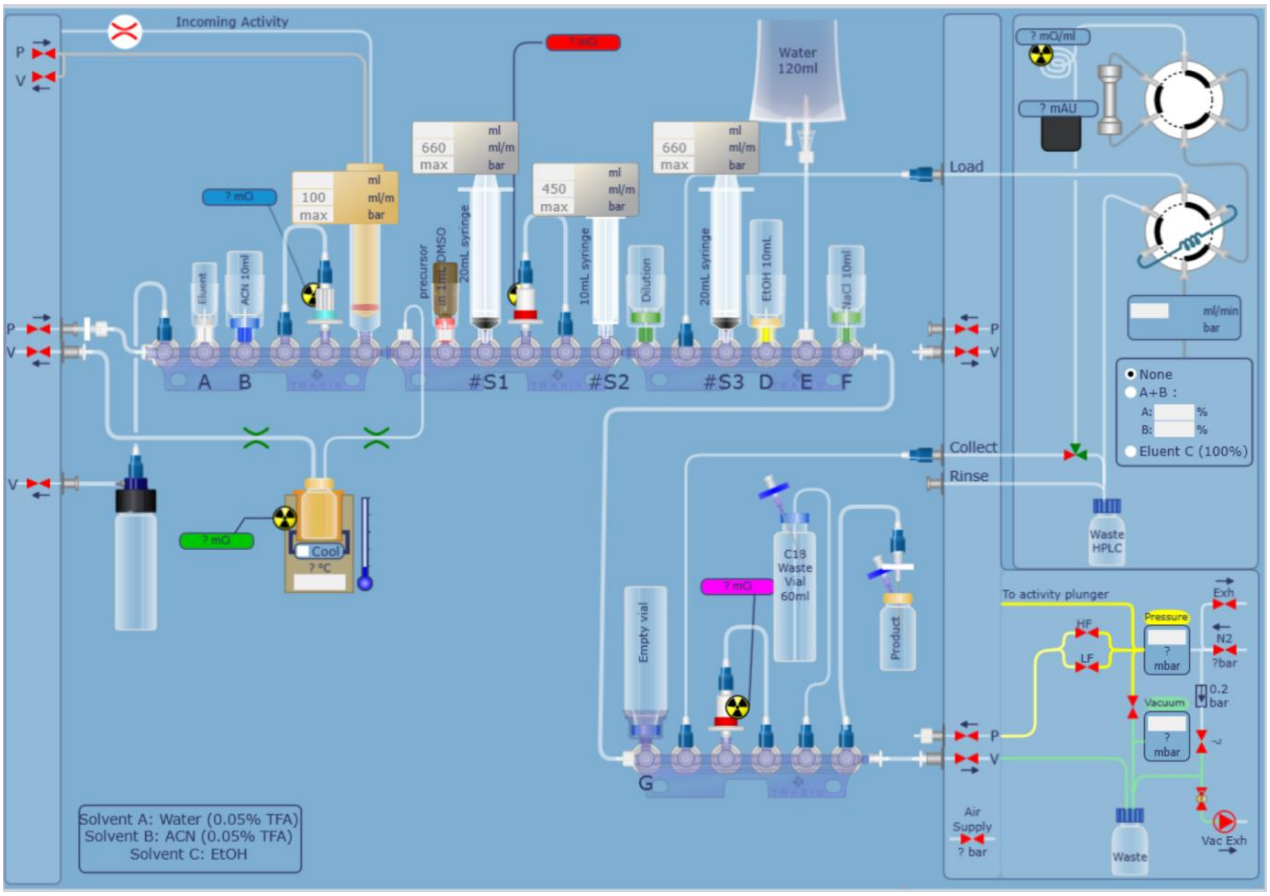
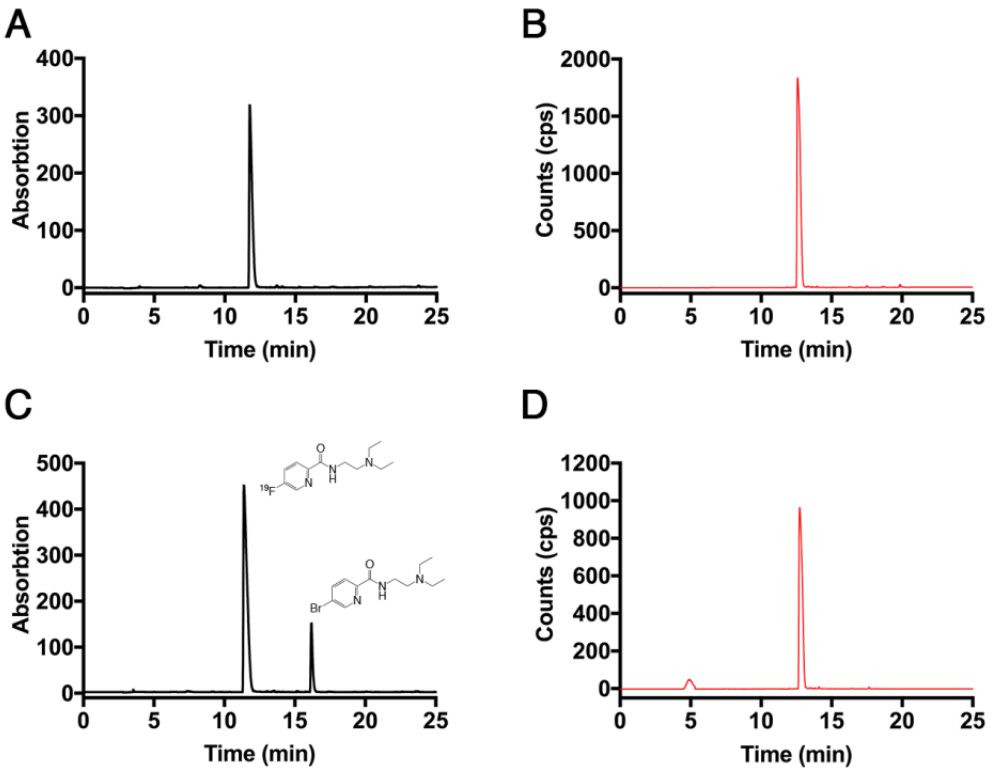
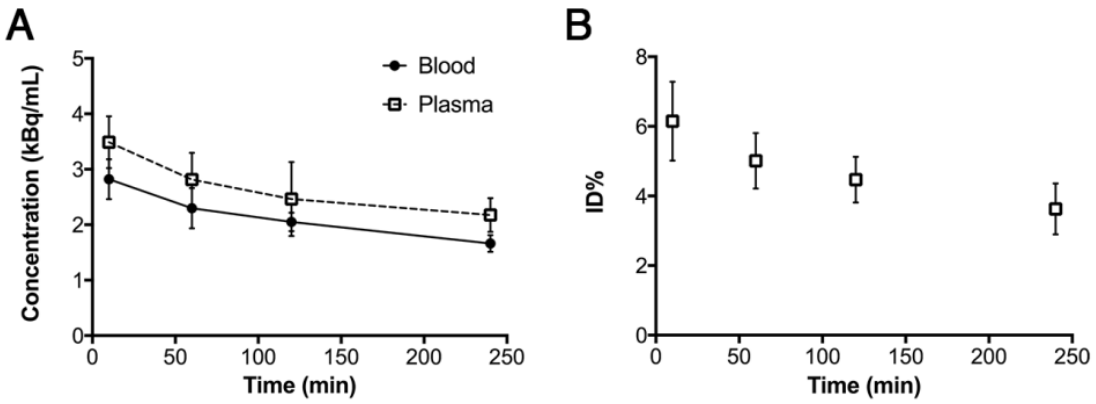


