Audit of ultrasound-guided aspirations and biopsies: are samples sent for complete testing?

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Background

The Churchill Hospital radiology department performs approximately 30 ultrasound-guided aspirations/biopsies a month. It has been noted that samples are not always sent to all required departments. This leads to suboptimal diagnostic yield, unnecessary delay in diagnosis/management and has the potential to expose the patient to further procedure related risks if a repeat is required.

We hypothesised that there may be a number of contributing factors; are the clinician's requests clear? Are the radiologists reading the requests when deciding how many samples to take and which sample pots to use? Are porters/HCAs taking the specimens to the correct location?

Audit standards and targets

The aim was to identify the proportion of samples sent to incorrect departments and to perform a root cause analysis of these errors to direct targeted service improvements. Practice was audited against a self-set standard:

All ultrasound-guided samples should be sent to the correct departments for analysis.

Methodology

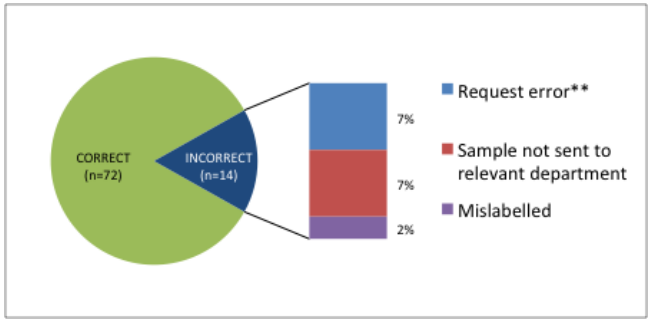
Retrospective audit of all ultrasound-guided samples taken during a 3 month period. The following data was obtained from CRIS and Electronic Patient Record (EPR);

- Indication for the procedure and request card details
- Referral source
- Laboratories (histology, cytology, microbiology, biochemistry) the samples were sent to according to the radiology report
- Samples processed by each laboratory (EPR)

Results

86 ultrasound-guided samples were performed during the audit period. 14 samples were not received by all required departments.

- 6 were due to request card errors (illegible writing, unclear details, incorrect test requested).
- 6 were not sent for complete testing (3 due to omission on request card, 3 due to radiology not sending sample to all requested departments)
  - microbiology omitted in 4
  - biochemistry omitted in 1
  - cytology omitted in 1
- 2 samples were mislabelled so the specimens could not be processed.



**Request was: inadequate, incomplete, illegible, unclear, incorrect test requested.

Action plan

Although the majority are correctly processed, this audit demonstrated an important area for improvement with deficits in the original request and the sample processing by radiology. The improvement will focus on both the request and the sample handling post-procedure, with 2 main aims:

- Request: To modify EPR forms with compulsory fields to specify whether the samples should be sent for microbiology, biochemistry, histology and cytology
- Radiology: Education though presentation at local radiology audit meeting to highlight importance of reading the request card and determining what samples will be required before starting the procedure.