

## Receptor status of invasive ductal carcinoma of Breast and its correlation with prognostic factors: A retrospective study

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**Introduction** Carcinoma of the Breast is the second most common cancer in the world and in terms of mortality is placed fifth. The Nottingham Prognostic Index (NPI) is arecognized tool to assess the prognosis in the management of breast cancers. Receptor status and age of the patient also influence the prognosis.

**Objective** The aim of this study is to assess the correlation between estrogen receptor (ER), progesterone receptor (PR) and HER-2/neu receptor status of invasive ductal carcinoma (IDC) with tumor size, histologic grade, lymphnode status and age.

**Methodology** This cross-sectional study was conducted in patients, who underwent mastectomy with axillary clearance for infiltrating ductal carcinoma (IDC) in Teaching Hospital Jaffna, Northern Sri Lanka from 2017 January to 2019 March. Data including receptor status, age, tumor size, grade and lymph node status were retrieved from the histopathology reports. Patients received neo adjuvant chemo therapy and other histological sub types of breast cancer were excluded in this study. Histopathology reports of 186 patients with IDC were analyzed.

**Results** The mean age of patients with IDC was 54.6 years (range 27-84 years) and 73% of the patients were older than 45 years. Considering T stage, 35 patients had T1, 93 and 33 patients had T2 and T3 tumors respectively. 13% of patients had grade I tumor, 62% patients had grade II and 25% patients had grade III tumor. 50% of patient had axillary LN involvement. The patients with axillary LN involvement had a statistically significant ( $p < 0.05$ ) correlation with HER-2/neu expression and lymph node involvement. Majority of the patients (40%) have moderate NPI.

**Conclusion:** Her2 neu receptor status has positive correlation with axillary LN involvement which is as a component of NPI. The receptor status does not have correlation with size of the tumor, histological grade or with age of patient.