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Medical oncologist Michael Morris

Summary

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Researchers at Memorial Sloan Kettering have shown the usefulness of a scale called the Bone Scan Index (BSI) for determining whether some [prostate cancer](#) patients are responding to therapy, according to a recently published study online in the *Journal of Clinical Oncology*.

Prostate cancer is one of the most common cancers among men in the United States, and the primary site of metastatic disease is bone. The BSI was developed by [Steven Larson](#), Chief of the [Nuclear Medicine Service](#), and his colleagues in the Nuclear Medicine Service and the Department of Medical Physics to help measure the extent of bone metastases. In this retrospective study, medical oncologist [Michael Morris](#) and his colleagues applied the BSI to 88 prostate cancer patients who received chemotherapy at Memorial Sloan Kettering, and set out to determine whether this scale was a better predictor of survival than prostate-specific antigen (PSA) levels.

“What we learned is that changes in BSI levels while on treatment correlated with a patient’s likelihood of surviving, and did so better than changes in PSA levels,” says Dr. Morris, of Memorial Sloan Kettering’s Genitourinary Oncology Service.

Physicians typically use bone scintigraphy – or bone scans – to view metastatic disease before, during, and after treatment. Because these scans are limited in their ability to track treatment responses, researchers have been searching for ways to standardize bone scan measurements. Developing an imaging biomarker for prostate cancer metastases that can help physicians measure or quantify treatment effects has been a major, international priority.

“The Bone Scan Index is a step in the right direction for developing that long-sought-after imaging biomarker, and shows how novel quantitative imaging techniques can be powerful new tools to predict survival,” Dr. Morris says. “We’re now working on ways to automate reading bone scans in this manner, so that the technique can be used easily in the context of larger studies and for clinical care.”

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