Diagnostic Cytopathology Service User Guide (Oxford Road and Wythenshawe Sites)

Directorate of Cellular Pathology

Manchester University NHS Foundation Trust

1 Introduction

Note: This user guide details information for the requesting of investigations, specimen requirements and communication of results for the department of **Cytopathology (Cellular Pathology) at Oxford Road and Wythenshawe Hospital sites.** Relevant ISO 15189: 2022 standards/clauses are referenced in brackets in section headers.

The Division of Laboratory Medicine (DLM) at Manchester University NHS Foundation Trust (MFT) provides diagnostic services to all areas of Greater Manchester and beyond including GP and specialised services.

The Diagnostic Cytology Service (part of the Cellular Pathology directorate) has laboratories based at the Oxford Road and Wythenshawe hospital sites and offers a diagnostic service for a comprehensive range of specimen types. The department provides a service to the patients, clinicians and General Practitioners of Greater Manchester and further afield for certain specialist services.

We offer the following diagnostic services with consultant sub-specialist reporting:

- Gynaecological pathology
- Gastrointestinal, pancreaticobiliary and hepatic pathology
- Renal, urological and endocrine pathology
- Haematological and lymphoreticular pathology
- Osteoarticular pathology
- Soft tissue pathology (Wythenshawe only)
- Head and neck pathology
- Dermatopathology
- Cardiothoracic and respiratory pathology
- Breast pathology
- Cerebrospinal fluid pathology

Specialties are supported by our on-site Immunohistochemistry services.

2 Contact Us

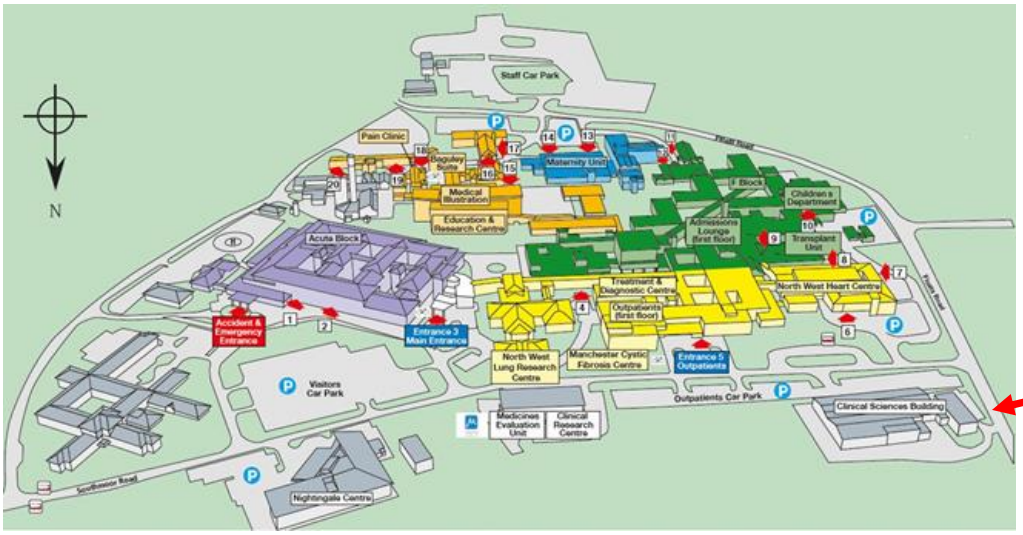
2.1 Opening Hours (7.2.2 a)

The Cytology laboratory at the Wythenshawe site is open Monday – Friday from 8am until 5.30pm, excluding public holidays. The laboratory at the Oxford Road site is open Monday – Friday 8am until 5.00pm excluding public holidays.

2.2 Location (7.2.2 a)

Our Wythenshawe laboratory reception is located on the ground floor of the Clinical Sciences Building at Wythenshawe Hospital

Division of Laboratory Medicine



Address: Histopathology and Cytopathology (Cellular Pathology)
Clinical Sciences Building
Wythenshawe Hospital
Southmoor Road
Wythenshawe
Manchester
M23 9LT

Our Oxford Road laboratory is located on the first floor of the Clinical Sciences building at the Manchester Royal Infirmary Hospital.

Address: Manchester Cytology Centre (Cellular Pathology)
Clinical Sciences Building
Manchester Royal Infirmary
Oxford Road
Manchester
M13 9WL

2.3 Contact Information (7.2.2 a)

Generic contact details	Location	Extension	Information
Report enquiries (Wythenshawe)	Office	0161 291 4813	At times, this number may have an answering machine: please leave a clear request and a number for us to call you back
Departmental nhs.net email address (Wythenshawe)			Mft.wythenshawe.histosecs@nhs,net
Report enquiries (Oxford Road)	Office	0161 276 5115/5116	Please provide full name and date of birth for patient when calling for a result
Departmental nhs.net email address (Oxford Road)			Mft.ngcytology@nhs.net

Key Contact Details

Laboratory	Tel No.	Email address
Chitra Sethuraman Clinical Director for Cellular Pathology	0161 701 1270 Secretary 0161 701 2375	Chitra.sethuraman@mft.nhs.uk
John Hayes Cellular Pathology Directorate Manager	0161 276 6138	John.hayes@mft.nhs.uk
Jacquelyn Medlock Cytology Laboratory Manager (Oxford Road)	0161 276 5120	Jacquelyn.medlock@mft.nhs.uk
Catherine McNulty Lead Biomedical Scientist (Wythenshawe)	0161 291 4804	Catherine.mcnulty@mft.nhs.uk
Rosebina Zafar Lead Biomedical Scientist (Oxford Road)	0161 276 5110	Rosebina.zafar@mft.nhs.uk
Christopher Harreld Deputy Lead Biomedical Scientist (Wythenshawe)	0161 291 4804	Christopher.harreld@mft.nhs.uk
Edyta Zgierun Cytology Section Lead (Wythenshawe)	0161 291 2156	Edyta.Zgierun@mft.nhs.uk
Dipak Ruda Advanced Biomedical Scientist (Oxford Road)	0161 276 5110	Dipak.ruda@mft.nhs.uk
Specimen reception (Wythenshawe)	0161 291 4800	
Cytology laboratory (Wythenshawe)	0161 291 2156	
General Enquiries (Oxford Road)	0161 276 5115/5116	

