

# Improving the Quality of Cancer Pain Management in an Academic Medical Center Emergency Department

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The impact and outcomes of the implementation of a pain management guideline and pain assessment standard operating procedure (SOP) in a cancer-specific emergency department are evaluated in this article. After implementation of the SOP, the number of pain assessments conducted per patient during hospitalization increased, as did the percentage of patients who underwent a pain assessment at admission, within one hour after analgesic medication was administered, and at regular intervals.

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Pain management is an essential part of cancer care. The American Pain Society emphasized the importance of pain control in patients with cancer, suggesting that pain become the fifth vital sign as a means of prompting clinicians to assess and document pain whenever vital signs are checked (Leong et al., 2010). A number of studies have demonstrated that, when adherent to World Health Organization (WHO) treatment guidelines, 90% of patients reach pain-free states (Pharo & Zhou, 2005). Although evidence is convincing, insufficient knowledge of pain assessment and lack of accountability by healthcare professionals limit effective pain management, causing pain control to continue to be suboptimal and unsatisfactory in more than 40% of patients (Deandrea, Montanari, Moja, & Apolone, 2008).

The Korean Ministry of Health and Welfare's healthcare accreditation program for hospitals includes pain management standards as one of the evaluation items. However, the scope of the evaluation is limited to the inpatient setting, leaving outpatient pain management less standardized or regulated. In addition, very few reported studies have evaluated the management of cancer pain in the outpatient setting, particularly in the emergency department (ED), where patients presenting with pain may be neglected because of a high priority being placed on urgent and life-threatening conditions (Tsai, Liu, Tang, Chen, & Chen, 2010).

In 2009, the Asan Medical Center opened a separate cancer emergency department (CED), which is a specialized unit designed to manage oncologic emergencies (Ahn, Lee, Lim, & Lee, 2012). As

a means to improve the quality of care to patients with cancer, the Cancer Pain Control Project (CPCP) was initiated in November 2011 to implement a pain management guideline and a standard operating procedure (SOP) for pain assessment. The aim of this study was to evaluate the impact and outcome of the CPCP in the CED.

## Methods

This retrospective, observational study used data retrieved from the Asan Medical Center electronic medical record system. A total of 1,993 patients visited the CED during the study period from August to September 2011 (before initiation of the CPCP,  $n = 891$ ) and from February to March 2012 (after the initiation of the CPCP,  $n = 1,102$ ). Patients aged 20 years and older, who stayed in the CED for more than 24 hours and experienced pain with self-reported numeric rating scale (NRS) scores of 4 or greater at the time of admission or during the CED stay were included in the study. Data from a total of 455 patients were used in the analysis.

## Pain Assessment and Management

The SOP for pain assessment is mandated once every eight hours, at admission and discharge, whenever patients report pain, and within one hour after the administration of analgesic medication. The pain management guideline contains five basic principles: (a) use of oral medication when available, (b) adherence to the WHO (1990) three-step ladder approach (<http://bit.ly/1u7alff>), (c) use of regular, time-release analgesics for the prevention of pain recurrence, (d) prescription of