CP4 revision 10

East Lancashire Hospitals
NHS Trust
A University Teaching Trust

Cellular Pathology

Information for Users

Safe | Personal | Effective

Contents

Section 1: General Information

Location

The laboratory is located at Level 0, Royal Blackburn Teaching Hospital, Haslingden Rd, Blackburn BB2 3HH.

Clinical Services

The department provides:

- Histology including immunocytochemistry, frozen section service and immunofluorescence
- Non-gynae Cytology
- Andrology – please refer to the Andrology User Information page

The department is a UKAS accredited Medical Laboratory No. 8136, and is accredited for training with the Royal College of Pathologists for junior medical staff and the Institute of Biomedical Sciences for Biomedical Scientists, AP's and MLA's.

Opening hours

The department is open from 8 am to 5pm Monday to Friday. There is no service outside of these hours.

Key Personnel & Contact Information

General enquiries

Cellular pathology enquiries line - 01254 732621 (82621)
Results are available on the ICE and GP systems - please check these before ringing the department.

Clinical advice

Clinical advice is available between 8.45 and 5pm Monday to Friday. If you require clinical advice please contact (01254) 732621 or extension 82621 if ringing from within the hospital

Clinical Staff:

Dr Santhi Kumar	Consultant Histopathologist (Clinical Lead)
Dr Lazslo Heygi	Consultant Histopathologist
Dr Kathryn Brelsford	Consultant Histopathologist
Dr Madhuri Deolekar	Consultant Histopathologist
Dr Andrea Marsico	Consultant Histopathologist
Dr Deepa Jacob	Consultant Histopathologist
Dr Neil Sahasrabudhe	Consultant Histopathologist
Dr Zuhair Twaij	Consultant Histopathologist
Dr Amany Said	Clinical Fellow
Dr Priyanka Prakash	Clinical Fellow

Lead Biomedical Scientist – Cellular Pathology

Craig Rogers	82438

Directorate Staff

Clinical Director	Dr Kathryn Brownbill	84153
Pathology Directorate Manager	Dayle Squires	84162
Pathology IT Manager	Howard Briggs	82473
Pathology Quality & Training Manager	Sushant Ghorpade	83103

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Ordering specimen pots and request forms

Users can order the following from our stores:

Specimen pots (formalin-filled and dry)
Cytology collection media
Michel's transport media (IMF samples)
Request forms

Please e-mail: gppathologysupplies.rbh@elht.nhs.uk

Complaints

Any complaints about the service should be directed to the Lead Biomedical scientist – Craig Rogers in the first instance on 01254 732438 or via e-mail craig.rogers@elht.nhs.uk

Data Protection

All data and patient information will be handled in line with Trust Policies 'Guide to Data Protection' and C077 'Confidentiality of Personal Information'.

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Sample transport

Frozen section
Specimens for frozen section need transporting urgently to the laboratory. High risk specimens (including Coronavirus or tissues at risk from Coronavirus e.g. head and neck) are not suitable for frozen sections. There is no facility to perform frozen sections out of hours.

Routine samples
All histology specimens need to be transported to the lab as soon as possible. Once in formalin the process of fixation preserves the tissue. Specimens should be stored at room temperature. There are transport runs from the GP practices within the East Lancashire area.

High risk specimens
High risk specimens i.e. suspected category 3 pathogen specimens such as Coronavirus, TB, and blood borne virus specimens should be sent clearly marked to the laboratory as 'HIGH RISK'. The specimens should be double bagged before being sent to the laboratory. Specimens will be fixed for 48 hours before being processed. High risk specimens are not suitable for frozen sections

Packaging labelling and dispatch

The mislabelling and packaging of specimens is a major risk to patient safety.

Packaging
Ensure the lid is fixed firmly to the pot.

