



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

Saurav Neupane and Dr. Carol McClure, PEI Cancer Registry  
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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

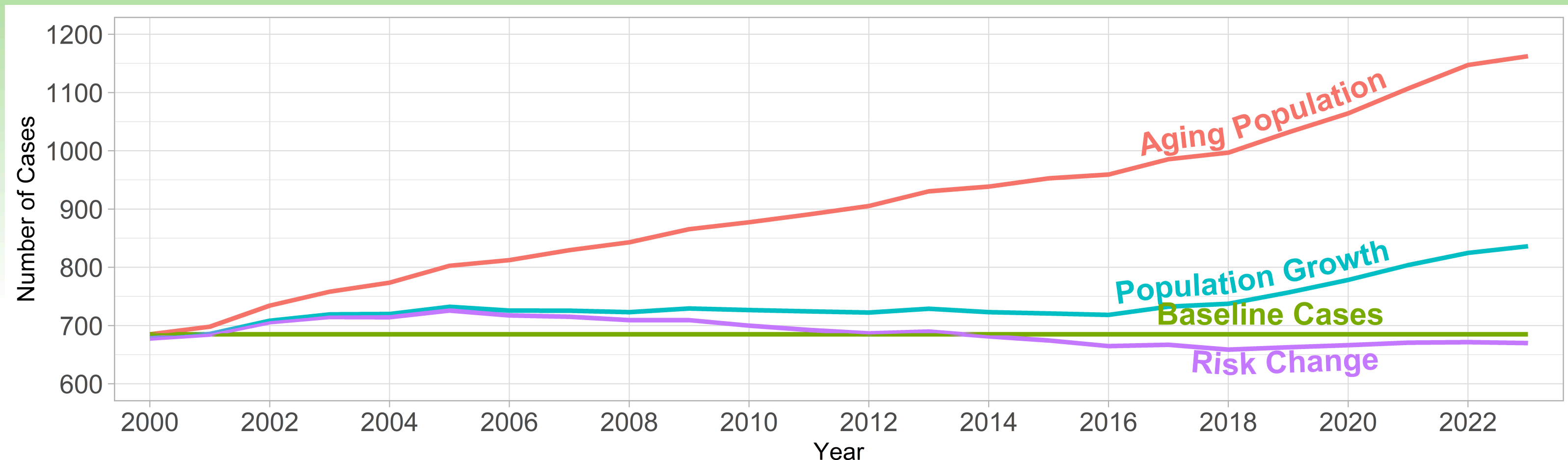


# Cancer Incidence



# Cancer Incidence in PEI (2000-2023)

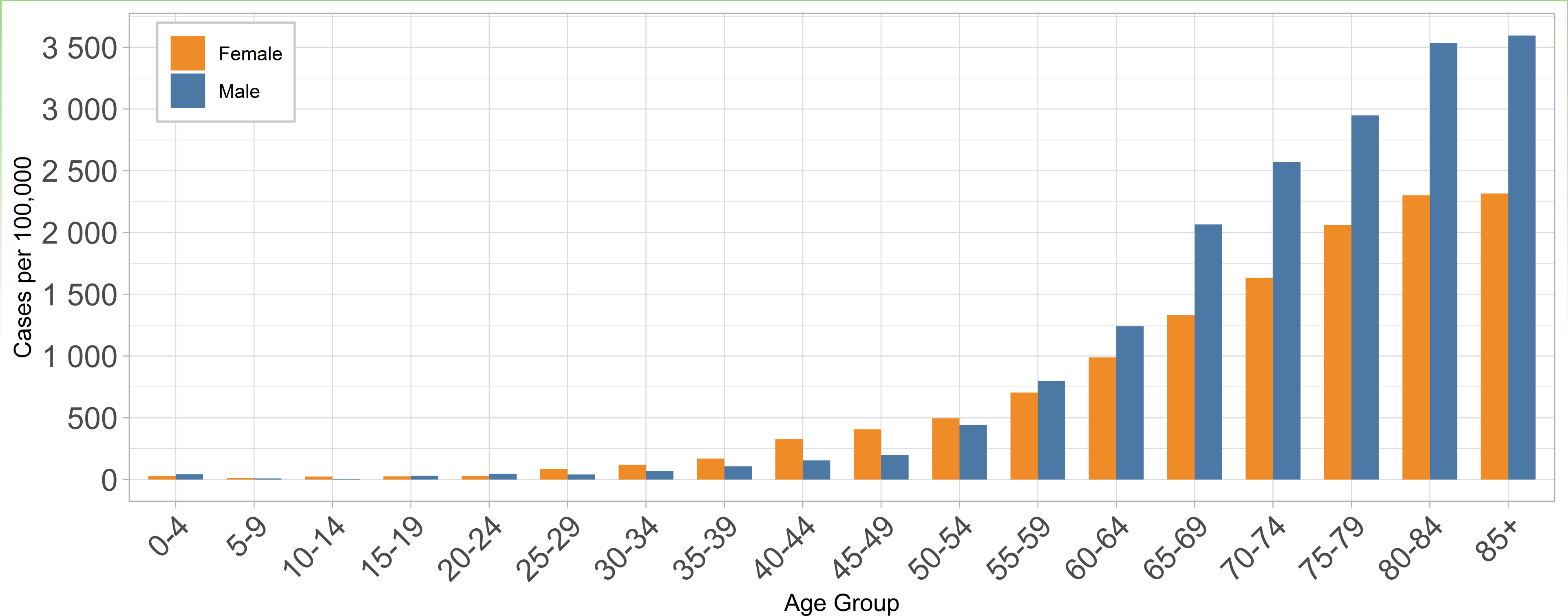
- Number of new invasive cancers diagnosed in a given time period, usually 1 year.



- 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.

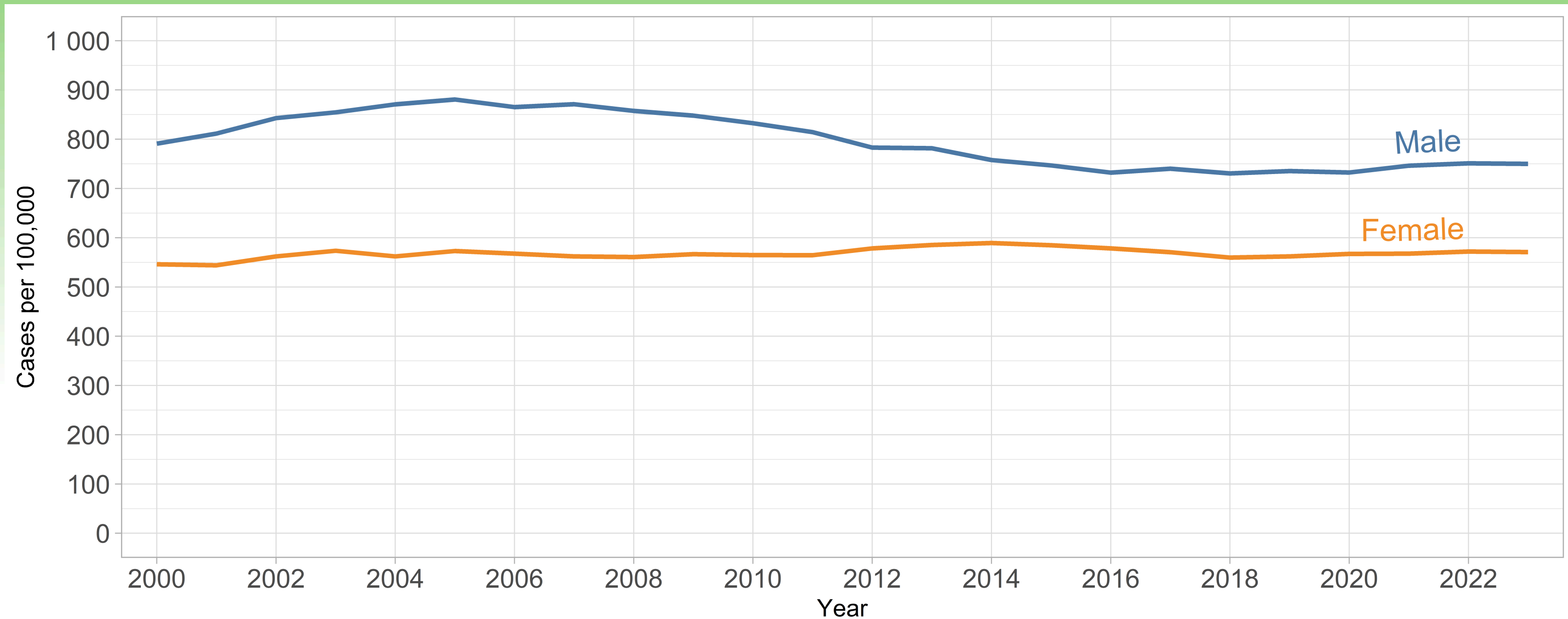


# Impact of Age and Sex on Cancer Rates (2018-2022)



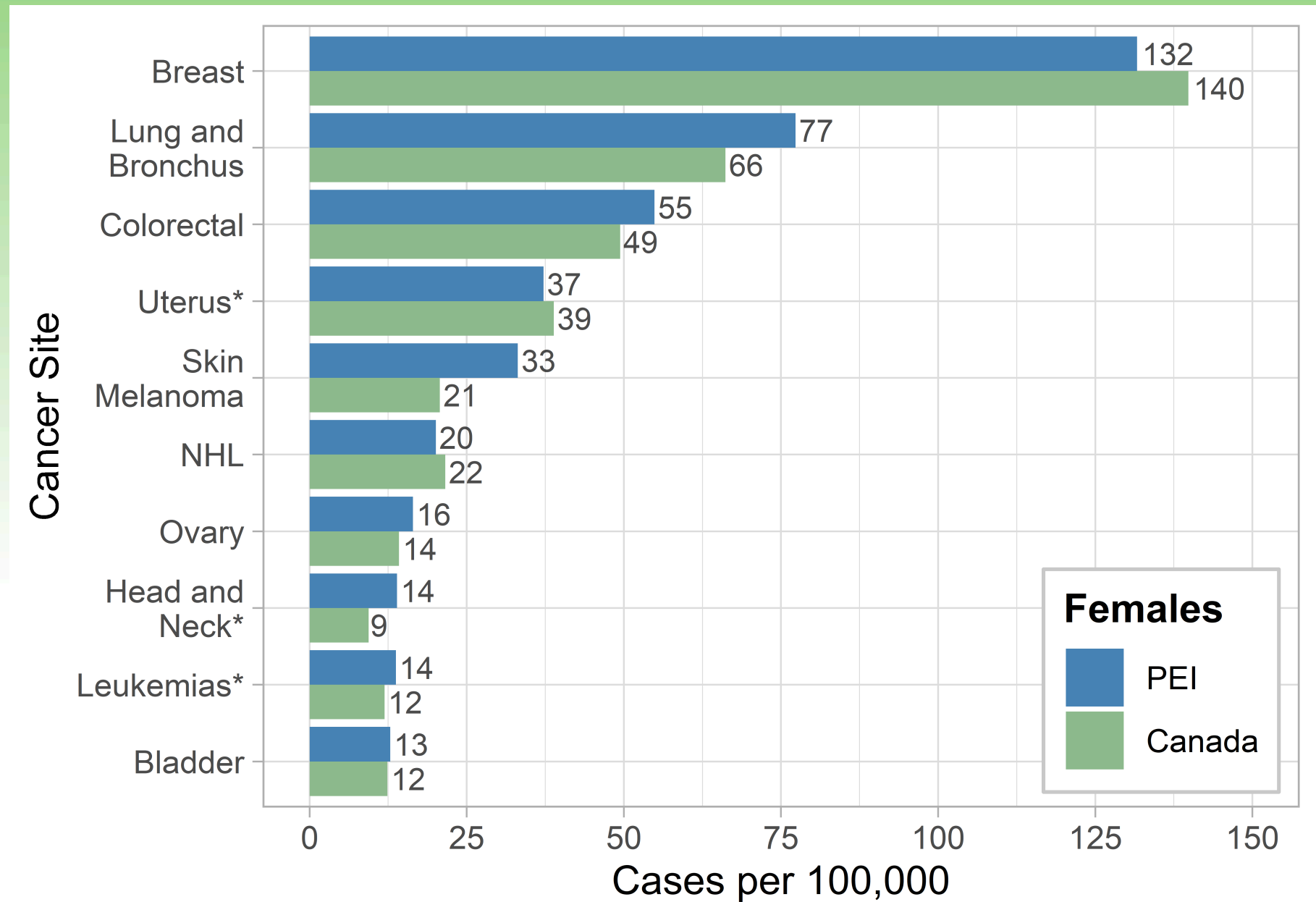
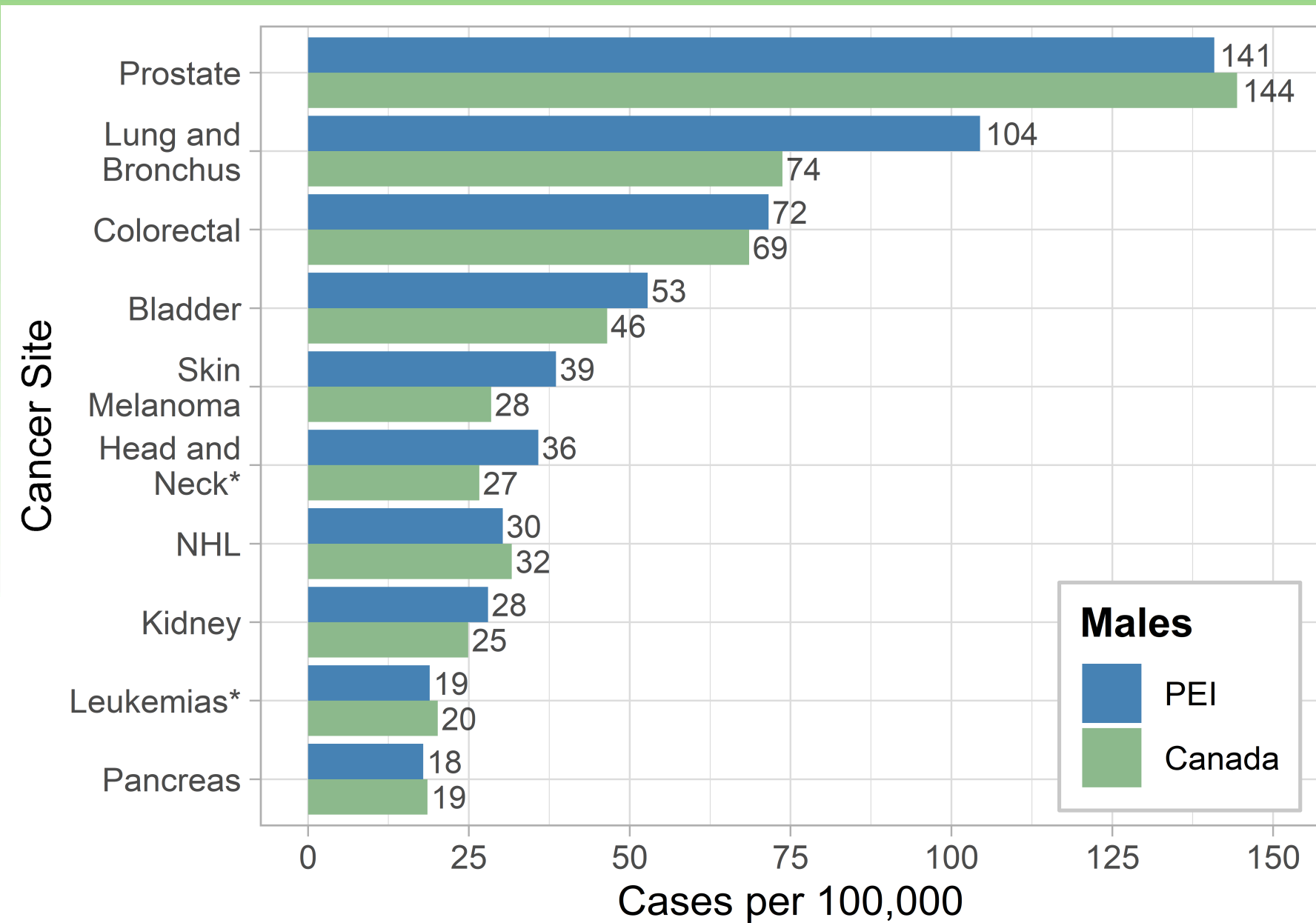
- Cancer rates rise sharply after age 55, especially among males.
- Females have higher rates at younger ages (due to melanoma, breast and reproductive cancers).

# 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).



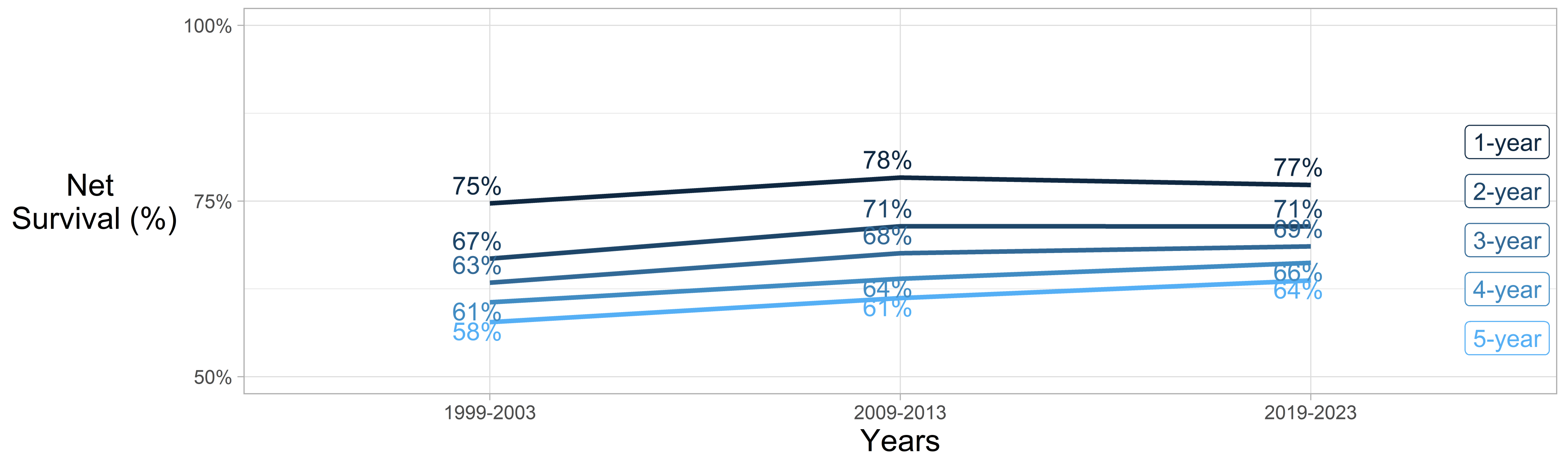
# Cancer Survival



# What is Net Survival?

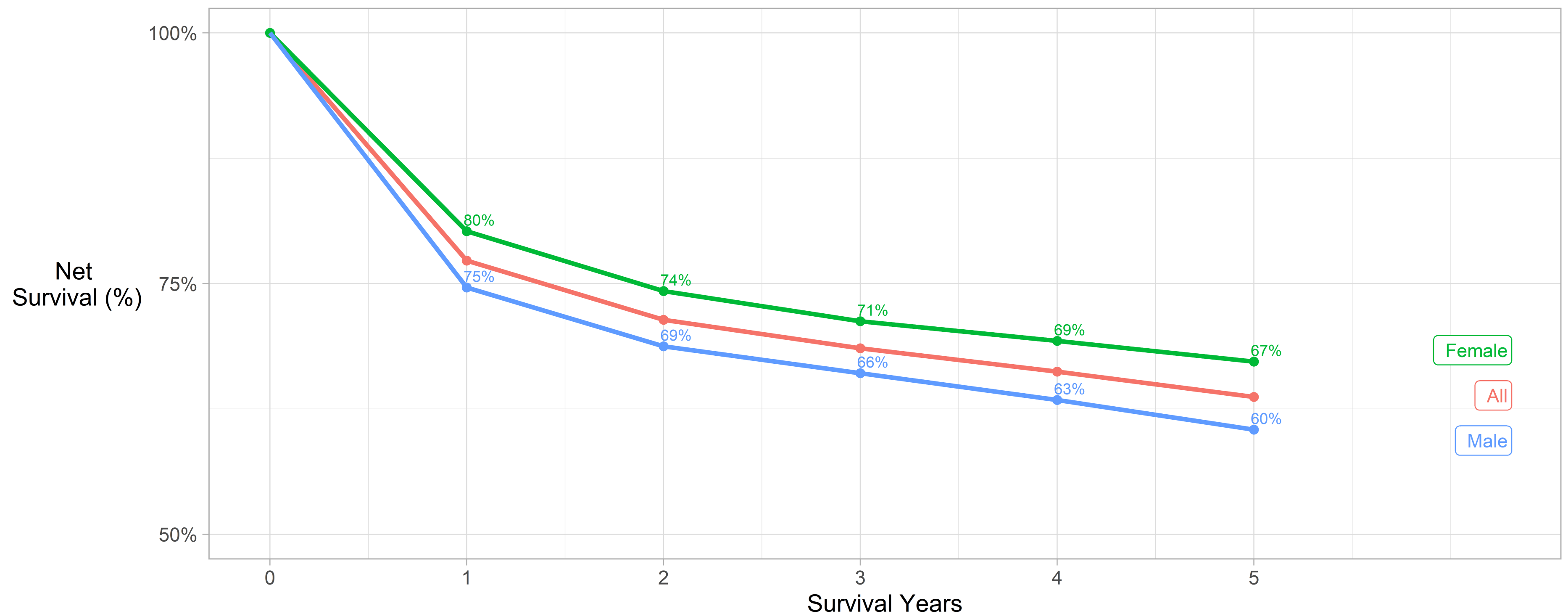
- Net survival: percentage of patients alive until certain years after diagnosis, adjusted for deaths from other causes
- 5-year net survival is the standard measure of patient survival after diagnosis.
- Shows effectiveness of early detection, treatment, and follow-up care

# Cancer Survival in PEI (1999-2023)



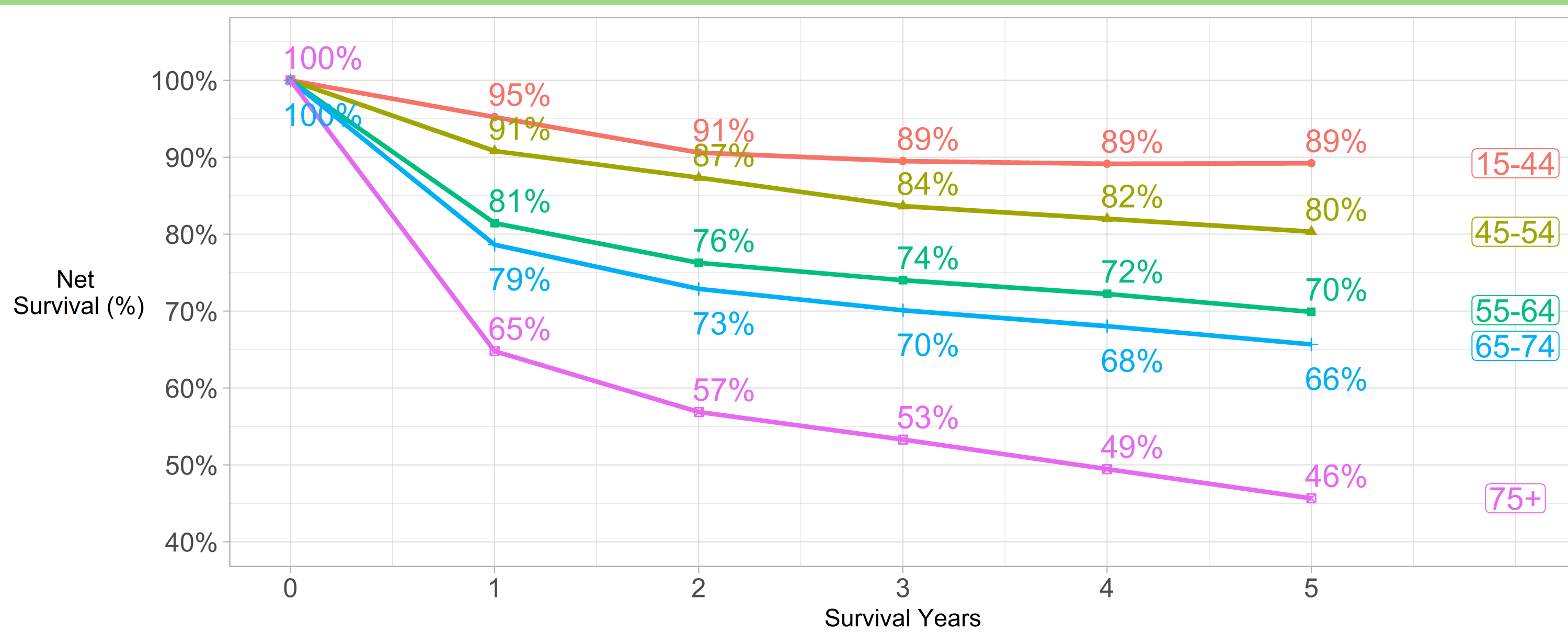
- Survival has improved over time, especially at 4 and 5 years post diagnosis due to screening programs, early diagnoses and improved treatments
- Breast screening began in 1998; colorectal screening in 2011
- Slight drop in 1-year survival (2009–2013), likely due to higher proportion of lower-survival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

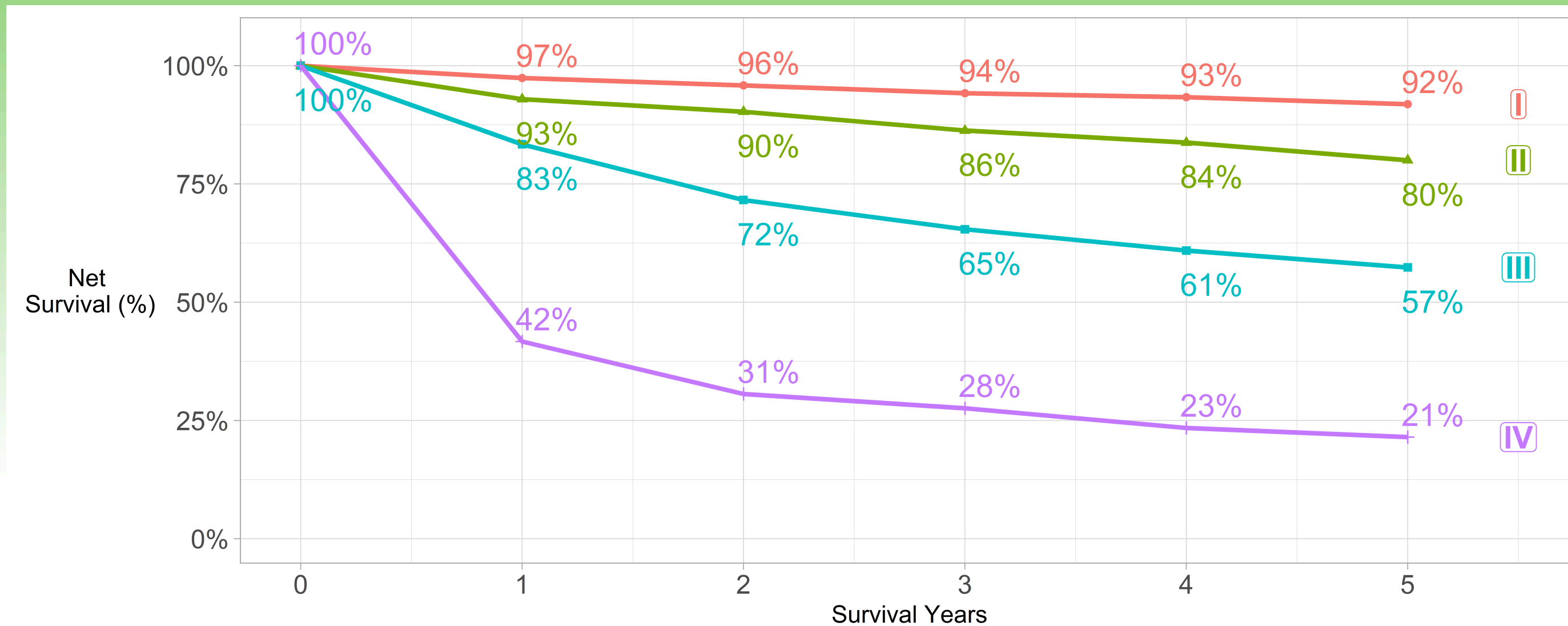
# Cancer Survival in PEI based on Age Groups (2019-2023)



