

Breast Cancer in Iran: levels, Variations and Correlates

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Abstract

Background and Objectives: As the most common neoplasm among females and the second most common cancer globally, breast cancer imposes enormous costs on health systems. This study aims to estimate levels of breast cancer in Iran and provinces, and examine correlates of incidence of breast cancer, focusing on place of residence, using the most recent nationally available data.

Material and Methods: This study is based on a total of 8333 breast cancer cases (259 males and 8074 females) registered by Iran Cancer Registration System during a Persian year (March 21th 2009 through March 20th 2010). Complementary demographic data about the study population was obtained from the 2011 National Census, conducted by Iranian Statistical Center. The Age-Standardized Rate (ASR) of breast cancer was estimated for the overall population, the capital city of provinces, large metropolitan areas, and four categories of provinces located in the north, south, east, west, and center of Iran.

Results: Only 3.1% of total 8333 breast cancer patients were men. The mean (SD) age of female and male participants were, respectively, 50.5(12.7) and 56.5 (15.4). The rate of breast cancer for the country was estimated at 33.1 cancers per 100,000 population, and the estimated rates for men and women was are respectively 24.6 and 0.82 per 100,000 population. The incidence of breast cancer in Iran varies from 15 cancers per 100,000 population in urban areas to 34.6 cancers in large metropolitan areas. Also, the estimated rate of breast cancers ranged from 18.1, 19.1 and 19.7 cancers in the west, north, and east of the country, respectively, to 29.3 and 29.7 cancers per 100,000 population in southern and central provinces of Iran. With rising the level of urbanization of provinces, the estimated rate of breast cancer increased ($r=0.71$, $P<0.001$).

Conclusion: Given the strong correlation between the incidence of breast cancer and urbanization, especial preventative and screening health programs need to be designed and implemented in urban areas to detect suspected cases of breast cancer.

Keywords: Breast neoplasms, Incidence, Iran, Registration, Urbanization