	Breast Cancer			HNSCC			STS			NSCLC			All Cancers		
	Female	Male	All	Female	Male	All	Female	Male	All	Female	Male	All	Female	Male	All
Sample Size	39	N/A	39	7.0	34	41	27	24	51	24	33	57	97	91	188
Age (yrs)	N/A	N/A	N/A	48.6 ± 15.5	57.8 ± 7.6	56.2 ± 9.8	54.4 ± 19.7	55.3 ± 13.7	54.8 ± 17.0	N/A	N/A	N/A	N/A	N/A	N/A
BMI (kg/m2)	28.2 ± 5.0	N/A	28.2 ± 5.0	30.7 ± 10.4	27.7 ± 3.6	28.2 ± 5.3	27.5 ± 5.0	28.5 ± 5.9	28.0 ± 5.4	25.7 ± 4.4	27.4 ± 4.8	26.7 ± 4.7	27.6 ± 5.5	27.8 ± 4.7	27.68 ± 5.1
Weight (kg)	76.0 ± 14.9	N/A	76.0 ± 14.9*	80.8 ± 28.5	85.7 ± 12.6	84.9 ± 16.0*#^	71.7 ± 13.7	84.8 ± 19.6	77.9 ± 17.8 [#]	65.9 ± 11.0	83.6 ± 16.2	76.2 ± 16.7^	72.7 ± 15.6	84.7 ± 15.8	78.5 ± 16.8
Estimated LBM (kg)	48.7 ± 4.5	N/A	48.7 ± 4.5*&	45.0 ± 8.6	62.3 ± 7.1	59.3 ± 9.8*#	42.6 ± 5.0	60.6 ± 9.2	51.2 ± 11.6#	40.4 ± 4.7	61.1 ± 7.6	52.7 ± 12.0 ^{&}	43.2 ± 5.6	61.5 ± 7.8	52.1 ± 11.4
Estimated Body Fat	40.5 ±	N/A	40.5 ±	41.9% ±	26.9% ±	29.5 ±	39.8% ±	27.1% ±	33.6 ±	38.1% ±	25.9% ±	30.6 ±	39.5% ±	26.5% ±	33.2 ±
(%)	4.5	N/A	N/A 4.5*~&	8.3%	4.2%	7.6*	4.5%	7.1%	8.9~	4.2%	5.9%	7.9 ^{&}	5.2%	5.8%	8.5

Supplementary Table 1: Patient characteristics. A two-way ANOVA with Tukey's test for multiple comparisons was used to compare variables across each cancer type. Significance is stated as p<0.05 *Breast Cancer vs. Head and Neck Squamous Cell Carcinoma, #Head and Neck Squamous Cell Carcinoma vs. Non-Small Cell Lung Carcinoma, &Breast Cancer vs. Non-Small Cell Lung Carcinoma, ~Breast Cancer vs. Soft Tissue Sarcoma.

	Breast Cancer			HNSCC			STS			NSCLC			All Cancers		
	Female	Male	All	Female	Male	All	Female	Male	All	Female	Male	All	Female	Male	All
Tumor SULmax (g/mL)	7.3 ± 3.6	N/A	7.3 ± 3.6	9.5 ± 4.5	10.3 ± 5.7	10.1 ± 5.5	6.6 ± 3.5*	9.9 ± 6.1*	8.1 ± 5.1	7.5 ± 4.6	8.7 ± 5.1	8.2 ± 4.9	7.3 ± 3.9	9.6 ± 5.6	8.4 ± 4.9
Muscle SULmax (g/mL)	0.6 ± 0.2	N/A	0.6 ± 0.2	0.8 ± 0.3	0.9 ± 0.2	0.9 ± 0.2	0.7 ± 0.3	0.9 ± 0.3	0.8 ± 0.3	0.8 ± 0.2	0.8 ± 0.2	0.8 ± 0.2	0.7 ± 0.2	0.8 ± 0.2	0.8 ± 0.2
WAT SULmax (g/mL)	0.3 ± 0.1	N/A	0.3 ± 0.1	0.6 ± 0.4	0.4 ± 0.2	0.5 ± 0.2	0.3 ± 0.1	0.5 ± 0.2	0.4 ± 0.2	0.3 ± 0.1	0.4 ± 0.2	0.3 ± 0.1	0.3 ± 0.2	0.4 ± 0.2	0.4 ± 0.2
BAT SULmax (g/mL)	0.6 ± 0.3	N/A	0.6 ± 0.3	0.7 ± 0.2	0.8 ± 0.3	0.8 ± 0.3	1.0 ± 0.6	0.8 ± 0.2	0.9 ± 0.5	0.7 ± 0.2	0.7 ± 0.2	0.7 ± 0.2	0.7 ± 0.3	0.7 ± 0.3	0.7 ± 0.3
Liver SULmax (g/mL)	1.6 ± 0.2	N/A	1.6 ± 0.2	2.1 ± 0.4	2.5 ± 0.4	2.4 ± 0.5	1.9 ± 0.2	2.4 ± 0.4	2.0 ± 0.3	2.0 ± 0.5	2.3 ± 0.6	2.1 ± 0.6	1.8 ± 0.4	2.4 ± 0.5	2.1 ± 0.5
Spleen SULmax (g/mL)	1.3 ± 0.3	N/A	1.3 ± 0.3	1.8 ± 0.3	2.1 ± 0.4	2.1 ± 0.4	1.7 ± 0.4	1.8 ± 0.2	1.7 ± 0.3	1.6 ± 0.4	1.9 ± 0.3	1.8 ± 0.3	1.5 ± 0.3	2.0 ± 0.4	1.8 ± 0.4

Supplementary Table 2: Whole-Body lean body mass-corrected maximal standardized uptake value (SULmax) across cancer types in men and women. A two-way ANOVA with Tukey's test for multiple comparisons was used to compare variables between women and men across cancer types. Significance is stated as p<0.05. *Soft Tissue Sarcoma Women vs. Soft Tissue Sarcoma Men.