



Barbados National Registry



CANCER IN BARBADOS (2013 - 2022) REPORT 2025



The George Alleyne
Chronic Disease
Research Centre



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Glossary

| | |
|----------------------|---|
| <i>ASIRs</i> | <i>Age-standardised incidence rates</i> |
| <i>BNR</i> | <i>Barbados National Registry</i> |
| <i>CARPHA</i> | <i>The Caribbean Public Health Agency</i> |
| <i>CIN</i> | <i>Cervical Intraepithelial Neoplasm</i> |
| <i>CNS</i> | <i>Central nervous system</i> |
| <i>DCO</i> | <i>Death certificate only</i> |
| <i>GACDRC</i> | <i>George Alleyne Chronic Disease Research Centre</i> |
| <i>GLOBOCAN</i> | <i>Global Cancer Observatory</i> |
| <i>IARC</i> | <i>International Agency for Research on Cancer</i> |
| <i>ICD-O</i> | <i>International Classification of Diseases for Oncology</i> |
| <i>MHW</i> | <i>Ministry of Health and Wellness</i> |
| <i>NCDs</i> | <i>Non-Communicable Diseases</i> |
| <i>NSP-NCD 20-25</i> | <i>National Strategic Plan for the Prevention and Control of NCDs 2020–2025</i> |
| <i>PAHO</i> | <i>Pan-American Health Organization</i> |
| <i>QEH</i> | <i>Queen Elizabeth Hospital</i> |
| <i>WHO</i> | <i>World Health Organization</i> |

Executive Summary

What is in this report. This report provides an overview of national cancer incidence data and mortality data for Barbados, reviewing ten years of cancer incidence data from 2013-2022, and mortality data spanning 2013-2024.

Definition. Cancer is the uncontrolled growth of abnormal cells resulting from external factors (e.g., tobacco, chemicals, radiation, and infectious organisms) and internal factors (e.g., inherited mutations, hormones, immune disorders, and mutations which cause errors in metabolism). Its uncontrolled spread within an individual can lead to death. These factors operate through complex mechanisms which initiate or promote carcinogenesis (i.e., the development of cancer), a process which requires multiple steps that may occur over many years or rapidly over a short time. Its treatment may be via any one or combination of the following: surgery, hormonal therapy, chemotherapy, immunotherapy, and radiotherapy. To be included in the Barbados National Registry for Non-Communicable Diseases (BNR) a case must be defined as a neoplasm with a behaviour code of 3 (malignant), according to the International Classification of Diseases for Oncology, 3rd Edition 1st Revision (ICD-O-3.1), or an in-situ (behaviour code of 2) neoplasm of the cervix (CIN III).

Background. Non-communicable diseases continue to be the main causes of death in Barbados according to the Barbados Health Report 2023¹. The National Strategic Plan for the Prevention and Control of NCDs 2020 – 2025 (NSP-NCD 20-25)² and the National Cancer Action Plan (2021 – 2025)³ were created by the Ministry of Health and Wellness to guide national efforts to control NCDs, which includes decreasing the number of deaths from non-communicable diseases by 25%. By examining trends in national data, the Barbados National Registry can be a monitoring and evaluation tool to indicate the effectiveness of national programs. To match international standards, the report title bears the year (2025) in which it is published, and data and trends include the most recently available data (2022).

Cancer in Barbados. The Barbados National Registry registered 941 new cases of cancer for 2021 and 983 new cases in 2022, representing an average of 121 new cases per month over the two years. Cases registered by Death Certificate Only (DCO) was less than 5% of total cancer registrations for the third year in a row, indicating that the registry was able to trace more cases to a point of diagnosis. More cases were identified by histology of metastatic spread than in all previous nine years, which suggests that cases were presenting or diagnoses was being confirmed at the later stages of the disease. Over the last ten years the top four cancers were - prostate, female breast, colorectal and corpus uteri. The data suggests that the number of prostate cancer cases are plateauing, however, there seems to be a continued increase in breast cancer cases in women and men. We observed an increase in the number of male breast cases reported to the registry, which although relatively small in number compared to female breast cancer, is the highest ever reported over 10 years. This may be the result of an improvement in screening technology or an increase in awareness and screening. Further investigations are required to understand this new

¹ Ministry of Health and Wellness (MHW) Planning and Research Unit. Barbados Health Report 2023. Bridgetown, Barbados. 2025. <https://www.barbadosparliament.com/uploads/sittings/attachments/fae6eb825f96f0410d5d121916552eab.pdf>

² Government of Barbados, Ministry of Health and Wellness (MHW). National Strategic Plan for the Prevention and Control of NCDs 2020 – 2025. Bridgetown, Barbados: MHW; 2019. <https://www.iccp-portal.org/resources/national-strategic-plan-prevention-and-control-non-communicable-diseases-2020-2025>.

³ Government of Barbados, Ministry of Health and Wellness (MHW). National Cancer Action Plan (2021 – 2025). Bridgetown, Barbados: MHW; 2020. <https://www.iccp-portal.org/resources/national-cancer-control-plan-barbados>

trend. In addition, 2022 represents the third consecutive year the Registry has observed a greater proportion of cancer cases in women (54.5%) than men (45.5%) in Barbados.

