

Multiparametric monitoring of chemotherapy treatment response in locally advanced breast cancer using quantitative ultrasound and diffuse optical spectroscopy

Supplementary Materials

Supplementary Table S1A: Sensitivity (%Sn), Specificity (%Sp) and AUC for multivariate (pairwise) QUS and DOSI parameters with AUC > 0.8

Week 1				
Combined Parameters	%Sn	%Sp	AUC (Logistic)	<i>p</i>
MBF + HbO ₂	85.7	87.5	0.973	0.000
MBF + HbT	71.4	75.0	0.857	0.006
SI + Hb	64.3	62.5	0.839	0.009
SI + HbO ₂	100	100	1.000	0.000
SI + HbT	85.7	87.5	0.929	0.001
SI + %Water	71.4	75.0	0.866	0.005
SI + %Lipids	71.4	62.5	0.857	0.006
SI + SP	71.4	62.5	0.857	0.006
SI + SA	78.6	75.0	0.830	0.012
SI + TOI	78.6	75.0	0.839	0.009
SS + HbO ₂	100	100	1.000	0.000
SS + HbT	85.7	87.5	0.955	0.000
SS + %Water	78.6	75.0	0.848	0.008
SS + %Lipids	78.6	75.0	0.830	0.012
SS + SP	78.6	75.0	0.830	0.012
SS + SA	78.6	75.0	0.857	0.006
SS + TOI	64.3	62.5	0.821	0.014

Supplementary Table S1B:

Week 4				
Combined Parameters	%Sn	%Sp	AUC (Logistic)	<i>p</i>
MBF + Hb	100	100	1.00	0.000
MBF + HbO ₂	100	100	1.00	0.000
MBF + HbT	100	100	1.00	0.000
MBF + %Water	100	100	1.00	0.000
MBF + %Lipids	100	100	1.00	0.000
MBF + SP	100	100	1.00	0.000
MBF + SA	100	100	1.00	0.000
MBF + TOI	100	100	1.00	0.000

SI + Hb	85.7	87.5	0.955	0.000
SI + HbO ₂	85.7	87.5	0.982	0.000
SI + HbT	85.7	87.5	0.982	0.000
SI + %Water	85.7	87.5	0.964	0.000
SI + %Lipids	100	100	1.000	0.000
SI + SP	100	100	1.000	0.000
SI + SA	100	100	1.000	0.000
SI + TOI	85.7	87.5	0.982	0.000
SS + Hb	92.9	100	0.955	0.000
SS + HbO ₂	85.7	87.5	0.938	0.001
SS + HbT	85.7	87.5	0.955	0.000
SS + %Water	85.7	87.5	0.955	0.000
SS + %Lipids	100	87.5	0.991	0.000
SS + SP	100	87.5	0.991	0.000
SS + SA	100	100	1.000	0.000
SS + TOI	92.9	87.5	0.982	0.000

Supplementary Table S1C:

Week 8				
Combined Parameters	%Sn	%Sp	AUC (Logistic)	p
MBF + Hb	100	100	1.00	0.000
MBF + HbO ₂	100	100	1.00	0.000
MBF + HbT	100	100	1.00	0.000
MBF + %Water	100	100	1.00	0.000
MBF + %Lipids	100	100	1.00	0.000
MBF + SP	100	100	1.00	0.000
MBF + SA	100	100	1.00	0.000
MBF + TOI	100	100	1.00	0.000
SI + Hb	100	100	1.00	0.000
SI + HbO ₂	100	100	1.00	0.000
SI + HbT	100	100	1.00	0.000
SI + %Water	100	100	1.00	0.000
SI + %Lipids	100	100	1.00	0.000
SI + SP	100	100	1.00	0.000
SI + SA	100	100	1.00	0.000
SI + TOI	100	100	1.00	0.000
SS + Hb	100	100	1.00	0.000
SS + HbO ₂	100	100	1.00	0.000
SS + HbT	100	100	1.00	0.000
SS + %Water	71.4	75.0	0.893	0.003
SS + %Lipids	100	100	1.00	0.000

SS + SP	100	100	1.00	0.000
SS + SA	78.6	75.0	0.911	0.002
SS + TOI	100	100	1.00	0.000

Pairwise combinations were reported with AUC > 0.8. Analyses were performed at week 1, 4 and 8.