

# PANCREATIC DISORDERS & TREATMENT

September 13-14, 2017 Dallas, USA

## Pancreatic Neuroendocrine Tumor diagnosis in the age of precision medicine

Deepthi Rao  
ProPath, USA

High-grade neuroendocrine neoplasms (World Health Organization Grade 3) classification of the pancreas include both well-differentiated neuroendocrine tumor (WD-NET) and poorly differentiated neuroendocrine carcinoma (PD-NEC). Previously, the diagnosis of this group of tumors was based on both the histopathology of the tumor and the assessment of proliferation fraction. However, it is extremely challenging to differentiate the WDNET Grade 3 from the PDNEC due to the lack of well-defined histologic criteria, and the utilization of guidelines with mitotic count and immunohistochemistry for Ki-67 (>20 mitoses/10 high-power fields or Ki67>20%) shows significant overlap. However, there can be major differences in treatment strategies and clinical outcome. Thus, there is a growing need for additional practical modalities to consistently facilitate the accurate differentiation between the two categories among the high-grade pancreatic neuroendocrine neoplasms. In the age of precision medicine and molecular biomarkers, the evaluation of immunohistochemical staining for surrogate biomarkers of known genotypes of WD-NET and PD-NEC, can be crucial in establishing a final definitive classification. These biomarkers are DAXX, ATRX, Tp53 and Retinoblastoma protein. The loss of DAXX or ATRX protein expression supports the diagnosis of WD-NET, whereas the aberrant expression of Tp53, and/or Retinoblastoma protein aids the diagnosis of PD-NEC which can result in the appropriate clinical management and prognosis.

### Biography

Dr. Deepthi Rao, M.D., FCAP, FASCP is an accomplished Gastrointestinal and Pancreatobiliary Pathologist. She has completed her medical schooling from Rajiv Gandhi University of Medical Sciences with high honors followed by her residency training at the University of Kansas Medical Center. She has completed her fellowship training in Oncological Gastrointestinal and Pancreatobiliary pathology from prestigious Memorial Sloan Kettering Cancer Center. Additionally, she has dedicated extra time in one of her interest areas, hepatic pathology, reading a large volume of liver biopsies at Weill-Cornell Medical Center during her fellowship training. She already has a decorated academic record in her young career with more than a dozen peer reviewed articles published and an even greater number of abstracts. Her interest in gastrointestinal pathology began early and is particularly unique as she spent two years doing clinical gastroenterology research in addition to her time in pathology residency and GI/Liver fellowship. She is currently working at one of the finest physician owned pathology practice - ProPath and continues to serve a large and diverse patient population. Dr. Rao has received numerous accolades during her career including meritorious acclaim for research, teaching and pure scholarship.

deepthirao.path@gmail.com

### Notes: