

**Supplementary Table S1.** PERCIST criteria.

	PERCIST
<b>Main criteria</b>	
Patient preparations	4-6 hours fasting
Serum glucose level	< 200 mg/dl (<11,1 mmol/l)
Injected activity	Center dependent, but within 20% difference between scans
Measurement unit	1. $SUV_{LBM} = SUL$ 2. $SUL_{peak} = 1 \text{ cm}^3 \text{ VOI}$
Glucose correction	No
Timing restrictions	PET at least 10 days after last chemotherapy 8-12 weeks after external beam radiotherapy
Scan restrictions	>50 minutes p.i. < 15 min difference in p.i. times between studies. ( <i>but always &gt; 50 min p.i.</i> )
	<b>Normal liver SUL must be within 20% (and &lt; 0,3 SUL units) between baseline and follow-up scans</b>
	Always same scanner, same model, same reconstructions
Partial volume correction	No
Correlation with other tissues *	3 cm diameter VOI in right liver lobe, expressed in $SUL_{mean} + SD$ . If liver is affected or VOI cannot be placed: 1 cm diameter axial (ROI) with 2 cm diameter in z-axis (= ellipse VOI)
<b>Measurements</b>	
Tumor	$SUL_{peak}$ VOI centered around hottest point in tumor foci (around maximum SUL pixel; which also should be noted) Most intense hypermetabolic tumors
Number of lesions	Up to 5 lesions (up to 2 per organ) 2 cm in diameter (though smaller lesions with sufficient uptake might be included). Baseline tumor uptake: $> 1,5 \times SUL_{mean,liver} + 2 \text{ SDs } SUL_{mean,liver}$ Or $> 2 \times SUL_{mean,bloodpool} + 2 \text{ SDs } SUL_{mean,mediastinum}$
Follow up measurements	Most intense lesions, not necessarily the same lesions
Additional parameters	

**Definition response:**

Calculation	Sum of PERCIST lesions
Complete metabolic response	Visual disappearance of all metabolic active tumors
Partial metabolic response	>30% reduction and at least 0,8 unit decline in SUL <sub>peak</sub>
Stable disease	Between partial response and progressive disease
Progressive metabolic disease	>30% increase and at least 0,8 unit increase in SUL <sub>peak</sub> <i>or</i> new metabolic active tumors <i>or</i> >75% increase in TLG

*Legend: SUV = standardized uptake value, LBM = lean body mass, SUL = SUV corrected for lean body mass, p.i. = post-injection, SD = Standard deviation, TLG = total lesion glycolysis*

*\* modified PERCIST 1.0: threshold for minimal metabolically measurable tumor activity is 1.5 x mean liver SUL instead of 1.5 x mean liver SUL + 2 SDs (as in the conventional PERCIST)*