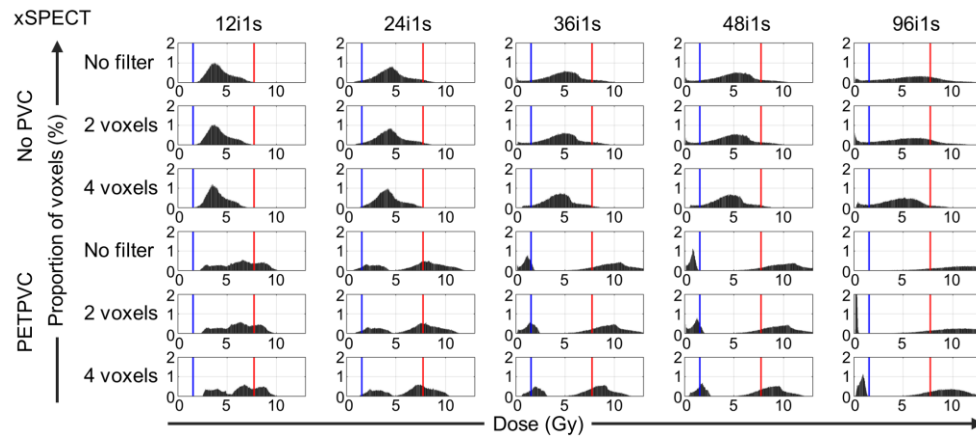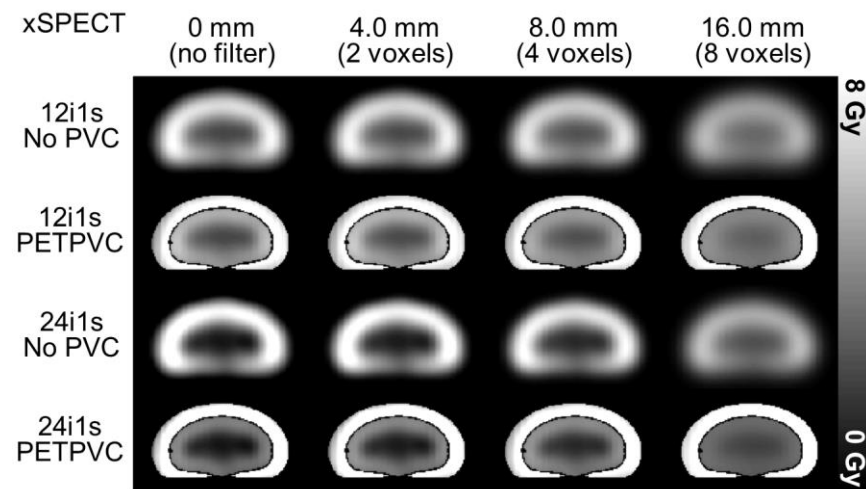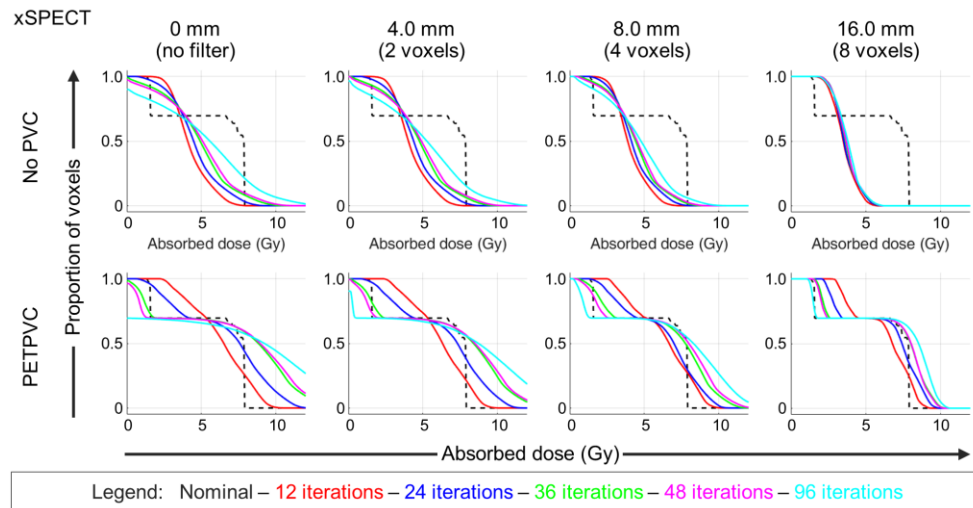**Supplemental Figure 1**

