

Prevalence of posttraumatic stress disorder (PTSD) in women with breast cancer

Linda Kwakkenbos, PhD^{1,2}; James C Coyne, PhD^{3,4}; Brett D Thombs, PhD^{1,2,5,6,7,8}

¹Department of Psychiatry, McGill University, Montréal, Québec, Canada; ²Lady Davis Institute for Medical Research, Jewish General Hospital, Montréal, Québec, Canada ³University of Groningen, Groningen, the Netherlands; ⁴Institute for Health, Health Care Policy and Aging Research, Rutgers University, USA, ⁵Departments of Medicine (Division of Rheumatology), ⁶Epidemiology, Biostatistics, and Occupational Health, ⁷Educational and Counselling Psychology, and ⁸School of Nursing, McGill University, Montréal, Québec, Canada.

Address for Correspondence: Linda Kwakkenbos, PhD; Jewish General Hospital; 4333 Cote Ste Catherine Road; Montreal, Quebec H3T 1E4; Tel: (514) 340-8222 ext. 8578; Email: kwakkenbosL@gmail.com

Financial support: Supported by Grant Number R01MH63172 from the National Institute of Mental Health and the National Cancer Institute. Dr. Kwakkenbos is supported by a Fonds de la Recherche en Santé Québec (FRSQ) postdoctoral fellowship. Dr. Thombs is supported by an Investigator Salary Award from the Arthritis Society. No conflicts of interest exist.

Studies on posttraumatic stress disorder (PTSD) in patients with medical diagnoses are increasingly common, particularly since the inclusion in DSM-IV of a diagnosis with a life-threatening illness as a traumatic event that could precipitate PTSD.¹ Concerns have been raised, however, about whether a PTSD diagnosis is the best way to capture emotional distress in patients with medical diagnoses, such as cancer.²⁻⁴ Rather than a single traumatic event with a defined end point, cancer diagnosis, treatment, and survivorship comprise interconnected, ongoing experiences involving significant stress, including anxiety and worry related to realistic future-oriented health concerns.²⁻⁴

In this context, it is important to understand the prevalence of PTSD in breast cancer. Estimates vary widely,⁵ with published estimates as high as 32%.⁴ However, most prevalence estimates are based on the proportion of patients above cutoffs on symptom questionnaires rather than actual PTSD diagnoses.⁴ Symptom questionnaires pick up cancer-related distress or ‘subsyndromal PTSD’ symptoms,⁶ but they tend to cast a wide net and identify far more patients as possible cases than the proportion who meet diagnostic criteria, and, thus, overestimate PTSD rates. A questionnaire with sensitivity and specificity of 80%, for instance, would identify 20% of patients as cases, even if there were no actual cases. Only 5 studies with ≥ 100 women with breast or gynecological cancer (range 102-506) have reported the prevalence of PTSD using a validated diagnostic interview. All used the Structured Clinical Interview for DSM-IV (SCID)⁷ and reported that 2.4% to 5.9% of patients met diagnostic criteria for current PTSD.^{2,3,8-10}

In this study, we assessed the current prevalence of PTSD in a large sample of women with breast cancer close to the time of initial diagnosis who received treatment at the Rowan Breast Center of the University of Pennsylvania Comprehensive Cancer Center between

December 2003 and April 2009. Eligible patients were 18 to 85 years of age, within 5 months of their index diagnosis, had not yet started chemotherapy, and were fluent in English. Exclusion criteria were a recurrence of cancer within 5 years, current substance abuse, and a history of bipolar or psychotic disorders. Patients were invited after their first medical oncology or postoperative surgical visit to participate in a longitudinal study on the psychosocial impact of breast cancer. Within 2 weeks after patients returned their baseline questionnaires and at 3 months follow-up, the SCID-I/NP module for PTSD⁷ was administered in a telephone interview, that were conducted by interviewers with certified SCID training. The study was approved by the Institutional Review Board of the University of Pennsylvania and the Clinical Trials and Scientific Monitoring Committee of the Abramson Cancer Center. Written informed consent was obtained from all patients.

