

Cancer diagnosis and health behaviour change; a prospective study from the BC Generations Project*

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**The data used in this research were made available by the BC Generations Project*



BC GENERATIONS PROJECT
Your time today builds a healthier tomorrow.

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Background

- Early-detection and treatment improvements means more cancer survivors
- Poorer health amongst cancer survivors
- Health behaviours impact health outcomes in cancer survivors
- Diagnosis could be a “teachable moment”
- Paucity of evidence for the impact of a diagnosis on health behaviour
- Methodological weaknesses for existing evidence

Aim

- Prospective analysis of health behaviour change in colorectal cancer survivors the BC Generations Project (BCGP).
- Focus on one cancer - colorectal cancer (CRC)
- Model health behaviour change

Data

Participants: Cancer-free at baseline & any data available at baseline and follow-up
(n = 19,764)



average of 5.3 years
Cancer diagnosis



Measures: Socio-demographics, health behaviours

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- Cancer status: BC Cancer Registry
- Health behaviours: Average daily alcohol consumption, smoking status, BMI

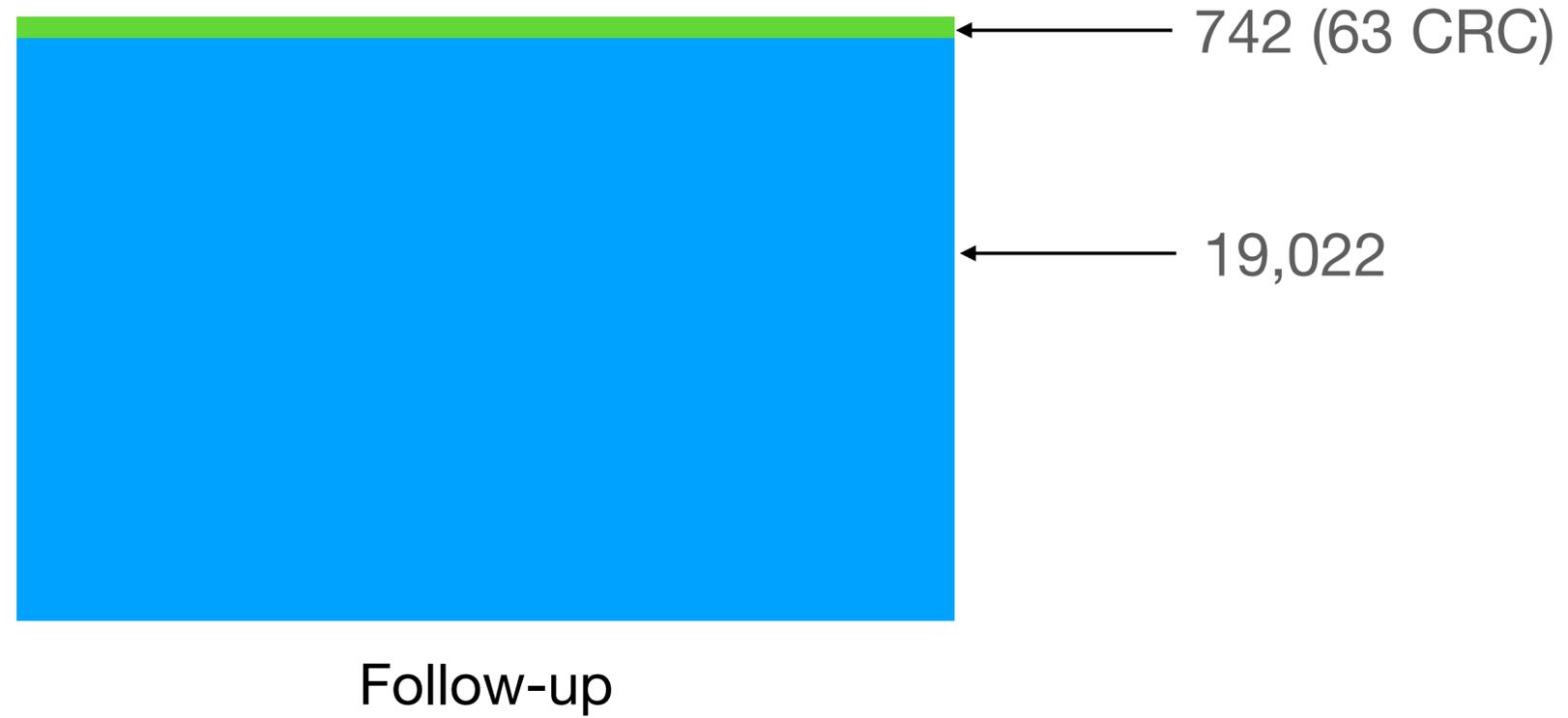
Analysis

- Smoking status: very low number of smokers, not modelled
- Groups: diagnosed with CRC, diagnosed with any other cancer, remained cancer free
- Models examined differences in alcohol consumption and BMI between baseline and follow-up for CRC survivors and any other cancer survivors, relative to those who remained cancer-free

