The Northwest Territories (NWT) is a Canadian territory spanning over 1,000,000 km², north of the 60th parallel. While the population of the territory has the second lowest population density in Canada, fifty percent of the population is Indigenous, which can further be divided into Dene (26%), Inuit (33%), and Metis (6%) persons.

The NWT Cancer Registry was established in 1982 alongside the Canadian Cancer Registry (CCR). This national registry ensures Canadian residents are only registered in their jurisdiction of residence at the time of cancer diagnosis. The NWT Cancer Registry records all newly diagnosed cases of invasive cancer, as well as select benign tumours and carcinoma in situ.

This report profiles cancer in the NWT between 2000 and 2016 and conveys the most up to date information available.

1. Examine cancer incidence in the NWT
2. Determine trends in cancer incidence over time, from 2000-2016
3. Compare cancer rates in the NWT to national rates
4. Characterize cancer morbidity, screening and staging in the territory

METHODS

Descriptive methods were used for calculating crude cancer incidence rates, mortality rates, staging and screening participation rates. The direct method for age-standardization with confidence-intervals was used. NWT data was age-standardized to the 2011 Canadian Standard Population. Standardized incidence ratios and confidence intervals were calculated using the direct method for cancer overall and the indirect method for cancer types1-3. Where necessary, data was aggregated over multiple years.

‘Cancer’ refers to a malignant tumour, while ‘tumour’ refers to the tissue or organ of origin. Multiple primary cancers were counted as separate ‘cases’.

References

RESULTS

In the NWT, the topmost cancer diagnoses and causes of death are due to preventable cancers: colorectal, breast and lung. Cancer survival is in primary opportunities in the NWT. There are no organised screening programs for colorectal or cervical cancer and one breast cancer screening program which serves half of the population. In the absence of organized screening programs, the NWT falls short of national screening targets for all cancers, with consequent wait to late stage (2-4) diagnoses for colorectal, breast and lung cancer. Although lung cancer screening programs are not routine in Canada, it is a preventable cancer in the NWT, smoking rates are among the highest in the country (38%), and lung cancer is diagnosed in more advanced stages.

NWT’s age-standardized cancer incidence rate for all cancers combined has changed little since 2000 and is not significantly different from Canada’s rates. However, for some specific cancers, namely colorectal in males and females and lung in females, the NWT rate surpasses national rates. Despite a decreasing trend in age-standardized cancer mortality in the NWT, mortality rates for cancer combined remains significantly elevated relative to Canada. In addition, the NWT mortality rates for lung, colorectal, and prostate cancer surpass national rates.

Improved cancer screening in the NWT through organized cancer screening programs (colorectal, breast and cervical) and following Canadian guidelines for lung cancer screening could lead to more early stage cancer diagnoses and decreased cancer mortality from preventable cancer.

Limitations
1. The small NWT population size reduces statistical power when comparing to other populations
2. Multiple years of data were aggregated where necessary.
3. Age-standardization was used to mitigate the effects of age and population size variations in incidence rates.
4. Standardized incidence ratios were used for national level comparisons
5. High variability in cancer cases creates wide confidence intervals
6. The need to compare aggregated years of NWT data to a single year of Canadian data
7. Where possible crude Canadian data was age-standardized and combined similarly to NWT data or single years were used for comparisons

CONCLUSION

The need to compare aggregated years of NWT data to a single year of Canadian data
7. Where possible crude Canadian data was age-standardized and combined similarly to NWT data or single years were used for comparisons

REFERENCES & ACKNOWLEDGEMENTS

4. Statistics Canada.  Table  17-10-0005-01   Population estimates on July 1st, by age and sex

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