Cytology Medical Secretary Office (Oxford Road)	0161 276 5116	mft.ngcytology@nhs.net
Booking an FNA (Oxford Road)	0161 276 5110/5115/5116 or Bleep 07623 916 611	
Advice on sample collection	0161 276 5110 (Oxford Road) 0161 291 2156 (Wythenshawe)	

Reporting Pathologists/Speciality (Wythenshawe)	**Office**	**Secretary**	**Email address**
Dr L Joseph **Deputy Clinical Head of Division, Quality and Patient Safety Lead & Co-Clinical Lead Histopathology** Skin, Breast, Cardiothoracic	0161 291 4808	0161 291 2123	leena.joseph@mft.nhs.uk
Dr S Pritchard **Co-Clinical Lead Histopathology** Breast, Gastrointestinal, Head & Neck,	0161 291 4818	0161 291 2143	susan.pritchard@mft.nhs.uk
Dr M Scott Gynaecology, Gastrointestinal, Urology	0161 291 2144	0161 291 2123	michael.scott@mft.nhs.uk
Dr N Ali Breast, Skin, Gynaecology, Gastrointestinal cytology	0161 291 5663	0161 291 4812	nisha.ali@mft.nhs.uk
Dr P Bishop Cardiothoracic,Head & Neck, Haematolymphoid	0161 291 2159	0161 291 2121	paul.bishop2@mft.nhs.uk
Dr A Davenport (part-time) Gastrointestinal	0161 291 5311	0161 291 2143	anna.davenport@mft.nhs.uk
Dr Laura Shepherd Breast, Urology	0161 291 4786	0161 291 4812	lauraann.shepherd@mft.nhs.uk
Dr A Paivi-Correia Cardiothoracic, max fax	0161 291 4805	0161 291 4810	Antonio.PaivaCorreia@mft.nhs.uk
Dr Kavita Singhal Breast, Skin	0161 291 4793	0161 291 2123	Kavita.singhal@mft.nhs.uk

Dr Nadine Elgeredly Breast, Urology, Gastrointestinal	0161 291 2819	0161 291 2121	Nadine.elgeredly@mft.nhs.uk
Dr Preethi Joseph Skin, Gastrointestinal, Urology	0161 291 4756	0161 291 4812	preethi.joseph3@mft.nhs.uk
Dr Nicola Gaunt Skin	0161 291 4812	0161 291 4812	Nichola.gaunt2@mft.nhs.uk
Dr Ishitha Gunadala Cardiothoracic, skin	0161 291 4812	0161 291 4812	Ishitha.gunadala@mft.nhs.uk
Dr Iman Borghol Gynae, Urology	0161 291 4810	0161 291 4810	Iman.Borghol2@mft.nhs.uk
Dr Krishnendu Halder Cardiothoracic.	0161 291 4812	0161 291 4812	Krishnendu.Halder@mft.nhs.uk
Speciality trainees	0161 291 4814 0161 291 4816	0161 291 4815 0161 291 4817	

Name	**Reporting Pathologists/Speciality (Oxford Road)**	**Telephone**	**E- Mail address**
Dr M Chau	Consultant Cytopathologist	0161 276 5108	w.chau@mft.nhs.uk
Dr S Jahangir	Consultant Histo/Cytopathologist	0161 276 4470	sidra.jahangir@mft.nhs.uk
Dr D. Shelton	Consultant Cytopathologist	0161 276 6475	david.shelton@mft.nhs.uk
Dr G. Santos	Consultant Cytopathologist	0161 701 0228	gildacsantos@gmail.com
Dr N Akhtar	Consultant Histo/Cytopathologist	0161 701 16997	noreen.akhtar@mft.nhs.uk
Dr S Dhar	Consultant Cytopathologist	0161 276 5109	supriya.dhar@mft.nhs.uk
Dr Dane Pointing	Consultant Histo/Cytopathologist		Dane.pointing@mft.nhs.uk

3 Services available at MFT (7.2.2)

3.1 Oxford Road Diagnostic Cytology Services

1. Exfoliative cytology
2. Biomedical Scientist (BMS) assistance at radiological and ad hoc FNA clinics
3. BMS assistance and on site specimen adequacy assessment at dedicated Head and Neck clinics, including thyroid – usually Tuesday mornings and Thursday afternoons
4. BMS assistance and on site adequacy assessment at a dedicated Ultrasound clinic- on Wednesday mornings.

3.2 Trafford General Diagnostic Cytology Services (7.2.2)

1. Exfoliative cytology
2. FNA without BMS on-site assistance.

Samples are transported to the MFT (ORC) site 3 times per day.

3.3 Christie Hospital Diagnostic Cytology Services (7.2.2)

1. Exfoliative cytology
2. FNA cytology, including BMS assistance in slide preparation and on-site specimen adequacy assessment. The BMS assistance service is available Monday, Wednesday, Thursday, Friday from 09:00 to 12:30 hrs and Tuesday 09:00 to 16:30 hrs.

** **BMS attendance has been suspended till further notice****

3.4 Wythenshawe Hospital Diagnostic Cytology Services (7.2.2)

1. Exfoliative cytology
2. FNA without BMS on-site assistance.

4 Quality (5.4.2, 5.5)

Cellular Pathology (Histology and Cytology) is fully accredited by UKAS in conformance with ISO 15189:2022. Our UKAS Medical Laboratory Reference Number is 8648. The department participates in regular extensive assessments to maintain its accreditation status.

The department is committed to delivering a quality service to our users and operates within a framework of continual improvement. A quality management system is utilised to ensure all documents, processes, quality records and clinical material are controlled to DLM (Division of Laboratory Medicine) policy. Processes and systems are regularly audited to identify non-conformities and quality improvements.

4.1 External Quality Assurance (EQA) (7.3.7.3)

The departments participate in the UKNEQAS for Cellular Pathology Technique (CPT) Scheme which was formed in 1991 following the merger of a group of regional schemes and is now the result of many years of development and evolution in the field of Cellular Pathology External Quality Assessment (EQA). UKNEQAS for CPT is an established international scheme with a first-class reputation and participant base that provides external quality assurance to both public and private institutions within the UK and overseas (UKNEQAS http://www.ukneqascpt.org.uk/content/PageServer.asp?S=399991074&C=1252&CID=1).