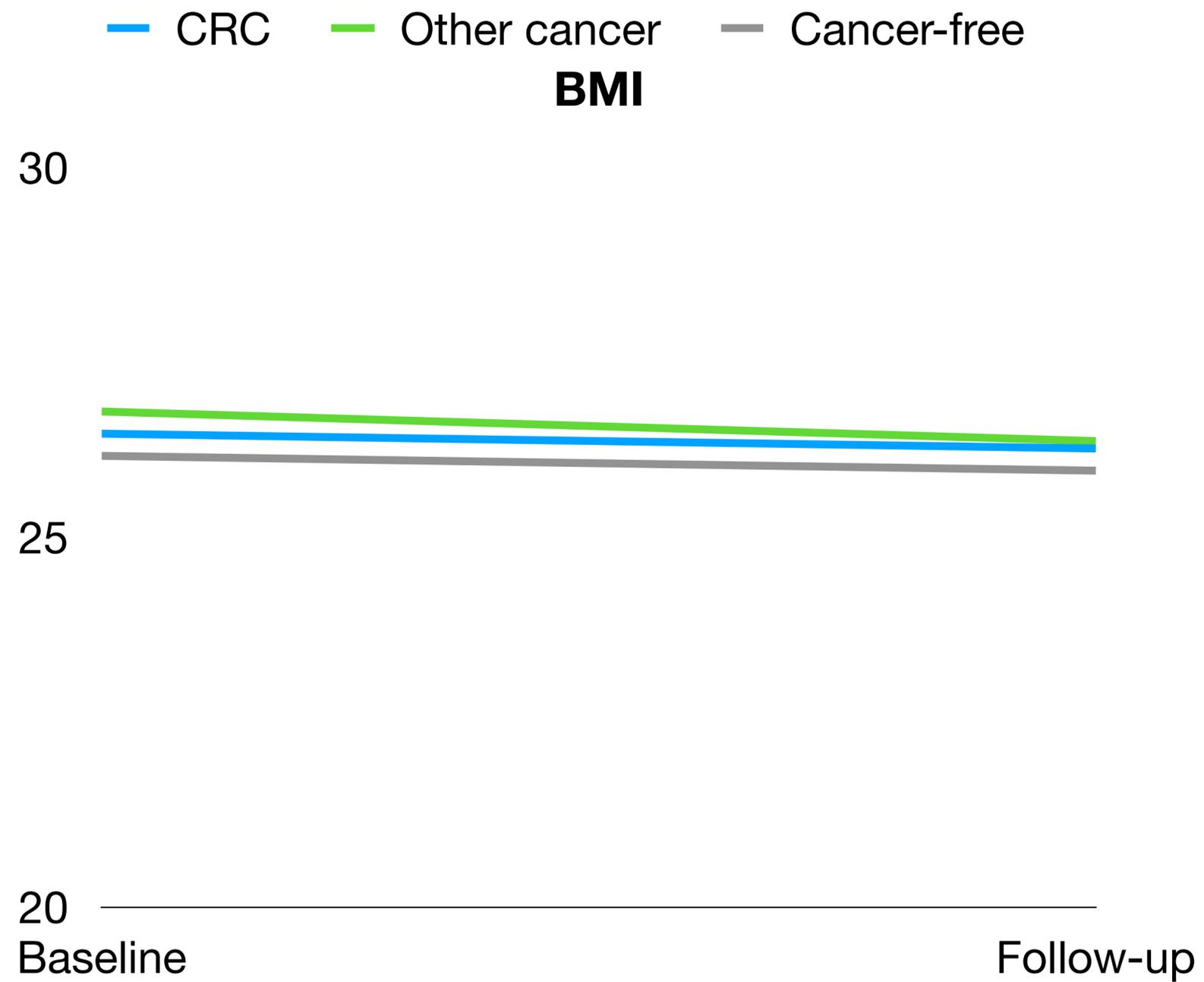
$$\Delta BMI = \beta_0 + \beta_1 CRCdiagnosis + \beta_2 BMI@baseline + \beta_3 Confounders + \varepsilon$$

Results

■ Cancer-free ■ Diagnosed with cancer



Results



Results

Adjusted baseline health behaviours change from baseline among colorectal cancer (CRC) survivors, other cancer survivors and cancer-free participants (n=19,764)

Characteristic	Participants with CRC (n=63) and cancer-free (n=19,022) participants		Participants with cancer other than CRC (n=679) and cancer-free (n=19,022) participants	
	<i>B</i> (95% CI)		<i>B</i> (95% CI)	
	BMI (kg/m ²) ^c	Alcohol (average drinks per day) ^d	BMI (kg/m ²) ^e	Alcohol (average drinks per day) ^f
Cancer				
No	Ref	Ref	Ref	Ref
Yes	-0.06 (-0.60, 0.49)	-0.18 (-0.42, 0.06)	-0.26 (-0.43, -0.09)**	-0.06 (-0.13, 0.01)

****p*<0.001 ***p*<0.01 **p*<0.05

Discussion

- General trend of decreased BMI between baseline and follow-up
- No significant change in BMI or alcohol consumption for those diagnosed with CRC relative to cancer free group
- Small but significant reduction in BMI for other cancer group
- Skeie et al, 2009

Implications/future research

- No change in health behaviours of CRC survivors
- Identified reduction in BMI in other cancer group of limited clinical significance?
- Repeated analysis at future BCGP follow-ups, or in other CanPath cohorts
- Examination of other health behaviours e.g., physical activity and diet.

Strengths and limitations

- Strengths
 - Prospective design
 - Objective assessment of cancer diagnoses
- Limitations
 - Low number of participants diagnosed with CRC
 - Missing data

Conclusion

- CRC and all cancer survivors make limited changes to health behaviours
- Targeted health behaviour change interventions could benefit these groups.

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Thank you

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