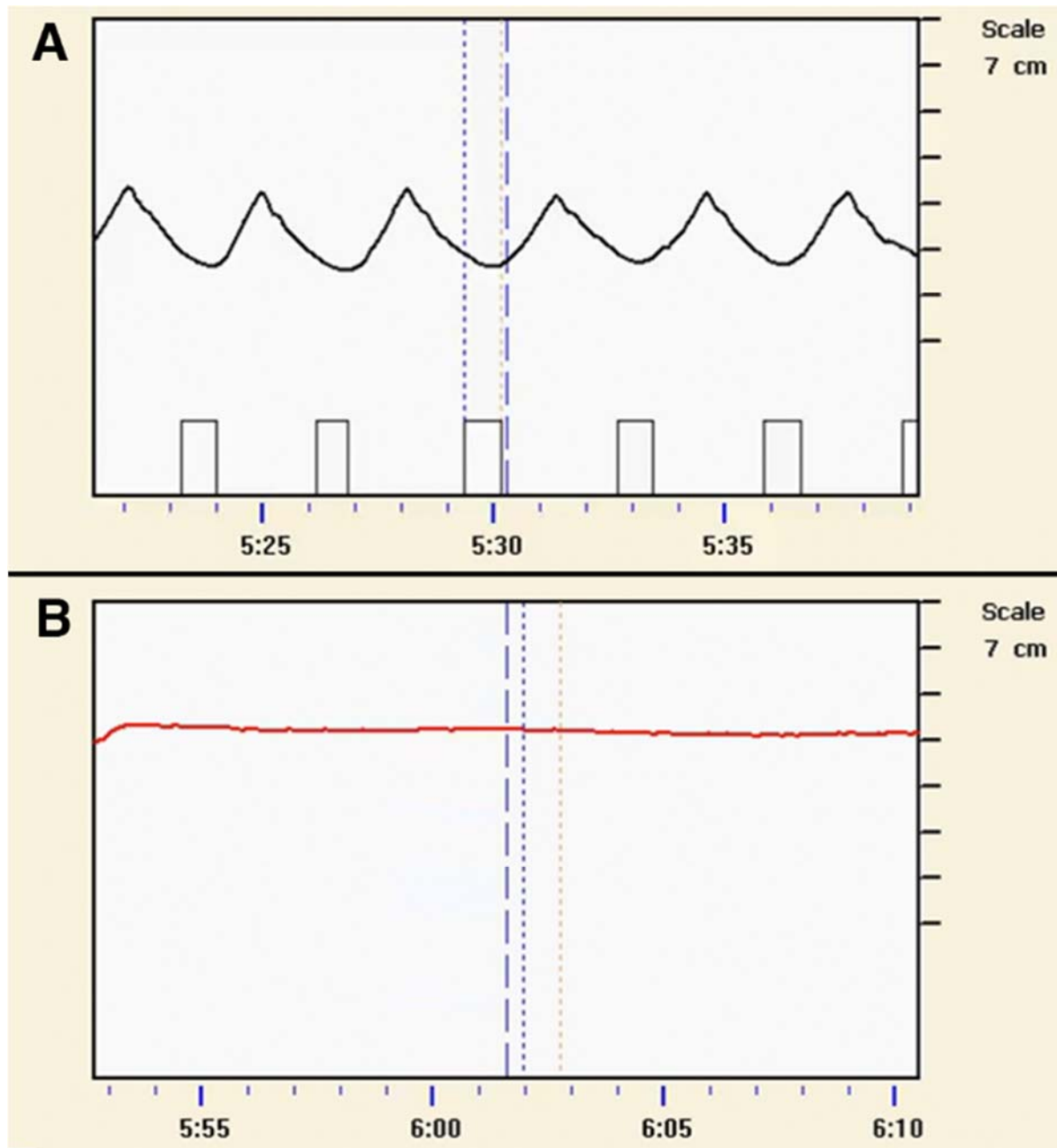
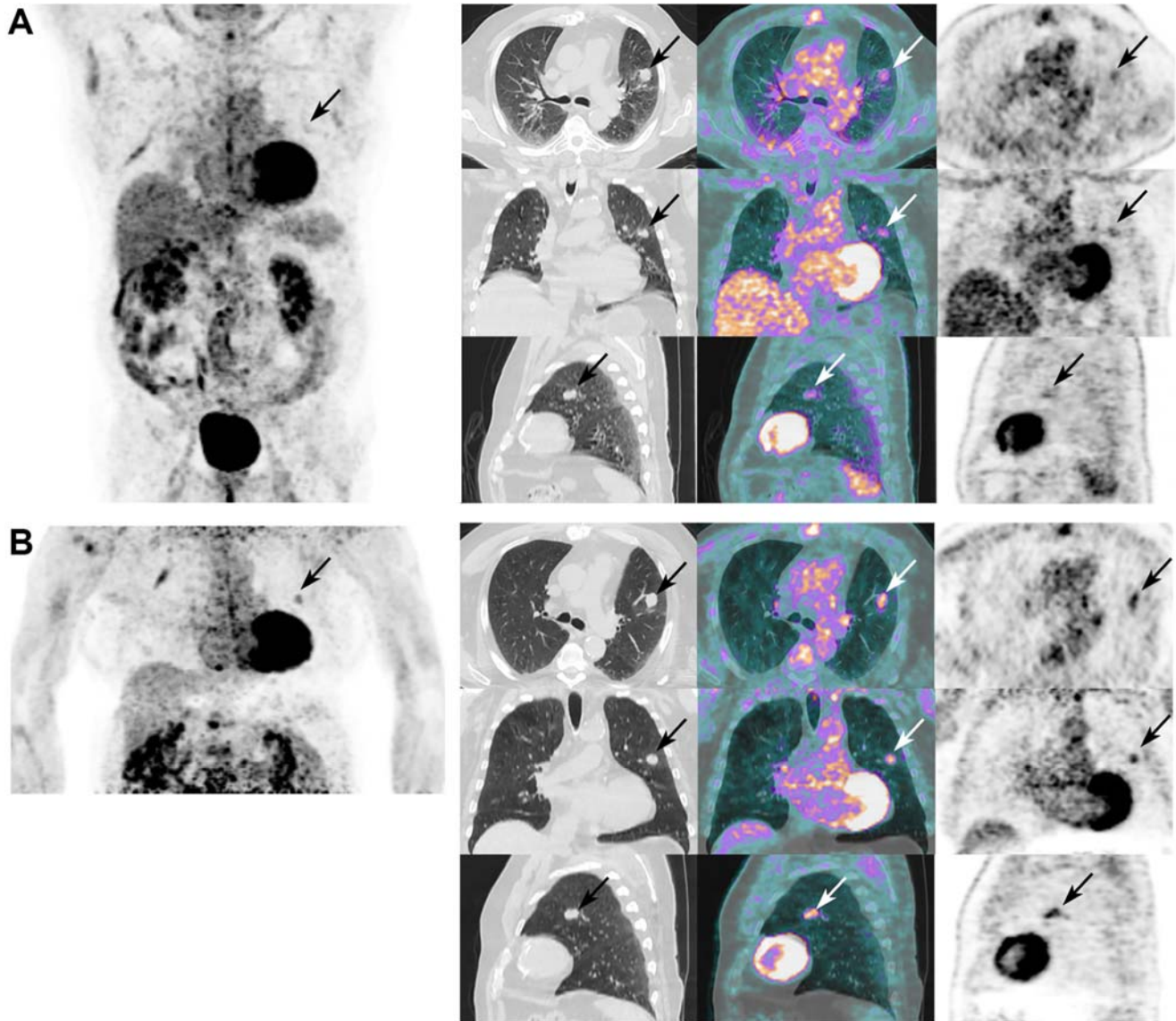


