Department of Cellular Pathology (BWH)

Mindelsohn Way, Edgbaston, Birmingham, B15 2TG

Handbook for Users

Check the Birmingham Women’s and Children’s Hospitals web site:
https://bwc.nhs.uk/laboratories

General Contact numbers:
Tel: 0121 333 9999, Ext | 5895 or 5892 – Histology/Mortuary
Ext | 5350 - Andrology

By your side
1 Introduction to Cellular Pathology ................................................................. 3
   Services Provided .......................................................................................... 3
   Service Scope ................................................................................................ 3
   Service Standards/Quality Assurance ............................................................ 3
   Service Commitment ...................................................................................... 4

2 Information Governance .................................................................................. 5
   Data Protection ............................................................................................... 6
   Complaints ..................................................................................................... 6

3 Patient Information ........................................................................................... 7

4 ..............................................................................................................................

5 Specimen Collection, completion of the request form and management of urgent and additional requests ......................................................... 13
   Consent .......................................................................................................... 13
   Specimen Collection (including the preparation of the patient) ......................... 13
   Instructions for patient collected samples ........................................................ 13
   Instructions for the completion of the request form ............................................ 23
   Electronic Requesting (ICE) ......................................................................... 23

   Specimen labelling and minimum data set ...................................................... 24
   Criteria for acceptance and rejection of samples .............................................. 24

6 ..............................................................................................................................

   Transportation of samples to the laboratory .................................................... 26
   Low Risk Diagnostic Specimens (UN3373): .................................................... 26
   High Risk Infectious Specimens (UN2114): ..................................................... 26
   Internal Transport ........................................................................................... 26
   Air Tube ......................................................................................................... 27
   Instructions for sending samples from an external source .................................. 27

7 Examinations offered by the laboratory ......................................................... 29

8 Reports, turnaround times and availability of clinical advice ......................... 30
   Reports .......................................................................................................... 30
   Turnaround Times .......................................................................................... 30

9 Work Referred Away ...................................................................................... 32
1 Introduction to Cellular Pathology

Services Provided
Specialist Diagnostic Gynaecological Histopathology Service
Specialist Diagnostic Perinatal Pathology Histopathology Service
Diagnostic Andrology Service

The department may refer some tests externally. Please see section 10 for further details

Service Scope
GYNAECOLOGICAL PATHOLOGY
The department provides a diagnostic gynaecological histopathology services for the Birmingham Women’s & Children’s NHS Foundation Trust (BWH Site) and also supports the activities of the Regional Gynaecological Cancer Centre, based at the City Hospital Birmingham (which is one of the largest units in the United Kingdom). The department also provides a tertiary referral service. The service includes rapid paraffin and frozen section services. All patient tissue received from OPD Clinics or in theatre, is sent to the department for diagnostic reporting.

PERINATAL PATHOLOGY
The department is a recognised Regional Perinatal Pathology Centre providing a fetal and perinatal autopsy service to the whole of the West Midlands region. Fetuses, including babies with congenital anomalies, stillborn babies and infants, are referred to the department for post mortem examination. The Department also offers limited post mortems, including external examination with X-Ray and photographic documentation of salient features. Placental histopathology is also undertaken following a variety of pregnancy complications and also after pregnancy loss, if a post mortem is declined. In addition, post mortems are undertaken for HM Coroners around the West Midlands and further afield.

ANDROLOGY SERVICE
The Andrology laboratory provides a diagnostic seminal fluid analysis service for male patients as a component of the infertility investigation pathway. This is carried out to the WHO guidelines for the examination and processing of human semen (5th addition 2010). The department also provides a post-vasectomy semen analysis service adhering to the British Andrology Guidelines (2016)

Service Standards/Quality Assurance
The department complies with ISO 15189:2012 Standards (Medical laboratories — Requirements for quality and competence) and adheres to guidelines recommended by relevant professional bodies, such as the ‘Royal College of Pathologists and Association of Anatomical Pathology Technology. The department also holds a full license from the Human Tissue Authority – License No: 12565.

The quality of our service is maintained by recognised effective internal quality control measures and by participation in National External Quality Assurance (EQA) Schemes:

- UKNEQAS Scheme for Cellular Pathology Technique
- UKNEQAS Scheme for Immunohistochemistry
- UKNEQAS Scheme for Reproductive Science
- National EQA Scheme for Paediatric and Perinatal Pathology
- National EQA Scheme for Gynaecological Pathology

The staff working within the department are fully qualified,
specialised and experienced, providing a quality service. All pathologists and state registered staff are registered for CPD. A high quality service is maintained by frequently looking at feedback from user meetings, audits and satisfaction surveys.

**Service Commitment**

We aim to be a model of excellence in the delivery of a clinical pathology service. In order to achieve this, we are committed to the following:

- Service user involvement
- Good professional practice & evidence-based practice
- Efficient utilisation of resources
- Valuing our staff in order to realize their full potential
- Commitment to the health, safety and welfare of our patients, staff and visitors
- Keeping a safe environment in compliance with current environmental legislation
- Working as teams and partnerships
- Continuous improvement

The purpose of this handbook is to provide information on the Cellular Pathology laboratory services including test repertoire, specimen requirements and details on accessing our service.
## Useful Contacts

### TECHNICAL ISSUES: BWCH Switchboard – 0121 333 9999

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Extension</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tervinder Sokhi</td>
<td>Head Biomedical Scientist/Manager</td>
<td>Ext 5525</td>
</tr>
<tr>
<td>Victoria Pickston</td>
<td>Deputy Head Biomedical Scientist</td>
<td>Ext 5519</td>
</tr>
<tr>
<td>Sarah Davis</td>
<td>Mortuary Manager</td>
<td>Ext 5892</td>
</tr>
<tr>
<td>Beverley McCracken &amp; Helen Greaves</td>
<td>Andrology BMS Team Leader</td>
<td>Ext 5350</td>
</tr>
<tr>
<td>Darren Redfern</td>
<td>Pathology Services Manager</td>
<td>0121 333 9835</td>
</tr>
</tbody>
</table>

### MEDICAL ISSUES: BWCH Switchboard – 0121 333 9999

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Extension</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr Tamas Marton</td>
<td>Head of Department &amp; Consultant Perinatal Pathologist</td>
<td>Ext 5541</td>
</tr>
<tr>
<td>Dr Jo Vella</td>
<td>Consultant Pathologist &amp; Gynae Lead</td>
<td>Ext 5556</td>
</tr>
<tr>
<td>Dr Raji Ganesan</td>
<td>Consultant Gynae Pathologist</td>
<td>Ext 5542</td>
</tr>
<tr>
<td>Dr Anthony Williams</td>
<td>Consultant Pathologist &amp; Gynae Lead</td>
<td>Ext 5530</td>
</tr>
<tr>
<td>Dr Andree Coetzee</td>
<td>Consultant Perinatal Pathologist</td>
<td>Ext 5539</td>
</tr>
<tr>
<td>Dr Sue Avery</td>
<td>Andrology Clinical Lead</td>
<td>Ext 6196</td>
</tr>
</tbody>
</table>

### OTHER HELPFUL NUMBERS

<table>
<thead>
<tr>
<th>Name</th>
<th>Office</th>
<th>Extension</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Histopathology Laboratory</td>
<td>Ext 5529</td>
</tr>
<tr>
<td></td>
<td>Histopathology Secretaries Office</td>
<td>Ext 5520</td>
</tr>
<tr>
<td></td>
<td>Histopathology Office Fax Number</td>
<td>0121 335 8066</td>
</tr>
<tr>
<td></td>
<td>Mortuary Office</td>
<td>Ext 5892 / 5895</td>
</tr>
<tr>
<td></td>
<td>Mortuary Fax Number</td>
<td>0121 335 8211</td>
</tr>
<tr>
<td></td>
<td>Andrology Laboratory</td>
<td>Ext 5350</td>
</tr>
<tr>
<td></td>
<td>Patient Access Team (Andrology Appointments)</td>
<td>0121 335 8100</td>
</tr>
<tr>
<td></td>
<td>BW Fertility Centre Reception (Andrology Patient’s)</td>
<td>0121 335 8270</td>
</tr>
</tbody>
</table>
3 Information Governance

Data Protection
Information is a vital asset both in terms of the clinical management of individual patients and the efficient management of services and resources. It plays a key part in clinical governance, service planning and performance management.

Your personal data is data which by itself or with other data available to us can be used to identify you. We are Birmingham Women’s and Children’s NHS Foundation Trust, the data controller. Our Trust is registered with the Information Commissioner’s Office (ICO) to process personal and special categories of information under the General Data Protection Regulation (GDPR) and Data Protection Act 2018 (subject to parliamentary approval) and our registration number is Z6078102.

The department complies with the Trust policies relating to the handling, use and protection of personal information (add document here)

- We only ask for information that we need to allow interpretation of results
- We protect the information and ensure only those staff who need to see the information can access it
- We share the information only when we need to for patient case, for example sending the information to another laboratory for testing
- The data will be stored in accordance with the Retention and Storage of Pathological Records and Specimens (5th edition) Guidance from The Royal College of Pathologists and the Institute of Biomedical Science, April 2015. We do not store any information for any longer than is absolutely necessary.

For more information, please click on the following link to read the Trusts Privacy Policy. This data protection and privacy policy sets out how we will use your personal data when you access our website. You can contact our Data Protection Officer at Birmingham Children's Hospital, Steelhouse Lane, Birmingham B4 6NH if you have any questions.

https://bwc.nhs.uk/privacy-policy

Complaints
Pathology Services operates a complaints system in line with the Trusts Complaints Policy ‘Making Experiences Count Policy’.

Complaints, comments or feedback regarding the services provided by pathology can be made verbally or in writing (letter or email). Please contact the Pathology Services Manager or the Quality Manager.

If you feel that your concerns have not been put right you can make a formal complaint:

https://bwc.nhs.uk/complaints
4 Patient Information

Histopathology

What is Histopathology?
Histopathology is the diagnosis and study of diseases of the tissues, and involves examining tissues and/or cells under a microscope.

What is the Histopathology Process?
Tissue samples are sent to the laboratory from a variety of sources, including operating theatres, clinics, outpatient departments, mortuaries etc. Each sample is accompanied by a request form which contains information about the patient, the referring clinician, the test(s) required and the clinical details.

Fixation Process
The great majority of the samples arrive in a reagent called formalin. It is important that the original structure of the tissue is preserved before it reaches the histopathology laboratory. As they die, cells break down releasing enzymes from their lysosomes and other intracellular organelles, which start to hydrolyse components of the tissue - a process termed autolysis.

Specimen Cut-up (Macroscopic Examination)
Since it takes some time for the fixative to permeate large tissue specimens, the pathologist will first assess whether the tissue is adequately fixed; if it is, they will then direct the cut-up of the specimen. Within a large piece of tissue, the important area for examination may be quite localised. By observation of the whole piece of tissue and using experience, the pathologist decides exactly which areas should be examined macroscopically. A single piece of tissue might have several cuts taken from it in order to give the best chance of identifying affected areas. All the tissue taken for examination is recorded on the patient request form.

Post Mortem Examination (Macroscopic Examination)
A post mortem can only be performed if consent has been obtained from the family or as instructed by the coroner. Depending on the type (or level) of the post mortem it can include external and internal examination of the baby’s body, an x-ray, photographs of important findings and tissue samples from the main organs (up to 3mm thick and up to 2.5cm in diameter, or up to the size of 2p coin). We may test for changes in the chromosomes or DNA, look for infection or occasionally for changes in the body chemistry. The internal examination is made through a careful incision on the front of the body and the back of the head. The organs to be checked are carefully removed and examined by the pathologist. After the post mortem, the organs are sensitively returned to the body and the skin is carefully repaired.

Tissue Processing
Tissue samples are loaded into cassettes which are then processed by a machine which takes the tissue successively through the stages of alcohol dehydration, xylene treatment and permeation with molten wax. The entire process usually runs overnight but can be run in a few hours on urgent cases depending on the size of the specimen.

Tissue Embedding, Sectioning & Staining
Following processing the tissue cassettes are transferred to an embedding machine, which holds the tissue in molten wax until it is ready to put into tissue moulds. The moulds are then filled with additional wax and chilled so that the wax sets, and the entire block
containing the tissue and the cassette (with patient information) is then mounted on the chuck of a microtome ready for sectioning.

Sectioning of the tissues is skilled and done by hand. A microtome cuts thin sections from fixed, embedded tissue. Tissue blocks within the department are routinely cut at 3 µm (1µm =10−6 metres). When an urgent result is required by the clinician (i.e. a suspicious area is noted during an operation) a cryostat can be used to cut fresh unfixed tissue by freezing the tissue to −15ºC. A result can be ready within 35 minutes, whilst the patient is still on the operating table.

A number of slides are prepared from each tissue block, possibly at different levels through the block, depending on the surgical specimen. The section(s) are then transferred on racks into a staining machine which does the basic H&E (Haematoxylin & Eosin) stain. The staining process involves a number of chemical reagents and dyes which stains each cellular component of the tissue enabling the pathologist to see what is happening within the tissue. The stained slides are then coverslipped using a fine glass and glue to protect the tissue.

**Internal Quality Control**

At this point, one of the biomedical scientists will examine the section under the microscope to ensure that the correct type of tissue corresponds with that noted on the request form. They will also check that the sectioning and staining has been carried out to the standard required. If it is not, repeating the sectioning and staining will be necessary. The whole of this process, from the time that the tissue arrives in the laboratory until the time that stained slides are ready to be examined takes one day.

**Diagnostic Reporting (Microscopic Examination)**

At this stage a pathologist examines the H&E-stained section(s) first, before deciding whether additional tests or staining procedures are required. They may be examining up to 120 slides in a day, so the amount of time available for each one is quite limited. Here again, experience is very important in rapidly identifying the characteristic appearance of a disease process. The pathologist’s report on the slide(s) is dictated to audio, for transcription by medical secretaries.

**Archive of Diagnostic Material**

Any x-rays, photographs and tissue samples (tissue blocks and slides) that are taken for histology are retained in archive for at least thirty years, so that they can be reviewed again if necessary. In the case of post mortem tissue retention of the material is only possible if appropriate consent has been gained to do so.

**Andrology**

**What is Andrology?**

Andrology is a branch of medicine concerned with the anatomy, functions, and disorders (such as infertility) of the male reproductive system.

**Why Get Tested?**

As part of infertility testing if your partner is having trouble becoming pregnant (Seminal Fluid Analysis – SFA) or after a vasectomy to determine if the operation was successful (Post Vasectomy Fluid Analysis – PVSA).
When to Get Tested?
When you think you might have a fertility problem or about three months after you have had a vasectomy.

How is the Sample Collected for Testing?

On-site sample production
Upon arrival at the BWFC reception, you will be provided with your Semen Analysis Request Form and asked to check that all demographics are correct. A hand-out is also available explaining the procedures required for the procurement of a semen sample. There is a section on the form that you will be required to complete relating to the sample collection and clinical details. You will then be escorted to the procurement room in the Andrology Department where you will be provided with a sample pot labelled with your name, date of birth and hospital registration number. The demographics on the sample pot are checked to ensure they match with the Andrology request form. You will then be requested to provide a semen sample by self-stimulation (masturbation). Some men, for religious or other reasons, might want to collect semen during the act of intercourse, using a condom. If this is the case, the healthcare practitioner will provide the condom or sheath ‘Male Factor Pak™’ because lubricated condoms can affect test results.

The process of production on-site is the same for both, post vasectomy and semen analysis samples.

Infertility evaluation: Samples are collected on-site as the semen needs to be examined within 60 minutes after ejaculation in order to maintain the quality of the specimen.

Off-site sample production
Semen samples for fertility investigations
If you have difficulty in producing a sample on-site, or are reluctant to do so, you will be offered the opportunity to provide a sample at home. This must be pre-arranged between 8-12am on the day of your given appointment.

