Bermuda National Tumour Registry
Annual Report
With Statistical Data from 2012
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About Us

Cancer is a major burden of disease on our island. According to the Bermuda Health Council, cancer is the second leading cause of death in Bermuda, accounting for 30.2% of all deaths in 2009. Reducing the burden of this disease is a great and noble cause that involves many programmes including a comprehensive database of all cancer cases island-wide. This database is what is referred to as a tumour registry. The importance of a tumour registry lies in the collection of accurate and complete cancer information that can be used for population based research, public health programme planning, evaluation of current practices and patient care improvement. The information helps health professionals to better understand the disease and to use resources effectively for the prevention and treatment of cancer. It is a vital link in reducing the burden of cancer in Bermuda.

The Bermuda National Tumour Registry is Bermuda’s first population-based, government supported cancer registration body. The Registry began data collection in 1979. It underwent restructuring in 2004 and was re-launched in September 2008. We are focused on improving outcomes in cancer diagnosis, treatment, care and, ultimately, survival.

The fundamental requirements of the registry are as follows:

- Confidentiality
- Complete records
- Quality controlled data
- Efficiency and usefulness
How does the Bermuda National Tumour Registry work?

The tumour registry uses a reporting system that involves primary care physicians, specialists, on island and overseas pathology departments and healthcare planners in order to obtain the most current and concise data. The aim is to register each and every reportable cancer diagnosis on island. The data collected by the tumour registry include: patient information (demographics, social habits and family history), tumour diagnosis specifics, treatment and hospital information, and follow-up particulars.

What are our objectives?

The objectives of the Bermuda National Tumour Registry are to:

- reduce the incidence of cancer in the community
- aid in making informed treatment choices based on precedent
- help identify potential environmental risk factors, genetic links, and high risk behaviours which may increase the likelihood of a cancer diagnosis
- assist in determining the efficacy of screening practices and ensuring that lifetime follow-up is conducted with every patient
- provide accurate island-wide data for the government, health service providers, medical researchers and the general community.

How is the data used?

The data gathered by the tumour registry serves the following purposes within Bermuda and overseas:

- ongoing surveillance of cancer incidence and trends
- provision of information for public and professional education
- epidemiologic and academic research

Professional organizations

International Association of Cancer Registries (IACR)

Pan-American Health Organization (PAHO)
Graphical Summary of Data

The Bermuda National Tumour Registry depends on physicians and pathology departments to report neoplasms as they arise. Because of lack of legislation, however, these particular bodies must self motivate to report diagnosed cancer cases to the registry. The graphs included below are representative of the number of registered cancer cases and may not be entirely representative of the actual number of cases (95% confidence interval).

![Most Registered Cancer Cases (2012)](image)
Top 5 Registered Cancers - Women

- Breast: 48 cases
- Colorectal: 15 cases
- Cervical: 15 cases
- Endometrial: 12 cases
- Lung: 10 cases

Breast Cancer Registrations by Age (2012)

- Age Group 30-39: 2 cases
- Age Group 40-49: 11 cases
- Age Group 50-59: 13 cases
- Age Group 60-69: 10 cases
- Age Group 70-79: 5 cases
- Age Group 80-89: 5 cases
- Age Group 90-99: 2 cases
Top 5 Registered Cancers - Men

- Prostate: 53 cases
- Lung: 21 cases
- Bladder: 15 cases
- Colorectal: 13 cases
- Bone Marrow: 6 cases

Prostate Cancer Registrations by Age (2012)

- 50-59: 13 cases
- 60-69: 21 cases
- 70-79: 16 cases
- 80-89: 2 cases
In most registries, squamous cell carcinomas are not reportable. Our registry does register all forms of skin malignancies (with the sole exception of basal cell carcinomas) because of the increased sun exposure of our populace and other environmental and demographic factors. The vast majority of registered skin cancers at the Bermuda National Tumour Registry are squamous cell carcinomas.

Number of skin cancer cases by type:

Squamous Cell Carcinoma – 84
Malignant Melanoma – 17
Other – 10
2013 Focus On: Cervical Cancer

Each year, the Bermuda National Tumour Registry chooses one cancer type for which to raise awareness and provide special education. For this year’s annual report, the choice is to focus on cervical cancer.

Cervical cancer can affect women of all ages. For the calendar year of 2012, cervical cancer was tied with colorectal cancer as the second most registered cancer type amongst the island’s women. Most of the cervical cancer cases registered in the Bermuda National Tumour Registry are diagnosed as CIN 3, which means that cancer has formed on the surface tissue.

Cervical cancer is a malignancy that forms in tissues of the cervix (the organ connecting the uterus and vagina). It is usually a slow-growing cancer that may not have symptoms but can be found with regular pap tests. Studies show that there is a direct causative link between human papillomavirus (HPV) infection and the development of cervical cancer in women. Both men and women can be infected with HPV.

Contracting HPV and developing cervical cancer can be prevented by getting vaccinated against the human papillomavirus, practicing abstinence, limiting the number of sexual partners and by women undergoing regular pap tests. The Bermuda Department of Health recommends that male and female children aged 11-12 years should receive 3 doses of quadrivalent HPV vaccine.

Early cervical cancers usually do not cause symptoms. However, as the cancer grows larger, some women may experience: bleeding between regular menstrual periods, bleeding after sexual intercourse, douching, or a pelvic exam, long and/or heavier menstrual periods, bleeding after going through menopause, increased vaginal discharge, pelvic pain, or pain during sex. Once symptoms present themselves, one of the following tests will be performed: lab tests, cervical exam or tissue sample. After testing, if the diagnosis is of a malignant cancer (in situ or invasive) then several treatment options will be offered. The choice of treatment depends mainly on the size of the tumor, whether the cancer has spread and future family planning considerations. The treatment options include: surgery, radiation therapy, or chemotherapy (or any combination of them).
Challenges

It appears that the value of cancer registries is under-appreciated by policy makers in many jurisdictions (not just ours) since there seems to be a general unwillingness to invest in registries despite the fact that starting and maintaining a cancer registry is not overly expensive in the grand scheme of things. This undervaluing of cancer registries exists despite the fact that virtually every publication on the topic of cancer control has trumpeted the benefits of population-based registries. The Bermuda National Tumour Registry has two main challenges for successful registration of cancer cases.

Legislation

In order to effectively collect data, a National Cancer Act that mandates reporting is necessary. Currently, Bermuda does mandate the reporting of all communicable diseases under the Public Health Act of 1949. Considering the fact that cancer has a growing burden of disease in Bermuda, it is of the utmost importance that we collect thorough and meaningful statistics expeditiously. This is not without precedent. Most jurisdictions that require the reporting of cancer cases to a population based registry (such as the Bermuda National Tumour Registry) have legislation in the form of a comprehensive Cancer Act. The United States has a separate National Cancer Act (1971) and the UK has provided for confidential cancer registration under Section 60 of the Health and Social Care Act (2002).

Reporting processes

Because the reporting of cancer cases is not mandatory, the tumour registry must rely entirely on the voluntary participation of the medical community. For the most part, physicians, patient care organizations and pathology departments/laboratories are willing to comply but there is a large enough number of exceptions that it negatively impacts the accuracy of data compilation and, thus, analysis.
Acknowledgements

Ministry of Health and Seniors
Bermuda Hospitals Board
Bermuda Cancer and Health Centre
PALS
Dr. Deborah J. Daly and staff
Staff of the Bermuda National Tumour Registry