

Cancer patients undertaking Bone Scans in a Department of Nuclear Medicine have Significant Stress Related to the Examination

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Bone scanning is a standard screening procedure for evaluation of metastases in cancer patient (1). In addition to the staging procedures, bone scan is a valuable test for deciding palliative therapeutic options in selected patients(2).

The aim of this study was to investigate if patients with cancer who were undertaking routine bone scans had any stress related to the test. We asked 83 consecutive patients with various types of cancer if they had anxiety just prior to undergoing the test. Overall, we found that 53 (64%) patients had increased anxiety related to the examination and 30 (36%) patients did not. Among the 53 patients who were anxious about the bone scan, 32 were concerned about the results of the examination, 13 worried about the effects of the radiation, 4 were anxious for both results/radiation, and 4 patients had stress but could not specify the reason. Among the 32 patients who were concerned about the results of the examination, 15 were having their first bone scans, while 17 had already undergone the procedure before. Among the 13 patients who were mainly concerned about the risks of the radiation exposure during the test, 9 were having bone scans for the first time. Out of the 4 patients who feared both the results and radiation, 3 were having bone scans for the first time and 1 had it for several times. Finally, out of the 4 patients who had anxiety about the test but could not identify the reason, 3 were having bone scans for the first time and one had the test before but was claustrophobic.

Our findings indicate that most patients (64%) with cancer who underwent a routine bone scan to check for metastatic disease had intense stress related either to the results or the side effects of the examination. However, there were more patients who were concerned about the results of the test rather than the effects of radiation. Among the patients who feared the effects of radioactivity most were having the test for the first time.

A previous study in a cohort of 213 patients that underwent mammography to screen for breast cancer found that although the overall anxiety level was high in approximately 30% in patients prior to the examination, dropped to 9% of patients who did not have cancer 4 weeks

later, but remained high in all patients with diagnosis of cancer. Thus, it appeared that although a large number of patients undergoing mammography had transient anxiety the psychological distress continued only in patients with the cancer diagnosis (3). Another study in a similar female population receiving a mammogram screening found a significant increase in anxiety following notification of a questionable screening result that necessitated additional



testing (4).

In summary our study showed that the vast majority of cancer patients that underwent a simple test such as a bone scan had intense psychological stress. Better patient education about the low risk of side effects from the examination and continuous psychological support of the cancer patient should be able to reduce this anxiety (Figure 1).

References

1. Ravaioli A, Pasini G, Polselli A et al. Staging of breast cancer: new recommended standard procedure. *Breast Cancer Res Treat* 2002; 72:53-60.
2. Oyen WJ, Witjes JA, Corstens FH. Nuclear medicine techniques for the diagnosis and therapy of prostate carcinoma. *Eur Urol* 2001; 40:294-299.
3. Ekeberg O, Skjauff H, Karesen R. Screening for breast cancer is associated with a low degree of psychological distress. *Breast* 2001; 10:20-24.
4. Heckman BD, Fisher EB, Monsees B, Merbaum M, Ristvedt S, Bishop C. Coping and anxiety in women recalled for additional diagnostic procedures following

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