You will be provided with a pre-weighed toxicity tested sample pot and latex free, non-spermicidal condom (‘Male Factor Pak™’) if required.

If you are producing a semen sample at home, it should be produced between 8-12am and delivered to the Andrology Department as close to the appointment time as possible. The sample must be delivered within 45 minutes after sample production to allow time for analysis, within the 60 minute production analysis interval, as per WHO guidelines (2010).

Prior to delivery, you must ensure that label the sample pot with your name, date of birth, date and time of sample production. You must ensure that the container is correctly sealed and that the sample is stored as close to body temperature as possible, to prevent cold shock during transport to the Andrology Department. The sample should not be left at room temperature for an extended period of time and should not be refrigerated.

When you arrive at the BWFC Reception with your sample a member of the Andrology Department staff will be called who will then check that the details are correctly recorded on the sample pot and assist with completion of the laboratory form.
Post vasectomy samples

Post vasectomy samples can also be produced off site using a pre-weighed toxicity tested sample pot and latex free, non-spermicidal condom ('Male Factor Pak™') if required.

A post vasectomy sample produced at home must be delivered to the BWFC Reception in the within 1 hour and 45 minutes after production. If motile sperm are seen in the first sample, ideally the second sample needs to be produced on-site. If this is not possible a sample produced at home will be accepted if it is delivered within 45 minutes of production. This is to allow assessment of the motile sperm.

Sperm motility decreases after ejaculation; thus, timing and temperature are critical to obtaining accurate results. If the sample is poor, repeat testing might be needed.

Semen samples produced at home and received over 1 hour old will be discarded. Samples received in a non-toxicity tested sample pot will also be discarded.

Pre-test Preparation needed to ensure the Quality of the Sample?

For infertility testing: To give sperm a chance to replenish, abstain from ejaculating 2-7 days before the sample is collected. Longer periods of abstinence may result in a greater volume of semen but decreased sperm motility. You may also be asked to avoid alcohol consumption for a few days before the test as well. Follow any instructions that are provided.

Post-vasectomy: It is recommended that the first post vasectomy sample is produced 16 weeks post-surgery or 24 ejaculates post-surgery to ensure clearance of remaining sperm.

What is being tested?

A complete semen analysis measures the quantity and quality of the fluid released during ejaculation. It evaluates both the liquid portion, called semen or seminal fluid, and the microscopic, moving cells called sperm. It is often used in the evaluation of male infertility. A shorter version of this test checks solely for the presence of sperm in semen a few months after a man has had a vasectomy to determine whether the surgery was successful.

Semen is a viscous, whitish liquid that contains sperm and the products from several glands. It is fairly thick at ejaculation but thins out, or liquefies, within 10 to 30 minutes. Sperm are reproductive cells in semen that have a head, midsection, and a tail and contain one copy of each chromosome (all of the male's genes). Sperm are motile, normally moving forward through the semen. Inside a woman's body, this property enables them to travel to and fuse with the female's egg, resulting in fertilization. Each semen sample is between 1.5 and 5.5 millilitres (about one teaspoon) of fluid containing at least 20 million sperm per millilitre, and varying amounts of fructose (a sugar), buffers, coagulating substances, lubricants, and enzymes that are intended to support the sperm and the fertilization process.

A typical semen analysis measures:

- Volume of semen
- Viscosity - consistency or thickness of the semen
- Sperm count - total number of sperm
- Sperm concentration (density) - number of sperm per volume of semen
Sperm motility - % able to move as well as how vigorously and straight the sperm move  
Number or % of normal and abnormal (defective) sperm in terms of size and shape (morphology)  
Coagulation and liquefaction - how quickly the semen turns from thick consistency to liquid  
Fructose - a sugar in semen that gives energy to sperm  
pH – measures acidity  
Number of immature sperm  
Number of white blood cells (cells that indicate infection)  

Additional tests may be performed if the sperm count is low, if the sperm show decreased motility or abnormal morphology, or if the seminal fluid is found to be abnormal. These additional tests may help identify abnormalities such as the presence of sperm antibodies, abnormal hormone levels (testosterone, FSH, LH, prolactin), excessive number of white blood cells, and genetic tests for conditions that may affect fertility.  

If you are a patient with retrograde ejaculation or anejaculation you should follow the instructions given by your referring clinician. You will need to produce a post masturbatory urine sample for examination. Sodium bicarbonate tablets will need to be taken 24 hours before the appointment. A leaflet explaining the procedure will be provided.
5  Service Location & Availability

Location of the Department

Histopathology Laboratory – 1st Floor Pathology Labs, Main BWH Building

Mortuary – Lower Ground, Main BWH Building (Next to Estates Dept.)

Andrology Laboratory – Fertility Centre, 2nd Floor, Main BWH Building. Patients should report to the Fertility Centre Reception from where they will be collected for their appointment by a member of the Andrology Team.

Laboratory postal address & Delivery address for couriers
Birmingham Women’s & Children's Hospital (BWH Site)
Department of Cellular Pathology
Histopathology Lab / Mortuary / Andrology Lab (please delete as appropriate)
Mindelsohn Way
Edgbaston
Birmingham
B15 2TG

Service Hours

Histopathology Laboratory – 07:30 to 16:30 (Mon – Fri)

Mortuary – 08:00 to 16:30 (Mon – Fri)
Receipt of Specimens – 09:30 to 14:30
Receipt & Release of Bodies – 09:30 to 14:30

Andrology Laboratory – 08:00 to 16:00 (Mon – Fri)

Out of Hours Service

Release of Bodies
The release of bodies out of hours must be arranged with the on-call healthcare practitioner in advance. They can be contacted via switchboard – 0121 333 9999. Bodies will only be released between 09:00 to 17:00 (Weekends & Bank Holidays).
6 Specimen Collection, completion of the request form and management of urgent and additional requests

Consent

Unless written consent is required for a particular test or investigation (this will be documented in the test details), the laboratory assumes that informed consent for testing to be carried out has been given at the time of the request form has been completed.

It is the responsibility of the requesting doctor to obtain consent for specimen collection and the tests requested. It is implicit in the receipt of the request form that consent has been obtained. We never request more sample than we need to but where there is material left over after laboratory testing, it may be used for other purposes such as quality assurance or audit, under the provisions of the Human Tissue Act 2004. Specific research is regulated separately by the ethics committee. Consent for the use of tissue requires that patients must be given the option to refuse permission for spare material to be used. When this occurs, each request to the laboratory must be clearly marked so that specimens are not used for other purposes.

There may be specific requirements for written consent for DNA tests sent to other countries, please contact the molecular genetics laboratory for further information.

Specimen collection

HISTOPATHOLOGY SERVICE

SPECIMEN CONTAINERS AND FIXATIVE

A wide range of containers are available from the department and can be collected during opening hours.

The small 60ml pre-filled biopsy containers are available from the histopathology department during opening hours. The larger 120ml pre-filled biopsy containers are supplied to theatres, Ward 8 and EPAU only. The larger containers used in theatres and delivery suite are dry and can be obtained from the mortuary during normal opening hours.

The 10% neutral buffered formalin (Blue Top) solution provided by the department for theatre use can be obtained from the histopathology department during opening hours. The solution must not be further diluted.

Neutral buffered formalin is classified as toxic, a carcinogen and a mutagen; therefore, personal protective equipment must be worn when handling such solution.

Formalin Saline Hazard Notification:

Toxic by:
Inhalation
Skin contact
Ingestion
May cause sensitisation by skin contact
First Aid Measures:

Eye contact: Irrigate thoroughly with water for at least 10 minutes
Inhalation: Remove from exposure, rest and keep warm
Skin contact: Drench the skin thoroughly with water. Remove contaminated clothing and wash before re-use.
Ingestion: Wash out mouth with plenty of water and give plenty of water to drink

Information on the Control of Substances Hazardous to Health (COSHH) guidelines can be obtained from the department.

