

# Breast cancer assessment under neoadjuvant systemic therapy using thoracic photon-counting detector computed tomography in prone position: a pilot study

## ELECTRONIC SUPPLEMENTARY MATERIAL

**Supplementary Table 1.** Comparison of tumor size and stage in MRI and PCCT before and in histopathology and PCCT after neoadjuvant systemic therapy. Measurements in PCCT include unenhancing (PCCT unenhanced) and enhancing tumor size (PCCT enhanced) in the monoenergetic 65 keV reconstructions and enhancing tumor size in the iodine map (PCCT iodine map) for reader 1/2/3, respectively. For case 1 and 9 the repeated measurements of total tumor size in PCCT after neoadjuvant systemic therapy performed by reader 1 and 2 are shown in brackets.

Case	Before neoadjuvant systemic therapy						After neoadjuvant systemic therapy					
	MRI [mm]	MRI T stage	PCCT unenhanced [mm]	PCCT enhanced [mm]	PCCT iodine map [mm]	PCCT T stage	Histopathology [mm]	ypT	PCCT unenhanced [mm]	PCCT enhanced [mm]	PCCT iodine map [mm]	PCCT T stage
1	16	4	12/10/17	12/10/17	12/10/11	4/4/4	25	2	9/9/9 (23/24)	2/3/4 (23/24)	2/3/3	1/1/1 (2/2/1 )
2	21	2	21/20/21	21/20/21	21/20/20	2/1/2	0	0	0/0/0	0/0/0	0/0/0	0/0/0
3	28	2	27/25/27	27/25/27	27/25/27	2/2/2	8	1	0/0/0	0/0/0	0/0/0	0/0/0
4	NA	NA	20/16/18	20/16/18	19/11/14	1/1/1	0	0	0/0/0	0/0/0	0/0/0	0/0/0
5	15	1	14/14/14	14/14/14	12/12/12	1/1/1	2	1	7/7/8	7/7/8	5/5/5	1/1/1
6	31	4	47/45/49	23/25/49	23/22/48	2/4/4	3	1	30/28/33	0/0/0	0/0/0	0/0/4
7	20	1	20/19/29	20/19/26	19/13/18	1/1/2	12	1	10/9/9	10/9/9	7/6/7	1/1/1
8	90	4	74/87/83	60/67/66	60/56/59	4/4/4	11	1	0/0/0	0/0/0	0/0/0	0/0/0
9	32	2	31/31/31	31/31/31	31/32/31	2/2/2	23	2	20/0/0 (23/18)	7/0/0 (23/18)	7/0/0	1/0/0 (2/1/0 )

*MRI* Magnetic resonance imaging, *PCCT* Photon-counting detector computed tomography

**Supplementary Table 2.** Number of suspicious lesions, cutis and pectoralis muscle infiltration in PCCT before and after neoadjuvant systemic therapy as assessed by reader 1/2/3.

	Before neoadjuvant systemic therapy			After neoadjuvant systemic therapy		
Case	Number of suspicious lesions [number]	Cutis infiltration [yes/no]	Pectoralis muscle infiltration [yes/no]	Number of suspicious lesions [number]	Cutis infiltration [yes/no]	Pectoralis muscle infiltration [yes/no]
1	6/6/3	y/y/y	n/n/n	6/6/1	n/n/n	n/n/n
2	1/1/1	n/n/n	n/n/n	0/0/0	n/n/n	n/n/n
3	6/6/2	n/n/n	n/n/n	0/0/0	n/n/n	n/n/n
4	6/4/5	n/n/n	n/n/n	0/0/0	n/n/n	n/n/n
5	6/6/6	n/n/n	n/n/n	6/6/6	n/n/n	n/n/n
6	1/1/2	n/n/n	n/y/y	2/1/2	n/n/n	n/n/y
7	2/3/3	n/n/n	n/n/n	4/3/3	n/n/n	n/n/n
8	6/6/6	y/y/y	n/n/n	0/0/0	n/n/n	n/n/n
9	3/3/6	n/n/n	n/n/n	2/2/0	n/n/n	n/n/n

y Yes, n No

**Supplementary Table 3.** Number of suspicious axillary lymph nodes in PCCT before and after neoadjuvant systemic therapy as assessed by reader 1/2/3 and histopathologically detected number of lymph node metastasis by axilla surgery after neoadjuvant systemic therapy.

	Before neoadjuvant systemic therapy	After neoadjuvant systemic therapy	
Case	PCCT lymph nodes [number]	Histopathology lymph nodes [number]	PCCT lymph nodes [number]
1	0/0/0	0	0/0/0
2	0/0/0	0	0/0/0
3	0/0/0	0	0/0/0
4	3/0/5	0	0/0/0
5	3/2/1	0	0/0/0
6	1/0/1	0	0/0/0
7	0/0/0	0	0/0/0
8	6/6/6	0	1/0/0
9	1/1/6	2	0/0/0

*PCCT* Photon-counting detector computed tomography