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Title: Integration of molecular testing into the decision-making algorithm for indeterminate thyroid nodules in a Head and Neck Cancer Centre

Body: Background: Molecular testing is an established management recommendation for cytologically indeterminate thyroid nodules. CUH developed an external referral pathway for molecular testing of indeterminate thyroid nodules from FNA material in 2022.
Methods: Retrospective analysis of all patients who had ThyroSeq analysis to date.
Results: 57/58 patients have had genetic profiling via the ThyroSeq V3 genomic classifier (GC), including 43 females and 15 males, age range 24 to 79 years.
Nine samples were insufficient for testing (15.5%), 31 samples were classified as negative/currently negative (53.5%) and 18 cases were positive, being classified as intermediate or high risk (31%). Of the cohort tested with ThyroSeq, histology is available on 17 patients. 9/17 cases were reported as intermediate or high risk and of these, 7/9 are follicular adenomas and two are adenomatoid nodules. 8/17 cases were surgically proven thyroid malignancies, 6 had insufficient material for molecular profiling preoperatively, and 2 incidental micro-carcinomas had low risk profiles.
Conclusion: 27 patients whose ThyroSeq result was low/likely low have so far avoided surgery, an estimated cost saving of €365,000 including the cost of molecular testing. Molecular testing is now incorporated into the management of indeterminate thyroid nodules with early results allowing more confident avoidance of unnecessary surgery.

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