

# 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
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# Background

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- 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

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- 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

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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

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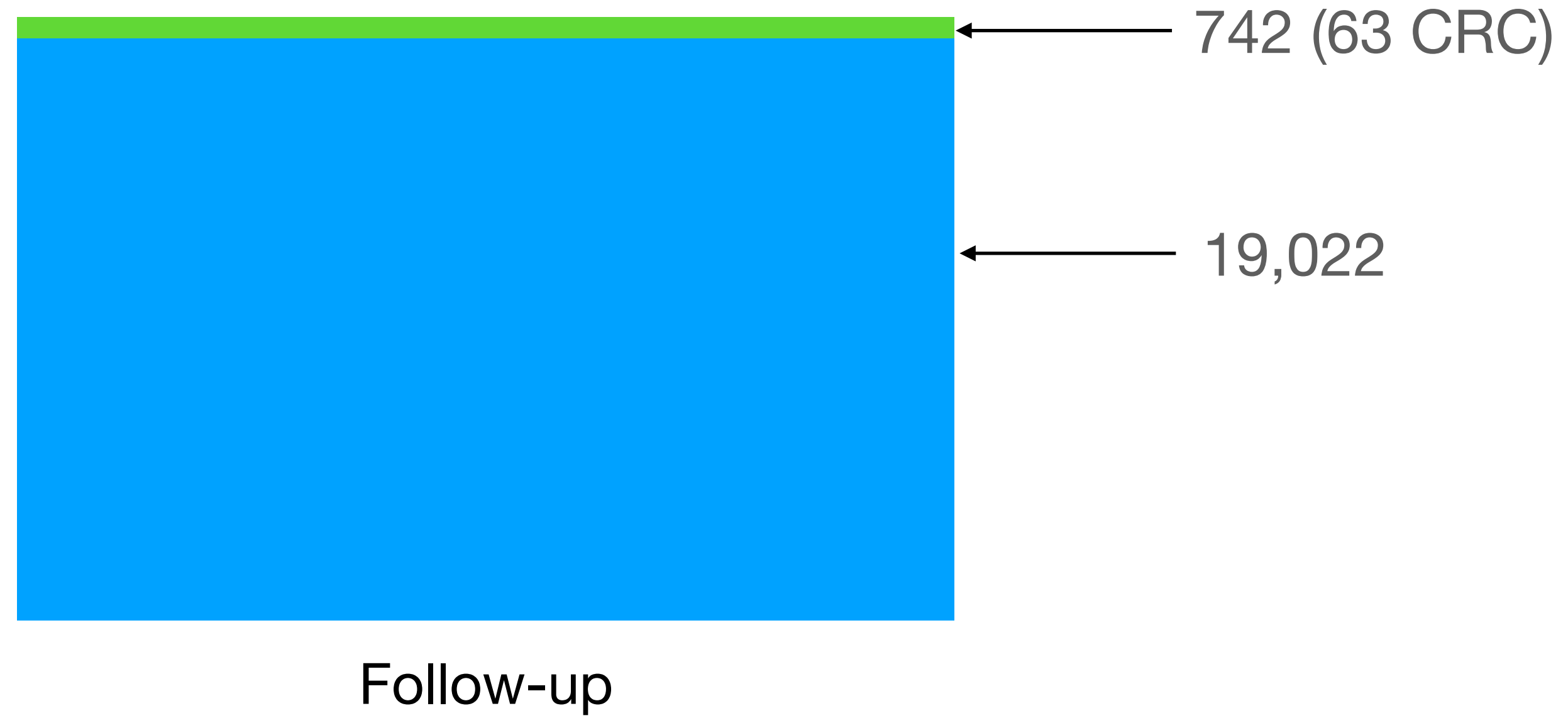
- Smoking status: very low number of smokers, not modelled
- Groups: diagnosed with CRC, diagnosed with any other cancer, remained cancer free
- Models examined differences in alcohol consumption and BMI between baseline and follow-up for CRC survivors and any other cancer survivors, relative to those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

