Cellular Pathology Handbook

Revision Version 7
PUBLISHED February 2016

The electronic version of this directory is updated regularly. Please ensure you always refer to the most recent version available on the Cellular Pathology and empath website. We hope you find this directory useful and we look forward to providing you with our services.

This book contains information about empath, Cellular Pathology Department and diagnostic / support services available at the Nottingham City Hospital Campus and Queens Medical Centre Campus, Nottingham University Hospitals and outlines the range of analytical and advisory services provided. To ensure the highest standard of work we participate in extensive internal and external quality assurance schemes and Clinical Pathology Accreditation (CPA) UK Ltd.

Please use the following link for information on empath: Welcome

empath specialist laboratories support emergency, inpatient and outpatient care at two of the country’s biggest teaching hospitals - Nottingham University Hospitals NHS Trust and University of Leicester NHS Trust.

empath is part of the NHS operating as a stand-alone organisation established by Nottingham University Hospitals and the University Hospitals of Leicester NHS trusts.

The Department is located on two sites:

- QMC A Floor, West Block
- NCH Ground Floor, Link corridor

Access to the department is controlled by authorised swipe card

Alternatively:

- QMC use the telephone by the Histopathology main entrance door
- NCH access is via Histopathology Reception

Normal working hours are between 09:00 and 17:30

- There is no laboratory out of hours service
- A mortuary out of hours service is available via the hospital switchboard
- In case of an out of hours emergency it may be possible to speak to a pathologist who may be contacted via the hospital switchboard: (QMC) 0115 9249924 (NCH) 0115 9691169

Author: Keith Ashford  Uncontrolled copy if printed  Approved by: Mike Langford
## CONTACTS:

<table>
<thead>
<tr>
<th>SERVICE ENQUIRIES</th>
<th>CLINICAL LEAD</th>
<th>Dr Irshad Soomro 0115 9691169 Ext 57706</th>
</tr>
</thead>
<tbody>
<tr>
<td>empath MEDICAL DIRECTOR</td>
<td>Dr Angus McGregor 0116 2586557</td>
<td></td>
</tr>
<tr>
<td>GENERAL MANAGER</td>
<td>Mr Mike Langford 07812 269835</td>
<td></td>
</tr>
<tr>
<td>QMC</td>
<td>0115 924 9924 Ext 63420</td>
<td></td>
</tr>
<tr>
<td>GENERAL ENQUIRIES</td>
<td>NCH</td>
<td>0115 969 1169 Ext 57700</td>
</tr>
<tr>
<td>FAX</td>
<td>0115 970 9479 QMC 0115 840 5883 NCH</td>
<td></td>
</tr>
<tr>
<td>MORTUARY</td>
<td>QMC</td>
<td>0115 924 9924 Ext 63551</td>
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<tr>
<td>GENERAL ENQUIRIES</td>
<td>NCH</td>
<td>0115 924 9924 Ext 62545</td>
</tr>
<tr>
<td>FAX</td>
<td>0115 969 1169 Ext 55075</td>
<td></td>
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</tbody>
</table>

### URGENT CONTACT IN EVENT OF FORMALIN SPILLAGE

If you have a spillage of formalin to deal with the laboratories are equipped with respirators & spill kits.

<table>
<thead>
<tr>
<th>H&amp;S AND QUALITY LEAD</th>
<th>Keith Ashford 0115 924 9924 Ext 63661</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surgical laboratory QMC</td>
<td>0115 924 9924 Ext 63551</td>
</tr>
<tr>
<td>Surgical laboratory NCH</td>
<td>0115 969 1169 Ext 55075</td>
</tr>
</tbody>
</table>

### LABORATORY & SPECIALIST SERVICE ENQUIRIES

<table>
<thead>
<tr>
<th>LABORATORY &amp; SPECIALIST SERVICE ENQUIRIES</th>
<th>MORTUARY SERVICES MANAGER</th>
<th>Mr Scott Raven 0115 924 9924 Ext 63338</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEREAVEMENT SERVICES MANAGER</td>
<td>Mrs Ruth Musson 0115 970 9726 0115 924 9924 Ext 61726</td>
<td></td>
</tr>
<tr>
<td>DEPUTY SERVICE MANAGER HISTOLOGY/ CYTOLOGY</td>
<td>Mrs Sharon Winters Laboratory 0115 924 9924 Ext 61076</td>
<td></td>
</tr>
<tr>
<td>DEPUTY SERVICE MANAGER SPECIALIST HISTOLOGY</td>
<td>Ms Carol Dunn Laboratory 0115 924 9924 Ext 61076 63317</td>
<td></td>
</tr>
<tr>
<td>OPERATIONAL MANAGER PHOTOGRAPHY &amp; DIGITAL IMAGING UNIT</td>
<td>Ms Carol Dunn 0115 924 9924 Ext 61076 67240</td>
<td></td>
</tr>
<tr>
<td>DEPUTY SERVICE MANAGER IMMUNOCYTOCHEMISTRY</td>
<td>Ms Carol Dunn Laboratory 0115 969 1169 Ext 61076 66263</td>
<td></td>
</tr>
<tr>
<td>OPERATIONAL MANAGER MOLECULAR DIAGNOSTICS &amp; IMMUNOPHENOTYPING</td>
<td>Mr Ian Carter 0115 969 1169 Ext 57711</td>
<td></td>
</tr>
<tr>
<td>MOHS LABORATORY TREATMENT CENTRE</td>
<td>Gateway G 0115 9248400 Ext 785107</td>
<td></td>
</tr>
</tbody>
</table>
### PROTECTION OF PERSONAL INFORMATION

All patient information is handled and stored in accordance with the Data Protection Act and NUH Trust policies – more information can be found through the following links.


### PATIENT AND USER FEEDBACK

Should wish to raise any feedback about the your experience of our service please contact the Patient Advice and Liaison Service in the first instance (PALS) who will direct your feedback to the appropriate team - more information can be found through the following links.

- [http://nuhnet/complaintsandpals/Pages/default.aspx](http://nuhnet/complaintsandpals/Pages/default.aspx)

