# The Bethesda System for Reporting Thyroid Cytopathology

Syed Z. Ali • Edmund S. Cibas Editors

# The Bethesda System for Reporting Thyroid Cytopathology

Definitions, Criteria, and Explanatory Notes

**Second Edition** 



Editors
Syed Z. Ali
Department of Pathology
The Johns Hopkins Hospital/The Johns
Hopkins University School of Medicine
Baltimore, MD, USA

Edmund S. Cibas Department of Pathology Brigham and Women's Hospital and Harvard Medical School Boston, MA, USA

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#### **Preface to the First Edition**

This atlas is the offspring of the "The National Cancer Institute (NCI) Thyroid Fine Needle Aspiration (FNA) State of the Science Conference," hosted by the NCI and organized by Dr. Andrea Abati. Preparations for the conference began 18 months earlier with the designation of a steering committee and the establishment of a dedicated, permanent web site. The meeting took place on October 22 and 23, 2007, in Bethesda, Maryland, and was co-moderated by Susan J. Mandel and Edmund S. Cibas.

The discussions and conclusions regarding terminology and morphologic criteria from the meeting were summarized in publications by Baloch et al. [1, 2] and form the framework for this atlas. The atlas is organized by the general categories of "Nondiagnostic," "Benign," "Follicular Neoplasm/Suspicious for a Follicular Neoplasm," "Suspicious for Malignancy," and "Malignant," and it includes the definitions and morphologic criteria of these categories as set forth by Baloch et al. The majority of the conference participants also agreed on a category of "undetermined significance," which is incorporated in this atlas (Chap. 4).

It is critical that the cytopathologist communicate thyroid FNA interpretations to the referring physician in terms that are succinct, unambiguous, and helpful clinically. We recognize that the terminology used here is a flexible framework that can be modified by individual laboratories to meet the needs of their providers and the patients they serve. Historically, the terminology for thyroid FNA has varied markedly from one laboratory to another, creating confusion in some instances and hindering the sharing of data among multiple institutions. It is the hope of all the contributors to this atlas that it will be a valuable supplement to the terminology committee's extraordinary summary document.

Baltimore, MD, USA Boston, MA, USA Syed Z. Ali Edmund S. Cibas

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#### **Preface to the Second Edition**

The second edition of this atlas was inspired by new developments in the field of thyroid cytopathology since the publication of the first edition 8 years ago. These include revised guidelines for the management of patients with thyroid nodules [1], the introduction of molecular testing as an adjunct to cytopathologic examination, and the reclassification of the noninvasive follicular variant of papillary thyroid carcinoma as noninvasive follicular thyroid neoplasm with papillary-like nuclear features (NIFTP)[2]. Much of the groundwork for this atlas was laid by a symposium entitled "The Bethesda System for Reporting Thyroid Cytopathology (TBSRTC): Past, Present, and Future" at the 2016 International Congress of Cytology in Yokohama, Japan. Preparations for the symposium began 12 months earlier with the designation of a steering group and the appointment of an international panel composed of 16 cytopathologists and an endocrinologist, whose task was to review and summarize the published literature in English since the introduction of TBSRTC.

The symposium, moderated by Drs. Syed Ali and Philippe Vielh, took place on May 30, 2016, and the discussions and recommendations from the symposium have been summarized in a publication by Pusztaszeri et al. [3]. Based on the panel's recommendation, the six original general categories ("Nondiagnostic," "Benign," "Atypia of Undetermined Significance/Follicular Lesion of Undetermined Significance," "Follicular Neoplasm/Suspicious for a Follicular Neoplasm," "Suspicious for Malignancy," and "Malignant") have been retained in this second edition. The chapters devoted to these categories now have expanded and refined definitions, morphologic criteria, and explanatory notes.

