Cancer Pain Predicted by Lower Anxiety and Depression, Higher Social Support

For immediate release
October 22, 2019

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Expert Perspective

“Clinicians are trained and eager to alleviate patients’ pain, but what we often overlook is an assessment of their psychological health,” said Monica S. Krishnan, MD, 2019 Supportive Care in Oncology Symposium News Planning Team member. “This study finds that emotional health has a direct relationship to physical health and symptoms, emphasizing the importance of examining the totality of the patient’s health.”

ALEXANDRIA, Va. – A new study from the Levine Cancer Institute finds that patients with cancer who report higher levels of anxiety and depression experience more intense pain associated with their diseases. Furthermore, patients with higher social support report lower levels of pain. These findings will be presented at the upcoming 2019 Supportive Care in Oncology Symposium in San Francisco, CA.

About the Study

At the first appointment with a cancer specialist, nearly 12,000 patients with cancer in stages I–IV used a tablet to input their responses to a series of questions about their psychosocial distress, common cancer symptoms, and unmet needs. Statistical models then identified pain predictors from self-reported anxiety, depression, and social support.
“To my knowledge, this is the largest study to date across all of the different variables in cancer pain,” said lead author Sarah Kathryn Galloway, PhD, a psychologist at Levine Cancer Institute. “It emphasizes the need to evaluate psychological symptoms early when addressing cancer pain, which is something that is not assessed regularly and should be. It also underscores the importance of family, interpersonal relationships, and community on pain and illness.”

Key Findings

The authors found that patient characteristics of race, lower income, tumor site, and advanced disease were predictive of pain intensity. In addition, anxiety, depression, and social support were significant factors impacting pain intensity; these associations remained after accounting for patient characteristics. Interestingly, for patients completing distress screening one year from their diagnosis, the effect of anxiety and depression on pain differed by level of perceived social support.

Though there is no way to determine whether the pain results from the cancer, the treatment for the cancer, or something else, the pain may be reduced with specific actions that patients can take to protect their psychological health. The authors encourage patients to discuss low mood, worry, and issues of social support with their physicians. Specific tools learned from interventions such as Cognitive Behavioral Therapy, mindfulness, and Acceptance and Commitment Therapy can help alleviate psychological distress and pain and improve quality of life.

“Anxiety, depression, and social support are modifiable factors that can greatly impact a patient’s cancer pain experience,” said Dr. Galloway. “Study results demonstrate the need for interdisciplinary, multimodal—pharmaceutical and non-pharmaceutical—interventions for cancer related pain.”

Next Steps

Based upon follow-up data the authors collected, in future analyses they will be examining how the impact of social support differentially impacts mood, anxiety, and pain across diagnosis, acute treatment, and survivorship.
This year's Supportive Care in Oncology Symposium will include approximately 150 abstracts focusing on efforts to improve supportive care for patients with cancer. On-site facilities for reporters will include a working newsroom and access to leading experts in supportive care.


**Doctor-approved patient information for your readers from Cancer.Net:**

- Managing Emotions
- Physical, Emotional, and Social Effects of Cancer
- Finding Social Support and Information

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*View the disclosures for the News Planning Team.*

**Attribution to the 2019 Supportive Care in Oncology Symposium is requested in all news coverage.**
Abstract 76: Anxiety, depression, pain, and social support in a large representative cancer population

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Background: Pain is one of the most common cancer symptoms. Individuals in pain often experience psychological distress in the form of anxiety and depression. Social support is an important resource utilized by patients to cope with cancer. Aims: (1) Identify clinicodemographic factors influencing cancer pain; (2) examine social support as a moderator of the relation between anxiety, depression and cancer pain. Methods: Participants included stage I-IV cancer patients (N = 11,815) who completed a routine tablet-based psychosocial distress screening at a large academic hybrid, multi-site, community-based cancer institute (Jan 2017-Jan 2019). Participants were matched to the Cancer Registry (N = 7,333); clinicodemographic factors were incorporated into lasso regression models. Models identified pain predictors from self-reported anxiety, depression and social support.
Analyses examined if the effect of anxiety and depression on pain differed by levels of social support. **Results:** Median age was 59 (RNG, 18-101), 61% female and 77% white. Tumor site (GI, Gyn, head/neck), advanced disease, black race, and lower income were independently associated with severe pain. Anxiety ($\beta = 0.48$, $p < .001$) and depression ($\beta = 0.69$, $p < 0.001$) were related to pain intensity after accounting for clinicodemographic factors. The effect of depression on pain differed by level of social support ($p = 0.009$). The effect of anxiety on pain differed in patients reporting transportation issues ($p = 0.035$). **Conclusions:** This is the largest study to date examining cancer pain intensity, psychological factors of anxiety and depression, and social support. Our data suggests that patient characteristics of race, income, tumor site, and disease staging independently predict pain intensity. Anxiety and depression are significant factors of pain intensity; these associations remain after accounting for patient characteristics. Social support buffers the negative impact of anxiety/depression on pain. Clinicians who treat cancer pain should be attuned to modifiable psychological factors which can greatly influence a patient's pain experience. Findings emphasize the need for interdisciplinary multimodal approaches for cancer pain.

**Disclosures:** Declan Walsh, MD: Consulting or Advisory Role with Tesaro, Leadership Role with Nualtra, Travel, Accommodations, Expenses from Tesaro, Stock and Other Ownership Interests with Nualtra, Honoraria from Tesaro, Research Funding from Nualtra.

**Research Funding Source:** No funding received.

**Received Grant funding:** No

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The American Society for Radiation Oncology (ASTRO) is the world’s largest radiation oncology society, with more than 10,000 members who are physicians, nurses, biologists, physicists, radiation therapists, dosimetrists and other health care professionals who specialize in treating patients with radiation therapies. The Society is dedicated to improving patient care through professional education and training, support for clinical practice and health policy standards, advancement of science and research, and advocacy. ASTRO publishes three medical journals, *International Journal of Radiation Oncology • Biology • Physics*, *Practical Radiation Oncology*. 
and Advances in Radiation Oncology; developed and maintains an extensive patient website, RT Answers; and created the nonprofit foundation Radiation Oncology Institute. To learn more about ASTRO, visit our website, sign up to receive our news and follow us on our blog, Facebook, Twitter and LinkedIn.

About the American Academy of Hospice and Palliative Medicine:

AAHPM is the professional organization for physicians specializing in hospice and palliative medicine, nurses, and other healthcare providers. Since 1988, the Academy has dedicated itself to advancing hospice and palliative medicine and improving the care of patients with serious illness. Our activities focus on education and training, resources, networking, and advocacy. Learn more about these activities and more in the AAHPM Annual Report video.

About ASCO:

Founded in 1964, the American Society of Clinical Oncology, Inc. (ASCO®) is committed to making a world of difference in cancer care. As the world's leading organization of its kind, ASCO represents nearly 45,000 oncology professionals who care for people living with cancer. Through research, education, and promotion of the highest-quality patient care, ASCO works to conquer cancer and create a world where cancer is prevented or cured, and every survivor is healthy. ASCO's Conquer Cancer Foundation supports the Society by funding groundbreaking research and education across cancer's full continuum. Learn more at www.ASCO.org, explore patient education resources at www.Cancer.Net, and follow us on Facebook, Twitter, LinkedIn, and YouTube.