Differential dose volume histograms for different xSPECT Quant reconstructions without (top) and with (bottom) partial-volume correction. From left to right, different numbers of iterations are shown. Additionally, different post-filters were applied (no filtering, 2-voxel FWHM, 4-voxel FWHM). The blue and red solid lines indicate the nominal absorbed dose values of both compartments.
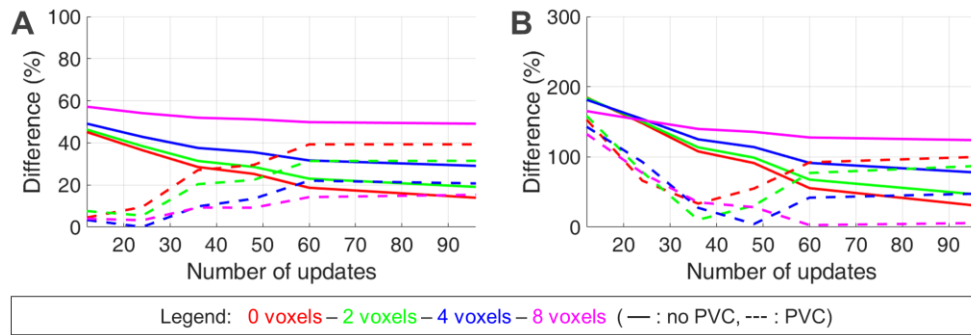
Supplemental Figure 2

Cross-sections through the 3D absorbed dose distributions obtained from the xSPECT Quant reconstructions (12 and 24 updates) with and without partial-volume correction. From left to right, different post-filters were applied (no filtering, 2-voxel FWHM, 4-voxel FWHM, 8-voxel FWHM). Additionally, the nominal absorbed dose distribution is given (right).
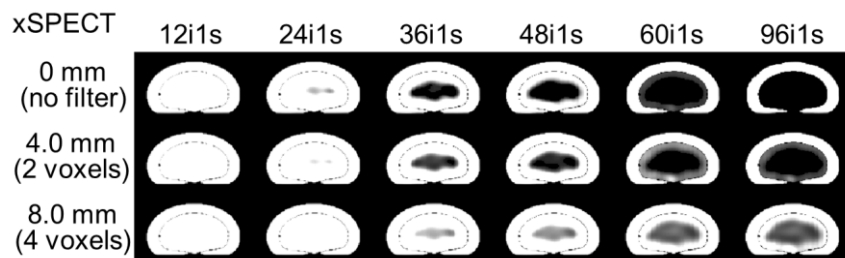
Supplemental Figure 3

Cumulative dose volume histograms for different xSPECT Quant reconstructions without (top) and with (bottom) partial-volume correction. From left to right, different post-filters are shown (no filtering, 2-voxel FWHM, 4-voxel FWHM, 8-voxel FWHM). Additionally, different numbers of updates were applied (different colors). The nominal absorbed dose is given by the dashed black line.

Supplemental Figure 4

Percentage difference between the SPECT/CT-based and the HPGe-based mean sub-organ absorbed doses for different post-filters for xSPECT Quant reconstructions with (dashed line) and without (solid line) partial-volume correction. A: Cortex. B: Medulla.

Supplemental Figure 5

Cross-sections through the 3D absorbed dose distributions obtained from the xSPECT Quant reconstructions for different iteration numbers (left to right) without partial-volume correction. From top to bottom, different post-filters were applied (no filtering, 2-voxel FWHM, 4-voxel FWHM).