- 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

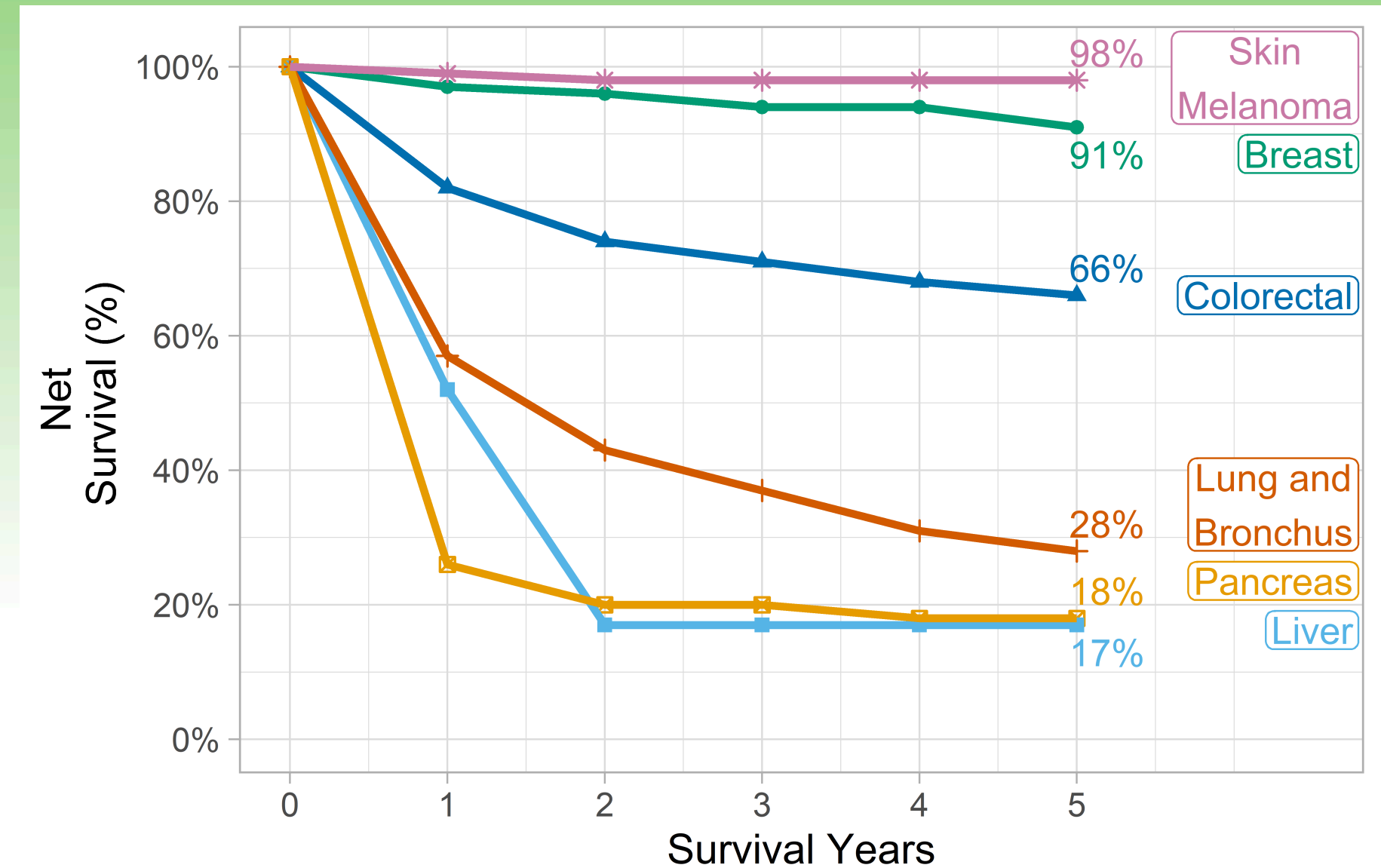
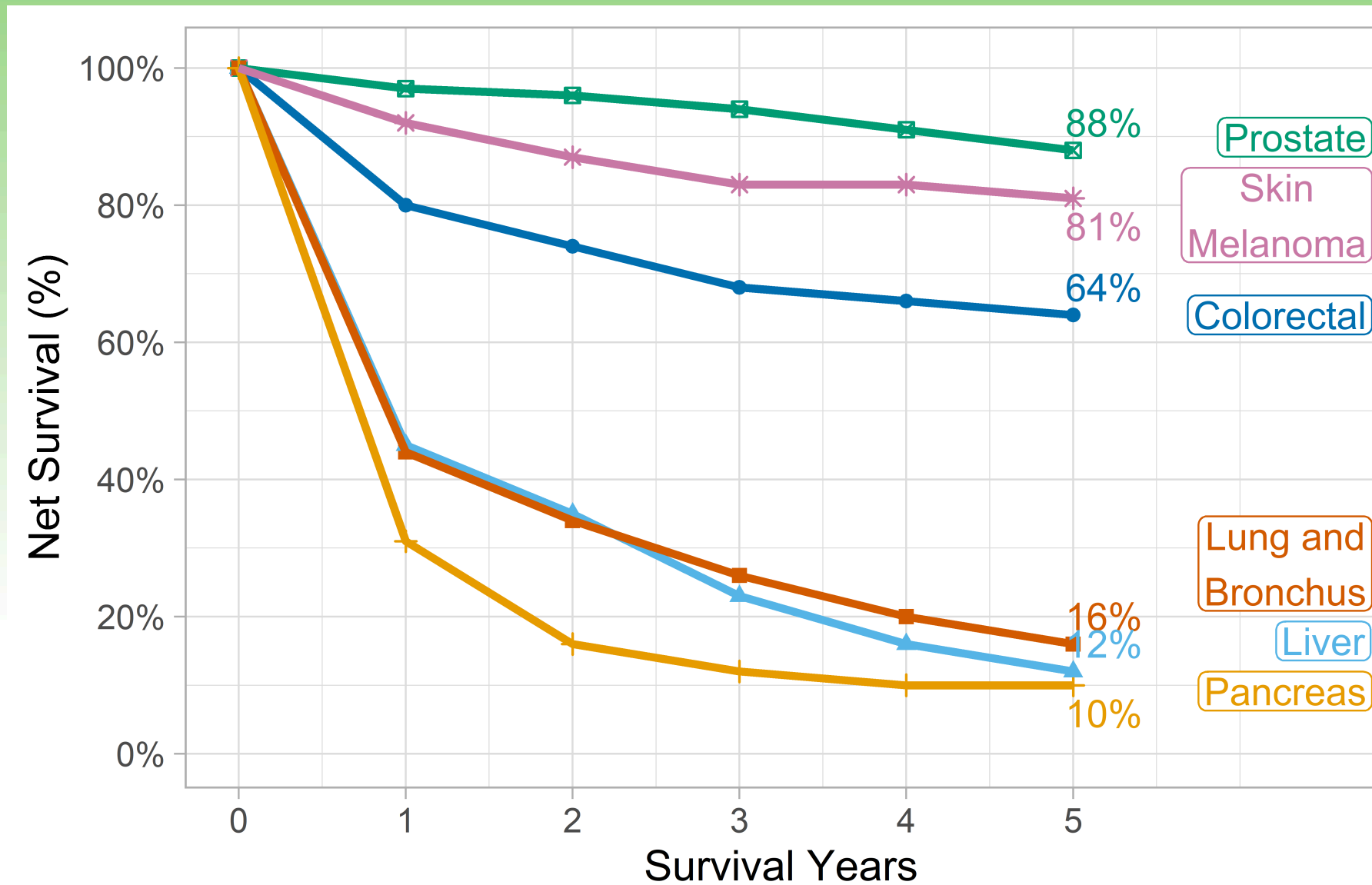