### CLINICAL ADVICE & INTERPRETATION QMC CAMPUS

<table>
<thead>
<tr>
<th>Speciality</th>
<th>Name</th>
<th>Phone</th>
<th>Ext</th>
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<tbody>
<tr>
<td><strong>DERMATOPATHOLOGY</strong></td>
<td>Dr Somaia Elsheikh</td>
<td>0115 924 9924</td>
<td>61169</td>
</tr>
<tr>
<td></td>
<td>Dr Kusum Kulkarni</td>
<td></td>
<td>66418</td>
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<td></td>
<td>Dr M Khan</td>
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<td>65356</td>
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<td>64919</td>
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<tr>
<td><strong>GASTROINTESTINAL &amp; HEPATOBILIARY PATHOLOGY</strong></td>
<td>Dr A Zaitoun</td>
<td>0115 924 9924</td>
<td>61173</td>
</tr>
<tr>
<td></td>
<td>Dr P Kaye</td>
<td></td>
<td>66207</td>
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<tr>
<td></td>
<td>Prof. M. Ilyas</td>
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<td>78330735</td>
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<tr>
<td><strong>GYNAECOLOGICAL PATHOLOGY</strong></td>
<td>Dr Suha Deen</td>
<td>0115 924 9924</td>
<td>61175</td>
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<td>Secretarial Support</td>
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<tr>
<td><strong>HEAD AND NECK AND LYMBOHORETICAL PATHOLOGY</strong></td>
<td>Dr R O Allibone</td>
<td>0115 924 9924</td>
<td>66064</td>
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<tr>
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<td>Dr M Khan</td>
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<td>61847</td>
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<tr>
<td><strong>NEUROPATHOLOGY, OPHTHALMIC , SURGICAL, PAEDIATRIC AND ORTHOPAEDIC PATHOLOGY</strong></td>
<td>Dr S Paine</td>
<td>0115 924 9924</td>
<td>62567</td>
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<tr>
<td></td>
<td>Dr D K Robson</td>
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<td>61271</td>
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<td>Dr Ian Scott</td>
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<tr>
<td><strong>PAEDIATRIC AND PERINATAL AUTOPSY PATHOLOGY</strong></td>
<td>Dr J Allotey</td>
<td>0115 924 9924</td>
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<td>Dr D O'Neill</td>
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<td><strong>CYTOLOGY, RESPIRATORY, ENDOCRINE PATHOLOGY</strong></td>
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</tr>
<tr>
<td>Dr M Khan</td>
<td>Ext 65356</td>
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<tr>
<td>Dr I Soomro</td>
<td>Ext 57706</td>
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<td>Ext 56874</td>
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<td>GASTROINTESTINAL, GYNAECOLOGICAL PATHOLOGY</td>
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<tr>
<td>Dr G Hulman</td>
<td>Ext 57704</td>
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<tr>
<td>Dr V Sovani</td>
<td>Ext 57702</td>
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<td>Dr I Soomro</td>
<td>Ext 57706</td>
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<tr>
<td>Dr E Rakha</td>
<td>Ext 56416</td>
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<td>UROPATHOLOGY</td>
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<tr>
<td>Dr G Hulman</td>
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<tr>
<td>Dr T A McCulloch</td>
<td>Ext 54337</td>
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<td>Dr Z Hodi</td>
<td>Ext 57705</td>
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<td>SARCOMA, RENAL PATHOLOGY</td>
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<tr>
<td>Dr T A McCulloch</td>
<td>Ext 54337</td>
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<td>Dr Z Hodi</td>
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<tr>
<td>BREAST PATHOLOGY</td>
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<tr>
<td>Prof I O Ellis</td>
<td>Ext 56133</td>
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<tr>
<td>Dr A H S Lee</td>
<td>Ext 57399</td>
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<td>Dr Z Hodi</td>
<td>Ext 54337</td>
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<td>Dr E Rakha</td>
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<tr>
<td>HAEMATOPATHOLOGY</td>
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<tr>
<td>Dr V Sovani</td>
<td>Ext 57702</td>
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<tr>
<td>Dr D Clarke</td>
<td>Ext 54954</td>
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<tr>
<td>Secretarial Support</td>
<td>Ext 56870</td>
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</table>

**NOTTINGHAM HEALTH SCIENCE BIOBANK**

- The Cellular Pathology department holds certain tissues which have been consented and are available for teaching, ethically approved research, public health surveillance, quality control and audit.
- The majority of specimens are stored as processed paraffin blocks & held by the department for a minimum of 30 yrs.
- All projects must have full ethical approval before tissue is supplied
- Staff of the Nottingham Health Science Biobank co-ordinates the request and retrieval of material

**TRANSLATIONAL RESEARCH AND BIO-BANKING ENQUIRIES**

**DEPUTY DIRECTOR NHSB**

Dr Balwir Matharoo-Ball 07980 466879
GENERAL INFORMATION

The department of Cellular Pathology sits within Empath Pathology Services which is a joint venture between Nottingham University Hospital NHS Trust (NUH) and University Hospitals Leicester NHS Trust (UHL). The service provided from Nottingham University Hospitals Trust sites is accountable to the Directorate of Diagnostics and Clinical support.

The Clinical Director for the Directorate is David Selwyn. The Divisional General Manager is Duncan Hanslow. The medical director for Empath Pathology Services is Dr Angus McGregor and clinical lead for Cellular Pathology is Dr Irshad Soomro. General Manager for Cellular Pathology is Mike Langford.

Cellular Pathology is an integrated University/NHS department and services are provided over two sites at Nottingham University Hospital Trust.

<table>
<thead>
<tr>
<th>QMC Campus</th>
<th>NCH Campus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Located on A Floor</td>
<td>Located on the ground floor link corridor</td>
</tr>
<tr>
<td>Between West Block &amp; the Medical School</td>
<td>Between Oncology and X-Ray (Junction W2)</td>
</tr>
</tbody>
</table>

Surgical Histology & Post Mortem Pathology
Mortuary and bereavement services.

Established areas of Interest:
- Neuropathology,
- Gastrointestinal,
- Gynaecological,
- Ophthalmic,
- Orthopaedic,
- Paediatric, Fetal and Neonatal Pathology, Dermatopathology,
- Head and Neck Pathology
- Non- Gynaecological cytology,
- Paediatric renal pathology technical service
- Photographic and Digital Imaging Unit.
- Satellite laboratory to support frozen section production for the Dermatological Mohs procedure at the Nottingham Treatment Centre
- Immunocytochemistry laboratory

Established areas of Interest:
- Breast,
- Gynaecological (mainly oncology gynae), Gastrointestinal,
- Respiratory,
- Endocrine,
- Genito-urinary,
- Lymphoreticular,
- Renal, soft tissue pathology,
- Non- Gynaecological cytology
- Molecular Diagnostics and Immunophenotyping laboratory
### REPORTS

All reports, once authorised by the pathologist, are available electronically via the NotIS system. A paper copy can also be generated and this is sent to the clinician or the source, as stated on the request card. If a paper copy of the report is required and has not been received it is advisable to contact the specialty team.

### URGENT REPORTS

If a report is required urgently this should be **clearly stated on the request form** and the degree of urgency indicated. If possible samples should be handed directly to a member of the laboratory staff before 16:30 hours. Specimens usually require overnight processing for optimum technical results, however, in exceptional circumstances small urgent specimens, if properly fixed, may be processed on a shorter schedule. **Please note this does not guarantee a report being issued on that day.**

Special arrangements must be made by telephone to arrange this:
- NCH Ext 55075, 56406 or 56391
- QMC Ext 62545 or 66264

### LABORATORIES TO WHICH WORK IS ROUTINELY REFERRED

The Histology department routinely refers cases for FISH and some complex molecular diagnostics investigations. Metabolic Bone samples are referred to Royal Hallamshire Hospital, Sheffield. Samples requiring Electron Microscopy are sent to Leicester Royal Infirmary (empath UHL). Further details of these providers can be obtained on request from the General Manager or Deputy Service Manager.

### TURNAROUND TIMES

<table>
<thead>
<tr>
<th>Service</th>
<th>Timeframe</th>
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</thead>
<tbody>
<tr>
<td>Treatment Centre- Histology</td>
<td>90% within 10 working days</td>
</tr>
<tr>
<td>Non TC Histology</td>
<td>100% within 2 calendar weeks</td>
</tr>
<tr>
<td>Treatment Centre- Diagnostic Cytology</td>
<td>90% within 5-8 working days</td>
</tr>
<tr>
<td>Non TC Diagnostic Cytology</td>
<td>100% within 2 calendar weeks</td>
</tr>
<tr>
<td>CSF cytology</td>
<td>Usually within 5 working days</td>
</tr>
<tr>
<td>Molecular requests</td>
<td>Typically range from 1-10 working days</td>
</tr>
<tr>
<td>Phentyping requests</td>
<td>Usually completed within 24 hours of receipt</td>
</tr>
</tbody>
</table>

**Exceptions**
- Any case referred to us from another organisation
- Bone samples which require decalcification before examination is possible. Decalcification time varies depending on specimen site.
- Social Terminations and fetuses.
- Any case referred out by us to an organisation that usually takes longer than the target time to return a result.
- Cases which require more in depth investigations following the initial examination e.g. FISH and EM
## SAMPLE REQUIREMENTS

