

# Nonpharmacologic Pain Interventions

## A review of evidence-based practices for reducing chronic cancer pain

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**BACKGROUND:** Pain is a common issue for patients with cancer and can be challenging to manage effectively. Healthcare professionals need to be knowledgeable about evidence-based nonpharmacologic interventions.

**OBJECTIVES:** This systematic review critically appraises the strength and quality of the empirical evidence for nonpharmacologic interventions in reducing chronic cancer pain.

**METHODS:** Intervention studies were critically appraised and summarized by an Oncology Nursing Society Putting Evidence Into Practice team of RNs, advanced practice nurses, and nurse scientists. A level of evidence and a practice recommendation was assigned to each intervention.

**FINDINGS:** Based on evidence, recommended interventions to reduce chronic cancer pain are celiac plexus block for pain related to pancreatic and abdominal cancers and radiation therapy for bone pain. Although psychoeducational interventions are considered likely to be effective, the effective components of these interventions and their dose and duration need to be determined through additional research.

### KEYWORDS

nonpharmacologic; interventions; chronic pain; cancer; evidence-based practice

### DIGITAL OBJECT IDENTIFIER

10.1188/17.CJON.S3.54-70

**PAIN IS ONE OF THE MOST COMMON PROBLEMS** among patients with cancer. This distressing symptom may be related to the disease and its progression, treatment, and processes unrelated to cancer (Green, Hart-Johnson, & Loeffler, 2011; van den Beuken-van Everdingen, 2012). Pain is experienced by approximately 66% of patients with advanced disease, 55% of patients undergoing cancer treatment, and 39% of cancer survivors who have completed treatment (van den Beuken-van Everdingen, Hochstenbach, Joosten, Tjan-Heijnen, & Janssen, 2016). Although acute pain is usually linked to a specific injury or illness and lasts a short time, chronic pain is persistent, and it often is challenging to find effective ways to manage it (Institute of Medicine, 2011).

Pain management interventions are typically classified as pharmacologic and nonpharmacologic. Pharmacologic approaches, many of which are opioid-based, may reduce pain, but their long-term effectiveness is limited. In addition, potential adverse effects can occur with pharmacologic interventions, such as constipation, sedation, and tolerance to the analgesic (Cherny, 2004; McNicol et al., 2003). Nonpharmacologic therapies are an important adjunct to pharmacologic interventions in furthering pain relief; they also can be used as stand-alone therapies. In addition, some nonpharmacologic interventions can be used independently by patients, therefore promoting self-management and increasing a sense of control over pain. Healthcare professionals who are knowledgeable about evidence-based nonpharmacologic interventions can offer treatment options for reducing chronic cancer pain. The purpose of this systematic review is to critically appraise the strength and quality of the empirical evidence for nonpharmacologic interventions in reducing chronic cancer pain.

### Methods

A comprehensive review was conducted of the PubMed, CINAHL®, and Cochrane Collaboration databases, as well as the National Comprehensive Cancer Network (NCCN) guidelines, and articles were retrieved from January 2002 to June 2016 (Brant, Eaton, & Irwin, 2017). After removal of duplicates and studies that did not meet the inclusion criteria, the current authors found 154 studies that addressed nonpharmacologic interventions for chronic cancer pain management. The studies were critically appraised