FORMALDEHYDE SPILLAGES
When a spill occurs the area must be well ventilated. The area should be evacuated apart from the person who is going to deal with the spill. A senior member of staff or the Safety Officer should be informed if a spillage occurs. You should familiarise yourself with the directions for using the respirator and the following spillage procedure. All areas that use neutral buffered formalin MUST have appropriate spillage kits. The incident MUST be reported on Datix.

All of the following protective equipment MUST be worn:

- Goggles
- Nitrile gloves
- Disposable apron
- Respirator fitted with formaldehyde filters

1. The spill should be contained by encircling it with sorbent minibooms. These allow immediate containment as they prevent the spill from spreading.
2. Once the spill has been contained, the chemical sorbent pillows can be used to mop up the liquid. These pillows have a high liquid holding capacity.
3. Chemical sorbent sheets can be used to mop up smaller spills and for a final clean up after a larger spill.
4. The area should be thoroughly washed to remove any traces of the spill.
5. All materials used to clean up the spill are placed into a sealable plastic bag and then placed into an orange clinical waste bag (double bagged). The orange bag is then sealed and tagged and placed in a large yellow clinical waste bin for incineration.
ROUTINE REQUESTS

GENERAL PROCEDURES FOR SPECIMEN HANDLING

To ensure adequate preservation, the following guidelines must be followed:

- Use a specimen pot that is appropriate to the size of the specimen, allowing for an appropriate 1:5 tissue / fluid ratio where possible.
- Ensure that the details requested on the label are provided and written legibly. Patient details on the request form and specimen pot MUST match. Wherever possible, printed patient labels should be used to aid in the timely and accurate identification of specimens.

**Note:**

Patient labels MUST be attached to the specimen pot and NOT the lid.

- Transfer the specimen to the fixative solution as soon as is practicable after its removal from the patient.
- Ensure that the lid is securely fastened.
- For transportation (where the pot size allows), the pot should be placed within a sealable plastic bag with pocket for the request form.
- Always keep the request form and the specimen pot together and ensure that patient confidentiality is protected.
- Store the specimen in a secure area until collection by the general portering services.

SMALL SPECIMENS

- Cervical / bladder / omentum / vaginal / vulval biopsies
- Curettings
- Pipelles
- Cervical / Endometrial Polyps
- Laboratory obtained clots
- LLETZ biopsies
- Other small tissue samples

These should be placed in pre-filled containers (either 60ml or 120ml) containing 10% neutral buffered formalin fixative, labelled correctly with the patient details and sent to the laboratory with a completed Histopathology Request Form.

PRODUCTS OF CONCEPTION / RETAINED PRODUCTS OF CONCEPTION

These should be placed in a correctly labelled container. The specimen should be kept fresh (not fixed in 10% neutral buffered formalin) if cytogenetic analysis is required. Otherwise the container should be filled with 10% neutral buffered formalin. The specimen should be sent with a completed Pregnancy Loss Tissue Disposal Options & Consent Form, available on the gynaecological wards.

Provided a senior member of staff obtains verbal consent for examination of the tissue and signs the consent form verifying this, the Trust will accept responsibility for examination of the tissue.
Gaining consent should be undertaken by appropriately trained professionals, so that the patient can be informed of the risks of not having the products of conception examined.

**To prevent autolysis of the tissue, fresh specimens need to be refrigerated at 4ºC whilst awaiting collection by the porters.**

**ECTOPIC PREGNANCY SPECIMEN**
The tissue should be sent with a completed ‘Pregnancy Loss Tissue Disposal Options & Consent Form’, available on the gynaecological wards.

**PRODUCTS OF CONCEPTION FOR MEDICAL TERMINATION**
The specimen should be sent with a completed ‘Termination of Pregnancy Disposal Options & Consent Form’ or a ‘Termination of Pregnancy Incineration Certificate’, available on the gynaecological wards.

Pregnancy remains from ‘Medical Terminations’ are **NOT** for examination and will follow the ‘Trust Medical TOP Policy’ unless specifically requested by the clinical team. The remains are received into the mortuary where staff follow the disposal options chosen by the patient.

**LARGE SPECIMENS (excluding placenta)**
These should be placed in a correctly labelled medium / large sturdy plastic container provided by the department. Sufficient 10% neutral buffered formalin should be added (preferably at least 5 - 10 times the volume of the specimen). The container must be large enough to allow sufficient fixative to be added. Small containers can lead to distortion of specimens and poor fixation, which can compromise the quality of histology and therefore the ability to provide an accurate report.

It is essential that the container has a well-fitting lid to prevent leakage of formal saline in transit.

If a specimen is very large it may take longer to report as it requires longer fixation, which is important, especially in assessment of tumours.

**PLACENTAS**
These should be placed fresh (not fixed in 10% neutral buffered formalin) in a plastic bag, then double bagged. A patient label should then be attached to the outer bag. Place the bagged placenta in a placenta pot and close with a correct fitting lid. Place a patient sticker on the pot (not the lid). Place the placenta pot in a clear plastic bag with the completed Request Form and tie securely. Place in the fridge ready for collection by the Porters.

Placentas from pregnancy losses are handled in the same way as described above, but are placed in the “ABBEY ANNEX” fridge in delivery suite with a completed “Pregnancy Loss Placenta Examination Request Form”

Only those placentas meeting a set of reporting criteria (Appendix 1) will be examined. The department no longer stores placenta and
therefore any cases that do not meet the required reporting criteria will be disposed of.

To prevent autolysis of the tissue, fresh specimens need to be refrigerated at 4ºC whilst awaiting collection by the porters.

**URGENT REQUESTS**

**FROZEN SECTIONS**

Frozen sections are a part of the procedures in the histopathology laboratory. This is a resource intense process. Every attempt will be made to provide a frozen section service during normal working hours. All requests must **STRICTLY** adhere to the following requisites:

- Requests for frozen sections should be booked by the operating surgeon (**not a junior member of the team**) by contacting one of the gynaecological pathologists, giving as much notice as possible.
- There must be a robust clinical indication for the request.
- Limitations of the process must be clearly understood.
- A contact number must be available at the time of booking.
- The sample **MUST** be accompanied by a completed Histopathology Request Form containing the:-
  - Patient’s name
  - Date, time and place of operation
  - Tissue to be examined
  - Name of surgeon
  - Clinical question to be answered/clinical details
  - Contact telephone number for communicating frozen section report

- Samples for frozen sections should be transported to the laboratory by theatre staff and handed to technical staff as quickly as possible.
- Some tissues are not suitable for frozen section e.g. High Risk specimens such as potential lesions of tuberculosis or viral hepatitis and HIV positive tissues. If in doubt, please contact the laboratory and ask advice of the Head/Deputy Head Biomedical Scientist or a Pathologist.
- Reports will be telephoned directly to the theatre where a member of the medical staff should be available to receive them (NB, please include theatre telephone number on request form).
- Frozen section material will be subsequently processed to produce paraffin sections. These will be examined and a written report issued.

**RAPID PARAFFIN SECTION SERVICE**

Suitable specimens such as small biopsies, received by 11.00 am at the latest, may be processed using rapid techniques to enable a report to be issued the same day. Requests for rapid processing must be booked by clinician by contacting one of the gynaecological pathologists. Specimens that have not been booked will not be entertained. The name and bleep number of the requesting doctor to be contacted with the report must be written clearly on the request form.
POST MORTEM SERVICE
The Mortuary is situated on the lower ground floor of the hospital. It has facilities for all aspects of fetal, perinatal and infant pathology (including coronial autopsies), body storage and viewing facilities for bodies up to the age of 2 years. The Trust also has a Bereavement Service to support patients through the bereavement process.

ADULT AND BABY DEATHS
A set of guidelines have been prepared by the Department of Histopathology to help doctors deal with problems that arise when patients die.

ADULT DEATHS

CONFIRMATION OF DEATH
The doctor on call for a ward may be asked by the nursing staff to confirm death. The Doctor should record in the clinical notes the time of the examination of the body and what checks were made to confirm death.

