



Update on Cancer in Durham Region

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Outline

By the end of this presentation, you will learn about:

- Cancer surveillance in Durham Region
- Updated dashboard – **Durham Region Cancer Data Tracker**
 - Measures of morbidity and mortality
 - Specific indicators
 - Data source caveats
- Prevention
- Resources



Cancer Surveillance in Durham Region

- Cancer surveillance is part of public health programming outlined in the Ontario Public Health Standards
- Cancer At A Glance report - Examined cancer incidence (new cancers) in Durham Region
 - Trends from 1998 to 2012
 - Compared Durham Region & Ontario 2010-2012
- **In 2010, the Ontario Cancer Registry changed the rules for counting primary cancers to a more liberal system, leading to higher counts and rates. Comparing with past reports can be misleading.**



Cancer Surveillance in Durham Region





Durham Region Cancer Data Tracker

- Interactive Power BI dashboard launched in 2022
 - durham.ca/cancerstats
- Examines cancer incidence (new cancers) and mortality in Durham Region
 - Trends from 2010 to 2020
 - By age, sex, and site
 - Compares Durham Region and Ontario (2010-2020)
- Data Source
 - Ontario Cancer Registry (OCR) operated by Cancer Care Ontario
 - SEER*Stat Package
 - July 2023 release



Measures of Morbidity and Mortality

- Incidence – new cases of cancer diagnosed each year
- Mortality – deaths attributed to cancer each year
- Standardized Incidence Ratio (SIR) – ratio of the number of observed to expected cases
- Standardized Mortality Ratio (SMR) – ratio of the number of observed to expected cancer deaths
- Rates
 - Age-standardized – compare populations with different age compositions
 - Age-specific – compare rates between different age groups
 - Site-specific – compare rates of different types of cancers



Indicators

- Overall top five new cancer cases and cancer deaths
- Incidence and Mortality rates
 - All sites
 - By age (0-14 years, 15-29 years, 30-49 years and 50+ years)
 - By cancer site
 - Annual Percent Change in Durham Region from 2010 to 2018
- SIR/SMR – comparison of Durham Region to Ontario by age group and cancer site
- Selected cancer sites: Bladder, Brain (CNS), Breast, Cervical, Colorectal, Esophagus, Hodgkin Lymphoma, Kidney, Leukemia, Liver, Lung, Melanoma, Non-Hodgkin Lymphoma, Oral, Ovary, Pancreas, Prostate, Stomach, Testis, Thyroid, Uterine



There were 38,943 newly diagnosed cases of cancer and 13,342 cancer deaths among Durham Region residents between 2010 and 2020.

Top Five Cancers in Durham Region (2010-2020)

Five Most Common Cancers

Breast

14%

Lung

13%

Prostate

11%

Colorectal

10%

Lymphoma

5%

Five Most Common Cancer Deaths

Lung

25%

Colorectal

10%

Breast

8%

Pancreas

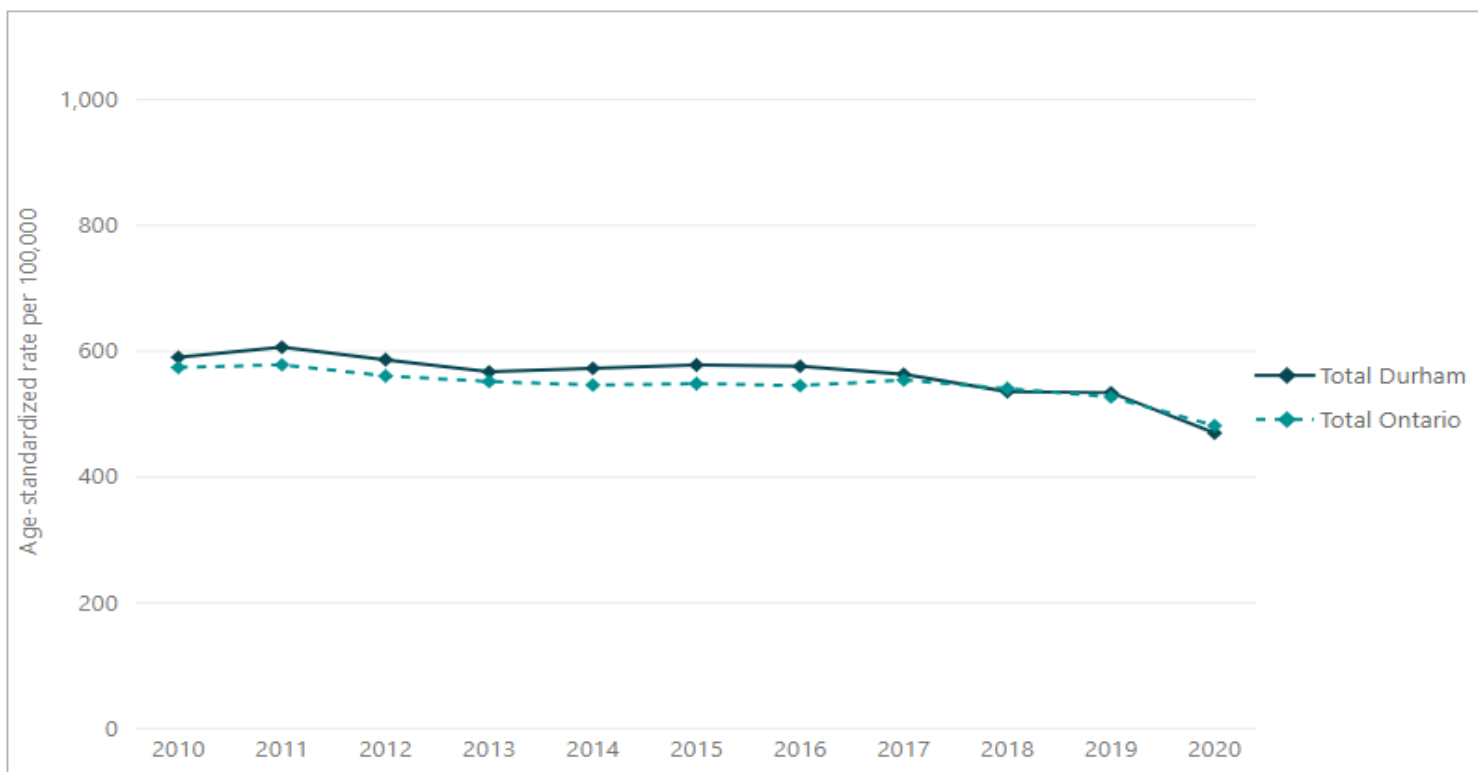
6%

