9 SPECIMEN COLLECTION AND PREPARATION

9.5 Non-Gynaecological Cytology

All Non-Gynae Cytology Specimens are a potential risk of infection. Please ensure that the specimen is in a suitable container and clearly marked if there is a known risk of infection e.g. HIV+ve, Hepatitis +ve, Tuberculosis +ve etc. Any known or potential High-Risk specimens should be double bagged and suitably labelled.

Fresh specimens should be sent to the laboratory as soon as possible to minimise deterioration of the cell content as interpretation may be adversely affected if there is significant delay. Advice is always available from the laboratory on 0191 445 6600.

9.5.1 Sputum

- Sputum cytology is only indicated in patients in whom there is a strong clinical or radiological suspicion of lung cancer, but who are not fit for other investigations, such as bronchoscopy. It is therefore nearly always requested by a chest physician.
- Spontaneous, deep cough specimens directly into a sterile 60ml container are preferable although induced samples can be diagnostic

- The Sputum should be sent to the laboratory immediately following production.

9.5.2 Brush Specimens

- Includes: Thyroid samples, Bronchial, Biliary tract, Oesophageal and Gastric brush specimens and FNA samples.
- The brush is detached and placed **immediately** into 35 ml tube containing Cytolyt collection fluid to prevent air-drying artefact which may cause problems with diagnosis.
- 35 ml tube containing Cytolyt collection fluid are available on request from Pathology Stores. The number to contact is 0191 445 2307

9.5.3 Bronchial Lavage / Trap Specimens

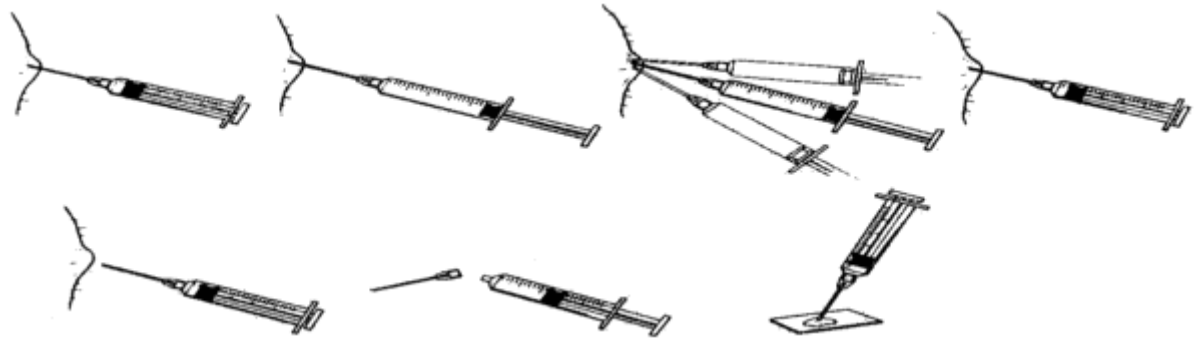
- The washing / lavage specimen is placed directly into placed immediately into 35 ml tube containing Cytolyt collection fluid as above.

9.5.4 EBUS Specimens

- The needle cores are carefully ejected into 35 ml tube containing Cytolyt collection fluid and the needle is rinsed with the collection fluid

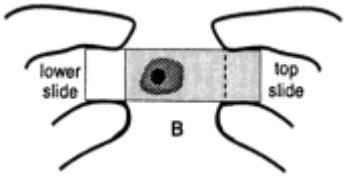
9.5.5 Fine Needle Aspiration (FNA) (suggested technique)

- Contents of aspiration needle should be blown with syringe onto an appropriate number of slides, spread quickly (as blood film) to produce monolayers.
- Pre-label charged slides with the patient's name and date of birth.

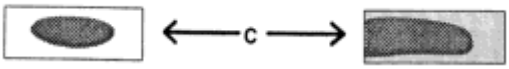


(a) With the mass held between thumb and index finger a 22 gauge 2.5- 4cm long needle attached to a 10ml syringe is inserted into the lesion.
(b) Pull out plunger to apply negative pressure.
(c) Under continuous vacuum, move the needle in various directions in the lesion (jiggle it about a bit!).
(d) Release the vacuum.
(e) Remove the needle from the mass.
(f) Remove the needle from the barrel and pull out plunger to take air into the barrel.
(g) Re-connect the needle to the syringe and gently "blow-out" the contents onto pre-labelled slides, with care being taken to deposit it as a single drop at one end of the slide.

