



Ethnic Differences in Hormonal Receptor Status (ER, PR & Her2/Neu) Among Breast Cancer Women: A Single Institution Experience

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Abstract

Background: Studies have shown differences in Hormonal Receptor Status (HRS) of Oestrogen Receptor (ER), Progesterone Receptor (PR) & Her-2/neu expression among Breast cancer women of different racial and ethnic groups, however to the best of our knowledge at Pakistan level no such study has been conducted separately to evaluate the differences in HRS by ethnicity.

Objectives: To evaluate Ethnic Differences in HRS among Breast Cancer Women at our institute JPMC, the largest public sector tertiary care hospital in Karachi.

Materials & Methods: The study consisted of 450 breast cancer women of different ethnicities who visited oncology ward from 1st June 2017 to 31st July 2018. Data from patients was collected regarding tumour histology, grade, HRS & ethnicity. Data analysed in SPSS version 20 using the Chi-Square Test to compare differences in HRS of different ethnicities.

Results: The mean age of patient was 46.57 years. The Urdu speaking Patients outnumbered other ethnicities. Overall HRS showed ER+ 61.30%, PR+ 53.30%, Her-2/neu+ 33.10%, Triple Positive 14.2% and Triple Negative 20.90%. However, analysis of HRS as per ethnicity showed that ER was proportionately more positive in Photon's patients at the rate of 75.7% as compared to Urdu Speaking 60.4%, Punjabis 60%, Sindh is 56.7% and Balochis 61.1%. Similarly, PR and Her-2/neu receptor were also more high-flying in Push toons at the rate of 64.9% & 40.5% respectively. The behaviour of Triple Positivity was also more prominent in Push toons at the rate of 24.3% and the Push toons were also proportionately less likely to be Triple Negative at the rate of 13.5% as compared to other ethnicities.

Conclusion: In this study we observed relatively high expression of ER, PR and Her 2/neu Receptors in Push toons as compared to other ethnicities. Understanding the factors underlying these differences may provide further insight into the breast cancer etiologic in different populations. However, it is an ongoing study, let the number of patients be further increased and then see either the same trend continues or vice versa. More studies are required on a larger scale in different parts of the country to reach a conclusion regarding ethnic differences in Hormonal Receptor Status among Breast Cancer Women in Pakistan.

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Publications

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