



The Royal College of Pathologists  
*Pathology: the science behind the cure*

**Code of practice for histopathologists and  
histopathology services**

**May 2005**

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**Prof John A Lee**  
**Director of Publications**  
**The Royal College of Pathologists**

# Code of practice for histopathologists and histopathology services

This code of practice is intended as a supplement to the required standards of practice for Clinical Pathology Accreditation (UK) Ltd (CPA), which is now compulsory, and NHS clinical governance through the Commission for Health, Audit and Inspection (CHAI).

Throughout the document, bulleted lists provide references to guidance documents that have already been published by The Royal College of Pathologists and other organisations that give more detailed information. All College documents can be downloaded from the College website: [www.rcpath.org](http://www.rcpath.org)

## Preface

The Codes of Practice for pathology services draw together, for each specialty, all relevant guidelines and standards issued by The Royal College of Pathologists.

Each Code of Practice comprises a coherent description of what is required for the provision of an effective, reliable and safe pathology service in that specialty. Thus, the codes and the documents cited within them can be used to assist in the appropriate delivery of pathology services and to help assess whether relevant standards for laboratory accreditation are being met.

**Professor Sir James Underwood**  
President

May 2005

## 1 Introduction

Histopathology is the branch of pathology based on the examination of tissues and cells obtained from a patient by biopsy or cytological procedures, during life or after death. Histopathologists provide diagnostic expertise and advice for clinical colleagues, and work in clinical teams that care for patients. Histopathologists should work in partnership with biomedical scientists (BMS), clinical scientists and pathology managers to provide the best possible histopathology standards and service.

- *Pathology: The Hidden Science that Saves Lives*. London: The Royal College of Pathologists, 2000.
- *Careers in Pathology*. London: The Royal College of Pathologists, 2002.

## 2 Management of services

The histopathologist should be prepared and able to take on the role of head of department and budget holder as recommended in the *Strategic Review of Pathology Services* (NHS Executive, 1995). In addition to his/her role in departmental administration, he/she should contribute to planning decisions at relevant hospital, district or regional level. The impact of any potential service reconfigurations or changes in commissioning on histopathology services must be recognised and allowed for.

Histopathology services play a key role in all hospital and community health settings, through the process of making individual patient diagnoses and providing an overview of the nature of all biopsy and surgical work being performed. Histopathology underpins the clinical audit process as a whole through the surgical pathology and autopsy services, and by pathologist participation in multidisciplinary and clinicopathological meetings. The histopathologist must ensure that this role is recognised, and that adequate facilities are made available to meet these requirements and their job plan reflects these activities.

Histopathologists are often called upon to be involved in regional and national managerial roles, including work for medical royal colleges and other professional bodies or specialist societies. This is necessary to ensure adequate representation on these bodies and global maintenance of standards and improvement in services. This should be recognised as a legitimate part of a consultant's work and practised to the same high professional standards as clinical work and more local managerial roles. This should be recognised and allowed for in the consultant's job plan.

### 3 Staffing and workload

Histopathology workload originates from a variety of sources, including hospital inpatients and outpatients, primary care, the independent sector and through pathology networks. Some departments also act as secondary and tertiary referral centres for more complex diagnostic problems. Many histopathology departments are understaffed at all levels and carrying an unacceptable workload. In response to this, different working practices are evolving that include pathology networks and remote reporting. The skill mix of the department should be adequate and appropriate for the workload and case mix, and strategies put in place to manage or reduce workload where staffing levels are inadequate. This should be done in agreement with local clinicians and managers.

Job descriptions for new and replacement histopathologist posts should conform to College recommendations. Histopathologists should have job plans that are workable and practical and allow protected time for clinical audit, continuing professional development (CPD), appraisal, administration, teaching and other duties. Pathologists should actively manage their workload, using appropriate strategies to combat overload or understaffing. These might include the use of locums, remote reporting services or specimen waiting lists and should be implemented with appropriate risk management and by agreement with clinical colleagues and managers. Out-of-hours on-call rotas should be adequately funded and histopathologists should not be required to work outside their area of expertise.