Prostate

5%



Cancer Incidence Rates in Durham Region by Year



Sex

Female

Male

Total

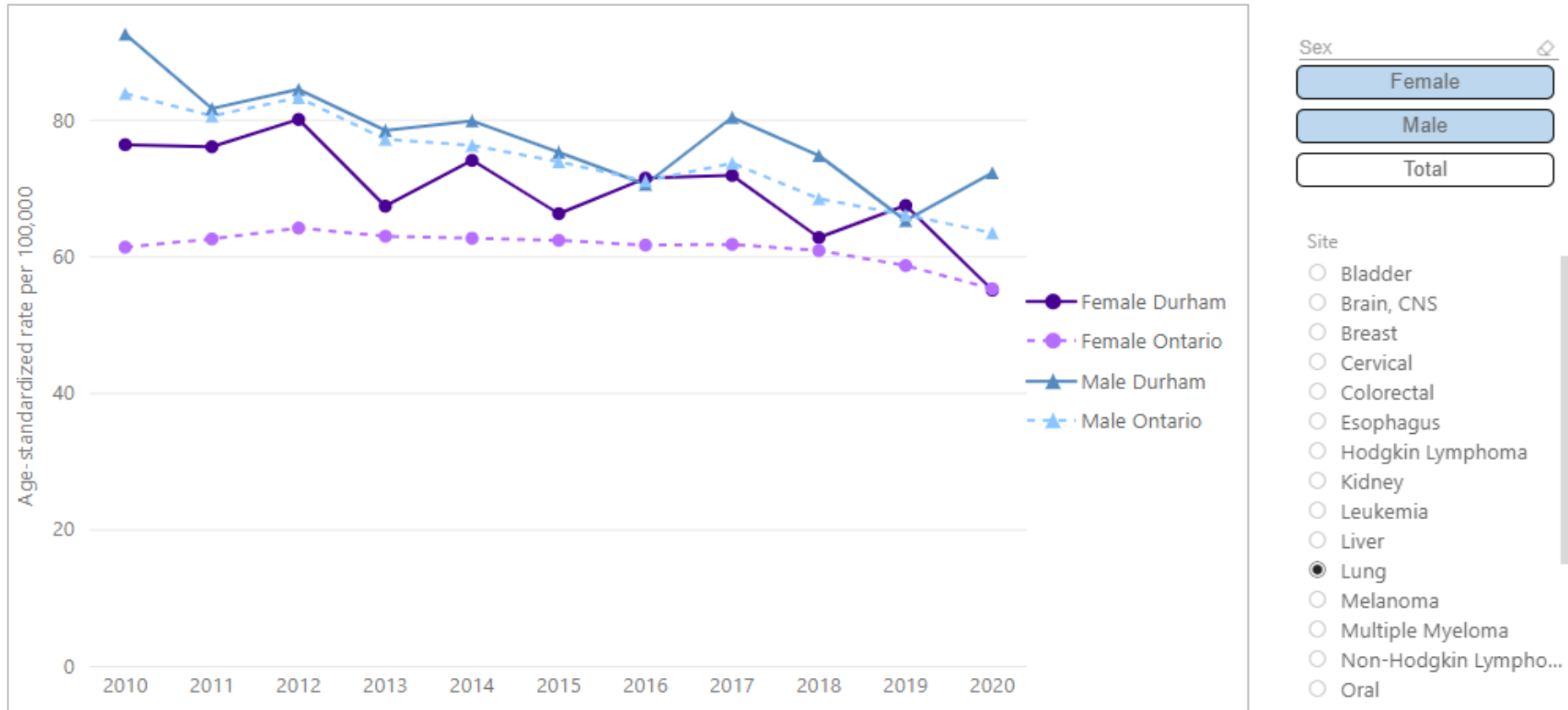
Click the buttons around the graph to view trends based on sex, age, and type of measure.

