## LETTER TO THE EDITOR

## Two-step method of major depression screening by patient health questionnaire for patients with lung cancer

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## To the Editor

I read with interest the recent paper by Randall et al. [1]. They recommended a two-step method for major depression screening using the Patient Health Questionnaire (PHQ) in patients with lung cancer. Before applying the PHQ 9-item version to cancer patients, they applied the PHQ 2-item version as a prescreening tool to avoid wastage of time for patients in the outpatient clinic. In their study, no validation study was conducted by using the Structured Clinical Interview for DSM-IV (SCID) as the gold standard for the diagnosis of major depressive disorder (MDD). The percentage of patients with PHQ-9 scores under 10 was 61 % (8/13) in their study.

I have three concerns about their study. First, PHQ-9 is a screening tool for depression, but mainly for detecting major depressive episode [2], and there are some difficulties in the clinical diagnosis of MDD using the PHQ-9 questionnaire. Randall et al. quoted some references of validation studies including cancer patients. In addition to sensitivity, specificity, positive predictive value, and positive likelihood ratio, the kappa value of PHQ-9 against SCID should also be included to maintain an adequate value of agreement.

Allgaier et al. recently reported the screening ability of PHQ-9 by using a structured diagnostic interview for depressive disorder as the gold standard [3]. In their study, two procedures were presented for PHQ-9 screening: the "categorical scoring procedure" and the "dimensional scoring procedure". The "categorical scoring procedure" was conducted according to the algorithms for clinical diagnosis based on DSM-IV-TR criteria. In contrast, the "dimensional scoring procedure" utilized appropriate cutoff points. Allgaier et al.

concluded that there was an advantage to using the "dimensional scoring procedure" for PHQ-9 screening for detecting depression. As a second concern, Randall et al. adopted the "dimensional scoring procedure" for PHQ-9 screening of MDD. I recommend presenting prevalence of depression by the "categorical scoring procedure" of PHQ-9 because the PHQ-2 was used as a prescreening tool for depression and the two items of PHQ-2 were composed of core questions for the "categorical scoring procedure". Whitney et al. reported that use of the "dimensional scoring procedure" of PHQ-9 resulted in a higher prevalence of depression than that of the "categorical scoring procedure" among patients with non-small-cell lung cancer [4].

Third, the number of samples was limited and stratified analysis could not be conducted owing to the potential loss of statistical power. I recommend a continuous survey by summing up the number of samples for accurate determination of the prevalence and magnitude of depression among patients with lung cancer.

**Conflict of interest** The author declares no conflict of interest.

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