

Department of Histopathology

Handbook

Date of Issue – 15th April 2019

Review Interval	Every 2 years
Author	Sandra martin
Location of Copies	Ipassport Walsall Healthcare Intranet

Document Review History

Reviewed by	Date	Signed	Next review date
Created	14/06/2010	KH	01/09/2011
Kerry Hadley	06/06/2012	KH	06/06/2014
Gena Cooke	29/08/2014	CC	29/08/2016
Sandra Martin	10/08/2017	SM - online	10/08/2019
Ipassport	30/11/2015	GR	29/08/2016
Sarah Brown	05/11/2017	SB	10/08/2019
Sandra Martin	15/04/2019	SM – V3	15/04/2021

This document is found online on the Walsall Healthcare intranet page.

Contents

Contents	3
1.0 INTRODUCTION	4
2.0 GENERAL INFORMATION.....	6
2.1 Contacts	6
2.2 Location.....	7
2.3 Services Offered by the Laboratory.....	8
2.4 Working Hours	8
Out of Hours Service	8
2.5 Completion of Request Forms	8
2.6 Transport of Specimens to the Laboratory	9
2.7 Availability of Clinical Advice and Interpretation.....	9
2.8 Referred Work.....	9
2.9 Provision of Request Forms, Specimen Containers and their Envelopes and Formalin	9
3.0 HISTOPATHOLOGY SPECIMENS	11
3.1 Handling of Specimens	11
3.2 Procedures requiring special handling include:	12
3.3 Rejection of Specimens.....	13
3.4 What happens to a specimen?.....	14
3.5 Processing of histology samples	14
3.6 Urgent Specimens	15
3.7 Frozen Sections.....	15
3.8 Turnaround Times	15
3.9 Additional Tests.....	16
3.10 Referral Laboratories	16
3.11 Reports.....	16
4.0 SEMEN ANALYSIS: Information for doctors and patients.....	17
4.1 Semen Analysis for Infertility Investigations	17
4.2 Semen Analysis for Post Vasectomy Investigations	18
5.0 NON GYNAECOLOGICAL (DIAGNOSTIC) CYTOLOGY.....	19
Handling.....	19
Policy for rejection of specimens	19
Types of Cytological Investigation	20
Respiratory Tract Cytology.....	21
Urinary Tract Cytology	22
Effusion Cytology	22
Fine Needle Aspirate Cytology.....	23
Breast Cytology.....	23
Cerebrospinal Fluid.....	23

1.0 INTRODUCTION

Welcome to the Black Country Pathology Service Histopathology department supporting Walsall Healthcare trust based at Walsall Manor Hospital. This handbook contains information for both medical staff and patients.

The Histopathology department based at the Manor Hospital includes services for Histology, Semen Andrology and Non-Gynaecological Cytology. The department currently holds UKAS accreditation (against ISO15189:2012). The department runs a comprehensive quality management system, participating in all relevant national quality assurance schemes, operates a schedule of internal quality audit, correct action and quality improvement.

The laboratory is recognised for training by the Health and Care Professions Council, the Royal College of Pathologists and the Institute of Biomedical Scientists. The laboratory complies with comprehensive health and safety procedures and control of substances hazardous to health (COSHH). To assess our compliance to our users' needs we welcome any and all user feedback, user suggestions and take any and all complaints very seriously.

The department's current workload is approximately 13,500 histology and 1,500 non-gynaecological cytology requests. All surgical pathology and non-gynaecological cytology originating from the Manor are dealt with on site; we also receive specimens from the local GP surgeries.

This handbook has been prepared with an intention to help you and us in providing the best service possible. We encourage the medical staff to have discussions with the Consultant Histopathologists and an advisory service provided by them, is available, at any time. The Department is keen to undertake research with the medical staff, but plans for this should always be discussed in advance with the Consultant Histopathologists.

The Histopathology department works to the Walsall Healthcare NHS Trust "Administration of the Data Protection Act" policy to ensure the protection of personal information, and handles complaints as per the "Management of Complaints and Concerns" policy.