The nursing staff will fill in an “Adult Notice of Death” - this form can be found on EVE:

http://eve/directorates/GL/PL/CellularPathology/Mortuary/Pages/home.aspx

This is attached to the outside of the body wrappings. The body is taken to the mortuary by the portering staff. The body is placed in the cold store and the notice of death attached to the clip outside the cold store. The BWH mortuary does not have the facility to store adult bodies. The Trust has a contract with a local funeral director who will transfer the adult body as soon as possible to an adult mortuary or the funeral directors premises.

Bariatric patients will be moved from the ward by the funeral director and taken to their premises.

The nursing staff will inform the relatives that the deceased will be moved off site as soon as possible. Ask them to come to the ward, usually on the next working day, to collect the death certificate.

DEATHS TO BE REPORTED TO HER MAJESTY’S CORONER
The following deaths must be reported to the Coroner:

- If the Cause of Death is not known
- Sudden, unexplained or suspicious deaths
- Deaths that may have been due to accident, including medical mishap, during or as a consequence of an operation or before recovery from an anaesthetic
- Deaths within 24 hours of admission to hospital
- Deaths related to fractures or falls
- Deaths where there may be a complaint about the quality of care received

To report a death, the doctor should ask the switchboard for the Coroner’s Officer. A Coroner’s Officer will take the details of the patient. The doctor may then have no further involvement with the patient. If the Coroner decides to investigate the death, a ‘Sudden
Death Notification’ to HM Coroner must be filled in and faxed to the Coroner’s Officer.

The Coroner’s Officer will deal with the relatives and issue the Death Certificate. Otherwise the doctor may be informed that the Coroner does not need to investigate the death and the procedures can be followed as for other deaths. Relatives should be told by medical staff if a death has been reported to the Coroner.

FORMS AND CERTIFICATES (ADULT DEATHS)

THE DEATH CERTIFICATE

The doctor will be asked by the ward staff to go to the ward to fill in a death certificate when the relatives arrive or telephone. If the death has been reported to the Coroner, the doctor must not fill in a death certificate, unless the Coroner indicates, no wish to investigate the death. It is important not to keep relatives waiting longer than necessary on the ward, even though the doctor may think the patients on the wards are more pressing than the patient who has died. The Medical Certificate of Cause of Death is the responsibility of the Registered Medical Practitioner who has been in attendance during the deceased’s last illness. This doctor is not necessarily the one who confirmed death. The doctor can issue a death certificate even if an autopsy is to be held, because there are a series of statements that can be selected, in particular: ‘Information from a post mortem examination may be available later’.

There are guidelines on the death certificate about statements to be avoided. In general, modes of death such as heart failure or cardiac asystole should not be given. The underlying disease should be given, such as ischemic heart disease. The death certificate is taken by the relatives to the Office of Registration of Birth, Deaths and Marriages at their local office. They are given a certificate for burial/cremation which is taken to the Funeral Directors.

CREMATION FORM

The doctor may be asked to fill in part of a cremation form (Crem 4), on the ward. This may or may not be done at the same time as the death certificate, usually not. The form should be sent to the mortuary to go with the body to the undertakers. Crem 5 to be completed if no PM.

The doctor may receive a fee for this (adult deaths only). The laboratory will ensure that the fees go to the relevant doctor. It is essential that the doctor keeps a record of the fees for Inland Revenue purposes.

BABY DEATHS

For certification purposes, there are three classes of death in this category.

1) Abortion - baby less than 24 weeks gestation with no sign of life.
2) Stillbirth - baby born after the 24th week of pregnancy that has neither breathed or has shown any sign of life. This includes
papyraceous fetuses that are recognised – please see recent guidance from RCOG.

3) Neonatal death - baby born alive regardless of gestational age.

The notification of death is filled in and is collected by the porter with the baby.

An autopsy should be requested on all identifiable fetuses (2nd trimester onwards) and babies. Written consent must be obtained for any invasive procedures e.g. skin biopsy, liver biopsy and even x-rays. This is a very distressing time and should be handled with sensitivity. The regional Post Mortem Consent Form (or equivalent) should be used.

Written consent is also necessary for examination of products of conception. A separate form is used for this, available on gynaecology wards.

INFANT DEATHS TO BE REPORTED TO HER MAJESTY’S CORONER

The Coroner does not have jurisdiction over stillborn infants or babies of less than 24 weeks gestation unless they have shown signs of life. Otherwise, the same rules apply regarding referral of baby deaths to the Coroner as for adults (see above).

If a Cause of Death can be given, the hospital doctor who has declared the baby dead can sign the Death Certificate after discussion with the Coroner, if necessary. The Coroner sends a special certificate to the Registrar to allow registration.

The following applies for:

1) On Delivery Suite - the doctor involved would contact the Coroner’s Officer
2) Neonatal death - the consultant or Senior Registrar would contact the Coroner’s Officer

NB: See Neonatal Deaths

FORMS AND CERTIFICATES (BABY DEATHS)

Neonatal Death - certificate completed by the doctor who has seen the baby alive.

Also see above - notification to the Coroner.

Stillbirth - certificate completed by either the midwife or doctor who was present at delivery or examined the baby after birth.

The Death Certificate is given to the parent(s) by the Bereavement Officer usually before the mother leaves the hospital.

After registration of death the white / green certificates from the registrar are given to the undertakers by the parents.

CERTIFICATES NEEDED FOR CREMATION

Registered deaths:-

- Stillbirth: Crem 9 form signed at hospital by the nurse, midwife or doctor.
- **Neonatal death**: Cremation forms (Crem 4 filled out and signed by doctor who wrote out the Death Certificate).
- **If no post mortem**: Crem 5 by pathologist.
- **If a post mortem**: No need to complete Crem 5.

**UNDER 24 WEEKS GESTATION**

A letter certificate goes with baby, signed by midwife or doctor present at delivery.

If cremation is to be carried out, FORM FR is completed by pathologist.

**NB:** No doctors’ fees are paid for infant cremation forms.

**REQUESTING AN AUTOPSY**

An autopsy (post mortem) can provide valuable information to the family and clinicians caring for an individual with regard to the cause of death, the disease processes affecting the patient / baby and the results of treatment. Fetal and perinatal post mortems may also provide essential information relating to the counselling of parents with regard to the risk of recurrence of a problem (genetic or otherwise) in a future pregnancy and possible diagnostic tests and treatment. Many parents also find reassurance from an autopsy that shows no evidence of a genetic or other problem that might affect their future reproductive success and other children.

Many relatives also find comfort in the fact that an autopsy can help to advance medical knowledge and may help other patients in the future. A full understanding of a patient’s (or baby’s) illness can help the relatives to adjust to their loss. Doctors, medical students and other health professionals can find it very valuable to see the pathological changes for themselves and are encouraged to attend the autopsy.

Even after extensive clinical investigations, in at least one in ten deaths the autopsy reveals unexpected and clinically important additional findings, and may change the cause of death. It is not possible to predict accurately which autopsies will show discrepant diagnoses.

Post mortem examinations are regulated by the Human Tissue Authority (HTA). In addition to the relevant legislation, the Human Tissue Act (2004), the HTA has issued statutory Codes of Practice, including one which governs the obtaining of consent for post mortem examination. Any person requesting a post mortem **MUST** be aware of the requirements of this Code of Practice. The Code of Practice is available from the Bereavement Office and can be found at: [https://www.hta.gov.uk/codes-practice](https://www.hta.gov.uk/codes-practice)

Some of the Key Points are given in Appendix 2, however, we strongly advise anyone considering requesting consent for post mortem to read the relevant parts of the Code of Practice.
The mortuary situated at Birmingham Women’s Hospital is licensed under section 16 of the human tissue Act 2004 for the following activities:

- The making of a post-mortem examination
- The storage of the body of a deceased person or relevant material which has come from a human body for use for a scheduled purpose
- The removal from the body of a deceased person (otherwise than in the course of an anatomical examination) of relevant material of which the body consists or which it contains, for use of a scheduled purpose other than transplantation

Usually a post mortem will be performed the day after the Post Mortem Consent Form and completed Referral Form reaches the Mortuary. In special circumstances autopsies may be done at shorter notice, for instance in the afternoon, if the body has to be removed from the Mortuary quickly.