It's gratifying to see that TBSRTC has been widely adopted in the USA and worldwide and endorsed by the American Thyroid Association [1]. It has gone far toward improving communication between cytopathologists and their clinical colleagues and has provided a uniform template for the sharing of data among investigators. It is our hope that it will continue to stimulate interest in the improvement of thyroid cytopathologic diagnosis and the betterment of patients with thyroid nodular disease.

Baltimore, MD, USA Boston, MA, USA Syed Z. Ali Edmund S. Cibas

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# Participants of the NCI Conference (2007) and TBSRTC 2010 Atlas Contributors

Andrea Abati, M.D. (Organizer, NCI Conference)

Susan J. Mandel, M.D., M.P.H. (Co-moderator, NCI Conference)

Zubair W. Baloch, M.D., Ph.D. (Committee Chair, Terminology and Morphologic Criteria, NCI Conference)

Pedro Patricio de Agustin, M.D., Ph.D.; Erik K. Alexander, M.D.; Sylvia L. Asa, M.D., Ph.D.; Kristen A. Atkins, M.D.; Manon Auger, M.D.; Zubair W. Baloch, M.D., Ph.D.; Katherine Berezowski, M.D.; Massimo Bongiovanni, M.D.; Douglas P. Clark, M.D.; Béatrix Cochand-Priollet, M.D., Ph.D.; Barbara A. Crothers, D.O.; Richard M. DeMay, M.D.; Tarik M. Elsheikh, M.D.; William C. Faquin, M.D., Ph.D.; Armando C. Filie, M.D.; Pinar Firat, M.D.; William J. Frable, M.D.; Kim R. Geisinger, M.D.; Hossein Gharib, M.D.; Ulrike M. Hamper, M.D.; Michael R. Henry, M.D.; Jeffrey F. Krane, M.D., Ph.D.; Lester J. Layfield, M.D.; Virginia A. LiVolsi, M.D.; Britt-Marie E. Ljung, M.D.; Claire W. Michael, M.D.; Ritu Nayar, M.D.; Yolanda C. Oertel, M.D.; Martha B. Pitman, M.D.; Celeste N. Powers, M.D., Ph.D.; Stephen S. Raab, M.D.; Andrew A. Renshaw, M.D.; Juan Rosai, M.D.; Miguel A. Sanchez, M.D.; Vinod Shidham, M.D.; Mary K. Sidawy, M.D.; Gregg A. Staerkel, M.D.; Edward B. Stelow, M.D.; Philippe Vielh, M.D., Ph.D.; Jerry Waisman, M.D.; Helen H. Wang, M.D., Dr.P.H.; Grace C. H. Yang, M.D.; Matthew A. Zarka, M.D.

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# Participants of the IAC-Sponsored Thyroid Symposium in Yokohama (2016) and TBSRTC II 2018 Atlas Contributors

William C. Faquin, M.D. Ph.D. (Group Leader, ICC Symposium 2016)

Marc Pusztaszeri, M.D. (Lead Panelist, ICC Symposium 2016)

Diana Rossi, M.D., Ph.D. (Lead Panelist, ICC Symposium 2016)

Philippe Vielh, M.D., Ph.D. (Co-moderator, ICC Symposium 2016)