Baseline data as well as the SCID at 3-month follow-up were included in the present study, since symptoms of PTSD should be present at least 1 month post-trauma (DSM-IV criterion E), and baseline interviews took place within 1 month of diagnosis for some patients in the sample. At baseline, participants were asked to respond to symptom-level criteria in the module based on their experience with breast cancer specifically. At 3 months, they were asked to respond based on their worst lifetime traumatic experience, if one had been experienced.

Of 652 women were invited to participate, 588 provided informed consent, 539 completed the baseline questionnaire assessment and of these, 437 completed the structured interview for PTSD and were included in the present study. The mean age was 54.2 (SD=11.6), and the majority were white (72.4%), had at least a college education (54.2%), and were married or living as married (66.8%). The mean time since diagnosis was 65.4 days (SD=30.9, range=1-150 days). At baseline, 13 patients (3.0%, 95% CI 1.8-5.1%) met criteria for PTSD. At 3-month follow-up (N=363), 9 patients (2.5%, 95% CI 1.3-4.6%) met criteria.

In summary, the prevalence of women who met criteria for PTSD in our sample was similar to prevalence estimates found in other studies that utilized a clinical interview.^{2,3,8-10} These prevalence estimates are generally similar to what might be expected in the general population, given that the estimated 12-month prevalence of PTSD in women in the US general population has been reported as 5%.¹¹ Thus, although cancer is distressing and frightening to many patients, it is uncommon that symptoms meet criteria for PTSD. Cancer patients have substantial psychosocial needs that should be addressed, but PTSD is not a specific need among most patients beyond what would be the case in the general population.

REFERENCES

1. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. 4th ed. Washington: American Psychiatric Association; 2000
2. Mehnert A, Koch U. Prevalence of acute and post-traumatic stress disorder and comorbid mental disorders in breast cancer patients during primary cancer care: a prospective study. *Psychooncology* 2007;16:181-8.
3. Greimel E, Dorfer M, Lambauer M, et al. Posttraumatic stress disorder in female cancer patients: an inappropriate diagnosis in oncology? *Psychother Psychosom* 2013;82:271-2.
4. Kangas M, Henry JL, Bryant RA. Posttraumatic stress disorder following cancer. A conceptual and empirical review. *Clin Psychol Rev* 2002;22:499-524.
5. Koutrouli N, Anagnostopoulos F, Potamianos G. Posttraumatic stress disorder and posttraumatic growth in breast cancer patients: a systematic review. *Women Health* 2012;52:503-16.
6. Shelby RA, Golden-Kreutz DM, et al. PTSD diagnoses, subsyndromal symptoms, and comorbidities contribute to impairments for breast cancer survivors. *J Trauma Stress* 2008;21:165-72.
7. First MB, Spitzer RL, Gibbon M, et al. Structured clinical interview for DSM-IV-TR Axis I disorders. New York: Biometrics Research, New York State Psychiatric Institute; 2001.
8. Palmer SC, Kagee A, Coyne JC, et al. Experience of trauma, distress, and posttraumatic stress disorder among breast cancer patients. *Psychosom Med* 2004;66:258-64.
9. Green BL, Rowland JH, Krupnick JL, et al. Prevalence of posttraumatic stress disorder in women with breast cancer. *Psychosomatics* 1998;39:102–11.
10. Widows MR, Jacobsen PB, Fields KK. Relation of psychological vulnerability factors to

posttraumatic stress disorder symptomatology in bone marrow transplant recipients. *Psychosom Med* 2000;62:873–82.

11. Kessler RC, Chiu WT, Demler O, et al. Prevalence, severity, and comorbidity of 12-month DSM-IV disorders in the National Comorbidity Survey Replication. *Arch Gen Psychiatry* 2005;62:617-27.