





Supplemental FIGURE 1. RC_{rod} and %STD_{RC} for the ^{99m}Tc-filled rods of 1, 2, 3, 4 and 5 mm diameter as a function of the average activity for the time frames of 1 h acquisition duration. The subpanes are numbered and lettered. The numbers 1, 2, 3, 4 and 5 indicate rod diameters of 1, 2, 3, 4 and 5 mm diameter, respectively. The letters A, B and C indicate no filtering, filter with 1.0 mm FWHM, and filter with 1.5 mm FWHM, respectively.

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Supplemental FIGURE 2. Average measured photopeak counts per second over all bed positions as a function of the average activity for the time frames with 1h acquisition duration.



Supplemental FIGURE 3. Maximum-intensity-projection images of the ^{99m}Tc-HDP bone scans of the mouse with different reconstruction settings and different amounts of activity at the start of the acquisition. Acquisition time was 1 h in all cases. (A) 9.4 MBq, SC, filter 1.0 mm FWHM, 1 iteration; (B) 9.4 MBq, SC, no filter, 6 iterations; (C) 9.4 MBq, SC, filter 1.0 mm FWHM, 6 iterations; (D) 9.4 MBq, no SC, filter 1.0 mm FWHM, 6 iterations; (E) 52.7 MBq, SC, filter 1.0 mm FWHM, 6 iterations. During the 24 h scan time after the mouse was euthanized, natural degradation processes took place leading to deformation of the liver and spleen as can be noted by comparing the high activity scan (E) with the other scans.



Supplemental FIGURE 4. Transverse images of the NU4IQ phantom showing from left to right the filled rods, the uniform phantom region and the region containing the cold water and air compartments. The images were obtained by averaging transverse planes over 10, 10 and 7.5 mm, respectively, equal to the axial lengths over which the IQ parameters for these regions have been defined. WB acquisition time was 1 h in all cases. Mean activity level was 9.4 MBq in (A – D), and 78.2 MBq in (E). Lettering (A – E) corresponds to the same reconstruction settings as used for the mouse images of Supplemental Figure 3. Gray scale in each image was chosen such that black and white correspond to maximum and minimum activity concentration, respectively.