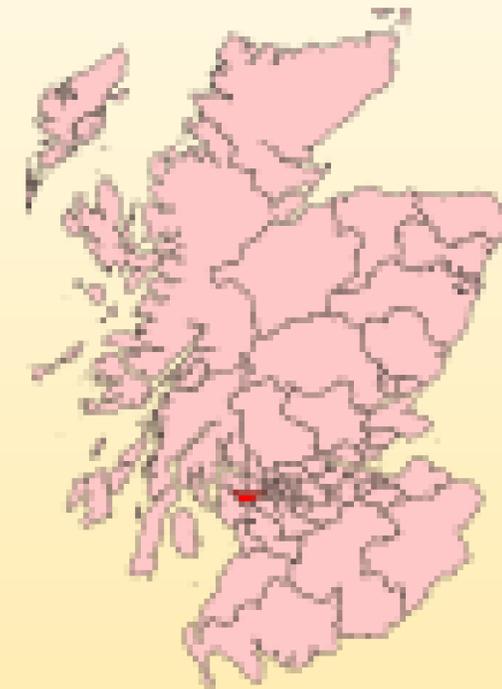


Audit Evaluating Image Guided Intra-Abdominal Biopsies in a Tertiary Care Radiology Department

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Background

Tissue biopsies of intra-abdominal organs are indicated for a variety of reasons including diagnosing and staging primary malignancies, identifying metastases and diagnosing benign lesions.

This audit evaluates the diagnostic yield and complication rate for all intra-abdominal biopsies performed in a tertiary care radiology department.

Methods

Local standards were derived from RCR guidance on CT guided biopsies and a UK national audit evaluating image-guided liver biopsies.

Local standards aimed for a diagnostic yield of 95% for all intra-abdominal biopsies.

The upper limit of acceptable complication rates was 30% for minor pain and bleeding, 3% for severe pain requiring analgesia, 0.5% for clinically significant haemorrhage and 0.1% for death.

Histology reports, radiology reports, and clinical notes were analysed.

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Results



Figure 1: Number and percentage of biopsies undertaken

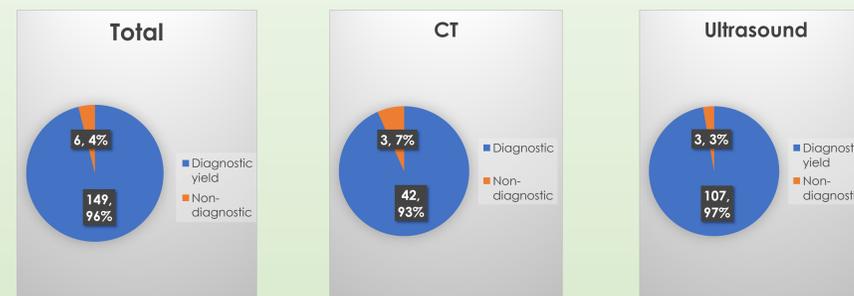


Figure 2: Diagnostic yield (number and percentage) for CT and Ultrasound-guided and total number of biopsies

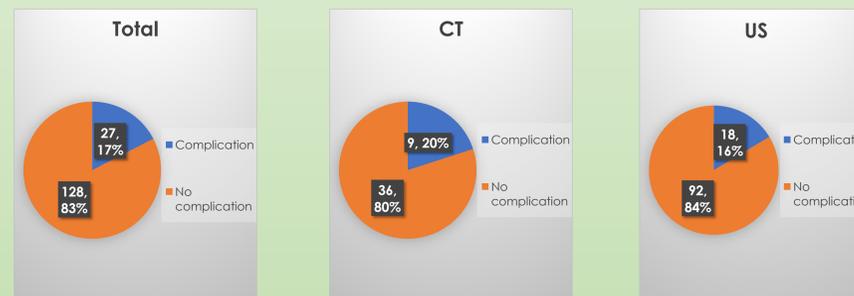


Figure 3: Complication rate (number and percentage) for CT and Ultrasound-guided and total number of biopsies

| | Number of patients | Diagnostic Yield | Complications |
|--------------------|--------------------|----------------------|---------------------|
| CT guided | | | |
| Liver | 3 | 3/3 (100%) | 0 |
| Kidney | 13 | 12/13 (92%) | 4/13 (31%) |
| Adrenal gland | 3 | 3/3 (100%) | 1/3 (33%) |
| Gallbladder | 1 | 0 | 0 |
| Peritoneum/Omentum | 6 | 6 | 0 |
| Lymph node mass | 13 | 13/13 (100%) | 2/13 (15%) |
| Soft tissue mass | 4 | 3/4 (75%) | 1/4 (25%) |
| Muscle | 1 | 1/1 (100%) | 1/1 (100%) |
| Bone | 1 | 1/1 (100%) | 0 |
| Total | 45 | 42/45 (93%) | 9/45 (20%) |
| US guided | | | |
| Liver | 88 | 86/88 (98%) | 13/88 (15%) |
| Kidney | 5 | 5/5 (100%) | 3/5 (60%) |
| Adrenal gland | 0 | 0 | 0 |
| Gallbladder | 1 | 0/1 (0%) | 0 |
| Peritoneum/Omentum | 10 | 10 (100%) | 1/10 (10%) |
| Lymph node | 2 | 2 (100%) | 0 |
| Soft tissue mass | 4 | 4 (100%) | 1/4 (25%) |
| Muscle | 0 | 0 | 0 |
| Bone | 0 | 0 | 0 |
| Total | 110 | 107/110 (97%) | 18/110 (16%) |

Figure 4: Diagnostic yield and complication rates of individual organ biopsies under CT- and Ultrasound-guidance

Results

Complications

10% (15/155) experienced minor pain and bleeding.

2.6% (4/155) experienced severe pain.

0.6% (1/155) experienced a clinically significant haemorrhage.

Conclusion

Local standards for diagnostic yield of image guided intra-abdominal biopsies were achieved.

Complication rates were within acceptable limits.

References

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