- *Guidelines for Consultant Job Description* (general and specialty-specific). The Royal College of Pathologists, 2002.
- *Guidelines on Staffing and Workload for Histopathology and Cytopathology Departments (2nd edition)*. The Royal College of Pathologists, 2005.
- *Guidelines for the Appointment of Career Grade Locum Pathologists*. The Royal College of Pathologists, 2001.
- Lilleyman JS. *The Modernisation of Pathology: A statement from The Royal College of Pathologists*. The Royal College of Pathologists, 2001.
- Lowe J. *Workload Management in Laboratory Medicine: Patient Safety and Professional Practices*. The Royal College of Pathologists, 2001.
- *Histopathology of Limited or No Clinical Value*. The Royal College of Pathologists, 2002.

## 4 Safety

Safety in the histopathology department is the joint responsibility of the consultant histopathologist and appropriate senior staff and a designated safety officer. They should make periodic inspections of the department to ensure relevant safety procedures are being observed. Each department should comply with regulations of the Health and Safety Executive and the Advisory Committee on Dangerous Pathogens and CPA (UK) Ltd standards. All procedures should be covered by written standard operating procedures that are reviewed regularly.

- *Safe Working and the Prevention of Infection in the Mortuary and Post-Mortem Room*. Health and Safety Executive, 2003.
- *HIV and the Practice of Pathology*. The Royal College of Pathologists, 1995.

## 5 Accreditation and standards

The laboratory should participate in a laboratory accreditation process, e.g. CPA (UK) Ltd, and ensure that its organisation and procedures take account of the National Healthcare Standards.

- CPA website, [www.cpa-uk.co.uk](http://www.cpa-uk.co.uk)
- *Standards for Better Health*, Department of Health, 2004.

## 6 Surgical histopathology

### 6.1 General procedures

Specimens removed surgically should be examined in the histopathology department serving the hospital concerned, or in a designated department within a network. Occasionally, all or part of a specimen may need to be sent to a specialised laboratory, or to a tertiary centre following patient referral.

The condition in which the specimen reaches the laboratory is important for proper diagnosis. Written protocols and advice should be available for all histopathology laboratory users to ensure that fresh specimens are received promptly, in suitable containers and that, when fixation is required, it is properly carried out. Protocols may be needed to minimise unnecessary dissection of the specimen after its removal from the patient and before being seen by the pathologist.

The procedures for receiving specimens, recording patient data and accession number, macroscopic description, reporting, and recording and retrieval of data should be agreed by all histopathologists in coordination with the laboratory. Such procedures should be written down and designed in such a way as to minimise the possibility of identification error.

If workforce shortages require referral to a remote reporting service, arrangements must be in place to risk manage the process, ensure quality standards are maintained and ensure that there is proper communication with clinical users.

- *Guidelines on Inter-Departmental Dispatch of Samples from Patients Sent to Another Hospital for Assessment and/or Treatment*. The Royal College of Pathologists, 2003.

## 6.2 Specimen recording

All specimens must be identified on receipt, matched with request forms and receive an accession number. Clerical, laboratory assistant or other trained staff can do this. Criteria for establishing adequate patient identification data should be clear to laboratory staff and users and be consistent across pathology departments in the hospital. Inconsistencies (e.g. different spelling of name on specimen container and form) should be recorded and brought to the attention of the histopathologist. Urgent specimens should also be drawn to his/her attention, as should any specimen that presents a potential infective hazard. Confirmation of correct name, hospital number, ward, etc. by means of access to a computer system is desirable.

When specimens are received for frozen section, they should immediately be brought to a histopathologist's attention for description, selection of block(s) and reporting. If the report is given over the telephone, it should also be recorded in writing at the same time. A safety cabinet must be available for handling potentially infectious specimens. It is advisable to consider and treat *all* fresh specimens as potentially infectious.

## 6.3 Macroscopic description and selection of blocks for microscopy

Specimen identification must be checked by matching with the request form. Facilities for specimen measurement, weighing, orientation and margin marking, and photography/digital imaging should be available. Specimen description, measurement and selection of blocks should be according to protocols contained within Standard Operating Procedures, and these should take account of national professional guidance including advice on minimum datasets. Where appropriate a block key should be included.