Age-standardised incidence rates (ASIRs) per 100,000 population (men and women), increased when comparing the last reported figures from 2020 to those reported in the 2022 data. ASIRs for 2022 were 223 per 100,000 men and 210 per 100,000 women. This report closely examines the top 10 cancers as these represent approximately 80% of the total cancers in 2022. ASIRs for the top five cancers are showing an increasing 2-year trend (Figure 2). The highest incidence of cancer in Barbados continues to be in the 65 to 79-year age range for both men and women in 2021 – 2022. The 1-year survival rate was approximately 66% (or two-thirds of diagnosed persons), and the 5-year survival rate was 48.5%.

Key Messages

- The number of new breast cancer cases continues to rise in Barbados, with 192 and 209 new cases registered in 2021 and 2022 respectively.
- Cancers of the gastrointestinal tract represent 19% (192) of the cases registered in 2022 (colorectal, pancreas, and stomach).
- There were more cases registered via histology of metastases (biopsy of tumour spread) in 2022, than in the nine prior reported years, which may be an indication of late stage presentation.
- Lung cancer incidence rates continue to be lower in Barbados than observed internationally. The trend suggests a decrease in the number of cases, with 2022 showing the lowest number (19 cases, <2% of overall cases) reported in the last ten years.

Summary Statistics

Table 1: Summary Statistics for BNR-Cancer, 2013-2022

| Year | 2022 | 2021 | 2020 | 2019 | 2018 | 2017 | 2016 | 2015 | 2014 | 2013 |
|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| No. registrations (tumours) | 983 | 941 | 981 | 924 | 1019 | 1015 | 1082 | 1092 | 884 | 885 |
| No. registrations (patients) | 977 | 932 | 943 | 910 | 990 | 997 | 1046 | 1069 | 865 | 868 |
| % of entire population | 0.35 | 0.33 | 0.33 | 0.32 | 0.35 | 0.35 | 0.37 | 0.37 | 0.30 | 0.31 |
| Age-standardized Incidence Rate (ASIR) per 100,000 | 213.7 | 202.6 | 207.0 | 191.9 | 221.0 | 215.8 | 235.1 | 243.9 | 206.2 | 209.7 |
| No. registered by death certificate only (DCO) | 25 | 12 | 29 | 48 | 60 | 80 | 85 | 101 | 41 | 59 |
| % of tumours registered as DCOs | 2.5 | 1.4 | 3.0 | 5.2 | 5.8 | 8.0 | 7.8 | 9.3 | 4.6 | 6.6 |
| 1-year survival (%) | 63.8 | 66.8 | 66.6 | 69.6 | 68.7 | 64.3 | 63.0 | 66.6 | 64.05 | 66.0 |
| 3-year survival (%) | 57.8 | 54.3 | 53.7 | 57.8 | 59.0 | 51.1 | 49.35 | 51.6 | 48.9 | 49.2 |
| 5-year survival (%) | . | . | 52.6 | 56.4 | 56.4 | 47.9 | 46.0 | 44.7 | 40.8 | 42.9 |

Note 1: 2022 (Population=282,986), 2021 (Population=281,207), 2020 (Population=287,371), 2019 (Population=287,021), 2018 (Population=286,640), 2017 (Population=286,229), 2016 (Population=285,798), 2015 (Population=285,327), 2014 (Population=284,825), 2013 (Population=284,294)

Notes 2: 5-year survival is missing for 2021 and 2022 due to an insufficient follow-up period.

Introduction

The NSP-NCD 20-25 lists NCD surveillance and research, as well as monitoring and evaluation of NCDs as a priority area. The Barbados National Registry (BNR), a Ministry of Health and Wellness (MHW) project led by the George Alleyne Chronic Disease Research Centre at The University of the West Indies, provides key data that can help identify areas for continued monitoring, evaluation, and improvement in clinical services. This report represents ten years of national cancer incidence data, collected and reported by the BNR on the behalf of the MHW. The report also outlines 12 years of cancer mortality data (2013 – 2024).

Methods

The reporting methodology utilised by the BNR remained unchanged since our last report in 2024 (See *Appendix*).

Cancer registries typically take between two to five years after the end of a given calendar year to report complete data. This is a result of continuing accrual of late registrations, completion of trace-back

investigations and follow-up activities. In Barbados, an active data collection methodology is particularly impacted by paper-based health information systems and limited physician cooperation, both of which increase the time required for case confirmation and data collection.

Incidence

Number of Cases

The total number of cases registered by the BNR were 941 in 2021 and 983 in 2022. Prostate cancer continued to represent the highest number of diagnoses annually, with over 200 cases each year since 2014, and 230 cases in 2022. Female breast cancer was the second most common diagnosis between 2013 and 2022, with 209 new cases reported in 2022. There were 34 cases of pancreatic cancer in 2022, the highest since 2018. The prevalence of all cancer cases in the population remains around an average of 0.33% of the population from 2013 – 2022 (Table 1).

Prostate cancer, female breast, colorectal cancer and cancers of the corpus uteri remain the top four reported cancers over the past 10 years and represent over 50% of all cases. For the purposes of comparability to international reporting, the sites “colon” and “rectum” are now combined and represented as “colorectal” throughout this report. The rankings in this report for previous years have been adjusted to reflect this change.