# Cancer Survival in PEI based on Stage at Diagnosis (2019-2023)



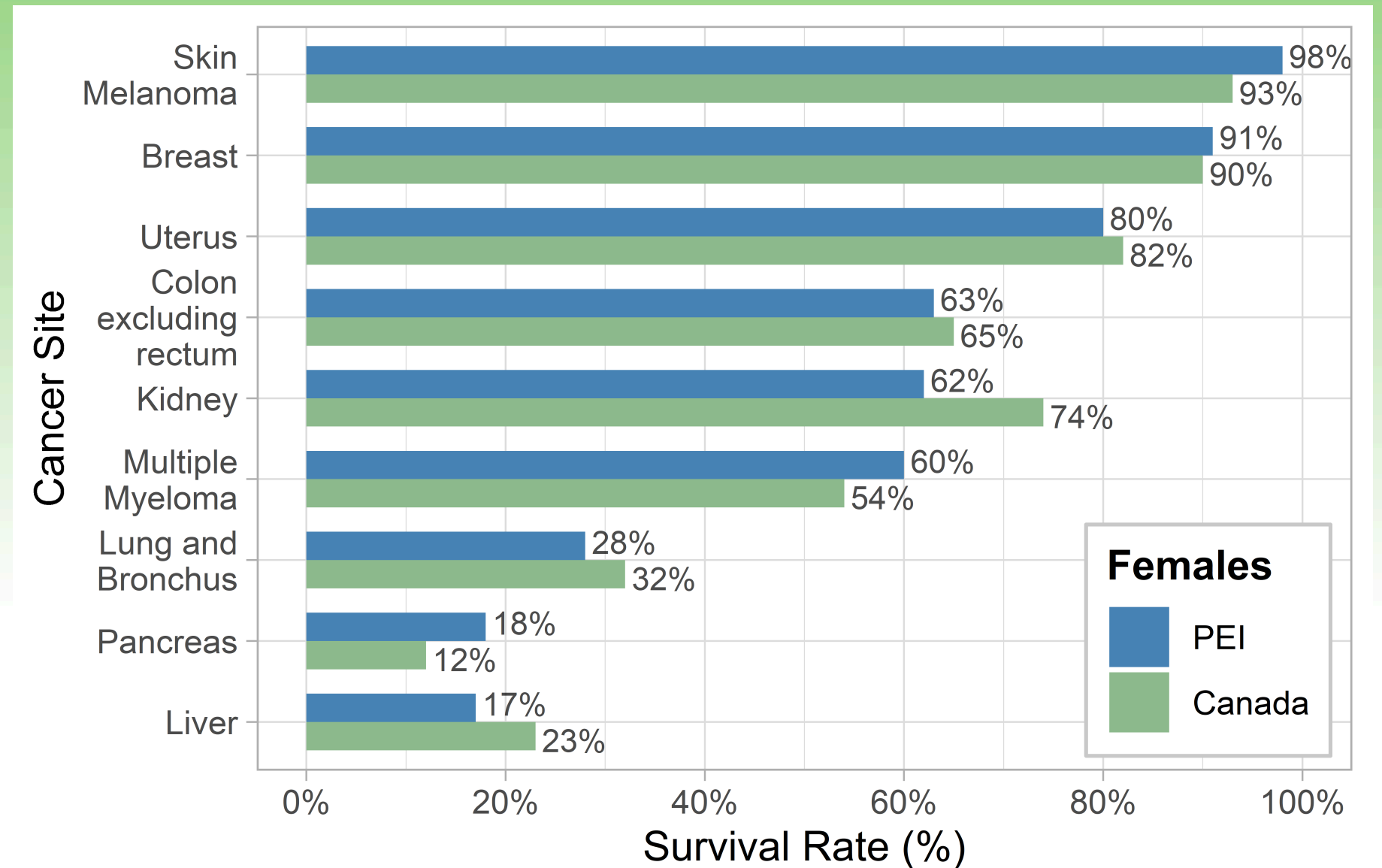
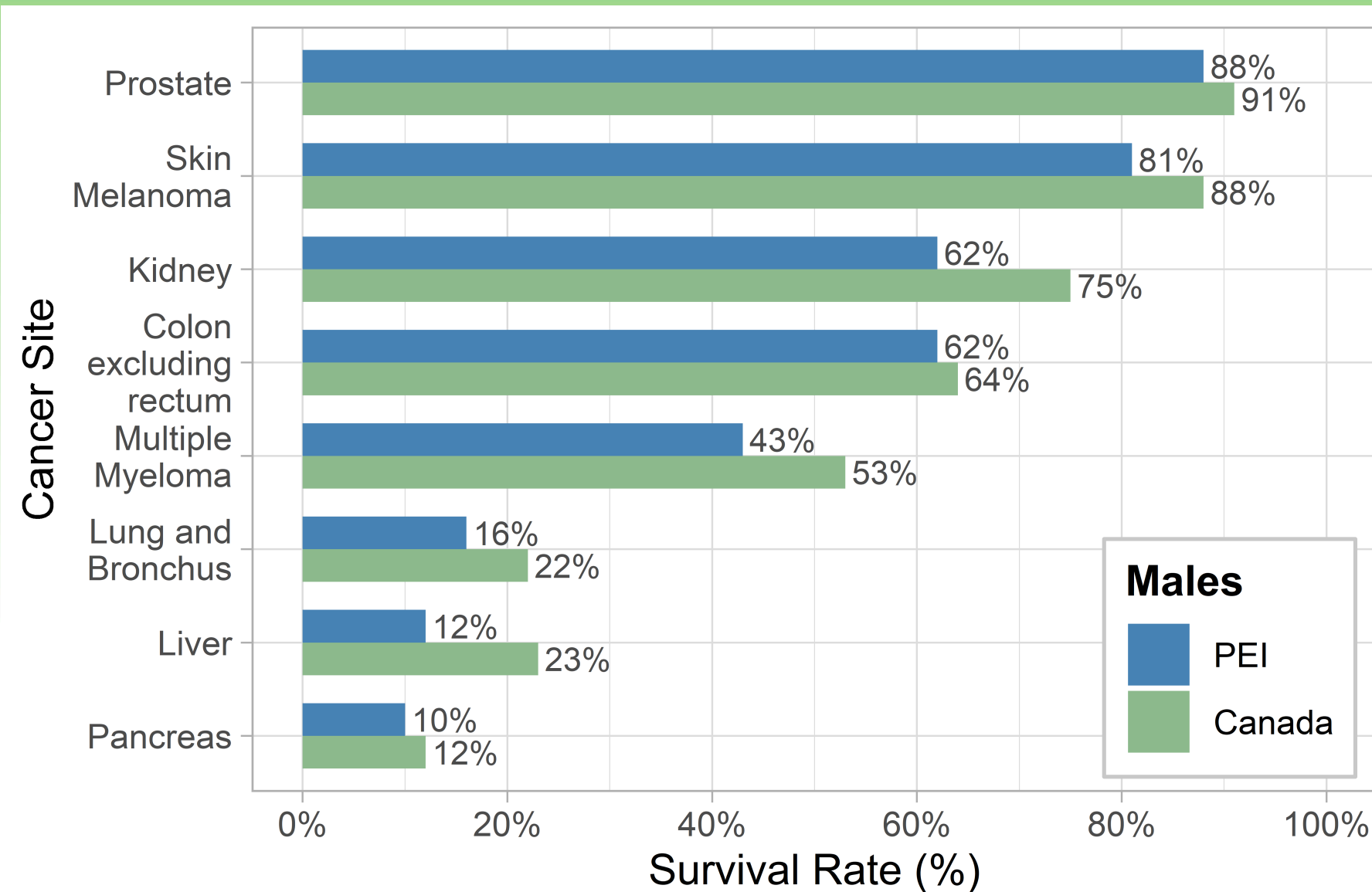
- Stage I has a 92% 5-year survival rate, while Stage IV has only 21%
- 1-year survival for stage IV is 42%, which is almost half of survival rate with either of stage I, II and III, likely due to more aggressive cancers
- Diagnosing cancer at earlier stages is critical for improving survival
- Screening 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