All Ages

Age Specific

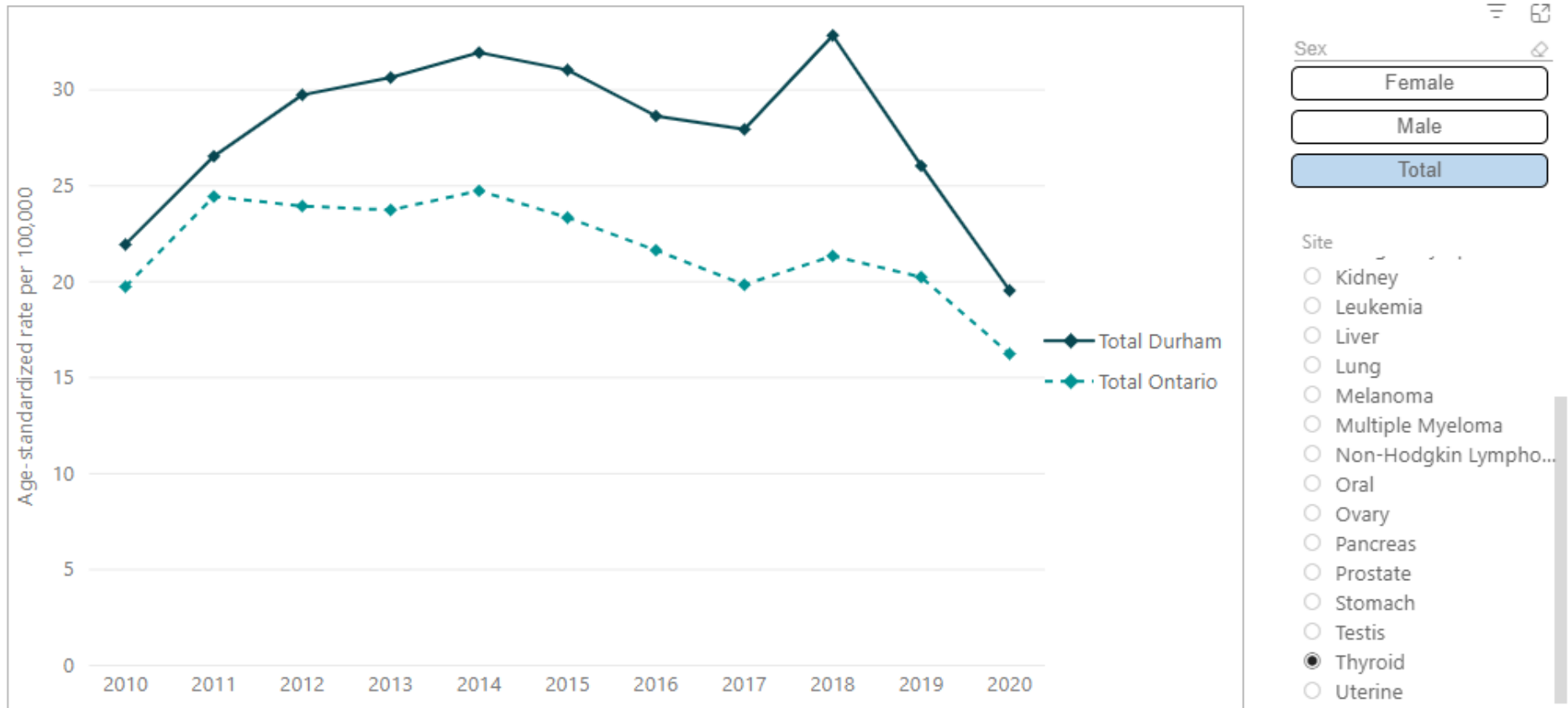


Cancer Incidence Rates in Durham Region for Selected Cancers by Year





Cancer Incidence Rates in Durham Region for Selected Cancers by Year





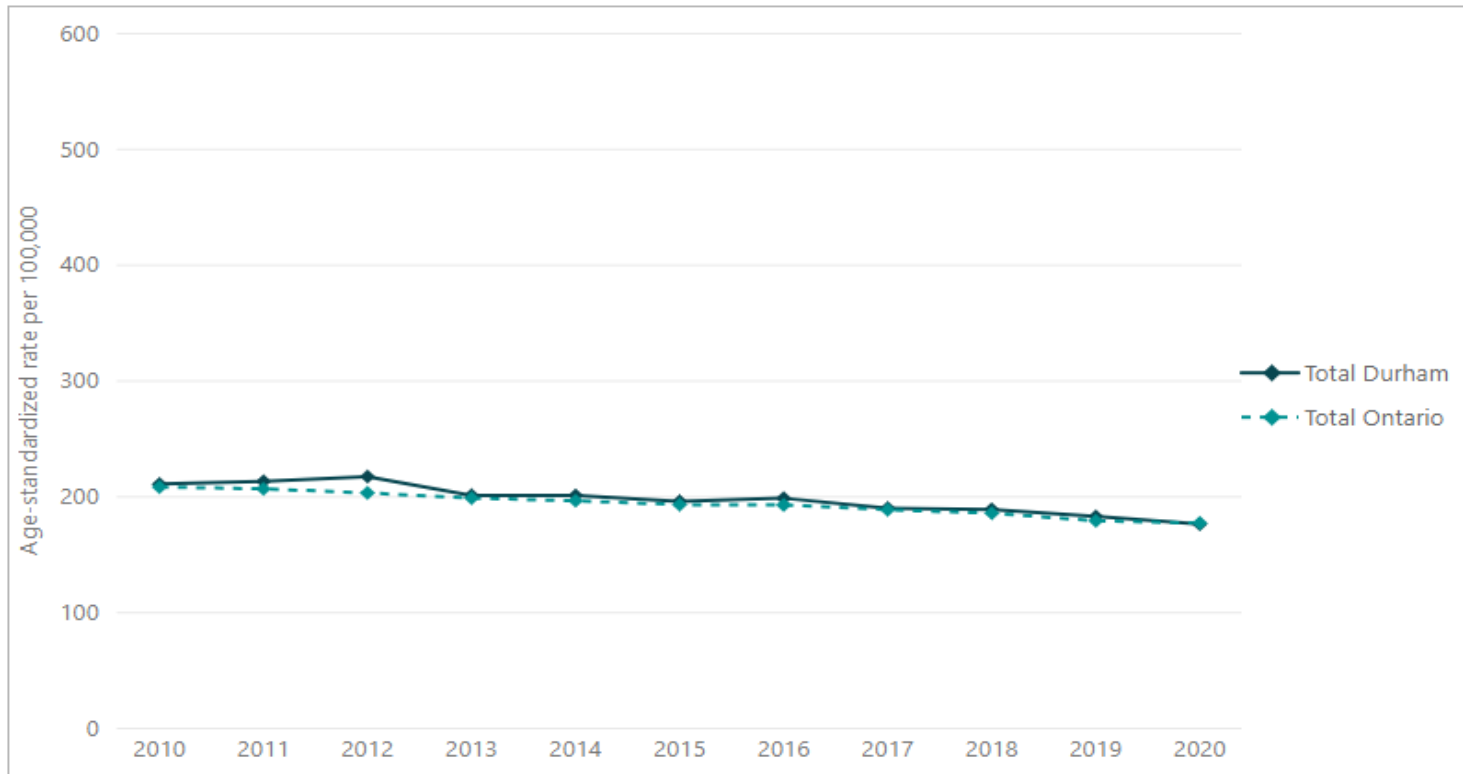
Changes Over Time in Cancer Incidence Rates for Selected Cancers

The table below shows age-adjusted rates per 100,000 population for Durham Region for 2010 and 2020. The annual percent change (APC) is the rate of change of incidence rates (age-adjusted to the 2016 Canadian population) over time. Statistical significance, in this instance, means the APC is significantly different from 0 (p-value<0.05).

Site	2020 Durham Rate	2020 Count	2010 Durham Rate	Annual Percent Change	Trend P-value	Statistical Significance
Breast	63.8	457	78.6	-0.80	0.30	Not Significant
Lung	62.0	458	82.4	-2.30	0.00	Significant decrease
Colorectal	48.2	346	62.5	-2.40	0.00	Significant decrease