The department is willing to undertake training of user of the service users in the use of the Histopathology Service. If you wish the Consultant Histopathologists to present and/or contribute (show slides) in the clinical meetings, please make sure that you contact the relevant person, at least 48 hours before the day of the meeting. The department fully engages with the MDT schedule.

We participate in departmental and interdepartmental audit sessions regularly. If you wish to undertake a joint audit topic, please discuss it first with the Consultant Histopathologist.

The Histopathology department works to the Walsall Healthcare NHS Trust "Administration of the Data Protection Act" policy to ensure the protection of personal information, and handles complaints as per the "Management of Complaints and Concerns" policy.

If laboratory errors are noted or the medical staffs have any queries about the service, please contact the Consultants or the senior laboratory staff (see contacts list).

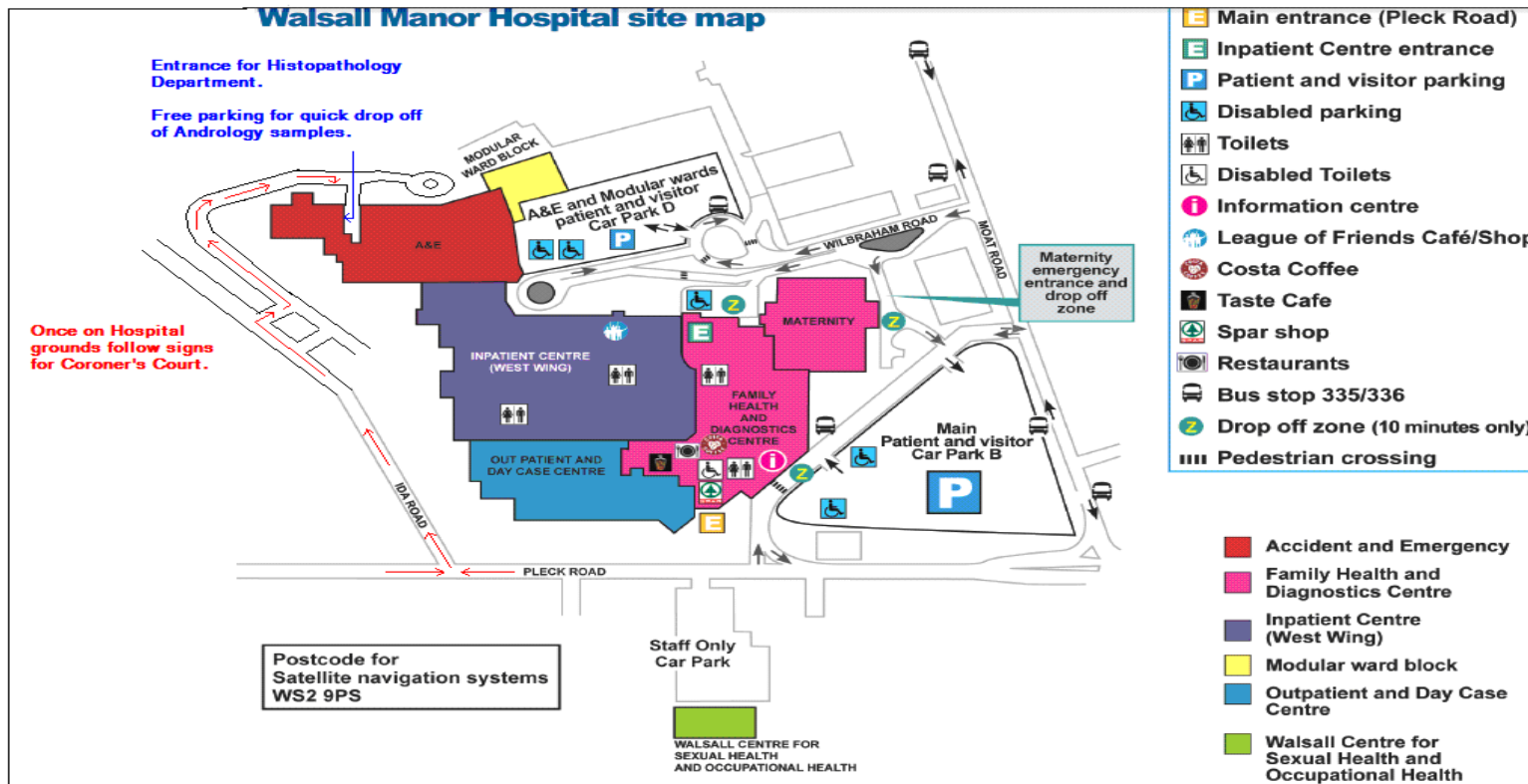
2.0 GENERAL INFORMATION

2.1 Contacts

CONTACT NUMBERS		
Consultant Histopathologist & speciality Doctor	Dr Maria Ahmad	7625
	Dr S Deshpande	7169
	Dr I Dhesi	6235
	Dr Racheal Howe	6411
Head BMS Histology	Sarah Brown	7126
Deputy Head BMS Quality Lead	Alexandra Martin	7206
Section Manager Andrology	Sarah Brown	7126
Section Manager Main Lab & Health & Safety Officer	Amanda Stewart	6477
Section Lead Non-Gynae Cytology	Amy Bednall	6477
Acting Section Lead Immunohistochemistry	Kavita Bhanot	6477
Acting Section Lead Specimen Dissection	Ben Stokes	6477
Report Enquiries - Histology & Non-Gynae Cytology		6871
Requesting urgent work or frozen sections		6477
Semen Andrology Appointments		6923 / 7622 / 7409 / 6871
Mr Ganta (Andrology lead for interpretive advice)		6038 / 7954
Secretariat		0192265 followed by Ext. 6923 / 7622 / 7409 / 6871
Main Laboratory		6477
Specimen Reception		6799

2.2 Location

The Histopathology Department is located at the rear of the hospital adjacent to the Coroners Court.



Staff:

Staff can access the department via distribution and estates and take the stairs to the first floor.

Patients:

Enter the hospital grounds via the Ida Road entrance, turn to your left and follow the road up a slight incline and round to the right. The Histopathology department is the building on your right.

2.3 Services Offered by the Laboratory

The department consists of:

- Histology (see Section 3)
- Semen Andrology testing for:
 - Infertility studies (see Section 4)
