

SUV 2.5 (3427 ml)

SUV 4.0 (2.13 ml)

41%max (143 ml)

A50%peak (96 ml)

MV2 (143 ml)

MV3 (96 ml)

“failed”

“poor”

“good”

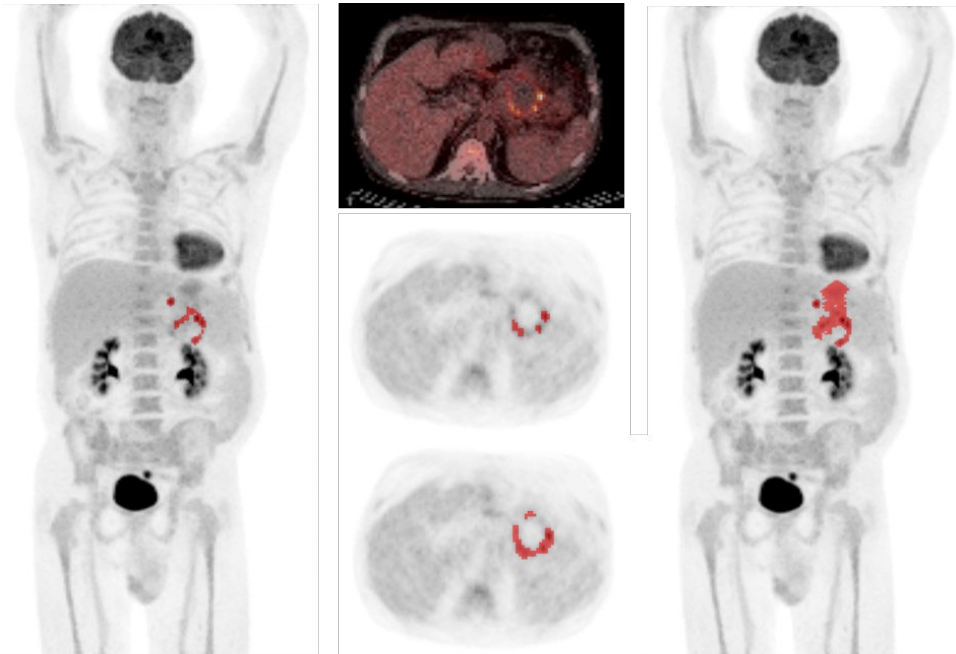
“moderate”

“good”

“moderate”

Supplemental FIGURE 1. Example scores per method derived MTV in a casus of DLBCL located in stomach, DS5. Scores “good” and “moderate” were considered as acceptable delineations whereas “poor” and “failed” were not.

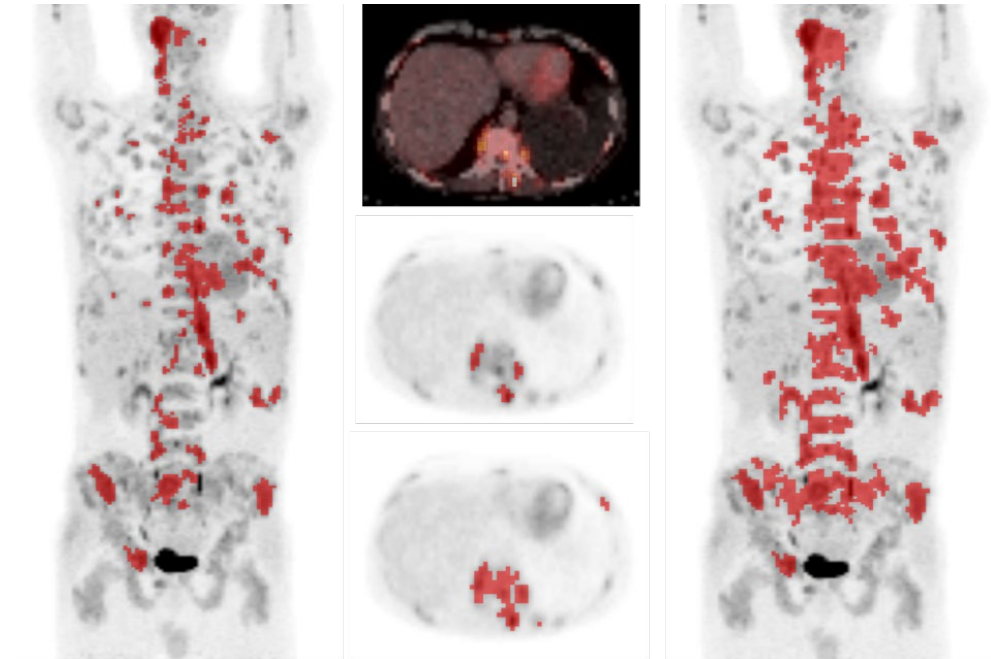
***A**



MTV MV3
12 ml (middle)

MTV SUV 4.0
98 ml (lowest)

