

Social networks and survival: Social ties could help with cancer management

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Researchers from Brigham and Women's Hospital led by Ying Bao, MD, ScD, an epidemiologist in BWH's Channing Division of Network Medicine and Assistant Professor at Harvard Medical School, have found that women with stronger social networks had better survival after colorectal cancer diagnosis and conclude that social network strengthening could be a tool for management of colorectal cancer.

Colorectal cancer is the third most commonly diagnosed and second leading cause of cancer death in the United States. At current rates, approximately 5% of individuals will develop a cancer of the colon or rectum within their lifetime. Though social <u>network</u> research has been done in other diseased populations, very few studies have examined the association between social network and survival in varying cancer sites.

The team utilized data from 896 women who participated in the Nurses' Health Study and had been diagnosed with colorectal cancer between 1992 and 2012. Social integration was assessed every four years during that time using the Berkman-Syme Social Networks Index; the value scale accounts for factors like marital status, social network size, contact frequency and religious or social group participation. This helped organize a patient rating system that identified patients on a range from socially isolated to socially integrated.

The findings indicated that, overall, women with high levels of <u>social</u> <u>integration</u> before a colorectal cancer diagnosis had significantly reduced risk of all-cause and <u>colorectal cancer</u>-specific mortality, particularly



among older women. Though the number of extended ties (religious or social group participation) weren't associated with survival, the presence of more intimate ties (family and friends) was associated with a significantly lower death rate.

"When a patient is diagnosed, health care providers can look to the patient's social network to see if it provides necessary resources or whether outside help might be something to consider," said Bao who is also an assistant professor at Harvard Medical School. "That could be assistance from social workers, for example, to ensure access to care. For physicians, portions of a care plan aimed at strengthening a patient's social network can be valuable tools that haven't always been considered in the past."

Due to the complexity of network interactions, there are many pathways through which social networks could cause improved survival among cancer patients. Some prior research indicates that higher levels of social integration are associated with lower levels of inflammation and thus disease progression; other studies indicate it relates to a reduction in psychological stress and poor health behaviors that may contribute to cancer progression. Support from social networks, such as assistance in getting to medical appointments, reminders to take medications, and help with nutrition and mobility, may also explain the observed association. Future investigations are required to understand how these factors are influencing different kinds of patients and their care plans.

More information: Sarma, E et al. "Social Integration and Survival after Colorectal Cancer Diagnosis" *Cancer*, DOI: 10.1002/cncr.31117

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