

Supplementary Material to:

**Phantom-based acquisition time and image reconstruction parameter
optimisation for oncologic FDG PET/CT examinations using a digital
system**

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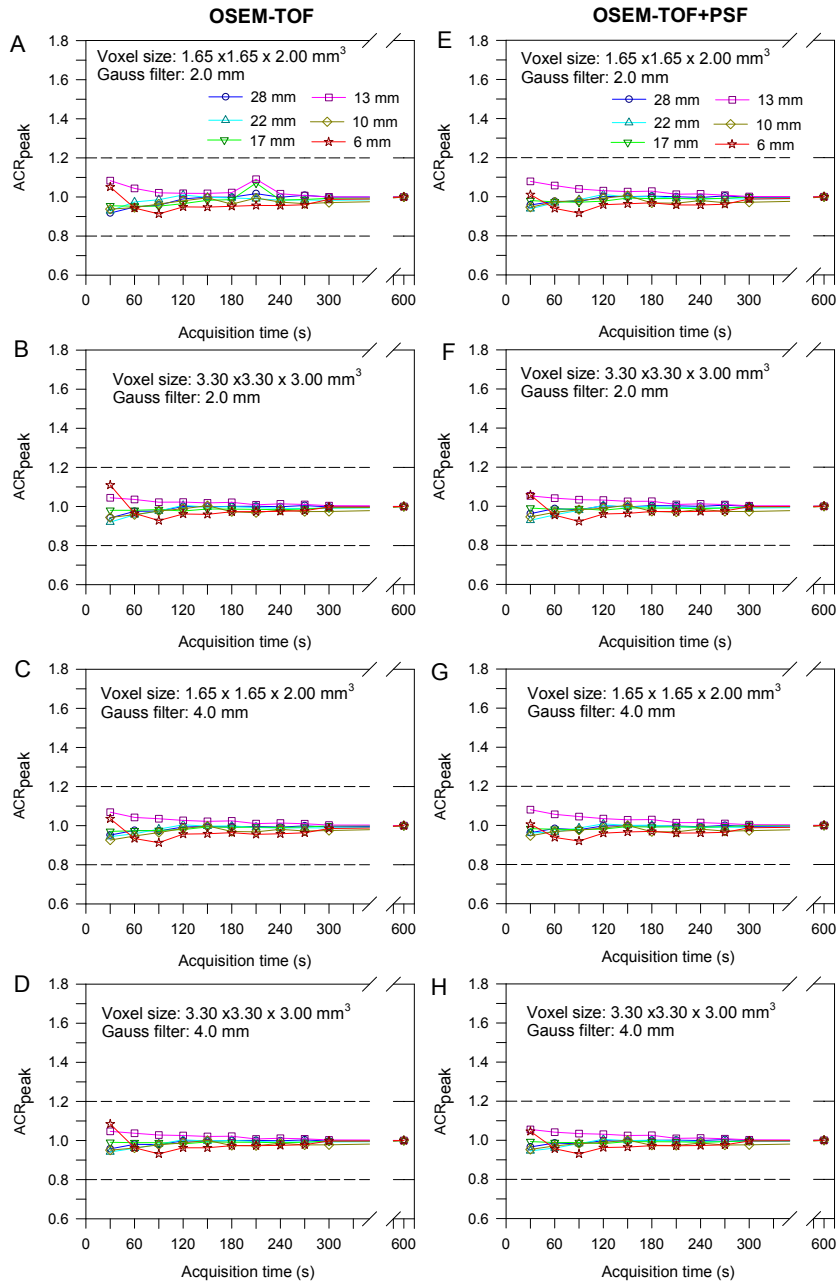
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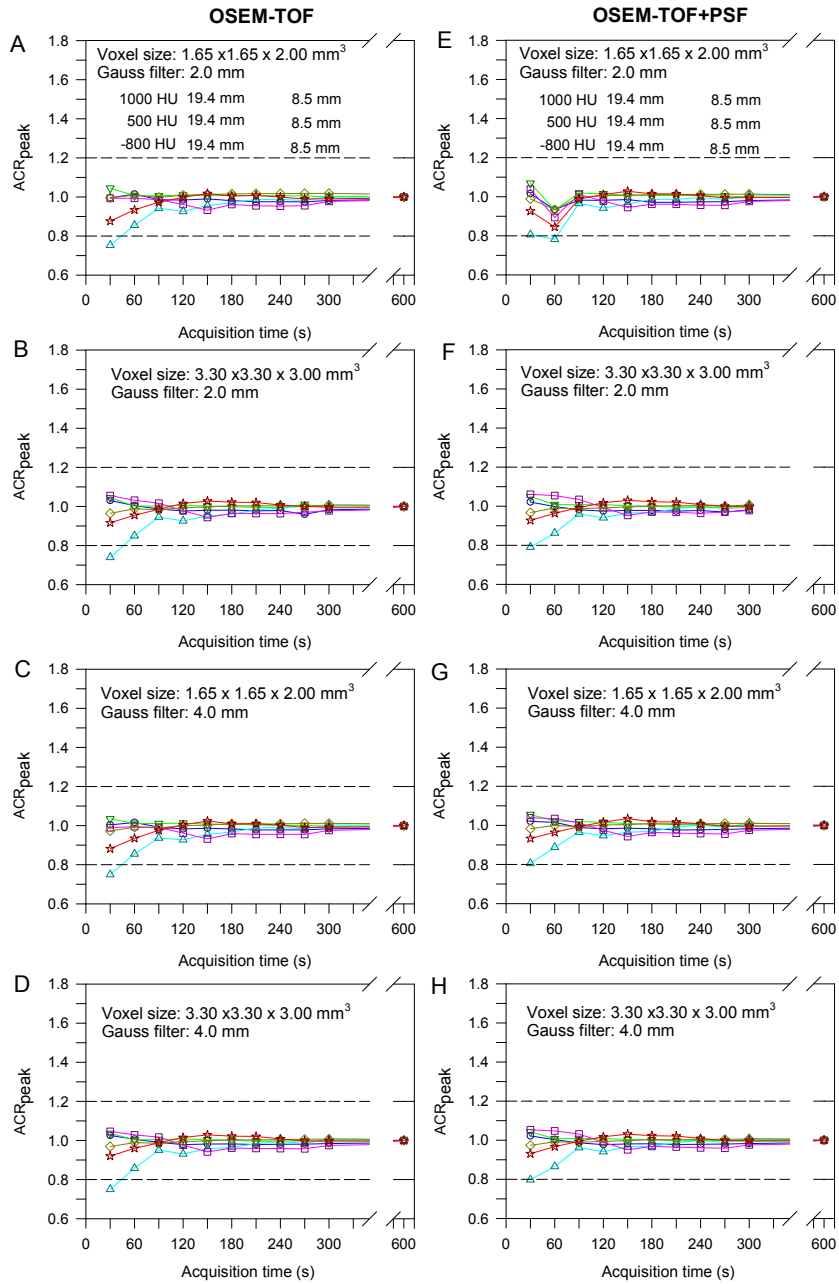
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Supplemental Figure S1