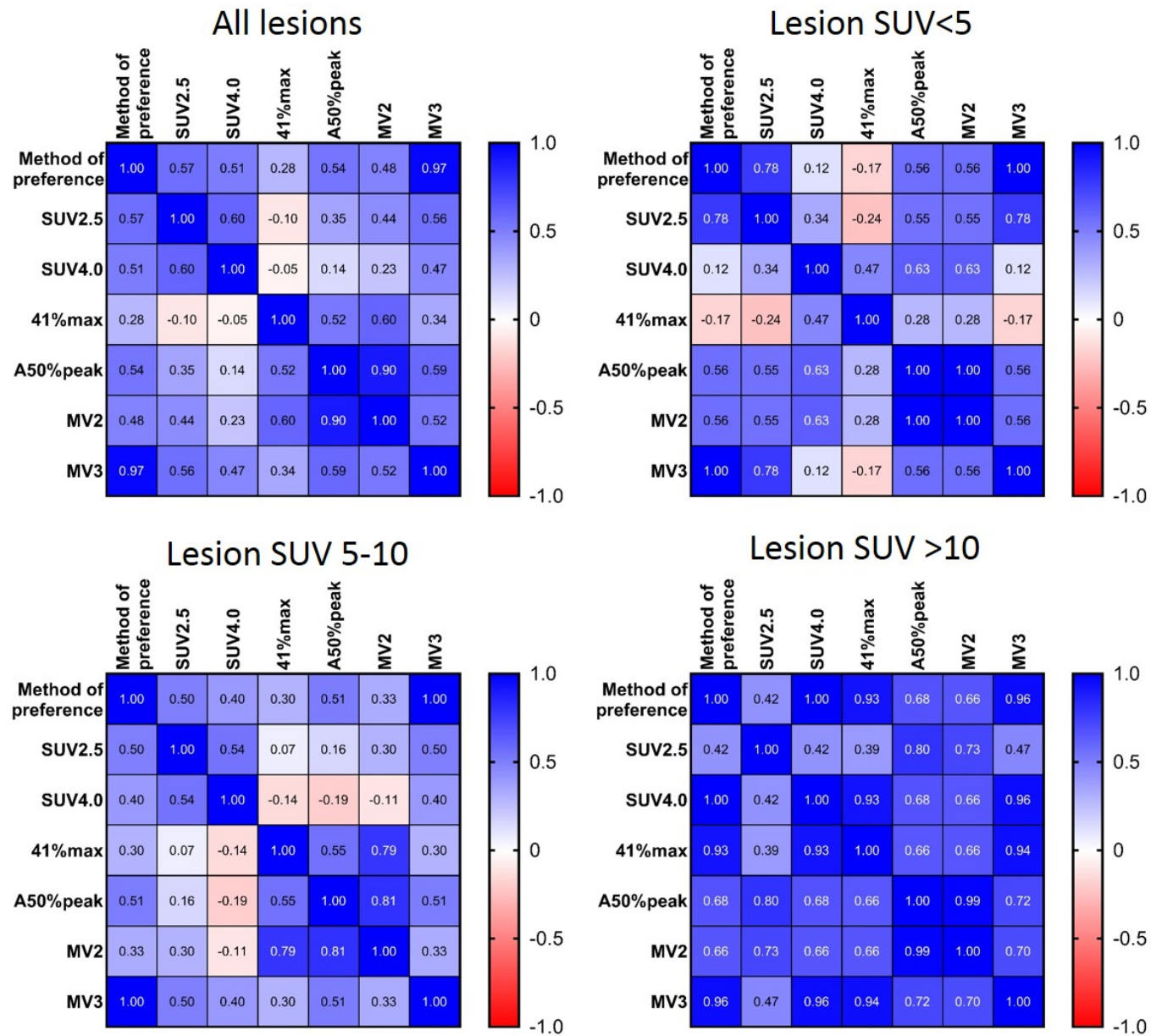
***B**



MTV MV3
245 ml (middle)

MTV SUV 4.0
756 ml (lowest)

Supplemental FIGURE 2. The delineation quality of MV3 derived MTVs *A and *B were rated as “non-acceptable” and were considered as providing underestimation of tumor volume by all observers. All observers scored SUV4.0 delineated MTV *A as “acceptable” while one observer scored MTV *B as “non-acceptable” based on missing tumor lesions and delineating physiological activity in left kidney.



Supplemental FIGURE 3. Spearman correlation coefficients between the method derived MTVs per category of lesional SUVmax. None of the log transformed method derived volumes of lesions with a SUVmax <10 were normally distributed and/or showed high Spearman correlation coefficients. For lesions with SUVmax>10, only 50%peak and MV2 derived MTVs were not normally distributed after log transformation.

