

## Do We Need a Cancer Registry in Bahrain ?

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What is it for ? may be a counter question, to serve the patients and community needs, establish a recognition on the geographic map, open new lines of research or add more burden on health care ?. All of these and more is the counter answer.

Cancer is a human affliction that exists in all parts of the world and no race, age, nationality, sex or social class is free from it. There is, however, a considerable international variation in the incidence of all cancers and much greater contrast in the incidence at different sites. Even within a country, certain classes of people and certain geographical areas have distinct pattern of cancer incidence. For these reason, most countries have undertaken extensive tumour control programmes to combat the disease knowing that it is the third commonest killer after road traffic accidents, and myocardial infarctions. Through the results already obtained from such programmes, the mortality rates from some forms of neoplasms have been reduced appreciably. The first step in the control of tumours is to gather information on their occurrence, and the most common factors conducive towards their formation. Ideally these data can always be obtained from hospital or population based cancer registries. However, from many parts of the world, where such registries do not exist, information on cancer pattern can also be derived from other sources, such as hospital admissions, or from pathology, radiotherapy, and oncology departments.

### THE PURPOSE AND THE FUNCTION OF CANCER REGISTRATION

The broad purpose of cancer registration is to help assess and control the impact of malignancies on the community. Hospital-registries are primarily concerned with improving the care of cancer patients seen in hospitals, and with the evaluation of treatment. Population-based registries are mainly concerned with assessing the impact of cancer on the community. Most cancer registries are multipurpose, and what is done in a particular registry depends on its size, resources and orientation. Hospital and population-based registries have much in common but differ in emphasis and, consequently, in organization and operation and in possible areas of research. Some registries may be "mixed" in function, and there is no absolute demarcation between the two types<sup>1</sup>.

The main function of cancer registries is to record information on patients with reportable neoplasm. The gathered information have been shown to provide 4 principal levels of functions; epidemiological analysis of cancer incidence patterns, patient care, cancer research, and health services in the country<sup>1</sup>.

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The epidemiological data will help to establish the number of new cancer cases diagnosed per year, age and sex distribution of patients, geographical and zonal prevalence, relative frequencies by anatomical site, number of deaths from cancer, and time trends in ratio and frequency patterns. From the point of patient care the data can be used to assess trends of cancer treatment and follow up, show time trends in ratio of early to late stages at time of diagnosis, describe length, rate and quality of survival in relation to site, stage and treatment. The registry can also provide background for clinical research, assist in the evaluation of therapy and case-control studies either by rapid notification or prospective studies, develop and evaluate clinicopathological classifications, identify groups with high and low relative frequencies of certain cancers, recognize associated factors and common carcinogens in the community, and keep surveillance of newer ones for urgent investigation. The contribution of registries to health services will help to assess the quality of hospital care and community care in a covered area, the effectiveness of preventive measure adopted to combat cancer, the educational programmes given to professionals and to the public. It will also serve as an indicator towards future plans of expansion of health care. Furthermore the overall data from the registry can also be used to compare the incidence patterns in the country with those of previous years as well as with neighbouring countries and with international figures.

#### **SCOPE OF CANCER REGISTRATION IN BAHRAIN**

There is no accurate knowledge of the incidence or prevalence of neoplastic diseases in Bahrain. No central board or registry has been created to gather information about cancer patients. Unlike infectious and communicable diseases, cancer in Bahrain is not registerable despite the heavy cost the various health institutions on the island are undertaking to provide diagnostic, therapeutic and rehabilitation facilities for cancer patients. As a result government and private health care centres carry their own independent and uncoordinated counting. Duplication is therefore inevitable especially among patients who voluntarily seek therapy at more than one centre. On the other hand the number of patients who seek diagnostic and therapeutic facilities outside Bahrain are not accounted for at all. Likewise cancer patients diagnosed by means of immunochemistry, cytology, radiology, ultrasonography, and computed tomography, and those who are referred by government agencies to overseas radiotherapy units, a costly facility which at present does not exist in Bahrain, also escape registration.

