

Table S1. SUVmax of tumor lesions on the baseline [⁶⁸Ga]Ga-DOTA.SA.FAPi PET/CT in the [¹⁷⁷Lu]Lu-DOTA.SA.FAPi group.

Patient S.No	Cancer type	Site of lesion	SUVmax	Tumor-to-pancreas ratio
1.	Right breast cancer	Right breast primary tumor	12.5	4.8
		Right shoulder skeletal lesion	8.7	3.3
2.	B/L breast cancer	Right shoulder skeletal lesion	7.8	3.9
		Left shoulder skeletal lesion	8.8	4.4
		Left knee skeletal lesion	6.7	3.4
3.	Right breast cancer	Ileum	8.1	4
		Pubis	9.0	4.5
Total number of lesions		7		
Mean±SD (Range)			8.1 ± 0.8 (6.7 – 9)	4 ± 0.5 (3.3 – 4.8)

*As pancreas demonstrated highest FAPi expression on [⁶⁸Ga]Ga-DOTA.SA.FAPi PET/CT tumor-to-pancreas ratio was considered.

Table S2. SUVmax of tumor lesions on the baseline [⁶⁸Ga]Ga-DOTA.SA.FAPi PET/CT in the [¹⁷⁷Lu]Lu-DOTAGA.(SA.FAPi)₂ group

Patient S.No	Cancer type	Site of lesion	SUVmax	Tumor-to-pancreas ratio
1	Radioiodine refractory follicular thyroid cancer	Right ileum skeletal lesion	10	3.8
		Femur bone lesion	12.8	6
2	Triple negative breast cancer	Right lung mass	11.1	4.6
3	Radioiodine refractory papillary thyroid cancer	Right lung nodule	14.2	6.7
4	Radioiodine refractory papillary thyroid cancer	Left shoulder bone lesion	9.21	4.6
		Sternum	8.9	4.2
		Right head of femur lesion	7.6	3.8
5	Paraganglioma	Skull	12	4.6
		Anterior rib lesion	8.7	3.3
		Posterior rib lesion	7.2	2.7
6	Anaplastic thyroid cancer	Right Neck mass	9.8	3.6
7	Medullary thyroid cancer	Liver lesion	11.8	4.0
Total number of lesions		N =12		
Mean ± SD (Range)			10.2 ± 2.1 (7.2 – 14.2)	4.3 ± 1.1 (2.7 – 6.7)