 - Post Vasectomy Studies (see Section 4)
- Non Gynaecological Cytology (see Section 5)

2.4 Working Hours

Monday to Friday 8.30am - 5.00pm

Out of Hours Service

There is no provision for out-of-hours service for routine reports, and there is no provision for a stand-by On-call Histology BMS. If an emergency arises the ON-CALL CONSULTANT PATHOLOGIST can be contacted directly through the hospital switchboard.

2.5 Completion of Request Forms

It is the responsibility of the requesting clinician or source to complete the request form fully. Please ensure all request forms meet the minimum data set of 3 unique patient identifiers, the source/requester information, specimen details and other clinically relevant information as detailed below:

- Name (Forename, Surname)
- Patient's DOB
- Hospital Number
- NHS number
- Identification and location of requestor/source
- Date and time specimen was collected
- The type of specimen and, where appropriate, the anatomical site of origin
- Relevant clinical information

Specimens must be correctly labelled and accompanied by a fully completed form, in accordance with the Pathology Specimen Labelling Policy

Due to medico-legal considerations, all unlabeled or mislabeled specimens will require identification and verification prior to processing. The same applies to specimens arriving with no form, a mislabeled form or insufficient data.

2.6 Transport of Specimens to the Laboratory

All histology specimens should be received in formalin, with the exception of placental material (unfixed), tissues for Immunofluorescence (Michelle's Medium) and frozen section (unfixed) where the case should be discussed with the laboratory before leaving theatres.

Surgical and non-gynaecological specimens will be collected and delivered to the Histopathology Department by the portering service.

These collections and deliveries are made at the following sites and times:

Hourly collection round Monday - Friday from 8:00am to 3.30pm (Saturdays 8.00am and 12:00pm)

Main Pathology, A&E, AMU, West Wing Theatres, West Wing blood bank, ITU, New Theatres, Maternity/Neonatal, Imaging, Endoscopy, Breast clinic, GOPD and OPD

2.7 Availability of Clinical Advice and Interpretation

The provision of interpretive comments on reports is an essential role of the Histopathology service. As such, we encourage the medical staff to have discussions with the Consultant Histopathologists and this advisory service provided by them, is available, at any time. See [Section 2.1 for contact details](#).

