arrived at by this department, which appears to have produced a very fine quality image for interpretation.

Under the assumption that a low-energy, 5-in. geometric focal depth collimator was used in this study, we utilize a low-energy collimator with a 3.5-in. geometric focal depth. When using this, however, care must be taken to position the probe at the proper distance from the patient. We have found that for the lower probe a position approximately 3.2 cm below the surface of the table places the area of interest in the proper focal plane. The upper probe must necessarily follow the contours of the patient's body at a distance of approximately 4 cm from the skin surface.

When setting up the patient, we hand scan, looking for areas of increased concentration. Except in rare cases (e.g., Paget's disease) we find our setup point in the lower third of the sternum anteriorly and in the mid-thoracic region posteriorly.

In order to avoid excessive bladder activity obscuring the details of the pelvic structures, we scan from the symphysis pubis to the shoulders immediately after the patient has voided. For this portion of the scan, we use a 30% background erase, which is sufficient to remove soft-tissue activity without disturbing the detail of the skeletal system. After this, the probes are returned to their starting positions to scan the lower extremities with a reduction of background erase to 15%.

We amend our rectilinear study with additional camera views: four projections of the skull, both humeri, lateral projections of the pelvis, and special views of areas of interest.

When performing scans at a 5:1 image ratio, we use the 5:1 slit mask and a line spacing of 3 ($\frac{1}{8}$ in.).

To summarize, we feel rectilinear bone scanning using the technique outlined above provides the physician with images of equal if not better quality than that obtained with the scintillation camera.

JAMES A. SENECAL
LINDA W. WEISS
KRISTINE M. CIPPERLEY
JANE G. HEGEMAN
Veterans Administration Hospital
Albany, New York

THE AUTHORS' REPLY

We very much appreciate the comments on our article but feel that some corrections require explanation. It was not our intention in this article to decribe an ideal rectilinear scanning procedure but to compare the relative efficacy of two approaches within similar and limited time frame considerations. Given a busy nuclear medicine department, with equal time allotted for either a camera or rectilinear scan examination, we continue to feel the camera offers the preferred imaging technique.

Our selection of 5-in. focusing collimators, standard with our instrument, was based on patient convenience as well as practical utility. Our patients lie supine on a noninterfering sponge pad, and to select the proper focusing distance we frequently require the 5-in. focal depth. We see no advantage in a $3\frac{1}{2}$-in. focal depth unless the isoresponse characteristics of the collimator are substantially different from the routine 5-in. model. We agree that a slight improvement in resolution is possible with closer line spacing and a 5:1 rather than a 2:1 slit mask. As Senecal, et al indicate, however, substantially more examination time is required, and the camera and scanner examinations do not remain comparable. We have utilized a lower background subtraction ratio as they have suggested. Routinely we reduce our subtraction ratio over the extremities. The selection of a 45% ratio is a reflection of general physician preference not statistical analysis.

Utilizing the tomographic capabilities of the scanner can be rewarding in examining the spine and extremities. Collimator distance, however, requires extremely careful monitoring, particularly in the lumbar spine and pelvis. Rib activity is often lost completely, and we continue to believe that day-to-day reproducibility is considerably more limited than with the scintillation camera. Thus while some of the suggestions may be valid, we wonder why they feel the need to supplement their own rectilinear scan examinations with regional camera images in suspicious cases.

CHARLES MANDELL
HERTA HOULE
Rhode Island Hospital
Providence, Rhode Island