

## SPECT Views for Cardiac Amyloidosis Imaging

**TO THE EDITOR:** As I was reading articles on cardiac amyloidosis in the June 2023 issue of *Journal of Nuclear Medicine Technology* in preparation for a lecture to my students, I came across a contradiction that I would like to get sorted out. According to the continuing education article (1),  $^{99m}\text{Tc}$ -pyrophosphate SPECT images are to be displayed in cardiac views (short axis, vertical long axis, and horizontal long axis). In the practical protocol tip (2), however, the images are to be displayed in transverse, sagittal, and coronal sections. I can see the wisdom of both tomographic orientations. Since cardiac amyloidosis is a problem that affects the entire myocardium, heart-oriented views should be easy to create. On the other hand, we do not usually need to see bone uptake in other types of cardiac studies, such as myocardial perfusion imaging. Standard body planes will make the comparison of  $^{99m}\text{Tc}$ -pyrophosphate uptake in the heart to that in bone easier to perceive. I would like to have the authors reconcile these 2 display suggestions.

### DISCLOSURE

No potential conflict of interest relevant to this article was reported.

### REFERENCES

1. Schockling EJ, Farrell MB, Embry-Dierson M, et al. Cardiac amyloidosis imaging, part 2: quantification and technical considerations. *J Nucl Med Technol.* 2023;51:90–98.
2. Farrell MB. Cardiac amyloidosis imaging. *J Nucl Med Technol.* 2023;51:99–101.

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**REPLY:** Thank you for your eagle-eyed attention to detail and for bringing the inconsistency to our attention regarding the SPECT reconstruction display between 2 articles published in the June 2023 *Journal of Nuclear Medicine Technology* (1,2). Unfortunately, there is no clear-cut answer to your question, though, as both displays are correct. However, we should have been more specific in our descriptions.

Currently, there are no published guidelines on cardiac amyloidosis imaging, specifically on processing the SPECT images, which are critical for accurate study interpretation. The good news is that the SNMMI guidelines committee is in the process of writing guidelines for cardiac amyloidosis imaging.

SPECT image display orientation is based on the reconstruction method used. If cardiofocal reconstruction is used (e.g., myocardial perfusion imaging), the images should be displayed in the short, horizontal long-, and vertical long-axis orientation. If chest reconstruction is used (e.g., bone SPECT), transverse, coronal, and sagittal images should be displayed. The simple answer is that both reconstructions

and image displays should be performed on all patients. Chest reconstruction is necessary to visualize ribs for visual scoring and cardiofocal reconstruction to evaluate whether tracer distribution is focal, patchy, or diffuse.

Again, thank you for bringing this issue to our attention. As the issue is still fluid, we will wait to address it once the new guidelines are published.

### REFERENCES

1. Schockling EJ, Farrell MB, Embry-Dierson M, et al. Cardiac amyloidosis imaging, part 2: quantification and technical considerations. *J Nucl Med Technol.* 2023;51:90–98.
2. Farrell MB. Cardiac amyloidosis imaging. *J Nucl Med Technol.* 2023;51:99–101.

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## Comment Regarding “Vapocoolant Analgesia for Breast Lymphoscintigraphy: A Prospective Clinical Trial”

**TO THE EDITOR:** I am writing to you regarding the article “Vapocoolant Analgesia for Breast Lymphoscintigraphy: A Prospective Clinical Trial” (1). Although the trial highlights the benefits of vapocoolants for the control of pain with needle procedures, I have several issues with the trial to address.

First, the trial design is limited by its 29-patient sample size, which weakens its overall clinical significance. Second, the trial does not contain a control group to compare the self-reported pain scale value, which further weakens its overall clinical significance. Third, the trial used a vapocoolant product that was irradiated to obtain sterility, creating toxic hydrofluoric acid in the product far in excess of permissible Occupational Safety and Health Administration (OSHA) limits.

The article states “that the Food and Drug Administration cleared a vapocoolant for sterile procedures, which instigated this clinical trial, the specific product being Nüm topical anesthetic spray, created by 623 Medical and distribution by Gilero.” According to Nüm’s Food and Drug Administration 510(k) summary (2), this hydrofluorocarbon-based product uses radiation to achieve sterility. No other Food and Drug Administration–cleared vapocoolants have used radiation. Previous literature (3) and recent independent third-party testing has shown that radiating a hydrofluorocarbon creates toxic hydrofluoric acid far greater than U.S. OSHA immediate danger to life and health levels. Nüm’s Food and Drug Administration 510(k) summary failed to address the presence of hydrofluoric acid created by the radiation.

In independent third-party testing, 5 Nüm lots were tested for hydrofluoric acid (HF) by 2 independent testing laboratories. We

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