The selection of tissue blocks for processing and examination is normally carried out by a histopathologist or trained BMS. When trainee medical staff are 'trimming', a consultant should be on hand to give advice on the handling of specimens and block selection. A trainee must have received tuition in the procedures before carrying them out without direct supervision.

- *Draft Guidelines for the Involvement of Biomedical Scientists in the Dissection of Specimens and Selection of Tissues*. The Royal College of Pathologists, 2001.
- *Joint RCPATH/IBMS Working Group on the Implementation of the Extended Role of Biomedical Scientists in Specimen Description, Dissection and Sampling – Final report*. The Royal College of Pathologists, January 2004.
- *Standards and Minimum Datasets for Reporting Cancers*. The Royal College of Pathologists, various.

## 6.4 Laboratory processing

The laboratory processing of tissue includes all procedures from the time the block is taken to the preparation of the stained and mounted slides for microscopy. The laboratory should be able to provide a wide range of stains in addition to those in routine use. The pathologist may request additional investigations at the time of 'cut up' or after examination of the routine sections. Certain types of specimens may have special stains carried out on a regular basis. All requests for special stains or additional investigations made by the referring clinician must be agreed by the reporting pathologist.

All laboratories should have access to an appropriate range of immunohistochemical staining, either as part of their local repertoire or through referral to an accredited laboratory providing a reference immunohistochemical service. Electron microscopy will occasionally be needed, e.g. for renal biopsies or difficult tumours, and should be planned beforehand so that the specimen can be correctly fixed and processed.

- *Interim Guidelines for the Disposal of Tissue, Blocks and Slides from Biopsies and Surgical Resections*. The Royal College of Pathologists, 2002.
- The Royal College of Pathologists and the Institute of Biomedical Science. *The Retention and Storage of Pathological Records and Archives (3rd edition)*. The Royal College of Pathologists, 2005.

## **7 The histopathologist and diagnostic reporting**

Each consultant histopathologist should have their own office and their own microscope, which should be modern, of good quality and meet ergonomic criteria for maximum comfort of use. Examination and reporting of tissue sections must be made by a trained histopathologist possessing the MRCPATH or equivalent experience, or by a trainee under consultant supervision, or using the RCPATH reporting schedules. Histopathologists not in possession of the MRCPATH or equivalent qualification (non-consultant career grade doctors) may report in conjunction with a named consultant who should be available for advice, although they would not always be directly supervised.

The histopathologist should ensure that they are available to report cases in a timely and appropriate manner according to clinical need. The histopathologist should be aware of previous specimens from the same patient and must be able to refer to these if necessary. The report should be constructed so as to give maximum help to the clinical management of the patient and cancer datasets used wherever possible.

- *Reporting Schedules for Trainees*. Joint Committee on Higher Pathology Training (JCHPT), The Royal College of Pathologists, 2003.
- *Standards and Minimum Datasets for Reporting Cancers*. The Royal College of Pathologists, various reports.

The pathologist issuing the report must authorise electronically or sign out, carefully checking for typographical and other errors. Where reports are written or validated by a trainee, this should be under the supervision of a trained histopathologist, whose name or initials would normally appear on the report, or within the RCPATH reporting schedule guidance.

Protocols and policies for consent and the retention and disposal of tissues, blocks and slides from surgical cases should be available and conform to latest national guidelines from the College, the Department of Health and the Human Tissue Act.

Information given to patients as part of the surgical consent process should inform patients that some tissue may be retained and used for supplementary purposes including quality assurance, service or technical development, teaching and training.

The process of obtaining consent should also address the issue of use of surplus tissue for research and provision should be made for the patient to indicate his or her wishes in this regard.

- *College advice relating to the ownership, storage and release of pathology results*. The Royal College of Pathologists, 2001.

- Human Tissue Act 2004.
- *Handbook for Postgraduate Medical Education and Training in Pathology*. JCHPT, The Royal College of Pathologists, 2002.
- The Royal College of Pathologists and the Institute of Biomedical Science. *The Retention and Storage of Pathological Records and Archives (3rd edition)*. The Royal College of Pathologists, 2005.
- *Transitional Guidelines to Facilitate Changes in Procedures for Handling 'Surplus' and Archival Material from Human Biological Samples*. The Royal College of Pathologists, 2001.

## 8 On-call and remote reporting

- *Code of Practice for Pathologists Participating in Remote Reporting of Histopathology/Cytopathology*. The Royal College of Pathologists, 2003.
- *Guidelines on Good Practice for Histopathology On-Call Rotas, including Frozen Sections*. The Royal College of Pathologists, 2003.

## 9 Office procedures

The College recommends 0.5 whole-time equivalent (wte) secretarial assistance per consultant histopathologist, with staffing levels adequate to cover additional office procedures. These should be agreed between senior histopathologist(s) and secretarial managers. A diagnostic index should be maintained and diagnosis coded using the SNOMed system, for audit and analysis. Coding may be manual or automatic. Records should be maintained in such a way as to facilitate:

- a) the retrieval of reports on individual patients
- b) the retrieval of reports or names/accession numbers, grouped according to disease categories
- c) a simple analysis of workloads by work-sensitive methods, which take into account complexity of specimens and investigations.

## 10 Information technology (IT)

Laboratory IT systems should be adequate for the needs of the service in terms of routine patient and specimen recording and the provision of data for audit and benchmarking purposes. Consultant histopathologists should each have their own individual office with computer access to departmental and appropriate PAS files, email, intranet and internet.

- *Minimum Requirements for Computerised Cancer Histopathology Reporting, Data Recording and Downloading to Cancer Registries*. The Royal College of Pathologists, 2002.

## 11 Risk management and critical incident reporting

Histopathologists and their departments must participate in local and/or national critical incident reporting schemes, as required by clinical governance.

- National Patient Safety Agency website, [www.npsa.nhs.uk](http://www.npsa.nhs.uk), for further details on the national reporting scheme.

## 12 Cytopathology

Cytopathology is a sub-specialty of histopathology and the College works jointly with the British Society for Clinical Cytology to ensure high standards of practice. A code of practice for cytology is available on the BSCC website. The cervical screening programme is governed by guidance produced by the National Screening Office of the NHS. Compliance with this guidance is monitored by the Regional Quality Assurance Teams.

- British Society for Clinical Cytology website, [www.clinicalcytology.co.uk](http://www.clinicalcytology.co.uk)
- NHS Cervical Screening Programme (NHSCSP), various reports.
- [www.cancerscreening.nhs.uk/cervical/publications/index.html](http://www.cancerscreening.nhs.uk/cervical/publications/index.html)
- Joint National Co-ordinating Network, British Society of Clinical Cytology and the Royal College of Pathologists Working Party. The Report of the Working Party on guidelines for the recognition and management of borderline nuclear changes in cervical smears. *J Clin Path* 1994;47:481–492.

## 13 Autopsy pathology

Every autopsy should have a risk assessment prior to its being carried out. Pathologists should ensure that clinicians have an opportunity to see or discuss post-mortem findings. Pathologists should facilitate the feedback of information to relatives, either through the appropriate clinician (requesting consultant or general practitioner) or through the Coroner's Officer. Histopathologists should perform all autopsies according to the standards outlined in the College's guidelines and datasets, as well as adhering to current relevant law and standards set by Department of Health and Retained Organs Commission (which ceased to exist on 1 April 2004) and the NHS Quality improvements standards for Scotland.

- [www.doh.gov.uk/tissue/](http://www.doh.gov.uk/tissue/)
- [www.nhshealthquality.org/nhsqis/files/pmortem.pdf](http://www.nhshealthquality.org/nhsqis/files/pmortem.pdf)
- [www.nhs.uk/retainedorgans/default.htm](http://www.nhs.uk/retainedorgans/default.htm)

All procedures involved in the performing of autopsies should be discussed with the anatomical pathology technologist (APT) and there should be a written manual of procedures available in the mortuary. All bodies received must carry an identification label, and their receipt and disposal must be recorded. As well as the sequential record of bodies received and autopsies performed, a disease index of major autopsy findings and a name index should be maintained.