Labelling
The specimen and the request card must bear matching patient information. Please include details of the specimen site. Please label specimens with the following information:

- Who the patient is (incl name, DOB, address, RXR number, NHS number)
- Who is requesting the result
- Who requires the result
- When the sample was taken
- What the specimen is
- All relevant clinical information

Please include as much relevant clinical information on the request form as you are able. This will aid diagnosis and reporting

Dispatch
It is the responsibility of the specimen taker to ensure transfer of the specimen to the laboratory. There are regular pick up of samples from GP surgeries.

Urgent Specimens
In genuinely urgent cases, where the immediate clinical management of the case depends on speedy tissue diagnosis, please telephone the Histopathologist to discuss the case. The request form should be clearly marked “URGENT” preferably in red ink.

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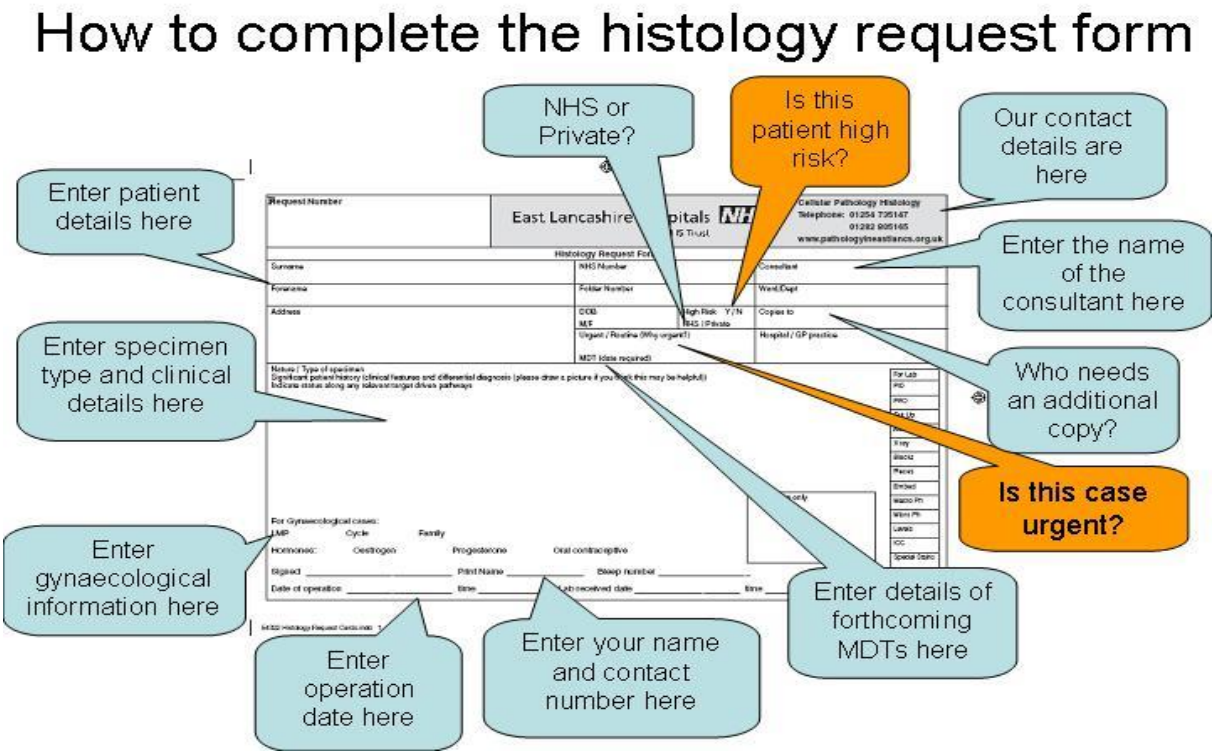
How to complete the histology request form

Please remember the specimen pot should be labelled with the patient's full name, date of birth, NHS number or RXR number and the site of the specimen.

Please only use either the request form provided by the laboratory (contains contact details in top right corner), printed ICE requests, or Endosoft forms.



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Request Forms

Each specimen or set of specimens from a patient must be accompanied by a Histology Request Form with ALL the relevant details completed. Previous histology and cytology, and treatments such as drug therapy, radiotherapy, and hormones should also be noted on the request form as well as the site of the specimen (e.g. Right, Left).