Currently UKNEQAS for CPT offers 6 assessment cycles per year in many modules, one of which is Diagnostic Cytopathology (NG).

Additionally, following a pilot scheme in UKNEQAS CPT Diagnostic Cytopathology Cell Block Scheme, the department has successfully subscribed to this scheme in 2023. There are 6 cycles per year and coincide with the slide scheme.

4.2 Data Protection (7.6)

The departments comply with trust, DLM and departmental policies relating to the handling, use and protection of personal information (DLM-QUAL-PRO-022 Management of Data and Information).

- 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 care, for example sending the information to another laboratory for testing
- We don't store information for any longer than is absolutely necessary

4.3 Measurement Uncertainty (7.3.4)

In clinical laboratory testing there are potential uncertainties that can affect test results, such as poor specimen collection or transport, patient related factors or other interfering factors. The laboratory examination process itself is subject to some degree of variability and our department regularly monitors this by the use of internal quality control and participation in external quality assurance schemes.

In accordance with the RCPath guidance, an assessment of the uncertainty of measurement will be carried out for any measurement that is included in the diagnostic report if it is deemed to have actual or potential "direct clinical impact."

Where weights and measurements are part of an overall description and do not impart prognostic or predictive value, an assessment will not be carried out.

The laboratory has undertaken a specimen pathway risk assessment to ensure all factors that may contribute to measurement uncertainty that cannot be statistically defined are captured and controlled as far as possible.

Information for users relating to measurement uncertainty is available on request.

4.4 Patient Consent (7.2.4.3)

It is the responsibility of the requesting clinician to ensure that any objections or restrictions expressed by a patient to the use of their samples are clearly recorded on the request card.

For samples submitted from external locations, it is the responsibility of the referring Trust to ensure consent for testing is in place, please be aware that evidence of consent may be required prior to sample testing.

5 Requesting of Investigations (7.2.4.4)

The Division of Laboratory Medicine (DLM) guidelines for specimen acceptance must be followed to ensure that all samples are correctly and unambiguously identified. The policy provides an overarching process to specimen rejection to help balance the requirement to process against the risk to patient safety. Clinical governance issues may arise from errors in specimen identification and/or insufficient clinical information being given with a specimen. To ensure that specimens are linked to the correct patient, adequate identifiers are essential.

Labelling multiple samples from the same patient

If there are multiple samples from the same patient from different sample sites or multiple samples from the same site:

1. Ensure each sample is collected in the appropriate sample collection pot (see section 7)
2. Ensure each pot is fully labelled with all the appropriate patient demographic information (see section 5.1) – for HIVE orders each pot should have a unique sample label generated
3. Ensure each pot is labelled with the specific sample source location i.e. FNA left neck level I
4. If there is more than 1 aspiration for a specific sample location (i.e. 3 aspirations of level V lymph node) these should be collected into the same sample pot and labelled with sample source. The number of aspirations for that site should be available on either the sample pot or provided with the request.

All urgent and specimens on a cancer tracking pathway (HSC205) should be clearly labelled as such. The date and time the specimen was taken is important information that should be included on all requests to determine the length of fixation of the cytology (+/- tissue) specimen.

5.1 Specimen Acceptance Policy (7.2.6.2)

All specimens need to be accompanied by a correctly completed cytology request form.

For test requests ordered on the Hive Electronic Patient Record (EPR) system an order requisition printout must be submitted with the request.

For non-Hive requests or paper requests raised during Hive downtime see sample acceptance criteria below for more information.

The following mandatory information must be provided for us to accept the specimen:

Essential Patient Identifiers:

- **Surname**
- **Forename**
- **Unique identification number** – Medical Record Number (MRN), NHS or external hospital number for external cases
- **Date of birth**
- **Address** – for GP or external locations

Essential clinical information – sample site MUST be listed on the sample pot for the sample to be accepted
Essential Clinical Details:

In producing a final diagnostic cytopathology report the Pathologists are essentially looking to provide guidance and answers to clinical queries. Therefore, it is essential that all relevant clinical information is provided on the request form (paper based or electronic) so that the cytological features of the specimen can be interpreted within the clinical context. Rather than simply repeating oneself under each heading give relevant clinical details, procedure details, medical history and the clinically suspected (differential) diagnosis. This should include all previous malignancies, whether in the same or any other organ system. Under *Specimen Details*, give the precise anatomical site of the specimens sent. If there are multiple specimens, there should be a one-to-one correspondence between the specimens listed on the card and the labelling of the specimen pots. Record any features of the specimen that are likely to be difficult to interpret after fixation, particularly for complex cases.

If the relevant, appropriate clinical information is not provided this may lead to a delay in the final report being issued.

- **High risk status** – to ensure health and safety of all staff
- **Specimen site** – must match on specimen pot and request card
- **Relevant clinical information** – see above
- **Lung cancer -** For any sample where there is a clinical concern for lung cancer (primary or metastatic), please ensure details of smoking (never/light smoker or current/ex-smoker) and performance status (WHO 0 1 2 3) are recorded on the request form in the clinical details section.
- **Date/time taken** – essential to ensure proper fixation of high risk specimen

Essential Sender Details:

- **Ward/department** – required for return of reports
- **Consultant or GP** – required for return of reports and contact in case of any errors/discrepancies
- **Contact number/bleep** – if urgent preliminary report required

It is recognised that some samples are sometimes not repeatable therefore the department has protocols in place to deal with specimens and accompanied request forms that do not meet the specimen acceptance criteria. A final report will not be issued until such details have been corrected.

As far as is reasonably practicable, when the sample is being processed on the same hospital site as it was taken, the requesting clinician will be required to attend the Laboratory to make any necessary amendments or verify the patient details / source of the sample.

For MFT cases, where it is not possible for the requesting clinician to attend, they, and / or the person raising the order will be contacted by electronic communication (email / HIVE

chat as appropriate) and an audit trail will be established to verify the patient details / source of the sample.