Prostate	46.1	352	75.2	-3.90	0.00	Significant decrease
Non-Hodgkin Lymphoma	22.8	166	26.6	-2.70	0.00	Significant decrease
Bladder	21.0	152	33.8	-4.30	0.00	Significant decrease
Thyroid	19.5	136	21.9	-0.50	0.80	Not Significant
Melanoma	18.8	137	23.0	-1.20	0.40	Not Significant
Uterine	17.0	127	16.0	0.80	0.60	Not Significant
Kidney	14.5	106	15.0	0.00	1.00	Not Significant
Leukemia	13.0	97	21.0	-3.00	0.00	Significant decrease
Pancreas	12.7	94	10.2	-0.20	0.90	Not Significant
Oral	11.7	86	11.2	0.70	0.70	Not Significant
Stomach	9.7	70	11.2	-1.10	0.20	Not Significant
Multiple Myeloma	8.4	62	11.4	-3.90	0.00	Significant decrease
Ovary	7.5	55	10.1	-3.60	0.00	Significant decrease
Brain, CNS	6.9	50	7.8	-2.70	0.00	Significant decrease
Cervical	5.2	37	6.8	0.10	1.00	Not Significant
Esophagus	4.9	36	6.1	-2.70	0.20	Not Significant
Testis	4.4	31	2.7	3.80	0.10	Not Significant
Liver	4.3	32	4.8	3.10	0.20	Not Significant
Hodgkin Lymphoma	2.9	20	4.4	-2.90	0.10	Not Significant



