

Impact of triple negative phenotype on breast cancer epidemiology in Iran

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CONTEXT: Immune Histochemistry (IHC) analysis has identified four breast cancer subtypes, ER+/PgR+/Her2- (HR+/Her2-), ER+/PgR+/Her2+ [triple positive (TP)], ER-/PgR-/Her2- (TN), and ER-/PgR-/Her2+ (HR-/Her2+). Triple negative (TN) breast cancer is an aggressive disease with many epidemiologic specificities.

OBJECTIVES: We examined the prevalence of breast cancer subtypes within Iranian patients and determined the association of epidemiologic factors (BMI, Age, parity, pathologic grade and stage at presentation, ...) within the subtypes.

DESIGN, SETTING, AND PARTICIPANTS: Immunohistochemical surrogates for each subtype were applied to 361 incident cases of invasive breast cancer from the Iranian Center for Breast Cancer (ICBC) (ascertained between May 2005 and December 2008), a cross-sectional study that sampled all patients who came to our center during this period of time. Subtype definitions were as follows: (1) HR+/Her2- (n=177, 49%), (2) TP (n=76, 21%), (3) TN (n=62, 17%), and (4) HR-/Her2+ (n=46, 13%).

RESULTS: The TN breast cancer subtype was significantly younger than HR+/Her2- group (mean age 40 vs 47, P=0.04). And compared with other subtypes presents with higher pathologic grade (P=0.01). parity also significantly less prevalent in TN than the HR-/Her2+ and HR+/Her2- groups (P=0.03, P=0.05 respectively).

CONCLUSIONS: Triple negative breast tumors occurred at a higher prevalence among younger patients compared with HR+/HER2- patients in this study. They are also have less parity and higher pathologic grade at presentation.