It is the responsibility of the Clinician / Health Professional seeking consent to ensure that the consent form is correctly completed and that the family understand what a post mortem entails and how the information it provides may assist them. The parents should be aware that the final report of the examination usually takes around 8 weeks, and sometimes longer. The family may find it helpful to be told the preliminary findings of the examination, which are usually available within 5 working days. They must be made aware that these findings are only provisional and may be subject to change in the light of the histology and other tests that may have been performed.

The consent form must be accompanied by a fully and accurately completed Clinical Information Form for Post Mortem Request. These forms are available on Delivery Suite, Neonatal Unit, Gynaecological wards and on ‘EVE’:

http://eve/directorates/GL/PL/CellularPathology/Mortuary/Pages/home.aspx

An incorrectly completed consent form or failure to supply sufficient information may delay the autopsy. In cases where congenital anomalies have been detected by Ultrasound scan, it may be helpful to supply copies of relevant scan reports.

Note: Adult post mortems are carried out at establishments where the Coroner has authorised the post mortem to take place. This is usually at the coroner’s mortuary in Newton Street, Birmingham.

ANDROLOGY SERVICE

METHODS OF REFERRAL

Couples who are experiencing difficulties in conceiving visit their GP, the GP will then refer them for fertility investigations. Male patients who are concerned about their potential fertility or require investigation following surgery, illness or prolonged medication, may be referred for diagnostic semen analysis at the Andrology Department.

The male partner is referred for semen analysis using a BWH Semen Analysis Referral Form. This form should include all patients’ details and relevant medical history.
Referrals, by Consultants from other Hospital Trusts or by General Practitioners from local Primary Care Trusts, may be made by letter or fax (0121 627 2768) to the **Patient Access Team (Booking Office)** at Birmingham Women’s & Children’s NHSFT (BWH Site). The patient is then sent a letter offering them an appointment for diagnostic semen analysis or post vasectomy semen analysis. They will also receive a leaflet appropriate for the relevant test, instructing them of the procedure.

There is also a direct NHS Choose and Book service for GP referrals. The GP should set up a referral then give the patient a website address, password and Unique Booking Reference (UBRN) serial number. The appointment can be booked either by the GP whilst the patient is in attendance, by the patient accessing the website or by the patient telephoning NHS Direct who will make the direct booking on his behalf. The referral letter must be attached electronically to the UBRN.

Referral forms are available from on the Trust internet site under the Fertility Centre - Andrology section. Alternatively a letter or fax can be used but must include the following information:

- Patient’s full name, address and date of birth
- Name and address of referring clinician
- Name and address of General Practitioner
- Investigation required

Where retrograde ejaculation or anejaculation is known or suspected, this must be noted on the referral form and the patient provided with the appropriate information sheet, available on the Trust internet.

Referral for post vasectomy semen analysis follows the same protocol as for semen analysis, except the date of the vasectomy surgery must be included on the referral letter. This is to enable the booking office team to offer appointments to the patient at 16 weeks and one at 22-24 weeks if required, as per the ABA guidelines. If previous post vasectomy analysis has been performed at another referral centre the results and how many previous PVSA (post vasectomy semen analysis) test have been performed must be included on the referral request.
Instructions for the completion of the request form
The laboratories have well established acceptance criteria which need to be present for samples to be accepted and processed. All essential items need to be present on the form to ensure that patients are uniquely identified so that results are not allocated to the wrong patient, and that the correct test can be performed and reported to the correct clinician and sent to the correct location.

It is the responsibility of the requesting clinician to complete the correct request form fully. Errors or incomplete information WILL result in the delay in specimen processing and reporting.

To comply with laboratory procedures, we will only accept samples where all mandatory information and minimum patient identifiers are provided. The following essential information is required (Please use hospital identification stickers whenever possible):

<table>
<thead>
<tr>
<th>Essential Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>NHS Number / Hospital Registration Number</td>
</tr>
<tr>
<td>Surname</td>
</tr>
<tr>
<td>Forename</td>
</tr>
<tr>
<td>Date of Birth</td>
</tr>
<tr>
<td>Patient’s full address</td>
</tr>
<tr>
<td>Identification and location of requestor</td>
</tr>
<tr>
<td>Clinical details</td>
</tr>
<tr>
<td>Investigation required</td>
</tr>
<tr>
<td>Date and time of collection</td>
</tr>
<tr>
<td>Specimen Type, where appropriate the anatomical site of origin</td>
</tr>
<tr>
<td>Referring laboratory specimen number (if applicable)</td>
</tr>
</tbody>
</table>

Note: Missing information will be logged onto the request form and details included in the final report.

Each histology specimen is unique, if the specimen is lost, we cannot return it to the patient and take it again.

Specimen labelling and minimum data set
The specimen must be labelled with the following information:
1. Surname
2. Forename
3. Date of Birth
4. Registration Number
5. Specimen Type

Add-on requests / Verbal requests
Additional or verbal requests on a case must be discussed with the appropriate medical staff in the first instance. All requests must be made in writing.

Criteria for acceptance and rejection of samples
Request forms and specimens are the key source of data for any department. The details on the request form, form the information that is entered onto the Laboratory computer system - Telepath which enables results to be available on the Telepath Web Browser. If any detail is missing on either the request form or sample, there is a risk that the specimen may be rejected. The criteria is clearly stated in ‘Instructions for completion of the request form’ and ‘Sample labelling and minimum data set’.

Specimen rejection
Where the details on the specimen container do not match those given on the Request Form or a mandatory Consent Form has not
been completed, the Request Form together with the specimen will be returned to source for amendment and a Datix Incident completed.

Semen samples produced at home and received over 1 hour old will be discarded. Samples received in a non-toxicity tested sample pot will also be discarded.
7 Transportation of samples to the laboratory

All specimens must be handled with care and treated by all personnel as a potential infection risk. However, additional precautions are required for samples that are deemed to be high risk.

Low Risk Diagnostic Specimens (UN3373):

The majority of specimens collected and transported to the pathology departments do not present a significant risk of infection to staff handling them. These may be considered “low risk” diagnostic specimens. Such specimens will normally be packaged in a primary container (e.g. blood tube, swab tube, specimen pot), and an outer secondary container (a sealed pathology transport bag or sealed plastic bag). All specimens must be accompanied by an accurately, fully completed pathology request form which must preferably be integral and external to the bag. The tertiary container used to transport specimens around and between hospitals may vary in design, but must comply with the P60 specification outlined in this Policy.

High Risk Infectious Specimens (UN2114):

Some patients may be suffering from, or be suspected of having a disease which may present higher risk to staff. Legislation requires specimens from such patients to be identifiable.

- The specimen containers and pathology transport bags used for these specimens will be identical to those used for routine specimens. The identification of risk associated with these specimens will be by the use of “DANGER OF INFECTION” labels. The specification for these labels is given in Appendix C.
- It is the legal responsibility of the person who requests the laboratory examination of the specimen to ensure that both the request form and the container are correctly labelled to indicate a danger of infection. “DANGER OF INFECTION” labels must only be used for specimens which are suspected of or are known to contain pathogens.
- All specimens that are deemed to carry a “High Risk” of infection will be kept in 10% neutral buffered formalin for a minimum of 48hrs (dependent on the size of the specimen) before they are handled.

Internal Transport -

Make sure you always wear appropriate Personal Protective Equipment (PPE) when handling specimens.

Make sure the container used is the appropriate one for the purpose, is properly closed and is not externally contaminated by the contents.

Make sure the pathology request form has not been and cannot be contaminated.

Make sure the container is labelled with the patient’s registration number (and NHS number of non-registered BWH patients), full name, ward / department etc. Use hospital stickers whenever possible.

For specimens where the container is placed into the leak-proof pathology bag, make sure the bag is sealed as directed on the form.

