

## THE JOURNAL OF THE IRISH HEAD AND NECK SOCIETY

**Title:** Audit of reporting of thyroid cytology specimens and their correlation with thyroid histology in Beaumont Hospital in 2016- 2023

**Body:** This audit evaluates the diagnostic accuracy of thyroid cytology reporting at Beaumont Hospital (2016–2023), focusing on the correlation between cytology classifications (Thy categories) and histology results, particularly Thy4 and Thy5 cases. The Royal College of Pathologists' 2009 guidelines provided the framework, aligning with the Bethesda System. The objectives were to assess case distribution across Thy categories and calculate the positive predictive value (PPV) for Thy4 and Thy5 in predicting malignancy.

**Materials and Methods:**

A retrospective audit was conducted on thyroid fine-needle aspiration (FNA) cases (January 2016–December 2023). Each cytology report was reviewed to ensure correct Thy classification. Cases were categorized, and for those with histological correlation ( $n = 129$ ), PPV for malignancy was calculated using histology as the gold standard. False positives and negatives were analyzed for potential causes like sample quality or interpretative discrepancies.

**Conclusion:**

Thy2 cases (66%) exceeded RCPATH's expected range (42–51%), possibly due to liquid-based cytology and incidental benign nodule identification in a tertiary cancer center. The Thy5 PPV was 100%, and Thy4 was 94.4%, confirming strong predictive reliability. Ongoing cytology-histology correlation monitoring will ensure continued high diagnostic accuracy.

**Authors:** Dr Samira Osman<sup>1</sup>, Dr Clíona Ryan<sup>1</sup>, Dr Helen Barrett<sup>1</sup>

**Affiliations:** 1. Beaumont Hospital, Beaumont, Ireland