The incidence of lung cancers in Barbados continues to be low. According to GLOBOCAN 2022⁴, lung cancer along with breast cancer represents the highest number of cases worldwide (12.4% of total cases). However, in 2022 in Barbados, lung cancer ranks 10th, representing less than 2% of cases. The data presented in this report represents the lowest number of reported lung cases over the last ten years.

Cancers of the digestive track are three of the top ten cancers reported in 2022 (colorectal, stomach and pancreas).

⁴ Ferlay J, Ervik M, Lam F, Laversanne M, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2024). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: <https://gco.iarc.who.int/today>, accessed [18 08 2025]

Table 2: Number, Percentage and Rank of the top 10 cancer sites, Barbados 2018 – 2022

| Site | Number of Tumours (% of all) | | | | | | | | | |
|----------------------|------------------------------|----------------|------|----------------|------|----------------|------|----------------|------|----------------|
| | Rank | 2022 | Rank | 2021 | Rank | 2020 | Rank | 2019 | Rank | 2018 |
| Prostate | 1 | 230 (23.4%) | 1 | 226 (24.0%) | 1 | 241 (24.6%) | 1 | 244 (27.8%) | 1 | 237 (23.3%) |
| Female Breast | 2 | 209 (21.3%) | 2 | 192 (20.4%) | 2 | 180 (18.3%) | 2 | 181 (20.1%) | 2 | 180 (17.7%) |
| Colorectal | 3 | 133 (13.5%) | 3 | 137 (14.6%) | 3 | 162 (16.5%) | 3 | 131 (14.9%) | 3 | 152 (14.9%) |
| Corpus uteri | 4 | 58 (5.9%) | 4 | 43 (4.6%) | 4 | 69 (7.1%) | 4 | 51 (5.8%) | 4 | 56 (5.5%) |
| Pancreas | 5 | 35 (3.6%) | 7 | 26 (2.8%) | 8 | 23 (2.3%) | 7 | 20 (2.3%) | 5 | 34 (3.3%) |
| Stomach | 6 | 24 (2.4%) | 8 | 23 (2.4%) | 10 | 18 (1.8%) | 6 | 22 (2.5%) | 9 | 22 (2.2%) |
| Cervix uteri | 7 | 21 (2.4%) | 11 | 15 (1.6%) | 9 | 20 (2.0%) | 11 | 16 (1.7%) | 12 | 13 (1.3%) |
| Non-Hodgkin lymphoma | 8 | 20 (2.0%) | 9 | 18 (1.9%) | 5 | 25 (2.5%) | 10 | 17 (1.8%) | 8 | 19 (1.9%) |
| Kidney | 9 | 21 (2.1%) | 10 | 19 (2.0%) | 7 | 31 (3.2%) | 9 | 17 (1.9%) | 11 | 25 (2.4%) |
| Lung | 10 | 19 (1.9%) | 5 | 32 (3.4%) | 6 | 31 (3.2%) | 5 | 32 (3.6%) | 7 | 28 (2.7%) |

Notes 3: Rank has been updated to reflect the combination of sites 'colon' and 'rectum', now reported as 'colorectal'.

Cancer Distribution by Gender (Top 10 cancers)

Of the 983 cases reported in 2022, 54.5% of cases occurred in women (513 cases). This is the third consecutive year in which more cancer cases were reported in women than in men (2020 – 2022). The top five cancers in women remains relatively unchanged in 2021 – 2022 (female breast cancer, colorectal, cervix and corpus uteri and pancreatic cancer). In men, prostate and colorectal cancers were the two most common. Cancers of the stomach, lung, pancreas, and multiple myeloma interchanged ranks between third and fifth place over the past decade. Prostate cancer accounted for 49% of all male cancer cases in 2022. We also report, in 2022, the highest number of male breast cancers in Barbados over the 10 years of reported data.

Figure 1: Number of cases from top 10 cancer sites, by gender, 2013 -2022

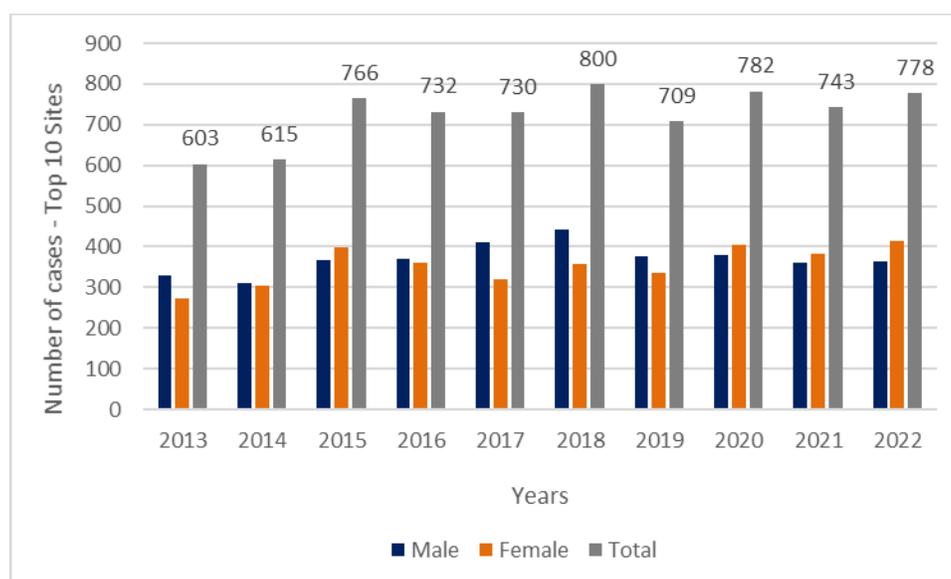


Table 3: Number and percentage of the top five cancer sites by gender, and ASIR with 95% uncertainty intervals (95% UI), Barbados, 2022, Women (146,370) Men (134,837)