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

# Results

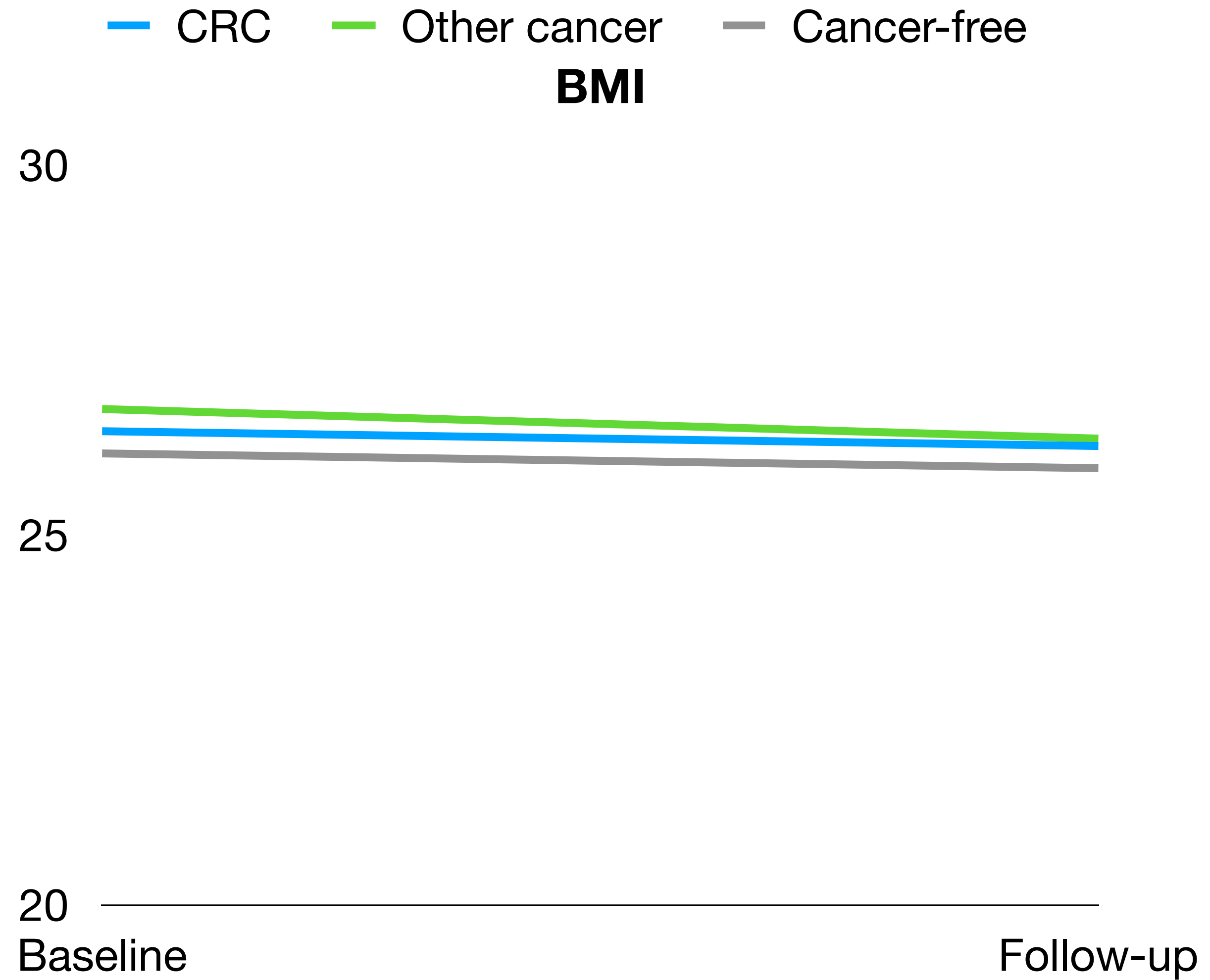
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■ Cancer-free    ■ Diagnosed with cancer



# Results

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# 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 <sup>2</sup> ) <sup>c</sup>	Alcohol (average drinks per day) <sup>d</sup>	BMI (kg/m <sup>2</sup> ) <sup>e</sup>	Alcohol (average drinks per day) <sup>f</sup>
<b>Cancer</b>				
<b>No</b>	Ref	Ref	Ref	Ref
<b>Yes</b>	-0.06 (-0.60, 0.49)	-0.18 (-0.42, 0.06)	<b>-0.26 (-0.43, -0.09)**</b>	-0.06 (-0.13, 0.01)

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

# Discussion

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- 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

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- 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

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

# Conclusion

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

# Acknowledgments

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- Salary and funding support: Canadian Cancer Society and Public Scholar's Initiative UBC
- Data: BCGP data manager and research manager, and all participants



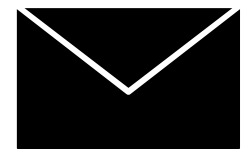
# Thank you

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