



Department:	Laboratory and Blood Bank		
Document:	Multidisciplinary Policy and Procedure		
Title:	Obtaining and Handling Specimens and Tissues		
Applies To:	All Laboratory staffs		
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1. PURPOSE:

- 1.1 To ensure proper handling of specimens submitted for histopathological/ cytopathological examination.

2. DEFINITONS:

- 2.1 Surgical samples exemption: grossly remarkable surgical samples/ tissue that doesn't need microscopic examination.

3. POLICY:

- 3.1 The tissue/ cytology specimens should be properly labelled & transported to the lab. (with adequate amount of the preservative specified to the specimen type).
- 3.2 Accuracy and completeness of histopathology forms is a must.
- 3.3 The tissue specimen should be properly dealt with in the lab. (from time to specimen receipt, transportation to KKGH histopathology department, receiving and release of reports to medical record department).
- 3.4 Other than the five exemptions, all tissue specimens removed at MCH during a surgical procedure or other procedures to obtain material for diagnostic purpose will be examined by the pathologist. The list of five exemptions approved by Medical Director is as follows:
 - 3.4.1 Foreign body unless specifically involved in the disease process.
 - 3.4.2 Newborn foreskin (circumcision skin).
 - 3.4.3 Placenta that is grossly normal.
 - 3.4.4 Fetuses and embryos.
 - 3.4.5 Calculi from both urinary tract and gall bladder.

4. PROCEDURE:

- 4.1 Submission of Histopathology specimens
 - 4.1.1 Submission of Histopathology specimens:
 - 4.1.1.1 Small Biopsies like needle biopsy from Liver, Lung and Endoscopic GIT should be in appropriate labelled container with proper volume of 10% formalin saline
 - 4.1.1.2 Large Biopsies and other surgical operative specimens the container should be large enough to contain 1.5 times of 10% formalin saline more than the volume of the large biopsy.
 - 4.1.1.3 Specimens should be delivered by the nurse staff on duty (preferably) to check the completeness of the request and labelling of the specimen.
 - 4.1.1.4 Receiving Logbook should be accompanied along with specimen to get signature from the receiving laboratory technician
 - 4.1.2 Submission of Cytopathology specimens:
 - 4.1.2.1 Cervical Smear:
 - 4.1.2.1.1 should be taken from the patient by Obstetrics Gynaecology physicians
 - 4.1.2.2 The physician should prepare the smear on the glass slide and put the smear in 95% ethyl alcohol as fixative.

- 4.1.2.1.3 The fixed smear should be sent to laboratory with Histopathology and Cytology Request Form immediately.
- 4.1.2.2 Specimen like Bronchial Washing, Urine, Body Fluids, CSF, and sputum:
 - 4.1.2.2.1 The specimen should be collected in a clean and leak proof container
 - 4.1.2.2.1 The specimen should be collected in a clean and leak proof container
 - 4.1.2.2.2 The specimen should be sent to laboratory with the completed Histopathology and Cytology Request Form immediately.
- 4.1.2.3 Fine Needle Aspiration Cytology (FNA):
 - 4.1.2.3.1 FNA is mostly performed in patients with superficial soft tissues masses and in deep-seated lesions with the aid of Ultrasound or CT guidance (The procedure can be safely carried out in OPD clinics without anaesthesia.). The FNA procedure is carried out with patient lying supine on examination couch, placed in such a way that there is easy access from either side to the lesion site. The Cameco syringe piston is made to it 10cc plastic syringe for conventional aspiration
 - 4.1.2.3.2 The types of needles that can be used are:
 - 4.1.2.3.2.1 Standard disposable 27-22 gauge (0.4-0.7mm) 30-50 mm long needles are suitable for superficial palpable lesions, which usually give adequate cellularity
 - 4.1.2.3.2.2 Needles of 23-22 gauge usually give better results in breast lesions. The syringe and needle is mounted in a piston grip and is operated by one hand, leaving other hand free to feel and fix the target lesion.
 - 4.1.2.3.3 In MCH hospital, FNA is done by specialist surgeons on duty & usually makes four wet smears (two for Hat staining and two for PAP stain), between two clean frosted labelled glass slides by pulling apart method & fixed in 95% ethyl alcohol or by spray fixative. During FNA procedure if some tissue fragment is found, it is segregated and fixed in 10% formal saline for cellblock.

4.2 Turn Around Time (TAT):

- 4.2.1 for Histopathology specimens, the reports are issued in 7 working days. Further time 1 - 2 days is required for unfixed, big surgical specimens, deep tissues sections and for special stains. Hard calcified and bony tissues are kept for decalcification until these are soft enough for tissue processing which may take a week or more time.
- 4.2.2 For cytopathology specimens, reports are issued in 7 working days.