2.8 Referred Work

There may be cases which will require a second opinion from a specialist from another hospital. Details including names and addresses of laboratories where work is referred is available from the head BMS.

2.9 Provision of Request Forms, Specimen Containers and their Envelopes and Formalin

a. Request forms and envelopes for specimen containers

Histology and Non Gynae request forms for all wards, theatres and clinics should be ordered from stores. These should be used for all histology and non-gynae investigations.

Semen Andrology patient packs are requested from the Histopathology secretariat when the patient is booking an appointment

b. Obtaining specimen containers for wards, theatres and clinics

For theatres, the empty, labelled buckets and jars are available on request from ext. 6480.

For clinics and wards small labelled specimen pots containing formalin are available on request from ext.6480.

c. Selecting specimen containers for specific tests

Any cases requiring special handling or collection procedures peculiar to that case, for example, renal or muscle biopsy should be discussed with a Histopathologist prior to that procedure taking place.

d. Ordering Formalin

Please contact Histology (ext. 6477) for formalin orders. Standing orders are not appropriate due to fluctuating demands so therefore each individual department should review the stocks they need and order formalin in preparation for clinics/lists.

3.0 HISTOPATHOLOGY SPECIMENS

3.1 Handling of Specimens

Adequately fixed tissue is vital in the interpretation of histopathology. All histology specimens should be placed in a suitable container as soon as possible, after being obtained. The container should be correctly labelled with patient's name, unit number, date of birth, and source. The specimens should be placed in large enough containers to hold the specimen and approximately 10 times its volume of 10% buffered formalin.

Although the majority of specimens can be placed in formalin provided by the Histology department, some biopsies will require a different fixative or no fixative at all, and the advice of the laboratory should be sought beforehand to ensure that a Pathologist is available to deal with the specimen on arrival. Such specimens include:

- Skin biopsies for Immunofluorescence
- Frozen sections
- Potential cases of special interest

All cases of exceptions to the general rule of using formalin must be brought to Histopathology directly. On no account should they be left in the Pathology Laboratory reception, theatres or in the wards.

When biopsies are to be cultured, only part of the specimen should be placed in formalin, and part should be sent dry, in a sterile container, to the Microbiology Department with a separate request form. If this is not possible, contact the Histology Laboratory before sending the whole specimen, dry, to us with the Microbiology and Histology request forms. It is the responsibility of the doctors concerned with the case that this procedure is followed.

Specimens should not be cut into or partially opened, since such specimens distort badly on fixation, and are then very difficult to examine adequately.

If any case requires an urgent report on a paraffin section then the specimen should be brought directly to the Histology Department and the doctor concerned should contact the Pathologist and write 'urgent' on the request form.

3.2 Procedures requiring special handling include:

a. Electron microscopy and renal biopsies

The Clinician should contact the Consultant Histopathologist if this service is needed, otherwise specimens will be sent to Russell's Hall Hospital, Dudley, only at the Pathologists discretion.

b. Muscle or nerve biopsies

Prior arrangement is needed with the Histopathology Department at the Midland Centre for Neurosurgery at University Hospitals Birmingham.

They need to be contacted by the Clinicians to make appropriate arrangements for the collection of the biopsy and the request for any appropriate containers and reagents that may need to be provided from this Centre.

On no account should any specimen be left overnight in the ward or theatre refrigerators.

c. Cytogenetics

This type of specimen should not be sent to Histology.

It is the responsibility of the Clinician in charge of the patient to make arrangements with the Regional Cytogenetics department at Heartlands Hospital as to their requirements and to pack the specimen appropriately.

The requesting Clinician must also make arrangements for transport of the specimen either via the routine taxi service operated from Pathology reception or by booking a specific taxi request through the General Office.

Tissue samples should be placed in saline and kept at 4°C if transport is delayed. Formalin must NOT be used at any time. Specimens will not be accepted by Cytogenetics between 4.00pm Friday and 9.00am Monday. For further details see Cytogenetics policy circulated to all Medical staff in the Obstetrics and Gynaecology department.