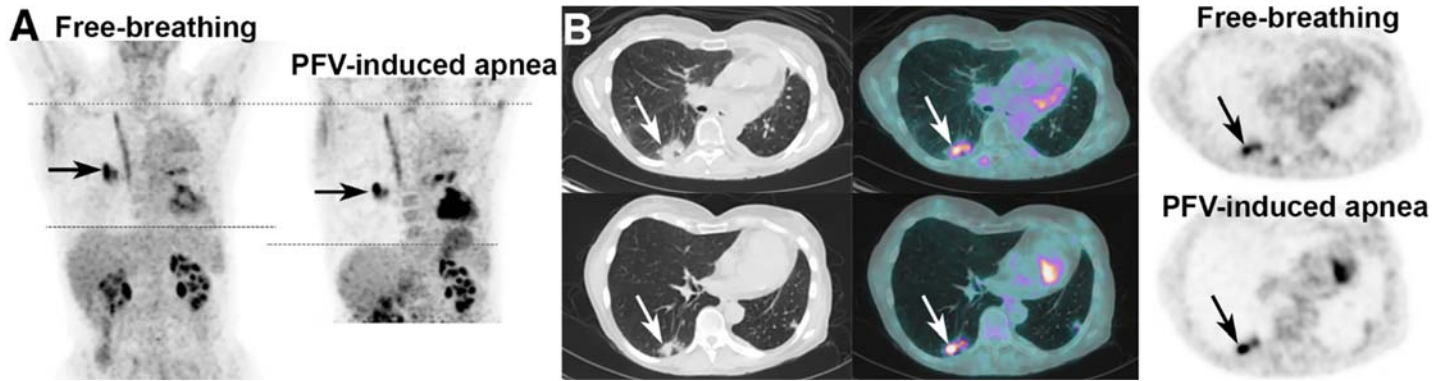
**Supplemental Figure 1.** Screenshot from the VARIAN RPM signal: **(A)** in free-breathing and **(B)** under PFV-induced apnea conditions (patient 4).