Cancer Mortality Rates in Durham Region by Year



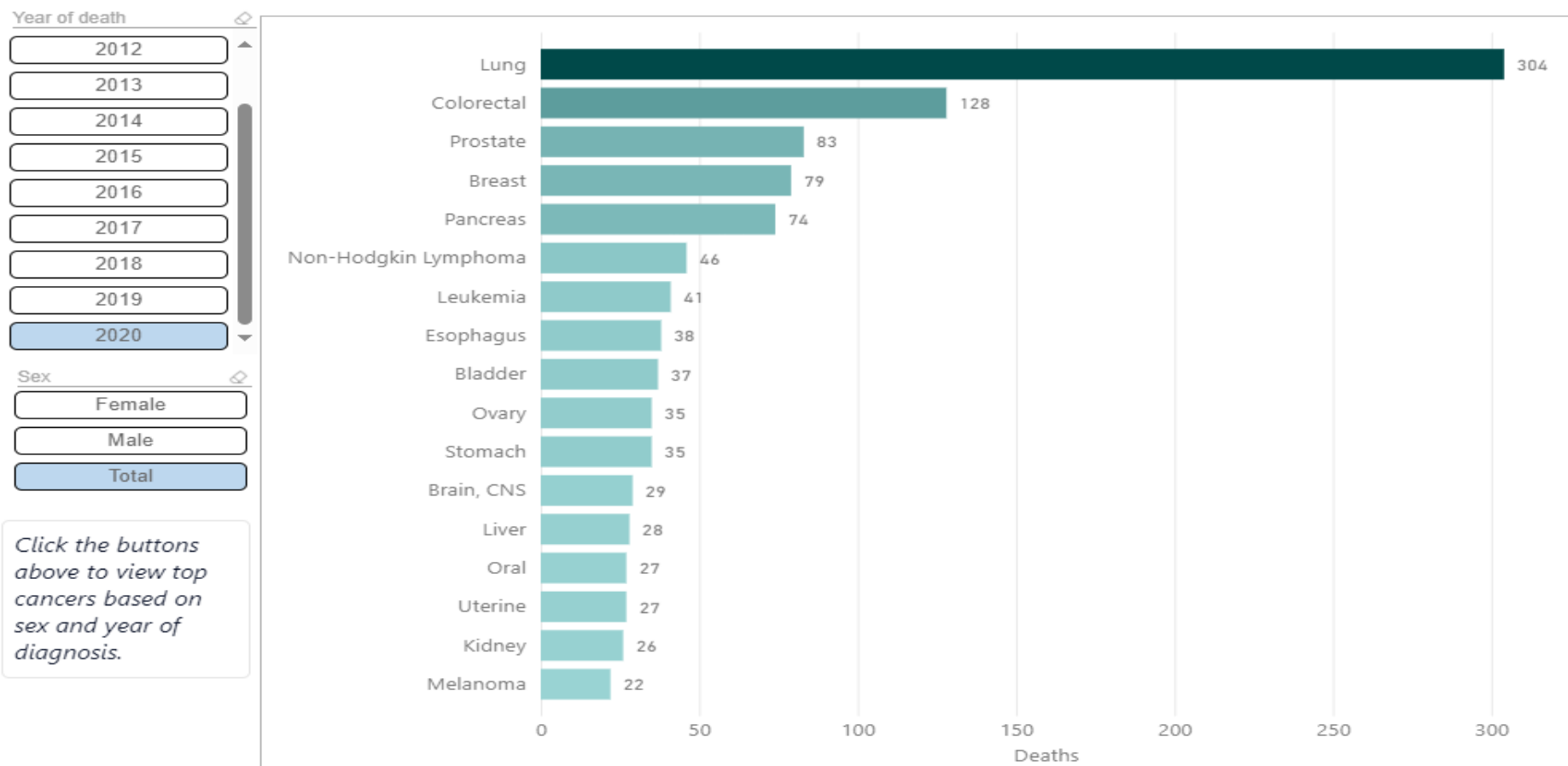
Click the buttons around the graph to view trends based on sex, age, and type of measure.

