

An Update on Cancer Trends in PEI (2000-2023)

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Health PEI

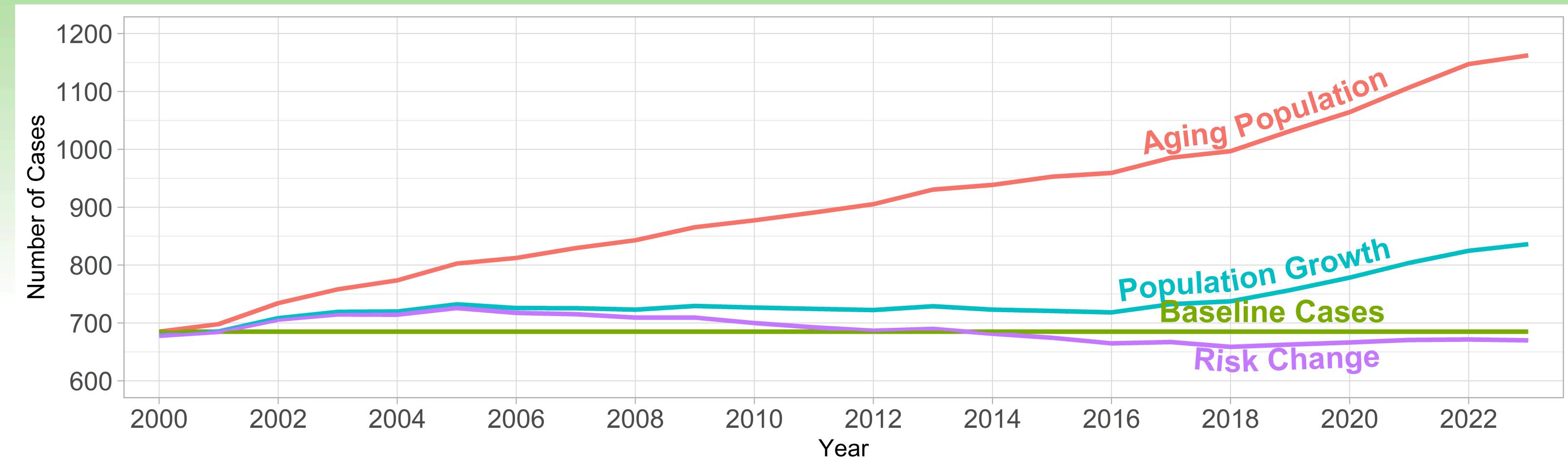
What We'll Cover Today

- How many invasive cancers get diagnosed each year (Cancer Incidence)
 - Trends over time and age and sex distribution
 - Most common cancers, PEI and Canada comparison
- What are the chances of cancer patients surviving 5 years? (Survival rate)
 - How survival has changed over time
 - Differences by sex, age, stage, and cancer type
 - PEI and Canada comparison
- How many people die from cancer? (Cancer Mortality)
 - Trends and patterns by sex and age
 - Most common cancer deaths, PEI and Canada comparison
- Conclusion

Cancer Incidence

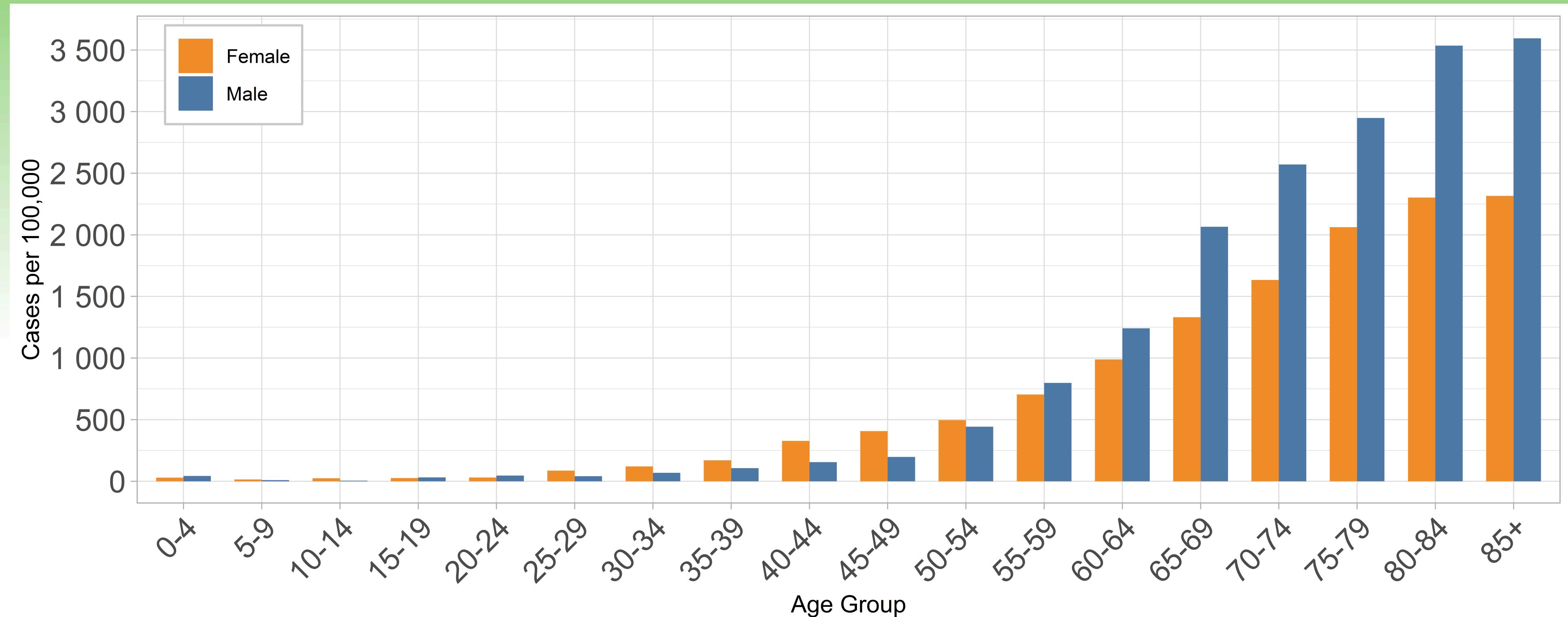
Cancer Incidence in PEI (2000-2023)

- Number of new invasive cancers diagnosed in a given time period, usually 1 year.



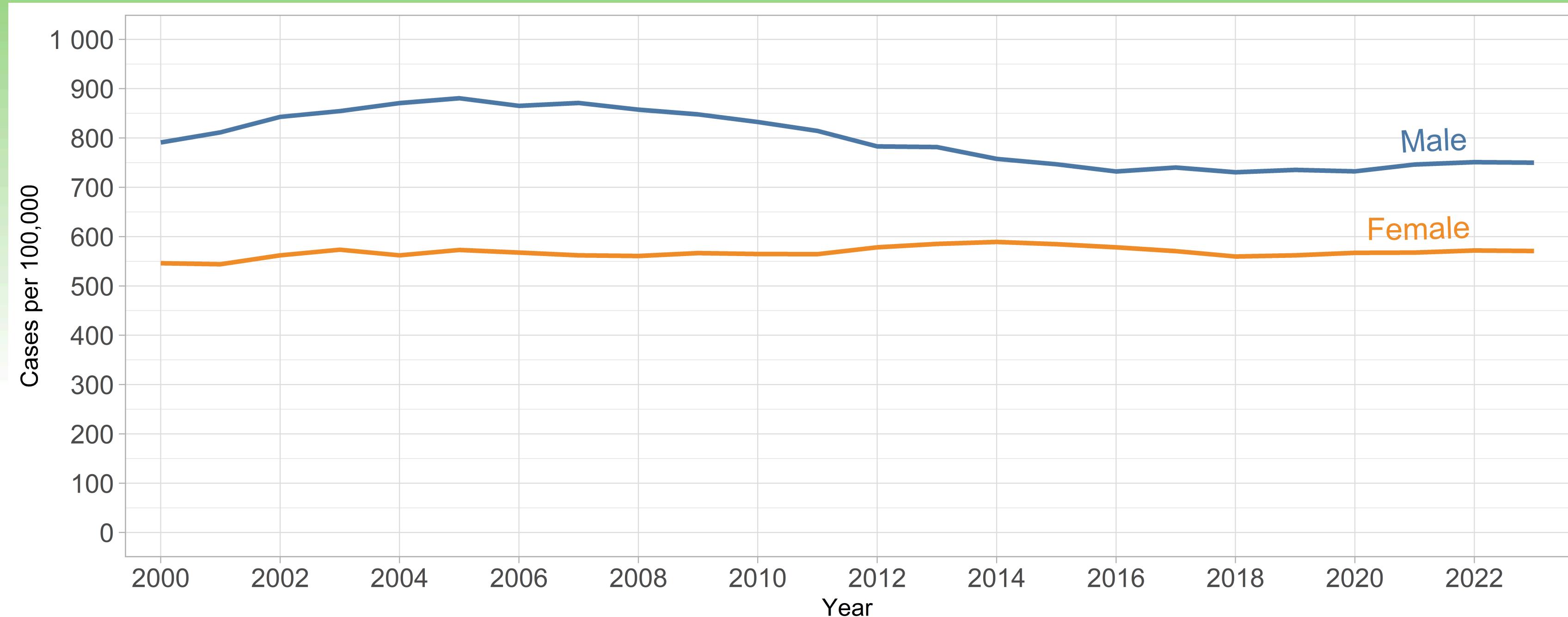
- Number of cases increased by 76.4% over two decades (658 in 2000 → 1,161 in 2023).
- Baseline Cases: Number of cases in year 2000
- Risk of getting cancer has been decreasing since 2005.
- PEI's population is growing → more people = more cases, even if risk is lower.
- Older population → higher likelihood of cancer. The older we live, the more likely we are to get cancer.