Laws towards the registration of cancer have been enacted in all the Arabian Gulf countries, and it is regrettable that such legislation has not been enforced in Bahrain, even though Bahrain was a cosignatory to establish the Gulf States Cancer Registry now in operation since more than three years in Kuwait. It is believed that with the formation of local registry in Bahrain, the health practitioners will be more aware of the problem of cancer, and will be ethically compelled to register information about this diseases.

Before 1982 the official annual statistics on the frequency of cancer in Bahrain were published by the Directorate of Public Health, Ministry of Health. These are neither accurate nor complete or reliable figures. Such statistics were prepared by the technical staff of the Department of Pathology, Salmaniya Medical Centre which provides diagnostic microscopic service for all of the health care areas of the Ministry. This staff lacks medical



knowledge with the result that : (a) The number of neoplasms referred for diagnosis to the Salmaniya from the various health care areas are counted to Salmaniya as well as to the concerned areas. (b) Repeated surgical biopsies from a patient for the purpose of diagnosis and follow up are counted according to their number. There is therefore duplication in the counting of tumour cases. (c) It does not include data on tumours of unknown behaviour, borderline malignancies, sarcomas, leukaemias, myelomas, mycosis fungoides, Burkitt's lymphoma, and immunoblastic lymphomas. (d) It lacks systemic anatomical organization. For example lymphomas of the cervical lymph nodes or metastatic tumours in the cervical nodes are listed as "tumours of the neck". (e) It lacks arrangement and does not follow any of the parameters recommended by the qualified organizations in cancer registration such as those of the WHO, International Classification of Diseases for Oncology<sup>2</sup>, International Association of Cancer Registries, and the International Agency for Research on Cancer<sup>1</sup>. (f) It does not distinguish between Bahraini and non-Bahraini patients and does not therefore reflect the true incidence of cancer in Bahraini population.

However, since 1982 figures on the frequency of cancer in Bahrain were extracted from hospital medical records and published annually by the Office of Health Information System, Ministry of Health. These frequencies, tabulated to list the number of deaths by sex and nationality, are also deficient : (a) The cases are coded according to the 9th Revision of the WHO, International Statistical Classification of Diseases, Injuries and Causes of Death<sup>3</sup> which specify ICD rubric 140–239 for "neoplasms". Of these rubric numbers 210–234 are designated to benign tumours. It is therefore not clear whether the number of deaths included those patients who died from these neoplasia. This is particularly in reference to children who die from post-operative complication of benign tumours e.g. teratomas. (b) It gives distribution by sex, and nationality but not by age. (c) It does not account for number of deaths from health institutions other than those of the Ministry of Health. (d) It does not show the number of patients with malignant neoplasms who are alive. (e) It does not indicate whether the malignancies were confirmed by microscopy or diagnosed by other means.

The number of people who die every year from malignant neoplasms in Bahrain is unknown, and accurate figures can neither be obtained from the Mortality Office of the Ministry of Health. Many patients die from complication of cancer (e.g. pneumonia, septicaemia, liver or kidney failure) and it is the practice of many practitioners to record on the death certificate the secondary disease rather than the primary cancer. The mortality records are therefore unreliable. However, to magnify the problem of cancer in Bahrain, the figures from the Annual Reports of the Ministry of Health can still be considered. Thus in 1982 cancer was the fifth most common cause of death in Bahrain accounting for 8.6% of all hospital deaths and in 1985 it jumped into second place accounting for 13.8% of all hospital deaths<sup>4,5</sup>.

Finally it is regrettable to say that while a number of studies have been published during the recent years from all over the Arabian Gulf countries indicating the frequencies and incidence patterns of various cancers in the population, only one appeared from Bahrain on head and neck cancers<sup>6</sup>.

In conclusion, there is an urgent need to establish a cancer registry in Bahrain. Its catchment should be population-based but its functions need to be "mixed" to serve hospital practice and community requirements including those of cancer-control programmes. The existence of such institution should not only account for histologically confirmed cases, but also for those diagnosed by other means such as immunochemistry, cytology, radiology, ultrasonography, and computed tomography. Legislation must therefore be enacted to empower cancer registration.

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