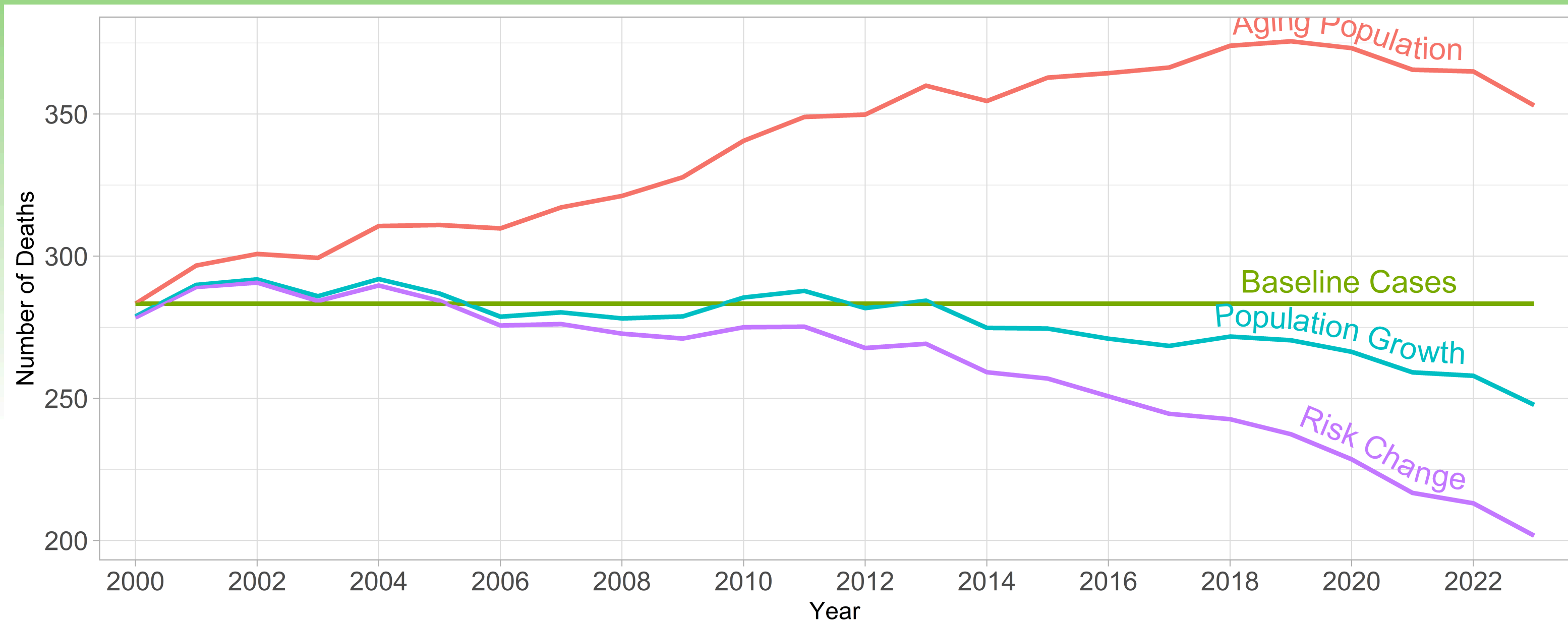
# Cancer Mortality



# What is Mortality?

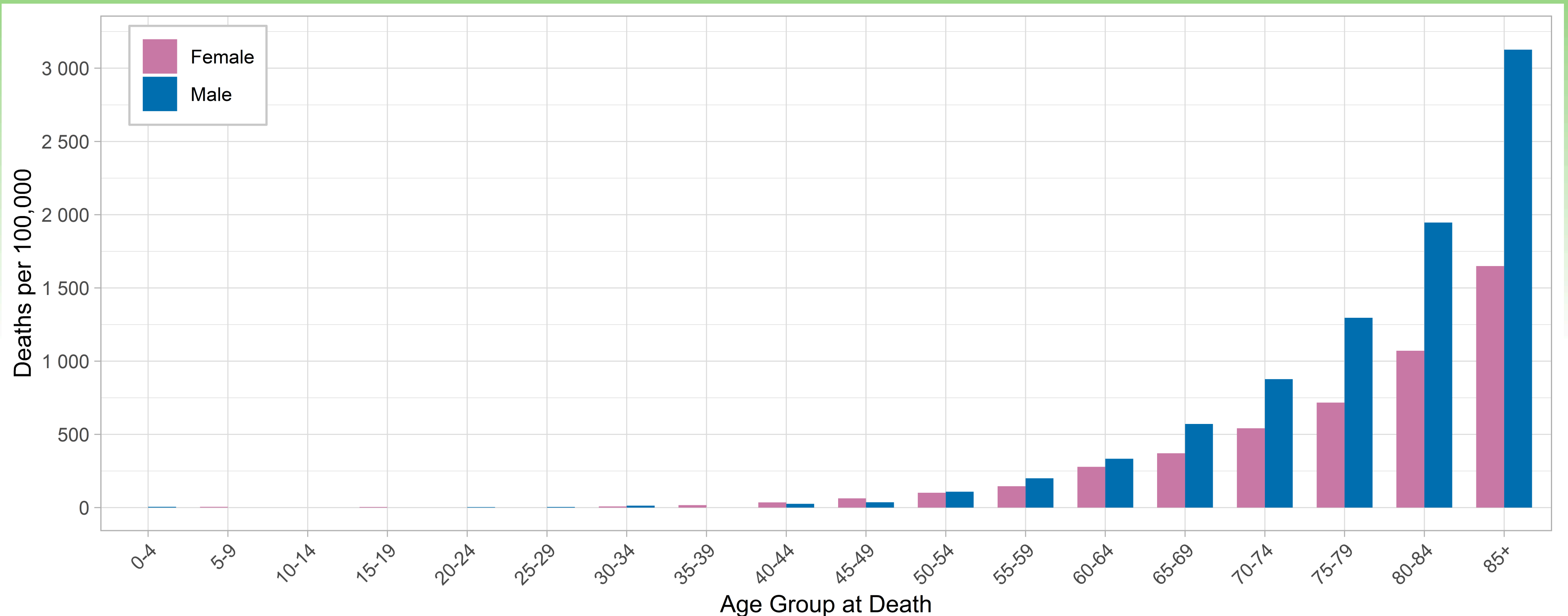
- Mortality depends on both incidence and survival after diagnosis
- Lower mortality comes from:
  - Preventing cancer to reduce incidence
  - Diagnosing cancers earlier
  - Improving treatment and follow-up care

# 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.

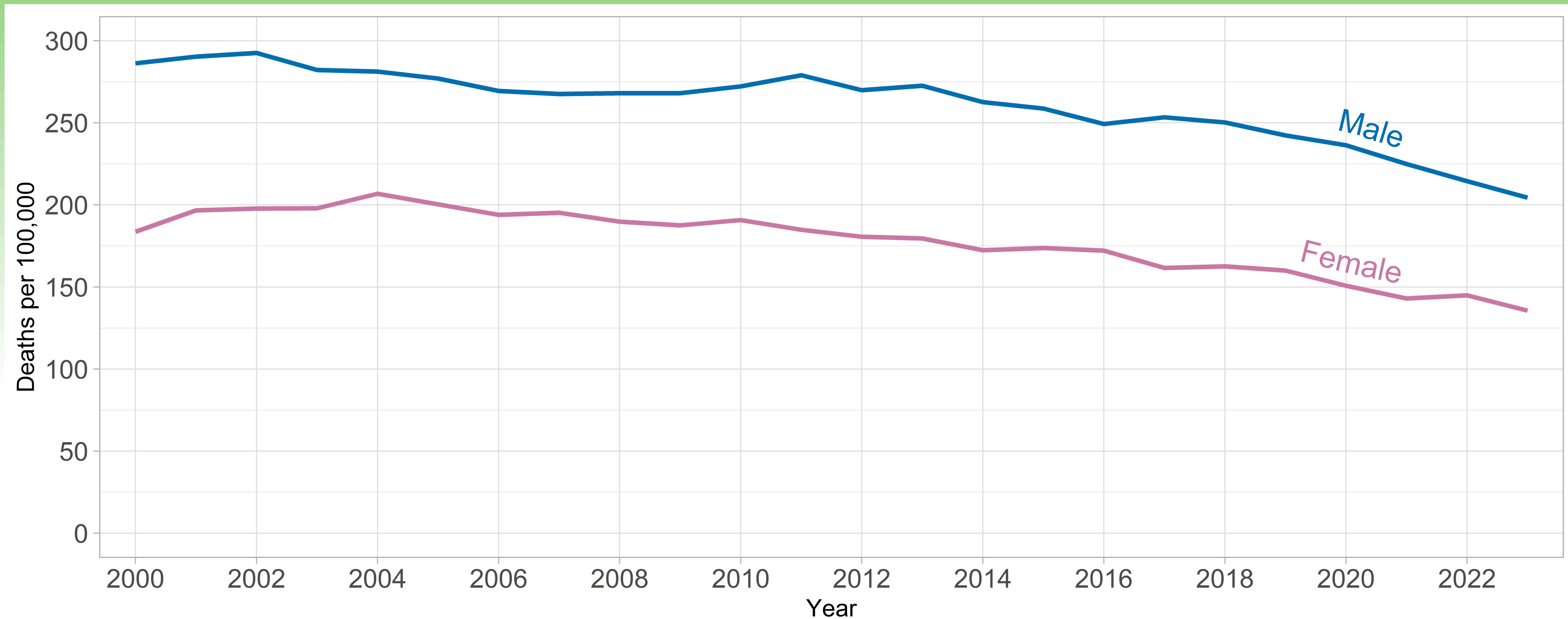
# Impact of Age and Sex on Cancer Death Rates (2000-2023)