Impact of Age and Sex on Cancer Rates (2018-2022)



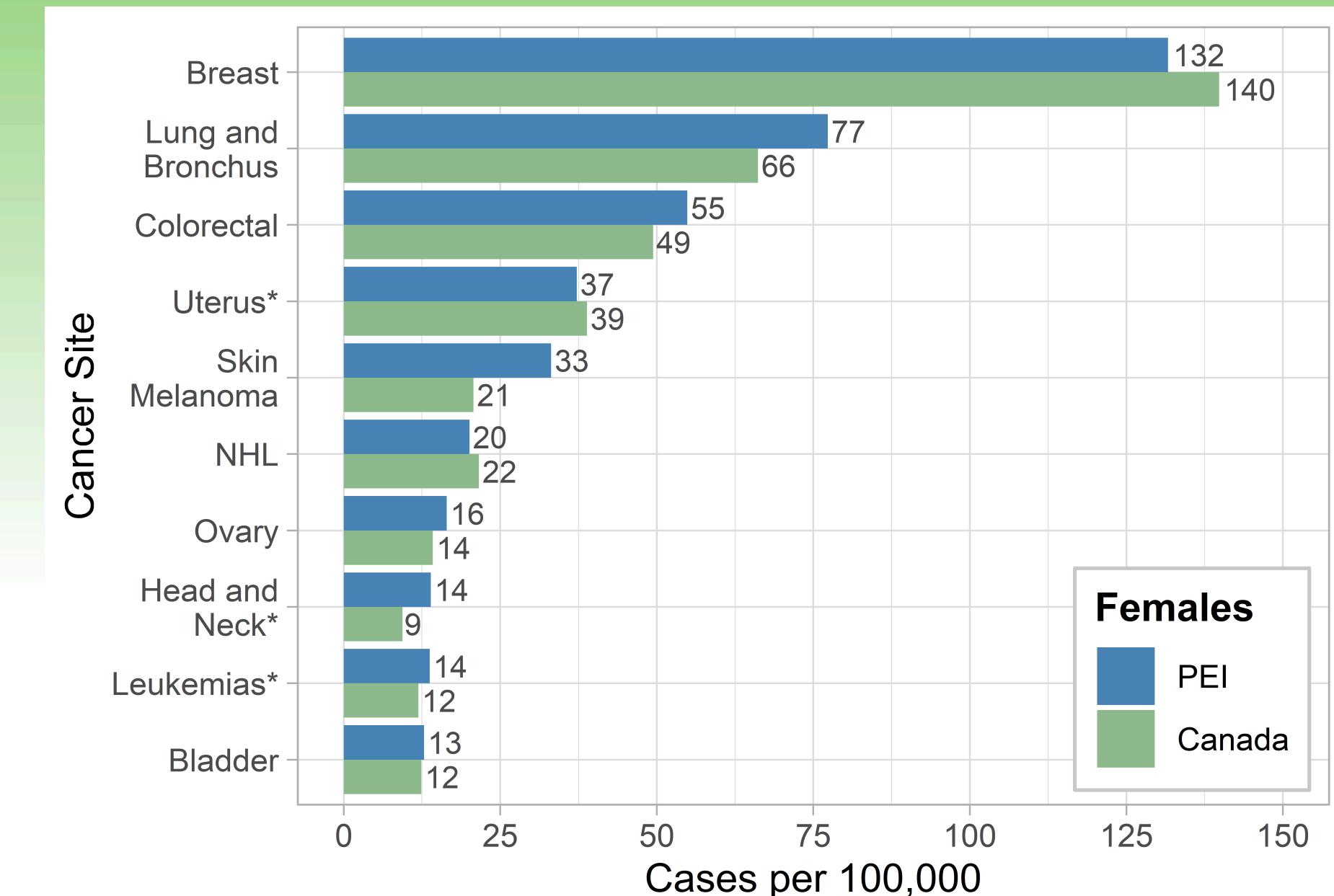
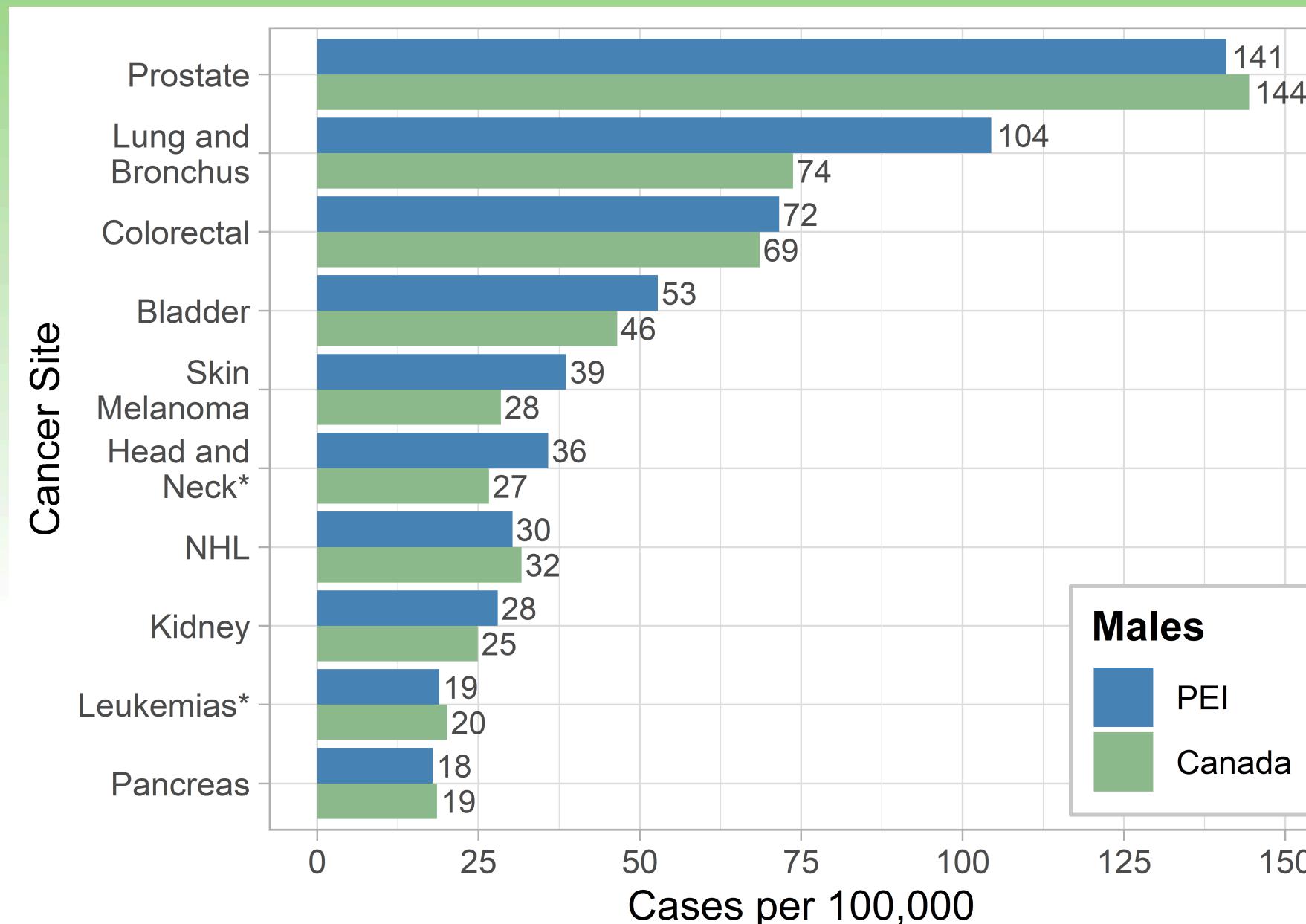
- Cancer rates rise sharply after age 55, especially among males.
- Females have higher rates at younger ages (due to melanoma, breast and reproductive cancers).