On no account are these bags to be stapled, pinned or clipped. These bags are not to be re-used.
Specimen containers which do not fit into the pathology bag should be placed in a polythene bag and sealed by knotting or the use of tape, but never by the use of staples, pins or clips. These bags should not be re-used.

Make sure that the specimen is packaged and stored in a suitable and safe manner and in a suitable place, whilst awaiting transportation to the laboratory.

**Do NOT refrigerate Histopathology samples in fixative.**

Make sure that if taken by ward staff / porter to the central specimen reception point within the hospital, that specimens are carried in a safe manner.

**Air Tube**

Under no circumstances should any Histopathology sample be sent via the air-tube as this will destroy the delicate tissue architecture.

**Instructions for sending samples from an external source**

Surgical specimens from other hospitals are brought in by hospital transport and delivered to the mortuary/specimen reception. The specimen should be properly sealed and adequately packed in a transport box to avoid spillage. The Histopathology staff should be informed by fax (0121 335 8066) when specimens are being dispatched including details of the specimens being sent. The staff will acknowledge the receipt of specimens and any discrepancies can be attended to immediately.

Transfer of specimens from other hospitals must only be done during normal working hours.

The laboratory is not staffed at weekends or bank holidays. Sending specimens out of hours poses a significant risk of mishap.

Specimens should be stored at the referring hospital and transferred on the next normal working day. The staff must make sure that specimens are adequately immersed in fixative to prevent deterioration, and then stored in a designated area (to be designated by the laboratory manager at referring hospital). The referring clinicians have been shown (at the MDT’s) the standard way of opening the specimens to allow optimal fixation, prior to putting them in formalin. **Do NOT refrigerate Histopathology samples in fixative.**

Specimens **MUST ONLY** be delivered to the mortuary/specimen reception and **MUST NOT** be left at the hospital reception or anywhere else. It is the responsibility of the referring trust to ensure that this procedure is adhered to. Specimens in transit must never be left unattended.

The specimen **MUST** be accompanied by an appropriate, correctly completed and signed request form with adequate clinical information to enable the specimen to be trimmed. In the absence of clinical information, the report may be delayed.
FACTORS AFFECTING SPECIMEN QUALITY AND REASONS FOR SPECIMEN REJECTION

- Inappropriate amount of fixative or none at all (if required)
- Large specimen crammed into a small pot
- Fresh tissue not sent to Histopathology immediately
- Unlabelled or miss-labelled request form or specimen
- Poorly packed specimens resulting in spillage

All of the above can result in poor quality histology or delays in the processing of the specimen.

HEALTH AND SAFETY CONSIDERATIONS

Please ensure:

- All areas that use formalin have appropriate spillage kits
- All specimens and request forms are packaged correctly
- All specimen lids fit securely
- Specimen pots and request forms are clean externally (i.e., no blood stains)

All request forms are labelled adequately including any ‘High Risk’ or ‘Urgent’ information.

GUIDELINES FOR THE HANDLING, LABELLING & TRANSPORTATION OF BABIES FOR POST MORTEM

Prior to sending a baby or fetus for post mortem examination the following requisites MUST be adhered to:

1. A correctly completed Post Mortem Consent Form (either the BWH PM Consent Form, available in most Trusts, the National Post Mortem Consent Form or equivalent) including the signature of at least one parent and a witness must accompany the body. An incomplete Consent Form will delay the post mortem. A copy of the form should be offered to the parent(s) and one should be filed in the mother’s or baby’s notes.

2. A Clinical Information Form for Post Mortem Request must be completed and must accompany the Consent Form. Please fill in as many details as possible, as lack of information may delay the post mortem.

3. Photocopies of Ultrasound Scan Reports, if performed and relevant, should accompany the body.

4. The placenta must be in a clean, dry, leak-proof and labelled pot. This should accompany the body. The placenta is essential in all cases of stillbirth / intrauterine death, miscarriage and fetal abnormality, and if available, for early neonatal deaths.

5. Patient identification tags with the mother’s name / baby’s name, mothers and / or baby’s registration number and baby’s date of birth must be included. If the fetus is too small to put a tag around the ankle, the tag should be placed around the abdomen, or the tag must accompany the body.

6. Bodies which leak or are to be ‘High Risk’ (biohazard) MUST clearly be identified as such and transported in a body bag.
7. Biohazard bodies should have documentation included which indicates the likely route(s) of infection (e.g. airborne, blood borne) – not with the name of the infection itself. If in doubt, please contact the Mortuary (Ext 5895) for advice.

Completion of all of the above stages before the baby is sent for post mortem will ensure that the post mortem is carried out promptly and efficiently and the baby is ready for collection as soon as possible.

IMPORTANT NOTICE
Please note that all responsibility for the transportation of bodies (both sending to and collecting from Birmingham Women’s Hospital) lies with the referring Trust.

8. Examinations offered by the laboratory
This section of the handbook explains which examinations are offered by the laboratory.

A full gynaecological histopathology diagnostic service; this includes internal testing, any additional tests that may need to be referred away to a specialist laboratory as part of the diagnostic service and second opinion cases.

A full perinatal pathology histopathology diagnostic service; this includes regional, coronial and forensic post mortem cases, placental cases, internal testing and additional tests that may need to be referred away to a specialist laboratory as part of the diagnostic service and second opinion cases.

A diagnostic seminal fluid analysis and post vasectomy seminal fluid analysis.

Test Costs
The department handles cases within the Trust and as part of block contracts with the regional commissioner. If you require the service our department please contact the Head BMS/Manager to discuss the requirements and costs.
9 Reports, turnaround times and availability of clinical advice

Reports - Histopathology
Typed reports are issued as soon as all necessary tests are completed. Verbal consultations on clinical problems can only be provided to qualified medical staff by Consultant Histopathologists.

Users are requested to check if final reports are available on the Web Browser, in the hospital notes, clinics or wards BEFORE making enquiries. Please note that clerical and scientific staff WILL NOT give report details over the telephone, but on request (through the clinician). Authorised reports will only be generated to appropriate staff following prior arrangement and only via encrypted e-mail or dedicated secure e-mail accounts.

Reports – Andrology
All seminal fluid analysis reports issued include current World Health Organisation reference ranges for semen parameters (5th Edition 2010). Post vasectomy reports are issued according to the ABA guidelines 2002.

Semen fluid analysis reports for fertility investigations will also, either include a statement confirming “normal semen parameters” or alternatively will detail appropriate interpretative comments relative to results outside the reference ranges. Post vasectomy reports have a comment stating the number of sperm seen/ no sperm seen in the sample analysed and will include to date of the next PVSA appointment where relevant. Please note that verbal reports will not be issued for semen analysis results.

Turnaround Times
Turnaround times quoted are the anticipated times between specimen receipt in our laboratory and reporting under normal operating conditions. The turnaround times of all tests are monitored. Results will normally be returned via the local laboratory at the requesting hospital. The times taken for the specimen to reach the laboratory and for the report to reach the requesting clinician are not included. When appropriate, abnormal results will be telephoned to the requesting clinician.