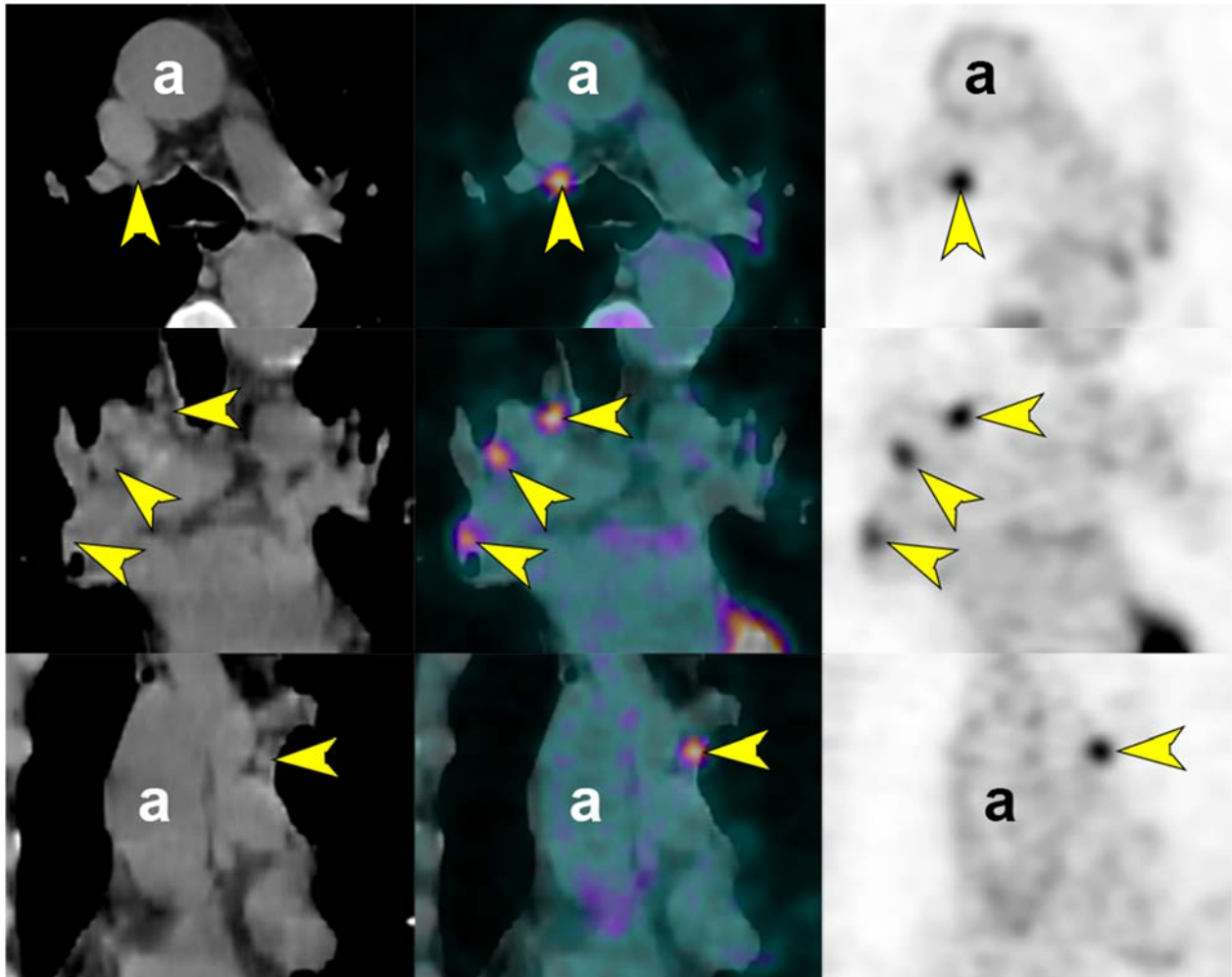
**Supplemental Figure 2.** Patient 1: Pulmonary nodule (arrow) with (A) free-breathing and (B) PVF-induced apnea.



**Supplemental Figure 3.** Patient 2: (A) Maximum intensity projection and (B) corresponding multiplanar reconstruction images of the pulmonary lesion (arrow).



**Supplemental Figure 4.** Patient 3: Appreciate the finer mediastinum details of PFV-induced apnea PET/CT with multiplanar reconstruction images showing excellent visibility of  $^{18}\text{F}$ -FDG-positive lymph nodes (yellow arrowhead). Note even the discernable uptake in normal aortic wall (a = aorta).



**Supplemental Figure 5.** Patient 4: (A) maximum intensity projection and (B) axial/sagittal multiplanar reconstruction images (b = breast gland). Pulmonary lesion (yellow arrowhead) is visible only in PVF-induced apnea PET/CT. Appreciate the finer maximum-intensity-projection details (e.g. individual ribs) in PVF-induced PET/CT (A).

