Introduction

Aim

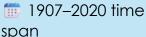
To find which of the five major cancers has the highest death rate in Australia.

Our Prediction

Skin cancer is has the highest mortality in population due to late detection and Australia's intense UV exposure.

Study Design

National mortality dataset



Age-standardised death rates for 5 major cancers



Cancers



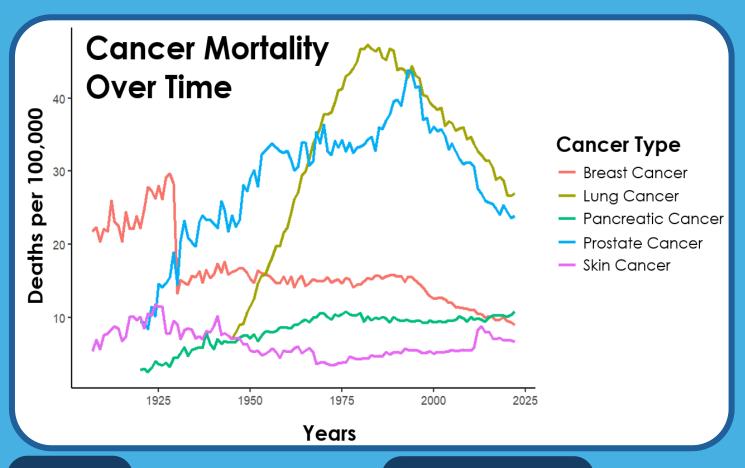
Lung



Breast



Pancreatic



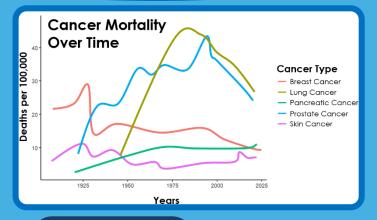
Key Insights

- Lung cancer mortality peaked, then dropped sharply.
- Prostate cancer rose mid-20th century, then declined.
- Breast cancer deaths have sharply then steadily declined.
- Pancreatic cancer mortality is stable but high.
- Skin cancer has the lowest and most stable mortality rate.

Possible Causes of Trends

- Anti-smoking campaigns helped lower lung cancer deaths.
- Improved early detection (mammograms and PSA tests).
- Improved treatments (chemo, immunotherapy, targeted drugs).
- More awareness led to earlier diagnosis.
- Slow progress in pancreatic cancer treatment keeps its rate high.

Conclusion



Prediction Result

Our hypothesis was incorrect lung cancer has the highest mortality rate, not skin cancer.

Takeaway

Lung cancer remains the deadliest despite declines. Skin cancer is common but causes the fewest deaths.





Lung Cancer

Lung cancer has the highest mortality rate among major cancers in Australia. There is a significant gender gap with 65 deaths per 100,000 men, and 15 deaths per 100,000 women.



Prostate Cancer



Prostate cancer causes approximately 30 deaths per 100,000 men in Australia, with no recorded mortality among women.

Breast Cancer

In Australia, breast cancer results in approximately 28 deaths per 100,000 women and about 2 deaths per 100,000 men.



Pancreatic Cancer



Pancreatic cancer causes an average of approximately 12 deaths per 100,000 men and 8 deaths per 100,000 women in Australia.

Skin Cancer

Skin cancer leads to an average of approximately 5 deaths per 100,000 men and 2 deaths per 100.000 women in Australia.



References

Data sourced from Australian Institute of Health Welfare, using datasets General Record of Incidence of Mortality (GRIM) books, and Australian Cancer Incidence and Mortality.

Cancer Mortality Patterns



≈65%

Survival



Breast

Pancreas

Summary

Among Australian people, lung cancer has the highest mortality rate, especially in men followed by prostate cancer in men and breast cancer in women. Pancreatic and skin cancers show similar death rates between genders, while breast cancer in men and prostate cancer in women are nearly negligible.

Prostate

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