Age-Standardized Cancer Incidence Rates by Sex (2000-2023)



- Removes the effect of age and population differences so we can compare cancer rates fairly across different populations
- From 2000 to 2023, males had higher cancer incidence rates than females, but the gap is narrowing.
- Overall: ~649 per 100,000 in 2023

PEI compared to Canada: Incidence Rates (2018-2022)



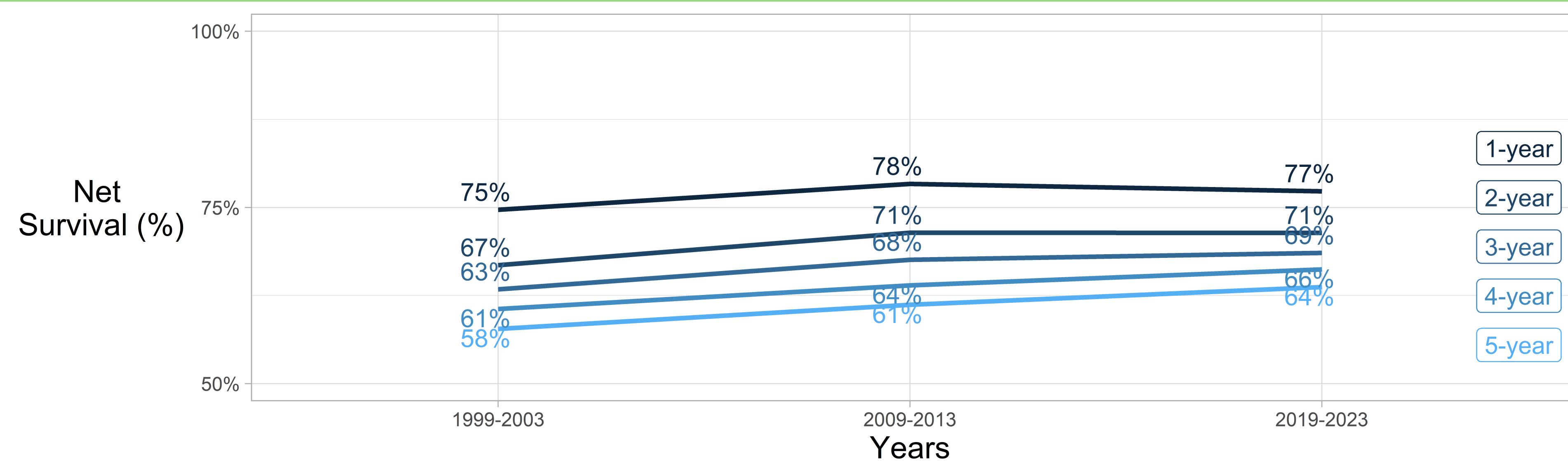
- Prostate (males) and breast (females) most common, both slightly below national rates - Lung and skin cancer considerably higher in PEI - Bladder cancer is 4th in males, 10th in females
- Overall, PEI has a higher cancer incidence than Canada (603 vs 567 per 100,000), with males having slightly higher rate than Canadian rates (689 vs 625) compared to females (532 vs 523).

Cancer Survival

What is Net Survival?

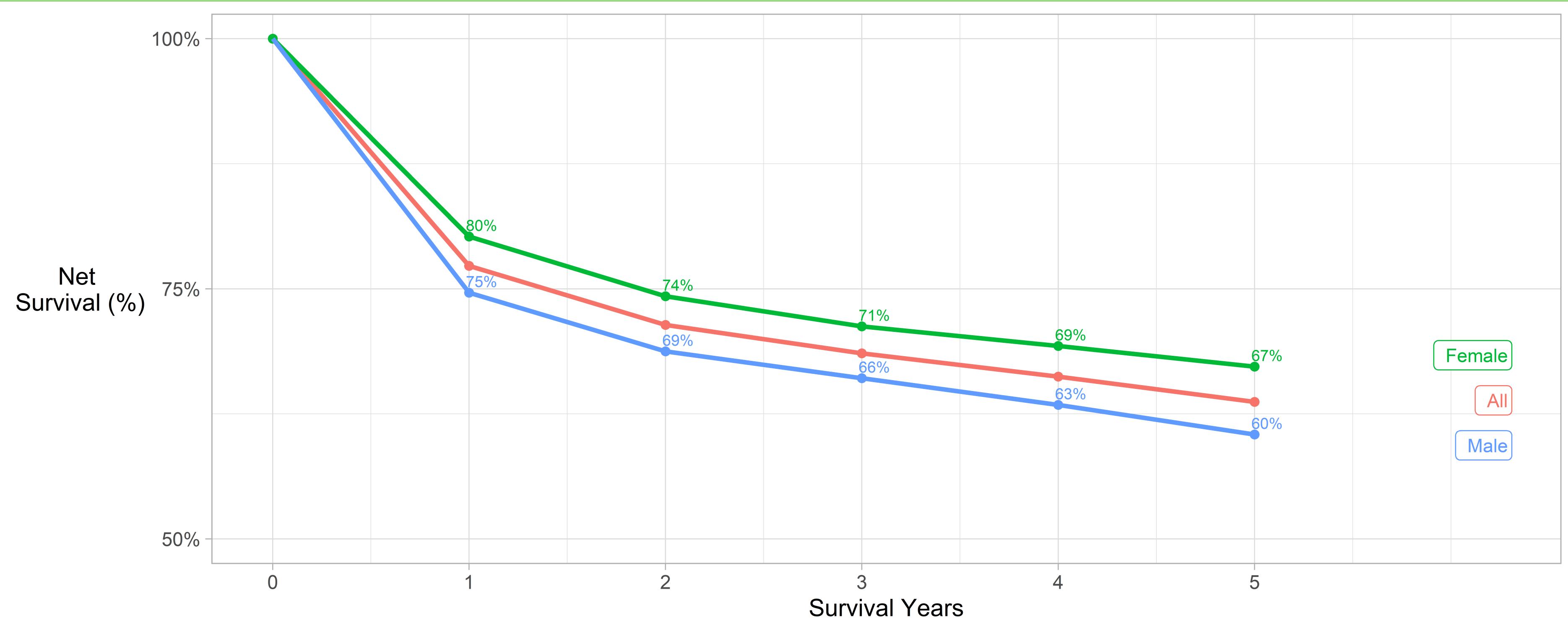
- Net survival: percentage of patients alive until certain years after diagnosis, adjusted for deaths from other causes
- 5-year net survival is the standard measure of patient survival after diagnosis.
- Shows effectiveness of early detection, treatment, and follow-up care

Cancer Survival in PEI (1999-2023)