Safety precautions are particularly important in the post-mortem room and the receipt of any body that is a potential hazard to health must be notified to the consultant histopathologist.

Pathologists should show respect in dealing with the dead and with bereaved relatives and work collaboratively with local bereavement services.

- *Guidance for Retention of Brain and Spinal Cord following Post-Mortem Examination and where Criminal Proceedings are in Prospect*. The Royal College of Pathologists, 2002.
- *Guidelines for Autopsy Practice*. The Royal College of Pathologists, 2002.
- *Deaths in Major Disasters: The pathologist's role (2nd edition)*. The Royal College of Pathologists, 2000.

#### **14 Relationship to clinical colleagues/good medical practice**

Histopathologists should work effectively and cooperatively with their pathology, clinical and laboratory colleagues. The histopathologist is an active member of the cancer multidisciplinary team and should work with clinical colleagues in multidisciplinary assessment, as staffing will allow, and ensure that reports reach their destination in a timely manner.

Pathologists should not work outside their area of expertise; this guidance applies to their non-NHS work and on-call rotas as well as to their daily practice within the NHS

- *Good Medical Practice in Pathology*. The Royal College of Pathologists, 2002.
- *Substandard Professional Performance. Guidance for Trusts and pathologists*. The Royal College of Pathologists, 2002.

#### **15 CPD, appraisal and clinical governance**

Histopathologists should ensure they are up to date and participating in continuing professional development and annual appraisal to ensure revalidation with the General Medical Council. All consultant histopathologists must take adequate steps to maintain their own professional standards and be aware of developments in their discipline. They must also ensure that the trainee pathologists working with them maintain high standards in diagnostic histopathology. Histopathologists should also be aware of the clinical governance requirements in their place of work and play a part in their implementation.

The same standards of professional behaviour and practice should be applied to non-NHS work and should not impinge on contracted hours/duties with the employer or on employer facilities/equipment.

#### **16 Quality assurance and audit**

The head of department is responsible for the maintenance of quality standards in all aspects of work in the department. Each department should have up-to-date documentation detailing all laboratory procedures and including instructions on the proper collection and processing of specimens. These should be readily available to all staff, and any changes should be initialled by senior staff. There should be appropriate participation in internal and external quality assessment. Audit activity should include some multi-professional and multidisciplinary element. All medical staff should participate in departmental and multidisciplinary audit. Individual pathologists should participate in relevant diagnostic external quality assessment (EQA) schemes.

Individual pathologists should:

- a) assure the quality of clinical advice given and associated record-keeping
- b) ensure the quality and timeliness of pathology reports and clinical advice
- c) undertake routine review (audit) of a sample of clinical cases/reports in selected areas
- d) be available and willing to communicate and discuss clinical and professional issues with colleagues
- e) know their own diagnostic limitations as demonstrated by their referral patterns
- f) participate in clinicopathological discussions or multidisciplinary team meetings (MDTs)
- g) work well in a team
- h) be willing to undertake a peer questionnaire or 360° review of practice

- i) ensure that tensions relating to other professional commitments are minimised
- j) participate in continuing professional development (CPD) and demonstrate that their CPD activities reflect their clinical job plan/activities
- k) participate in relevant external quality assessment schemes
- l) show that their reporting patterns as individuals or groups of pathologists are comparable to those of their peers.

## **17 Research**

Where appropriate, histopathologists should actively encourage and participate in research, and also be aware of the opportunities to make observations of value to the community that may arise through routine histopathological practice. Departments with pathologists in training must ensure that the trainees have the time, opportunity and encouragement to be involved in research during their training. Histopathologists must adhere to both national and local ethics and research procedures/policies and ensure appropriate approval and consent is obtained for all research undertaken.

