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RESEARCH ARTICLE

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A systematic review of geographical differences in management and outcomes for colorectal cancer in Australia

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Abstract

Background: Australia and New Zealand have the highest incidence of colorectal cancer (CRC) in the world, presenting considerable health, economic, and societal burden. Over a third of the Australian population live in regional areas and research has shown they experience a range of health disadvantages that result in a higher disease burden and lower life expectancy. The extent to which geographical disparities exist in CRC management and outcomes has not been systematically explored. The present review aims to identify the nature of geographical disparities in CRC survival, clinical management, and psychosocial outcomes.

Methods: The review followed PRISMA guidelines and searches were undertaken using seven databases covering articles between 1 January 1990 and 20 April 2016 in an Australian setting. Inclusion criteria stipulated studies had to be peer-reviewed, in English, reporting data from Australia on CRC patients and relevant to one of fourteen questions examining geographical variations in a) survival outcomes, b) patient and cancer characteristics, c) diagnostic and treatment characteristics and d) psychosocial and quality of life outcomes.

Results: Thirty-eight quantitative, two qualitative, and three mixed-methods studies met review criteria. Twenty-seven studies were of high quality, sixteen studies were of moderate quality, and no studies were found to be low quality. Individuals with CRC living in regional, rural, and remote areas of Australia showed poorer survival and experienced less optimal clinical management. However, this effect is likely moderated by a range of other factors (e.g., SES, age, gender) and did appear to vary linearly with increasing distance from metropolitan centres. No studies examined differences in use of stoma, or support with stomas, by geographic location.

Conclusions: Overall, despite evidence of disparity in CRC survival and clinical management across geographic locations, the evidence was limited and at times inconsistent. Further, access to treatment and services may not be the main driver of disparities, with individual patient characteristics and type of region also playing an important role. A better understanding of factors driving ongoing and significant geographical disparities in cancer related outcomes is required to inform the development of effective interventions to improve the health and welfare of regional Australians.

Keywords: Bowel cancer, Colorectal cancer, Disparity, Regional, Health outcome

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