Cytogenetic specimens collected in theatre should be sent to the ward with the patient for the ward to dispatch.

3.3 Rejection of Specimens

Rejection of specimens is covered by 2 categories:

a. Unacceptable

No specimen will be accepted by the laboratory if:

- The specimen is unlabelled
- The request form is not completed
- Any specimen arrives without a request form
- Any request form arrives without a specimen
- Any specimen with miss-matched details on request form and specimen container.
- Any infective specimens arriving in a broken container
- Any known infectious specimens arriving without appropriate hazard labelling and packaging.
- Any combination of the above

All of the above specimens will be returned directly to their source for completion/verification of missing details. If the source is unknown, the specimen will remain in the Histology Department but no further action will be taken until appropriate details are completed by telephone call or personal visit from the Clinician/House Officer.

b. Partially Accepted

This category includes any specimen on which some of the necessary details are missing.

The minimum level for acceptance in this category will be the provision of:

- unit number
- patient's name
- DOB
- Consultant.

If the remaining details can be completed by a telephone call to theatre, clinician etc., the specimen can then be fully accepted and dealt with accordingly.

It is essential that all patient details are completed on the request form, or a pre-printed label should be attached.

It is important that:

- The signature of the doctor making the request is legible so that he or she can be contacted for further details or for urgent communication.
- The details on the form and specimen are the same since discrepancies will cause delays.
- The ward or department given is the place to which the report will be sent, so if the pre-printed label is incorrect, it should be altered.
- The Consultants name should also be given for all in-patient and outpatient request forms.

- The details of 'nature of specimen and site' should be completed on the histology form and as much clinical detail as possible must be given. In case of certain biopsies for example, liver biopsy - details of LFT investigation results, drugs and any other relevant past history and investigations should be written on the form. In particular we would like to know your provisional diagnosis, any other relevant diseases, previous operations, radiation, drug or hormone therapy and for female patients, date of LMP and normal menstrual cycle. We also need the slide reference numbers of all relevant previous biopsies or cytological specimens.

General Practitioners making requests must ensure that the form includes:

- their name
- practice number
- address
- telephone number

All pathology specimens should be treated as irreplaceable, therefore proper labelling and handling of specimens is essential. If we receive full information on the request forms, the reporting is quicker and time is not wasted in trying to contact the relevant doctor.

3.4 What happens to a specimen?

Histological specimens are usually placed into a fixative solution of 10% buffered formalin immediately after excision. Large specimens are fixed for a minimum of 12 hours before being examined by a pathologist. The pathologist records the macroscopic appearance and for large specimens selects the pieces to be processed. For small biopsies the entire specimen is processed. The tissue is processed overnight. The next day wax blocks are prepared and slides cut and stained for the pathologist to report.

3.5 Processing of histology samples

Tissue processing takes hours before sections are available. Please allow adequate time for processing and examination before enquiring on report progress.

Tissue from specimens are selected and processed overnight or over the weekend, in readiness for reporting the next working day. Delays in reports may be expected if extra fixing, special techniques or procedures or re-sampling is needed. For example,

- Large specimens like bowel or breast will need at least 24 - 48 hours fixing.
- Special staining techniques are needed for liver, lymph nodes, lungs, kidneys and tumour biopsies.
- Decalcification of bone or other calcified tissue can take several days.

In such cases it may be possible to issue an interim report.

Report details are kept on computer files and the Data Protection Act requires those to be accurate.

3.6 Urgent Specimens

If the request form has Consultant's name clearly written and the urgent specimen reaches the laboratory by 4.00pm, then a report will be given (by the Consultant Histopathologist) the following day to the requesting Consultant directly. Note that very few specimens are truly urgent.

3.7 Frozen Sections

The department has currently suspended its frozen section service

For routine lists please give the laboratory 24-48 hours advance warning by telephoning patient details, nature of biopsy, surgeon, ward and time of operation.

- Phone details to extension 6477 or directly to the Consultant Histopathologists at extension 7625/7169/6235/6411.
- A provisional booking, with subsequent confirmation is preferable to inadequate notice.
- Inform the laboratory if requests are cancelled.

If the need for a frozen section arises unexpectedly, the request will be accommodated if possible.