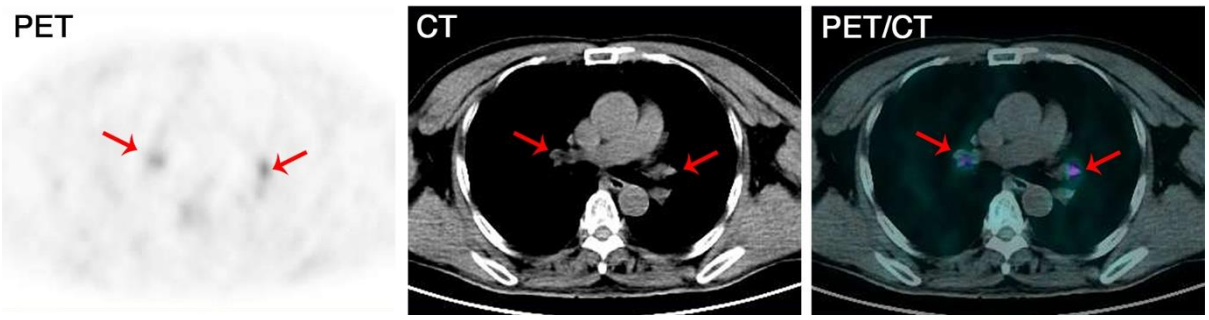
Supplemental Figure 1. The interface of the AllInOne^{TM} synthesizer.



