Biomarkers study by various methods in diagnosis and prognosis of breast lesions

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Abstract

Breast cancer is the 2nd most common cancer in urban Indian population because of changes in lifestyle, better economic status. Thus it is imperative to diagnose, treat and increase the survival of these women especially in low to middle income group countries like India. There are several biomarkers available which are important and play a role in diagnosis, treatment and prognosis of breast lesions. Steroid markers like estrogen (ER) and progesterone (PR) are nuclear markers which are important for treatment and prognosis. Overexpression of HER2/neu a cell membrane marker and Ki67 a proliferation marker are important for treatment and prognosis. Metastatic markers like E-cadherin and vimentin which when decreased are associated with increased chances of metastasis. It is also related to increased ER expression and tumor budding (TB). Other factors like increase in angiogenesis leads to bad prognosis which can be identified by markers like CD34 and vascular endothelial growth factor (VEGF).

All the above markers can be studied by various methods like Fine Needle Aspiration Cytology (FNAC), Manual Liquid Based Cytology (MLBC), Cell Block (CB) and histopatholgy sections. Each method have their advantages and limitations which will be highlighted in the study.

Biography

Nandini N M, Professor, JSS Medical College, Mysore, is attached as a teaching faculty from the past 25 years in the Department of Pathology. She has worked in the field of cytology of cervix and breast. She has attended many national and international conferences in countries like UK, USA, Singapore and Netherland. She has worked on liquid based cytology, cell block technique and has come up with indegenious methods. She has several publications and books to her credit written on cervical and breast cancer.

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