## Beyond Breast Cancer: exploring the unconventional cancers among Canadian women

Sex is known to be a factor in the diagnosis and prognosis of disease<sup>1</sup> with cancer being a prime example. Cancer affects many Canadians during their lifetime, with estimates of 45% among men and 42% among women with a mortality rate of one in four (29% of men and 24% of women).<sup>2</sup> Specifically for women, though breast cancer continues to be the most prevalent diagnoses, with one in nine women developing this disease, lung cancer is the leading cause of death among women (27%) followed by breast (13.6%) and colorectal cancer (11.5%).<sup>2</sup> Such epidemiological findings highlight the need to explore and understand other cancers that may affect women in addition to breast cancer.

Lung cancer is one of the most common cancer for both men and women.<sup>2</sup> According to the Canadian Cancer Society (2010), the incidence of lung cancer has not increased for women since 2006 3 and the consumption of tobacco by women has significantly dropped since the mid-1980s.<sup>4</sup> Although rates of new cases are decreasing coupled with the efforts to decrease the impact of lung cancer, the five-year survival rate for stage I to III lung cancers is 54% and a grim 4% for stage IV.<sup>3</sup> This has led to lung cancer being the leading cause of death in Canada in comparison to other major types of cancers (prostate, breast and colorectal).<sup>2</sup>

The prevalence of colorectal cancer has fluctuated over the past decades with a notable decline in the mid-1980s for both men and women, though women had less prevalence relative to men.<sup>5</sup> In the mid-1990s, the prevalence of cancer increased and then slightly declined due to increased use of colorectal cancer screening.<sup>5</sup> Though the number for incidence continues to rise as a result of the aging population 6-8, through screening, health care professionals are able to identify and intern remove precancerous polyps, preventing the spread of cancer.<sup>2</sup> The five-year survival rate for colorectal cancer is quite particular with localized stage being 90%; the involvement of lymph node or organs being 71%; and 13% with metastatic disease.<sup>9</sup> Among Canadian women, colorectal cancer is the third leading cause of mortality following lung and breast.<sup>2</sup>

Finally both pancreatic and ovarian cancer rates are note-worthy for Canadian women, as they have high mortality rates. These "silent killers" manifest themselves initially with little signs and symptoms; however associated with serious prognostic outcomes. Particularly for pancreatic cancer, it is difficult to diagnose as there are no specific cost-effective screening tests which may detect early stages of this cancer.<sup>9</sup> As a result of the limited screening tests, the disease is often not detected until later stages when the cancer is no longer resectable.<sup>10</sup> The one-

year survival rate of people with pancreatic cancer is 28%, while the five-year survival rate of two and seven percent.<sup>11</sup> Although not as equally grave to pancreatic, ovarian cancer among women is undoubtedly more life threatening than breast cancer. If the cancer is contained within the ovaries, the five-year survival rate is estimated to be 92%, however with regional spread decreasing rates to 45%, and 27% with distant metastasis.<sup>10</sup>

In summary, although breast cancer is diagnosed the most among women, a closer investigation of others cancers affecting women in Canada shows lung, colon, pancreatic and ovarian cancer have higher mortality rates and relative to men. Such findings highlight the need for further work and efforts to reduce the impact of risk factors (i.e., tobacco use) in conjunction with appropriate screening to help with earlier diagnosis and in turn, the effective treatment of cancer in its earlier course and stage.

FIGURE 3.2 Percent distribution of estimated cancer deaths, by sex, Canada, 2015

Males 41,000 Deaths		Females 37,000 Deaths	
Lung	26.6%	Lung	27.0%
Colorectal	12.4%	Breast	13.6%
Prostate	10.1%	Colorectal	11.5%
Pancreas	5.6%	Pancreas	6.29
Bladder	4.0%	Ovary	4.79
Esophagus	3.9%	Non-Hodgkin lymphoma 3.3%	
Leukemia	3.8%	Leukemia	3.19
Non-Hodgkin lymphoma 3.5%		Body of uterus	2.8%
Stomach	3.1%	Brain/CNS	2.3%
Brain/CNS	3.0%	Stomach	2.19
Kidney	2.7%	Bladder	1.89
Liver	2.1%	Kidney	1.89
Oral	2.0%	Multiple myeloma	1.79
Melanoma	1.8%	Esophagus	1.29
Multiple myeloma	1.8%	Melanoma	1.19
Larynx	0.8%	Oral	1.19
Breast	0.1%	Cervix	1.09
All other cancers	12.5%	Liver	0.7%
		Larynx	0.29
		All other cancers	12.89

CNS=central nervous system

**Note:** The complete definition of the specific cancers listed here can be found in Table A10.

Analysis by: Surveillance and Epidemiology Division, CCDP, Public Health Agency of Canada Data source: Canadian Vital Statistics Death database at Statistics Canada