4.3 Dispatch of reports of Histopathology/ Cytopathology:

- 4.3.1 All Histopathology/ Cytopathology reports received are registered in the specified logbook
- 4.3.2 When the reports are delivered to the medical record department, signature from the concerned person is obtained in the pathology dispatch logbook.
- 4.3.3 Any significant finding (s) will be informed to the concerned physician.

4.4 Specimen will be rejected if:

- 4.4.1 The specimen is submitted from an unauthorized source
- 4.4.2 Broken or unlabelled slides/ materials
- 4.4.3 Incomplete request form

5. MATERIALS AND EQUIPMENT:

- 5.1 95% ethyl alcohol
- 5.2 10% formalin saline
- 5.3 Standard disposable 27-22 gauge (0.4-0.7 mm)

6. RESPONSIBILITIES:

- 6.1 Lab. Staff in-charge of serology section.
- 6.2 Nursing staff

6.3 Doctors in relevant specialities

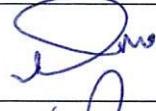
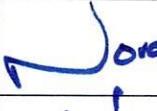
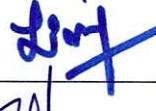
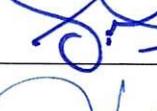
7. APPENDICES:

7.1 Table (1): Specimen Collection Instructions

8. REFERENCES:

- 8.1 Montanaro A. Formaldehyde in the workplace and in the home. Exploring its clinical toxicology. *Lab Med.* 1996;27:752-757
- 8.2 Goris JA. Minimizing the toxic effects of Formaldehyde. *Lab Med.* 1997;29:39-42
- 8.3 Wenk PA. Disposal of histology stains. *Lab Med.* 1998;29:337-338.
- 8.4 Occupational Safety and Health Administration. 2+CR1910.1048 and 1450, revised July 1, 1998.

9. APPROVALS:

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Approved by:	Mr. Fahad Hazam Alshammari	Hospital Director		January 20, 2025

Appendix 7.1 Table 1 : Specimen Collection Instructions

SN	INVESTIGATIONS	TYPE OF SPECIMEN	SPECIMEN COLLECTION INSTRUCTIONS
1	Sputum for Malignant cells	Sputum	<ul style="list-style-type: none"> • Collect morning deep cough specimen in clean container, preferably 3 specimens on 3 successive days to achieve maximum diagnostic accuracy. • Send the specimen to the Laboratory immediately.
2	Bronchial washings for malignant cells	Bronchial washings	<ul style="list-style-type: none"> • Collect the specimen in an equal volume of 50% ethyl alcohol and send immediately to laboratory.
3	Bronchial brushings for malignant cells	Bronchial brushings specimen	<ul style="list-style-type: none"> • Brush rotated on small area of the surface of the slide and wet smear is immediately fixed in 95% ethyl alcohol. • Or cut off the brush and send it to the laboratory in a bottle containing 50% ethyl alcohol.
4	Body fluids for malignant cells	Body fluid	<ul style="list-style-type: none"> • Collect the specimen in an equal volume of 50% ethyl alcohol and add anticoagulant.
5	Urine for malignant cells	urine	<ul style="list-style-type: none"> • Collect fresh morning specimen in an equal volume of 50% ethyl alcohol and send to lab immediately. • Preferably 3 specimens on 3 successive days to achieve maximum diagnostic accuracy.
6	Bladder washing, renal pelvis and ureteric sample for malignant cells	Bladder washing, (Retrograde catheterization specimen or direct specimen)	<ul style="list-style-type: none"> • Collect the specimen in an equal volume of 50% ethyl alcohol and send it to the laboratory immediately.
7	Esophageal/ gastric brushings/ Lavage for malignant cells	Esophageal & gastric brush	<ul style="list-style-type: none"> • Smears prepared from brushings and wet smears should be immediately fixed in 95% alcohol. Or • cutoff the brush and send it to the laboratory in 50% ethyl alcohol.
		Aspirate / Lavage specimen	<ul style="list-style-type: none"> • Add equal volume of 50% alcohol to esophageal & gastric Lavage specimens and send to lab immediately.
8	C.S.F. specimen for malignant cells	C.S.F.	<ul style="list-style-type: none"> • Collect the specimen in equal volume of 50% ethyl alcohol & send it to the laboratory immediately.
9	Nipple secretions for malignant cells	Nipple secretions	<ul style="list-style-type: none"> • Collect the specimen by applying slides directly to the nipple and fix wet smears immediately in 95% ethyl alcohol
10	PAP smear examination	Cervical/ vaginal smears	<ul style="list-style-type: none"> • Fix wet smears immediately in 95% ethyl alcohol and send to the laboratory immediately.

***Anticoagulants that can be used for body fluids:**

- 3.8% sodium rate: 1ml/10ml of body fluids
- Heparin: 5-10 units/1ml of body fluid
- EDTA: 1mg/1ml of body fluids