### ROUTINE SAMPLE REQUIREMENTS

<table>
<thead>
<tr>
<th>SAMPLE TYPE &amp; TRANSPORT SPECIFICATIONS</th>
<th>FIXATIVE &amp; HANDLING REQUIREMENTS</th>
<th>HEALTH &amp; SAFETY CONSIDERATIONS</th>
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</thead>
<tbody>
<tr>
<td><strong>Histology</strong></td>
<td>Formalin Fixative</td>
<td></td>
</tr>
<tr>
<td>Transport via Autocore</td>
<td>Supplied by: Histology Lab QMC &amp; NCH</td>
<td></td>
</tr>
<tr>
<td>Path Reception</td>
<td>Wear relevant personal protective equipment including gloves and eye protection where appropriate.</td>
<td>Formalin can irritate skin, eyes, throat and lungs</td>
</tr>
<tr>
<td>Air Tube</td>
<td></td>
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<tr>
<td>Portering service</td>
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</table>

| **Cytology**                            | Cytology Fixative                |                               |
| Transport via Autocore                  | Cytorich Red Fluid               |                               |
| Path Reception                          | Supplied by: Histology Lab QMC & NCH |                               |
| Portering service                       | Wear relevant personal protective equipment including gloves and eye protection where appropriate. | Cytology fixatives are highly flammable and Can irritate if splashed in eyes. Toxic by inhalation, skin contact or if swallowed. |

| **Frozen Section**                      | Dry pot or container             |                               |
| Transport via Portering service         | Supplied by: Histology Lab QMC & NCH |                               |
|                                        | Wear relevant personal protective equipment including gloves and eye protection where appropriate. | Send sample to department as soon as possible after collection Take relevant precautions for potentially infective material |

| **Electron Microscopy**                 | Glutaraldehyde Fixative         |                               |
| Transport via Autocore                  | Supplied by: Histology Lab QMC & NCH |                               |
| Path Reception                          | Wear relevant personal protective equipment including gloves and eye protection where appropriate. | Glutaraldehyde can irritate your skin, eyes, throat and lungs and cause sensitisation to the skin and respiratory tract. It has been associated with spontaneous abortion. See safety information for glutaraldehyde in electron microscopy section |
| Air Tube                               |                                  |                               |
| Portering service                       |                                  |                               |

| **Molecular Diagnostics & Immuno-phenotyping** | EDTA tubes | | |
| Transport via Autocore                  | Supplied by: Autocore reception QMC Pathology Reception NCH | | |
| Path Reception                          | Wear relevant personal protective equipment including gloves and eye protection where appropriate. | | |
| Portering service                       | | | |

### FIRST AID IN ALL INSTANCES
- **If Splashed**: Wash eyes/skin in running water for 10 minutes
- **If Swallowed**: Wash mouth and drink plenty of water
- **If Inhaled**: Remove to fresh air

### HEALTH & SAFETY Dealing with a Spillage
- **Small spills**: Use correct absorbent granules
- **Large Spill**: Use spillage kit – seek advice on 63661
- **Dispose of spill waste**: Seal in a plastic bag and dispose of by incineration. Wash surfaces in contact with the spillage with water.
**SAMPLE LABELLING**

REFER TO THE TRUSTS PROCEDURES FOR:
- REQUEST AND SPECIMEN LABELLING CL/CGP/018
- SAMPLE ACCEPTANCE & REJECTION FOR PATHOLOGY LABORATORIES CL/CGP/049

IT IS ESSENTIAL THAT THE PERSON REQUESTING AND COLLECTING THE SAMPLE ENSURE THAT THEY HAVE CORRECTLY IDENTIFIED THE PATIENT, PRIOR TO COLLECTION, BY ASKING THE PATIENT FOR THEIR NAME AND DATE OF BIRTH AND/OR CONFIRMATION EITHER BY A SEPARATE FORM OF IDENTIFICATION OR VIA A WRISTBAND AS APPROPRIATE.

SAMPLES MUST BE LABELLED AT THE TIME OF COLLECTION NOT PRIOR TO, OR REMOTELY FROM THE PATIENT AFTER COLLECTION

| The ultimate responsibility for accuracy of sample labelling and request form completion lies with the named clinician |
| Please be aware that if the full information is not provided on the request form or patient sample then the clinician or clinical team responsible will be contacted to confirm the patient’s identity. Samples which are not thoroughly labelled may be returned to the source |

| ALL SPECIMENS REMOVED DURING ANY ONE PROCEDURE SHOULD BE ACCOMPANIED BY A SINGLE REQUEST FORM. |

| STATE THE NATURE OF EACH SPECIMEN AND RELEVANT CLINICAL INFORMATION IDENTIFIED ON THE REQUEST FORM |

| AFFIX A CURRENT PRE PRINTED PATIENT ADDRESSOGRAPH I.D. LABEL TO: |
| - REQUEST CARD |
| - ALL SPECIMEN CONTAINERS |

| THE MINIMUM INFORMATION REQUIRED ON THE HISTOLOGY REQUEST FORM IS AS FOLLOWS; |
| (WHERE HAND WRITTEN, CAPITAL LETTERS MUST BE USED) |

- The unique patient identifier (NHS Number or District (K) Number)
- Surname
- Forename
- Date of birth
- Patient’s address
- Source of collection (location of patient) or address for report written in full (hospital/ ward/ department/ treatment centre gateway/GP surgery)
- Date and time specimen taken
- Name and signature of requesting person/sender (title, full surname and initials of consultant clinician/ GP)
- Consultant / GP to whom result is to be sent (use full surname and initials and WinPath code-if known)
- Clinical information (including relevant drug and patient history details where appropriate).
- Risk of infection status and hazard warnings if required
- Investigations required
- Type of sample/specimen (including anatomical site or origin where appropriate)
- All forms should be signed by a Clinician or qualified member of staff who has approval from Consultant / GP to request such investigations.
### WHAT I NEED TO INCLUDE

<table>
<thead>
<tr>
<th>WHAT I NEED TO INCLUDE</th>
<th>WHAT HAPPENS IF I DON’T?</th>
</tr>
</thead>
<tbody>
<tr>
<td>A minimum of 4 patient identifiers</td>
<td><strong>REJECTED SAMPLE</strong>&lt;br&gt;• You will need to attend the lab to identify sample&lt;br&gt;• Sample will be returned to you.</td>
</tr>
<tr>
<td>Clinician and location for report</td>
<td><strong>REPORT NOT AVAILABLE</strong>&lt;br&gt;• Without the correct originating source we can’t allocate a destination for the report</td>
</tr>
<tr>
<td>Complete forms fully and accurately</td>
<td><strong>REJECTED SAMPLE OR COMPROMISED DIAGNOSIS</strong>&lt;br&gt;• Include as much patient information as possible.&lt;br&gt;• Failure to provide information may lead to unhelpful or inaccurate diagnosis</td>
</tr>
<tr>
<td>Complete forms legibly</td>
<td><strong>SAMPLE INCORRECTLY REGISTERED</strong>&lt;br&gt;• Illegible handwriting will not be interpreted&lt;br&gt;• May result in errors or delays to results</td>
</tr>
<tr>
<td>Use a single request form for multiple samples from a single patient (Use alphabetic characters A,B,C, etc)</td>
<td><strong>SAMPLES MAY BE REGISTERED SEPARATELY</strong>&lt;br&gt;• Possible delays to results as samples will be split up&lt;br&gt;• Inefficient use of staff time in the department.&lt;br&gt;• Multiple reports will be available for a single procedure</td>
</tr>
<tr>
<td>Indicate the appropriate tests if applicable Use the correct carriers or sample bags</td>
<td><strong>SAMPLES MAY NOT RECEIVE CORRECT EXAMINATION</strong>&lt;br&gt;Sample may not reach the correct destination&lt;br&gt;• May result in errors or delays to results</td>
</tr>
</tbody>
</table>

### OTHER SAMPLE REQUIREMENTS FOR CONSIDERATION

- Where the name of a patient is not known, or is confidential e.g. GUM patients, as much information as possible must be written on each sample and request form to enable adequate identification. This should include the provision of the unique specific patient identification number on both sample and form.
- Please also include a relevant bleep number for in-patient requests.
- For samples from Primary Care, please include the address of the GP surgery and telephone number in case we need to contact the practice.
- Most specimens should be placed in an ample amount of formalin fixative in a properly labelled container. Certain samples may need to be sent fresh and unfixed.
- Specimens taken from different sites should be placed in separate containers and separately identified. Please use alphabetic characters first e.g. A, B, C, D etc. Numbers will be given by laboratory staff when records are entered on the computer system.
FACTORS AFFECTING INTERPRETATION OF RESULTS

It is essential that tissue samples are immediately placed into 10x their volume of fixative to preserve the tissue and prevent deterioration. Placing a large sample into a small volume may compromise the histological interpretation.

