

et al. were able to detect seven/seven patients bleeding from the stomach/duodenum (7). Miskowiak et al. after studying patients with both upper and lower GI bleeds using with ^{99m}Tc-labeled red blood cells, concluded, "In upper gastrointestinal bleeding, scintigraphy should be considered when endoscopy fails." (11). Gupta et al. in a similar study, concluded that, "In suspected upper GI bleeding, it [Tc-99m RBC's] should be considered if endoscopy is either unsuccessful or contraindicated" (10). However, even if ^{99m}Tc red blood cells were not useful in upper GI bleeds, this would not be of great significance since endoscopy is the primary technique for evaluating these patients (12).

To completely answer the question of [^{99m}Tc]DTPA versus ^{99m}Tc red cells, a large-scale comparison study would need to be performed. Technically, this would be more difficult than comparing sulfur colloid to red cells.

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Bone Density Measurements of Spine and Distal Forearm in Osteoporosis

TO THE EDITOR: Nilas et al. (1) recently reported that there was not preferential spinal osteopenia using dual photon absorptiometry (DPA) in patients with spine "fractures" and that single photon absorptiometry (SPA) of the distal radius provided comparable diagnostic sensitivity. However, most other institutions that have made comparisons of SPA and DPA have found that the lumbar spine provides (a) about twice the diagnostic sensitivity of peripheral measurements for early crush-fracture osteoporosis (2) and (b) even better precision than SPA (3).

In the report by Nilas et al. (1), the 28 women with "spine fracture" actually are similar in characteristics to women with spinal wedging, not crush fractures, reported in another paper by the same group (4). The spine density in this "wedge fracture" group was only 25% below premenopausal women and 7% below postmenopausal women. Typically, crush-fracture osteoporotic patients average 33% below premenopausal women and ~15% below postmenopausal controls. This is in fact what the Glostrup Lab observed in true crush-fracture cases; that is a 35% spine decrement compared with an 18% forearm deficit (4).

Thus, it appears that patient selection and, perhaps, sub-optimal DPA methodology has led to the unusual results in the Nilas report.

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REPLY: Dr Mazess has raised some critical comments on our recently published paper (1). His criticism concentrates on the dual photon methodology (DPA) and the patient selection. The diagnostic sensitivity of a method does not only depend on the difference between two groups, it also depends on the scatter of values. It is well documented and generally accepted that single photon absorptiometry (SPA) has a better precision than DPA in normal subjects (1-4). In osteoporotic patients this difference is even greater. Calculations of spinal BMC thus have a precision of 6.1% in patients with moderate spinal osteoporosis compared with 1.1% in normal subjects (1).

We agree with Dr. Mazess that the more severe the osteoporotic condition, the larger the deficit of bone mass. In other words, patients with several crush fractures have a lower bone mass than those with a single wedge fracture. It is likely that patients who develop spinal crush fractures within the first