assurance measures do not detect viral contamination, and there are currently no requirements for operator training on blood-borne pathogen contamination. Professional and regulatory organizations should provide explicit guidance on appropriate precautions for commonly prepared radiopharmaceuticals and should consider whether additional guidance is needed for all sterile pharmaceuticals prepared in pharmacies that handle blood.

In summary, the current guidelines cited by Hung do not adequately address the risk of blood contamination of pharmaceuticals in nuclear pharmacies. The introduction of blood products into nuclear pharmacies where sterile pharmaceuticals are prepared should be accompanied by aggressive efforts to ensure safe blood-handling practices and appropriate infection control. Pharmacists and technicians working in these settings should have a thorough understanding of precautions to prevent blood contamination and how these differ from the approach to bacterial or fungal contamination and growth. Increased awareness of the risks of blood-borne pathogens in nuclear pharmacies through enhanced training, education, and professional leadership is needed. Nuclear pharmacies that handle blood or any potentially infectious biologic material should adhere to higher standards to ensure product integrity and patient safety.

DISCLAIMER: The findings and conclusions in this letter are those of the authors and do not necessarily represent the views of the Centers for Disease Control and Prevention.

REFERENCES

1. Hung JC. Hepatitis C virus infections from contaminated ^{99m}Tc -sestamibi [letter]. *J Nucl Med.* 2007;48:847–848.
2. Patel PR, Larson AK, Castel AD, et al. Hepatitis C virus infections from a contaminated radiopharmaceutical used in myocardial perfusion studies. *JAMA.* 2006;296:2005–2011.
3. Hung JC. The potential impact of USP general chapter <797> on procedures and requirements for the preparation of sterile radiopharmaceuticals. *J Nucl Med.* 2004;45(6):21N–26N.
4. American Pharmacists Association web site. APhA comments on USP chapter 797. Available at: <http://www.aphanet.org/AM/Template.cfm?Section=Home&CONTENTID=6704&TEMPLATE=/CM/ContentDisplay.cfm>. Accessed August 21, 2007.
5. U.S. Pharmacopeia web site. <797> Pharmaceutical Compounding: Sterile Preparations. Available at: <http://www.usp.org/pdf/EN/USPNF/PF797.pdf>. Accessed August 21, 2007.

Priti R. Patel

Joseph F. Perz

Anthony E. Fiore

*Centers for Disease Control and Prevention
Atlanta, Georgia*

Amanda D. Castel

*George Washington University School of
Public Health and Health Services
Washington, DC*

DOI: 10.2967/jnumed.107.045195

REPLY: It seems to me that the letter by Patel et al. failed to identify the specific cause for this hepatitis C virus (HCV) outbreak, and in fact the letter made the whole issue more confusing. If the pharmacist who radiolabeled WBCs on October 14, 2004, had to exit the “blood room” to the “main room” to measure the radioactivity of ^{111}In and ^{111}In -oxine-labeled white blood cells, the

syringes containing these materials would have been capped during the dose measurement and brought back to the blood room after the measurement. Also, the letter indicated that these syringes would not be reused “because of their radioactive contents.” Thus, the process and syringes should not be the causes for the HCV contamination. Patel et al. surmised that a contaminated vial or bag of saline or possibly a contaminated syringe was somehow moved from the blood room to the main room and somehow caused contamination only to vial 1 and not the other 5 vials of ^{99m}Tc -sestamibi, all of which were prepared 1 min apart by the same pharmacist in the same hood (1). Let us assume that contaminated saline vials/bags or syringes were carried inadvertently into the main room on the afternoon of October 14, 2004. Before the preparation of ^{99m}Tc -sestamibi (vials 1–6) in the early morning of October 15, 2004, the pharmacist would have discarded any contaminated supplies (e.g., unwrapped syringes or used saline vials or bags) left in the hood of the main room as per the statement (i.e., “No pharmacists reported improper disposal or reuse of contaminated equipment or supplies.”) in the letter by Patel et al.

Even though 59 (82%) of 72 patients who were injected with ^{99m}Tc -sestamibi drawn from vials 2–6 were later tested for anti-HCV and all were negative (1), I think that it would be prudent to closely follow up the medical condition of the other 13 individuals who did not take part in this test because the exact cause for this catastrophic HCV contamination is still unclear. Have symptoms related to HCV, hepatitis B virus, or HIV (human immunodeficiency virus) developed in any of these 13 patients after the incident?

There is no doubt that higher standards should be established for the handling of radiolabeled blood cells to ensure product integrity and patient safety. However, we should carefully evaluate the suitability and practicality of any proposed standards so that their cost (e.g., the cost of significant changes in remodeling, monitoring, or staffing) does not force facilities (especially small or rural nuclear pharmacies/nuclear medicine laboratories) to discontinue providing products such as ^{111}In -oxine-labeled white blood cells to patients.

REFERENCE

1. Patel PR, Larson AK, Castel AD, et al. Hepatitis C virus infections from a contaminated radiopharmaceutical used in myocardial perfusion studies. *JAMA.* 2006;296:2005–2011.

Joseph C. Hung
*Mayo Clinic
Rochester, Minnesota*

DOI: 10.2967/jnumed.107.045393

Attenuation Correction for Stress and Rest PET ^{82}Rb Myocardial Perfusion Images

TO THE EDITOR: The July 2007 article by Gould et al. (1) reported a 40% false-positive rate for cardiac PET ^{82}Rb myocardial perfusion imaging with CT attenuation correction, using helical slow imaging (29 s) during free breathing and helical fast imaging (4 s) during a breath-hold at end expiration. Further, the authors suggested that correction with nonhelical, time-averaged