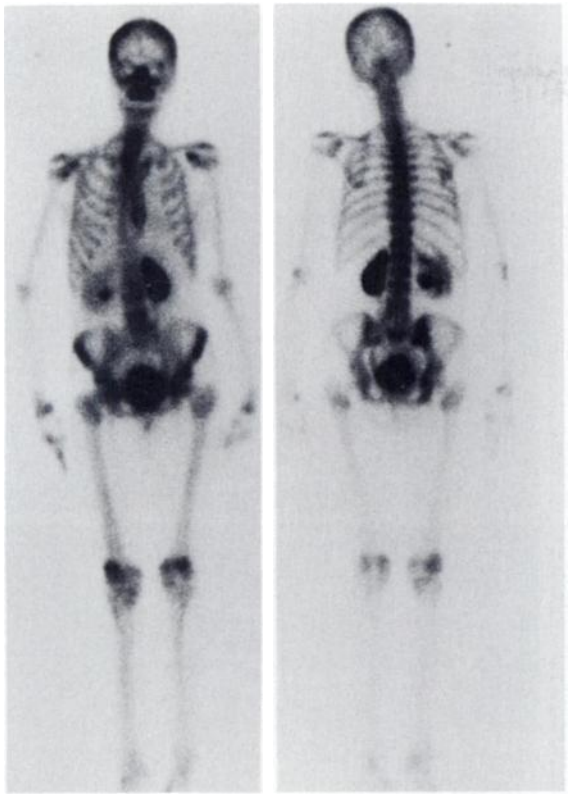

FIGURE 2
Whole-body bone scintigraphy, performed after patient voiding, demonstrates intense radionuclide accumulation within dilated left renal pelvis and ureter suggesting obstructive uropathy

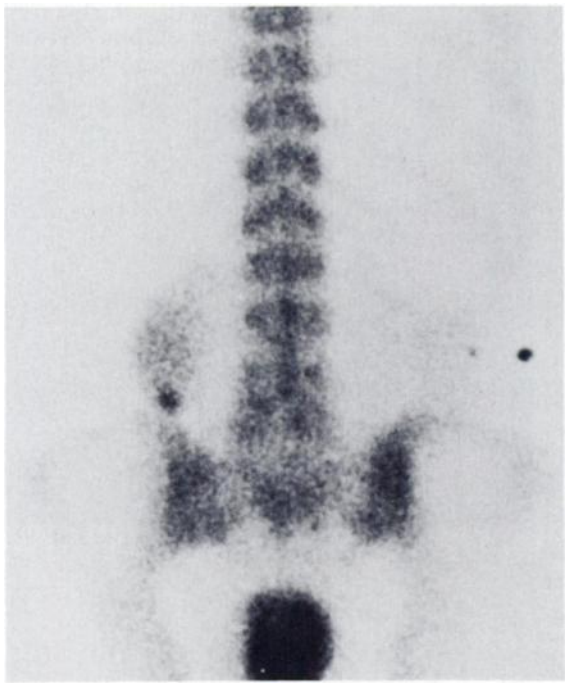

FIGURE 3
Delayed posterior image of kidneys demonstrates only mild residual radionuclide activity within left renal pelvis, confirming that initial findings were secondary to vesicoureteral reflux and not obstruction

References

1. Neely HR, Witherspoon LR, Shuler SE: Genitourinary findings incidental to bone imaging. In *Bone Scintigraphy*, Silberstein EB, ed. New York, Futura Publishing Company, 1984, pp 371-397
2. Hattner SH, Miller SW, Schimmel D: Significance of renal asymmetry in bone scans: Experience in 795 cases. *J Nucl Med* 16:161-163, 1975

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A Magic Bullet for Breast Cancer

TO THE EDITOR: This is a plea for continued efforts to utilize estrogen and progesterone receptors in the search for better methods of detection and treatment of breast cancer.

I am a biochemist who has breast cancer which has spread. I have learned the hard way that present detection methods have their limitations. In my case, the bone scan technique using the bone-seeking tracer, methylene diphosphonate complexed with technetium-99m, could not differentiate between metastases and rib fractures. Neither could bone scans, x-rays, or CT scans detect the metastases which are present in my lymph nodes and other soft tissues.

I have been bombarded with electrons and gamma-rays for therapy in two series, but these radiations are not very specific magic bullets. I am now in the midst of my third series of chemotherapeutic injections. The radiation and chemotherapy have been helpful, but only palliative.

As a target for the long-sought-for magic bullet for breast cancer, could estrogen or progesterone receptors on breast ductal epithelial cells be used? As a cancer-seeking bullet, could a ligand which would bind to these receptors be synthesized?

For diagnosis, could the ligand be complexed to a tracer which could be imaged by radioactive or other techniques? For therapy, could this postulated ligand be complexed with a cytotoxin, which might be radioactive (such as iodine-131) or which might be a metabolic inhibitor?

Tamoxifen has been useful in therapy of breast cancer, and its mechanism of action seems to involve competing with estrogen for estrogen receptors on the tumor. Perhaps tamoxifen or a similar compound could be complexed with a radioactive tracer for diagnosis or with a radioactive or nonradioactive cytotoxin for therapy.