SUPPLEMENTAL TABLE 1

Acceptable score frequency per method	SUV2.5	SUV4.0	41%max	A50%peak	MV2	MV3
Percentage: Total (60 lesions)	57.2	52.8	60.6	77.2	72.8	90.0
SUVmax > 5 (45)	48.9	66.7	67.4	74.1	68.9	90.4
SUVmax < 5 (15)	82.2	11.1	40.0	86.7	86.7	88.9
SUVmax 5 - 10 (28)	51.2	48.8	58.3	76.2	66.7	92.9
SUVmax > 10 (17)	45.1	96.1	82.4	70.6	72.5	86.3
SUVmax < 10 (43)	62.0	35.7	51.9	79.8	72.9	91.5
SUVmax 10 - 15 (11)	42.4	93.9	81.8	84.8	84.8	87.9
SUVmax > 15 (6)	50.0	100.0	83.3	44.4	50.0	83.3
SUVmax < 15 (54)	58.0	47.5	58.0	80.9	75.3	90.7
Good score frequency per method (of original four scoring variables)	SUV2.5	SUV4.0	41%max	A50%peak	MV2	MV3
Percentage: Total (60 lesions)	21.7	20.6	26.7	38.3	30.0	48.9
SUVmax > 5 (45)	13.3	25.9	31.9	37.8	26.7	45.9
SUVmax < 5 (15)	46.7	4.4	11.1	40.0	40.0	57.8
SUVmax 5 - 10 (28)	15.5	19.0	25.0	46.4	23.8	54.8
SUVmax > 10 (17)	9.8	37.3	43.1	23.5	31.4	31.4
SUVmax < 10 (43)	26.4	14.0	20.2	44.2	29.5	55.8
SUVmax 10 - 15 (11)	12.1	36.4	45.5	30.3	39.4	33.3
SUVmax > 15 (6)	5.6	38.9	38.9	11.1	16.7	27.8
SUVmax < 15 (54)	23.5	18.5	25.3	41.4	31.5	51.2
Specific Agreement; acceptable vs non-acceptable	SUV2.5	SUV4.0	41%max	A50%peak	MV2	MV3
Percentage: Total (60 lesions)	79.6	84.2	87.2	92.1	90.8	93.2
SUVmax > 5 (45)	75.8	87.8	89.0	91.0	88.2	92.6
SUVmax < 5 (15)	86.5	20.0	77.8	94.9	97.4	95.0
SUVmax 5 - 10 (28)	79.1	78.0	91.8	93.8	87.5	94.9
SUVmax > 10 (17)	69.6	95.9	85.7	86.1	89.2	88.6
SUVmax < 10 (43)	82.5	71.7	88.1	94.2	91.5	94.9
SUVmax 10 - 15 (11)	71.4	93.5	85.2	85.7	85.7	89.7
SUVmax > 15 (6)	66.7	100.0	86.7	87.5	100.0	86.7
SUVmax < 15 (54)	80.9	80.5	87.2	92.4	90.2	93.9

Percentage Total (60)	72.7	82.4	80.3	73.2	75.5	38.9
SUVmax > 5 (45)	76.8	75.6	77.3	74.3	73.8	30.8
SUVmax < 5 (15)	37.5	90.0	85.2	66.7	85.7	60.0
SUVmax 5 - 10 (28)	78.0	79.1	88.6	80.0	75.0	33.3
SUVmax > 10 (17)	75.0	0.0	33.3	66.7	71.4	28.6
SUVmax < 10 (43)	71.4	84.3	87.1	76.9	77.1	45.5
SUVmax 10 - 15 (11)	78.9	0.0	33.3	20.0	20.0	25.0
SUVmax > 15 (6)	66.7	0.0	33.3	90.0	100.0	33.3
SUVmax < 15 (54)	73.5	82.4	82.4	67.7	70.0	40.0

Specific Agreement; good vs others

	SUV2.5	SUV4.0	41%max	A50%peak	MV2	MV3
Percentage Total (60 lesions)	33.3	32.4	47.9	49.3	37.0	58.0
SUVmax > 5 (45)	11.1	34.3	51.2	49.0	27.8	54.8
SUVmax < 5 (15)	52.4	0.0	20.0	50.0	55.6	65.4
SUV 5 - 10 (28)	15.4	37.5	57.1	59.0	30.0	65.2
SUVmax > 10 (17)	0.0	31.6	45.5	16.7	25.0	25.0
SUVmax < 10 (43)	38.2	33.3	50.0	56.1	42.1	65.3
SUVmax 10 - 15 (11)	0.0	25.0	53.3	20.0	23.1	27.3
SUVmax > 15 (6)	0.0	42.9	28.6	0.0	33.3	20.0
SUVmax < 15 (54)	34.2	30.0	51.2	50.7	37.3	60.2
Percentage Total (60)	81.6	82.5	81.1	68.5	73.0	59.8
SUVmax > 5 (45)	86.3	77.0	77.2	69.0	73.7	61.6
SUVmax < 5 (15)	58.3	95.3	90.0	66.7	70.4	52.6
SUVmax 5 - 10 (28)	84.5	85.3	85.7	64.4	78.1	57.9
SUVmax > 10 (17)	89.1	59.4	58.6	74.4	65.7	65.7
SUVmax < 10 (43)	77.9	89.2	87.4	65.3	75.8	56.1
SUVmax 10 - 15 (11)	86.2	57.1	61.1	65.2	50.0	63.6
SUVmax > 15 (6)	94.1	63.6	54.5	87.5	86.7	69.2
SUVmax < 15 (54)	79.8	84.1	83.5	65.3	71.2	58.2

Abbreviations: PA: positive agreement, NA: negative agreement