| Gender | Site | Number of tumours | % of all tumours | ASIR | 95% UI |
|----------------------------|--------------|-------------------|------------------|--------------|----------------------|
| Women (total cases) | | 513 | 100 | 209.7 | 191.1 – 229.9 |
| | Breast | 209 | 40.7 | 90.6 | 78.19 – 104.6 |
| | Colorectal | 75 | 14.6 | 28.4 | 22.1 – 36.2 |
| | Corpus uteri | 58 | 11.3 | 21.3 | 16.1 – 28.0 |
| | Pancreas | 22 | 4.3 | 7.5 | 4.7 – 12.0 |
| | Cervix uteri | 21 | 4.09 | 10.51 | 6.3 – 16.6 |
| Men (total cases) | | 469 | 100 | 223.3 | 203.2 – 245.1 |
| | Prostate | 230 | 49.0 | 103.7 | 90.6 – 118.4 |
| | Colorectal | 58 | 12.4 | 27.0 | 20.4 – 35.3 |
| | Stomach | 17 | 3.6 | 8.6 | 4.9 – 14.3 |
| | Lung | 15 | 3.2 | 7.5 | 4.1 – 12.8 |
| | Pancreas | 13 | 2.8 | 6.2 | 3.3 – 11.0 |

Age-standardised Incidence Rates (ASIR)

Barbados has an aging population⁵. As age is one of the main risk factors for cancer, age-standardised incidence rates (ASIR) allow comparability across countries by removing age as a factor. Overall cancer incidence in Barbados remains higher than global averages. In 2022, GLOBOCAN estimated the ASIR for

⁵ Barbados Statistical Service. 2021 Population and Housing Census Report. Barbados. 2023. <https://stats.gov.bb/census/>. Accessed August 2025.

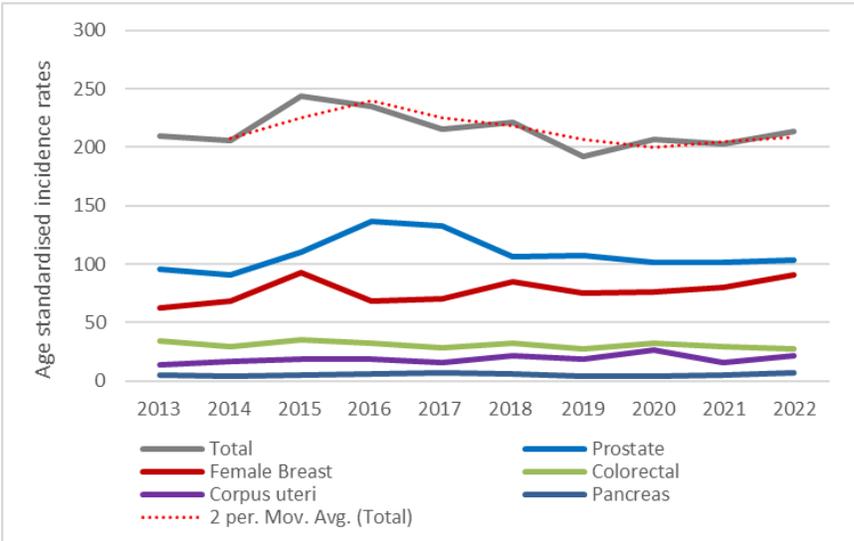
all cancers worldwide at 196.9 per 100,000⁶, compared to 213.7 per 100,000 in Barbados. Rates were higher for both sexes compared with global estimates: 209.7 per 100,000 vs. 186.3 globally in women; 223.3 per 100,000 vs. 212.6 globally in men. While overall cases in women were greater than men in 2022, the ASIRs in men were higher than women.

The ASIRs for the top five cancer sites for 2013 – 2022 are shown in Figure 2. Prostate cancer rates, which peaked in 2016, have since plateaued. Breast cancer rates show an upwards trend. However, when assessed using a two-year moving average over the decade (Figure 2), ASIRs in 2022 were similar to those in 2013. This suggests incidence rates are rising slightly but stabilising over the long term.

Table 4: Age-standardised incidence rates of all cancers by gender, 95% uncertainty intervals (95% UI), Barbados, 2013 - 2022

| Years | Men (134,837) | | | | Women (146,370) | | | |
|-------|---------------|------|-------|---------------|-----------------|------|-------|---------------|
| | Cases | % | ASIR | 95% UI | Cases | % | ASIR | 95%UI |
| 2013 | 454 | 51.4 | 235.1 | 213.7 – 258.3 | 430 | 48.6 | 191.4 | 172.7 – 211.7 |
| 2014 | 453 | 51.2 | 229.0 | 207.9 – 251.9 | 431 | 48.8 | 189.9 | 171.5 – 210.0 |
| 2015 | 515 | 47.2 | 251.7 | 229.8 – 275.2 | 577 | 52.8 | 239.7 | 219.2 – 261.8 |
| 2016 | 582 | 54.0 | 275.1 | 252.7 – 299.1 | 496 | 46.0 | 203.5 | 184.8 – 223.7 |
| 2017 | 547 | 54.5 | 250.8 | 229.7 – 273.5 | 457 | 45.5 | 184.7 | 167.1 – 203.8 |
| 2018 | 504 | 50.0 | 229.3 | 209.3 – 250.9 | 505 | 50.0 | 212.8 | 193.4 – 233.8 |
| 2019 | 468 | 51.4 | 206.2 | 187.6 – 226.3 | 443 | 48.6 | 177.9 | 160.6 – 196.6 |
| 2020 | 484 | 49.6 | 214.9 | 195.6 – 235.8 | 491 | 50.4 | 201.0 | 182.5 – 221.0 |
| 2021 | 456 | 46.3 | 212.1 | 192.7 – 233.1 | 484 | 53.7 | 198.1 | 180.1 – 217.7 |
| 2022 | 469 | 45.5 | 223.3 | 203.2 – 245.1 | 513 | 54.5 | 209.7 | 191.1 – 229.5 |

Figure 2: Age-standardised Incidence Rate (ASIR) curves for top five cancers, 2013 – 2022



⁶ GLOBOCAN 2022: Latest global cancer data shows rising incidence and stark inequities. 1 February 2024. <https://www.uicc.org/news-and-updates/news/globocan-2022-latest-global-cancer-data-shows-rising-incidence-and-stark>. Accessed August 18, 2025.

Cancer Incidence Stratified by Age-category and Sex

Trends in cancer incidence by age group for 2021 (Figure 3) and 2022 (Figure 4) follow the expected pattern of increasing incidence with age. More women than men were diagnosed between ages 30 and 55. Incidence in men rises from age 45, coinciding with the recommended age for prostate cancer screening. Most cancers in Barbados were diagnosed between 65 and 79 years, corresponding with the retirement years. During this period, patients may face reduced access to healthcare if employer-based health insurance coverage ends.

Figure 3: Age and gender stratified rates for all cancers, Barbados, 2021

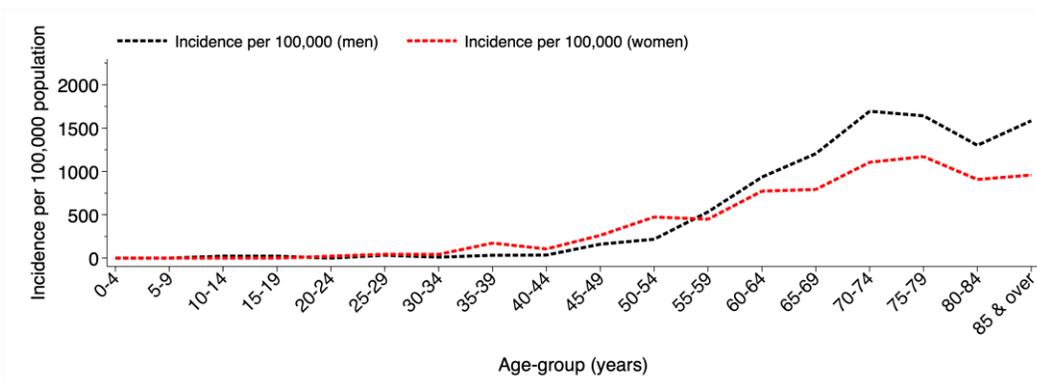
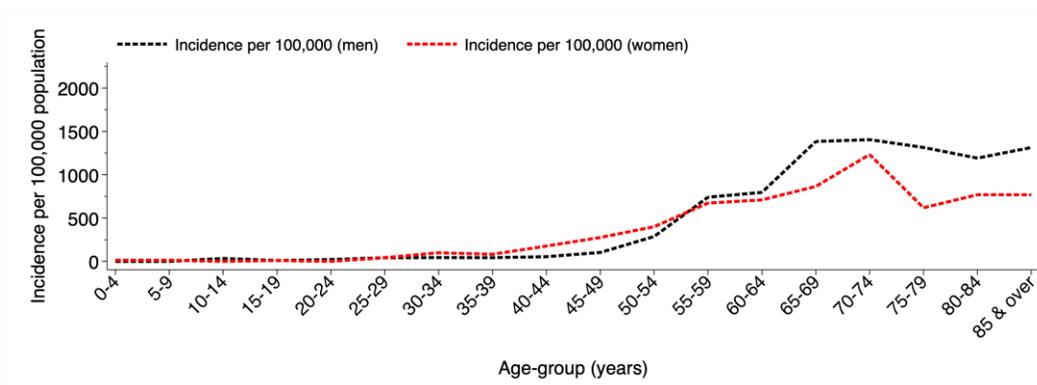


