

## World Congress on **Breast Cancer**

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### **Role of NFkB as a prognostic marker in breast cancer: A new tool in the horizon**

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The nuclear factor kB (NFkB) is a superfamily of transcription factors. Activation of the signaling pathway leads to induction of target genes that inhibits apoptosis, dysregulates cell cycle, promotes cellular invasion. It regulates tumorigenesis, inflammation and metastasis. It is hypothesized that study of a single factor, instead of multiple proliferative genes, can prognosticate breast cancer to same extent. A prospective study was conducted at the Comprehensive breast service and Breast cancer research Unit, IPGME & R, Kolkata, India. The patients were divided into two groups, first group (Group A) comprised of 57 patients with primary breast cancer and second group (Group B) comprised of 54 patients of fibroadenomas. NFkB was measured in both groups by Western Blot and RT-PCR technique using p65 protein of NFkB family. ER, PR and Her2 neu were measured by immunohistochemistry methods. NF-kB was expressed in 71.8% of breast cancer patients while none of the Group B patients expressed it. NF-kB / p65 expression is significantly associated with large tumor size (>5 cm.) (p-value 0.012), Grade III tumors (p=0.002), ER and PR negative tumors (p=0.002 and 0.001 respectively) and Her2 neu positive tumors (p=<0.001). Correlation is poor with lymph node status (p0.393) and menopausal status (p=0.973). The results were correlated with NPI (higher NPI of more than 5.4 was statistically significant with p=0.002). The study puts forward the fact that NF-kB is a valid prognostic marker. Being a transcription factor, it controls multiple pathways and thus has the potential to replace costly multigene prognostication models. This can have a major impact in developing countries in prognosticating breast cancer.

#### **Biography**

Diptendra K Sarkar is the Chief of the Breast Service and Research Unit at IPGMER, Kolkata, India. He is a Founder member and presently the Honorary Secretary of The Association of Breast Surgeons of India. He has delivered more than 150 lectures and orations in various national and international conferences. He has published more than 30 articles and has contributed as author to two different text books. He is the Associate Editor of *Indian Journal of Surgery and Surgical Oncology*. He is part of the esteemed Governing Council of Association of Surgeons of India. He is the one of the pioneers of Breast Surgery in Eastern India.

#### **Notes:**