassment	Acceptance of professional regulation Promotion of professional attitudes and values Act with probity and willingness to be truthful and to admit errors
Developing networks	Describe the role of team dynamics in the way a group, team or department functions Describe team structures and the structure, roles and responsibilities of the multidisciplinary teams within the broader health context relevant to the specialty, including other agencies	Take on differing and complementary roles within the different communities of practice within which they work Support bringing together different professionals, disciplines, and other agencies, to provide high quality healthcare	Interact effectively with professionals in other disciplines and agencies Respect the skills and contributions of colleagues

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Building and maintaining relationships	Use specific techniques and methods that facilitate effective and empathic communication	Develop effective working relationships with colleagues and other staff through good communication skills, building rapport and articulating own view Communicate effectively in the resolution of conflicts, providing feedback, and identifying and rectifying team dysfunction	Recognise good advice and continuously promote values based non prejudicial practice Use authority appropriately and assertively; willing to follow when necessary
Encouraging contribution	Appropriately apply facilitation and conflict resolution methods	Enable individuals/groups and agencies to implement plans and decisions Identify and prioritise tasks and responsibilities including to delegate and supervise safely	Show recognition of a team approach and willingness to consult and work as part of a team Respect colleagues, including non-medical professionals
Identifying the contexts for change	Show recognition of a team approach and willingness to consult and work as part of a team Respect colleagues, including non-medical professionals	Discuss the local, national and UK health priorities and how they impact on the delivery of healthcare relevant to the specialty Identify trends, future options and strategy relevant to the specialty and delivering patient services	Comply with national guidelines that influence healthcare provision Be willing to articulate strategic ideas and use effective influencing skills
Applying knowledge and evidence	Describe and correctly use the patient outcome reporting systems within the specialty, and the organisation and how these relate to national programmes Based on an understanding of research methods, evaluate scientific publications including the use and limitations of different methodologies for collecting data	Compare and benchmark healthcare services Use a broad range of scientific and policy publications relating to delivering healthcare services	Evaluate issues and potential solutions before acting

6. HEALTH

Objective: to understand the importance of the personal health of the doctor.
New specialists will:

- act quickly and effectively if they have reason to believe that their own or a colleague's conduct, performance or health may put patients at risk.

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Personal health	Know of occupational health services Know of one's responsibilities to the public Know not to treat oneself or one's family	Recognise when personal health takes priority over work pressures and to be able to take the necessary time off	Recognise personal health as an important issue
Stress	Know the effects of stress Have knowledge of support facilities for doctors	Develop appropriate coping mechanisms for stress and ability to seek help if appropriate	Recognise the manifestations of stress on self and others

7. PROBITY

Objective: to be able to demonstrate probity in all aspects of professional practice.

New specialists will:

- always act in their personal and professional lives to maintain public trust in the profession
- undertake duties such as writing reports, giving evidence and completing and signing documents in a timely, honest and conscientious way
- through their leadership encourage the development and practice of these qualities in their colleagues.

Subject	Knowledge	Skills and knowledge application	Attitudes and behaviours
Service information	Legal framework for advertisements		Recognise absolute importance of accuracy and impartiality
Writing reports and giving evidence			Honesty and integrity Timeliness
Research		Obtain ethical approval	Put safety and care of patients first Conduct research with honesty and integrity
Financial dealings			Not induce patients to accept private medical care Manage funds for the purpose for which they are intended Declare conflicts of interest