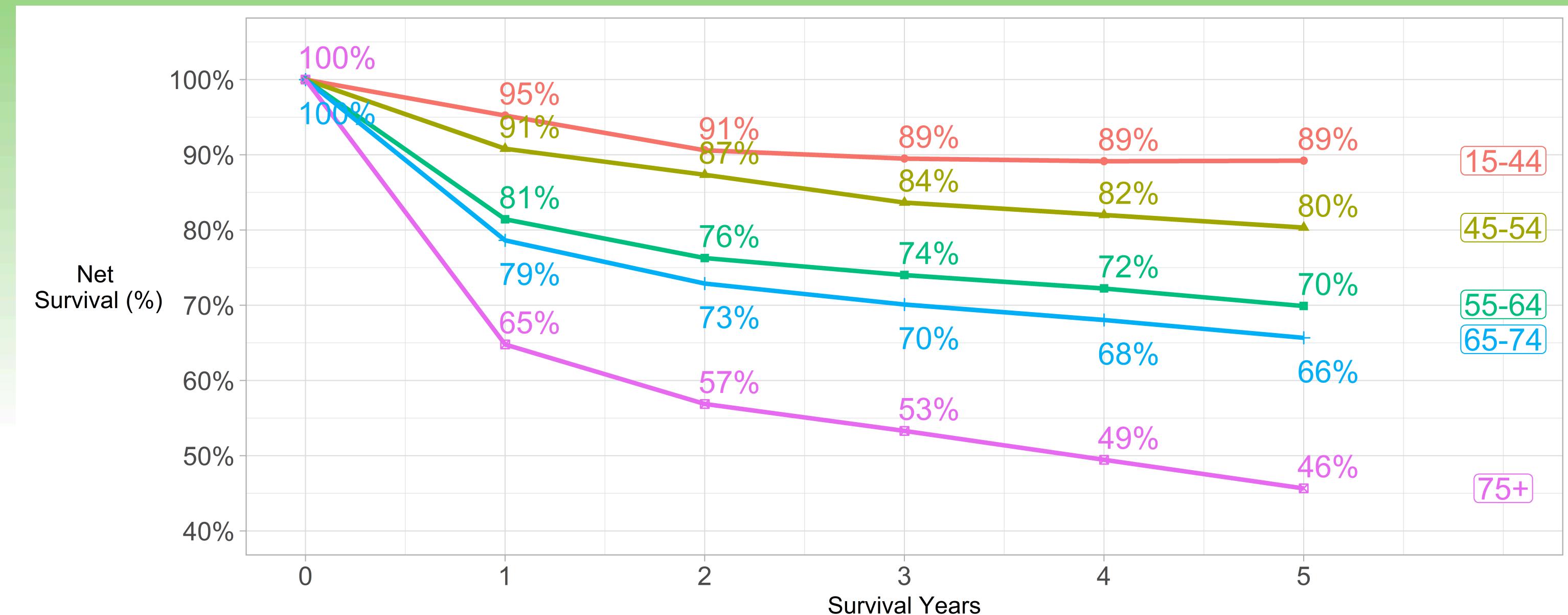
- Survival has improved over time, especially at 4 and 5 years post diagnosis due to screening programs, early diagnoses and improved treatments
- Breast screening began in 1998; colorectal screening in 2011
- Slight drop in 1-year survival (2009–2013), likely due to higher proportion of lower-survival cancers diagnosis (lung, pancreas, liver)

Cancer Survival in PEI among Males and Females (2019-2023)



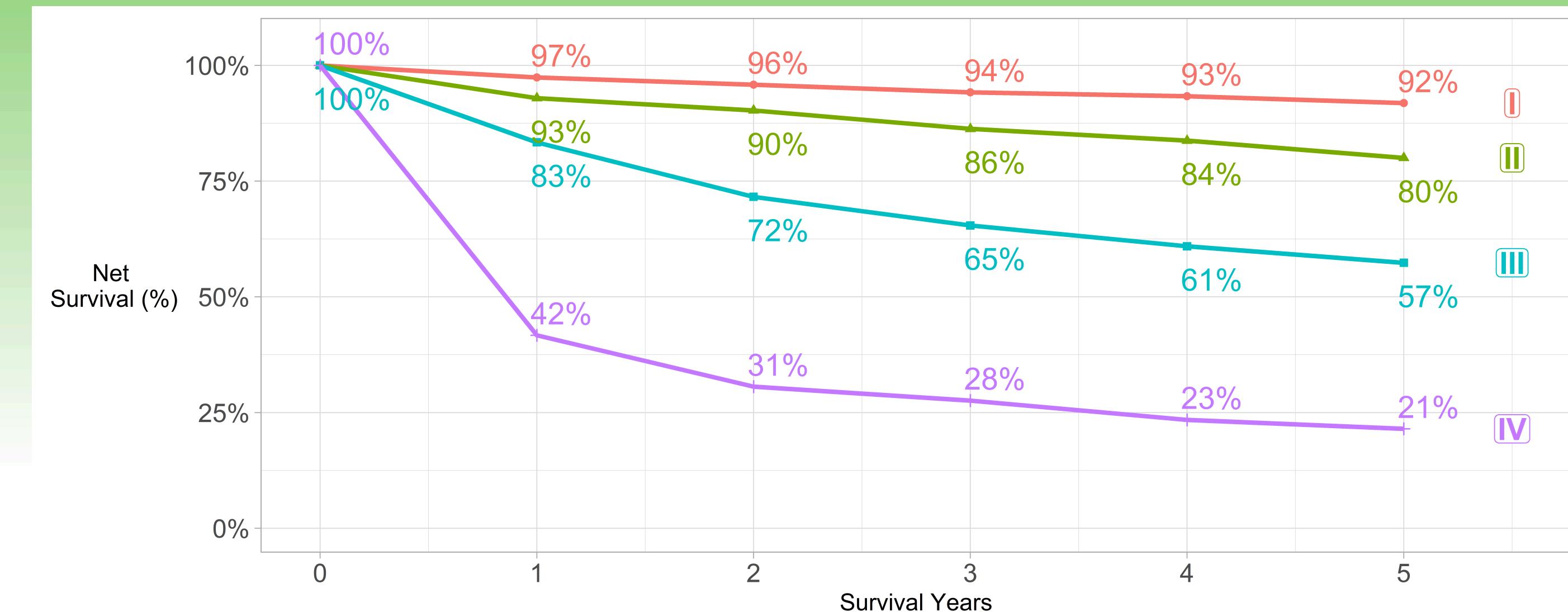
- 5-year overall survival: 64% (females 67%, males 60%), females have better survival compared to males
- Sharp decline of 20%+ in first year for both males and females, then slower decrease, likely due to aggressive cancers (lung, pancreas) or late-stage diagnoses

Cancer Survival in PEI based on Age Groups (2019-2023)