Figure 4: Age and gender stratified rates for all cancers, Barbados, 2022



Mortality

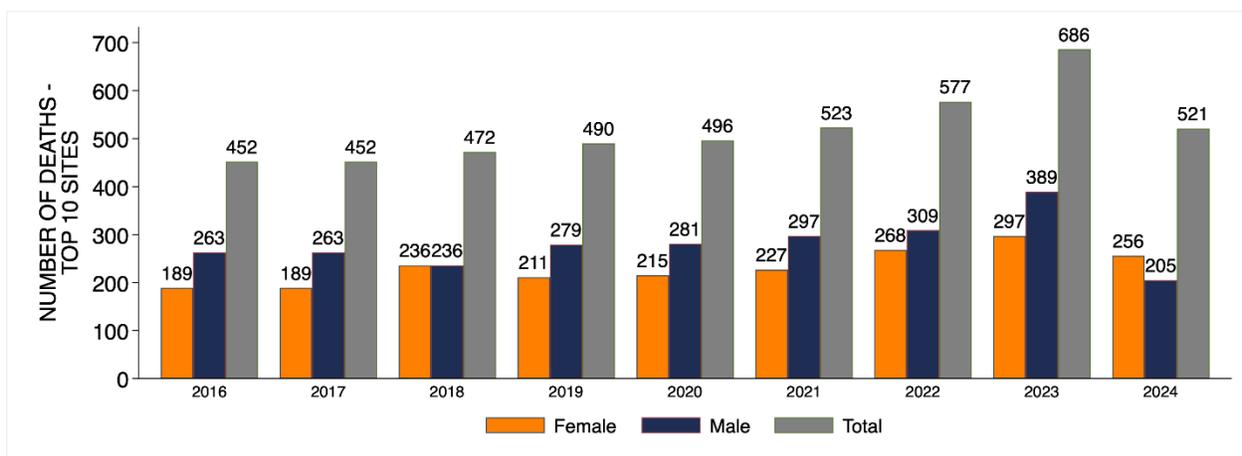
There were 932 and 774 cancer-related deaths registered with the Registration Department for 2023 and 2024 respectively. Further review of death data in subsequent reports should indicate if this is a true decline in cancer-related deaths to pre-COVID levels or a delay in death registration. Table 5 lists the top ten sites contributing to mortality between 2021 and 2023. Between 2016 – 2021, more deaths were attributed to the top ten cancer mortality sites in men than in women (Figure 6). However, in 2024, more women were registered as having died of cancer than men. Across the four-year period (2021–2024), prostate, colorectal, and female breast cancers were consistently the leading causes of cancer-related deaths. Although lung cancer had one of the lowest incidence rates, it was the fourth leading cause of cancer-related death in three of the four years examined (Table 5).

Table 5: Top 10 Cancer-related deaths and percentage of total cancer deaths, 2021 - 2024

| 2021 | | 2022 | | 2023 | | 2024 | |
|----------------------|----------------|---------------|----------------|------------------|----------------|---------------|----------------|
| Site | Deaths | Site | Deaths | Site | Deaths | Site | Deaths |
| Prostate | 139 (19.1%) | Prostate | 163 (19.8%) | Prostate | 173 (18.8%) | Prostate | 155 (24.2%) |
| Colorectal | 118 (16.2%) | Colorectal | 116 (14.1%) | Colorectal | 141 (15.3%) | Colorectal | 113 (17.6%) |
| Female breast | 75 (10.3%) | Female breast | 75 (9.1%) | Female breast | 101 (10.9%) | Female breast | 73 (11.4%) |
| Lung | 47 (6.5%) | Lung | 43 (5.2%) | Lung | 65 (7.0%) | Corpus uteri | 46 (7.2%) |
| Pancreas | 29 (4.0%) | Pancreas | 42 (5.1%) | Liver | 51 (5.5%) | Lung | 40 (6.2%) |
| Kidney | 26 (3.6%) | Liver | 35 (4.3%) | Pancreas | 40 (4.3%) | Pancreas | 35 (5.5%) |
| Stomach | 23 (3.2%) | Kidney | 30 (3.6%) | Corpus uteri | 32 (3.5%) | Kidney | 31 (4.8%) |
| Multiple Myeloma | 22 (3.0%) | Cervix uteri | 24 (2.9%) | Kidney | 28 (3.0%) | liver | 31 (4.8%) |
| Corpus uteri | 21 (2.9%) | Corpus uteri | 24 (2.9%) | Stomach | 27 (2.9%) | Stomach | 27 (4.2%) |
| Non-Hodgkin Lymphoma | 21 (2.9%) | Stomach | 23 (2.8%) | Multiple Myeloma | 24 (2.6%) | Bladder | 17 (2.6%) |

Notes 4: numbers have adjusted from the previous reports due to data cleaning and consolidation, and late death registrations.