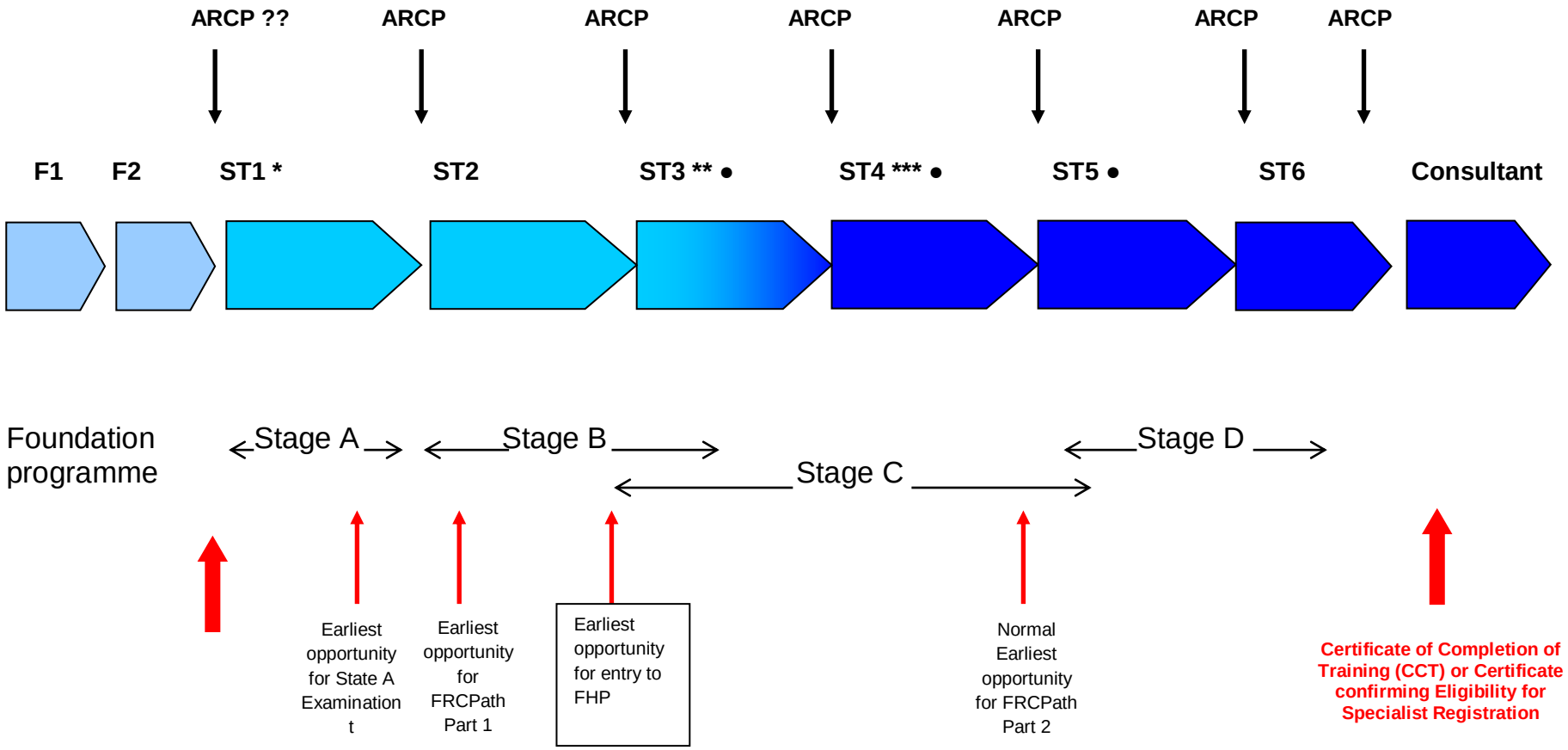
Appendix 1b HISTOPATHOLOGY IN FORENSIC PRACTICE

This should be seen as a guide to those areas where a higher level of knowledge and/or skill **in post-mortem diagnosis** is expected than that developed in stages A and B of 'general' training.

In general terms, this means the histopathology of: injury; those conditions that may give rise to sudden death; those conditions which may simulate injury or complicate injury; those conditions occurring as a consequence of medical treatment and those conditions arising out contact with toxic substances. The table that follows gives examples of the sort of conditions included. It is not intended to be a complete list and is in addition to those skills achieved in stages A and B.

- **Injury -** Inflammation relating to trauma, in all organ systems, of whatever type – appearance, differential, ageing.
- **Drugs and toxins -** Effects in all organ systems including pathology of alcohol and drugs of abuse; hyperpyrexia and rhabdomyolysis; vasculitis; hypersensitivity, allergy and anaphylaxis; hepatic necrosis; acute tubular necrosis and papillary necrosis; pulmonary fibrosis, etc.
- **Cardiovascular system -** Histopathology of shock, DIC and sepsis; hypertrophy (morphometry and microscopy); IHD (including atherosclerosis, infarction, grafts and stents); inflammation (including myocarditis, toxic effects and cardiac.
- manifestations of systemic disease); cardiomyopathy; storage disorders; basic conduction system disorders.
- **Respiratory system -** tumours, industrial lung disease, Infection (bacterial, fungal, viral, in immunocompromised); inflammation (allergic, systemic, vascular, toxic,); organisation and fibrosis (inflammatory/infective, allergic, toxic,); embolism (air, fat, thrombus, amniotic fluid); aspiration; diffuse alveolar damage; haemorrhage;; **Gastro intestinal system -** Ulceration and erosion (toxic, 'stress', peptic); ischaemia; peritonitis; hepatic necrosis; cirrhosis; hepatitis; pancreatitis.
- **Endocrine system -** Phaeochromocytoma; pituitary haemorrhage and infarction; adrenal haemorrhage.
- **Renal -** Infection; infarction; toxic effects (papillary necrosis, interstitial nephritis, tubular necrosis, myoglobinuria, ethylene glycol), ischaemia; diabetes; acute GN; DIC.
- **Lymphoreticular -** Bone marrow aplasia, drug/toxin effects; identification of neoplasia; infection.
- **Genito –urinary system -** Identification of early pregnancy.
- **Soft tissues and skin -** Mimics of injury; burns; electrocution; deep venous thrombosis.
- **Bone** – fractures and healing, common metabolic disease, mimics of injury.