Erik K. Alexander, M.D.; Manon Auger, M.D.; Zubair W. Baloch, M.D., Ph.D.; Justin A. Bishop, M.D.; Massimo Bongiovanni, M.D.; Ashish Chandra, M.D.; Béatrix Cochand-Priollet, M.D., Ph.D.; David S. Cooper, M.D.; Barbara A. Crothers, D.O.; Tarik M. Elsheikh, M.D.; Guido Fadda, M.D.; William C. Faquin, M.D., Ph.D.; Armando C. Filie, M.D.; Pinar Firat, M.D.; Mary C. Frates, M.D.; Hossein Gharib, M.D.; Michael R. Henry, M.D.; SoonWon Hong, M.D., Ph.D.; Jeffrey F. Krane, M.D., Ph.D.; Kennichi Kakudo, M.D., Ph.D.; Lester J. Layfield, M.D.; Virginia A. LiVolsi, M.D.; Claire W. Michael, M.D.; Ritu Nayar, M.D.; Michiya Nishino, M.D.; Martha B. Pitman, M.D.; Celeste N. Powers, M.D., Ph.D.; Marc Pusztaszeri, M.D.; Gregory W. Randolph, M.D.; Andrew A. Renshaw, M.D.; Diana Rossi, M.D., Ph.D.; Miguel A. Sanchez, M.D.; Fernando Schmitt, M.D., Ph.D.; Vinod Shidham, M.D.; Mary K. Sidawy, M.D.; Gregg A. Staerkel, M.D.; Edward B. Stelow, M.D.; Paul A. VanderLaan, M.D., Ph.D.; Philippe Vielh, M.D., Ph.D.; William H. Westra, M.D., Ph.D.; Grace C. H. Yang, M.D.; Matthew A. Zarka, M.D.

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#### **Contributors**

**Erik K. Alexander, MD** Department of Endocrinology, Brigham & Women's Hospital and Harvard Medical School, Boston, MA, USA

**Syed Z. Ali, MD, FRCPath, FIAC** Department of Pathology, The Johns Hopkins Hospital/The Johns Hopkins University School of Medicine, Baltimore, MD, USA

**Manon Auger, MD, FRCP(C)** Department of Pathology, McGill University Health Center, Glen Site, Montreal, PQ, Canada

**Zubair W. Baloch, MD, PhD** Department of Pathology and Laboratory Medicine, Perelman School of Medicine, Hospital of the University of Pennsylvania, Philadelphia, PA, USA

**Justin A. Bishop, MD** Department of Pathology, The Johns Hopkins University School of Medicine, Baltimore, MD, USA

Massimo Bongiovanni, MD Institute of Pathology, University Hospital, Lausanne, Switzerland

**Ashish Chandra, MD, FRCPath, DipRCPath (Cytol)** Department of Cellular Pathology, Guy's & St. Thomas' NHS Foundation Trust, London, UK

**Edmund S. Cibas, MD** Department of Pathology, Brigham and Women's Hospital and Harvard Medical School, Boston, MA, USA

**Béatrix Cochand-Priollet, MD, PhD** Department of Pathology, Cochin Hospital-University Paris 5, Paris, France

**David S. Cooper, MD** Division of Endocrinology, Diabetes, & Metabolism, The Johns Hopkins Hospital/The Johns Hopkins University School of Medicine, Baltimore, MD, USA

**Barbara A. Crothers, DO** Department of Pathology, Walter Reed National Military Medical Center and National Capital Consortium, Bethesda, MD, USA

Tarik M. Elsheikh, MD Department of Pathology, Cleveland Clinic, Cleveland, OH, USA

**Guido Fadda, MD, MIAC** Anatomic Pathology and Histology, Catholic University – Foundation Agostino Gemelli Hospital, Rome, Italy

xiv Contributors

William C. Faquin, MD, PhD Department of Pathology, Massachusetts General Hospital, Massachusetts Eye and Ear, Harvard Medical School, Boston, MA, USA

**Armando C. Filie, MD** Laboratory of Pathology, Center for Cancer Research, National Cancer Institute, Bethesda, MD, USA

**Pinar Firat, PhD** Department of Pathology, Istanbul University, Istanbul Faculty of Medicine, Istanbul, Turkey

Mary C. Frates, MD Department of Radiology, Brigham and Women's Hospital/Harvard Medical School, Boston, MA, USA

**Hossein Gharib, MD** Department of Endocrinology, Mayo Clinic College of Medicine, Rochester, MN, USA

**Michael R. Henry, MD** Department of Laboratory Medicine, Mayo Clinic, Rochester, MN, USA

**Soon Won Hong, MD, PhD** Department of Pathology, GangNam Severance Hospital/Yonsei University, College of Medicine, Seoul, Republic of Korea