Figure 5: Number of deaths from the top 10 cancer sites, by gender

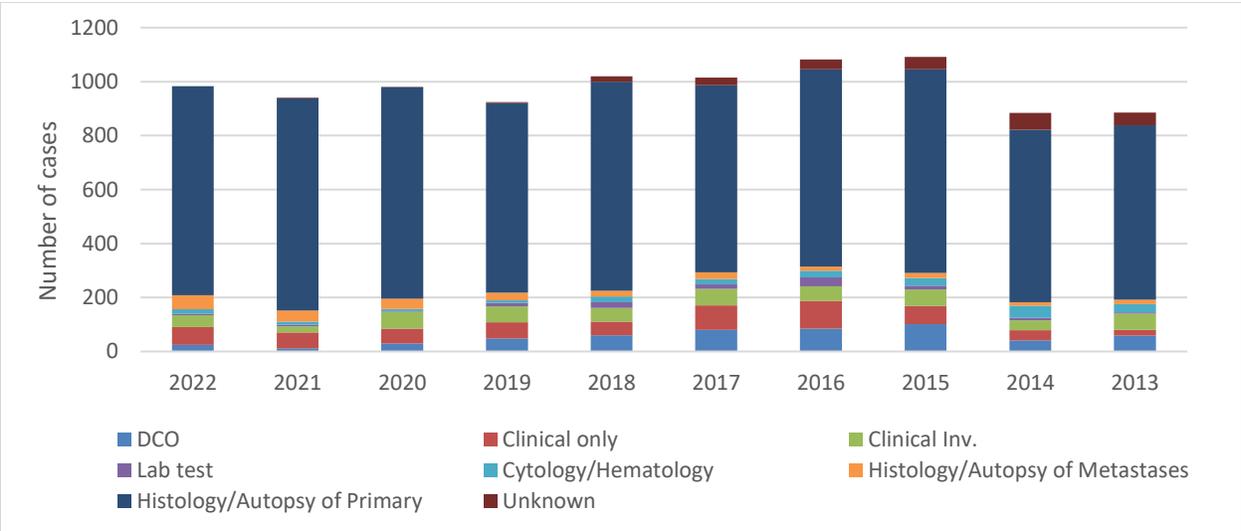


Data Quality

The Barbados National Registry strives to collect the most accurate cancer data for national reporting. In a review of the basis of diagnosis of cancer in Barbados, the majority of the diagnoses (74.5%) were made through histology of primary (i.e. biopsy of the primary cancer site; Figure 7). An average of 5.5% of cases were registered through a review of death certificates only between 2013 – 2022. In addition, there have been only 2.4% of cases where the basis of diagnosis was unknown – cases that cannot be traced.

One area of concern is the number of cases 53 (5.4%), being diagnosed by histology of a metastatic spread or an autopsy without histology. This indicates that the cancer was first found due to malignant spread; a suggestion of late stage presentation and delays in diagnosis.

Figure 6: Basis of Diagnosis for Cancer Cases, 2013-2022



Summary

Cancer remains a major public health concern in Barbados. On average, 981 new cancer cases are diagnosed each year over the 10-year reporting period (2013–2022). Incidence rates remain higher than global estimates, with breast cancer continuing to rise and prostate cancer plateauing but still representing a significant disease burden. These trends highlight the urgent need to prioritise early detection and screening, particularly for breast, colorectal, and prostate cancers, as part of national cancer control efforts.

Evidence of late presentation — including a growing proportion of diagnoses from metastatic tissue and high mortality in cancers with relatively low incidence (such as lung cancer) — underscores the importance of increasing public awareness, strengthening referral pathways, and expanding access to timely diagnostic services.

The BNR remains committed to providing high-quality, nationally representative data on cancer incidence and mortality to support evidence-based decision-making by the Ministry of Health and Wellness and guide future cancer prevention and control strategies.

Appendices

Appendix A – Acknowledgements

Authors

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Prof. SG Anderson, GA-CDRC Director

Prof. IR Hambleton, Statistician

Special thanks

Prof. Sir Trevor Hassell, Chairman of National Chronic Non-Communicable Disease Commission

Staff in the following departments of the Queen Elizabeth Hospital: Medical Records, Pathology, Radiotherapy, Haematology, Death Records, Colposcopy

Appendix B – PAB Membership

The Professional Advisory Board of the BNR (2022)

| Name | Affiliation |
|-----------------------------|---|
| Dr Kenneth Connell (Chair) | President of the National Commission for Chronic NCDs |
| Prof. Simon Anderson | Director, George Alleyne Chronic Disease Research Centre (GACDRC) |
| Dr Taraleen Malcolm | Representative, PAHO/WHO |
| Most Hon. Dr Kenneth George | Chief Medical Officer, Ministry of Health and Wellness |
| Dr E Arthur Phillips | Senior Medical Officer of Health, Ministry of Health and Wellness |
| Dr Joy St. John | Caribbean Public Health Agency (CARPHA) |
| Dr Natalie Greaves | University of the West Indies |
| Dr Dawn Scantlebury | Queen Elizabeth Hospital (QEH) |
| Dr Cheryl Alexis | University of the West Indies |
| Ms Lee-Ann Salandy | Queen Elizabeth Hospital (QEH) |
| Mrs Tanya Martelly | George Alleyne Chronic Disease Research Centre |
| Dr Richard Ishmael | Consultant Radiologist, QEH |
| Prof. David Corbin | Consultant Neurologist, QEH; Clinical Director, BNR–Stroke |
| Dr Rudolph Delice | Head of Dept. of Medicine, QEH; Clinical Director, BNR–Heart |
| Prof. Patsy Prussia | Honorary Consultant Pathologist, QEH; Clinical Director, BNR–Cancer |

Appendix C – Definitions

An incidence rate is the number of new disease events occurring in a specified population during a year, usually expressed as the number of events per 100,000 population at risk. That is,
Incidence rate = (new events / population) × 100,000

The numerator of the incidence rate is the number of new disease events; the denominator is the size of the population. The number of new events may include multiple events occurring in one patient. In general, the incidence rate does not include recurrences (where recurrence is defined as a presentation to the healthcare system within a certain period of the initiating event).

The age standardised rate is the proportion of cases (or deaths) in a given population (and year) weighted by the age structure of the population. For incidence (ASIR) and mortality (ASMR) calculations, cases and deaths were weighted by the WHO World Standard population.