Ensure tissue is housed in a container that is large enough to accommodate the tissue. The specimen must be free floating to ensure that the fixative can infiltrate the tissue over the maximum surface area.

Using a container too small for the specimen will result in distortion of the sample. A variety of sizes of specimen containers containing 10% buffered formalin fixative are available from the department during normal working hours.

Provide as much clinical information as possible. A lack of clinical information can make examination of the sample and diagnosis difficult or impossible.

DO NOT wrap samples polythene as this will not allow fixative to penetrate this tissue.

SAMPLE TRANSPORT

SAMPLE TRANSPORT GENERAL

Specimens for histological examination reach Histopathology in a number of ways. It is important that you ensure specimens reach the department as soon as possible.

<table>
<thead>
<tr>
<th>QMC campus</th>
<th>NCH campus</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Airtube system</strong></td>
<td><strong>Non-urgent specimens</strong> at the City campus are distributed by Pathology Reception staff, who deliver to the Histology laboratory. <strong>Urgent specimens</strong> are brought to the attention of the laboratory.</td>
</tr>
<tr>
<td>Station located in the Surgical Cut-up Laboratory</td>
<td>Specimens arriving in Pathology Reception at City</td>
</tr>
<tr>
<td>Location Code for Cellular Pathology 1400</td>
<td>Prior to 3.30pm specimens will be delivered to the laboratory the same day.</td>
</tr>
<tr>
<td><strong>Specimens generated by sources within the QMC</strong></td>
<td>Pathology Reception is open between 9am and 5pm</td>
</tr>
<tr>
<td>Delivered directly to the ante-room next to the Histology laboratory A Floor, West Block (formerly part of Pathology Reception).</td>
<td>Fixed specimens for Histology outside these hours can be left in the marked box available outside Pathology Reception. For enquiries contact ext 56195.</td>
</tr>
<tr>
<td>Place in the blue trolley. Access is by swipe card.</td>
<td><strong>Specimens generated by senders from outside QMC</strong></td>
</tr>
<tr>
<td><strong>Specimens generated by senders from outside QMC</strong></td>
<td><strong>Needle cores of Breast tissue</strong></td>
</tr>
<tr>
<td>Delivered to the Pathology Autocore facility, from where they are collected by Histopathology laboratory staff. The last collections made by Histology laboratory staff are 5pm</td>
<td>Delivered to the Pathology Reception</td>
</tr>
<tr>
<td><strong>High Risk specimens in a RED TIN, urgent biopsies for frozen sectioning and intra-operative opinion or material that is being transported fresh.</strong></td>
<td>Prior to 3.30pm specimens will be delivered to the laboratory the same day.</td>
</tr>
<tr>
<td>These specimens may be delivered directly to the Department by a porter</td>
<td><strong>Specimens from Trent cardiac unit</strong></td>
</tr>
<tr>
<td></td>
<td>Delivered by a member of staff from that department.</td>
</tr>
</tbody>
</table>
SAMPLE TRANSPORT VIA THE AIRTUBE SYSTEM

- The Airtube system is designed to be used for sending Pathology samples to the various Pathology Departments, Haematology, Clinical Chemistry, Immunology, Cellular Pathology, and Microbiology.
- Location code 1400 can be selected to transport small specimens for Histology at the QMC campus.
- Each specimen pot must be securely closed and packed inside a sealed plastic sample bag attached to the appropriate request form for the test.
- Use a transportation carrier and ensure the lid is closed securely. Any unsecured carriers can cause system shutdown if jamming occurs.
- The following samples **MUST NOT** be sent via the Airtube:
  - High risk, including suspected HIV samples, IV drug abusers, Hepatitis B, TB, and CJD.
  - CSF samples
  - Muscle biopsies
  - Sural nerve biopsies
  - Fresh tissue samples (unfixed) for histology
  - Radioactive samples
  - Samples in excess of 1 kg or in a specimen pot greater than 120ml in size
  - Samples NOT packed in a sealed plastic specimen bag.

Carriers must not be over-packed, forcing samples into the carrier increase the risk of breakage. Under no circumstances put samples into an airtube station without being in a carrier. Misuse of the Airtube, or ignoring the instructions located at all Airtube stations will result in an incident report being instigated.

Security
All ward placed Airtube stations are equipped with a lockable cupboard. The cupboard must be kept locked at all times and must only be accessed by authorised staff. **DO NOT** display the digital-lock code on or anywhere near the station. Remember that this is a security device. The room in which the station is located must be secure with no public access.

Contamination
In the event of specimen container leakage within individual carriers, place the entire carrier and the contents in to a yellow clinical waste bag and take immediately to Clinical Pathology Autocore. If the tube itself is affected then contact the system controller (engineer or member of Pathology - see below).

CONTACT:
During normal working hours Monday to Friday a member of the Pathology staff carries the Airtube bleep (BLEEP 784 3224) At all other times, the on call engineer electrician will respond to BLEEP 784 3202.

SAMPLE TRANSPORT HEALTH & SAFETY CONSIDERATIONS

- Material safety data sheets for all fixatives and substances are available. These can be supplied by the department upon request.
- Spills / Decontamination - Spills of formalin require specialist equipment available from the Histopathology Dept contact details are provided in the contacts section of this document.
- Any biological spillage from leaking or damaged specimen containers should be cleaned up using Distel disinfectant at dilution of 1 in 10 (10%).
- Distel disinfectant - A Halogenated Tertiary Amine which is bactericidal, virucidal, fungicidal, sporocidal and mycobactericidal. Classified as non-hazardous. Incompatible with strong acids as may release harmful vapours.
- Strong alkalis may neutralize or reduce disinfectant qualities.
- Can be used for cleaning and decontamination of all work surfaces and instruments.

PLEASE REFER TO TRUST DISINFECTION POLICY FOR DETAILS
### SPECIMENS WITH SPECIAL REQUIREMENTS

#### HIGH RISK SPECIMENS
Specimens known to be infected with high-risk organisms, notably Mycobacterium tuberculosis, hepatitis B & C, HIV or prion (CJD) are not routinely handled unfixed by the department. Use routine histology containers and ensure that fixed high risk specimens are appropriately and clearly labelled with full details. Put in the correct biohazard bag or hazard tin before delivering to the department.

#### FRESH/ UNFIXED SPECIMENS
Some specimens may need to reach the laboratory in a fresh state where tissue storage, electron microscopy or specialised enzyme techniques are likely to be required or for frozen section. In such cases, phone the laboratory with 24 hrs notice to book the procedure.
Place specimens in a fully labelled clean dry container.
Some samples may need wrapping in moist gauze or sterile polythene sheet.
After telephoning the laboratory, samples should be sent immediately, accompanied by a request form.