APPENDIX 2a: ILLUSTRATIVE EXAMPLE OF FORENSIC HISTOPATHOLOGY TRAINING



* Trainees must have passed the ST1 Stage A Examination by the end of stage A/ST1.
Failure to pass the Year 1 Stage A Examination will prevent the trainee from progressing to stage B.

** Trainees must have passed the FRCPath Part 1 examination by the end of stage B.
Failure to pass the Part 1 examination by month 30 will prevent the trainee from progressing to stage C.

*** Trainees must have passed the FRCPath Part 2 examination by the end of stage C.

Appendix 2b: ILLUSTRATIVE TIMETABLE FOR FORENSIC HISTOPATHOLOGY TRAINING (WITHOUT A NECESSARY EXTENSION OF TRAINING)

	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
ST1	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12
	Begin stage A. NTN awarded							RCPath State A Examintion		RCPath Stage A Examintion		Earliest opportunity to end stage A
ST2	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19	Month 20	Month 21	Month 22	Month 23	Month 24
	Earliest opportunity to begin stage B								Part 1 FRCPath opportunity	Part 1 FRCPath results		Earliest opportunity to exit stage B
ST3	Month 25	Month 26	Month 27	Month 28	Month 29	Month 30	Month 31	Month 32	Month 33	Month 34	Month 35	Month 36
	Earliest opportunity to enter FHP (stage C)		Part 1 FRCPath opportunity	Part 1 FRCPath results		Second opportunity to exit stage B	Second opportunity to enter FHP (begin stage C)		Part 1 FRCPath opportunity	Part 1 FRCPath results		
ST4	Month 37	Month 38	Month 39	Month 40	Month 41	Month 42	Month 43	Month 44	Month 45	Month 46	Month 47	Month 48
			Part 1 FRCPath opportunity	Part 1 FRCPath results								
ST5	Month 49	Month 50	Month 51	Month 52	Month 53	Month 54	Month 55	Month 56	Month 57	Month 58	Month 59	Month 60
			Part 2 FRCPath opportunity	Part 2 FRCPath results		First opportunity to exit stage C	First opportunity to begin stage D		Part 2 FRCPath opportunity	Part 2 FRCPath results		
ST6	Month 61	Month 62	Month 63	Month 64	Month 65	Month 66	Month 67	Month 68	Month 69	Month 70	Month 71	Month 72
			Part 2 FRCPath opportunity	Part 2 FRCPath results		First opportunity to exit stage D						

APPENDIX 3 ACRONYMS

AIDS	Acquired immune deficiency syndrome
ACPO	Association of Chief Police Officers
APTs	Anatomical Pathology Technologists
ARCP	Annual Review of Competence Progression
BAFM	British Association in Forensic Medicine
BMA	British Medical Association
BMS	Biomedical scientist
BSP	Breast Screening Programme
CATT	College Advisory Training Team
CbD	Case-based discussion
CCT	Certificate of Completion of Training
CEMACH	Confidential Enquiry into Maternal and Child Health
CESH	Confidential Enquiry into Suicide and Homicide
CESR	Certificate Eligibility for Specialist Registration
CHAT	Certificate of Higher Autopsy Training
CHCCT	Certificate of Higher Cervical Cytology Training
CNS	Central nervous system
CPD	Continuing professional development
CSF	Central spinal fluid
CSP	Cervical Screening Programme
DNA	Deoxyribonucleic acid
DOPS	Directly observed practical skills
ECE	Evaluation of clinical events
EQA	External Quality Assurance
FNA	Fine needle aspiration
FRCPath	Fellowship of the Royal College of Pathologists
GI	Gastrointestinal
GMC	General Medical Council
GP	General Practitioner