For samples from General Practitioners or external clinics we will accept corrections to patient detail discrepancies via email, e.g. Tameside, Christie.

All specimen and/or request form amendments will need to have a specimen amendment form completed and / or a printout of the correction email.

If the request form requires edit, either a new form is submitted, or the request form can be edited to represent the amendment in the margin on the form with the initials and date of the individual who collated the information. If amendments are not addressed within seven calendar days, then an incident will be raised in Ulysses.

Any high-risk specimens should be highlighted on the specimen request form and for MFT orders, on the HIVE request.

5.2 Request Cards (7.2.2)

All paper request cards should be completed in full (see above), and all information provided should be clearly legible. Any missing information or errors will result in a delay to specimen processing and reporting.

Correct patient and specimen information is vital for us to provide a quality service to our users. Any specimens deemed to be high risk or potentially high risk should be clearly labelled as such to protect the health and safety of all staff.

As we provide our service to a range of service users, please also state the type of unique patient identification number given, e.g. NHS, district, MRN. Please also indicate whether the patient is an NHS, private or waiting list initiative patient.

If a patient is part of a research project, this should be clearly labelled on the request card to ensure that the specimen undergoes the correct procedures. Similarly, patients that are part of a screening programme, e.g. BCSP BOSS, should be clearly labelled.

5.3 HIVE Requests (7.2.2)

Unlike some of the other pathology disciplines, Cellular Pathology (Cytology) still require a request card for all specimens requested on HIVE.

For test requests ordered on the Hive Electronic Patient Record (EPR) system an order requisition printout must be submitted with the request

HIVE generates specimen labels for both the requisition printout and each sample pot created as part of the order entry. Please ensure the correct label is attached to the correct container. HIVE labels must be attached to the specimen container and not to the lid of the container.

Sample containers – please see section 7 for information on the appropriate sample containers to use for collection of different cytology samples and information on clinical decision values / biological references.

5.4 Transport of Specimens (7.2.5)

Specimens for cytology are not allowed to be transported via the pneumatic tube system.

The transport of the specimens to the department is undertaken by the respective hospital transport portering teams and associated transport links from the Wythenshawe, Oxford Road, Trafford General, and Tameside sites. North Manchester General Hospital (NMGH) are sent by courier. Dedicated barrels are provided, by the histology department, as the secondary packaging for use to transport the samples. The primary packaging being the container the specimen is in. Urgent samples, e.g. CSF, may be delivered to the department ad hoc; these should be transported in an appropriate container, with a tightly fitting lid. The transport containers should be labelled as Diagnostic Specimens – UN3373 and have the department name and telephone number to ensure the containers comply with transport regulations. Barrels and transport bags are disseminated to the appropriate Diagnostic Cytology laboratory post-delivery.

Specimens should not be transferred to the department without appropriate packaging. All specimens should be received with a documented tracking sheet as appropriate detailing the patient identifiers, specimen type and where the specimen has been taken. These tracking sheets are checked on arrival in the department and returned to the department or area the specimen was taken from for staff to record that the specimen has been received safely in laboratory.

Transport of samples on site at MFT occurs twice daily with specimens delivered at between 8.00-10am and 12-2pm, and additionally at Oxford Road Campus between 3-4.30pm, Monday – Friday.

Transport of the Tameside samples occur twice daily. The transport collects specimens from theatres, endoscopy and then pathology before leaving pathology at 9.30 am and 3.30 pm. This transport also delivers samples from GP surgeries within the Tameside borough. This transport also delivers supplies from Wythenshawe Site back to Tameside for the relevant theatres and clinics.

For specimens received from hospitals where there is not a routine transport service arranged, a courier service is used. This includes specimens transported from Stepping Hill Hospital and independent providers. Transport between Wythenshawe Histopathology, Withington Community Hospital, and Oxford Road Campus is in place at regular intervals throughout the day to ensure timely transport of specimens to be processed at each site.

Samples from all sites should be delivered to Histopathology specimen reception in the clinical sciences buildings at Wythenshawe or Central Specimen Reception at Oxford Road Campus so that appropriate staff can accept these and ensure all specimens are accounted for. Delivery of specimens should be Monday – Friday between 8.00am and 5.30 pm unless by prior arrangement as there are no staff on site over the weekend to accept specimens into the department.

Any fresh specimens (not delivered in preservative for diagnostic cytology specimens) should be delivered directly to a member of laboratory staff to ensure processing is undertaken quickly with no degradation to specimen.

If you have any queries or should extra transport be required for any reason please contact the Trust transport department via switchboard.
Samples received from both Trusts are recorded using a paper-based system and in some cases electronically. Please ensure such records are completed before dispatch of samples.

For paper-based requesting, only specimen request forms provided by cytology should be used to request specimen testing. These forms should not be photocopied, for a supply of forms, please contact the laboratory.

Samples from the GP surgeries within the Greater Manchester District are delivered to the main pathology reception areas and then collected by histology staff on an ad hoc basis. Dedicated portering services pick up and deliver some samples at the Oxford Road site. Some of these samples are requested electronically others are accompanied by handwritten request forms. For paper-based requesting, only specimen request forms provided by histopathology should be used to request specimen testing. These forms should not be photocopied, for a supply of forms, please contact the laboratory.

If samples from Wythenshawe/Oxford Road sites cannot be accepted due to failing the specimen acceptance criteria please follow section 5.1 Specimen Acceptance Policy.

All specimen and/or request form amendments need to be documented, a specimen amendment form may be used. If amendments are not addressed within seven calendar days, then an incident will be raised in Ulysses.

For some external clinics we will accept corrections to patient detail discrepancies via email, e.g. Tameside, Christie.

Please be aware that a final report will not be issued until the necessary amendments have been made (although specimens may be processed should there be a clinical urgency or risk in specimen degradation should processing be delayed). Failure to amend the specimen request form of specimen pot in a timely fashion will lead to a delay in the final report and if the specimen is not amended in 7 days, a Ulysses record will be raised.

All specimens should be transported in the relevant fixative or transport medium as indicated below in section 7 All specimen pots should be tightly sealed and transported using specimen bags, where appropriate. The request card should be placed in the pocket of the specimen bag, and the pot inside the sealed bag to ensure the safety of all staff.

