

Geographic Variation of Incidence Rates of Cancer and Associated Risk Factors in Northern West Bank, Palestine (2005-2008)

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Abstract:

Background: Cancer is the third leading cause of deaths in the Occupied Palestinian Territories accounting for about 10% of total deaths. Despite its importance, little research has been devoted to characterization of incidence rates and geographic variations. Differences in risk factors, socioeconomic status and access to medical services are possible reasons for the geographic variations in incidence rates. This study compared the incidence rates and some risk factors of cancer among the six governorates of Northern West Bank and among types of locality (classified as urban, rural, and refugee camps) for the period 2005-2008.

Methods: Crude and age-adjusted incidence rates (and 95% CI) were calculated using cancer data obtained from the registry files of three hospitals in Northern West Bank. Negative binomial regression analysis was performed to compare incidence rate ratios (IRR) among governorates and types of locality while adjusting for age-group, sex, and year of diagnosis. Fisher's exact test was also employed to test for relationships among cross tabulated variables.

Results: The lowest overall incidence rate was found in the governorate of Jenin (age-adjusted rate of 45.0 cases per 100,000 over the 4-yr period). With Jenin taken as a reference, the governorate of Nablus had the highest incidence rate ratio (3.30) with age-adjusted incidence of 148.1 cases per 100,000. Refugee camps had higher overall incidence rate than urban and rural areas (age adjusted rates of 169.0, 103.2, and 79.3 cases per 100,000 for refugee camps, urban areas, and rural areas, respectively). Geographical differences were found in the distribution of patients with regard to types of environmental pollution, smoking and alcohol consumption, types of stress, and chronic diseases.

Conclusion: In Northern West Bank, large differences were found among areas of residence (governorates and locality types) in incidence of cancer. Geographical differences in risk factors were also found which could explain part of the geographic differences observed in incidence rates.

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