

Supplemental Table 1. Plasma analytes assessed in referent normal subjects and in patients undergoing anthracycline therapy

Human Soluble Cytokine Receptor Multiplex Panel					
Abbreviation	Full name	Mean sensitivity (minimum detectable concentration, pg/ml)	Serum Dilution Factor	Catalog #	Manufacturer
sCD30	Tumor necrosis factor receptor superfamily, member 8	7.0	1:5	HCSRMAG-32K	Millipore
sEGFR	Epidermal growth factor receptor	42.0	1:5	HCSRMAG-32K	Millipore
sgp130	Interleukin 6 signal transducer	6.0	1:5	HCSRMAG-32K	Millipore
sIL-1RI	Interleukin 1 receptor, type I	21.0	1:5	HCSRMAG-32K	Millipore
sIL-1RII	Interleukin 1 receptor, type II	115.0	1:5	HCSRMAG-32K	Millipore
sIL-2R α	Interleukin 2 receptor, alpha	11.0	1:5	HCSRMAG-32K	Millipore
sIL-4R	Interleukin 4 receptor	14.0	1:5	HCSRMAG-32K	Millipore
sIL-6R	Interleukin 6 receptor	9.0	1:5	HCSRMAG-32K	Millipore
sRAGE	Advanced glycosylation end product-specific receptor	3.0	1:5	HCSRMAG-32K	Millipore
sTNFRI	Tumor necrosis factor receptor superfamily, member 1A	12.0	1:5	HCSRMAG-32K	Millipore
sTNFRII	Tumor necrosis factor receptor superfamily, member 1B	8.0	1:5	HCSRMAG-32K	Millipore
sVEGFR1	Fms-related tyrosine kinase 1	111.0	1:5	HCSRMAG-32K	Millipore
sVEGFR2	Kinase insert domain protein receptor	71.0	1:5	HCSRMAG-32K	Millipore
sVEGFR3	Fms-related tyrosine kinase 4	47.0	1:5	HCSRMAG-32K	Millipore

Human Cytokine Multiplex Panel					
Abbreviation	Full name	Mean sensitivity (minimum detectable concentration, pg/ml)	Serum Dilution Factor	Catalog #	Manufacturer
GM-CSF	Granulocyte macrophage colony-stimulating factor	0.2	1:4	M50000007A	Biorad
IFN- γ	Interferon gamma	6.4	1:4	M50000007A	Biorad
IL-2	Interleukin 2	1.6	1:4	M50000007A	Biorad
IL-4	Interleukin 4	0.7	1:4	M50000007A	Biorad
IL-6	Interleukin 6	2.6	1:4	M50000007A	Biorad
IL-8	Interleukin 6	1.0	1:4	M50000007A	Biorad
IL-10	Interleukin 10	0.3	1:4	M50000007A	Biorad
TNF- α	Tumor Necrosis Factor alpha	6.0	1:4	M50000007A	Biorad

Human Matrix Remodeling Multiplex Panel					
Abbreviation	Full name	Mean sensitivity (minimum detectable concentration, pg/ml)	Serum Dilution Factor	Catalog #	Manufacturer
TIMP1	TIMP metalloproteinase inhibitor 1	1.6	1:50	171-AM002M	Biorad
TIMP2	TIMP metalloproteinase inhibitor 2	2.4	1:50	171-AM002M	Biorad
TIMP3	TIMP metalloproteinase inhibitor 3	96.3	1:50	171-AM002M	Biorad
TIMP4	TIMP metalloproteinase inhibitor 4	1.7	1:50	171-AM002M	Biorad
MMP1	Matrix metalloproteinase 1	35.0	1:10	171-AM001M	Biorad
MMP2	Matrix metalloproteinase 2	450.0	1:10	171-AM001M	Biorad
MMP3	Matrix metalloproteinase 3	116.0	1:10	171-AM001M	Biorad
MMP7	Matrix metalloproteinase 7	5.4	1:10	171-AM001M	Biorad
MMP8	Matrix metalloproteinase 8	1.5	1:10	171-AM001M	Biorad
MMP9	Matrix metalloproteinase 9	24.0	1:10	171-AM001M	Biorad
MMP10	Matrix metalloproteinase 10	1.6	1:10	171-AM001M	Biorad
MMP12	Matrix metalloproteinase 12	1.0	1:10	171-AM001M	Biorad
MMP13	Matrix metalloproteinase 13	4.9	1:10	171-AM001M	Biorad

