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Supplemental Table 1: Summary of studies that used DCE-MRI to predict clinical outcome along with whether increases perfusion parameters were beneficial or punitive for survival.

Author	Tumor Type	n=	Tx	Perfusion method	Endpoints	Changes in perfusion/ permeability (p<0.05)				Comments
						Tx time	↑ Mets	↑ Local	↑ Surv	
Mayr (1996)	Cervical carcinoma	17	Rx	Slope, rSI	Local recurrence, Mets DSF	Pre	□	□	□	Higher rSI (>2.8) during early therapy predicted low local recurrence. 50% of patients with rSI<2.8 have recurrences 4 months post Rx compared to 100% of patients with rSI>2.8.
						During		↓↓		
						Post	□	□	□	
Mayr (2000)	Cervical carcinoma	16	Rx	rSI, slope	Local recurrence	Pre				88% tumor recurrence for tumors with low enhancement regions (10th percentile RSI<2.5).
						During		↓↓		
						Post				
Loncaster (2002)	Cervical carcinoma	55	Rx	SImax, Amplitude, Kep	Disease specific survival, PO2.	Pre	□	□	↑↑	At the time of analysis (5yrs), only 55% of patients with large, poorly enhanced tumors (Amplitude) were alive compared with 92% of patients with small, well-enhanced tumors.
						During				
						Post	□	□	□	
Hoskin (1999)	Head & neck cancer	13	Rx	Tmax, Slope & E(signal enhancement)	Disease free & local failure-recurrence.	Pre				Increased perfusion (E>8, Tmax=23sec) post therapy in tumors that failed locally
						During				
						Post		↑↑	□	
Fujimoto (2003)	NSCLC	94	Sx	MER, SImax,Tmax, Washout,slope	survival and histopathology (MVD), VEGF	Pre	□	□	↓↓	Patients with higher slope had significantly shorter overall surivival time. Risk Ratio:1.036. High slope (> 37.3%/min) median survival time~80mo, while low slope median survival time ~ 120 months post Sx
						During				
						Post	□	□	□	
Dunst (2001)	Ewing	79	Sx,Rx &	% non	Event free &	Pre	↓↓		↑↑	Correlation between tumor size and

	sarcoma		Chx	perfused areas in a tumor volume = necrosis	overall survival, necrosis, tumor size	During Post				necrosis. Metastasis increased with necrosis. 55% of the patients with necrosis lived 3 years , compared 100% of patients without necrosis.
Wong (1998)	Glioma	121	(not specified)	MRU & DRU	Survival and histopathology	Pre During Post	□ □	□ □	↓↓ □	higher MRU, shorter survival : Hazard Ratio=2.8.
Mills (2006)	Glioma	27	Sx +/-	rCBV, Ktrans	Survival & Tumor grade	Pre During Post			↑↑	Mild-moderate positive correlation between Ktrans and Survival in high grade(III , IV) glioma
Cao (2006)	Glioma	20	Rx, Chx +/-	Ktrans & Ve	Survival	Pre During Post	□ □	□ □	↑ Ve □	Patient age & Ve correlated with survival
Gilles (1993)	Breast cancer	26	Sx,Rx & Chx	Signal enhancement	Local recurrence	Pre During Post		↑↑ □		Patients with local relapse had enhancement after 1 min 34 sec. Gd-DOTA was used. Mean time of recurrence 6.4 years.
Pickles (2005)	Breast cancer	48	Chx & Sx	Ktrans, Kep and Ve	local response (Δtumor volume)	Pre During Post	□ □	↓↓ □	□ □	Significant reduction in Ktrans & Kep for responders after treatment, while Ve increased in non responders. Responder= decrease in more than 65% of tumor volume.

Tx= treatment, Sx= Surgery, Rx= Radiation Therapy, Chx= Chemotherapy
SI= signal Intensity, rSI=relative signal intensity, Max= Maximum, SImax = Maximum Signal intensity . SIprior = Signal intensity before injection. MER= Maximum Enhancement Ratio = (SImax –SIprior)x100/ Siprior. Slope= (SImax – SIprior)x100 / (SIprior

Tmax= Time to maximum enhancement/intensity, MRU=Maximum Uptake Ratio

DRU= Delayed Uptake Ratio, rCBV= Relative Cerebral blood volume.

Ve= Volume of extracellular space, Ktrans=K1= transfer coefficient (delivery), Kep=K2= transfer coefficient (efflux)

MVD= Microvascular Density, VEGF= Vascular Endothelial factor

NSCLC= Non Small Cell Lung Cancer

DSF= disease free survival