

Incidence of colorectal cancer in age group 30-49 years in the Geelong region, a pilot study

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Background and aim: Colorectal cancer (CRC) accounts for a significant proportion of cancer related illness and mortality in Australia.¹ A review of national cancer data published by the Australian Institute of Health and Welfare found CRC was the second most diagnosed cancer in Australia, with a total case number of 16,398 cases across all ages in 2019. The age group of 30–49 years had 1305 cases, which was 7.9% of all cases diagnosed.² The Australian National Bowel Cancer Screening Program (NBCSP) has reduced the overall disease burden of CRC in individuals aged 50-75 years.³ Despite this reduction in individuals aged 50-75 years, there is an ongoing rise in rates of colorectal cancer in younger populations, aged less than 50 years.⁴

This study is designed to observe the incidence of CRC and high-grade dysplasia (HGD) in the age group 30-49 years at Barwon health (Geelong region). Secondary aims are to establish if the covid-19 pandemic (starting in 2020) has impacted these presentations.

Methods: We performed a retrospective cohort study of patients aged between 30-49 years that had undergone a colonoscopy and subsequent diagnosis of HGD or CRC at Barwon health between January 2019 to December 2020.

Methods continued: Clinical and histopathological data collected included indication for colonoscopy, age, gender, and histology of biopsy/resection specimen. Stage of disease and survival of the patient up to one year post colonoscopy was recorded where available. Patients with known hereditary colorectal cancer syndrome or a previous diagnosis of colorectal cancer were excluded from this study.

Results: 1063 patients aged between 30-49 years underwent a colonoscopy at Barwon health between January 2019 and December 2020. In 2019, 651 colonoscopies were performed compared to 412 in 2020. Of those undergoing colonoscopies over this period 15 (9 diagnosed in 2019, 6 diagnosed in 2020) were diagnosed with HGD or CRC. Of the patients diagnosed in 2019, 5 patients were diagnosed with adenocarcinoma and 4 patients with HGD. Thus, the overall incidence of CRC or HGD in the 30–49-year age group was 1.4% during 2019 (95% CI, 0.3-2.6). In 2020 one patient was diagnosed with adenocarcinoma, 3 patients were diagnosed with HGD and 2 were diagnosed with a neuroendocrine tumour. Therefore, the incidence of HGD or CRC was 1.5% for this age group in 2020 (95% CI, 0.4-2.3).

There was no statistically significant difference between these years (1.4% vs 1.5%, $P=0.921$).

Of the total 8 patients diagnosed with CRC (adenocarcinoma and neuroendocrine) 62.5% were female and the median age at diagnosis was 42.5 years. Of those diagnosed with HGD 71.4% were females and the median age at diagnosis was 37 years.

One patient diagnosed with CRC had metastatic disease at the time of diagnosis with 3 other patients having evidence of nodal involvement (including both patients with neuroendocrine tumours).

Results continued: The remaining 4 patients had T1-3N0-XM0-X disease at diagnosis. Survival one year post diagnosis of HGD or CRC was documented for 12 patients with the survival status of the remaining 3 patients not able to be ascertained. The patient with metastatic CRC at diagnosis died 14 months post colonoscopy. The other 11 patients were alive at 12 months post colonoscopy.

Conclusion: This retrospective cohort study captured the incidence of colorectal cancer and high-grade dysplasia at Barwon health between January 2019 and December 2020 encompassing both a normal and “pandemic” year. Overall, the incidence of colorectal cancer or high-grade dysplasia at Barwon Health in the 30–49-year age group was 1.4% in 2019 and 1.5% in 2020 with no statistical difference between a normal and “pandemic” year. This compares with the national incidence of 1.3% in 2020 for the same age group.²

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References

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