The specimen should be sent dry and handed directly to a member of the technical or medical staff of the Histology Department. It should be accompanied by a correctly completed request form including the telephone number of the theatre to be contacted.

A rapid verbal report will be given on the frozen section and a typed report on a paraffin section of the tissue will normally follow within 48 hours.

On no account should known / suspected infected material with Hazard Group 3 or 4 pathogens, i.e., TB, Hepatitis B positive etc., material be sent for frozen section. (A 24 hour service is available for urgent cases).

3.8 Turnaround Times

The department is continually working to improve on turnaround times of specimens and works towards achieving current NHSi guidelines.

Diagnoses are usually made on sections stained by routine techniques, but not infrequently cases require more sophisticated and extensive studies. The Department can offer a wide range of immunohistochemical methods either in-house or at chosen referral laboratories.

Departmental turnaround times

Histology Timelines		
<i>Indicator</i>	<i>Benchmark</i>	<i>Current</i>
The proportion of clinically relevant tests agreed between the requestor and provider as 'urgent' reported within locally agreed turn-around times (from 'receipt of sample' to 'arrival of result at the requestor'). - Urgents reported in 10 calendar days	> 95%	
The proportion of diagnostic histopathology cases requested for the investigation of cancer that are reported within 10 calendar days of the procedure taking place.	> 90%	
The proportion of diagnostic Non-Gynae cytology cases requested for the investigation of cancer that are reported within 7 calendar days of the procedure taking place.	> 90%	
The number of results / reports not available within 42 calendar days of request	0	

3.9 Additional Tests

All specimens are kept for approximately 28 day following authorisation. Blocks and slides are kept for a minimum of 30 years should additional testing be required. Any additional tests must be arranged through direct contact with the reporting Consultant.

3.10 Referral Laboratories

The choice of referral for a second clinical opinion is the decision of the reporting Consultant although many will be guided by regional agreement. A list of referral laboratories is maintained within the department and quality performance of the laboratories is reviewed annually. A list is available from the Head BMS on request.

3.11 Reports

Reports are generated via the Secretariat and are dispatched to the sender source. If further copies are required please indicate on the request form. Usually once a report is authorised in Histopathology it can be looked at on Fusion and or a paper copy will be sent out to the clinician. Verbal reports shall only be given if the report is authorised and to the requesting clinician. Unauthorised reports shall not be given by laboratory staff and the case should be discussed with the reporting pathologist.

4.0 SEMEN ANALYSIS: Information for doctors and patients

The department undertakes analysis of semen for Infertility studies and Post Vasectomy studies. We are an appointment only service, appointments and patient packs are available by

- **Telephoning the Histology department on 01922 656871.**
- **The department also has a strict specimen acceptance procedure**
- There is a map to show how to get to the department on the reverse of the patient leaflet included in the patient pack sent on booking an appointment.
- Samples will be examined on receipt, and again the following day. This report will be issued directly to the requesting Doctor / Consultant.
- **The Laboratory staff cannot give out results directly to patients.**

4.1 Semen Analysis for Infertility Investigations

- The specimen must be produced by masturbation and collected in the pot provided by the department. Do not use a condom as they contain spermicide.
- The sample will require an abstinence period of 2-7days. Any samples collected before this time may show immature sperm and any samples after this may show a lot of dead sperm.
- The sample should be delivered to the hospital within one hour of production. (Seminal fluid specimens which arrive later will be rejected and another appointment made).
- Please make sure that you label the specimen container with your name and the date and time of collection.
- This sample must be kept warm, either in an inside pocket or against the skin, as a drop in temperature could kill sperm.
- You must bring with you the andrology request form which you were given by your doctor / consultant. Please ensure that the forms are correctly filled out with:
 - your details
 - your partners details
 - the requesting Doctors name
 - Answer all the questions regarding collection of the sample.
- The sample must be received by a member of the Histopathology department.
- On arrival to the department, you will be asked what time the sample was produced. This is to make sure the testing of the sample is optimal.

If the sample is poor, or has a low sperm count, we will ask for at least one further sample, but you will be notified about this.

4.2 Semen Analysis for Post Vasectomy Investigations

Specimen Requirements

- The sample should be collected 16 weeks following the vasectomy.
- There should have been at least 24 ejaculations before the sample is submitted for examination. This should reduce the number of false positives and minimise repeat examinations.
- The specimen must be produced by masturbation and collected in the pot provided by the department. Do not use a condom as they contain spermicide.
- The sample will require an abstinence period of 2-7days.
- The sample should be delivered to the hospital within one hour of production. (Seminal fluid specimens which arrive later will be rejected and another appointment made).
- Please make sure that you label the specimen container with your name and the date and time of collection.
- The sample must be kept warm, either in an inside pocket or against the skin, as a drop in temperature could kill any viable sperm still present.
- You must bring with you the andrology request form which you were given by your doctor / consultant. Please ensure that the forms are correctly filled out with:
 - your details
 - the requesting Doctors name
 - Answer all the questions regarding collection of the sample.
- The sample must be received by a member of the Histopathology department.
- On arrival to the department, you will be asked what time the sample was produced. This is to make sure the testing of the sample is optimal.

The Histology staff cannot give out results directly to patients.

You will need to provide 2 samples, week 16 and week 20.

Use contraception until you have had 2 negative results from consecutive specimens of semen.

Your GP/Consultant will advise you of your results and if you need to produce further samples.

5.0 NON GYNAECOLOGICAL (DIAGNOSTIC) CYTOLOGY

Non-gynaecological examination of body fluids, urine and sputum are provided on-site as a routine service. Fine needle aspiration cytology is available routinely but examination of 'unusual' sites should only be undertaken after discussion with the Consultant Histopathologist.

Handling

The container should be labelled correctly with:

- patients name
- unit number
- date of birth
- Name and location of requesting clinician

The specimen must be received in the appropriate container or fixative. It should be obtained using the correct procedures and an adequate amount of material sent analysis. The sample must be sent to the laboratory as soon as possible after production. Cell morphology deteriorates with time. (See detailed description of each specimen for requirements for a good sample and type of fixative used). All infected specimens should be labelled with 'danger of infection' labels.

Policy for rejection of specimens

Specimens to be rejected immediately on receipt:

- Unlabelled specimens.
- Specimens labelled with patient details different to those on the accompanying request form
- Specimens received without a request form
- Specimens received in the wrong fixative
- Insufficient amount of specimen for the test required.

Specimens to be rejected after preparation:

A report of 'Inadequate' will be issued if after preparation smears show:

Insufficient cells

- Cells not appropriate to the type of specimen received
- Cells obscured by extraneous material.

Request forms

Histology request forms should be used for all cytology investigations.

Full details must be entered on to the request form. The remarks made in respect of histology request forms also apply. Clinical details, date and time the sample is taken should also be written on the request forms. If an urgent report is needed this should be stated. The protocol of reporting urgent specimens will

be similar to the histology 'urgent' reporting. Specimens and request forms should each be placed in the correct portion of plastic specimen bags.

Reporting of non-gynaecological specimens

Reports on all cytological specimens may be delayed for a further one or two days if special staining methods or immunocytochemical techniques are used to aid in differential diagnosis.

Types of Cytological Investigation

- Respiratory Tract Cytology
- Sputum
- Bronchial washings
- Bronchoalveolar lavage
- Bronchial brush smears
- Biliary brush smears
- Percutaneous lung F.N.A.s
- Urinary Tract Cytology
- Voided urine
- Catheterised urine
- Serous Effusion Cytology
- Pleural fluid
- Peritoneal fluid
- Peritoneal washing
- Pericardial fluid
- Cyst fluid
- Synovial fluid
- Fine Needle Aspirate Cytology
- Lymph node aspirates
- Salivary gland aspirates
- Thyroid aspirates
- Aspirates from any other site
- Breast Cytology
- Nipple discharge
- Cyst fluid
- Fine needle aspirates
- C.N.S. Cytology
- C.S.F.
- Cytology of the Female Genital Tract
- Vaginal samples
- Vault samples

Respiratory Tract Cytology

Sputum

Requirements for a good sample:

- An early morning specimen before teeth are cleaned or food is taken.
- A deep cough specimen - Saliva will be reported as 'inadequate'.
- The specimen should be produced directly into a sterile plastic, screw cap container.
- Specimens should be produced on 3 consecutive days. Separate specimens should be sent if cytological tests and microbiological tests are required, if possible (this prevents time delays and an unsuitable procedure being applied to the specimen for the test required).

