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Childhood Cancer Among Arab Americans in Southeast Michigan

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G. CHILDHOOD CANCER AMONG ARAB AMERICANS IN SOUTHEAST MICHIGAN

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Cancer is relatively rare among children, yet it remains an important public concern. Childhood cancer ranks second as a cause of death after accidents. Population-based data such as Surveillance, Epidemiology, and End Results (SEER) program of the National Cancer Institute create an opportunity to study the effect of ethnic background on the incidence and mortality of cancer. Studies on migrants have been widely used to infer the relative importance of environmental factors versus inherited factors and have proved valuable in developing population-specific interventions. Unfortunately, information on cancer occurrence among Arab Americans is lacking because of incomplete reporting of nationality and place of birth in the SEER registry.

This study aimed to: 1) identify cancer cases in children less than 20 years of age among Detroit Metropolitan Arab Americans; 2) determine the proportional incidence ratios (PIR) for specific cancer sites or histologies; and 3) compare the results with non-Arab White children in Detroit and with Arab children from the Middle East (Lebanon).

This study utilized an Arab/Chaldean surname index and the Metro Detroit Cancer Surveillance System (MDCSS) to identify cancer cases in individuals less than 20 years of age. The MDCSS is a regional cancer registry providing data to the national SEER cancer registry. For equivocal surnames the list was matched against an Arab/Chaldean first name index. Childhood cancers were grouped by histologic type, and primary site was based on the International Classification of Childhood Cancers (ICCC). Excel (Microsoft Corp., Redmond, WA) was utilized to calculate PIR, including the Byar ap-

proximations of the 95% confidence intervals (CI).

During the period 1973–2001, the total number of matches between the surname list and MDCSS was 216 cases, with no difference by sex; the peak age of occurrence was 1–4 years. Metro Detroit Arab-American children had similar frequency of the seven major pediatric cancers based on expected proportions in the non-Arab Whites also from Metro Detroit. Arab-American children had proportionately more adrenal carcinoma (PIR 10.1, 95% CI 2.03, 29.55). A trend was also for increased chondrosarcoma and thyroid cancer and a tendency for reduced frequency of malignant melanoma and retinoblastoma compared to non-Arab children. The finding of altered frequency of these malignancies among the Arab children is constrained by the relatively small numbers of cases and should be considered as exploratory rather than definitive. The same Metro Detroit Arab-American cases were then compared to summary values for pediatric cancers reported in Lebanon. Distribution of the seven most common childhood malignancies among 555 patients in Lebanon showed similar results to those in Metro Detroit. Adrenal carcinomas were not reported as a separate group in the data from Lebanon.

This descriptive study is the first to determine cancer patterns in children among the Middle Eastern immigrant population in the United States. Only one population based cancer registry is in an Arabic country (Kuwait). Other Arab cancer data are from cancer registries based in large cancer treatment programs. For example, United Arab Emirates, Oman, and Gaza report increased rates of T-cell adult lymphocytic leukemia (ALL) and a predominance of

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Burkitt's was reported in Jordan. Determination of leukemia histologic subtypes (T cell, B cell) was complicated by the lack of such information in the

MDCSS registry. Proportional data are not necessarily an accurate reflection of population-based incidences. Until US denominator (total Arab population)

data are available and complete ethnicity data are present in medical charts, improved estimates will be difficult to obtain.