



WHAT'S NEW IN PATHOLOGY?

THE LATEST NEWS IN THYROID

By Dr. Andrey Bychkov

The year 2016 witnessed several updates in the thyroid field for pathologists, described below:

New entities

- **NIFTP (Noninvasive Follicular Thyroid neoplasm with Papillary-like nuclei)** - introduced by Nikiforov ([JAMA Oncol 2016;2:1023](#)) - replaces noninvasive encapsulated follicular variant of papillary thyroid carcinoma. It should impact patients (no cancer diagnosis), clinicians (less aggressive treatment) and pathologists (strict diagnostic criteria, FNA, molecular testing). In America and Europe, it represents 20% of thyroid cancers, with lower rates in Asia. As NIFTP will be included in the 2017 WHO classification, we should disseminate this knowledge to surgeons, ENT specialists, endocrinologists and radiologists.
- **MASC (Mammary Analog Secretory Carcinoma)** is a new tumor recently described in thyroid. This rare cancer associated with the ETV6-NTRK3 translocation was originally reported in salivary glands. It closely mimics papillary thyroid carcinoma, and can be suspected by its microcystic / cribriform pattern. It should be distinguished from thyroid cancer (by IHC) as it is more aggressive and RAI therapy is ineffective.

In brief

- WHO issued a press release ([IARC, No. 246](#)) indicating that overdiagnosis and overtreatment of thyroid cancer is a serious public health concern, and that overdiagnosis is responsible for 50% - 90% of thyroid cancers in women in high income countries.

- 2015 ATA management guidelines ("Less is more") were released for adults with thyroid nodules and differentiated thyroid cancer ([Thyroid 2016;26:1](#), [Thyroid 2016;26:759](#), [Cancer 2016 Oct 14, Epub](#)). Recommendations include fewer diagnostic tests, less extensive surgery and reduced RAI and followup. The primary diagnostic workup of thyroid nodules should be FNA with sonography, with possible molecular testing. A detailed pathology report helps clinicians determine the risk of recurrence.

- Molecular studies have shifted from PTC ([Cell 2014;159:676](#)) to aggressive thyroid cancers (PDTC / ATC) ([J Clin Invest 2016;126:1052](#)). Recent updates have been [summarized here](#).

- Expert pathologists do not agree on identification of extrathyroidal ([Thyroid 2016;26:512](#)) and extranodal ([Thyroid 2016;26:816](#)) extension, consistent with prior reports of interobserver variation regarding PTC nuclei, capsular and vascular invasion.

- **The International Head and Neck Scientific Group** proposed how to deal with rare (but odd) benign thyroid inclusions in cervical lymph nodes ([Eur Arch Otorhinolaryngol 2016;273:2867](#)), summed up on our page ([table](#)).

- Thyroid C cells were found to derive from endoderm, not neural crest ([Development 2015;142:3519](#), [Eur Thyroid J 2016;5:79](#)).

Protocols updated

- CAP: [Specimen examination](#)
- CAP: [Biomarker testing](#)
- RCP: [Cytology specimens](#)

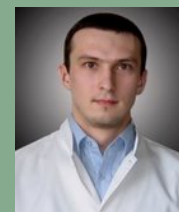
Coming soon

- The Blue Book (WHO Classification) Endocrine, new edition, is anticipated in 2017.
- The Bethesda system for reporting thyroid cytopathology (2009) is being updated ([Acta Cytol 2016;60:399](#)),

with a second edition planned for 2018 ([Acta Cytol 2016;60:397](#)).

New sources

- [Rosai, AFIP Tumors of the Thyroid and Parathyroid \(2015\)](#)
- [Wenig, Atlas of Head-Neck Pathology 3e \(2015\)](#)
- [Kakudo, Thyroid FNA Cytology: Differential Diagnoses and Pitfalls \(2016\)](#): special emphasis on borderline tumors
- [Asa, Endocrine Pathology \(2016\)](#)
- [Wartofsky, Thyroid Cancer—A Comprehensive Guide to Clinical Management 3e \(2016\)](#)
- [Diagnostic Histopathology 2016;22:171](#): mini symposium on thyroid pathology
- [Newly described thyroid tumors and variants](#)



MEET THE AUTHOR

Dr. Andrey Bychkov has been an active contributor to PathologyOutlines.com since 2014 and was the first non US based member of the Editorial Board.

Dr. Bychkov graduated with an M.D. from Russia where he also completed residency training and practiced in pathology. He earned a Ph.D. in Japan and is currently affiliated with Chulalongkorn University, Thailand.

He has published more than 20 journal articles and 2 book chapters, serves as a peer reviewer for several journals, and is regularly invited to speak at various Asian medical forums. His previous research interests have included tumor microenvironment, pathology of AIDS and opportunistic infections. His current expertise is in thyroid.