All specimens sent via Royal Mail should adhere to the packaging guidance available on the Royal Mail website. It is the responsibility of the sender to ensure that specimens are appropriately labelled and packaged.

5.5 Specimen Tracking (7.2.2)

Many of our service users have systems in place to track specimens. If specimen acceptance criteria are applied at the time of tracked receipt, the specimen can be returned to the sender quickly should any discrepancy be identified.

Appropriate action in the event of a specimen acceptance failure involving fresh tissue (e.g. frozen section, gel sample) or an Urgent / HSC 205 sample is decided at the discretion of

the reporting pathologist. The decision to accept and process pending confirmation may be taken based on a dynamic risk assessment to determine potential harm to the patient.

If a specimen has been requested using HIVE, the sender can use HIVE to check whether the specimen has been received.

6 Specimen Requirements (7.2.4)

All specimens should be sent to the laboratory in an appropriately labelled specimen pot that is large enough to easily accommodate the specimen. It is unsafe practice to label specimen pots in advance of a procedure.

6.1 Factors Affecting Performance (7.2.2)

The following is a list of factors known to significantly affect the performance of examination and interpretation of results:

- Failure to follow the specimen acceptance policy will result in a delay to specimen processing and reporting.
- Failure to supply adequate clinical information may result in a delay to requesting of specimen investigations and reporting.
- Failure to label requests as urgent or HSC205 will result in a delay to specimen processing and reporting.
- Failure to fix specimens appropriately (depending on specimen type) and in a timely manner will adversely affect specimen integrity and subsequent examination.
- Failure to follow instructions for the specific specimen requirements will prevent necessary examinations from being performed.
- Failure to disclose high risk status of the specimen will put staff at unnecessary risk of infection.
- Specimens for cytology being placed into 10% neutral buffered Formalin as opposed to being sent fresh, in saline or cytological fixative as appropriate for the sample type and test required
- Failure to ensure timely transport to laboratory for fresh samples that require rapid processing (e.g., CSF)

Should any of these factors affect the issuing of a final report, then an incident may be raised in Ulysses. If a final report is able to be issued, factors that may have affected this result will be included in this report.

6.2 Specimen Fixation (7.2.7)

Depending on the type of sample Cytorich Red fixative may be used to fix the specimen. See sample type table below.

6.3 High Risk Specimens (7.2.2)

All specimens from patients who are identified as (or are likely to be) in the high-risk category must be clearly labelled to ensure the health and safety of all staff. The following are common hazard group 3 pathogens considered high risk (this list is not exhaustive): HIV, AIDS, TB, Hepatitis B and Hepatitis C.

6.4 Haematological Cancer Diagnostics (HCD) (7.2.2)

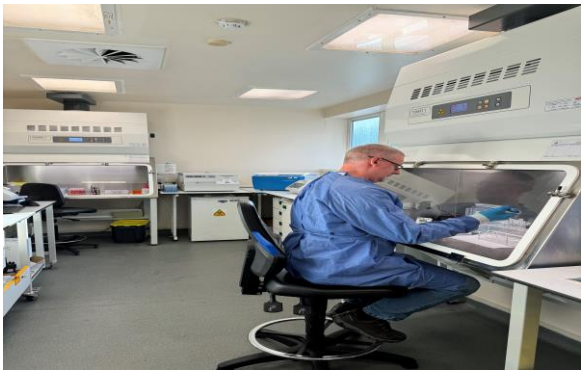
Cellular Pathology samples with a suspected diagnosis of lymphoma are sent to Cellular Pathology as for any other specimen. The request form should clearly indicate the suspicion of lymphoma. A consultant pathologist will examine initial slides and determine whether the case is to be sent to the HCD.

6.5 Diagnostic Cytology Samples (7.2.2)

We currently use a mixture of direct spreads, cytospins and cell blocks in our sample preparation. All samples are prepared in Containment level 3 rooms with Class 1 microbiological safety cabinets. Our research activity at the Oxford Road site includes:

- Protector study- Preventing Ovarian cancer through early excision of tubes and late Ovarian Removal

- DETECT –Research project to screen women presenting with post- menopausal bleeding for evidence of endometrial carcinoma



Diagnostic cytology specimens are either fluid based or received as smears of fine needle aspirations (FNA) or imprints of tissue biopsies on glass slides.

Specimens should be sent in sample containers of an appropriate size to adequately hold the specimen. Some specimens are received fresh, with no additives and therefore should be delivered to the department as soon as collected to prevent deterioration of the sample (see table below). Other specimens are received in cell collection fluid or a preservative such as cytorich red. These preservatives assist with preservation of the cells within the sample. In the case of thyroid aspirates some slides should be fixed using the alcohol based fixative spray and some air dried. The air dried slides are for Giemsa staining.

Cytorich red and alcohol spray fixative (for tongue and buccal smears) are both available from by contacting the cytology
laboratories.

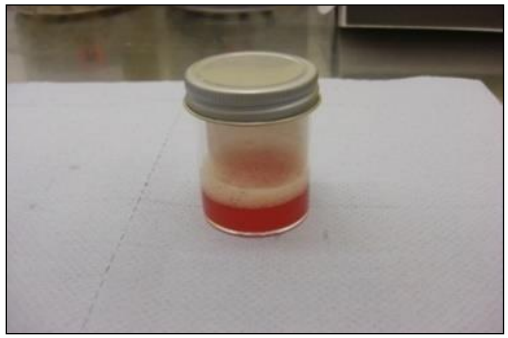
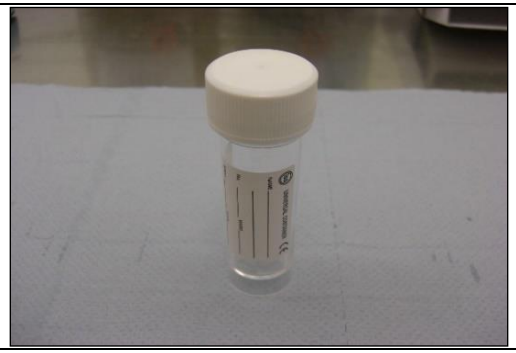
6.6 Molecular Testing (7.2.2)

The Diagnostic Cytopathology department can facilitate a number of molecular tests on cytology samples due to our close working relationship with the Manchester Centre for Genomic Medicine, The Christie Hospital NHS Foundation Trust and other external providers. We strongly recommended that the clinicians convey any requests for molecular tests to the attending BMS for any FNA cytology samples or to the consultant cyto/histopathologists for any exfoliative cytology samples, either by indication on the request card or by telephone.

