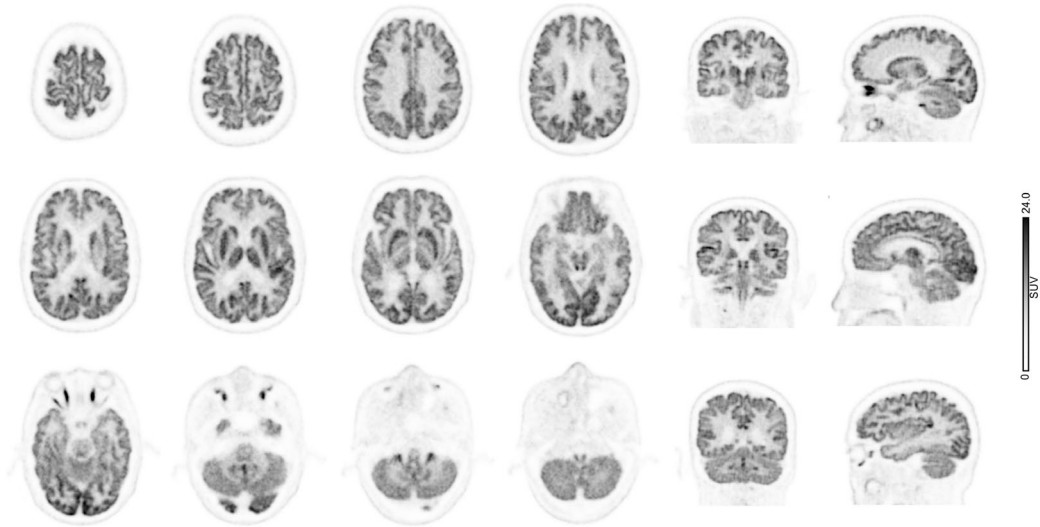
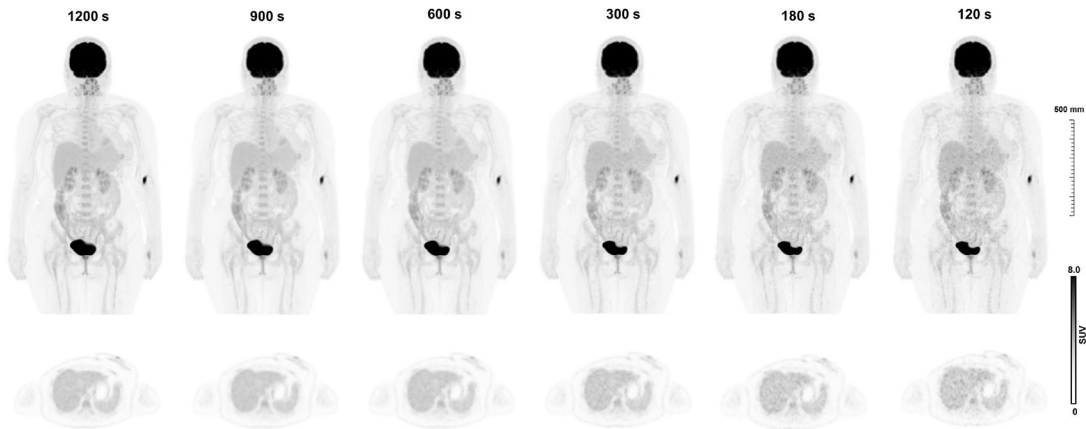


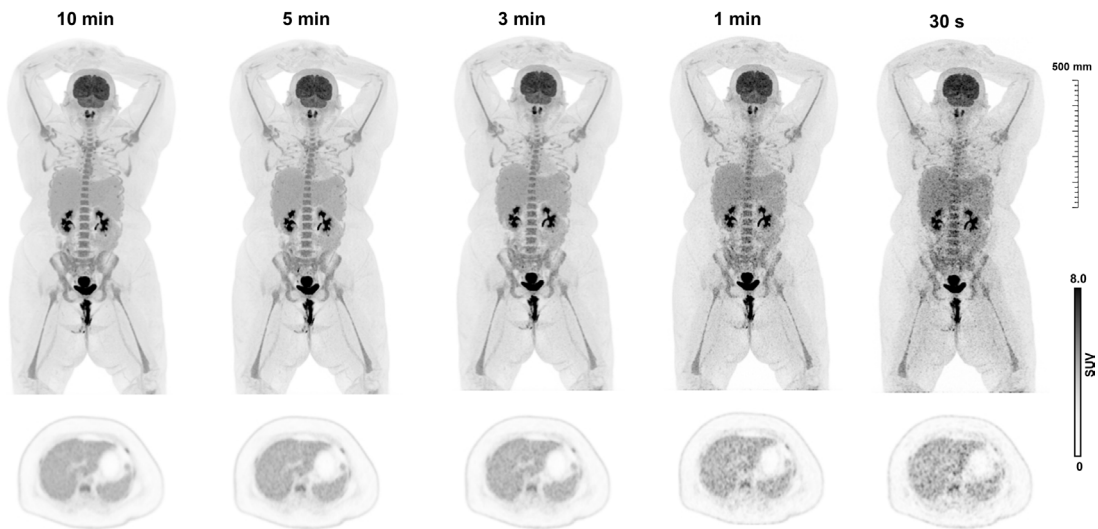
Supplemental Data



SUPPLEMENTAL FIGURE 1. Brain images acquired on the uMI Panorama GS system. The patient received a single injection of 168 MBq (4.5 mCi) ^{18}F -FDG, and PET images were acquired at 85 min post-injection for 5 min. Data were reconstructed using OSEM with TOF-PSF, 6 iterations and 10 subsets, voxel size of $0.6 \times 0.6 \times 0.6 \text{ mm}^3$, 0.5-mm Gaussian post filter. A clear demarcation of the gyri, sulci, striatum and thalamus can be observed. The human study was approved by the Institutional Review Board of Peking Union Medical College Hospital, and the patient provided informed consent.



SUPPLEMENTAL FIGURE 2. Low dose images acquired on the uMI Panorama GS system. A patient (height: 155 cm; weight: 74 kg; BMI: 30.8) undergoing restaging for breast cancer received a single injection of 29 MBq (0.79 mCi) ^{18}F -FDG, and PET images were acquired 64 min post-injection for a duration of 20 min. List-mode PET data were reconstructed with different time frames. Data were reconstructed using OSEM with TOF-PSF with 2 iterations and 10 subsets, voxel size of $2.1 \times 2.1 \times 2.5 \text{ mm}^3$, 5-mm Gaussian post filter. The acquisition time of 3 minutes is expected to yield acceptable image quality under sub-millicurie low-dose protocols, with dedicated reconstruction parameters adjusted for low-dose settings. The human study was approved by the Institutional Review Board of Peking Union Medical College Hospital, and the patient provided informed consent.



SUPPLEMENTAL FIGURE 3. Long delay images of a large patient acquired on the uMI Panorama GS system. A patient (height: 155 cm; weight: 74 kg, weight: 160 kg; BMI: 54.7) undergoing restaging for breast cancer received a single injection of 444 MBq (12 mCi) ^{18}F -FDG, and PET images were acquired 110 min post-injection for a duration of 15 min. List-mode PET data were reconstructed with different time frames. Data were reconstructed using OSEM with TOF-PSF with 3 iterations and 10 subsets, voxel size of $2.1 \times 2.1 \times 2.1 \text{ mm}^3$, no post filter. The acquisition time of 3 minutes is expected to yield acceptable image quality under low-delay protocols with such a large BMI patient. The human study was approved by the Institutional Review Board of Peking Union Medical College Hospital, and the patient provided informed consent.