All Ages

Age Specific



Distribution of Cancer Deaths in Durham Region for Selected Cancers





Standardized Incidence Ratios (SIRs) by Age, 2010-2020 Combined

	Rate Ratio	Lower Confidence Interval	Upper Confidence Interval	P-Value	Count	Compared to Ontario
Durham Region						
00-14 years	0.95	0.82	1.09	0.46	213	Similar
15-29 years	1.15	1.07	1.24	0.00	719	Higher than Ontario
30-49 years	1.05	1.02	1.08	0.00	4,568	Higher than Ontario
50+ years	1.02	1.01	1.03	0.00	33,443	Higher than Ontario

Sex 

Female

Male

Total

Click the buttons above to view SIRs by sex.

Standardized Mortality Ratios (SMRs) by Age, 2010-2020 Combined

	Rate Ratio	Lower Confidence Interval	Upper Confidence Interval	P-Value	Count	Compared to Ontario
Durham Region						
00-14 years	1.30	0.92	1.80	0.13	40	Similar
15-29 years	1.05	0.80	1.36	0.75	60	Similar
30-49 years	0.99	0.91	1.08	0.89	612	Similar
50+ years	1.02	1.00	1.04	0.01	12,630	Higher than Ontario

Sex 

Female

Male

Total

Click the buttons above to view SMRs by sex.



Key Changes



- No changes in most common cancers overall and by sex
- No significant increase in incidence rates for common cancers in Durham Region
- Mortality rates have been stable over the last decade for all ages and sex
- Regional trends in mortality rates of various cancers for 2010-2020 are similar to those for 2010-2018
- Incidence (15-29yrs, 30-49yrs, 50+yrs) and mortality (50+yrs) for certain age groups continues to be higher than Ontario for 2010-2020 combined.
- Mortality for Bladder, Breast, Lung, and NH Lymphoma continues to be higher and for Colorectal and Liver continues to be lower than Ontario.
- Incidence for age standardized and age specific rates lower in 2020, possibly due to COVID related delays and closures
- Incidence rates for NH Lymphoma, Leukemia, Myeloma, and Brain/CNS have seen a statistically significant decline since 2010 in Durham Region
 - in addition to the four cancers noted in the previous update - Lung, Prostate, Colorectal, Bladder, and Ovary
- Compared to Ontario, Durham Region had
 - lower incidence of Brain/CNS and Kidney cancers
 - higher incidence for Multiple Myeloma



Caveats

- Non-melanoma cancers not included in Ontario Cancer Registry (OCR)
- Timeliness of data
- Suppression rules
- Selected cancers
- Limited information on external factors



We can prevent some types of cancer by:

- Eating a diet rich in vegetables and fruits
- Being physically active
- Not smoking
- Reducing alcohol consumption
- Maintaining a healthy weight
- Vaccinating against infections such as human papillomavirus (HPV) and hepatitis B
- Reducing exposure to carcinogens in the workplace
- Screening for breast, cervical and colorectal cancers
- Practicing sun safety and avoiding excessive sun exposure



Resources

- Public Health Ontario – [Snapshots](#)
- Cancer Care Ontario – [Ontario Cancer Profiles](#)



Durham Region Cancer Data Tracker

www.durham.ca/cancerstats



Questions?

