

EXCESS RISK OF DEATH OF BREAST CANCER IN DIFFERENT COUNTRY SETTINGS: COMPARISONS BETWEEN A FILIPINO RESIDENT POPULATION, FILIPINO-AMERICANS AND CAUCASIANS

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Background:

Various international comparisons have disclosed higher breast cancer survival rates in developed countries than in emerging and developing nations [1-3]. Likewise, differences between ethnicities have also been shown, such as those in the United States, with Asian and Pacific Islanders showing better breast cancer survival than Caucasians [4-7]. These survival discrepancies have been hypothesized to be mainly due to access to and utilization of diagnostic facilities and treatment [1, 5] and partly due to biological reasons [4, 8]. However, it is not clear how much of these differences are contributed by various factors.

Purpose:

To elucidate the impact of ethnicity versus health care system on breast cancer survival, survival of Filipino-American breast cancer patients was compared with survival of both cancer patients from the Philippines, who have the same ethnicity, and Caucasians in the US, who have the same health care system.

Methods:

Using the SEER 13 database, the databases from the Philippine Cancer Society-Manila Cancer Registry (PCS-MCR) and the Department of Health-Rizal Cancer Registry (DOH-RCR), and data from an active follow-up of Philippine cancer patients, age adjusted absolute and relative survival (ratio of observed and expected survival) estimates were computed and compared between Philippine residents, Filipino-Americans and Caucasians in the US. Period analysis [9] was used to compute relative survival, with expected survival derived from life tables for the year 2000 using the Ederer II method [10]. Potential determinants of survival differences (age, tumor size, lymph node involvement, distant metastasis, morphology and receipt of surgery) were examined using cross tabulations and Cox proportional hazards modeling.

Results:

Age adjusted five-year relative survival in 1998-2002 was much lower in the Philippine resident population (58.4%) as compared to Filipino-Americans (89.1%) and Caucasians (87.7%). The large proportion of women with advanced tumor size, lymph node involvement, distant metastasis, and who have not received surgery explained a substantial portion of the excess mortality in the Philippine resident population. However, excess mortality remained even after controlling for these and other factors in the multivariate analysis (Relative Risk, 2.44; 95%

Confidence Interval, 2.05-2.91). The moderate excess risk of Caucasians compared to Filipino-Americans was explained by the age differences and essentially disappeared after multivariate analysis (Relative Risk, 1.09; 95% Confidence Interval, 1.00-1.20).

Conclusions:

These results highlighted the importance of health care for reducing breast cancer deaths in less developed countries. Access and utilization of appropriate diagnostic and therapeutic facilities should be given emphasis. Given comparable access to education and health care, women with ethnic origins from developing countries could have at least as high breast cancer survival as western women.

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