

## **SIGNIFICANT VARIABILITY IN ULTRASONOGRAPHIC REPORTING OF THYROID NODULES - A SYNOPTIC REPORT SHOULD BE DEVELOPED.**

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**Background/Purpose:** Thyroid ultrasound [TUS] is a routine investigation in the work up of thyroid nodules for suspected malignancy, along with fine needle aspiration biopsy [FNAB]. Both yield important diagnostic information that guide clinical management. Whilst reporting of FNAB is standardized, TUS reporting is not. We compared TUS reports from three separate practices to assess the degree of variability of reporting of relevant thyroid nodule features.

**Methods:** From a literature review we identified 8 sonographic features most relevant in the assessment of thyroid nodules for malignancy. 1021 de-identified TUS reports were retrospectively assessed for these features. Statistical analysis of the results was performed.

**Results:** There was consistent reporting of nodule number (100% v 99% v 100% p=0.192 ) and location (98% v 99% v 99% p = 0.253) across the three practices. However there was inconsistent and statistically different rates of reporting of thyroid nodule borders (25% v 8% v 23% p<0.05), echogenicity (94% v 68% v 96% p<0.05), vascularity (27% v 16% v 27% p<0.05), calcification (17% v 16% v 26% p<0.05) and lymphadenopathy (45% v 57% v 75% p<0.05).

**Discussion & Conclusion:** There is considerable inconsistency and variability in the reporting of salient features of thyroid nodules including nodule borders, echogenicity, vascularity, calcification and lymphadenopathy across the three radiology practices assessed. These features are important in aiding clinical decision making. We propose a synoptic reporting system for TUS should be developed based on the criteria established in this study.