**IMPORTANT:**
- Fresh specimens must be delivered directly to the laboratory
- Fresh samples should never be sent using the Air Tube System

**CONTACT**
- **QMC** 0115 924 9924 ext 63317/61820
- **NCH** 0115 969 1169 ext 56406/56391

#### SAMPLES REQUIRING SPECIAL FIXATION
The following specimens and conditions may require specialist fixation or handling.
For advice and to arrange for the provision of a special fixative contact the relevant Histopathology laboratory at NUH
- Testicular biopsies for infertility
- Adrenal tumours
- Renal biopsies
- Lymph node biopsies
- Nerve biopsies
- Muscle biopsies

Special fixation in glutaraldehyde is also required for specimens requiring electron microscopy (see **Electron Microscopy**). For information about the supply of glutaraldehyde, contact the Histopathology department at QMC or NCH

**CONTACT**
- **QMC** 0115 924 9924 ext 62545/63317
- **NCH** 0115 969 1169 ext 56391

#### CYTOLOGY SAMPLES
All cytology samples are processed at the QMC Campus. (see sections relating to Cytology and CSF cytology).
All diagnostic cytology specimens should be sent in the appropriate carriers and sealed in NUH NHS Trust Histopathology/Cytology specimen bags.
Samples originating at NCH campus specimens must be sent via the Pathology reception these are then transported to QMC in dedicated transport boxes.
Samples originating at QMC must sent via the Autocore reception these are then collected and delivered to QMC Histopathology.

**Spray fixative is not supplied.** Cytology fixative fluid and CytoRich Red containers can be obtained from the Histopathology department at both campuses.

**IMPORTANT:**
- Urgent specimens must be delivered directly to the laboratory

**CONTACT**
- **QMC** 0115 924 9924 ext 63680
- **NCH** 0115 969 1169 ext 55075
CSF SAMPLES FOR CYTOLOGY

This is not a routine investigation in the majority of patients who are having a lumbar puncture. The main indication is when there is clinical suspicion that malignant cells are circulating in the cerebrospinal fluid.

It is also an investigation that may be used to characterise unusual suspected inflammatory conditions affecting the central nervous system. CSF cytology does not provide a differential or absolute cell count.

Please phone the relevant laboratory to inform them that a CSF sample is being taken and will require cytology. A sample of >2ml is optimal for cytology. Samples should be taken directly to the pathology department rather than using routine collection services as cells can deteriorate if the sample is left to stand.

Separate samples should be taken for microbiology, and clinical chemistry. The laboratory service is available from 09:00 hours Mon-Friday only (excluding statutory holidays). CSF cytology samples should be received in the laboratory by 16:00 hours to allow time for processing.

It is not possible to deal with samples arriving after 17:00hrs. In such cases the clinician should discuss a late sample with the Haematology on call service. See Cytology section for more details.

IMPORTANT:
CSF specimens must be delivered directly to the laboratory.

CONTACT
QMC 0115 924 9924 ext 63317/61820  NCH 0115 969 1169 ext 55075
Out of Hours QMC Campus Contact on call haematology technical team via the switchboard.
Out of Hours NCH Campus Bleep 80 7134 or ring the Haematologist on call via the switchboard.

FROZEN SECTION AND INTRA OPERATIVE DIAGNOSIS

Frozen sections must be arranged with the Pathologist on duty.

To arrange an intra-operative frozen section call: 56406 (option 1) or directly on 56391
Specimens for frozen section should be sent unfixed and handed directly to a member of the laboratory staff.

The request form must be completed fully and in addition have details of the surgeon, the operating theatre and a contact number for a verbal report.

It is requested that patients be scheduled first on the list.

Elective Procedures

It is essential that a booking be made with the laboratory to confirm that a Pathologist and laboratory staff are available on the day. Prior booking should be made with the laboratory when booking the patient for an admission date. Failure to do this may mean that an intra-operative opinion is not available or is delayed. To make a booking please contact the specialty team involved. No bookings for elective procedures can be accepted on the day of surgery, as staff may not be available with a risk that a patient has to be re-scheduled.

Non-Elective Procedures

There is a facility to obtain an urgent intra-operative diagnosis for non-elective cases. The Consultant involved in the care should telephone the Pathologist in the relevant specialty team to discuss the diagnostic requirements as soon as the need for diagnosis is appreciated. This service cannot be used for planned elective procedures where the need for intra-operative diagnosis is known in advance.

Moh’s intra-operative frozen sections

This service is performed at the request of Dermatology consultants in a specialist laboratory within the Treatment Centre. The lists are pre-arranged and assessment of completeness of excision is determined intra-operatively by the dermatologist. Following diagnosis remaining specimens must be handled and sent to the department as specified in this document and according to local standard operating procedures.

Out Of Hours

There is no routine service for out of hours frozen section diagnosis. The Nottingham University Hospital switchboard keeps a list of home telephone numbers for Consultant Pathologists and it may be possible to make an individual out of hours arrangement. If there is a requirement for CSF preparation out of hours then the Haematology on call service can deal with samples after appropriate consultation. See Cytology and CSF section.

CONTACT
QMC 0115 924 9924 ext 63317/61820  NCH 0115 969 1169 ext 56406/56391
**RENAL BIOPSIES FROM WITHIN THE TRUST**

Prior notice to arrange for the attendance of a Biomedical Scientist to assess suitability of a renal biopsy is essential. Adult renal biopsies are done on the City campus. Paediatric renal biopsies are done at QMC campus. To book a biopsy, telephone the relevant laboratory. A member of the department will then attend the procedure.

When completing a booking form, the laboratory staff will ask for the following information:

- Date and time of the biopsy
- Patient’s name
- Is the biopsy native or transplant
- If transplant, how old
- Is the result required urgently (specify a date/time)
- The location of the procedure
- Doctor performing procedure
- Contact telephone number

If procedures are performed in X-ray, the Radiologist must have the relevant clinical information and complete pathology request forms ready for the attending biomedical scientist.

Biopsies for same day reporting must be completed by 12:00 hrs unless special arrangements have been made with a Consultant Pathologist.

**CONTACT**

**QMC** 0115 924 9924 ext 62545  
**NCH** 0115 969 1169 ext 56406 option 1

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**RENAL BIOPSIES FROM ROYAL DERBY HOSPITAL**

A renal biopsy ‘Histo kit’ can be ordered from the Histology Department at NUH. They are packaged into containers and transferred to Derby with the Pathologist attending the MDT meeting.

Each transport box contains a 1 litre UN screw capped plastic container, a sealable padded bag with absorbent material and a security seal label.

The contents of each histo kit are sufficient for one renal biopsy & contain the following:

- 60ml formalin pot
- 5ml EM vial containing 0.5ml of glutaraldehyde, labelled ‘G’
- 5ml EM vial containing 4.5ml of cacodylate buffer, labelled ‘B’
- Universal container of Michel’s medium
- Universal container filled with Tris Buffered Saline
- Data hazard sheet for formalin
- Data hazard sheet for Michel’s medium
- Data hazard sheet for TBS
- Data hazard sheet and instructions for preparation of EM fixative
- 2 Histology request forms

When only 10 kits remain, contact the Histology department to re-stock.

Details for completion of request cards, dividing and despatching samples, in the correct container and fluid are in local Derby SOPs.

Specimens must be packaged in the sealed containers and a security seal affixed. The sealed containers must be placed in to a transport box and transferred according to local protocol specified in Derby standard operating procedures.

Apply labels to the box stating sender and recipient.

Track according to local protocols, notify NUH once samples are in transit.

Send an email with details of the number of biopsies and the surnames of the patients to the following mailing list:

- matthew.russell@nuh.nhs.uk
- jane.pizer@nuh.nhs.uk
- tom.mcculloch@nuh.nhs.uk
- zsolt.hodi@nuh.nhs.uk

In the event of a query, contact NUH via phone or e-mail. Once the sample has been received by NUH Hospital, receipt is acknowledged by email.

**CONTACT**

**QMC** 0115 924 9924 ext 62545  
**NCH** 0115 969 1169 ext 56406
URGENT RENAL BIOPSIES
For renal biopsies requiring an urgent report, separate transport arrangements must be made to get the sample to the Histopathology Laboratory at the NUH QMC Campus. For a report the same day, the sample must arrive in the laboratory by 12pm. It is imperative that the time the sample was placed in formalin is recorded on the request card. The availability of a Consultant Pathologist to report the biopsy must be established prior to requesting urgent processing.

CONTACT
QMC 0115 924 9924 ext 62545
NCH 0115 969 1169 ext 56406

MUSCLE BIOPSIES, NERVE BIOPSIES AND BIOPSIES FOR HIRSCHSPRUNGS DISEASE
When a muscle biopsy, nerve biopsy or rectal biopsy for Hirschsprung’s disease is to be taken, it is essential that the procedure is booked with the laboratory at the time a patient is given an appointment for the procedure. A minimum of 24 hours’ notice is required for urgent, non-elective procedures. Failure to do this may mean that staff are not available to deal with the sample and a biopsy would then have to be repeated. All bookings should be made through the Neuropathology laboratory on 0115 924 9924 Ext. 63317 (Operational Manager Ms Carol Dunn).

CONTACT
QMC 0115 924 9924 ext 63317/61820

SPECIMENS REQUIRING ELECTRON MICROSCOPY
Electron microscopy can be performed by prior arrangement. The correct primary fixative (glutaraldehyde) should be used and can be provided on request. This can be obtained from the Histopathology Department on either campus.
In an emergency a fresh specimen can be sent directly to the histopathology department as long as the laboratory is notified, the specimen is kept moist with saline (not wet) and it is within normal working hours (8.30am-5.30pm). Otherwise formalin can be used but the results may be inferior. It is not recommended to send venous blood samples for investigation unless prior arrangement has been made with the relevant pathology specialist team.
For more information please contact the Histopathology department.

CONTACT
QMC 0115 924 9924 ext 63317/62545/56391

SPECIMENS REQUIRING MOLECULAR OR PHENOTYPING ANALYSES
Both molecular and phenotyping analyses are conducted on peripheral blood and bone marrow which should be collected in EDTA tubes and sent to pathology reception in a Molecular Diagnostics and Immunophenotyping sample bag as soon as possible. Please include full clinical details and the most recent FBC if possible.
If same day delivery to the laboratory cannot be guaranteed the sample can be refrigerated then sent as soon as possible the following day.
Immunophenotyping can also be undertaken on fresh CSF, pleural and ascitic fluid – there is no need for anticoagulation of these specimens.
Lymphoma requests and CSF samples should be marked as particularly urgent. Some molecular tests are undertaken on histological material – fresh/frozen biopsies are preferable but DNA-based tests can be conducted on paraffin sections for advice contact Ian Carter or Laurence Pearce
Please note: samples must be received by 3.00 p.m. Monday to Friday, unless by prior arrangement with the laboratory. High-risk specimens will not be processed.

CONTACT
NCH 0115 9691169 Ext 57711/55599
SPECIALIST SERVICES

ELECTRON MICROSCOPY LEICESTER ROYAL INFIRMARY (LRI) CAMPUS, empath UHL

This section provides a service for specialised ultrastructural examination of tissue samples. All electron microscopy procedures are performed at the LRI campus, but the EM samples in fixative can be sent to either the QMC or City campuses for forwarding, this includes renal biopsies.

For further information contact:
- Carol Dunn Deputy Service Manager  Ext 61076  email: carol.dunn@nuh.nhs.uk
- Martin Holland Team Leader Ext: 66515  email: martin.holland@nuh.nhs.uk

The EM fixative (glutaraldehyde) is stored in two vials that are mixed just before use to activate the fixative. The following protocol should be adhered to when handling the EM fixative.

Primary Electron Microscopy Fixative (2.5% Glutaraldehyde (nominal) in cacodylate buffer)

General Handling
- Always avoid inhalation of vapour and direct contact with any of the solutions by using in a well-ventilated area and wearing suitable protective clothing.
- Always wash your hands after handling.

Transport
- All EM samples should be placed in a sealed plastic specimen bag, with the specimen request card, after ensuring the specimen tube lid is tightly sealed. The sample can be sent to the laboratory in the normal way for histology specimens.

Contents
- Tube ‘G’ - 0.5ml of stock 25% EM grade Glutaraldehyde (T, N) solution
- Tube ‘B’ - 5ml of 0.1M sodium cacodylate (T) buffer adjusted to pH 7.4 and 300 mOsm

Storage
- Keep both tube ‘B’ and tube ‘G’ @ 4°C until required. If stored correctly these reagents can be stored for up to one year. The solutions should be totally clear before use. DO NOT USE REAGENTS IF DISCOLOURED, RETURN TO DEPARTMENT

Instructions
- Always prepare the “active fixative solution” on the same day it is required, by pouring the contents of tube ‘B’ into tube ‘G’ then mixing. The word ‘NOT’ on tube ‘G’ should then be deleted leaving the word ‘ACTIVATED’, to show that this procedure has been undertaken.
- You may receive just the ‘ACTIVATED’ tube ‘G’ that you can use directly without mixing. Always ensure the fixative has been activated before using!
- Using standard hospital procedures for handling fresh tissue, transfer small pieces of tissue (preferable about 1-2 mm thick slices) to the active fixative solution. Needle biopsies can be left whole.
- If orientation is important as in skin samples then the sample can be left whole as long as it is sent to the histopathology department as soon as possible.
- If you have activated the fixative yourself, then reseal and dispose tube ‘B’ in a sharps container or any other suitable incineration bag. All specimens must have the patient information written on the tube and accompanied by a completed histology request card.
- It is also helpful to write the date and time the sample was taken on the form.
- The EM sample in activated fixative should then be sent to Histopathology Specimen Reception at the QMC.

Safety
- Glutaraldehyde can irritate your skin, eyes, throat and lungs. More importantly, it can cause sensitisation both to the skin and to the respiratory tract. It has been associated with spontaneous abortion. The occupational exposure standard is 0.2 ppm.
- Sodium cacodylate contains arsenic, which is poisonous

SPILLAGE
- Use absorbent material to absorb excess fluid. Seal waste in a plastic bag and incinerate waste. Wash all surfaces in contact with the spillage with water. (Note glutaraldehyde is used as a disinfectant) AVOID INHALATION OF FUMES.

SURGICAL HISTOLOGY

This section is based at QMC with a smaller facility at the City campus and provides a service for surgical
pathology comprising the following specialties: Gastrointestinal, Gynaecological, Dermatopathology, Head and Neck Pathology, Diagnostic cytology, Paediatric renal pathology technical service, Breast, Respiratory, Endocrine, Genito-urinary, Lymphoreticular, Renal and soft tissue pathology.

Support is provided for the Dermatological Mohs frozen section procedure at the Nottingham Treatment Centre at a Satellite laboratory.

The majority of samples are received fixed. See sections on special sample requirements for renal biopsies, frozen sections, fresh/unfixed samples and high-risk.

For further information contact:
- Mrs Sharon Winters 0115 924 9924 ext. 61218 / 61076

**NEUROPATHOLOGY QMC CAMPUS**

Neuropathology provides services which include: surgical neuropathology, paediatric oncology, frozen sections e.g. pancreatic, head and neck, muscle biopsies, fresh rectal biopsies for aganglionosis, nerve biopsies and post-mortem brain examinations. It undertakes specialist post-mortem examination of hospital cases for medical audit, teaching and research together with the examination of hospital and public mortuary cases on the instruction of HM Coroner. A specialist service is provided for delicate tissues from the nervous system and for cases requiring urgent intra-operative diagnosis using brain smears and/or frozen sections. In addition certain aspects of surgical pathology requiring enzyme histochemical analysis e.g. muscle biopsies, are dealt with by this section. See section on samples with special requirements for details on frozen sections, muscle biopsies, nerve biopsies and biopsies for Hirschsprung’s.

For further information contact:
- Ms Carol Dunn on 0115 924 9924 ext. 63317 / 61076

**PAEDIATRIC, FETAL & NEONATAL PATHOLOGY QMC CAMPUS**

This section provides a service for surgical paediatric, fetal and neonatal pathology, post mortems and fetal and placental examinations.