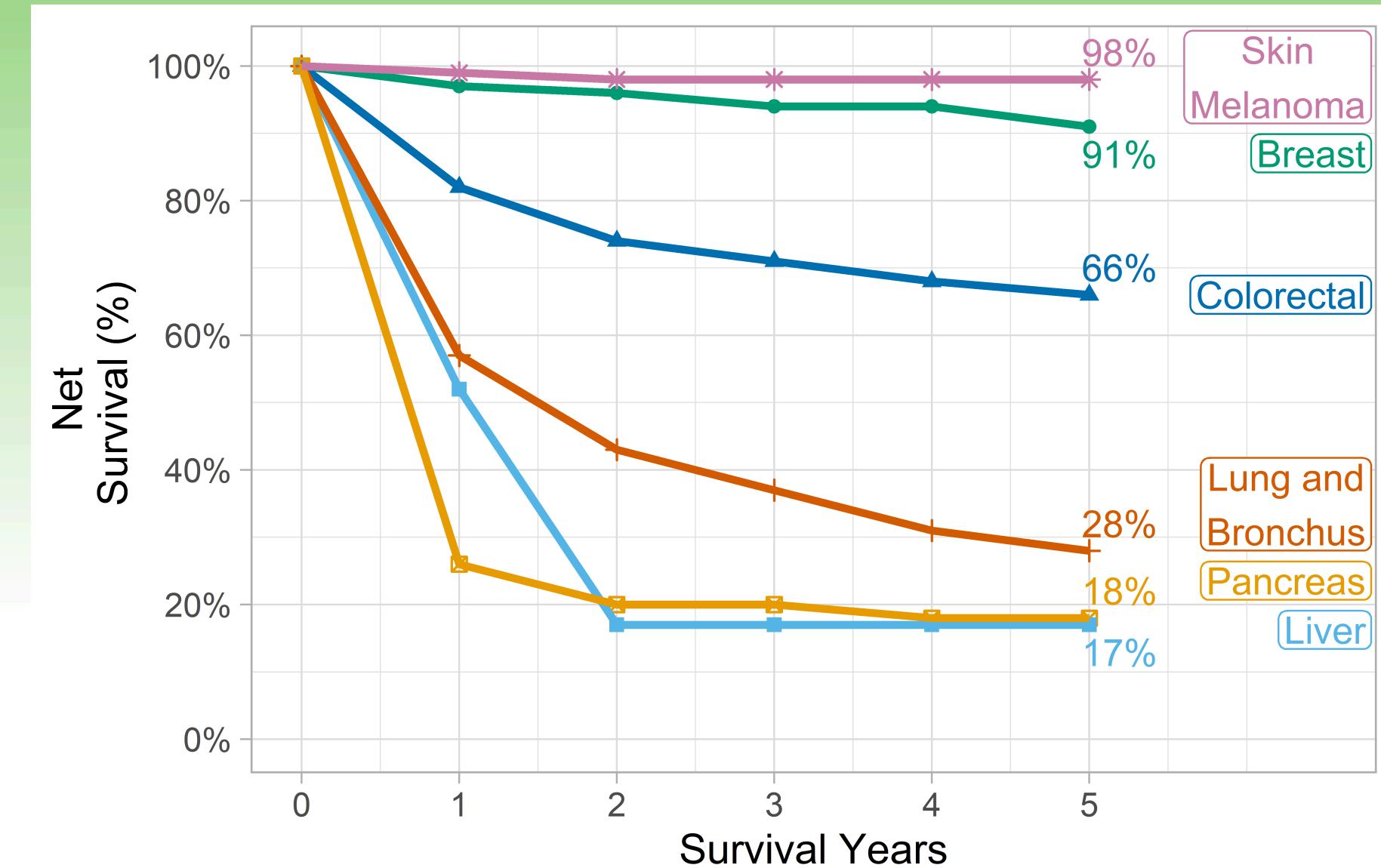
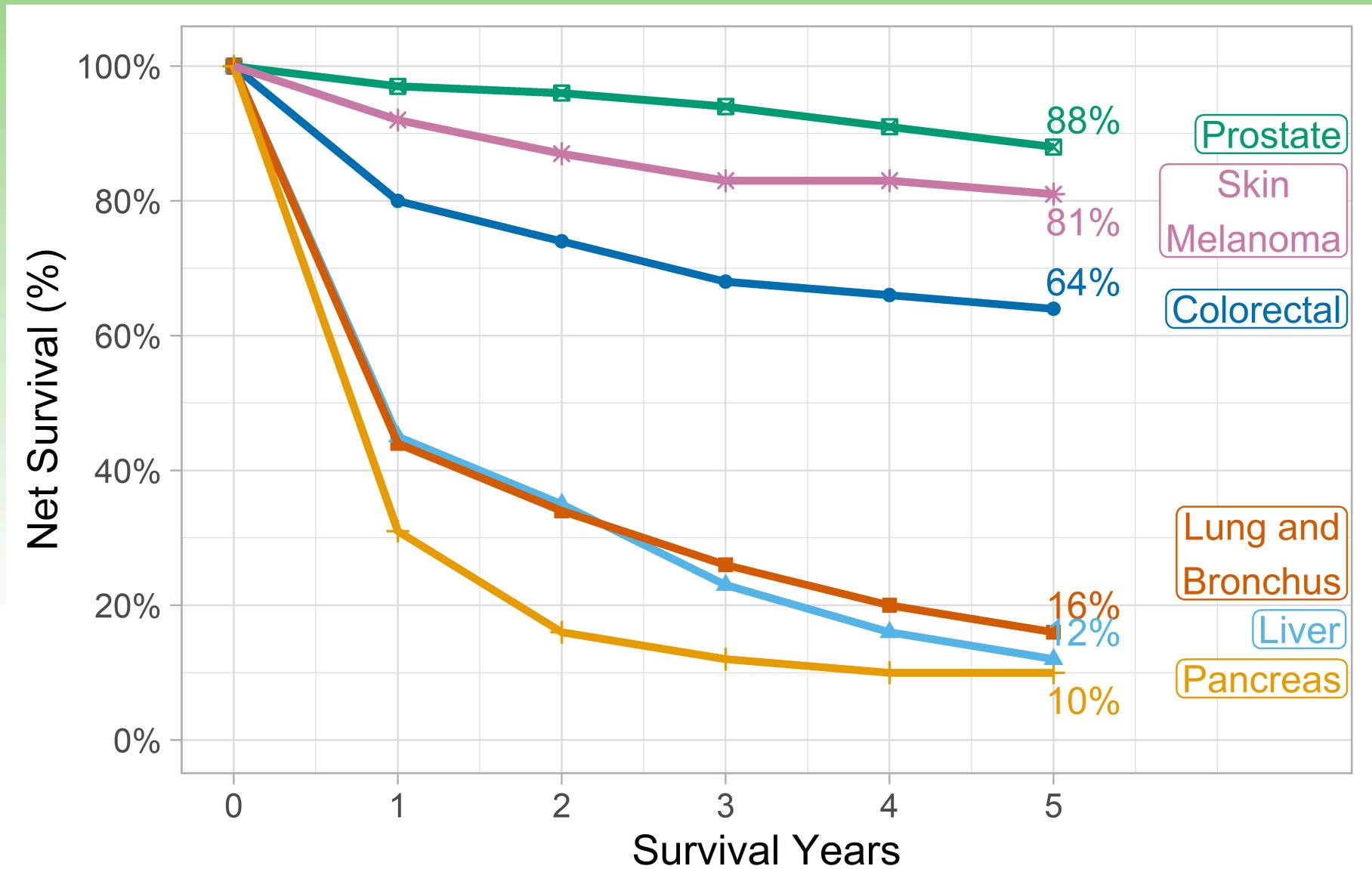
- Survival decreases with age; older patients have lower survival rates
- The gap between 65-74 and 75+ is especially large
- Differences between age groups are due to types of cancer and resilience of patients
- Poorer survival in the older age group is likely influenced by overall health, comorbidities, and personal treatment choices

Cancer Survival in PEI based on Stage at Diagnosis (2019-2023)



