## LETTER TO THE EDITOR





## Reply to: "Regarding 'PET/CT Imaging Characteristics After Radioembolization of Hepatic Metastasis from Breast Cancer'"

Amy R. Deipolyi<sup>1</sup> · Ryan W. England<sup>1</sup> · Fourat Ridouani<sup>1</sup> · Christopher C. Riedl<sup>2</sup> · Henry S. Kunin<sup>1</sup> · F. Edward Boas<sup>1</sup> · Hooman Yarmohammadi<sup>1</sup> · Constantinos T. Sofocleous<sup>1</sup>

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We read the commenter's letter with interest. We acknowledge that the terminology in our text could have been clearer—our use of the term "dose," based on historical use of the term, to describe amounts of activity should be updated in modern literature. We thank the commenter for their diligence.

Without intending to lessen the correctness of the commenter's objection, the topic of dose (both administered activity and absorbed dose) was tertiary to our work and its conclusions. We aimed to review impact of vendor-recommended radioembolization protocols using PERCIST criteria. Absorbed dose and response relationships were not studied at any depth. Figure 3 was shown because administration activity and absorbed dose calculation methodologies vary significantly across the field and across the vendor products included in our study [1], whereas the ultimate administered activity (in units of mCi) can be stated concisely and without compounding assumptions. The correlation of dose with radioembolization response assessment should be further studied in future work.

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## **Compliance with Ethical Standards**

Conflict of interest Dr. Deipolyi reports personal fees from BTG, Inc., and personal fees from Dova Pharmaceuticals, outside the submitted work. Dr. Boas is a co-founder of Claripacs, LLC, and received a research grant and supplies from Guerbet, research support from GE, research supplies from Bayer, and a research grant and speaker fees from Society of Interventional Oncology, sponsored by Guerbet; he is also an investor in Labdoor, Qventus, CloudMedx, Notable Labs, and Xgenomes. Dr. Yarmohammadi received research grants from the Thompson Foundation and Guerbet. Dr. Sofocleous received consulting fees from Terumo and consulting fees and research funding from BTG and Johnson and Johnson. The other authors have no disclosures.

## Reference

 Dezarn WA, Cessna JT, DeWerd LA, et al. Recommendations of the American Association of Physicists in Medicine on dosimetry, imaging, and quality assurance procedures for 90Y microsphere brachytherapy in the treatment of hepatic malignancies. Med Phys. 2011;38:4824–45.

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Interventional Radiology Service, Memorial Sloan Kettering Cancer Center, New York, NY, USA

Molecular Imaging and Therapy Service, Memorial Sloan Kettering Cancer Center, New York, NY, USA