6.7 Third Party Providers

On occasion and to support the timely reporting of results Third party reporting providers may be utilised to support the Diagnostic Cytopathology service. Report will state if a case has been outsourced/reported by a third party provider.

7 Sample Collection/Pots/Special Instructions (7.2.2, 7.2.7)

Sample Type	Collection Container	Special Precautions/Information
Air-dried slides	 Slide box	N/A
Serous Fluid		• 50 -75 mls fluid should be sent in a clean dry container with screw cap (**Note: no formalin or alcohol should be added to the sample as both of these can cause interference with adherence to slide and quality of staining**) • The fluid should be submitted as soon as possible to minimise cell deterioration, so that cell preservation is not compromised • If there is a delay in delivering the sample to the laboratory, the sample should be kept refrigerated at 4^0C (Note – the sample should NOT be frozen).
Cyst Fluids		• Cyst fluid samples should be put into a clean dry container with screw cap. • The fluid should be submitted as soon as possible to minimise cell deterioration, so that cell preservation is not compromised • If there is a delay in delivering the sample to the laboratory, the sample should be kept refrigerated at 4^0C (Note – the sample should NOT be frozen)
Urinary tract inc voided, catheter, ileal conduit, ureteric and urethral		• Collect urine in a clean, dry container with a screw cap. A 20ml to 50ml container, preferably with yellow lid (see image) is suitable • **Please do not send urine for cytology in Sarstedt Monovette**

	 70ml Sterile container	• An adequate urine sample is the second voided of the day, preferably mid-morning. • **Please note: The first sample voided in the morning is unsuitable for cytological analysis** • Urine can be collected from catheters as well as washings from the bladder or upper urinary tract. The request form must state the method of collection • If there is a delay in delivering the sample to the laboratory, the urine sample should be kept in a fridge at 4ºC • A voided urine received in the laboratory more than 2 days old may be rejected
CSF		• A clean, dry container with screw cap should be used • CSF samples are liable to degenerate rapidly and as such must be prepared immediately. **Please contact the laboratory to inform staff of imminent arrival of a CSF sample, and leave a bleep or contact number** • **Latest processing time for samples is 15.30 hrs Mon-Fri. CSF samples must be received at least half an hour before this time** • If out of hours sampling is unavoidable, storing the sample in refrigerator at 4°C may help preserve cells for up to 24 hours.
Gastro Tract Brush samples including bile duct brushes		• Place brush into clean screw capped container with CytoRich® Red preservative fluid. Ensure brush is fully immersed in preservative • The time of this fixation should be indicated on the label of the container • DO NOT USE FORMALIN FIXATIVE • Please note: When the stock of CytoRich® Red preservative fluid is running low or close to its expiry date, please contact the cytology department on 276 5110/5115 for replacement of stock.

Bronchial Brushings		• Place brush into clean screw capped container with CytoRich® Red preservative fluid. Ensure brush is fully immersed in preservative • The time of this fixation should be indicated on the label of the container. • DO NOT USE FORMALIN FIXATIVE • Please note: When the stock of CytoRich® Red preservative fluid is running low or close to its expiry date, please contact the cytology department on 276 5110/5115 (Oxford Road) or 0161 291 2156 (Wythenshawe) for replacement of stock.
Bronchial Trap/Wash		• Fresh specimen should be placed in a clean dry container and an equal volume of CytoRich® Red preservative fluid added immediately for fixation • The time of this fixation should be indicated on the label of the container • If CytoRich® Red preservative fluid is not available, fresh specimen should be placed in clean dry container. Delay in receipt of unfixed samples can lead to deterioration of specimen • If differential cell count is required, split the sample and send half unfixed and the other half fixed in CytoRich®. • **Send unfixed samples on ICE and received by the laboratory before 3.30pm**
Bronchoalveolar Lavage		• Fresh specimen should be placed in a clean dry container and an equal volume of CytoRich® Red preservative fluid added immediately for fixation • The time of this fixation should be indicated on the label of the container • If CytoRich® Red preservative fluid is not available, fresh specimen should be placed in clean dry container. Delay in receipt of unfixed samples can lead to deterioration of specimen If differential cell count is required, split the sample and send half unfixed and the other half fixed in CytoRich®. **Send unfixed samples on ICE and received by the laboratory before 3.30pm**

Fine Needle Aspirations	 	• Standard disposable 23-25 gauge needles. A 25 gauge (orange) needle is suitable for most lesions • Disposable 10 ml plastic syringes • Clean container with tight lid (preferably universal) containing CytoRich® Red preservative fluid • Standard microscopic glass slides onto which aspirate is to be spread. **See Sections 7.13, 7.14 and 7.15 for guidance**
Buccal smears (Wythenshawe site)	 Slide box	• 4 fixed smear slides • Alcohol spray fixative is available from the laboratory
Tongue smears (Wythenshawe site)	 Slide box	• 1 fixed smear slide • Alcohol spray fixative is available from the laboratory

For sample turnaround times – please see section 12.2.

Please note: When the stock of CytoRich® Red preservative fluid is running low or close to its expiry date, please contact the cytology department on 276 5110/5115 (Oxford Road) or 0161 291 2156 (Wythenshawe) for replacement of stock.

7.1 Fine needle aspiration cytology samples (7.2.2)

The Diagnostic Cytopathology department at the Oxford Road (ORC) site provides biomedical scientist (BMS) assistance at fine needle aspiration cytology (FNAC) clinics to prepare direct spreads and needle rinses.

Please note the BMS staff do not perform the aspirations.
We do provide BMS on site rapid specimen adequacy assessment at Head and Neck clinics, including thyroid, every Tuesday and Thursday afternoons at MFT (ORC). We also provide adequacy at the Ultrasound clinic in Radiology (ORC) on Wednesday mornings.