Human Cardiac Troponin I ELISA					
Abbreviation	Full name	Mean sensitivity (minimum detectable concentration, pg/ml)	Serum Dilution Factor	Catalog #	Manufacturer
cTnI	Cardiac Troponin I	100	1:2	ELH-CTNI	RayBiotech

Supplemental Table 2. Linear regression of biomarkers at V1 to changes in Ejection Fraction > 10% from V1 to V6)

	Coef.	SE	DF	t	p
Ecc (%)	-1.5540	0.3924	35	-3.9605	<.001
ESV (ml)	-0.2496	0.0446	43	-5.5980	<.001
EDV (ml)	-0.0187	0.0268	43	-0.6980	.4889
Mass (g)	-0.0459	0.0425	43	-1.0786	.2868
Mass Volume (g/ml)	-5.2095	8.7259	43	-0.5970	.5536
ESFS (g/cm ²)	-0.1584	0.0451	43	-3.5114	.0011
BSA (m ²)	-4.0437	3.5390	43	-1.1426	.2595
CTnI (pg/ml)	0.0003	0.0002	44	1.8203	.0755
TIMP1 (pg/ml)	0.0000	0.0000	43	-0.6539	.5167
TIMP2 (pg/ml)	-0.0001	0.0000	43	-1.9313	.0601
TIMP3 (pg/ml)	0.0000	0.0002	43	-0.1691	.8665
TIMP4 (pg/ml)	0.0008	0.0004	43	2.0004	.0518
MMP1 (pg/ml)	0.0017	0.0016	43	1.0343	.3068
MMP2 (pg/ml)	0.0000	0.0001	43	-0.4870	.6287
MMP3 (pg/ml)	0.0000	0.0000	43	0.4706	.6403
MMP7 (pg/ml)	-0.0014	0.0006	43	-2.4592	.018
MMP8 (pg/ml)	0.0002	0.0003	43	0.5972	.5535
MMP9 (pg/ml)	-0.0001	0.0001	30	-0.9421	.3537
MMP13 (pg/ml)	-0.0205	0.0118	43	-1.7378	.0894
GM.CSF (pg/ml)	-0.0030	0.0367	43	-0.0805	.9362
IFN γ (pg/ml)	0.3151	3.1086	43	0.1014	.9197
IL4 (pg/ml)	-11.0271	438.9031	43	-0.0251	.9801
IL8 (pg/ml)	0.0003	0.1299	43	0.0026	.9979
sCD30 (pg/ml)	-0.0145	0.0240	44	-0.6058	.5478
sEGRF (pg/ml)	-0.0001	0.0001	44	-1.8501	.071
sIL 1RI (pg/ml)	-0.0182	0.0203	44	-0.8946	.3758
sIL 1RII (pg/ml)	0.0000	0.0001	44	-0.0523	.9585
sIL 2Ra (pg/ml)	-0.0014	0.0010	44	-1.3117	.1964
sIL 4R (pg/ml)	0.0034	0.0014	44	2.4405	.0188
sIL 6R (pg/ml)	-0.0001	0.0001	44	-0.8747	.3865
sRage (pg/ml)	-0.0502	0.0216	44	-2.3234	.0248

sTNFRI (pg/ml)	-0.0032	0.0015	44	-2.1340	.0385
STNFR2 (pg/ml)	-0.0008	0.0003	44	-2.4872	.0167
sVEGFR1 (pg/ml)	-0.0001	0.0006	44	-0.2391	.8121
sVEGFR2 (pg/ml)	-0.0003	0.0002	44	-1.7407	.0887
sVEGFR3 (pg/ml)	-0.0058	0.0022	44	-2.6162	.0121
sgp130 (pg/ml)	0.0000	0.0000	44	-1.7178	.0929

ϵ_{cc} : Peak global longitudinal strain magnitude; ESV: End systolic volume; ESFS: End systolic fiber stress; BSA: Body surface area; CTnI: Cardiac Troponin I; MMP: Metalloproteinase; TIMP: Metalloproteinase inhibitor; GM-CSF: Granulocyte-macrophage colony-stimulating factor; IFN γ : Interferon γ ; IL: Interleukin; sCD30: soluble CD30; sEGFR: soluble EGFR; sILR: soluble interleukin receptor; sRage: receptor for advanced glycation end products; sTNFR: soluble receptor for TNF; sVEGFR: receptors for vascular endothelial growth factor; sgp130: Glycoprotein 130

The negative sign in front of the coefficient for a specific biomarker demonstrates directionality of change in relation to a decrease in EF from V1 to V6.