It is important for the laboratory computer database records that the patient's date of birth rather than age is noted on the request form.

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Section 2: Histology

All specimens for routine histopathology (except frozen section material) must be immersed in a wide-mouthed container of formalin fixative as quickly as possible after excision. For identification purposes, the container should be labelled with at least the patient's name, folder number or date of birth, ward or department, date and consultant.

The container must be of sufficient size to allow the specimen to be surrounded by fixative. Ideally the volume of fixative should be at least 10x the volume of the specimen. If multiple specimens are taken from the patient at any one session, they must be put into separate containers and labelled accordingly.

THE PATIENT NAME, DATE OF BIRTH, NHS or HOSPITAL NUMBER SITE OF SPECIMEN ORIGIN OF EACH TISSUE MUST ALSO BE CLEARLY STATED ON THE JAR LABEL, AS WELL AS ON THE REQUEST FORM.

Specimen containers are available from the laboratory during working hours. GPs may order specimen pots Specimens received into the Department without adequate identification will be returned to the sender, as the laboratory cannot accept any responsibility in such circumstances. This may delay the report.

Formalin filled 60ml screw-topped plastic containers are available for small biopsies such as skin, tru-cut and endoscopic biopsies. There is also a range of containers of different sizes available from the laboratory on request. Please ensure that all containers have their lids either screwed on tightly or snapped on completely around the whole circumference of the container before transporting to the laboratory.

If the specimen is suspected to be ‘HIGH RISK” the request form and the specimen pot should be clearly marked with high risk stickers. The specimens should be double bagged before transport to the laboratory. Specimens will be fixed for 48 hours before being processed. Please not that an IR1 may be raised against your department if high risk samples are not clearly identifiable.

Samples removed in Burnley theatres should be sent to RBTH via the lab reception at BGTH. Bags of samples will be signed for at BGTH between 09:00 and 17:00, but individual cases/pots need not be checked as all samples are checked on receipt at RBTH. **Please note that samples arriving in the laboratory at BGTH after 17:00 will not be signed for.**

Specimen storage

Specimens in formalin should be stored at room temperature. There are transport runs from the GP practices within the East Lancashire area to deliver specimens to the laboratory. Hospital samples must be delivered to the laboratory – Please note that Histology/Cytology samples are not suitable for the hospital ‘Pod’ system.

Frozen Sections

If a frozen section for immediate diagnosis is scheduled, the laboratory should be informed at least 24 hours before the operation takes place. The laboratory must be informed of unscheduled frozen sections as soon as possible to ascertain the availability of a Consultant Histopathologist for tissue diagnosis. The specimen should be sent to the

Department immediately after excision in a dry specimen container (i.e. without fixative). Please inform the department if there is likely to be a significant delay or cancellation. A telephone extension number indicated clearly on the request form will assist in giving a speedier service.

Lymph Nodes

Tuberculosis or other high risk lymph nodes should be sent in formalin and labelled 'High Risk'.

Skin Biopsy for Immunofluorescence

Skin biopsies for immunofluorescence (IMF) should be placed in Michel's transport medium. This is available from the laboratory at RBH into which the skin should be collected before being transported to the laboratory at the earliest opportunity. **Skin specimens for immunofluorescence should not be placed in formalin**

In the absence of Michel's transport medium, saline or wet gauze can be used to transport IMF biopsies. Please inform the laboratory if this is the case.

Ideally peri-lesional skin should be submitted for examination.

Samples for **Epidermolysis bullosa** investigations need to be sent with a St. John's Institute of Dermatopathology request form. Samples are forwarded via the Cellular pathology Department to St. John's.

Please note that our IMF service is not currently covered by our UKAS accreditation.

Muscle biopsies

Muscle biopsies are sent directly to Royal Preston Hospital directly from theatre. For further information please contact the laboratory.

Ophthalmic specimens

Ophthalmic specimens are sent to Manchester Royal Infirmary for reporting. For further information please contact the laboratory.