At the Christie Hospital NHS Foundation Trust, the BMS provides FNA assistance and on site specimen adequacy assessment of all types of FNA samples. The staff in the laboratory will be pleased to advise and assist on any aspect of sample collection. Please contact the department at:

- Cytology Department (ORC site), Monday to Friday between 08:00 hrs and 17:00 hrs on 0161 276 5110/5115/5116. We may also be contacted by bleep on 07623916611
- Please note calls must be received by 16:15 hrs for FNA attendance.

****BMS attendance at The Christie Hospital has been suspended till further notice****

In the absence of Cytology staff assistance, a diagrammatical guide to performing aspirations and making spreads is shown below**.**
Please also see our series of short videos on the Cytology homepage or via the link mft.nhs.uk/laboratorymedicine

- Christie hospital FNA clinics:
  - Monday, Wednesday, Thursday, Friday 09:00 hrs to 12:30 hrs
  - Tuesday 09:00 hrs to 16:30 hrs

Contact: 0161 276 5110
It is recommended that the support of a BMS be utilised for optimal sample preparation

7.2 Use of fine needle aspiration (7.2.2, 7.2.4)

- Patients presenting with palpable lesions in clinics (ENT, maxillofacial), outpatients and wards.
- Deep seated lesions sampled by radiologically guided techniques (Ultra Sound, CT)
- Endoscopic, endobronchial and transbronchial guided specimens

7.3 Equipment required for fine needle aspiration (7.2.2, 7.2.4)

- Standard disposable 23-25 gauge needles. A 25 gauge (orange) needle is suitable for most lesions
- Disposable 10 ml plastic syringes
- Clean container with tight lid (preferably universal) containing CytoRich® Red preservative fluid
- Standard microscopic glass slides onto which aspirate is to be spread.

7.4 Performing a fine needle aspiration (7.2.2, 7.2.4, 7.2.2.4)

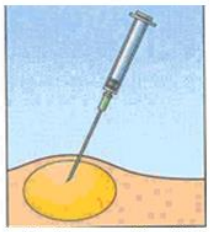
The Diagnostic Cytopathology department in collaboration with the Christie Hospital NHS Foundation Trust has produced a series of short videos demonstrating the techniques of performing FNAs and making direct spreads. Please see our home page for these videos or follow the link
mft.nhs.uk/laboratorymedicine

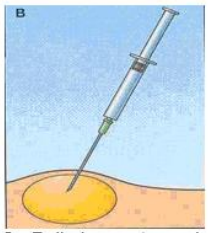
If you are unable to open the videos, please see diagrammatic representation of the above below.

7.5 How to perform a fine needle aspiration (7.2.2, 7.2.4, 7.2.2.4)

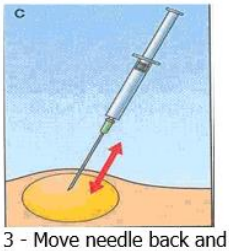
Figure taken from Fine Needle Aspiration. (2005), 4th Edition. S. Oreell; G.F. Sterrett; and D. Whittaker. Elsevier
Churchill Livingstone.

- Disinfect skin using pre-packed alcohol swabs.
- Before insertion of needle wipe away any excess ultrasound jelly with tissue paper (if U/S guided)
- Perform the aspiration according to the instructions 1 to 6

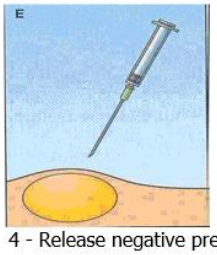

1 -Position needle within target tissue pressure



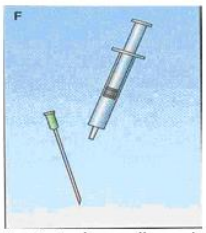
2 - Pull plunger to apply negative



3 - Move needle back and forth inside target and withdraw needle



4 - Release negative pressure



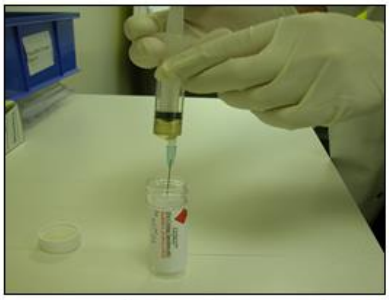
5 - Detach needle and draw air into syringe microscope slide

6 - Push a drop of sample onto

7.6 Making spreads from fine needle aspiration (7.2.2)

The ideal FNA sample is prepared as follows:

- Even monolayer spreads onto glass slides for **air-dried** 'direct spreads'
- Needle to be rinsed in CytoRich® Red preservative fluid
- 4 passes are recommended for each case with spreads made on pass 1 and 3
- **If Tuberculosis is suspected, please also send an aspirate to microbiology in a sterile container.**



Step 1: Having expelled a small drop of the aspirate onto a glass slide (step G above), place a clean slide (spreader) above the drop and spread gently but swiftly. Leave to air dry.

Step 2: Rinse the remaining material from the needle into the CytoRich® Red preservative fluid by repeated aspiration and expelling of the said CytoRich® Red preservative fluid

Step 3: Label container containing CytoRich® Red preservative fluid according to specimen acceptance policy (see 5.1) and use a pencil to label slide.

Step 4: Complete request form, package sample (see 5.4) and send to Cytology Department, Clinical Sciences Building 2, MRI

7.7 Endobronchial ultrasound guided aspirate specimens (EBUS) (7.2.2)

These should be delivered to the department as soon as possible so that preparation of the samples can be undertaken. It is appreciated that reports are wanted on these specimens in a timely fashion for MDT discussion.