A mortality rate is the number of deaths, in which the disease (cancer) was the underlying cause of death, occurring in a specified population during a year. Mortality is usually expressed as the number of deaths due to the disease per 100,000 population. That is,
Mortality rate = (disease deaths/population) × 100,000

The numerator of the mortality rate is the number of deaths; the denominator is the size of the population.

Case Definitions

Case definition for 2008 diagnoses: “All in-situ and malignant neoplasms with a behaviour code of 2 or 3 according to the International Classification of Diseases for Oncology, 3rd Edition (ICD-O-3) as well as benign tumours of the brain & other parts of CNS, pituitary gland, craniopharyngeal duct and the pineal gland (behaviour code of 0 or 1).”

Case definition for 2013 onwards diagnoses: “All malignant neoplasms with a behaviour code of 3 according to the ICD-O-3 and in-situ neoplasms of the cervix only (CIN3). Exclude all other in-situ neoplasms and basal cell and squamous cell carcinoma of skin, non-genital areas”.

The case definition for 2014 onwards remains the same as 2013 but was reworded to: Data were collected on all malignant neoplasms with a behaviour code of 3, according to the International Classification of Diseases for Oncology, 3rd Edition 1st Revision (ICD-O-3.1), as well as in situ neoplasms of the cervix only (CIN 3) diagnosed in 2014.

Residency

‘Usual Residence’ used in the Population and Housing Census is as follows:

Usual Residence – This is defined as the place where a person being enumerated lives and sleeps most of the time.

(a) For persons with more than one home, usual residence will be the one at which the person spends the greater part of the year. Thus, for an individual who has more than one place of residence because his workplace or school is away from home, the usual residence should be that place in which he/she spends at least four nights of the week.

(b) Fishermen at sea are considered to have their place of usual residence where they

dwell when on shore.

(c) Barbadians in the farm labour programme were enumerated in their usual households; seamen or crewmembers on vessels plying foreign ports should record as their usual residence the place where they stay when on shore.

(d) Aircraft pilots are considered to have their usual residence in the households in which they dwell.

(e) Foreign diplomats are the usual residents of the countries they represent and were not enumerated.

Appendix D – Data Quality

Data Collection Methodology

Cases were ascertained by trained data abstractors via review of available pathological and laboratory data, as well as data from key departments at the Queen Elizabeth Hospital: haematology clinic, the Clara Brathwaite Centre for Oncology & Nuclear Medicine, colposcopy, and death records.

Following case ascertainment, data were abstracted directly onto encrypted laptops, using the International Agency for Research on Cancer (IARC)'s CanReg software, version 5. For complete information on each tumour, further retrieval from additional sources (e.g., private physicians and clinics) was performed as required. This is necessary as patients may take several pathways to diagnosis, whether accessing initial care through: the general practitioner, a non-governmental organisation (NGO) through breast or prostate screening programs, a specialist physician, or a surgeon. By collecting data from all sources, the most representative incidence date for the tumour can be determined (the first date of definitive diagnosis).

Mortality data was entered into a Research electronic data capture (REDCap) database from paper records existing within the Barbados National Registration Department. This allowed the team to conduct death clearance and provides death clearance data to other departments within the Ministry of Health and Wellness.

The Barbados National Registry continues to make every effort to ensure cancer data is comparable with other registries internationally, as such, we have outlined below the definitions and assumptions used for reporting and the changes made over time:

- a. The Registry switched from The International Agency for Research on Cancer (IARC) definition of incidence, for 2008 data collection year, to the European Network of Cancer Registries (ENCR) definition which better matched data we had collected for 2013 onward (*see Appendix for definitions*)
- b. Residency is categorised as:
 - i. Persons living on the island for six months or more
 - ii. 'Usual residence' as per the Barbados Statistical Services definition (*See Appendix*)
 - iii. All persons registered with the Electoral and Boundaries Commission
 - iv. The address listed on the death certificate if no other information available
- c. Only malignant tumours are included in the calculation of ASIRs in this report, per international standards. The summary tables include both malignant tumours and cervical carcinoma in situ. Notes accompanying the tables will guide readers accordingly.
- d. Nationally reported annual numbers of cancer deaths, presented by the Ministry of Health and Wellness, may differ from numbers of deaths reported by the BNR. MHW

reports based on underlying cause of death and BNR reports all cases with cancer listed on the death certificate. All cases with cancer listed as a cause-of-death are treated as a death certificate notification and are investigated to determine the year of incidence.

Data Analysis

In order to share data and make it comparable to other countries and year-to-year, the BNR must maintain quality. We engage several tools for standardising and formatting variables, checking for accuracy, duplicates and missing data as well as performing preliminary analysis. Data Management and Analysis were performed using the International Association for Research in Cancer software: IARCcrgTools version 2.13 (by J. Ferlay, Section of Cancer Surveillance, International Agency for Research on Cancer, Lyon, France), Stata version 17.1 (StataCorp., College Station, TX, USA), CanReg5 database version 5.43 (International Agency for Research on Cancer, Lyon, France), Research electronic data capture (REDCap), Version 15.6, the SEER Hematopoietic database (Surveillance, Epidemiology and End Results (SEER) Program [www.seer.cancer.gov] Hematopoietic and Lymphoid Database, online version. National Cancer Institute, DCCPS, Surveillance Research Program).

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