Purpose:
- To assess the safety and adequacy of Core Needle Biopsy of Thyroid nodules.

Materials and methods:
- Retrospective study, patient radiology notes and discharge notes reviewed.
- Data items collected:
  - departmental database interrogated to collect a breakdown of all thyroid biopsies performed over time period of past 8 months.
  - Reviewed patient discharge notes - review details of consent, clotting documentation, procedural details including number of passes, needle type and core size, operator, right/ left lobe/isthmus.
  - details of post-procedural complications and final histology report.
- Data analyzed and tabulated.

Results:
- All biopsies were done with an 18G 6cm needle with an adjustable variable (10 or 20mm) notch size. Trans-isthmic approach was used as far as possible.
- Twenty-six biopsies done from 20 nodules. Nodule size ranging from 14 to 55mm. Lobar distribution as illustrated above.
- Age of the patients ranged between 29-94 years with a mean age of 63 years. About 70% (n=14) patients were Female and 30% (n=6) Male.
- Of the 20 patients, 9 (45%) had at least one previous inadequate FNA, 3 (15%) had no prior FNA done and 8 (40%) had a positive prior FNA.
- Twenty-four (92.3%) of the 26 samples were adequate to provide a histological diagnosis. Two samples (7.7%) were inadequate/non diagnostic.
- Larger nodules allowed larger and multiple cores to be obtained, multiple cores were obtained in about 20% (n=4) of patients as opposed to single cores in the remaining 80% (n=16).
- The distribution of samples among the 10 vs 20mm cores was equal. The adequacy of the samples was 100% in the longer 20mm cores Vs 94.6% in the 10mm core samples. The two non diagnostic samples were both 10mm cores, further, these nodules had a more cystic component than the others.
- Of the 24 adequate samples, 19 (79.2%) were benign, 3 (12.5%) were malignant, 2 (8.3%) showed follicular neoplasm, one of which was operated and confirmed Follicular carcinoma.
- No Major complications were observed, 1 patient (0.05%) had a focal hematoma, managed conservatively and did not progress.

Conclusions:
- Thyroid CNB is a safe and rapid method to evaluate thyroid nodules.
- It is especially useful for nodules with prior non-diagnostic FNA and for patients with benign nodules who want to avoid a diagnostic hemithyroidectomy.
- Although its safety is well documented, No guidelines exist for Thyroid CNB as a first line in diagnosis.

References: