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EDITORIAL

Luminescences of the 2023 Bethesda System for Reporting Thyroid Cytopathology, 3rd edition, in Thyroidology

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Mater artium necessitas. The Bethesda System for Reporting Thyroid Cytopathology (TBSRCT), *per se*, has still been crucial for Endocrine Pathologists, Endocrine Surgeons, Neck-Endocrine Surgeons, Endocrinologists, Head&Neck Surgeons, Laryngologists, Head&Neck Radiologists, Nuclear Medicine, and Thyroidologists, globally. The 2010 TBSRTC, 1st edition, was initially proposed in Bethesda, Maryland, USA, in 2007, providing Thyroidologists to utilize a standardized reporting system for thyroid fine-needle aspiration (FNA) [1]. The 2015 American Thyroid Association management guidelines have also endorsed wielding TBSRTC [2] through this delicate papillon endocrine gland [5-9]. Furthermore, a special 2½-hour symposium was moderated by Ali and Vielh at the 19th International Congress of Cytology, ICC, in Pacifico Yokohama, Japan on 28 May–01 June 2016 [10-12]. Subsequently, the 2017 TBSRTC, 2nd edition, was then published by amendment of indeterminate cytology [13]. However, (re)appraisal for atypia of undetermined significance (AUS) or follicular lesion of undetermined significance (FLUS), category III, has still been one of the most challenging issues in Thyroidology worldwide [14-21]. Currently, a 3rd edition of this lexicon, the 2023 TBSRTC, has been announced by Ali et al. after two former successful editions. This novel 2023 TBSRCT, 3rd edition, provides several key updates [22]:

i) Assignment of only a single name for each of the six-based diagnostic categories: (I) nondiagnostic; (II) benign; (III) atypia of undetermined significance (AUS) (by discontinuing the term follicular lesion of undetermined significance, FLUS); (IV) follicular neoplasm (FN) (by discontinuing the term suspicious for FN, SFN); (V) suspicious for malignancy (SM); and (VI) malignant.

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ii) Updating an implied risk of malignancy (ROM) for each of the six based categories, providing an average ROM for each category and the expected range of cancer risk. The estimated final ROM after excluding "Noninvasive Follicular Thyroid Neoplasm with Papillary Like Nuclear Features (NIFTP)" for each of the six categories has been updated based on the reported attenuating mean

iii) Subdividing category III, AUS, into two subgroups: (a) AUS-nuclear atypia (NA) or (b) AUS-other, based on the implied ROM and molecular profiling.

iv) Updating the new or revised disease nomenclatures in Thyroidology according to the recently published 2022 World Health Organization, WHO, Classification of Thyroid Neoplasms, including "thyroid follicular nodular disease" instead of nodular/multinodular goiter, "cribriform morular thyroid carcinoma," "high-grade follicular-derived carcinoma," "papillary thyroid carcinoma (PTC) subtypes" instead of PTC variants, and "oncocytic follicular lesions" instead of Hürthle cell lesions.

v) Intercalating brand fresh two chapters addressing clinical perspectives and imaging modalities (Chap. 13) and utilizing molecular and other ancillary tests (Chap. 14).

vi) Intercalating the novel pediatric ROMs and management algorithms for pediatric thyroid disease for the same six reporting categories for this age group.

One of the most luminescent novelties of the current and last edition is the subdivision of category III [22]. Of note, we emphasized in February 2021 whether it is essential to maintain AUS in TBSRTC, 1st and 2nd edition, as a unique category [20]. Afterward, we declared blurred lines for managing thyroid nodules in the era of category III in a possible forthcoming TBSRTC, 3rd edition, in October 2021. To this end, we postulated that the so-called subcategorization in category III, as (i) IIIA: AUS/FLUS without nuclear atypia (AUS/FLUS w/o NA) and (ii) IIIB: AUS/FLUS with nuclear atypia (AUS/FLUS w/ NA) [21]. Last but not least, we have currently recommended in a publication working with subsets to resolve the ongoing debate on 'indeterminate cytology', similar to 'intermediate suspicion' in Radiology, with a submission date of June 08, 2023 [23]. Evangely, just one month later, a 3rd and the last edition of this lexicon, the 2023 TBSRTC, was announced by Ali et al. after two former successful editions on July 08, 2023.

As two peas in a pod, the up-to-date 3rd edition announced and stated the subcategorization of category III: (i) AUS-NA and (ii) AUS-other, by confirming [22] our antecedent recommendations in our two former publications: (i) AUS w/ NA, and (ii) AUS w/o NA [20,21]. Evangely, the subcategorization has been announced after a long expectancy. NAs have non-negligible clues in thyroid nodules with indeterminate cytology, *hic et ubique terrarum. E fructu arbor cognoscitur.*.

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