- Central Office for Research Ethics Committees (COREC) website, [www.corec.org.uk](http://www.corec.org.uk)

## **18 Teaching and training**

All pathologists should be willing and able to teach as required. The head of department is responsible for ensuring that all grades of staff receive appropriate in-service and professional training. Consultants should have time recognised in their job plans for their own CPD as well as training junior medical staff, other healthcare professionals and undergraduate medical students. Access to journals and books, particularly frequently used reference sources, should be easily available, such as within the reporting room or pathologists' offices. Ongoing departmental educational activity including slide seminars, 'black box' sessions and participation EQA slide discussions are recommended.

- *Handbook for Postgraduate Medical Education and Training in Pathology*. JCHPT, The Royal College of Pathologists, 2002.

## SPECIALIST PATHOLOGY SERVICES

### 19 Paediatric pathology

There are two aspects to specialist paediatric pathology:

- a) specialist organ and system pathology, surgical and oncological, from the childhood age range
- b) post-mortem examinations of the fetuses, newborn infants and children.

#### 19.1 Staffing and workload

There are dedicated paediatric histopathology departments and paediatric pathology sections of major histopathology departments located in large teaching hospitals throughout the country.

At least two full-time consultant pathologists are required to adequately staff specialist paediatric/perinatal pathology departments (or such sections).

- *Service Specification for Paediatric and Perinatal Histopathology: Guidance for purchasers*. The Royal College of Pathologists, 1995.

#### 19.2 Surgical histopathology: general procedures, specimen recording, macroscopic description and selection of blocks for microscopy

This is similar to general histopathology, with the exception of paediatric surgical oncology where fresh tumour sample triage is carried out by a paediatric pathologist in accordance with the guidelines from the UK Children's Cancer Study Group (UKCCSG) Biological Studies Group.

- UKCCSG protocol for sending neuroblastoma samples for molecular and cytogenetic analysis (ESIOP Protocol, final UK version), August 2002.
- Wilms' tumour 2001/UK final version, Society of Paediatric Oncology (SIOP), January 2002.

Biopsies and resection specimens for the diagnosis of Hirschsprung's disease require specific handling (including histochemical staining on frozen tissue). Otherwise, the procedures of laboratory processing, microscopy and reporting, specimen retention and storage, and office procedures are identical to those applied to general histopathology practice.

- Lake BD. The diagnosis of Hirschsprung's disease and pseudo-obstruction. In: Filipe MI, Lake BD (editors). *Histochemistry in Pathology*, 1990, pp 211–220.

#### 19.3 Paediatric autopsy pathology

Histopathologists, including perinatal/paediatric pathologists, should perform all autopsies according to the standards outlined in College guidelines and datasets. The Department of Health standards of consent and retention of tissue and organs apply primarily to the majority of perinatal/paediatric autopsies (consented hospital autopsies). Paediatric autopsies may involve transport of fetuses and babies between hospitals. Adequate arrangements must be in place for the proper receipt and return of the bodies to their original referring hospital.

Paediatric autopsies should be concentrated at selected specialist paediatric/perinatal pathology sites supporting surgical/oncological and tertiary referral maternity centres. Dedicated mortuary space with a dedicated paediatric mortuary technician, access to

radiology and photography, access to cytogenetics laboratory, clinical genetics and genetics database, ultra-low temperature freezer for storage of samples (including DNA) and proper arrangements for disposal of bodies should be in place.

Where it is impracticable for perinatal autopsies to be carried out in a specialist centre due to a shortage of full time paediatric pathologists, these should be done to College standards with appropriate back-up from paediatric pathology and genetic departments.

- *Fetal and Perinatal Pathology: Report of a Joint Working Party*. The Royal College of Obstetricians and Gynaecologists and The Royal College of Pathologists, 2001.
- *The Future of Paediatric Pathology Services*. The Royal College of Paediatrics and Child Health, 2002.
- *Guidelines on Autopsy Practice – Best Practice Scenario 8: Sudden unexpected deaths in infancy (SUDI)*. The Royal College of Pathologists, 2005.
- *Standard Operating Procedure For Investigation of SUDI* (PHLS standard operating procedure), March 2003.
- Code of practice and consent forms for post-mortem examinations (*Families and Postmortems – a Code of Practice*), Department of Health, May 2003.
- CESDI 7<sup>th</sup> Annual Report, *Sudden Unexpected Deaths in Infancy – Pathology*, 1999, pp. 65–74.
- *Sudden Unexpected Deaths in Infancy. The CESDI SUDI studies 1993–1996*. The Stationery Office, 2000.
- *Sudden Unexpected Death in Infancy – A multi-agency protocol for care and investigation*. The Royal College of Pathologists and The Royal College of Paediatrics and Child Health, 2004.