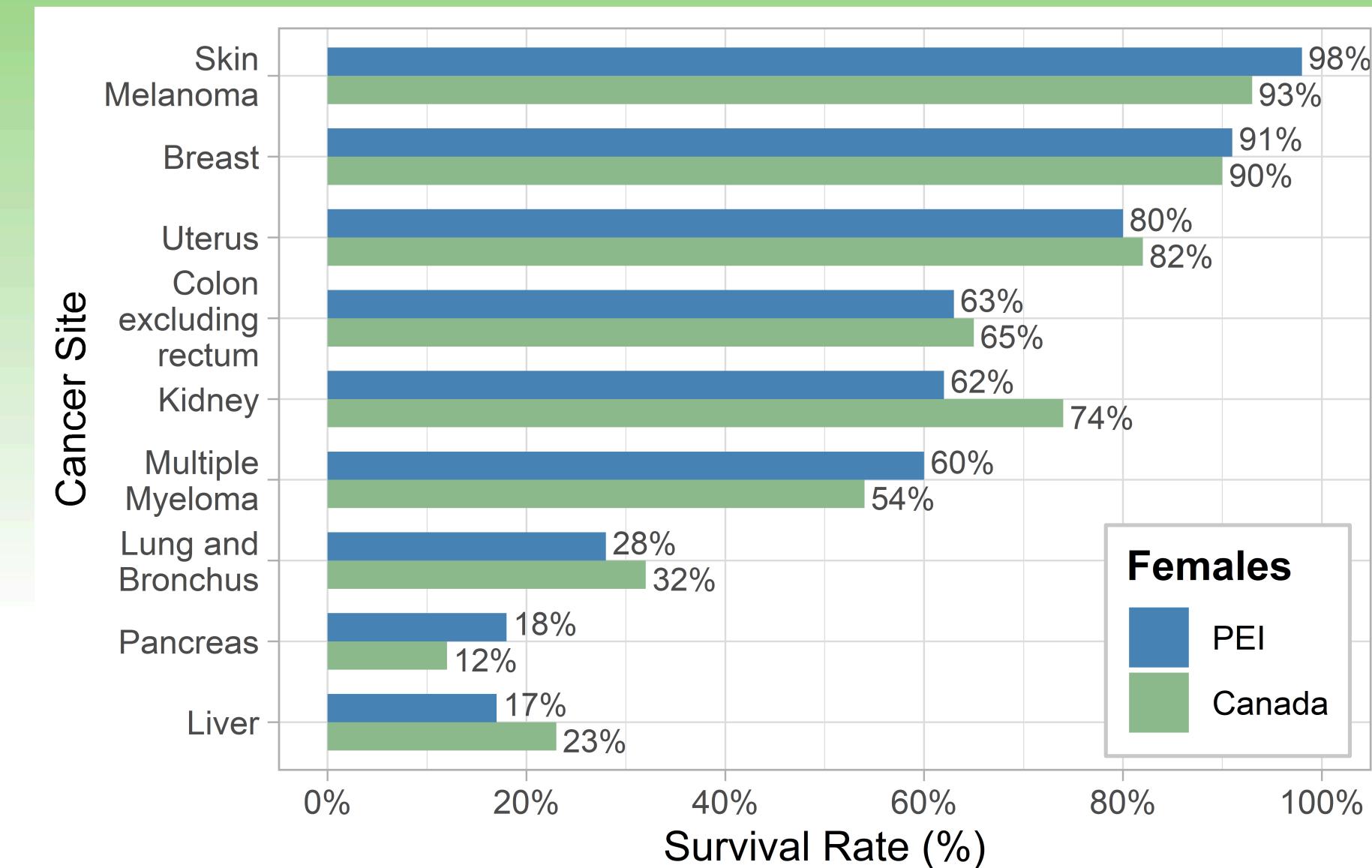
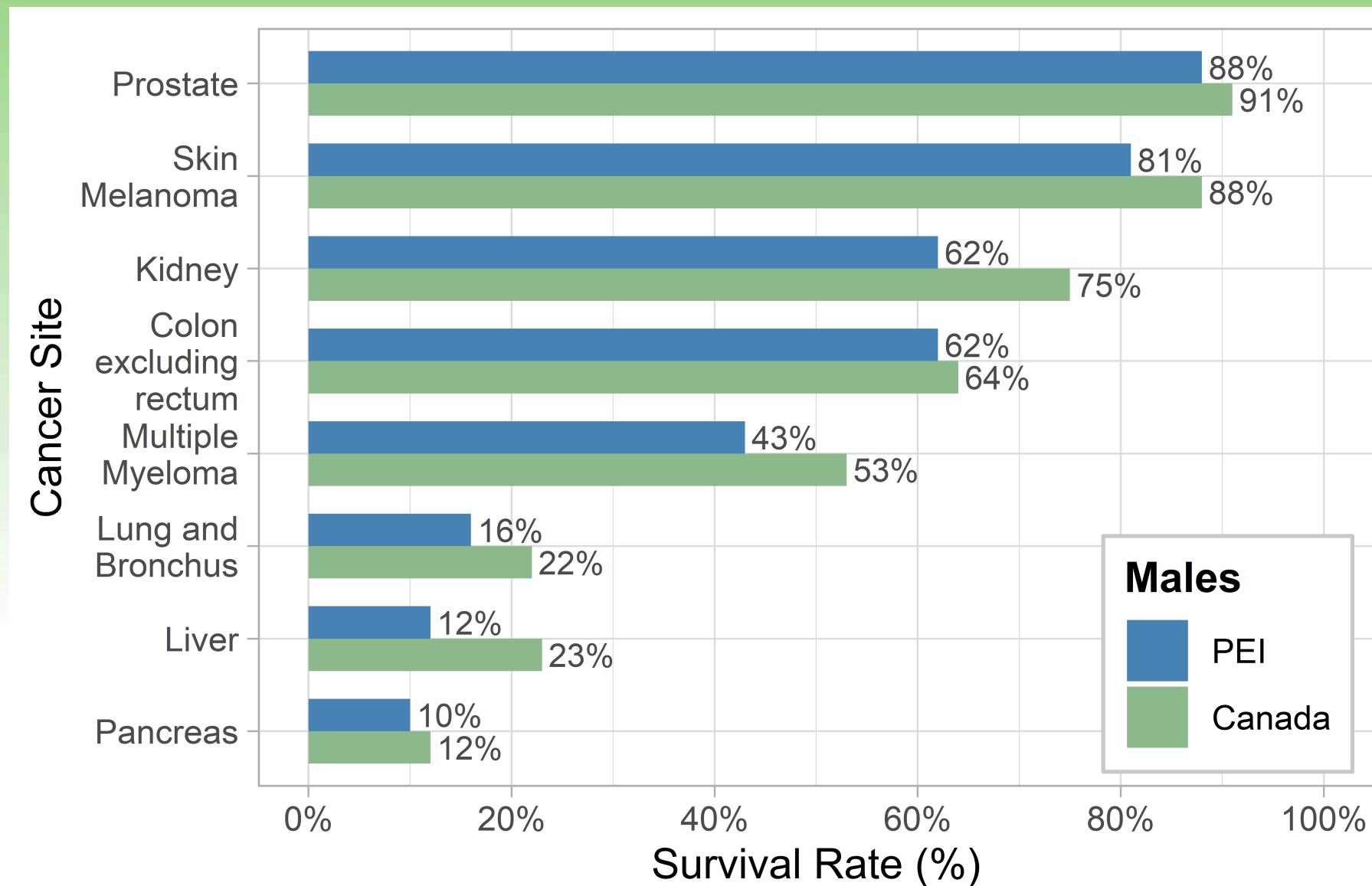
- Stage I has a 92% 5-year survival rate, while Stage IV has only 21%
- 1-year survival for stage IV is 42%, which is almost half of survival rate with either of stage I, II and III, likely due to more aggressive cancers
- Diagnosing cancer at earlier stages is critical for improving survival
- Screening programs and public awareness help detect cancers early, leading to easier treatment and reduced healthcare use

Cancer Survival in PEI among Males and Females (2019-2023)



- Among males: prostate cancer survival is above 85%; skin melanoma is 81%; colorectal is 64%
- Lung, liver, and pancreatic cancers have very low survival: 1-year rates drop to 45%, 44%, and 33%; 5-year rates are 16%, 12%, and 10%
- Among females: skin melanoma survival is 98%; breast cancer is 91%; colorectal is 66%
- Lung, liver, and pancreatic cancers remain low but higher than males: 5-year rates are 28%, 17%, and 18%

PEI compared to Canada: Survival Rates (2019-2023)



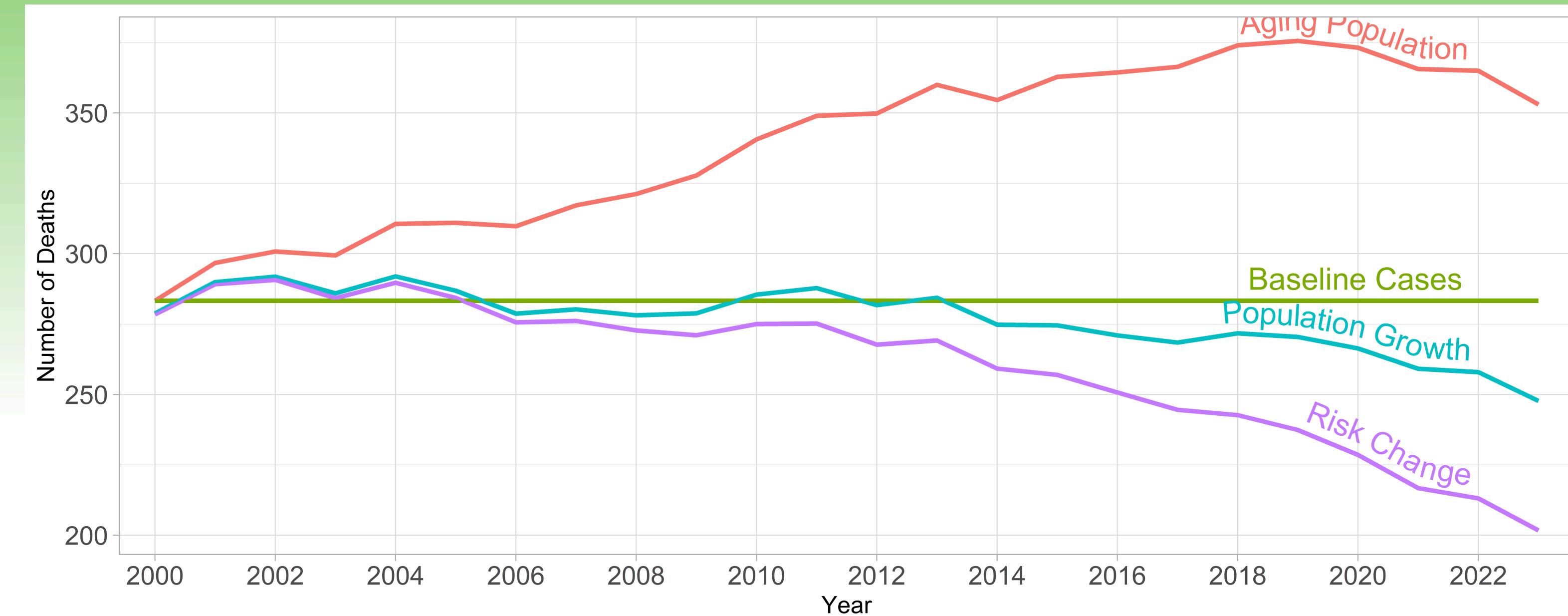
- Males in PEI generally have lower survival than Canada, especially for kidney cancer (62% vs 75%), multiple myeloma, and aggressive cancers like lung, liver, and pancreas
- Females in PEI have higher survival for skin melanoma, breast cancer, and multiple myeloma, but kidney cancer remains low (62%) and pancreatic cancer is still poor despite being slightly higher than Canada
- Differences may relate to time to diagnosis and time to treatment for patient who travel off-island

Cancer Mortality

What is Mortality?

