LETTERS TO THE EDITOR

THE CORRECT SHELF LIFE OF TECHNETIUM-99M MEBROFENIN

To the Editor: Choletec (Squibb Diagnostics, Princeton, NJ) is a kit for the preparation of technetium-99m mebrofenin (^{99m}Tc-mebrofenin) to be used as a hepatobiliary imaging agent. Choletec is the first reagent kit in which the reconstituted product (^{99m}Tc-mebrofenin) can be used beyond the regular 6–8-hr shelf life of the other ^{99m}Tc-labeled radiopharmaceutical kits. According to the package insert for Choletec (*1*), ^{99m}Tc-mebrofenin has a shelf life of 18 hr from the time of reconstitution of the kit. However, it seems incorrect for this preparation of ^{99m}Tc-mebrofenin to be used beyond 12 hr after reconstitution when all of the commercially available sodium pertechnetate ^{99m}Tc solutions for reconstituting the Choletec kit have a shelf life of 12 hr after time of elution (*2–4*).

In principle, no ^{99m}Tc-labeled radiopharmaceutical preparation should be used after 12 hr from the time of generator elution or after the expiration time of the radiolabeled ^{99m}Tc drugs stated in the package insert, whichever occurs first. In the case of the Choletec kit, the expiration time of the ^{99m}Tc-mebrofenin preparation should be changed to 12 hr from the time of reconstitution of the kit.

Joseph C. Hung
Mayo Clinic
Rochester, Minnesota

REFERENCES

1. Choletec (kit for the preparation of technetium-99m mebrofenin) package insert. Princeton, NJ: Squibb Diagnostics; May 1990.
2. Technelite (technetium-99m generator) package insert. Billerica, MA: The Du Pont Merck Pharmaceutical Co.; November 1992.
3. Ultra-TechneKow FM (technetium-99m generator) package insert. St. Louis, MO: Mallinckrodt Medical, Inc.; August 1990.
4. Technetium-99m generator package insert. Arlington Heights, IL: Medi-Physics, Inc.; June 1993.

COMMENTS ON STRONTIUM-89 THERAPY IN PAINFUL BONY METASTASES

To the Editor: The recent article by Dickenson et al. in *JNMT* on strontium-89 (^{89}Sr) therapy (*1*) is important because it serves to extend and expand the nuclear medicine community's knowledge of this tracer, which recently received its new drug approval from the FDA. I have a few comments on, and corrections to, the above-referenced *JNMT* article.

The first large series published in the United States on the use of ^{89}Sr (as noted in Reference 19 in the *JNMT* article) (*2*), appeared in print in 1985. That article and subsequent data from other authors do not confirm the dose-response relationship noted by Robinson et al. in their publications. The prolonged physical retention of ^{89}Sr in metastatic sites was not first reported by Robinson, but rather by the Southampton Group in 1986 (*3*).

Reference 19 is incorrectly cited in Table 2 as using doses of either 16 or 70 μCi/kg; that dose-response study was done administering doses of 16–80 μCi/kg. We have found no dose-response relationship throughout that range.

Dickenson et al. stated that the study in Reference 23 (*4*) noted 60% complete pain relief with a combination of teletherapy and ^{89}Sr. The study actually showed no significant difference in pain reduction with or without ^{89}Sr, i.e., when employing teletherapy alone. This study did demonstrate that patients in the ^{89}Sr arm of the study had a delay in the recurrence of previously painful sites as well as in the appearance of new pain sites.

In administering ^{89}Sr, we have found that one can reduce the dose to the hands from the beta emissions by setting up an intravenous line prior to removing the ^{89}Sr syringe from its plastic shielding. Patients who are candidates for ^{89}Sr therapy have frequently had multiple courses of chemotherapy and venous access may be difficult. The necessity for repeated venipuncture attempts is quite likely. If one is holding the unshielded ^{89}Sr syringe during this process, the resultant dose to the fingers may be as high as 5 rad.

Finally, one does not have to see evidence of metastatic disease reduction on the bone scintigraph to have pain reduction.

Edward B. Silberstein, MD
University of Cincinnati Hospital
Cincinnati, Ohio

REFERENCES

1. Dickenson CZ, Hendrix NE. Strontium-89 therapy in painful bony metastases. *J Nucl Med Technol* 1993;21:133–137.
2. Silberstein EB, Williams C. Strontium-89 therapy for the pain of osseous metastases. *J Nucl Med* 1985;26:345–348.
3. Blake GM, Zivanovic MA, McEwan AJ, et al. Strontium-89 therapy: strontium kinetics and disseminated carcinoma of the prostate. *Eur J Nucl Med* 1986;12:444–454.
4. Porter AT, McEwan AJ, Powe JE, et al. Results of a randomized phase-III trial to evaluate the efficacy of strontium-89 adjuvant to local field external-beam irradiation in the management of endocrine resistant metastatic prostate cancer. *Int J Radiat Oncol Biol Phys* 1993;25:805–813.