Supplemental Figure 2. The radio semi-preparative high-pressure liquid chromatographs of ^{18}F-P3BZA. The radioactive chromatograph of ^{18}F-P3BZA (A) and 254 nm absorption chromatograph of ^{19}F-P3BZA (B) after co-injection. (C) The 254 nm absorption chromatograph of co-injection of P3BZA precursor and ^{19}F-P3BZA. (D) The 4-hour serum stability of ^{18}F-P3BZA.



Supplemental Figure 3. The pharmaceutical kinetic of ^{18}F-P3BZA in blood. (A) The radioactivity-time curve of ^{18}F-P3BZA in whole blood and plasma. (B) The kinetic of ^{18}F-P3BZA in blood.



Supplemental Figure 4. PET/CT images of ^{18}F-P3BZA distribution in obsolete lymph nodes (red arrows) in the chest.

Supplemental Table 1 Reaction sequence for ^{18}F-P3BZA radiosynthesis

01. ^{18}F trapping on QMA cartridge
02. ^{18}F elution with 1.5 ml K2.2.2/K_2CO_3 solution
03. Azeotropic evaporation at 90 °C for 3 min and 110 °C for 7 min
04. Addition of bromo-precursor (P3BZA in 1ml anhydrous DMSO) to the reactor vial
05. Reacting at 150 °C for 10 min
06. Cooling the reactor vial
07. Addition of 3 ml sterilized water
08. Pre-purification on a C18 Plus Cartridge
09. Elute with 2mL acetonitrile
10. Diluted with 7 mL water
11. Injection on HPLC
12. Collection of ^{18}F-P3BZA peak
13. Dilution of the collected fraction with 20 ml sterilized water
14. Trap product on a C18 plus cartridge
15. Elute product with 1ml ethanol
16. Formulation with 10 ml saline
17. Sterile filtration

Supplemental Table 2 PET/CT- derived distribution of ^{18}F-P3BZA in healthy volunteers

Organ	SUV_{mean}			
	10 min	60 min	120 min	240 min
Adrenals	1.5 ± 0.2	1.4 ± 0.2	1.1 ± 0.2	1.1 ± 0.2
Brain	3.5 ± 0.4	2.0 ± 0.2	1.7 ± 0.2	1.4 ± 0.2
Breasts	0.2 ± 0.0	0.3 ± 0.1	0.3 ± 0.1	0.2 ± 0.1
Gallbladder	4.8 ± 0.5	6.2 ± 0.8	4.6 ± 1.2	4.0 ± 0.6
Lower large intestine	2.6 ± 0.6	2.3 ± 0.3	3.0 ± 0.4	2.3 ± 0.3
Small intestine	3.0 ± 0.5	3.2 ± 0.9	2.4 ± 0.4	1.6 ± 0.3
Stomach	7.5 ± 1.1	10.9 ± 1.1	9.5 ± 1.3	4.5 ± 1.1
Upper large intestine	3.1 ± 0.5	2.7 ± 0.6	2.6 ± 0.5	2.4 ± 0.3
Heart	3.5 ± 0.5	2.3 ± 0.4	2.1 ± 0.3	1.7 ± 0.2
Kidneys	4.5 ± 0.6	3.6 ± 0.5	3.2 ± 0.3	2.5 ± 0.3
Liver	8.3 ± 1.0	4.8 ± 1.0	4.0 ± 0.6	3.4 ± 0.7
Lungs	1.5 ± 0.2	1.3 ± 0.1	1.1 ± 0.1	0.9 ± 0.1
Muscle	1.4 ± 0.2	1.3 ± 0.2	1.1 ± 0.1	0.9 ± 0.1
Ovaries (n=3)	1.4 ± 0.3	1.2 ± 0.1	1.0 ± 0.1	0.5 ± 0.2
Pancreas	3.2 ± 0.3	2.5 ± 0.2	2.0 ± 0.2	1.7 ± 0.2
Bone marrow	3.2 ± 0.2	2.9 ± 0.3	2.6 ± 0.4	1.8 ± 0.4
Spleen	5.1 ± 0.5	3.7 ± 0.7	3.0 ± 0.4	2.1 ± 0.4
Testes (n=3)	1.4 ± 0.3	1.4 ± 0.5	1.2 ± 0.3	1.0 ± 0.5
Thyroid	2.0 ± 0.4	1.6 ± 0.2	1.3 ± 0.2	1.1 ± 0.2
Eyes	1.6 ± 0.3	2.1 ± 0.4	2.4 ± 0.5	2.2 ± 0.3