**Kennichi Kakudo, MD, PhD** Department of Pathology, Nara Hospital, Kindai University Faculty of Medicine, Ikoma, Nara, Japan

**Jeffrey F. Krane, MD, PhD** Department of Pathology, Brigham and Women's Hospital and Harvard Medical School, Boston, MA, USA

**Lester J. Layfield, MD** Department of Pathology and Anatomical Sciences, University of Missouri, Columbia, MO, USA

**Virginia A. LiVolsi, MD** Department of Pathology and Laboratory Medicine, Perelman School of Medicine/University of Pennsylvania, Philadelphia, PA, USA

**Claire W. Michael, MD** Department of Pathology, University Hospitals Case Medical Center/Case Western Reserve University, Cleveland, OH, USA

**Ritu Nayar, MD** Department of Pathology, Northwestern University, Feinberg School of Medicine and Northwestern Medicine, Chicago, IL, USA

**Michiya Nishino, MD, PhD** Department of Pathology, Beth Israel Deaconess Medical Center/Harvard Medical School, Boston, MA, USA

**Martha B. Pitman, MD** Department of Pathology, Massachusetts General Hospital/Harvard Medical School, Boston, MA, USA

**Celeste N. Powers, MD, PhD** Department of Pathology, VCU Health, Richmond, VA, USA

**Marc P. Pusztaszeri, MD** Department of Clinical Pathology, Geneva University Hospitals, Geneva, Switzerland

**Gregory W. Randolph, MD** The Claire and John Bertucci Endowed Chair in Thyroid Surgery Oncology, Harvard Medical School, Boston, MA, USA

Division of Thyroid and Parathyroid Endocrine Surgery, Massachusetts Eye and Ear Infirmary, Boston, MA, USA

Department of Surgery, Endocrine Surgery Service, Massachusetts General Hospital, Boston, MA, USA

**Andrew A. Renshaw, MD** Department of Pathology, Baptist Hospital, Miami, FL, USA

**Esther Diana Rossi, MD, PhD** Department of Anatomic Pathology and Histology, Fondazione Policlinico Universitario "Agostino Gemelli" – Universita' Cattolica del Sacro Cuore, Rome, Italy

**Miguel A. Sanchez, MD** Department of Pathology, Englewood Hospital Medical Center, Englewood, NJ, USA

**Fernando Schmitt, MD, PhD, FIAC** Department of Pathology and Oncology, Medical Faculty of Porto University and IPATIMUP, Porto, Portugal

Vinod B. Shidham, MD, FRCPath, FIAC Department of Pathology, Wayne State University School of Medicine, Karmanos Cancer Center & Detroit Medical Center, Detroit, MI, USA

Mary K. Sidawy, MD Department of Pathology, MedStar Georgetown University Hospital, Washington, DC, USA

**Gregg A. Staerkel, MD** Department of Pathology, University of Texas MD Anderson Cancer Center, Houston, TX, USA

**Edward B. Stelow, MD** Department of Pathology, University of Virginia, Charlottesville, VA, USA

**Paul A. VanderLaan, MD, PhD** Department of Pathology, Beth Israel Deaconess Medical Center, Boston, MA, USA

**Philippe Vielh, MD, PhD** Department of Pathology, National Laboratory of Health, Dudelange, Luxembourg

William H. Westra, MD Department of Pathology, The Johns Hopkins Hospital/ The Johns Hopkins University School of Medicine, Baltimore, MD, USA

**Grace C.H. Yang, MD** Department of Pathology and Laboratory Medicine, Weill Cornell Medicine, New York Presbyterian Hospital, New York, NY, USA

**Matthew A. Zarka, MD** Department of Laboratory Medicine and Pathology, Mayo Clinic Arizona, Scottsdale, AZ, USA