

# Radiation Therapy Pain Management

## Prevalence of symptoms and effectiveness of treatment options

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**BACKGROUND:** The prevalence of pain among patients undergoing radiation therapy (RT) is not well described.

**OBJECTIVES:** The purpose of this study was to assess the prevalence and management of pain in patients undergoing RT.

**METHODS:** 94 patients undergoing RT were surveyed at two time points during the course of their treatment. Patients reported on pain, fatigue, nausea, headache, and depressive symptoms, as well as on the use of pharmacologic and nonpharmacologic or alternative methods for symptom management.

**FINDINGS:** The mean severity of pain did not change significantly between the first week of RT and the final week. Severity of pain was associated with worse fatigue, nausea, headaches, and depressive symptoms, providing opportunities for providers to address multiple co-occurring symptoms. Rates of opioid and marijuana use remained similar between the two time points. More than half of the patients reported use of at least one nonpharmacologic method for pain management, with use increasing during the course of RT.

### KEYWORDS

radiation therapy; oncology; quality of life; symptoms; pain management

### DIGITAL OBJECT IDENTIFIER

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**PAIN IS HIGHLY PREVALENT AMONG PATIENTS WITH CANCER**, affecting more than half of all patients during the course of their disease (Bennett, Paice, & Wallace, 2017). Despite advances in understanding the pathophysiology of cancer-related pain, pain continues to be largely undertreated (Bennett et al., 2017). Ineffective management of cancer-related pain stems from insufficient pain assessment by providers and limitations in their competency to manage pain (Fairchild, 2010; Maltoni, 2008), as well as from reluctance on the part of the patients to report or seek treatment for pain (Fairchild, 2010). Some patients on multiple medications may be overwhelmed by the prospect of adding medications to already complicated pharmacologic regimens. In addition, concerns related to opioid use has exacerbated the undertreatment of cancer pain (Graczyk, Borkowska, & Krajnik, 2018; Page & Blanchard, 2019).

Although opioids have long been the mainstay of treatment for moderate-to-severe cancer-related pain (Fallon et al., 2018), several less traditional therapies, including acupuncture, Reiki therapy, and cannabinoids, have also demonstrated effectiveness when used alone or in combination with more typical analgesics (Kramer, 2015; Lu & Rosenthal, 2013; Thrane & Cohen, 2014). Legislative changes affecting opioid prescribing and marijuana legalization may prompt increased patient use of alternative pain management approaches (Haskins, 2019). Early identification and treatment of cancer-related pain improves quality of life and well-being in social function and decreases disease progression (Fairchild, 2010; Greco et al., 2014; Quinten et al., 2009).

Many patients with cancer undergoing radiation therapy (RT) travel daily for multiple weeks to and from radiation treatment centers. Symptoms from RT, such as undertreated pain or severe nausea, are common reasons for unplanned treatment interruptions (Fesinmeyer, Mehta, Blough, Tock, & Ramsey, 2010; Lazarev et al., 2017), and several large retrospective studies have reported that such disruptions are associated with worse oncologic outcomes (Fowler & Lindstrom, 1992; Ohri, Rapkin, Guha, Kalnicki, & Garg, 2016; Perez, Grigsby, Castro-Vita, & Lockett, 1995). Therefore, effective pain management ensures patients can receive and tolerate timely RT and maintain their quality of life. Studies about pain prevalence and management in this group is limited. Therefore, the purpose of this study was to survey patients undergoing RT regarding their pain, as well as evaluate effective pain management strategies that optimize their plan of care and quality of life.