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P095.IMPACT OF THE USE OF AMERICAN COLLEGE OF RADIOLOGY TIRADS ON THYROID FINE-NEEDLE ASPIRATION PERFORMANCE

Rafael S. Scheffel¹, Débora L. Strieder¹, Ana P. Cristo¹, André B. Zanella¹, Carlo S. Faccin¹, Mauricio Farenzena¹, Márcia S. Graudenz¹, José M. Dora¹, Ana L. Maia¹

Introduction: The American College of Radiology Thyroid Imaging Reporting and Data System (TIRADS) is a sonographic risk-stratification system being proposed as "rule-out" test that can identify nodules that do not require fine-needle aspiration (FNA). Objectives: To evaluate the impact of the use of TIRADS on thyroid FNA performance. Methods: Prospective cohort in a single academic referral center. All patients with thyroid nodules who underwent FNA, between 2012 and 2019 were included. TIRADS data were extracted from radiological medical records. The malignancy rates were defined based on cytological (Bethesda V and VI) and/or anatomopathological cell block results. Results: A total of 929 patients (1043 nodules) were included, 88% female, mean age of 56 ± 18.5 years. The TIRADS classification was as follows: 13 TIRADS 1, 524 TIRADS 2, 273 TIRADS 3, 148 TIRADS 4 and 85 TIRADS 5. Accordingly TIRADS FNA criteria, only 314 (30%) nodules should have undergone FNA. Of them, 157 (50%) were classified as benign, 45 (14.3%) as undetermined and 51 (16.2%) as malignant. Of the remaining 729 nodules that did not meet FNA criteria, 17 (2.3%) were classified as malignant. Of them, 4 cases were classified as TIRADS 2, 5 as TIRADS 3 and 8 as TIRADS 4. According to TIRADS recommendations, follow up would be suggested for all patients but 9 patients classified as TIRADS 2 and/or with nodules < 1 cm. Conclusion: TIRADS use allows a significant decrease in the number and increase the diagnostic accuracy of thyroid FNA. Further evaluation of additional criteria might add to the improvement of false negative rates. Conflict of interest: None declared.

P096.PERFORMANCE OF A MIRNA-BASED CLASSIFIER IN THYROID INDETERMINATE NODULES: PROSPECTIVE, MULTICENTRIC AND REAL-WORLD DATA

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Introduction: Thyroid nodules with indeterminate cytology account for 20% > 30% of the cases. The mir-THYpe molecular classifier test was developed and validated with 100% of Brazilian patients, showing promising results (NPV = 96%; PPV = 76%) in a retrospective study. Objectives: To evaluate the real-world mir-THYpe test performance in a prospective and multicentric clinical routine. Methods: We analyzed the prospective and multicentric post-surgery histopathology results of all patients (Mar18-Mar19) submitted to a thyroidectomy surgery influenced by the pre-surgery results of the mir-THYpe molecular test. All patients signed an Informed Consent form. Results: The study enrolled 56 nodules from 52 patients, in which the FNA smear slides used for the mir- THYpe test were prepared in 22 different cytopathology labs spread in 7 Brazilian states from 4 Regions. Ages: < 54 yo = 64%; ≥ 55 yo = 36%. Gender: Female = 92%; Male = 8%. Bethesda categories: III = 52%; IV = 46%; V = 2%. Thyroid nodule lobes: Right = 48%; Left = 46%; Isthmus = 4%. From the 6 samples with a "negative" mir-THYpe result, all were confirmed as benign lesions (NPV = 100%). From the 50 samples with a "positive" mir-THYpe result, 36 were confirmed to be malignant nodules (PPV = 72%), including 2 NIFTPs. Conclusion: The real-world results suggests that the mir-THYpe test performance in a prospective and multicentric clinical routine use are not biased by a specific laboratory, Bethesda category or geographic region and seems to be similar to the data observed on the well-controlled and retrospective study recently published, proposing that the mirTHYpe test can be considered for use in clinical practice to support a more informed clinical decision and potentially reduce the rates of unnecessary thyroid surgeries. Conflict of interest: M. Santos Shareholder of: ONKOS Molecular Diagnostics, Grant/research support from: Fapesp, F. Gennaro Employee of: ONKOS Molecular Diagnostics; M. Pereira Employee of: ONKOS Molecular Diagnostics; B. Rodrigues Employee of: ONKOS Molecular Diagnostics; D. Xavier Employee of: ONKOS Molecular Diagnostics; N. Calanca Employee of: ONKOS Molecular Diagnostics, D. Ortellado Shareholder of: NICAP; G. de Los Santos Shareholder of: NICAP; J. Aust Shareholder of: NICAP; A. Viana Shareholder of: NICAP; R. da Silva Shareholder of: Complexo ISPON; G. dos Reis Shareholder of: Face Clínica Médica; A. Laemmel Shareholder of: CDO; A. Carvalho: none declared.

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