Bronchial Washings and Bronchoalveolar Lavage

Requirements for a good sample:

- Salinated washings should be sent to the laboratory in the specimen collection pots used in the bronchoscopy procedure.
- The specimen should be sent as soon as possible.
- Separate specimens, if possible, should be sent if both cytological tests and microbiological tests are required.
- If both lungs are sampled, or pre- and post-biopsy specimens taken, forms and specimens must be labelled accordingly.

Bronchial brush specimens

Requirements for a good sample:

- The bronchial brush is sent to the department in the appropriate container and transport medium
- Request forms must be completed and slides must be labelled correctly, taking particular care to indicate if both lungs have been sampled.

Percutaneous fine needle aspirates of the lung

Requirements for a good sample:

- Direct smears should be made from the needle onto clean glass slides labelled with pencil, on the frosted end. These should then be immediately spray fixed whilst still wet.
- The needle should be washed out into saline or a vial containing Preservcyt solution (this can be obtained from the Histology Department).
- Any fairly large pieces of tissue obtained may be placed in formalin.

Urinary Tract Cytology

Voided Urine

Requirements for a good sample:

- Early morning specimen is **NOT** suitable as exfoliated cells may have been in the bladder for several hours and will have undergone degeneration.
- Mid-stream specimen is **NOT** suitable because urothelial cells are passed at the beginning and end of voiding.
- The whole of the specimen is **NOT** required. For practical purposes fill 1 sterile universal container (approx. 25ml).
- Send to the laboratory as soon as possible after production as cells deteriorate very rapidly.

Catheterised urine

Requirements for a good sample:

- Catheterised urine specimens can cause interpretational difficulties in cytology and therefore, are less preferable than voided urine. However, if only catheterised urine is available, this should be clearly stated on the form.
- Fill 1 sterile universal container, i.e., approximately 25ml. Send to the laboratory as soon as possible after production.

Effusion Cytology

Pleural fluid, peritoneal fluid and pericardial fluid

Requirements for good samples:

- Samples should be sent to the laboratory in sterile universal containers as soon as possible after being aspirated. N.B do not send large containers of fluid 20mls is sufficient for analysis. If a delay is envisaged store in a refrigerator at 4°C.
- Separate samples with request forms are required by each department if possible, when biochemical or Microbiological tests are required in addition to cytology.

Fine Needle Aspirate Cytology

Lymph nodes, salivary glands, thyroid glands etc.

Requirements for good samples:

- Routinely FNA samples are washed out into a vial containing Preservacyt solution (this can be obtained from the Histology Department).
- When direct smears are made onto clean glass slides labelled with pencil:
 - If there is only enough material to make one slide this should be allowed to air dry. If there is enough material to make 2 or 4 smears, allow 2 to air dry and 2 spray fixed.

Breast Cytology

Nipple Discharge

Requirements for a good sample:

- Clean glass slides should be pressed against the nipple. Gentle squeezing may be needed to encourage the discharge.
- Smears should be labelled in pencil and placed into a smear pot after spray fixing.

Cyst Aspiration

Requirements for a good sample:

- Fluid should be expelled into a sterile universal container which should be labelled with the relevant patient details.

Fine Needle Aspiration

Palpable lumps and non-palpable lumps detected by mammography, (where the lesion is located by stereotactic imaging and aspiration performed under radiological control or under ultrasound guidance). Requirements for a good smear:

- Direct smears should be made from the material obtained. Transfer them immediately to a smear pot after spray fixing before air drying occurs. The needle is washed out into a labelled universal container containing approximately 10mls of 'cytopsin fluid' (obtainable from the Histology department).

Cerebrospinal Fluid

Requirements for a good sample:

- The whole of the sample obtained should be expelled into a sterile universal container.
- It should be stated the investigation is for malignant cells
- Samples need to be sent promptly to the laboratory.