7.8 Joint Fluids (7.2.2)

Joint Fluids should be sent to Diagnostic Cytology at Oxford Road site for reporting. The contact details are

Jacquelyn Medlock Jacquelyn.Medlock@mft.nhs.uk Cytology Manager Rosebina Zafar Rosebina.zafar@mft.nhs.uk Lead Biomedical Scientist Diagnostic Cytopathology	Manchester Cytology Centre Clinical Science Building 2 Manchester Royal Infirmary Oxford Road Manchester M13 9WL	Tel 0161 276 5119

7.9 Cervical Cytology (7.2.2)

Cervical cytology is sent to the Oxford Road site for reporting. The contact details are:

Jacquelyn Medlock Jacquelyn.Medlock@mft.nhs.uk Cytology Manager Adanna Ehirim Adanna.Ehirim@mft.nhs.uk Lead BMS Cytopathology	Manchester Cytology Centre Clinical Science Building 2 Manchester Royal Infirmary Oxford Road Manchester M13 9WL	Tel: 0161 276 5119 Fax: 0161 276 5113

8. Immunohistochemistry (7.2.2)

There are two Immunohistochemistry laboratories that support the Diagnostic Cytopathology services. One is situated on the ground floor of the Clinical Sciences Building at Wythenshawe and the other is within the Adult Histology laboratory, Clinical Sciences Building first floor at Oxford Road.

We currently house automated Ventana BenchMark Ultra staining machines which we use to carry out our routine clinical work. We currently hold a repertoire of over 90 antibodies, listed on our Antibody Repertoire List and are enrolled in the UKNEQAS ICC quality assurance scheme.
Any clinician wishing to request specific immunohistochemistry antibody markers should discuss this with the reporting pathologist. It is not appropriate to contact the laboratory directly to request IHC.

9 Specialised testing (5.4.2 d)

The laboratory performs the following specialised tests for patients accessing Cytopathology services at MFT as well as referral tests for hospitals within Greater Manchester and wider regions;

- PD-L1 (lung cancer)
- ALK (lung cancer)

Our full scope of UKAS accredited tests can be found on the UKAS website – accreditation licence number 8648.

10 Referrals (6.8.2)

As referenced in section 6.4, the laboratory on occasion refers material (paraffin embedded blocks or stained slides) to the Manchester Haematological Cancers Diagnostic Partnership. This is a joint partnership between Manchester Foundation Trust and the Christie Hospital for confirmation and classification of lymphomas and to the Christie Hospital for opinion and / or confirmation of pathology in a small number of cases.

Material may also be referred to St. Marys Genetics department for Genetic / molecular testing which quotes a 10-day turnaround time for results. This includes EGFR, BRAF and KRAS.

The department regularly receives requests for expert/second opinion from other hospitals. A very small number of cases are referred to other Specialist Cytopathologists / Histopathologists for expert second opinion or review and in response to service pressures. The following are the most used:

Type	Address
Lymphomas	Via the HCD partnership with The Christie.
Reporting/Vacancy cover	Source Bioscience, 1 Orchard Place, Business Park, Nottingham, NG8 6PX
Reporting/Vacancy cover	Diagnexia, Science Park Centre, 6 Babbage Way, Exeter Science Park, Clyst Honiton, Exeter, EX5 2FN
Preparation of samples	Cellular Pathology Services, Unit 12, Orbital 25 Business Park, Dwight Road, Watford, WD18 9DA
Genetics	Manchester Centre for Genetic Medicine 6th Floor, St Mary's Hospital, Oxford Road, Manchester M13 9WL

11 Manchester Cancer Research Centre Tissue Bank (7.4.2)

The Homepage - Manchester Cancer Research Centre is an initiative to collect and bank tissue samples from cancers to facilitate research. The project started collecting in April 2008. To contact the team please ring 0161 446 3659 or click on the hyperlink above.

12 Communication of Results

12.1 Reports (7.2.2, 7.4.1,)

All reports issued by the department are available on the relevant Trusts' electronic systems. This will be EPIC HIVE Electronic Patient Record at Manchester University NHS Foundation Trust sites and Lorenzo within Tameside. For primary care, paper reports are distributed to the GP practice systems.

Paper reports are still sent to the users at Tameside, Christie and some GP practices. Tameside reports, including those for the Tameside GP practices, are transported back to the Pathology Department at Tameside site using the twice daily transport. They are then distributed as required from Tameside Pathology. Paper reports for GP practices within the Greater Manchester catchment area are sent via second class post.

Users are requested to check if final reports are available on the patient chart in HIVE before making enquiries. Please note that clerical staff will not give report details over the telephone.

12.2 Turnaround Times (7.2.2)

The Diagnostic Cytology service aims to report all specimens in accordance with NHSE Faster Diagnosis Standard (FDS) by March 2025
https://www.england.nhs.uk/wp-content/uploads/2023/08/PRN00654-national-cancer-waiting-times-monitoring-dataset-guidance-v12.pdf

Existing turnaround times guided by the Royal College of Pathologists are:

80% of cases are to be reported within seven calendar days of sample being taken whilst 90% are to be reported within ten calendar days – www.rcpath.org. TAT relates to the final local report and excludes cases sent for external opinion and those that require molecular biology analysis. The department is required to publish monthly audit reports and this information is available on request.

Reporting times for all specimens, including urgent and HSC205, may be extended if they are high risk specimens. Any case requiring specialist techniques such as immunohistochemistry will also likely have extended reporting times. Some cases may require referral to a specialist referral centre, which can prolong reporting times. This would include samples such as lymphomas, which are routinely referred to the Christie via the Haematological Cancer Diagnostics Service. However, a preliminary report would be issued beforehand.

To ensure we meet our turnaround time targets, all urgent and HSC205 specimens must be clearly labelled as such. There are several factors that may affect the turnaround time of a specimen, such as those mentioned in 6.1 Factors Affecting Performance.

13 Enquiries and Complaints (7.7)

To enable us to deal with enquiries efficiently, please ensure you use the correct contact information, as detailed in section 2 (Contact us).

13.1 Errors and complaints (7.5, 7.7)

The department is committed to fully investigating all complaints regarding the standard and quality of services that we offer. Please contact our laboratory manager/Lead BMS for the appropriate site according to information below.

Laboratory Manager		
Laboratory Manager (Wythenshawe) role is vacant. Lead Biomedical Scientist Wythenshawe Catherine McNulty	0161 291 4804	Catherine.mcnulty@mft.nhs.uk
Laboratory Manager (Oxford Road) Jacquelyn Medlock	0161 276 5120	Jacquelyn.medlock@mft.nhs.uk