HCC	Healthcare Commission
HOPS	Head of Pathology School
HPV	Human papilloma virus
IBD	Inflammatory bowel disease
IQC	Internal quality control
JCPT	Joint Committee on Pathology Training
LBC	Liquid-based cytology
MDT	Multidisciplinary team meeting
MSF	Multi-source feedback
NCEPOD	National Confidential Enquiry into Patient Outcome and Death
NHS	National Health Service
NICE	National Institute for Health and Clinical Excellence
NOS	Not otherwise specified
NPSA	National Patient Safety Agency
NTN	National Training Number
NTN(A)	National Training Number (Academic)
ONS	Office of National Statistics
OOPR	Out-of-programme research
OOPT	Out-of-programme training
PIAG	Patient Information Advisory Group
QAT	Quality assurance testing
RNA	Ribonucleic acid
SAC	Specialty Advisory Committee
SIDS	Sudden infant death syndrome
SOCO	Scenes of Crime Officer
SOP	Standard operating procedure
ST	Specialty training
STC	Specialty Training Committee
SUDI	Sudden unexpected death in infancy
TEM	Tubo-endometrioid metaplasia

UK	United Kingdom
WHO	World Health Organization

APPENDIX 4 DIRECTED WORKPLACE-BASED ASSESSMENTS BY STAGES OF TRAINING AND OPTIONAL PACKAGES

The following are lists of workplace-based assessments, from which should be selected appropriate examples to make up the 'directed' component of assessments during each stage of training. Each item in the lists is in fact a group of possible scenarios to be used, and each group may be used more than once as long as exact circumstances are not duplicated. Additionally, it can be seen that the lists are similar for each stage, but increase in complexity and/or depth as a trainee progresses through the stages of training. Finally, the relative numbers of DOPS, ECEs and CBDs changes with increasing stage, until in stage D, no DOPS are required, but ECEs and CBDs make up all the required workplace-based assessments.

Stage A (18 in stage, 12 directed)

Directly Observed Practical Skills (DOPS) (six from the following):

Set up and use microscope

Autopsy:
- performing a straightforward evisceration
- dissection of single organ / system

Cut-up:
- completion of a simple cut up session (e.g. simple skins, gall bladders, appendices)
- macroscopic description and block taking of a major cancer resection (e.g. colonic cancer)

Microscopy:
- demonstrate ability to recognise normal histology
- demonstrate ability to recognise straightforward pathological entities (e.g. basal cell carcinoma, adenocarcinoma in biopsies, acute appendicitis)

Cytology:
- screen a gynae cytology slide and correctly identify various cells

Comment: all six DOPS undertaken in stage A will be taken from this list

Evaluation of Clinical Events (ECEs) (three from the following):

Histology/cytology:
- present a case with ancillary investigations to a consultant trainer

Autopsy:
- presentation to trainer or clinicians of findings in straightforward cases (e.g. bronchopneumonia, myocardial infarction, pulmonary embolus, cerebrovascular accident)

Audit:
- present at audit meeting and lead discussion, having discussed findings with trainer beforehand

Poster presentation:

- show a poster at the Pathological Society meeting or similar

Teaching event for medical students or demonstration of interesting case to other trainees:

- to be observed by trainer

Referral letter:

- write a draft letter on a case for referral

Comment: three further ECEs in stage A may be taken from outside this list.

Case-Based Discussions (CBDs) (three from the following):

Autopsy:

- write an appropriate post-mortem report with clinicopathological correlation and cause of death

Histology/non-cervical cytology:

- present a case with ancillary investigations (e.g. additional levels, blocks or immuno- or histo-chemical stains, review of previous samples) to a consultant trainer, indicating the relevance of the ancillary investigations
- write an appropriate report for a major cancer resection (with appropriate TNM staging and prognostic information)

Cytology:

- present and discuss a case of cervical dyskaryosis (including appropriate follow-up and clinical management)

Comment: three further CBDs in stage A may be taken from outside this list.

Stage B (18 in stage, 12 directed)

Directly Observed Practical Skills (DOPS) (four from the following):

Autopsy:

- performing an evisceration (not including complex case, e.g. post-operative)
- dissection of single organ/system

Cut-up:

- completion of a whole cut-up session
- macroscopic description and block taking of a major cancer resection (e.g. radical prostatectomy or hysterectomy for cancer)

Microscopy:

- demonstrate ability to recognise pathological entities (e.g. ulcerative colitis, small cell carcinoma of the lung, urothelial carcinoma *in situ*)

Cytology:

- screen a gynae cytology slide and correctly grade the degree of dyskaryosis
- demonstrate the ability to recognise simple pathological entities in non-cervical cytology samples (e.g. fibroadenoma, Warthin's tumour, non-small cell carcinoma of the lung)

Photography:

- macro or microscopic specimens

Comment: two further DOPS undertaken in stage B may be taken from outside this list.

