

# Case of the Quarter

David F. Preston

University of Kansas Medical Center, Kansas City, Kansas

## Case History

Mrs. SS, a 47-year-old woman with known metastatic ductal carcinoma of the breast, underwent a left radical mastectomy in 1972. At that time, 8 of 28 axillary lymph nodes were found positive. Cobalt-60 radiation therapy to axilla and chest wall followed. In April of 1974, a right breast mass was found and, following a diagnosis of ductal carcinoma of the breast, a right mastectomy was performed. The brain scan was read as negative. The bone scan (Fig. 1) demonstrated increased uptake of the radiopharmaceutical in the left pelvis and right medial head of the clavicle. The anterior liver scan (Fig. 2) showed an area of decreased concentration at the dome of the liver. However, the right lateral and posterior views of the liver (Figs. 3 and 4) demonstrated good concentration throughout.



FIG. 1

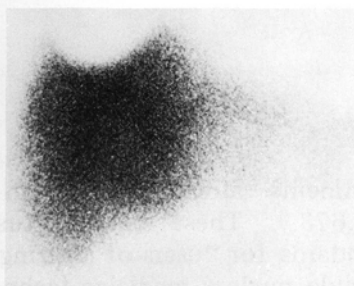


FIG. 2

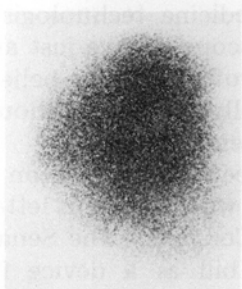


FIG. 3

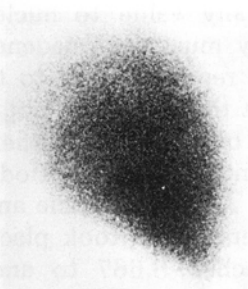


FIG. 4

The area of decreased concentration in the anterior liver scan is most likely due to:

1. Metastatic carcinoma of the breast
2. Variant of normal
3. Pendulous breast
4. Subdiaphragmatic abscess
5. Chest wall absorber
6. Defective photo multiplier tube

## Solution and Discussion

Mrs. SS was wearing a breast prosthesis overlying the dome of the right lobe in the anterior projection. The "lesion" cannot be seen in other views taken of the liver and was absent when the anterior view was repeated without the prosthesis. Therefore, the correct answer is 5: chest wall absorber. The bone scan (Fig. 1) taken with the prosthesis in place closely showed the bilaterality of the apparent defect (cold areas in chest).

Metastatic carcinoma of the breast usually produces multiple smaller lesions and there is seldom such a clear demarcation between normal and "abnormal" areas.

This is not a usual variant of normal shape and is not similar to any of the unusual normal anterior shapes described by McAfee (1).

Pendulous breast has been described as producing a similar artifactual decrease in right upper lobe activity. The history eliminates this possibility, since the patient's right breast was removed surgically. Also, the sharpness of the "lesion" edge is too great for simple interposition of tissues between liver and crystal.

Subdiaphragmatic abscess of this size should also be seen in the right lateral view.

## Reference

1. McAfee JG, Ause RG, Wagner HN: Diagnostic value of scintillation scanning of the liver. *Arch Intern Med* 116: 95-110, 1965

For reprints contact: David F. Preston, Radiology Dept., University of Kansas Medical Center, Kansas City, Kans. 66103.