The role of cytology in the era of molecular medicine

Genomic alterations are known to play an important role in cancer initiation and progression. Molecular tests have been increasingly incorporated into pathology practice. Common applications include assisting pathology diagnosis, predicting prognosis and therapeutic response and identifying patient's eligibility for targeted therapy. The lecture will outline the role of molecular tests in the diagnosis of HPV-related cancer, thyroid cancer, hematopoietic malignancies, detection of tumor of unknown origin and management of lung cancer, breast cancer and other solid tumors. To successfully conduct molecular tests, a high quality tumor sample is imperative. The lecture covers practical experience of MD Anderson and covers the strategies regarding how to use small and limited FNA samples for making the most informative diagnosis and yet preserve tumor tissues for cyogenetic and genomic tests that, in turn, facilitate diagnosis and targeted therapies.

Biography

Yun Gong has received MD degree in 1984 and then completed her Post-graduate Pathology training in 1989 at Zhejiang Medical University in China. She has then worked as a Post-Doctor and Research Associate in the Shanghai Institute of Cell Biology, Chinese Academy of Sciences; Catholic University of Nijmegen, Netherlands and The Scripps Research Institute, California. She has received her Residency training in Anatomic and Clinical Pathology at Northwestern University Medical School in Chicago followed by one-year Cytopathology Fellowship training at MD Anderson Cancer Center. She became a Faculty Member at the Department of Pathology, MD Anderson Cancer Center in 2003 and currently is a Full Professor. She has numerous publications in the fields of cytopathology and breast cancer biomarker research (120 peer-review articles, 18 invited articles, 6 book chapters, 1 book and 118 abstracts). She is a Member of 9 Editorial Boards of professional journals and is a Member of the Scientific Program Committee, American Society of Cytopathology (ASC).

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