If the ligand for estrogen or progesterone receptors were a nonprotein compound, it might have an advantage over monoclonal antibodies in having less risk of eliciting antibody formation by the host.

In patients like myself who have had both breasts, the uterus, and both ovaries removed, the binding of the postulated ligand to estrogen or progesterone receptors in tissues other than those on breast carcinoma cells may not be a problem.

We really do need that magic bullet for breast cancer. Keep trying, and good luck.

Dorothy Hubbard
Indianapolis, Indiana

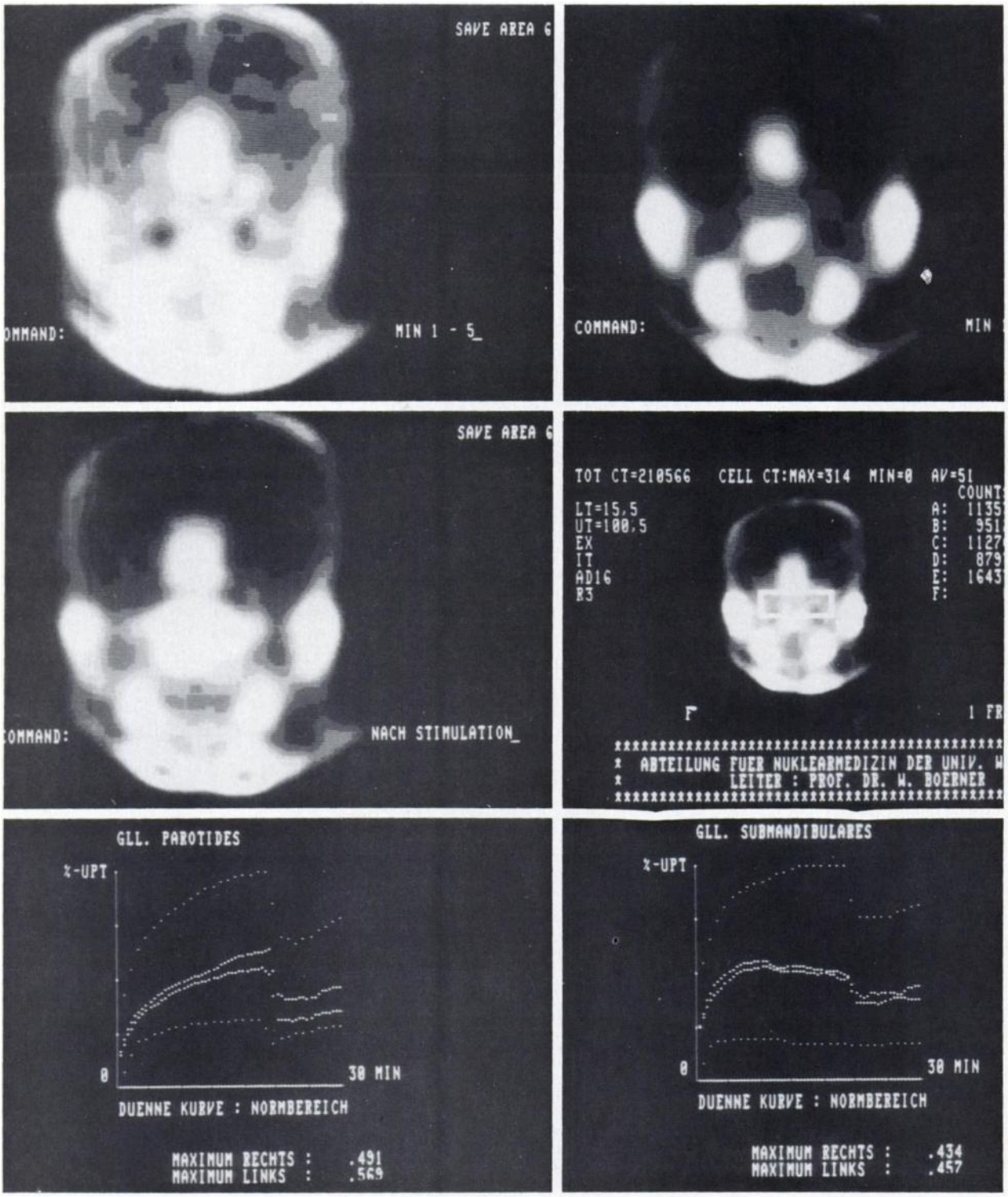

FIGURE 1
Normal salivary gland function with normal reaction to gustatory stimulation

Stimulated Salivary Clearance of Technetium-99m Pertechnetate

TO THE EDITOR: In a recent report, Blue and Jackson (*1*) recommended a stimulated salivary clearance of technetium-99m (^{99m}Tc) pertechnetate for separating normals and patients with known decreased salivary gland function (Sjögren's syndrome, patients following radiation therapy). They described their method using a one compartment model as easy to perform and independent of patient size, gastric and thyroid function. We do not agree with this assumption. In a multicompartment model for [^{99m}Tc]pertechnetate a clear-