Gynaecological Pathology

<table>
<thead>
<tr>
<th>Investigation</th>
<th>Sample</th>
<th>Turnaround Times</th>
</tr>
</thead>
<tbody>
<tr>
<td>Routine Histology</td>
<td>Various</td>
<td>Target: 80% reported in 7 days &amp; 90% reported in 10 days</td>
</tr>
<tr>
<td>Simple Specimens</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>POC’s for cytogenetic analysis - fresh tissue only</td>
<td></td>
</tr>
<tr>
<td>Routine Histology</td>
<td>Various</td>
<td>Target: 80% reported in 7 days &amp; 90% reported in 10 days</td>
</tr>
<tr>
<td>Large / Complex Specimens</td>
<td></td>
<td>Complicated cases may take longer due to the nature of the tests involved.</td>
</tr>
<tr>
<td>Urgent Histology</td>
<td>Various</td>
<td>Usually reported within 30 minutes of receipt of specimen</td>
</tr>
<tr>
<td>Frozen Sections</td>
<td>Fresh tissue only</td>
<td></td>
</tr>
<tr>
<td>Urgent Histology</td>
<td>Various – small tissue only</td>
<td>Usually reported within 5 hours of receipt of specimen</td>
</tr>
<tr>
<td>Paraffin Wax</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Perinatal Pathology

<table>
<thead>
<tr>
<th>Investigation</th>
<th>Sample</th>
<th>Turnaround Times</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Routine Histology</strong></td>
<td>Placenta</td>
<td>Usually reported within 42 days. (The commissioner contract target for no-</td>
</tr>
<tr>
<td>‘Livebirth’ + ‘No-</td>
<td>Fresh tissue only</td>
<td>consent placentas is 56 days)</td>
</tr>
<tr>
<td>Consent’ Placental Pathology</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Urgent Histology</strong></td>
<td>Placenta</td>
<td>Usually reported within 3 working days</td>
</tr>
<tr>
<td>Placental Pathology</td>
<td>Fresh tissue only</td>
<td></td>
</tr>
<tr>
<td><strong>Routine Histology</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post Mortems</td>
<td>Various</td>
<td>Preliminary reports usually available within 5 working days of PM taking place</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Final PM reports – Non-complicated cases should be available within 56 days of the</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PM taking place (as set out by the commissioner’s contract). Complicated cases</td>
</tr>
<tr>
<td></td>
<td></td>
<td>may take longer due to the nature of the tests involved.</td>
</tr>
<tr>
<td><strong>Routine Histology</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coroner’s/Forensic Cases</td>
<td>Various</td>
<td>Preliminary reports usually available within 5 working days of PM taking place</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Final PM reports generally available within 10 weeks of PM taking place. However,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>this may take longer due to the nature of the tests involved and the requirements</td>
</tr>
<tr>
<td></td>
<td></td>
<td>of the Coroner/Police</td>
</tr>
</tbody>
</table>

### Andrology

<table>
<thead>
<tr>
<th>Investigation</th>
<th>Sample</th>
<th>Turnaround Times</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seminal Fluid Analysis</td>
<td>Semen</td>
<td>3-7 days of specimen receipt</td>
</tr>
<tr>
<td>Post Vasectomy Seminal Fluid</td>
<td>Semen</td>
<td>3-7 days of specimen receipt</td>
</tr>
<tr>
<td>Analysis</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NOTE**

Turnaround times can vary depending on the complexity of the cases, the nature of the specimen (e.g. high risk) and whether further investigations (e.g. special stains, immunohistochemistry, genetic or biochemical tests) are required.

**Clinical Advice**

All medical or senior staff is available to provide advice on a case or a specimen during normal working hours. Please refer to contact details and service availability sections for details.
10 Work Referred Away

The department regularly refers specimens to other specialist centres in order to provide a comprehensive diagnostic service. Most UK laboratories to which samples are referred are UKAS accredited. However, many of those from Europe and around the world are either not accredited or their accreditation status is unknown. The performance of referral laboratories is routinely monitored.

Where work has been done in other centres, this is made clear on our laboratory report. A list of referral laboratories is given in Appendix 3.
EXAMINATION OF PLACENTAS REFERRED TO THE MORTUARY

1. **Macroscopic examination only (no histology):**
   a) Suspected single umbilical artery
   b) Unusual findings by clinical observation (e.g. accessory lobes)
   c) Uncomplicated twin pregnancy, >30/40 gestation (injection studies in MCDA)

   However, full examination can be performed if relevant abnormalities are identified during examination.

2. **Full examination – histology taken but not reported:**
   a) 30/40 and above and between 1st and 3rd centile for body weight
   b) 30/40 and above, no indication of admission to NNU, but maternal pyrexia or foul smelling liquor/baby/placenta, chorioamnionitis
   c) Morbidly adherent placenta
   d) Apgar scores >5 and <8 @ 10 minutes
   e) Twins or other multiples with any of the above complications under 2
   f) Monochorionic twins, with complications: e.g. TTTS, LASER ablation, or significant weight discordance (with injection studies)
   g) Twins or other multiples with any of the above complications under 3.
   h) Other serious complications on discussion with pathologist

Placentas will no longer be stored by the department. If submitted placentas do not meet the above indications for referral they will be Datix reported immediately and will be returned to Delivery Suite and not be entered on the pathology laboratory system.

**Note:** This change means that:

I. We will not be storing or examining placentas from babies between 30 and 37 weeks if there are no other complications
II. We will not be storing placentas from gestational diabetics, or GBS carriers, following uncomplicated PPROM, or uncomplicated PET, or from babies with congenital structural anomalies

If submitted the above placentas (i, ii) will be returned to labour ward for disposal.

3. **Full examination, with histology reported:**
   a) Gestation less than 30/40, any condition
   b) Admission to NNU (any gestation)
   c) Gestation 30/40 and above AND below 1st centile for body weight.

   d) Fetal Hydrops
   e) Apgar scores <5 @ 10 minutes
   f) Monochorionic twins, with complications: e.g. TTTS, LASER ablation, or significant weight discordance (with injection studies)
   g) Twins or other multiples with any of the above complications under 3.
   h) Other serious complications on discussion with pathologist
Appendix 2

KEY POINTS FROM HTA CODE OF PRACTICE ON POST MORTEM CONSENT

Code of Practice – Consent

- **Seeking Consent**
  - Give honest clear objective information
  - Allow a reasonable time to reach decisions
  - Provide support e.g. bereavement counselling

- **Who can seek consent?**
  - Sufficiently senior person
  - Sufficiently well informed
  - Should have seen a post mortem
  - Can be a doctor or other appropriately trained individual

- **What should be discussed**
  - Basic details of what happens
  - Benefits to the family and others
  - Possible outcome
  - Alternatives to post mortem
  - Communication of results
  - Options regarding retention or return of tissue etc.
  - Timing of PM and of funeral

For full details of the Code of Practice persons thinking of requesting consent for Post Mortem should see the Code of Practice which is available in the Bereavement Office or on the web at:

https://www.hta.gov.uk/codes-pract
### Appendix 3

#### REFERRAL SPECIALIST SITES

<table>
<thead>
<tr>
<th>Speciality</th>
<th>Referral Hospital/Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tissue Pathology</td>
<td>Royal Group of Hospitals Trust</td>
</tr>
<tr>
<td>Department of Cancer Medicine,</td>
<td>Trophoblastic Tumour Screening and Treatment Centre</td>
</tr>
<tr>
<td>Department of Cellular Pathology</td>
<td>University Hospital Birmingham NHSFT</td>
</tr>
<tr>
<td>Musculoskeletal Pathology</td>
<td>Royal Orthopaedic Hospital NHSFT</td>
</tr>
<tr>
<td>Department of Histopathology/Cytology</td>
<td>South Warwickshire General Hospital</td>
</tr>
<tr>
<td>Department of Histopathology–Skin Pathology</td>
<td>City Hospital</td>
</tr>
<tr>
<td>Department of Pathology, Boston (Sarcomas)</td>
<td>Brigham Women’s Hospital</td>
</tr>
<tr>
<td>Department of Histopathology (Lymphomas)</td>
<td>Manor Hospital</td>
</tr>
<tr>
<td>Musculoskeletal Histopathology</td>
<td>Robert Jones &amp; Agnes Hunt Orthopaedic Hospital</td>
</tr>
<tr>
<td>Department of Developmental Neuropathology</td>
<td>Neuropathologiste-Département de Pathologie</td>
</tr>
<tr>
<td>Department of Forensic Neuropathology</td>
<td>Salford Royal Hospital</td>
</tr>
<tr>
<td>Department of Histopathology</td>
<td>Great Ormond Street Hospital</td>
</tr>
<tr>
<td>Department of Pathology (Skeletal Dysplasia)</td>
<td>University Hospital Utrecht</td>
</tr>
<tr>
<td>Department of Histopathology</td>
<td>Royal Brompton &amp; Harefield NHS Trust</td>
</tr>
<tr>
<td>Institute of Liver Studies</td>
<td>King’s College Hospital</td>
</tr>
</tbody>
</table>