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## Measuring HER2-receptor expression in metastatic breast cancer using [<sup>68</sup>Ga]ABY-025

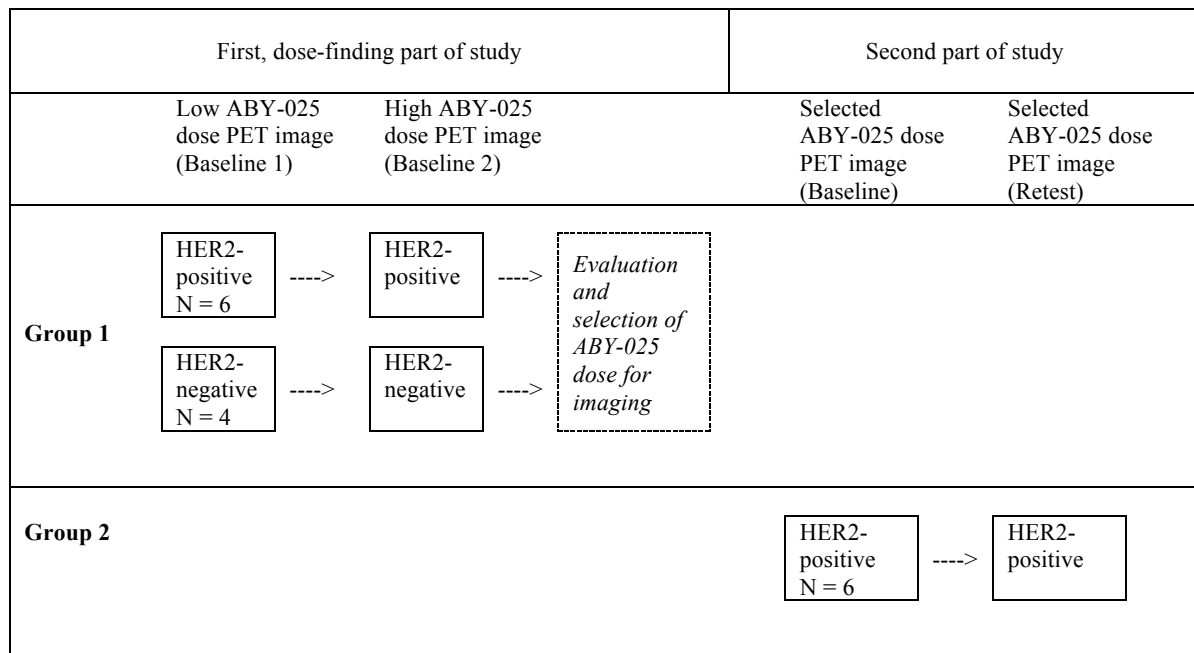
### PET/CT

### Supplementary material

**Table S1.** List of 10 lesions used in test-retest. [<sup>68</sup>Ga]ABY-025 SUV was measured as SUVmax in the two largest lesions in each of 5 patients scanned twice a week apart at 2h after injection of 200 MBq with ~430 µg total peptide mass.

Patient#	Location of metastasis	Baseline SUV	retest SUV
11	liver	20.0	20.0
	bone	7.2	7.4
13	bone	5.2	4.6
	bone	6.3	6.7
14	liver	11.7	9.8
	liver	4.7	3.9
15	liver	35.8	33.4
	liver	23.7	22.7
16	bone	2.4	2.5
	bone	2.2	2.7
Mean		11.9	11.4
SD		11.1	10.5

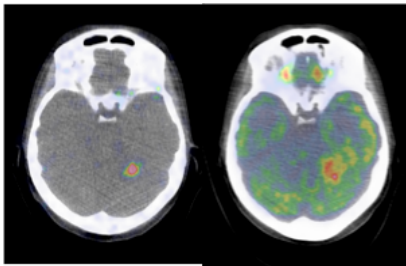
Figure S1. Schematic protocol outline.



**Figure S2.** Examples of [<sup>68</sup>Ga]ABY-025 PET findings. Low background in most tissues provided high contrast images of metastases.

A: Brain metastasis in Patient 7. Left: ABY-025, SUV threshold 10. Right: FDG. Normal brain SUV was <0.1 in all patients, facilitating detection of HER2-positive brain metastases.  
B: HER2-negative bone metastasis in Patient 8. Left: ABY-025, SUV threshold 10. Mid: CT. Right: FDG. This patient had a HER2-positive primary tumour and later developed bone metastasis. She was treated with trastuzumab for three years and gradually progressed. Two vertebral biopsies were performed and HER2 status was 1+ in both. FDG-PET/CT showed generalized bone disease. [<sup>68</sup>Ga]ABY-025 uptake ranged from 0-3.6. Due to the low signal throughout normal bone (SUV<0.7) even metastases with low HER2-expression are easily seen.

A



B