Foetal and peri-natal specimens

Foetal and peri-natal specimens are sent directly to Royal Manchester Children's Hospital for reporting. For further information please contact the laboratory.

Reporting

The department works to the RCPath/Carter KPI of reporting 90% of 'cases sent for the investigation of cancer within 10 days'. Compliance against this is monitored monthly. In some instances it may be found necessary to take extra blocks and/or apply specialised staining techniques to clarify or confirm the diagnosis. In such cases results will take longer.

Please note that Consultant Histopathologists may triage cases to be sent to an external service for reporting.

If the patient is on a cancer pathway (2WR) please label the request form with a red cross. In ICE, select urgent and clearly state that it is 2WR in the clinical information. Cases not marked as 2WR may be triaged as routine.

Occasionally slides are sent away for a second or expert opinion and this will significantly prolong the time to final diagnosis. In such cases, the authoriser will indicate this in a provisional or interim report.

Photography

Photography of surgical specimens can be performed in selected cases, and may be requested by clinicians.

Factors affecting the performance of the test

- Time taken for the specimen once excised from the body to get to formalin

- Total immersion in formalin (ideally there should be 10x the fixative to specimen)
- Time taken for the specimen to arrive in the laboratory (Please send specimens in a timely manner)
- Time limits for requesting additional information
- The time limit for requesting additional information is 4 weeks, although depending on the nature of the request more time may be allowed for additional requests

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Section 3: Cytology

Cytology is the study of cells. Cytology samples are preparations of cells received in fluid or by curettings or scrapings. Cytology samples are traditionally divided into two types; Gynaecological samples, scrapings taken from the female genital tract and all other samples.

Services Available at ELHT

1. Exfoliative cytology
2. FNA cytology
3. Rapid Head and Neck clinic on Thursday mornings – samples to be transported to the laboratory as quickly as possible

Please note: we do not provide a service for differential white blood cell counts on bronchoalveolar lavage samples.

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Cervical cytology

Samples for Cervical cytology are picked up from GP surgeries along with routine pathology samples for East Lancashire Laboratories.

Cervical cytology samples are processed from Surepath liquid based cytology samples and processed at Manchester Royal Infirmary. The contact details for the lab there are

Manchester Cytology Centre
First Floor, Clinical Sciences Centre
Manchester Royal Infirmary
Oxford Road, Manchester
M13 9WL

Urgent & general enquiries Tel: 0161 276 5111 Fax: 0161 276 3258 Cyto.pathology@cmft.nhs.uk

