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REPLY: We would like to thank Drs. Lam and Smits for their concerns and comments regarding the methodology in our study (*1*).

The aim of our study was to answer the frequently occurring clinical question of whether a patient with low or no ^{99m}Tc-macroaggregated albumin (^{99m}Tc-MAA) uptake in metastatic lesions should undergo ^{90}Y-radioembolization. The observation in our patient cohort with colorectal liver metastasis was that therapy response after ^{90}Y-radioembolization was independent of the degree of intratumoral ^{99m}Tc-MAA uptake. Consequently, our recommendation to the reader was that "therapy should not be withheld from patients with colorectal liver metastases lacking intratumoral ^{99m}Tc-MAA accumulation" (*1*).

Our results are based on the current body-surface-area model available, taking all the insufficiencies and drawbacks of the surrogate ^{99m}Tc-MAA into account (*2*). The establishment of dose–response relationships was beyond the scope of our study. Although qualitative Bremsstrahlung or ^{90}Y-PET imaging may be feasible in clinical routine, one has to admit that a quantitative assessment of dose estimations in normal liver parenchyma in regard to liver-related adverse events and in multiple tumor lesions in both liver lobes is far more difficult (*3,4*).

However, we agree with Drs. Lam and Smits that it would be essential to establish individualized treatment planning on the basis of optimized scout-dose imaging. Besides the technical aspects, such as catheter tip position or injection flow, it is desirable to have an agent that is identical to or that better models the treatment device. The recently introduced [166]Ho-microspheres by Smits et al. (*5*) may be used for pretherapeutic assessment and treatment evaluation, making them a promising candidate for future application. Nevertheless, we consider flow alterations during the radioembolization process due to the embolization effect to be a significant contributor to variable microsphere distribution in the tumor and liver that cannot be estimated or overcome by any proposed approach.

An optimization of dose estimation and individual treatment planning is even more important for further evaluation of the clinical and biologic aspects of the dose–response relationship for different tumor entities, pretreatment with chemotherapeutics, or a combined treatment and sequential lobar treatment versus whole liver treatment (*6*).

An individualized dosimetry concept should improve the efficacy of ^{90}Y-radioembolization while potentially reducing cases of overtreatment and unnecessary toxicity. To define the method and role of individualized pretreatment planning, a prospective multicenter trial would be needed.

Again, we thank Drs. Lam and Smits for their comments and discussion.

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Results Confounded by a Disregard for Basic Dose–Response Radiobiology

TO THE EDITOR: Every now and then, one comes across a publication on radionuclide therapy prognosis using qualitative descriptors, without due regard for basic dose–response radiobiology (*1–3*). Like the parable of the blind men and an elephant, these authors draw erroneous conclusions based on insufficient information unbeknownst to themselves. The scientific language of dose–response radiobiology is the radiation absorbed dose expressed in grays, not the injected activity expressed in becquerels. Any prognostic study whose design does not account for absorbed radiation doses to tissue will have no reliable method of data stratification for accurate response analysis, casting doubt on the scientific validity of its results.

The recent publication by Ulrich et al. (*3*) used the semiempiric body-surface-area (BSA) method for ^{90}Y resin microsphere activity prescription in a study to determine whether the visual degree of tumoral ^{99m}Tc-macroaggregated albumin (MAA) implantation carried any predictive value for response. Use of the BSA method was not explicitly mentioned in the article but was subsequently