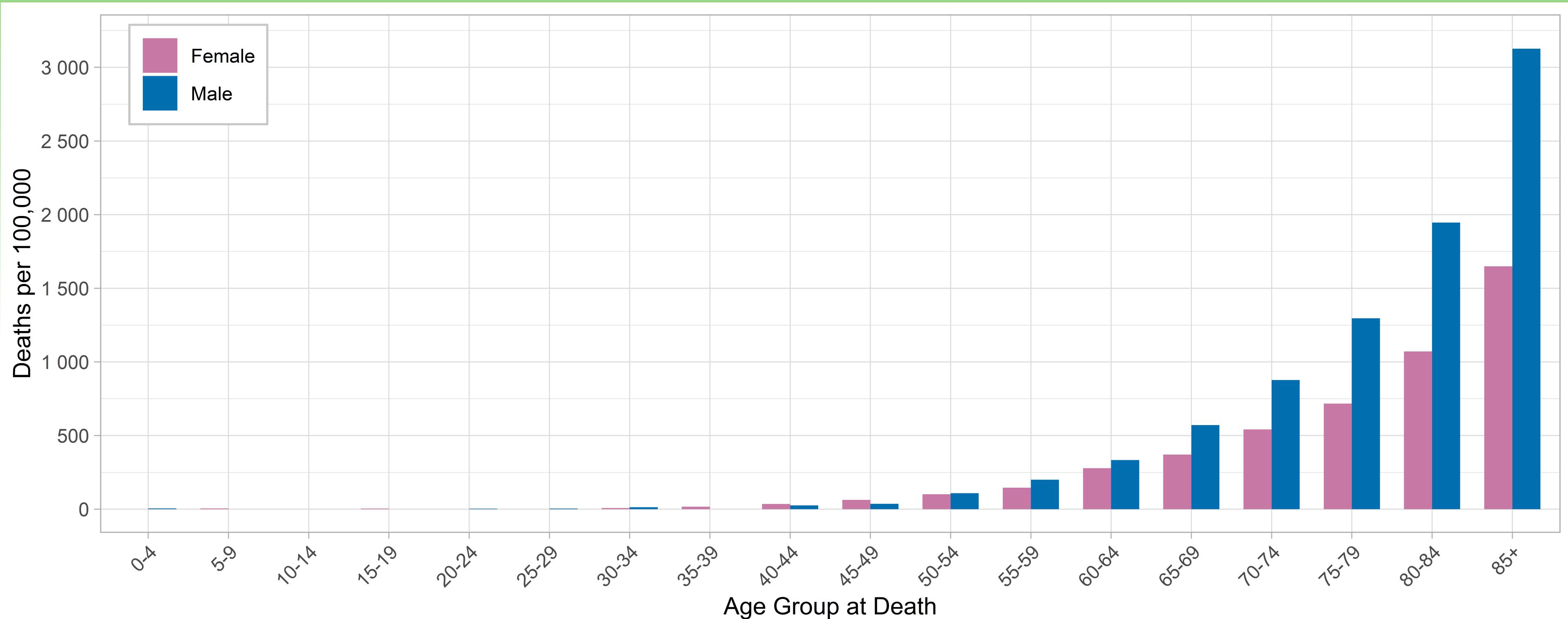
- Mortality depends on both incidence and survival after diagnosis
- Lower mortality comes from:
 - Preventing cancer to reduce incidence
 - Diagnosing cancers earlier
 - Improving treatment and follow-up care

Cancer Mortality in PEI (2000-2023)



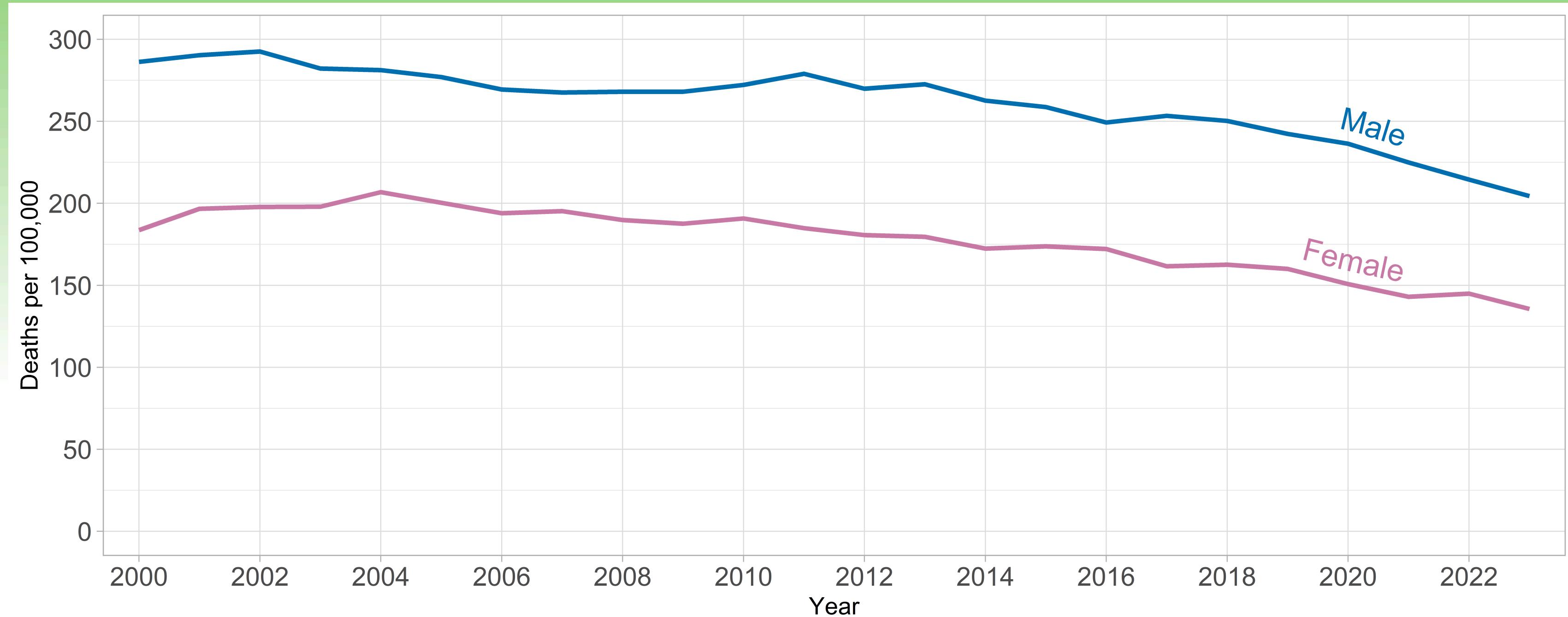
- The risk of dying from cancer has fallen since 2000, reflecting better prevention, early detection, and improved treatments
- A growing and aging population results in more cancer deaths overall, even as individual risk decreases.
- Overall, cancer deaths increased by 14.7% (299 to 343) from 2000 to 2023, driven mainly by population growth and aging.

Impact of Age and Sex on Cancer Death Rates (2000-2023)



