Bone scans are not necessary in men with prostate specific antigen levels less than 5 ng/mL following treatment for localized prostate cancer, a study shows. The PSA level can increase to 20 ng/mL in men treated with watchful waiting if caution is used.

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These are the findings reported by Dr. Katherine S. Warren of the Midwest Urology Foundation in Chicago and colleagues. In The Journal of Urology for July, they note that “the PSA level at which to recommend a bone scan after treatment of early prostate cancer is controversial.”

Dr. Warren’s group determined the incidence of bone metastases at varying PSA levels in a group of 8113 asymptomatic men managed with radical prostatectomy, radiation therapy or watchful waiting. Data from a total of 10,389 bone scans were analyzed.

For men treated with watchful waiting and the anti-androgen bicalutamide or placebo, the incidence of positive bone scans in was low (0.7% to 3.2%) when the PSA level was below 20 ng/mL, they report. At higher PSA levels, the rate of positive bone scans was “considerably higher,” according to the team, and, therefore, bone scans would be warranted in these cases.

For men treated with radiation therapy or surgery, regardless of the addition of bicalutamide, the incidence of positive bone scans was low (0.2% to 1.4%) when the PSA level was below 5 ng/mL. In this group, the sample sizes were smaller at PSA levels greater than 5 ng/mL “so the results are harder to interpret,” the authors say.

In summary, the researchers write that their study “provides sufficient support for clinicians to eliminate routine bone scans” in patients with PSA less than 5 ng/mL who have undergone radiotherapy or radical prostatectomy, the authors conclude.

In cases of watchful waiting or newly diagnosed disease, “we can confidently eliminate the need
for bone scans at a PSA less than 5 ng/mL, and with caution this level can be increased to 20 ng/mL,” they advise.

“Using PSA as an indicator for the presence of bony metastases rather than routine bone scans would have large economic savings given the patient population size,” Dr. Warren and colleagues add.