## 20 Neuropathology

Please see separate section on the following page.

# CODE OF PRACTICE FOR NEUROPATHOLOGY

## UNITS AND DEPARTMENTS

Draft revision, February 2004

### 20.1 Introduction

Neuropathology is a sub-specialty of histopathology so most basic aspects of this code of practice are common to both. The practice of neuropathology has significant additional features that reflect the structural and functional complexity of the nervous system. These distinguishing features of neuropathology practice include greater dependence on special investigations, the need for extensive sampling, particularly of necropsy material to define the anatomical localisation of the disease process, and the emphasis on clinicopathological correlation of the findings based on the relevant clinical disciplines of neurology, psychiatry, neurosurgery and neuroradiology.

### 20.2 Head of department

Neuropathology is practised either in independent departments, usually associated with a neurosciences centre, or in units that are integrated into a histopathology department. Responsibility for all aspects of the running of the neuropathology service should be vested in a fully trained and experienced, medically qualified, consultant or honorary consultant neuropathologist who is head of the neuropathology service. The head of service in an independent neuropathology department should have overall responsibility for the neurohistology and neuro-cytology, electron microscopy, other neuropathology laboratory services, secretarial office and records and, in many cases, will also have responsibility for the post-mortem room. Technical management of the laboratory will normally be the responsibility of a senior biomedical scientist (BMS) in the department, with whom the consultant neuropathologists should discuss all matters affecting the laboratory. When neuropathology forms part of a larger histopathology department, a consultant neuropathologist should assume overall responsibility for the neuropathology service in consultation with the head of department.

### 20.3 Surgical neuropathology

Neurosurgical specimens removed by a surgical procedure should be examined in the neuropathology department serving the hospital concerned. Rarely, if all or part of a specimen requires special examination not available in the department, it may need to be sent to a specialised laboratory. This should only be done with the prior agreement of the consultant neuropathologist, who should arrange for the specimen to be logged in the department's records before it is sent, so that it can be traced in future.

When specimens are received for frozen section and smear preparation, they should immediately be brought to a neuropathologist's attention for description, selection of block(s) and reporting. A safety cabinet must be available for handling potentially infectious specimens. If the report is given over the telephone, a contemporary written record should be made.

Neuropathological reporting should be carried out by a neuropathologist or trainee under his/her supervision, or by laboratory staff who have had appropriate training.

The range of available immunocytochemical stains will vary from one laboratory to another but it is expected that all neuropathology services will be able to perform immunocytochemistry. Electron microscopy will often be needed and, whenever possible, should be planned beforehand so that the specimen may be correctly fixed and processed. Embedding in an epoxy resin may be required, e.g. in the case of peripheral nerve biopsies for which osmium fixation and teasing of nerve fibres may also be needed.

#### **20.4 Neuropathology autopsy**

A full neuropathological autopsy includes the examination of the brain, spinal cord, nerves and muscles and other organs and tissues, as appropriate.

As well as the sequential record of bodies received and autopsies performed, a disease index of major autopsy findings and a name index should be maintained. Brains are usually examined after adequate fixation (2–4 weeks). Ideally, the examination should occur in the presence of the relevant clinicians. After these ‘brain cuts’, a report of the macroscopic findings should be issued, followed by the results of histological examination.

Since many diseases of the nervous system, particularly neurodegenerative disorders, present considerable diagnostic problems in life, neuropathological necropsies are of great value in, and in many cases essential for, establishing an accurate diagnosis.

**Specialty Advisory Committee on Histopathology**

**May 2005**