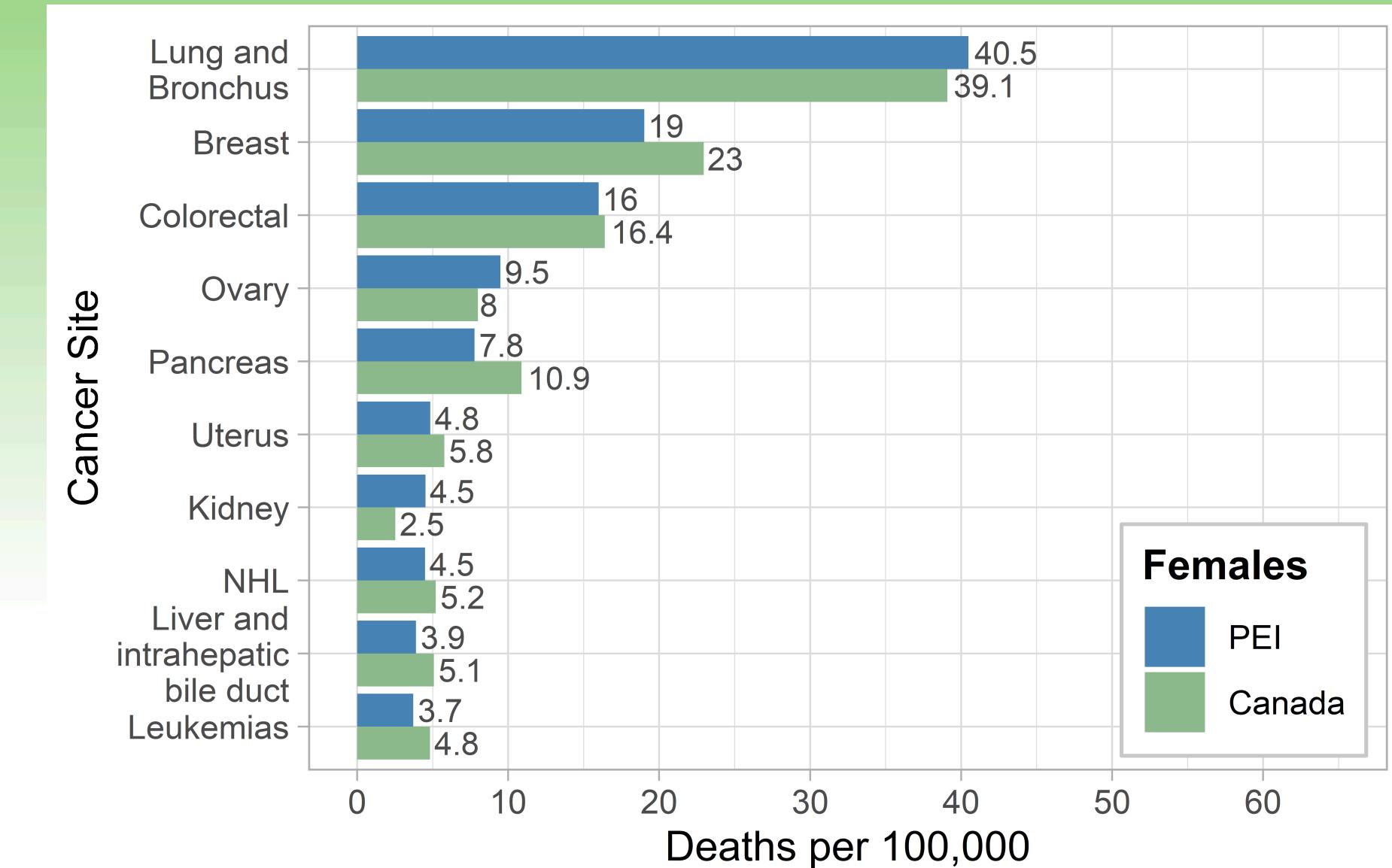
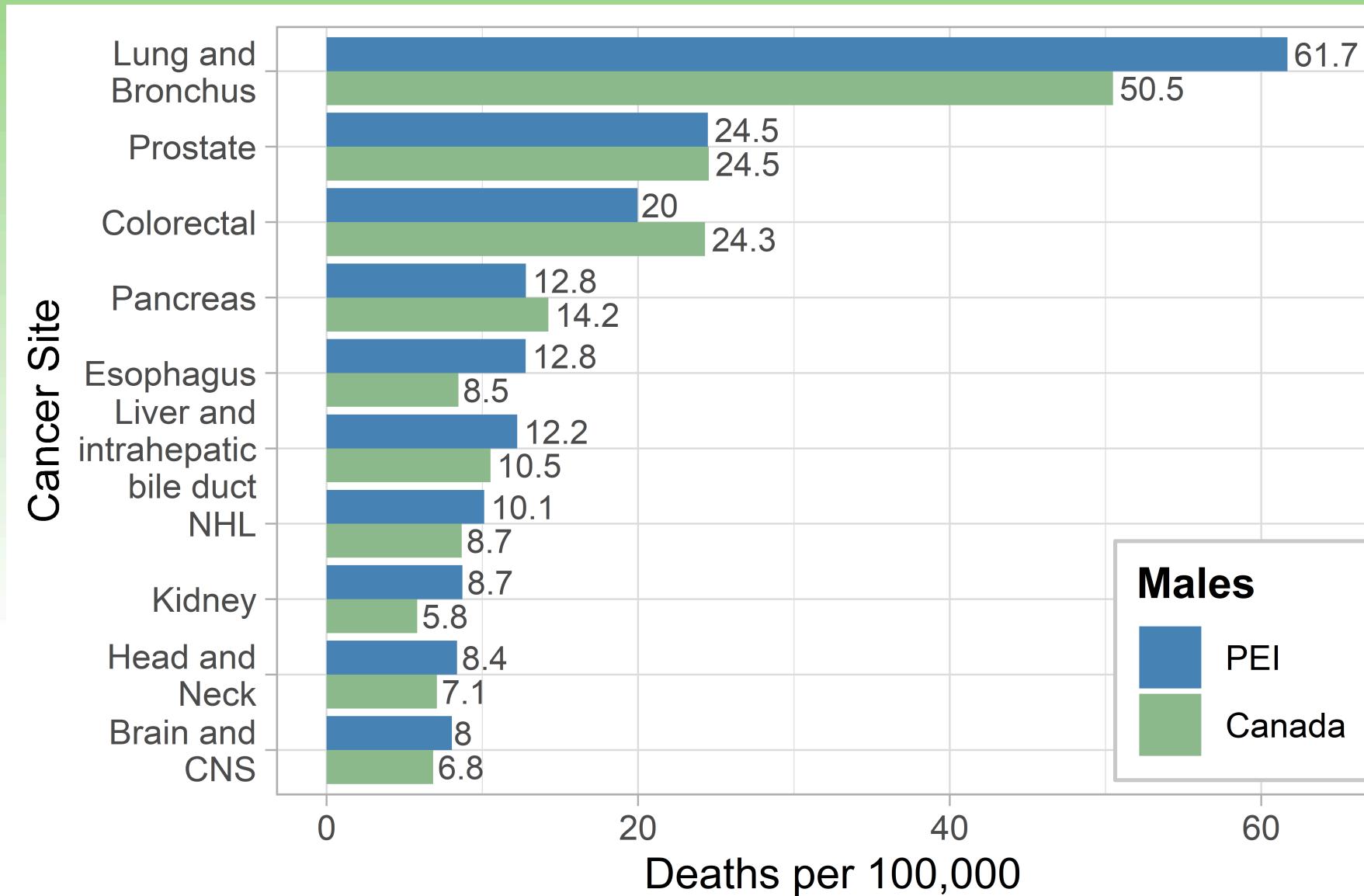
- Mortality rates rise sharply after age 50, with the highest burden among older men
- Females have slightly higher mortality at younger ages, likely due to breast and reproductive cancers

Age-Standardized Cancer Mortality Rates by Sex (2000-2023)



- Age-standardized mortality rates have decreased for both sexes over the last two decades
- Overall: 161 cancer deaths per 100,000 PEI residents Males: 34% drop ($295 \rightarrow 195$ per 100,000); Females: 37% drop ($200 \rightarrow 127$ per 100,000)
- Lower female mortality reflects lower incidence and higher survival compared to males

PEI compared to Canada: Mortality Rates (2018-2022)



- Overall mortality is higher in PEI (197 vs 182 per 100,000)
- Lung cancer has the highest mortality, especially among males
- PEI males: lower mortality for colorectal and pancreas, but higher for esophagus, liver, NHL, kidney, head & neck, and brain/CNS
- PEI Females: mostly similar or lower than Canada, except lung and kidney
- Lung and kidney mortality rates are notably higher for both sexes compared to Canada

Conclusion

Takeaway Message

- Rising cancer cases are mainly due to population aging and growth, creating significant pressure on healthcare
- Although the risk of getting diagnosed is decreasing, prevention and awareness programs are essential to maintain this trend
- Survival has improved over time because of screening programs, early diagnosis, improved treatments, and follow-up care
- PEI females have similar incidence, survival, and mortality rates compared to Canada
- PEI males have higher incidence, lower survival, and higher mortality than Canadian averages, highlighting the need for targeted cancer control in this population
- Breast, Prostate, Lung, and Colorectal cancers make up 50% of total cancer cases in PEI
- Melanoma incidence in PEI remains the highest in Canada year after year
- Lung, liver, pancreas, and kidney cancers need further investigation due to high rates and poor survival
- Protecting ourselves from cancer means timely screening, cancer awareness, and healthy living through initiatives like [LiveWell PEI](#).

Thank you!

- Questions?
- Cancer Statistics and Trends on PEI
- <https://www.princeedwardisland.ca/en/information/health-pei/cancer-statistics-and-trends-on-pei>