

## C. CANCER DATABASES IN THE ARAB WORLD

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Cancer is a major public health problem worldwide. Between 1975 and 1990, cancer cases increased 37%, with a growth rate of 2.1% per year. In 1996, more than 10 million people were diagnosed with cancer, and at least 6 million people with the disease died from it. These cases were divided almost equally between industrialized and developing countries. The World Health Organization (WHO) estimates that these figures will double by the year 2020, with 20 million new cases and 12 million deaths from cancer alone. The WHO also estimated that 70% of these deaths would come from developing countries.

Successfully controlling most communicable diseases of childhood through the WHO Expanded Programme on Immunization, together with rapid strides in socioeconomic development, has led to the emergence of non-communicable diseases as the dominant source of ill health in the Arab countries.

In the Arab countries, comprehensive population-based incidence data are available from the National Cancer Registry of Saudi Arabia, Kuwait, Oman, and Jordan. Incidence data for the rest of the Gulf countries, including Qatar, United Arab Emirates, and Bahrain are available from the Gulf Center for Cancer Registration. This registry is responsible for registering cancer cases in the region and works within the functions of the Saudi National Cancer Registry.

Incidence data for Algeria, Egypt, and Tunisia are available from their regional cancer registries. The rest of the Arab countries do not have a registry, so the Globocan 2000 database is used. Globocan 2000 is a publication of the International Agency for Research on Cancer. For countries with no registries, incidence data are either estimated by

using any available data on the relative frequency of different cancers or from the average of neighboring countries in the same regions.

The age-adjusted incidences for all geographic sites vary from a low of 61 and 60 per 100,000 males and females, respectively, in Saudi Arabia to a high of 180 and 216 per 100,000 males and females, respectively, in Qatar. These rates are significantly lower than those observed in developed countries. Cancer is predominant in men in Tunisia, Lebanon, Egypt, Jordan, and Oman.

For males, lung cancer is the most frequent type in several countries, constituting up to 22.9% of all cancers in Tunisia. Bladder cancer ranks in the top three cancers in many countries, with the highest frequency observed in Lebanon. Non-Hodgkin's lymphoma is common in Egypt, Kuwait, Oman, and Saudi Arabia, accounting for about 10% of all cancers. Liver cancer is frequent in Egypt, Qatar, and Saudi Arabia, accounting for 13% of all cancer types in Egypt. The relative frequency of stomach cancer ranks first in Oman (11.1% of all cancers). The frequency of leukemia is high in Kuwait and Qatar, constituting 15.7% of all cancer cases in Kuwait. On the other hand, colorectal cancer is frequent in Kuwait and Jordan.

For females, breast cancer is the leading cancer site for all countries, constituting between 16.2% and 38.4% of all types. Cervical cancer is frequent in Algeria, accounting for 18% of cancer types. Non-Hodgkin's lymphoma ranks second in Egypt and Oman and third in Qatar. The frequency of leukemia is high in the United Arab Emirates, while thyroid cancer is high in Qatar, Saudi Arabia, and the United Arab Emirates. Colorectal cancer is frequently observed in Kuwait and Jordan.

Egypt has a population of approxi-

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From The National Cancer Institute, Cairo, Egypt.

mately 70 million, with 51% males. The age structure is relatively young, with 47% of the population below the age of 20 years and 6% above the age of 60 years. Life expectancy is around the mid-60s.

The first population-based cancer registry for Egypt is in Tanta, Gharbiah, a governorate located in the middle of the Nile Delta, approximately 90 km north of Cairo. The registry was established in 1998, and it records all incident cases among approximately 3.4 million Gharbiah residents diagnosed within and outside Gharbiah.

The total number of cases first diagnosed in 1999 was 3,427, including 1,735 males and 1,692 females. The age-adjusted rates for males and females, respectively, were 154 and 137 per 100,000. These rates are lower than those of more developed countries, but generally lower than those reported by

other Arab countries and other less-privileged countries. In males, the most frequent site of cancer was the urinary bladder, which has always been related to schistosomiasis. Next in frequency was liver cancer. Lung cancer, a disease intimately related to the spreading smoking epidemic in Egypt, occupied the fourth rank, after non-Hodgkin's lymphoma. In females, breast cancer was by far the most common type of cancer, followed by non-Hodgkin's lymphoma. Liver cancer ranked fourth after leukemia.

The National Cancer Institute (NCI), Cairo University, is the largest comprehensive cancer center in Egypt. The 550-bed hospital is overloaded by patients referred from all over the country. The NCI has well-established pathology- and inpatient-based cancer registries. Our first attempt to develop a hospital-based cancer registry was in the year 2001.

During the years 2001–2002, 38,400 new patients visited the NCI; 19,568 (53%) were malignant cases. Half of the cases were males and the other half were females. Of the 19,568 new cancer patients, 11% were children 18 years of age or younger. Approximately 54% of the cases were between 41 and 65 years of age.

The most common type of cancer seen in the NCI was breast cancer, with 3,729 (19%) new cases during 2001–2002. The digestive system was the second-most common site (15.6%), followed by the urinary system (12%). Leukemia and lymphoma represented 42% of childhood cancer.

In conclusion, most Arab countries are still without proper cancer registration. These countries should be encouraged to develop a cancer registry. Cancer has become a major problem in the region. Efforts should be directed toward cancer prevention and early detection.