Report: Almost Half of Cancers in Alberta are Preventable

The Alberta Population Attributable Risk (PAR) study was initiated as a collaboration between the Department of Cancer Epidemiology and Prevention Research, CancerControl Alberta and the Alberta Cancer Prevention Legacy Fund, Population, Public and Aboriginal Health in May 2014.

The project culminated in a major report that provides estimates of the number of incident cancers in Alberta for 2012 that could be attributed to modifiable lifestyle and environmental risk factors for cancer. A series of manuscripts from this project have also been written and are currently under review for publication.

The new PAR numbers, found on www.AlbertaPreventsCancer.ca, show that up to 45 per cent of Alberta's cancer cases are caused by factors we can change. AHS is helping to make those changes by:

- Supporting Albertans in quitting tobacco use.

- Providing information on topics like indoor tanning and sun safety to help people make informed choices for themselves and their families.

- Delivering cancer-preventing vaccines like the HPV vaccine to school-aged children across Alberta.

- Coordinating programs that increase the number of Albertans who benefit from high quality cervical, colorectal, and breast cancer screening.

- Working with communities and workplaces to help create the environments that make it easier for all Albertans to reduce their cancer risk.

- Making every contact with the health care system an opportunity for prevention.

The Population Attributable Risk (PAR) study estimated how many cases of each cancer type can be attributed to specific risk factors such as physical inactivity and being overweight. This corresponds to how strongly the factor is related to cancer and how common the risk factor is in Alberta.

Highlights:

- Tobacco continues to be the leading cause of cancer in Alberta with 2,485 cases.

- We could prevent about 810 cases of cancer in Alberta each year – if we support each other to eat better.

- We could prevent about 673 cases of cancer in Alberta each year – if we support each other to get to, and stay at, a healthy weight.

- We could prevent up to about 617 cases of cancer in Alberta each year – if we support each other to drink less alcohol.

- Eighty-five per cent of lung cancer in Alberta is due to risk factors that we can reduce, limit, and/or avoid with the top risk factors being tobacco, physical inactivity, and radon.

- Fifty per cent of breast cancer in Alberta is due to risk factors that we can reduce, limit, and/or avoid with the top risk factors being physical inactivity, hormone replacement therapy, and being overweight.

It's the first time in Alberta that cancer statistics have been broken down by the main lifestyle and environmental risk factors. This Alberta specific data helps cement the recommendation of experts in Alberta that eating healthy, maintaining a healthy body weight, being active, getting screened, getting vaccinated, limiting your exposure to UV rays, not using tobacco and reducing alcohol consumption are the key strategies for cancer prevention.

With www.AlbertaPreventsCancer.ca, Albertans have the unique opportunity to view a specific cancer type and dig deeper into the risk factors they can adapt or change to reduce their risk of that cancer type.For a wealth of useful resources and strategies that can be used right now to help Albertans reduce their risk of cancer, go to: www.albertapreventscancer.ca.

Alberta Study goes National
During the PAR project, an opportunity to apply for a Canadian Cancer Society Research Institute Cancer Prevention Partnership grant arose and Drs. Friedenreich and Brenner decided to leverage the work they had initiated in Alberta to a full scale Canada-wide project. They assembled a group of eminent cancer epidemiologists and biostatisticians from across Canada and were successful in November 2014 in receiving a four year grant for the "Quantifying the cancer incidence burden due to lifestyle and environment in Canada – the Canadian population attributable risk of cancer project (ComPARe)."

The ComPARe project will expand on the work done in Alberta by estimating the incidence of cancers that can be attributed to these same lifestyle and environmental risk factors for each province in Canada. In addition, they will be estimating how the incidence of cancers can be reduced by changing the exposures to these risk factors. These projections will be made from 2015-2045 and will provide valuable data for cancer prevention and promotion programs on the number of cancers that could be avoided by changes in lifestyle and environmental exposures.

How Do We Know How Much Cancer Is Caused By Individual Risk Factors?

When we talk about things that people can do to reduce their chances of getting cancer, a common question is: How much cancer is caused by specific risk factors? For example, someone might want to know how much lung cancer in Alberta is caused by smoking.

What is Population Attributable Risk?

Population Attributable Risk (PAR) is a measure used to estimate how many cases of cancer can be attributed to specific risk factors (which include things such as: smoking, physical activity, healthy body weight, radon, etc.). This measure is the proportion of cancers that could be prevented if a particular risk factor was removed from the population. For example, the PAR for cancer associated with tobacco smoking for Alberta represents the proportion of cancers in Alberta that we can consider to be attributable to tobacco.

What information do we need to estimate Population Attributable Risk?

Population Attributable Risk is estimated using two main pieces of information: the relative risk linking a risk factor with cancer from scientific studies and the prevalence of the risk factor in the Alberta population. The relative risk is a measure that allows us to quantify the strength of the relationship between an individual risk factor and cancer. Risk factors that are more likely to cause cancer have larger relative risks. The prevalence of the risk factor quantifies how common the risk factor is in the Alberta population.

Does this measure consider exposure today or in the past?

For the most part, cancer is a slow developing disease. Hence, when we talk about cancers being diagnosed today, they are likely caused by exposures to risk factors that occurred in the past. Consequently, when we are estimating the number of cancers being diagnosed today that are due to an individual risk factor using Population Attributable Risks (PAR), we need to use information about the prevalence of a given risk factor from the past. Although these statistics are based on past exposure, they also provide an estimate of how the number of cancers that are diagnosed could change if exposures to these risk factors are decreased.

How do we know how many cancer cases are caused by specific risk factors?

Population Attributable Risk measures give us an estimate of the proportion of cancers caused by each risk factor. We can estimate the actual cases of cancer by multiplying the total number of cases of a specific cancer type diagnosed in Alberta by the population attributable risk percentage.

For this project, we obtained data describing the number of new cancer cases diagnosed among adults in Alberta in 2012 from the Alberta Cancer Registry. These data were taken from the Alberta Cancer Registry in September 2014 and as such, may differ slightly from numbers published by the Surveillance and Reporting Department in CancerControl Alberta. To learn more about the cancer data used in our project, please go to AlbertaPreventsCancer.ca.

The PAR study was supported by the Alberta Cancer Prevention Legacy Fund.