The section is based in the Neuropathology laboratory. See also bereavement services.

For further information contact:
- Ms Carol Dunn on 0115 924 9924 ext. 63317 / 61076

**PHOTOGRAPHY & DIGITAL IMAGING UNIT QMC CAMPUS**

Histopathology at QMC campus is unique in that it has its own dedicated photographic service. The Unit is headed by an experienced medical photographer and provides a valuable and diverse imaging service.

The photography of histopathological specimens is the primary service offered and images taken provide a high-quality macroscopic record of the specimen and are used in a variety of ways:
- During complicated specimen dissections.
- As part of the histopathology report.
- Integrated into presentations used at Multi Disciplinary Team meetings (MDTs).
- Teaching and publication purposes.

Digital photomicroscopy and virtual microscopy are also a part of the service provided as is the design and production of PowerPoint presentations, large format poster design and printing, graphic design work, image manipulation, copy work and leaflet design and production.

For further information contact:
- Deputy Service Manager Carol Dunn on 0115 924 9924 Ext 61076
- Associate Practitioner Daniel Tomlinson on 0115 924 9924 Ext. 63240
IMMUNOCYTOCHEMISTRY QMC CAMPUS

The Department of Cellular Pathology offers a comprehensive immunocytochemistry service on cases that require further analysis and clarification of diagnostic problems.
Specialities include breast, dermatology, gastrointestinal, gynaecology, lymphoma, neuropathology, paediatric and renal pathology.

For further information contact:
- Deputy Service Manager Carol Dunn on 0115 9691169 Ext 61076 / 66263

MOLECULAR DIAGNOSTICS & IMMUNOPHENOTYPING NCH CAMPUS

Molecular Diagnostics and Immunophenotyping is situated at the NCH campus.
The Molecular Diagnostics Laboratory offers a PCR-based service with the following applications:
- Molecular diagnosis and classification of haematological malignancies
- Assignment of prognostic/predictive molecular markers in cancer
- Residual disease monitoring.
- Monitoring of engraftment in bone marrow transplant patients by STR profiling (chimerism).
The Immunophenotyping Laboratory offers a cell marker service which includes:
- Acute leukaemia phenotyping by flow cytometry.
- POD stain for the PML-RAR α fusion protein in acute promyelocytic leukaemia (APML).
- B and T-cell lymphoproliferative disease phenotyping by flow cytometry.
- Paroxysmal nocturnal haemoglobinuria (PNH) screening – peripheral blood only.
The laboratory can be contacted between 9.00 a.m. and 5.00 p.m. Monday to Friday.

For further information contact:
- Ian Carter or Laurence Pearce (Clinical Scientists) 0115 969 1169 ext 55711
- Immunophenotyping enquiries to Ian Carter or Laurence Pearce, 0115 969 1169 ext 55711 / 55599

CYTOPATHOLOGY NUH CAMPUSES

A Diagnostic Cytology reporting service is provided for all Non-Gynaecological specimens from both campuses.
All samples are processed at the QMC Campus (see section relating to CSF cytology) There is no interpretative service out-of-hours for CSF samples.
All diagnostic cytology is diagnosed in-house; no diagnostic cytology is routinely referred to another laboratory.
Additional examinations for diagnostic cytology need to be requested within 7 days of the authorised report, this may include requests for immunocytochemistry to clarify the site of malignancy or alternative investigations such as microbiology.
Cervical cytology samples are not processed or reported at NUH. These samples are sent to Derby Royal Hospitals NHS Trust for processing and diagnosis.
Opening times of the laboratory are Monday – Friday 9.00 – 5.30

For further information contact:
- Sharon Winters – Deputy Service manager in Cytology 0115 969 1169 Ext 61076
CSF Enquiries at QMC to:
- Carol Dunn Deputy Service Manager Neuropathology 0115 924 9924 Ext 63317 / 61076
Out of Hours CSF
- NCH Campus Bleep 80 7134 or ring the Haematologist on call via the switchboard.
- QMC Campus Contact on call haematology technical team via the switchboard.
### Handling Cytology Samples

<table>
<thead>
<tr>
<th>Sample Type</th>
<th>Handling Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serous effusions, aspirates, urine, sputa, bronchial washings and all other non-gynaecological fluid</td>
<td>Specimens should be sent in sterile containers and should not exceed 20mls in volume.</td>
</tr>
<tr>
<td>Bronchial Brushings</td>
<td>These should be spread on labelled frosted-end slides and rapidly placed in labelled cytology fixative fluid containers or spray-fixed with a cytology fixative and placed in slide carriers. Lead pencil must be used to label slides. Should you require additional slides they can be collected from the Histopathology department.</td>
</tr>
<tr>
<td>GI Tract Brushings (e.g. CBD)</td>
<td>These should have either the rinsing from the brush or the removed brush head placed in labelled CytoRich Red fluid containers.</td>
</tr>
<tr>
<td>Transbronchial Needle Aspirations (TBNAs)</td>
<td>These should be spread on labelled frosted-end slides and rapidly placed in cytology fixative fluid containers. Additional slides should be rapidly air-dried and placed in slide carriers. The needle should then be washed out in CytoRich Red fluid. (Lead pencil must be used to label slides)</td>
</tr>
<tr>
<td>Fine Needle Aspirations (FNAs)</td>
<td>Multiple sites sampled by FNAs must be clearly labelled/differentiated on all slides and containers sent to the laboratory.</td>
</tr>
<tr>
<td>Lymph Nodes (FNAs)</td>
<td>These should be spread on lead pencil labelled frosted-end slides and rapidly air-dried before being placed in slide carriers. Additional slides can be fixed with cytology fixative (see Bronchial Brushings) or the needle rinsed out in CytoRich Red fluid containers if metastatic disease is suspected.</td>
</tr>
<tr>
<td>Thyroid (FNAs)</td>
<td>These should be spread on lead pencil labelled frosted-end slides and rapidly air-dried before being placed in slide carriers.</td>
</tr>
</tbody>
</table>
| CSFs                                                  | This is not a routine investigation in the majority of patients who are having a lumbar puncture. There are a number of factors that affect the performance of the test and the interpretation of the results:  
  - Poor diagnostic reliability is associated with low volume samples (<2ml).  
  - Delays in receipt by the laboratory (>2 hours).  
  - Contamination of the specimen container by glove powder.  
  CSF samples for cytospin should be collected in a clean, sterile universal container. Scrupulous care should be taken in collecting the CSF avoiding glove powder falling into the container.  
  Samples that may arrive after 5pm should be taken by the clinical team to the haematology on-call technical team. The on call haematology technical team should be telephoned to notify them of the need for CSF cytology.  
  Samples must NOT be left in a specimen reception area and must NOT be left in the histopathology department.  
  Samples must NOT be left to stand overnight as cells degenerate and this may render the sample non-interpretable. |
| Other sites                                           | Any other FNA should have both fixed and air-dried slides prepared as above.                                                                                                                                               |
| Cervical Cytology Samples                            | Any liquid based cervical samples received at NUH are sent to Derby Royal Hospitals NHS Trust Cytology Department.                                                                                                       |
# Mortuary & Bereavement Services

Bereavement Services are provided on both QMC & City Campus and managed as a single combined service consisting of: The Mortuary, Specialist Nursing and Midwifery team and Bereavement Centre.

For further information contact:
- Mr Scott Raven (Manager Mortuary) 0115 924 9924 ext 63338.
- Mrs Ruth Musson (Manager Bereavement services) 0115 924 9924 ext 65112

## The Mortuary

Provides services for the patients dying at NUH as well as providing facilities for HM Coroner to investigate deaths occurring in the local community. Both facilities are licensed under the Human Tissue Act

**Post mortem examinations are carried out at QMC mortuary site only.**

**Location:**
- QMC campus: A Floor between West Block and the Medical School
- City campus: Link corridor between Oncology and X-Ray (Junction W2), opposite Dept of Cellular Pathology.