Supplemental Figure S1: Peak activity concentration ratio for the small-tumour phantom as a function of the acquisition time by reference to the 10-min acquisition time PET images separately for the different investigated combinations of voxel sizes, Gaussian filters, and OSEM-TOF (A-D) or OSEM-TOF+PSF (E-H) image reconstructions. Data for all investigated spheres are presented. Dashed horizontal lines indicate the $\pm 20\%$ deviation (acceptance criterion).

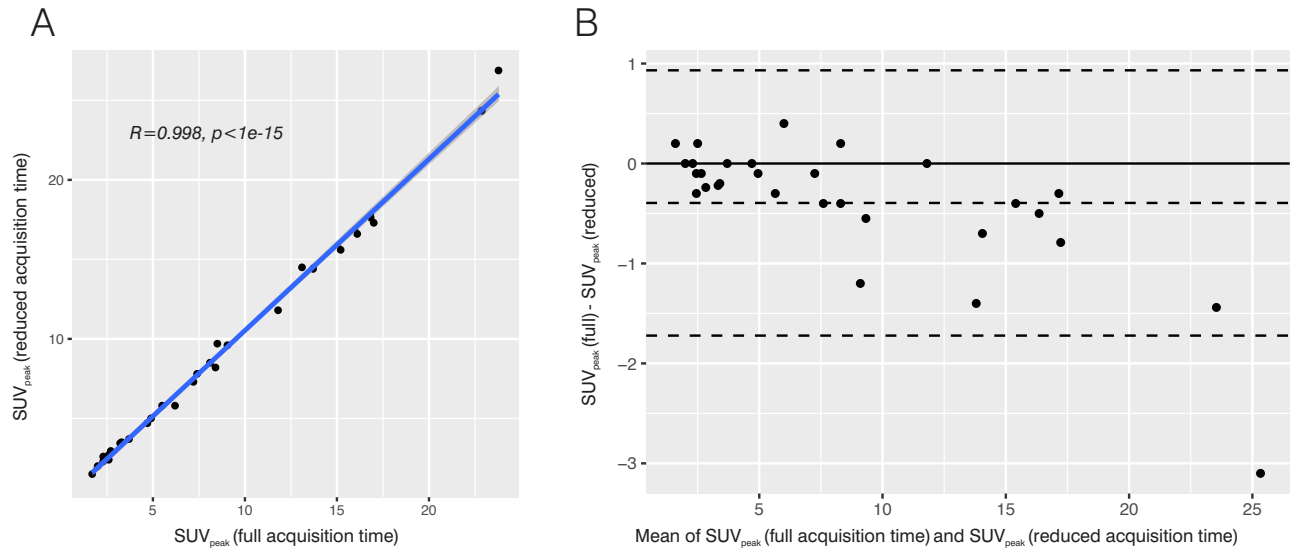
Supplemental Figure S2



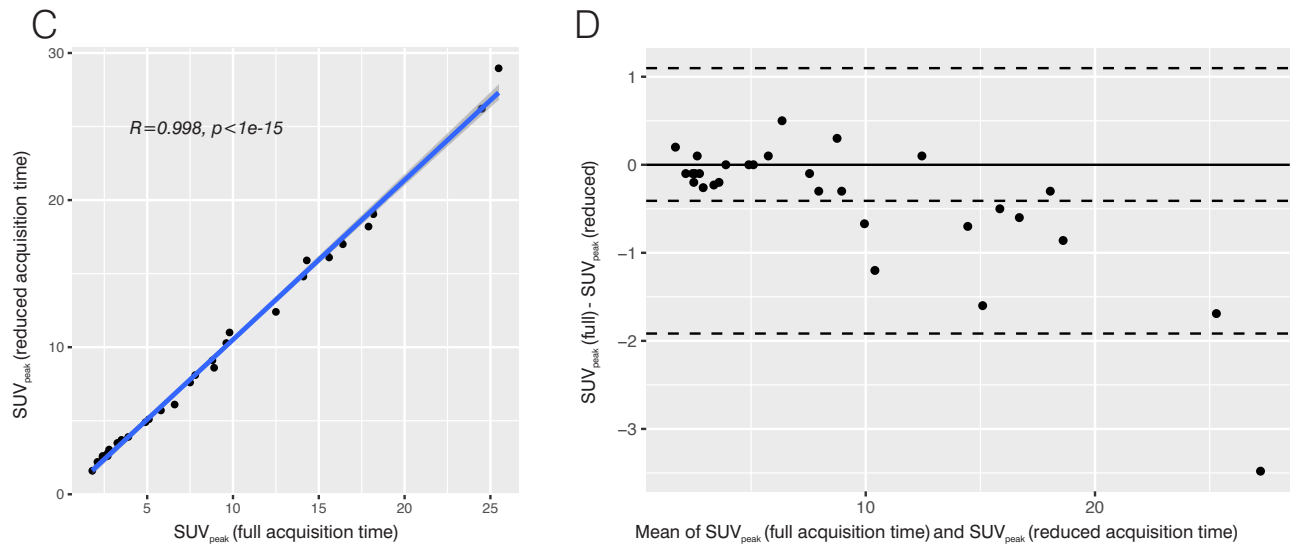
Supplemental Figure S2: Peak activity concentration ratio for the bone-lung phantom as a function of the acquisition time by reference to the 10-min acquisition time PET images separately for the different investigated combinations of voxel sizes, Gaussian filters, and OSEM-TOF (A-D) or OSEM-TOF+PSF (E-H) image reconstructions. Data for all investigated spheres/density regions are presented. Dashed horizontal lines indicate the $\pm 20\%$ deviation (acceptance criterion).

Supplemental Figure S3

OSEM-TOF



OSEM-TOF+PSF



Supplemental Figure S3: Analysis of correlation and agreement of patient data. Scatter plot (A) and Bland-Altman analysis (B) for SUV_{peak} of reduced acquisition time versus SUV_{peak} of full acquisition time PET images for OSEM-TOF reconstructions. Scatter plot (C) and Bland-Altman analysis (D) for SUV_{peak} of reduced acquisition time versus SUV_{peak} of full acquisition time PET images for OSEM-TOF+PSF image reconstructions.