other known reconstruction methods (Ref. *1* and other references therein) and the ultimate solution to the quantitative imaging problem will probably be found in another technique.

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THE AUTHORS' REPLY

The OTC algorithm is correctly presented in our paper. The example chosen to illustrate its operation was intentionally simplified but apparently misunderstandings can arise when relatively few picture elements are used to illustrate processes which involve thousands of picture elements for proper approximations.

OTC does produce zeros appropriately. With repeated application of correction factors having values less than unity, the count value corresponding to a void converges toward zero. Truncation deletes those matrix values which are substantially less than unity and zeros result in the final reconstruction.

There is probably no single reconstruction method which will be optimum in economy and performance for all hardware and for all classes of emission and transmission pictures. We replaced our earlier DSA process with OTC in order to quantify radioactivity in brain sections, which was not possible before. This method, including attentuation correction, has worked well in hundreds of quantitative section scans of patients, animals, and phantoms of various configurations. Even though OTC is more sensitive to noise, we consider the results clearly superior to what we accomplished using DSA or SSA processing. To our knowledge, no one has performed similar comparisons of OTC with alternative methods of reconstruction.

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RIB ABNORMALITY HIDDEN BY BREAST PROSTHESIS

The half-value thickness for ^{99m}Tc in water is 5 cm and in denser tissues considerably less. It is well recognized that a breast prosthesis or even a large pendulous breast can produce a defect on a ^{99m}Tc-sulfur colloid liver scan (*1*). Buchignani and Rockett pointed out that a similar area of decreased uptake may be produced on a bone scan when ^{99m}Tc-labeled radiopharmaceuticals are used and such an artifact could possibly conceal a bone lesion (*2*). The following case report confirms this.

The patient, a 52-year-old woman, underwent an extended right, simple mastectomy in October 1971 because of a breast mass. Histologically, the lesion was an infiltrating ductal carcinoma confined to the breast; no metastases were found in nine axillary nodes examined. In July 1972, she noted pain in her left upper arm which in the succeeding months increased in severity. Radiological examination of the

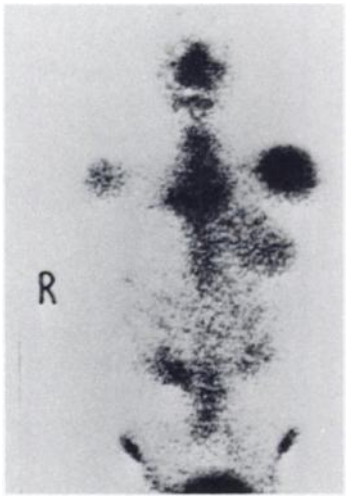

FIG. 1. Bone scan of head and trunk showing no activity in region of right breast.