conferenceseries.com

13th International conference on

Pathology and Molecular Diagnosis

June 26-27, 2017   San Diego, USA

Shahla Masood

University of Florida, USA

Breast cancer prediction and early detection: The potential value of cytomorphology and *hTERT* gene DNA methylation

Risk assessment has become an integral part of multi-disciplinary breast care, and breast cancer risk reduction interventions, and identification of high risk individuals have received a great deal of attention. Atypical proliferative changes in breast epithelial cells are ranked high among various known breast cancer risk factors and have been the subject of several investigations. Breast tissue and fluid in the ductal system provides a rich source of cells and biomarkers that has the potential to measure short-term risk of breast cancer development, and assess responses to interventional prevention efforts. Minimally invasive procedures such as fine needle aspiration biopsy, ductal lavage, and nipple fluid aspiration are commonly used in breast cancer detection and research. We have established the "Masood Cytology Index" as a morphologic risk predictor and believe that the development of a novel malignancy-associated biomarker amplified by PCR will enhance our ability to stratify high-risk patients. DNA hypermethylation has been documented to be prominent using qualitative methylation specific PCR on DNA isolated from the tumor cell line. Using quantitative pyrosequencing technology, we demonstrated that there is significant hypermethylation in tumor cells versus low DNA methylation in normal tissue. The results of this study highlight the value of DNA hypermethylation as a potential marker for early breast cancer detection. More importantly, we believe that integration of this novel malignancy associated testing with morphology is of significant value in the accurate interpretation of breast cancer precursors obtained from minimally invasive procedures and may be used as a breast cancer risk predictor.

Biography

Shahla Masood is a Persian-born Physician, who is currently the Professor and Chair of the Department of Pathology and Laboratory Medicine and Medical Director of the UF Health Breast Center at the UF College of Medicine, Jacksonville. As an internationally recognized expert in breast cancer diagnosis and prognosis, she has lectured extensively in over 50 countries, has authored numerous publications, book chapters, and textbooks, and is the recipient of countless educational and scientific awards. She has been named as one of the Top Doctors in America, Top Doctors in Cancer, and the Top 20 Most Influential Professors in Oncology.

Shahla.Masood@jax.ufl.edu

Notes:

J Clin Exp Pathol, an open access journal
ISSN:2161-0681

Pathology and Molecular Diagnosis 2017
June 26-27, 2017

Volume 7, Issue 2 (Suppl)

Page 28