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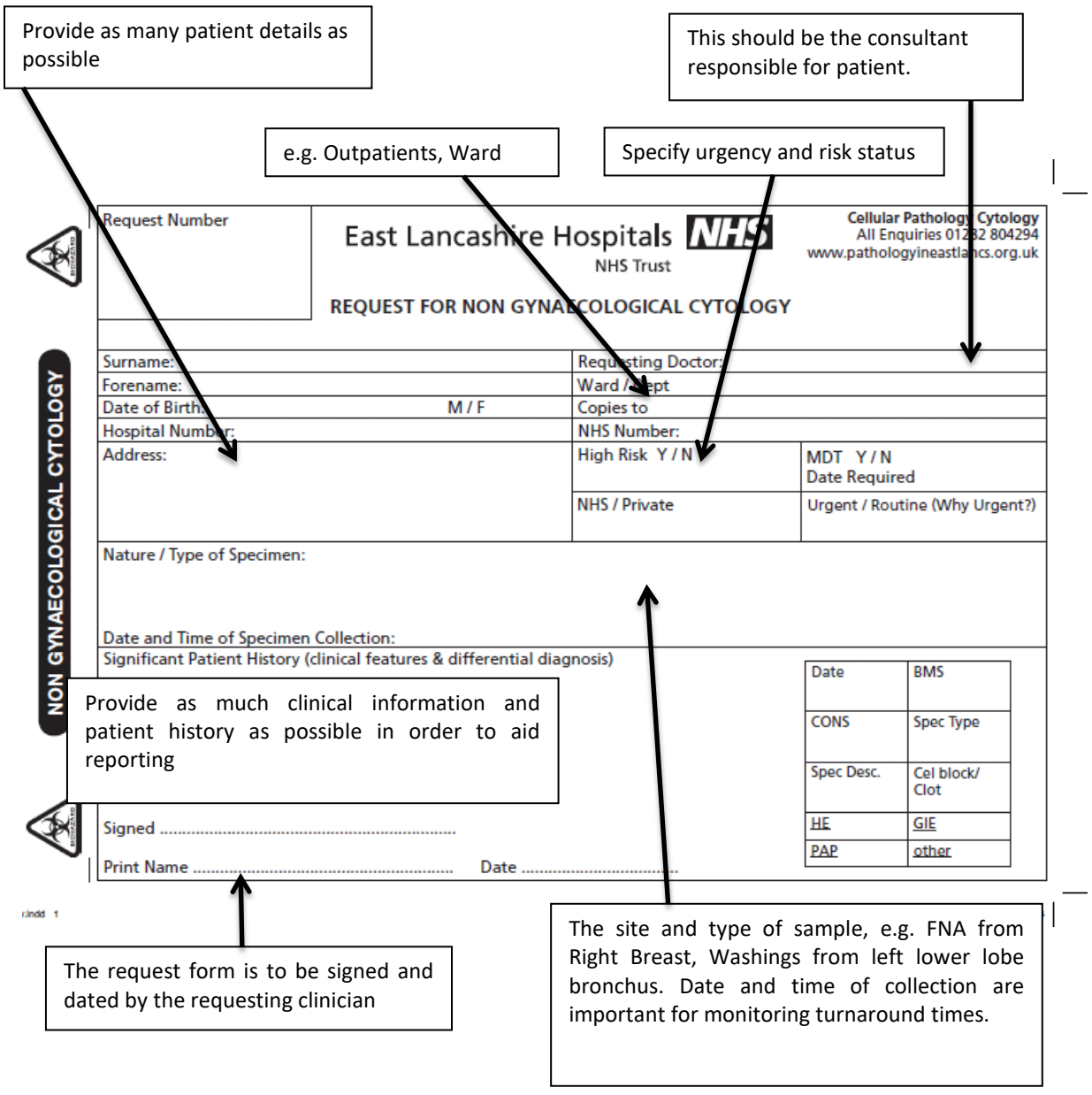
Non – gynaecological cytology

Completing the Request Form



PLEASE ENSURE ALL FIELDS ON THE REQUEST FORM ARE COMPLETED

High Risk/Urgent Samples

If the specimen is known or suspected to be **'HIGH RISK'** the request form and the plastic specimen bag must be clearly marked as such. For example TB, Hepatitis A, B and C, Pneumocystis pneumonia, and immunosuppressed patients are considered high risk. For full details see www.hse.gov.uk/pubns/misc208.pdf

Please note that an IR1 may be raised against your department if high risk samples are not labelled appropriately.

DIRECT SPREADS ARE NOT TO BE SENT FOR HIGH RISK SPECIMENS

Urgent samples should be clearly marked **'URGENT'** preferably in red ink. Please try to avoid a delay in processing and reporting of urgent samples by delivering them to the laboratory as quickly as possible; walk them down if possible. **All EUSFNA, EBUS, and Head and Neck clinic samples should be treated as urgent.**

Specimen Containers

All non-gynaecological cytology samples should be collected either fresh, or into CytoLyt (a transport medium) in a red-top universal tube. The tubes of CytoLyt can be requested from the laboratory.

Please send specimens in the appropriate container (as shown below), ensuring that the lid is screwed on tightly and that the container is labelled with both patient and specimen details. If possible please avoid covering the volume scale on the side of the container in order to help us quantify the sample.

*PLEASE **DO NOT** SEND SAMPLES IN BORIC ACID TUBES. THIS IS NOT AN APPROPRIATE COLLECTION MEDIUM*

RED-TOP CYTOLYT

(contains 30ml CytoLyt)

STERILE POT

STERILE POT

Collection of FNA Samples

Includes: Breast lesions / Axillary lymph nodes / Thyroid / Head and neck lesions, salivary glands and lymph nodes / Pancreatic lesions and cysts / Respiratory tract (TBNA and EBUS) / Any other lesions

- Please take precautions to avoid contaminating the sample with substances such as Ultrasound Jelly, which makes the cells difficult to visualise. Please wipe away ultrasound jelly from site of FNA before inserting the needle.

- The aspiration is to be expelled in a red-top universal tube containing 30mls CytoLyt. Saline can be used to rinse the needle into the tube.

- Please note that if two samples from different sites on the same patient, please try to distinguish clearly which specimen is from which site. For example, Pot 1: Right Breast FNA, Pot 2: Right Axillary FNA.

- If possible, avoid sending multiple pots of the same sample from the same site. For example, doing two FNA passes from the same site in the thyroid. Both passes can be placed in the same Red Top Universal. Sending two specimen pots is only necessary if the samples are from different sites

- **If there is a delay in delivering the sample, please refrigerate at 4°C**

Collection of Head and Neck Clinic FNA Samples

- For samples from the Head and Neck (excluding high risk samples) we request that a direct spread of the sample onto a slide is provided. Instructions for how to do this are found **in the next section.**

- A slide must be created from the first pass of the FNA only. The needle should then be rinsed in the Cytolyt.

- All subsequent passes are to be expelled entirely into CytoLyt, as described above.

- Please deliver specimens from the head and neck clinic, including those from Radiology, directly to the Histology lab as soon as possible. This is a rapid turnaround service.

- Please make it clear on the request form that the sample has come from the head and neck clinic to ensure that it is processed immediately.

Making Direct Spreads

A small drop of the aspirate is to be expelled onto a glass slide. Using a second (spreader) slide, spread the drop gently but swiftly to create a tongue-shaped smear. Demonstrations of this technique can be arranged by contacting the department.

All slides should be **clearly labelled** with the patient details, and transported to the laboratory in a slide mailer box.

PLEASE NOTE THAT DIRECT SPREADS SHOULD **NOT** BE DONE FOR HIGH RISK SPECIMENS

Collection of Serous Fluids

Body Cavity Fluids (Includes: pleural / ascitic / peritoneal fluid / peritoneal washing / pericardial)

- Around 50mls of fluid should be collected into a sterile, dry container with a screw cap for transport to the laboratory (**Note**: no other transport medium or fixative is to be added to the sample as this can cause interference with adherence to the slide and quality of staining).

- The fluid should be delivered to the laboratory as soon as possible to minimise cell deterioration, so that cell preservation is not compromised.

  If there is a delay in delivering the sample, please refrigerate at 4°C

Collection of Cyst Fluids

- Cyst fluids should be collected into a red-top universal tube filled with 30mls of CytoLyt to prevent deterioration of the sample.

- The sample should be delivered to the laboratory as soon as possible to minimise cell deterioration, especially if not collected in CytoLyt.

  If there is a delay in the delivering the sample, please refrigerate at 4°C

Collection of Urinary Tract Samples

Includes: voided / catheter / urethral washings / Ureteric and renal pelvis/ileal conduit samples

- Collect urine in a 50ml red-top universal tube containing 30mls CytoLyt to prevent deterioration of the sample (see above section on specimen containers). Please fill the pot where possible to ensure specimen adequacy.

- **BORIC ACID IS NOT SUITABLE FOR URINE SAMPLES FOR CYTOLOGICAL ANALYSIS.**

- If the patient is collecting the specimen outside of a clinic / surgery then please provide them with a clean, dry container with a screw top. **Tubes containing CytoLyt are NOT to be sent home with patients. The urine they collect should be transferred into CytoLyt before transporting to the Laboratory.**

- Please note: the first sample voided in the morning is **unsuitable** for cytological analysis. An adequate sample is voided either mid-morning or randomly.

- Please state the method of collection (voided, catheter etc) on the request form.

- The sample should be delivered to the laboratory as soon as possible to minimise cell deterioration, especially if not collected into CytoLyt. **If there is a delay in delivering the sample, please refrigerate at around 4°C**

Collection of Respiratory Tract Samples

Transbronchial FNA

- See above section on collection of Fine Needle Aspirates

Bronchial Washings / Lavage / Trap / Bronchoalveolar Lavage

- The specimen should be collected in a red-top universal tube containing 30mls of CytoLyt to prevent deterioration of the sample.

- We do not provide a service for differential white blood cell counts on bronchoalveolar lavage samples.

- The sample should be delivered to the laboratory as soon as possible to minimise cell deterioration, especially if not collected into CytoLyt.

  If there is a delay in delivering the sample, please refrigerate at 4°C

Bronchial Brush Samples

- Place brush into a red-top universal tube filled with 30ml of CytoLyt **as soon as possible** to prevent deterioration of the sample. **Do not** wait until the end of the procedure, as this causes the brush to dry and makes interpretation difficult.

- Ensure the brush is fully immersed.

- The sample should be delivered to the laboratory as soon as possible to minimise cell deterioration, especially if not collected into CytoLyt.

  If there is a delay in delivering the sample, please refrigerate at 4°C

Endobronchial Ultrasound FNA (EBUS FNA)

- EBUS samples should be collected into a yellow-top formalin pot.

Collection of Gastrointestinal Brush Samples

Including bile duct brushings

- Place brush into a 50ml red-top universal tube filled with 30ml CytoLyt **immediately** to prevent deterioration of the sample. **Do not** wait until the end of the procedure, as this causes the brush to dry and makes interpretation difficult. Ensure the brush is fully immersed.

Collection of Cerebrospinal Fluid (CSF) Samples

- CSF should be collected into a 50ml red-top universal tube filled with 30ml CytoLyt to prevent deterioration of the sample.

Factors Affecting Test Performance

- Fresh specimens should be transported to the laboratory as soon as possible to limit autolysis of the cells. If they cannot be transported that day then they should be **refrigerated at 4°C** until the next working day.
- Time taken for the specimens to arrive in the laboratory
- Inappropriate transport media. If in doubt, please contact the laboratory for advice.

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Section 4: List of Referral laboratories

Laboratory	Area of Specialism
St. John's Institute of Dermatology	Dermatology
Christie Hospital	Cancer Pathology
Royal Preston Hospital	Gynae Pathology GI pathology Neuropathology
Leeds Haematological Malignancy Diagnosis Service	Haematological Pathology
Manchester Royal Infirmary	Ocular Pathology Gynae Cytology
Source Bioscience	Gastric Her-2 testing Backlog reporting of routine histology
Clinical genetics lab, St Mary's hospital, Manchester	EGFR receptor status K-ras status testing
Central Manchester Foundation Trust	Cytology GI pathology Histopathology referrals Ophthalmic services Paediatric Pathology Perinatal Pathology
Morecambe Bay NHS Foundation Trust (Royal Lancaster Infirmary)	Upper GI pathology
Cellular Pathology Department University Hospital of Wales Heath Park Cardiff CF14 4XW	Pulmonary pathology
Queen Elizabeth Hospital Queen Elizabeth Medical Centre Edgbaston Birmingham B15 2TH	Molecular Pathology tests ALK PDL-1
Royal Hallamshire Hospital Glossop Road Sheffield S10 2JF	Gynaecological Pathology
St. James Hospital Department of Cellular Pathology Level 5 Bexley Wing St James University Hospital Beckett Street LEEDS LS9 7TF	Liver Pathology Dermatopathology
Backlogs Ltd Silvaco Technology Centre Compass Point St Ives PE27 5JL	Backlog reporting of routine histology
HCA Laboratories 43a Wimpole St London W1G8AQ	EUSFNA