

# Causes of death in a cohort of early stage colorectal cancer patients treated at a regional centre in Australia

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## BACKGROUND

- Australia has one of the highest incidences of colorectal cancer in the world.
- The state of Victoria has amongst the best survival rates nationally and internationally.
- However, *inequalities* in CRC survival for patients living in rural and regional areas persist.
- In particular, there is an **absolute difference of 10% in five year survival** rates of patients diagnosed between 2005 – 2009 in Metropolitan Melbourne compared to the Grampians region in regional Victoria. <sup>1</sup>

## AIM

- To explore potential contributing factors for increased mortality.

## METHODS

- A cohort of patients with early stage colorectal cancer diagnosed from 2005 - 2009 at Ballarat Health Services, Victoria, **who did not receive adjuvant chemotherapy**, were identified via the Victorian Cancer Registry.
- Demographic, tumour and treatment data were extracted from medical records.
- Survival data was obtained from the Victorian Cancer Registry, with correlation with hospital records to identify cause of death.

## RESULTS

- A total of 123 patients were included. The median age was 73 years.
- 21% of patients (n=26) were diagnosed after presenting as an emergency.
- Most tumours were T3 (47%) and 93% were node negative.

### Socioeconomics

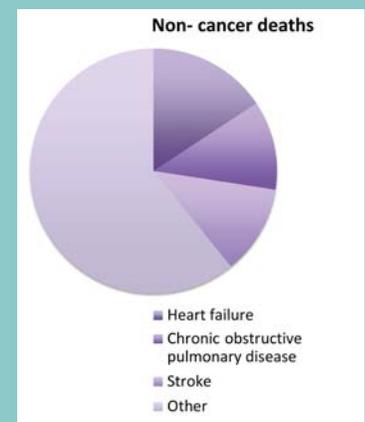
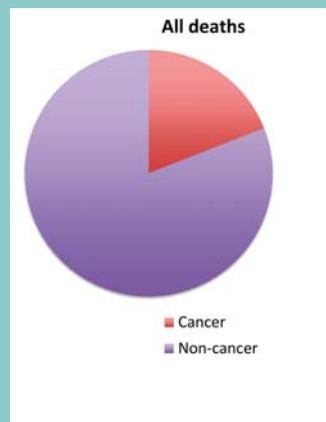
- Patients lived a median distance of 13km from the hospital, with 30% living alone.
- 5.7% were employed at diagnosis.

### Comorbidities and Performance Status

- The median Charlson score at diagnosis was 2.
- The median ECOG performance status of 1.
- 69% of patients were either overweight (BMI 25.0–29.9) or obese (BMI >30).

### Mortality and causes of death

- As of December 2017, 63 of the 123 patients had died.
- The median time from surgery to death was 56 months.
- Colorectal cancer was identified as the cause of death in 12 of 63 deaths – **a minority of deaths**
- The majority of deaths (51 out of 63) **were not** related to cancer, with heart failure (n=8), chronic obstructive pulmonary disease (n= 6), and stroke (n=6) as the most common causes.



### Early Deaths

- 11 of the 63 deaths (17.5%) occurred **within 12 months** of surgery.
- The median Charlson score for these patients was 2 – similar to the overall cohort
- 45% were overweight or obese – less so than the whole cohort
- The median ECOG of 2 **was poorer** than the entire cohort.
- 7 of the 11 deaths were in patients who had presented **as emergencies**,
  - However only 2 of these were directly attributable to cancer (perforation and sepsis).
  - The others were hospital-acquired pneumonia (n=2), end stage airways disease (n=2), ischaemic heart disease (n=2).

## CONCLUSIONS

- The majority of deaths in this cohort of early stage colorectal cancer **were non-cancer related**.
- The standard Charlson comorbidity index and the median ECOG performance status for the whole cohort were not particularly high.
- Demographic factors like a lack of social support from being unemployed and living alone, and a suboptimal weight, could be associated factors.

- Patients who presented as an emergency accounted for a majority of early deaths, however this was not directly related to malignancy in the majority.
- To further elucidate factors contributing to non-cancer mortality, data from a contemporaneous cohort of early stage patients from a Victorian metropolitan centre is being analysed and compared.

## References

1. Australian Institute of Health and Welfare 2017. Cancer in Australia 2017. Cancer series no.101. Cat. no. CAN 100. Canberra: AIHW.