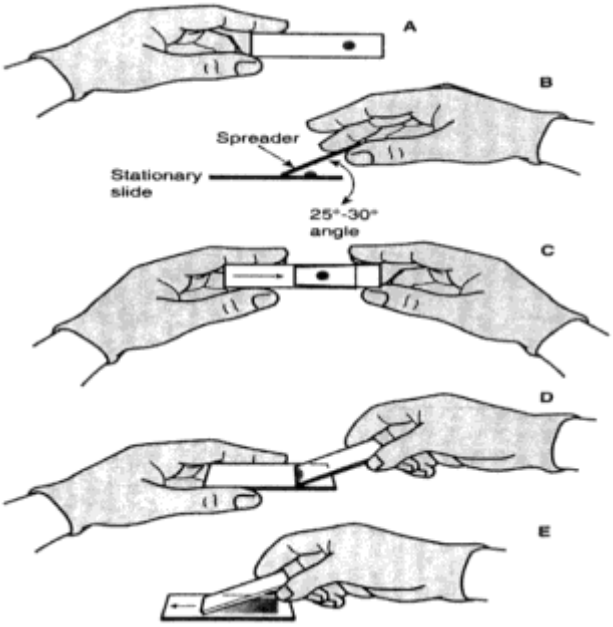
- If the fluid consists of a droplet of semi - solid material:



- The spreader slide is pushed forward with a smooth, rapid stroke. (Blood Film type slide.) It is spread by placing another slide on the drop of material so that the two slides overlap slightly.



- The two slides are then pulled apart in a smooth, parallel motion.



- If the fluid consists of a droplet of blood or other Fluid (A):
  B. A spreader slide is positioned at a 25º to 35º angle in front of the drop.
  C. The spreader slide is backed into the drop of material.
  D. The drop of material is allowed to spread evenly along the edge of the spreader slide.
  E. The spreader slide is pushed forward with a smooth, rapid stroke. (Blood Film type slide.)

- Try to prepare 2 slides, from the aspirate.
- Quickly Air-dry both smears by waving in the air; please ensure slide is dry before sending to the laboratory as artefacts may occur which may cause problems with diagnosis.
- When all slides have been prepared "washout" needle into a 35 ml tube containing Cytolyt collection fluid and send with the slides to the cytology department.

9.5.6 CT / USS / X-Ray Guided FNA

- Laboratory technical assistance may be available but at least 24 hours notice must be given.
- Please contact Cytology Department on Ext. 8721 to ensure availability and arrange appointment for assistance.
- Please contact the Laboratory in the event of any delays or cancellations

9.5.7 Urine

- The ideal screening specimen is a random freshly voided urine sample obtained by mid-stream clean-catch technique. A **minimum** volume of **10ml** is required.

    - Do **NOT** use the first urine sample of the day.
    - Urine samples from 24-hour urine collections and external collection bags are unsuitable for cytology.
    - Please do not use the microbiology universal container as this contains boric acid and is not suitable for cytology specimens.
    - Specimens should not be collected during the 14 days following cystoscopy
    - Specimens obtained via cystoscope, catheter, or bladder washings **MUST** be clearly marked as such, as should midstream urine samples (MSU).

- All urines for cytology should be sent in Universal container with cytology preservative available from pathology stores.

9.5.8 Body Cavity Fluids - (Pleural/Peritoneal/Ascitic Fluid, Washings etc)

- Specimens should be a **minimum volume of 60ml** in line with RCPath Guidelines and should be sent to the laboratory in sterile 60ml specimen containers available from pathology stores. (**DO NOT PLACE IN BORIC ACID CONTAINERS**)

- **Do not send drainage bags**, as we do not have the facilities to deal with these.
- Histological clot/cell block specimens are routinely prepared from fluid samples. Occasionally the cytological specimen is not reported until the clot sample is available or a supplementary report may be issued if the clot contains cells that may require further procedures to provide a more definitive diagnosis.

9.5.9 Cerebrospinalfluid (CSF)

- A minimum of 1ml should be submitted fresh in a sterile universal container.

9.5.10 Other Specimens

- Please ring Cytology on Ext. 6600 for advice on sending specimens for cytology not described above. Inappropriately collected samples may lead to problems with diagnosis.