

# Depression's Impact on Survival in Patients With Cancer

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Healthcare professionals spend a great deal of time evaluating prognostic indicators to improve the treatment and survival of patients. With the building evidence that depression is an independent prognostic factor, they should look to do what those in cardiology are attempting—intervention trials to treat depression and lower its risk. As patient advocates, oncology nurses should look at their practice and make sure they incorporate psychosocial assessment as a standard component of cancer care.

The World Health Organization (2010) defined depression as a common mental disorder that presents with depressed mood, loss of interest or pleasure, feelings of guilt or low self-worth, disturbed sleep or appetite, low energy, and poor concentration. The problems can become chronic or recurrent and lead to substantial impairments in an individual's ability to take care of everyday responsibilities (World Health Organization, 2010). Annually, major depressive disorder affects about 6.7% of the U.S. population, or 14.8 million Americans aged at least 18 years. For people aged 15–44 years, it is the leading cause of disability in the United States (National Institute of Mental Health, 2010).

## Depression and Survival in Patients With Cancer

In patients diagnosed with cancer, the rate of depression is disturbingly elevated, 2–5 times greater than in the general U.S. population. The reported prevalence of major depression in individuals with cancer varies, ranging from 0%–38% (Massie, 2004). Identifying and treating depression ultimately may enhance patient safety and the overall survival of patients with cancer.

For some time, very clear evidence has shown that depression and anxiety are increased in patients with cancer and that they have negative effects on the patients' quality of life. Evidence also

has shown that patients with cancer and depression or depressive symptoms may have an elevated mortality rate. Depression can affect a patient's likelihood of survival, according to a meta-analysis (Oncology Nursing Society, n.d.). Satin, Linden, and Phillips (2009) analyzed 26 studies, with a total of 9,417 patients, that examined the effects of depression on the progression of disease and survival of patients with cancer. The analysis found an increased risk of death in patients who reported more depressive symptoms than others, as well as in patients who had been diagnosed with a depressive disorder compared to those who had not. The relationship was not seen consistently in all studies analyzed, and some studies found only a weak relationship between depression and decreased survival. However, Satin et al. (2009) found that patients experiencing depressive symptoms were 25% more likely to die, and patients diagnosed with major or minor depression were almost 40% more likely to die. The strongest relationship was in the bone marrow and stem cell transplantation population. Multiple studies have demonstrated that depressed mood prior to transplantation was associated with shorter survival times even after the researchers controlled for relevant medical

factors (Andrykowski, Brady, & Henslee-Downey, 1994; Cassileth, Walsh, & Lusk, 1988; Colon, Callies, Popkin, & McGlave, 1991; Satin et al., 2009).

Psychological factors such as depression, anxiety, and stress can have negative physiologic effects on cancer progression (Andrykowski et al., 1994; Antoni et al., 2006; Cassileth et al., 1988; Colon et al., 1991; Satin et al., 2009). The mechanisms of the association still are being researched, but depression has been linked with declines in natural killer cell activity (Irwin & Miller, 2007; Levy, Lee, Bagley, & Lippman, 1988), an increase in catecholamines (Lutgendorf et al., 2005), and the release of angiogenic cytokines promoting angiogenesis (Irwin, Clark, Kennedy, Christian Gillin, & Ziegler, 2003), all of which are associated with tumor growth and cancer progression (Thaker et al., 2006).

Even with the epidemiologic and physiologic evidence supporting the link between depression and decreased survival, the causal variable is not known. Does depression cause the progression, or is depression the consequence of the tumor's manipulation of the body and the physiologic changes? Akechi et al. (2000) suggested a bidirectional relationship between depression and cancer.

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Digital Object Identifier: 10.1188/10.CJON.649-652