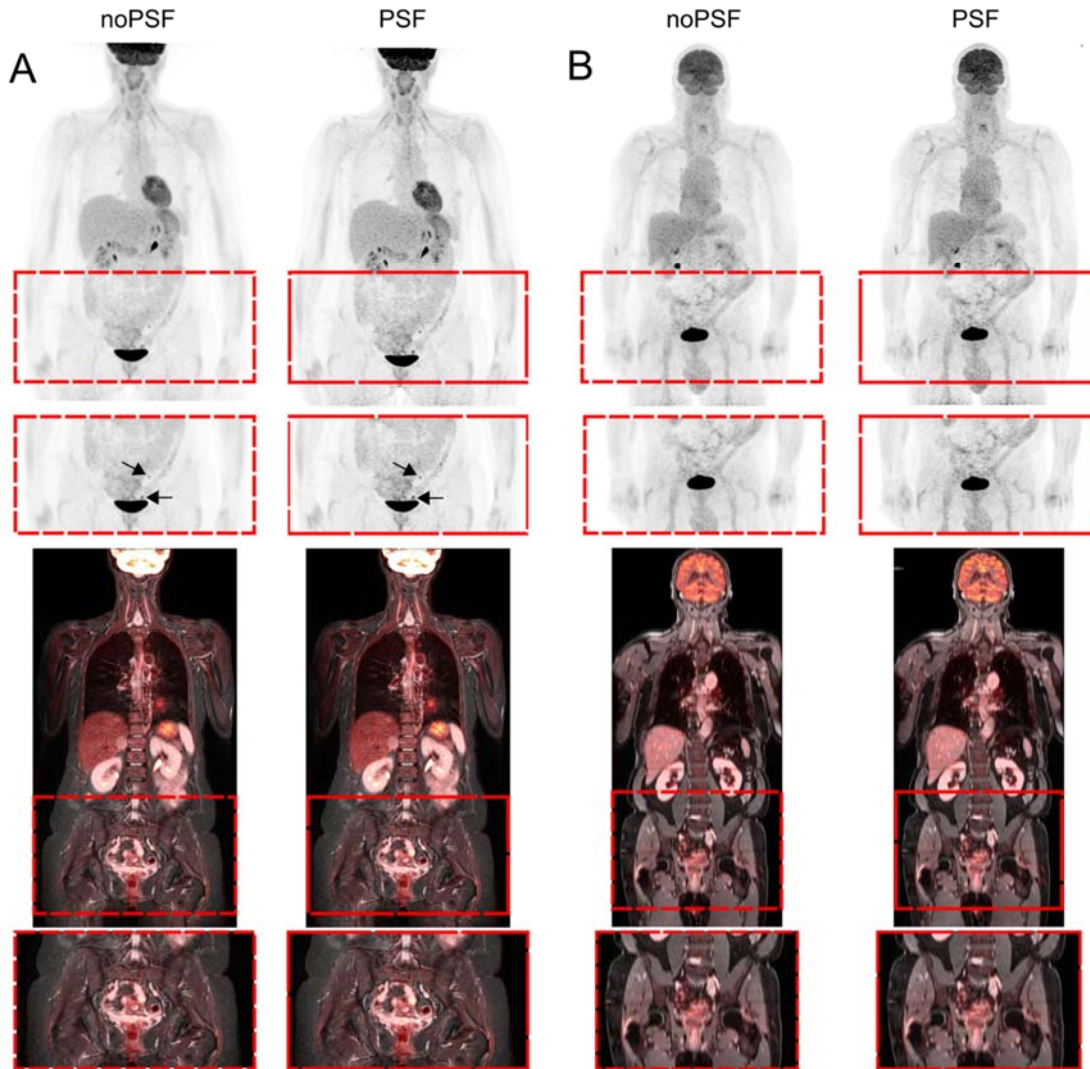


Supplemental Figure 1: The effect of varying the reconstruction parameters on patient data. (A) 3 iterations and 2 mm Gaussian filter. (B) 3 iterations and 4 mm Gaussian filter. (C) 10 iterations and 2 mm Gaussian filter. (D) 20 iterations and 2 mm Gaussian filter. (E) 34 iterations and 2 mm Gaussian filter. Note that a Gaussian filter of 4 mm and 3 iterations is recommended by the manufacturer for noPSF (B, left), while a Gaussian filter of 2 mm and 3 iterations is recommended for PSF (A, right) as standard reconstruction parameters in PET patient imaging. The other reconstructions either increased the level of image noise in the PET image or smoothed the PET image in such a way that small lesions showed a loss in SNR and lesion contrast.



Supplemental Figure 2. Maximum intensity projection PET and fused PET/MR images of two exemplary patients, where both readers evaluated the overall image quality of the PET images reconstructed without PSF better than those PET images reconstructed with PSF. (A) 39-y/o female with cervix carcinoma and pelvic lymph nodes (arrows in A); (B) 73-y/o male with no lesions.