Evaluation of Clinical Events (ECEs) (four from the following):

Histology/cytology:

- present a case with ancillary investigations to a consultant trainer

Autopsy:

- presentation to trainer or clinicians of findings (e.g. carcinomatosis, road traffic accident, gastrointestinal haemorrhage, cirrhosis)

Audit:

- present at audit meeting and lead discussion, having discussed findings with trainer beforehand

Poster presentation:

- show a poster at the Pathological Society or similar

Teaching event for medical students or demonstration of interesting case to other trainees:

- to be observed by trainer

Referral letter:

- write a draft letter on a case for referral

MDTs

- demonstrate a case that the trainee has reported at MDT or other clinicopathological meeting

Comment: two further ECEs in stage B may be taken from outside this list.

Case-Based Discussions (CBDs) (four from the following):

Autopsy:

- write an appropriate post-mortem report with clinicopathological correlation and cause of death

Histology/non-cervical cytology:

- present a case with ancillary investigations (e.g. additional levels, blocks or immuno- or histo-chemical stains, review of previous samples) to a consultant trainer, indicating the relevance of the ancillary investigations

- write an appropriate report for a major cancer resection (with appropriate TNM staging and prognostic information)

Cytology:

- present and discuss a case of cervical dyskaryosis (including appropriate follow-up, clinical management and histocytological correlation)
- present and discuss a non-cervical cytology case (with appropriate follow-up, clinical management and histocytological correlation)

Comment: two further CBDs in stage B may be taken from outside this list.

Stages C and D (24 in stage C, 18 directed. 4 in each 6 month period of Stage D, as agreed with educational supervisor)

Directly Observed Practical Skills (DOPS) (six from the following in stage C):

Use of a crime light
Dissection of a fixed brain
Dissection of vertebral arteries
Examining time of death
Forensic external examination
Toxicological sampling
Scene examination
Taking a relevant history from the police
Labelling and packaging an exhibit (production)
Providing a post autopsy briefing to the police
Giving evidence in court
Dissection of the neck (anterior/posterior)
Block examination of the genital tract
Removal of the eyes
Examination of the middle ears
Long bone examination
Examination for an air embolus
Examination of the structures of the face
General forensic evisceration of the body

Comment: two further DOPS undertaken in stage C may be taken from outside this list

Evaluation of Clinical Events (ECEs) (six from the following in Stage C):

Use of critical incident reporting procedures

Demonstration and presentation of case(s) in forensic CPD/case meeting
Referring an aspect of a forensic case for specialist opinion
Presenting audit findings and leading discussion on the action required
Handling a potential safety event related to scene or autopsy practice
Providing clinic- pathological advice in response to a police or coroner enquiry
Discussing the Health and Safety issues related to a forensic scene or autopsy case
Interactions with the media
Providing a layman's explanation of forensic interpretation to a lawyer
Demonstration of the principle of continuity of evidence of a forensic exhibit (production)
Agreeing a forensic strategy for handling a case with investigators
Creating and delivering a new under graduate or post graduate teaching event
Significant contribution to peer review scientific publications

Comment: two further ECEs in stage C may be taken from outside this list.

Case-Based Discussions (CBDs) (six from the following in Stage C):

Forensic autopsy case – personally undertaken or observed (state)
Identification of an unknown cadaver or body part
Discussion of a case involving divergent opinions
Discussion of involvement in critical incident or patient safety event
Discussion of involvement in a multiple fatality incident
Discussion of a case involving a specialist forensic laboratory investigation
Discussion of a case involving a specialist investigator investigation
Discussion of a case involving the examination of skeletal remains
Discussion of a case involving a decomposed cadaver
Discussion of a case involving the estimation of the time since death
Discussion of a request to differentiate human from non-human remains
Discussion on the distinction between accidental and non-accidental/natural pathology in a pediatric case of a sharp force injury case
Discussion of a case involving firearms
Discussion on the distinction between inflicted and self-inflicted injury
Discussion of a case involving blunt force injury

Comment: two further CBDs in stage C may be taken from outside this list.

APPENDIX 5 GOOD MEDICAL PRACTICE

The following table indicates where the *Good Medical Practice* headings can be found in the curriculum.

Good Medical Practice	Page number
Good clinical care	52
Maintaining good medical practice	75
Teaching and training, appraising and assessing	86
Relationships with patients	88
Working with colleagues	95
Health	101
Probity	102