- 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



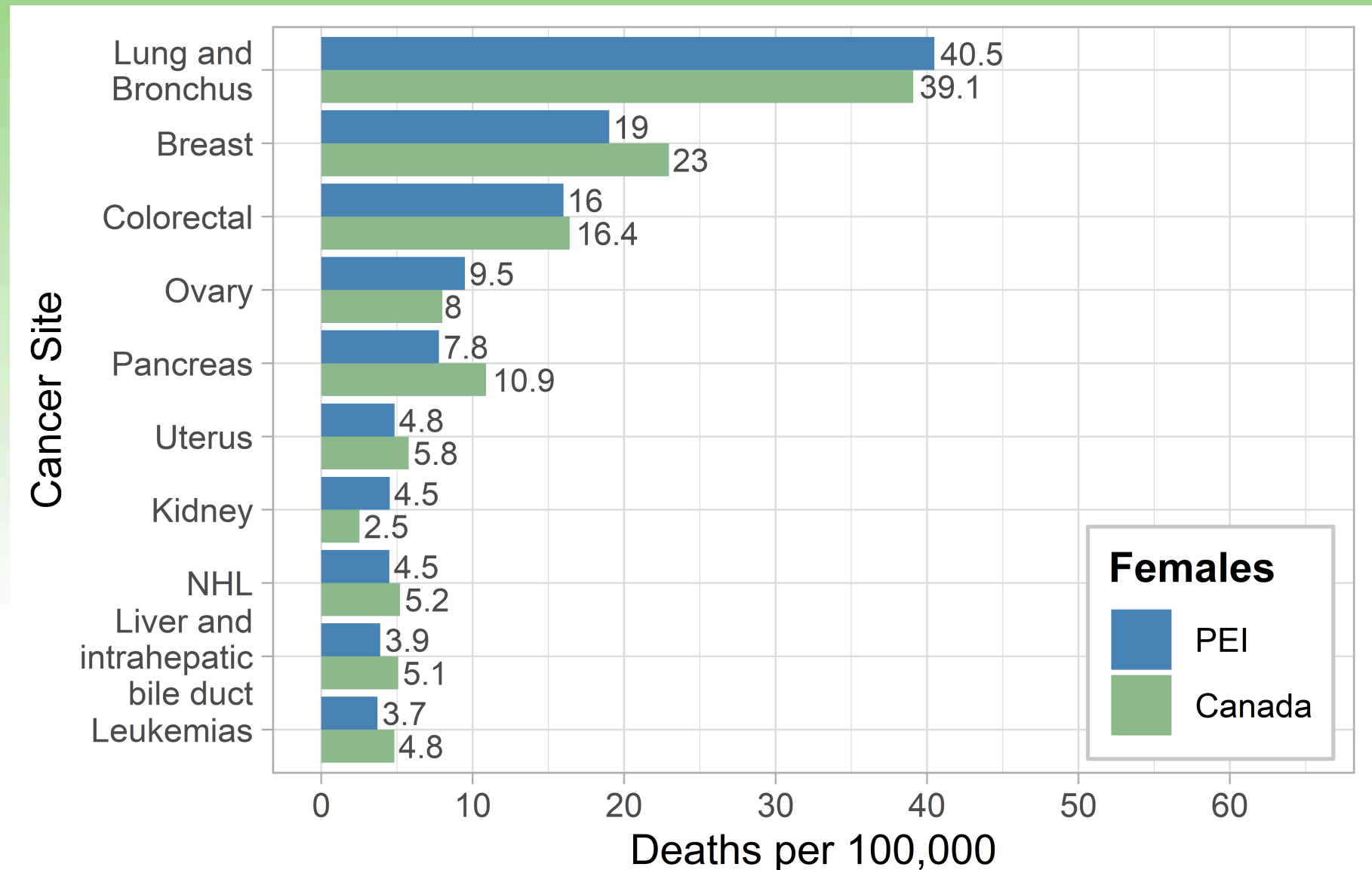
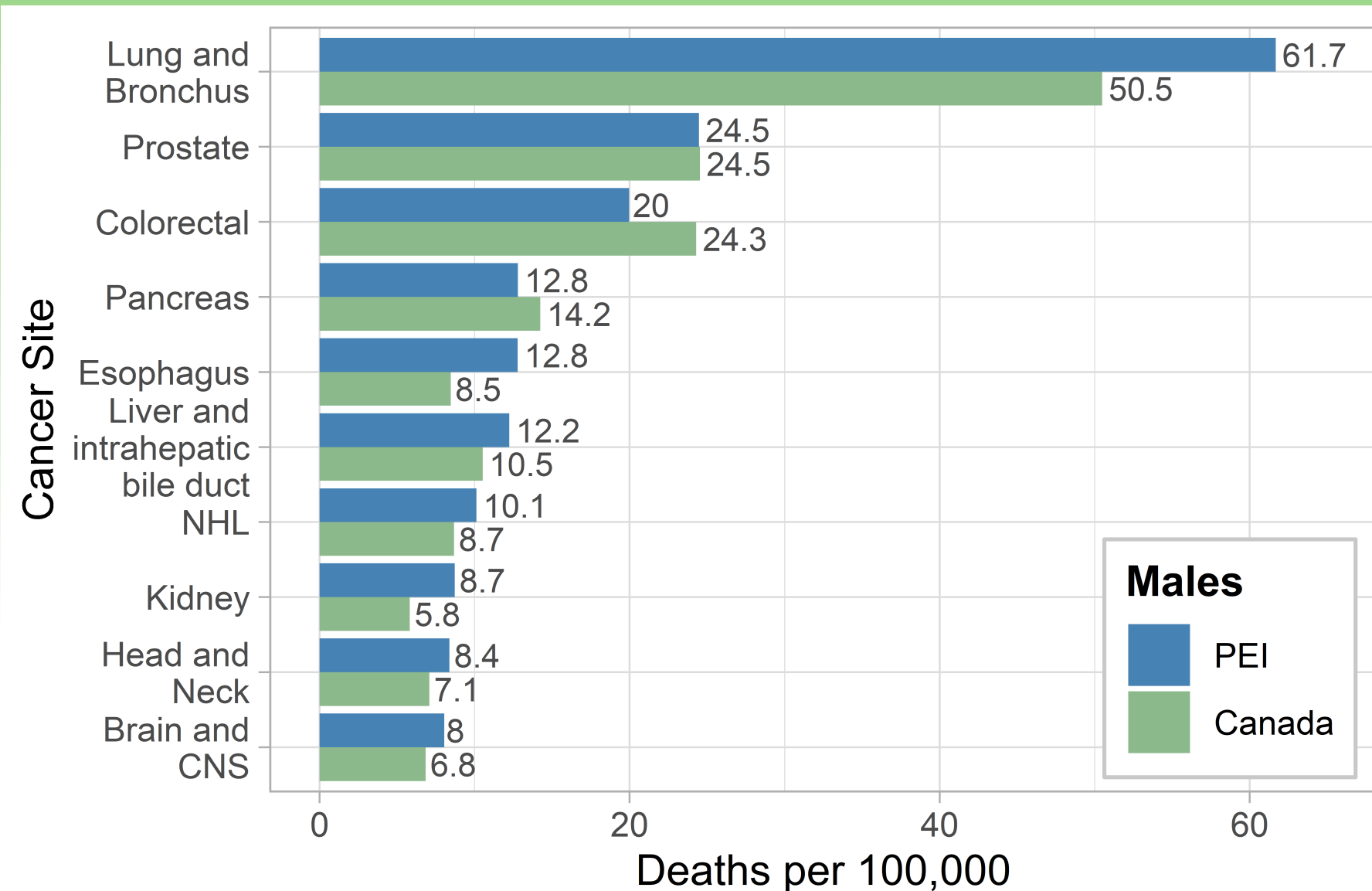
# Age-Standardized Cancer Mortality Rates by Sex (2000-2023)



- 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 → 195 per 100,000); Females: 37% drop (200 → 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-pe/cancer-statistics-and-trends-on-pe>