Use of the Distress Thermometer in Cancer Survivors: Convergent Validity and Diagnostic Accuracy in a Spanish Sample

Yolanda Andreu Vaillo, PhD, Paula Martínez Lopez, PhD, and María José Galdón Garrido, PhD

OBJECTIVES: To explore the performance of the National Comprehensive Cancer Network Distress Thermometer (DT) as a distress screening tool in cancer survivors.

SAMPLE & SETTING: 236 Spanish adult-onset cancer survivors who visited the Fundación Instituto Valenciano de Oncología in Valencia, Spain, for follow-up appointments.

METHODS & VARIABLES: Survivors completed the DT and the Brief Symptom Inventory 18 (BSI-18), which has established a cutoff score for identifying clinically significant distress.

RESULTS: Receiver operating characteristic curve analysis of the DT scores relative to the BSI-18 cutoff score showed good overall accuracy. For a score of 5 or greater, sensitivity, specificity, positive predictive value, negative predictive value, and clinical utility indexes indicated that the DT appeared to be satisfactory for screening but had restricted use for case finding.

IMPLICATIONS FOR NURSING: Screening for and responding to distress is considered an important part of nursing practice. The DT is suitable for use as a first-stage, quick-detection instrument in a two-step screening process to rule out noncases among Spanish post-treatment cancer survivors.

KEYWORDS cancer survivors; Distress Thermometer; psychosocial distress; diagnostic accuracy
***ONF, 46*(4), 442–450.**
DOI 10.1188/19.ONF.442-450

People who have survived cancer frequently experience long-term and late physical effects, such as pain and fatigue (Bower, 2007; Pachman, Barton, Swetz, & Loprinzi, 2012), as well as psychosocial and practical difficulties, such as fear of recurrence and issues surrounding employment, finances, and health and life insurance (Aaronson et al., 2014; de Boer, Taskila, Ojajärvi, van Dijk, & Verbeek, 2009; Duijts et al., 2014; Hoffman, McCarthy, Recklitis, & Ng, 2009; Stanton, 2012). Because of these challenges, cancer survivors are at increased risk for psychosocial distress, even many years after the completion of therapy, although definitive data regarding the prevalence of significant distress are lacking (the reported prevalence ranges from 5% to 43%) (Jefford et al., 2017; Kaiser, Hartoonian, & Owen, 2010; Mitchell, Ferguson, Gill, Paul, & Symonds, 2013; Ploos van Amstel et al., 2013; Wells et al., 2015). Psychosocial distress in cancer is defined by the National Comprehensive Cancer Network ([NCCN], 2017a) as follows:

> A multi-determined unpleasant emotional experience of a psychological, social, spiritual and/or physical nature that may interfere with the ability to cope effectively with cancer, its physical symptoms and its treatment. Distress extends along a continuum, ranging from common normal feelings of vulnerability, sadness, and fears to problems that can become disabling, such as depression, anxiety, panic, social isolation, and existential and spiritual crisis. (p. MS-4)

In the early 2000s, distress was recognized as the sixth vital sign in cancer care (Bultz & Carlson, 2005); consequently, guidelines of a number of international professional societies and regulatory organizations (e.g., CanCon in Europe and NCCN in the United States) recommended integration of screening for