**CONTACT**

**QMC** 0115 924 9924 ext 63551 & 64373  
**NCH** 0115 969 1169 ext 56662 & 76550

Qualified technical staff are available between the hours of 0800 and 1800 Monday to Friday

**Emergency On-call service**

Out of hours on-call services are provided outside of core hours: Qualified staff are available via the hospital switchboard from 17:30-08:00 Monday to Friday and 24 hrs Bank Holidays and weekends.

## Bereavement Centre Services

**Specialist Nursing and Midwifery Team**

The Specialist Nursing and Midwifery team role encompasses communicating with families where there is either a consented or a Coroner’s post mortem examination, facilitating the collection of tissues for diagnostic and research purposes, providing families with the results of examination, audit and facilitation of consent procedures. They also provide bereavement services as part of the department of Cellular pathology

**CONTACT**

**QMC** 0115 924 9924 ext 61726  
or via the Bereavement office 63149 / 66883  
**NCH** 0115 969 1169 ext 57689  
or via the Bereavement office 56720

**The Bereavement Centre**

Bereavement centre staff facilitate appointments for bereaved families to complete the practical arrangements at the time of a death. This includes: arranging chapel of rest appointments, handing over the medical death certificate, returning deceased property, and appointments (on campus) with the Registrar of Births and Deaths.

**Opening times are:**

09:00 – 16:00 Monday – Friday  
Closed at weekends and Bank Holidays

**CONTACT**

**QMC** 0115 924 9924 ext 63149 / 66883  
**NCH** 0115 969 1169 ext 56720

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Approved by: Mike Langford

Page 21 of 24
### INFORMATION FOR USERS OF MORTUARY & BEREAVEMENT SERVICES

#### PATIENTS WHO DIE IN NOTTINGHAM UNIVERSITY HOSPITALS

The Trust has a number of policies and procedures relating to death and bereavement, which can be accessed via the link on the Bereavement services website: Go to the intranet home page for details: NUHnet A –Z of services, B for Bereavement Services.

#### DEATH CERTIFICATION

When a patient dies in hospital, a decision needs to be made as to whether a meaningful death certificate can be issued or whether the case should be referred to the Coroner.

Guidance for doctors completing certificates can be found at: www.gro.gov.uk/images/medcert_July_2010.pdf

The Department of Health guidance states that death certificates should be completed within 24 hours of a death wherever possible so the death can be registered. A Death must be registered before the funeral can proceed.

The death certificate must be completed by a doctor attending the patient in his/her final illness and who has seen the patient within 14 days of death.

It is important that the certificate is completed correctly; otherwise the family may not be able to register.

**Death Certificate books:**
- QMC: All wards and in the Bereavement Centre,
- City: The Specialist Receiving Unit and in the Bereavement Centre

**Tips for ensuring that your certificate is accepted:**

- Ensure before you write the certificate that the death does not need to be referred to the Coroner (a comprehensive list of reasons for referral is on the NUH bereavement website)
- There must be an acceptable cause of death, not just a mode of death, so heart failure, septicaemia or renal failure for example must have a cause in part 1b.
- The certificate must be written legibly, and all causes must be written in full. Initials, such as COPD or CVA are not acceptable
- You must write the date that the patient was last seen alive by you. If you have not seen the deceased alive, you can still write a certificate but you must discuss the death with the Coroner first.
- Ensure that you write your name in capitals beneath the signature, and give your GMC registration number.

**NOTE:**
Sometimes it is difficult to find the appropriate doctor to sign the certificate, or the doctors may not be available.
On these occasions, ward or bereavement centre staff may need to look through the notes to find a suitable doctor.
It would help them greatly if all doctors could write their latest bleep number (not the on-call bleep) when writing in the notes.
# REPORTING A DEATH TO THE CORONER

Deaths in certain categories must be reported to the Coroner. A report to the Coroner can have three possible outcomes:

- The Coroner will authorise you to issue a certificate and will agree wording with you. The Coroner will then sign a form which is sent directly to the Registrar and authorises the registration. This form must exactly match the certificate that you have written for registration to go ahead.
- The Coroner’s office will agree that you cannot write a certificate and will continue to make enquiries into the death. This can be either by contacting the GP to see if they can write a certificate or by requesting a post mortem examination.
- The Coroner may decide to hold an inquest without post mortem examination, in which case they will ask you to write a report detailing the events leading up to the death. In this case whilst you can write what you consider to be the cause of death, it is up to the Coroner to determine the circumstances, so do not make judgements such as death was caused by a fall.

If you are uncertain about issuing a Death Certificate in the first instance you should talk to the Consultant in charge of the care. If a patient is admitted and dies during an on-call period, this would be the Consultant on duty when the patient was admitted.

If you believe that a case has to be reported to the Coroner, then you must inform the relatives.

If you wish to discuss a case with the Coroner but think that it is unlikely that he will accept the case, it is still advisable to inform the relatives.

It is not necessary to wait until the patient has died, as relatives are often better prepared for the reality of a post-mortem examination if the possibility has been raised beforehand.

Conversations with the relatives must be documented in the patient notes.

**CASES SHOULD BE REPORTED AS SOON AS POSSIBLE AS DELAYS COULD ADD TO THE DISTRESS OF RELATIVES.**

## CORONER’S OFFICE

| The Council House, Old Market Square, Nottingham, NG1 2DT |
| Telephone: 0115 841 5553 |
| The office is open Monday to Thursday from 0800 to 1600 and on Friday from 0800 to 1530 |

## HOSPITAL POST MORTEMS

If a death certificate can be issued, the medical team may consider it beneficial to ask the relatives to consent to a post mortem examination. A request for a post mortem should normally come from more senior members within your team, such as the Registrar. If you are involved in asking for consent the most important thing to remember is to ensure that the bereavement team are aware.

Consent for post mortem examination can only be taken by staff who have received appropriate training.

Further information can be found in the NUHT Consent to Post Mortem Examination Policy which can be found on the Intranet.
**PAEDIATRIC POST MORTEMS**

Medical staff have often built up close relationships with the family and it is often more acceptable for the Clinician in charge of the care to obtain consent, accompanied by a Pathology Specialist Nurse/Midwife if appropriate.

The following booklet should be given to the parents:

“A Guide to the Post Mortem Examination Procedure Involving a Baby or Child”

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**CONSENTS IN OBSTETRICS & GYNAECOLOGY**

All pregnancy losses, except termination for social reasons, must be accompanied by a Consent or Refusal of Examination form, with an indication of wishes for the disposal of tissues.

*All staff taking consent must have received appropriate training.*

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**CREMATIONS**

The Bereavement Office will contact doctors when a cremation form is required. These need to be completed promptly in order that the undertakers may collect the deceased. Lack of attention to this matter could lead to delay in the funeral. Payment for these papers is made via the Mortuary.

The appropriate forms are kept in the Bereavement Centre and on some of the wards. There are two parts of the form that are completed at the hospital:

- **Form 4** (First part) to be completed by a doctor who has dealt with the deceased prior to death. To complete this form you must have seen the deceased both whilst they were alive *and* after death.
- **Form 5** (Second part) is completed in the mortuary by an independent senior doctor/consultant: If you have completed FORM 4 then they will need to speak to you. **Please ensure that you fully complete the accompanying Cremation Information Form with ALL of the required contact details.**

It is necessary to complete all of the required information on the Cremation form: Common omissions include:

- Full name (including middle names if appropriate) of the deceased,
- Occupation of the deceased,
- Who was present at the time of death (one family member will suffice).
- Names of the nursing staff who cared for the deceased.

**Question 9:** asks for a summary of the events leading to the death and your reasoning for giving the cause. This will be available to the family so must be completed in lay language.