

Manuscript: Cancer Biomark. 2019;26(3):291-301.

Andrew Mitchell^{1*}, Sarrah L. Hasanali^{2*}, Daley S. Morera², Rohitha Baskar², Xin Wang², Rahil Khan³, Asif Talukder¹, Charles S. Li², Meenakkshy Manoharan⁴, Andre R. Jordan^{2,5}, Jiaojiao Wang², Roni J. Bollag^{3,6}, Nagendra Singh², Daniel Albo¹, Santu Ghosh^{7*}, Vinata B. Lokeshwar^{2*}

Supplementary Information

A Chemokine/Chemokine Receptor Signature Potentially Predicts Clinical Outcome in Colorectal Cancer Patients

Mitchell et al.

Supplementary Table 1: Patient characteristics. Patient characteristics in the clinical specimen cohort and in the available TCGA-dataset. Follow-up information was not available for time to metastasis in the TCGA-dataset. Note: In the TCGA-dataset, metastasis data is same as M-stage (metastasis at the time of diagnosis), as the follow-up data are not available to determine whether any M-stage negative patients developed metastasis later.

Parameter	Clinical cohort	TCGA-dataset
Specimens	Normal = 27; Tumor = 49	Tumor = 375
Gender	Male: 25; Female: 24	Male: 207; Female: 168
Age (years)	Median: 64; Mean: 62.3 ± 12.58	Median: 66; Mean: 64.44 ± 13.09
T-stage	T1: 4; T2: 11; T3: 28; T4: 6	T1: 11; T2: 57; T3: 256; T4: 49 Missing: 2
N-stage	(-): 25; (+): 24	(-): 204; (+): 167 Missing: 4
LVI	(-): 34; (+): 15	(-): 227; (+): 102 Missing: 46
PNI	(-): 39; (+): 10	(-): 168; (+): 58 Missing: 149
Metastasis	(-): 34; (+): 15	(-): 252; (+): 51 Missing: 72
Metastasis (months)	26.97 ± 35.82	
Overall survival	(-): 42; (+): 7	(-): 280; (+): 86 Missing: 9
Follow up months (overall survival)	36.3 ± 36.76	30.78 ± 26.6

Supplementary Table 2: RT-qPCR primer sequences

Gene	Forward Primer	Reverse Primer
CXCR-4	5'TCATCAAGCAAGGGTGTGAG3'	5'TGGCTCCAAGGAAAGCATAG3'
CXCR-7	5'CAGCTTCATCAATCGCAACTA3'	5'AGCTTGGTGAGCCCTGTTT3'
SDF-1 α	5'AAGCACAACAGCCAAAAAGG3'	5'TGCCCTTTCATCTCTCACAA3'
SDF-1 β	5'CGCCTTTCCCAGGTGCTAAC3'	5'TGGTCTGCTTAGGGGATTTGG3'
IL-8	5'TTTGCCAAGGAGTGCTAAAGA3'	5'GATAAATTTGGGGTGGAAAGG3'
IL-17A	5'GCCCAAATTCTGAGGACAAG3'	5'GGAGATTCCAAGGTGAGGTG3'
GM-CSF	5' AGCCTCACCAAGCTCAAGG3'	5' AATCTGGGTTGCACAGGAAG3'

Supplementary Table 3: Intercepts and coefficients for CXCR-4/7+SDF-1 signature (CXCR-4/7+SDF-1 β in clinical cohort). Logistic regression analysis was used to calculate intercepts and coefficients (α) for the calculation of the signature. For both cohorts, the signature was calculated using metastasis and overall survival as a categorical variable.

Metastasis			
Clinical cohort		TCGA-dataset	
Intercept	Coefficient α	Intercept	Coefficient α
4.663	CXCR-4: -2.9178 CXCR-7: -1.3486 SDF-1 β : 4.7398	3.5927	CXCR-4: 0.0522 CXCR-7: -0.5131 SDF-1: 0.2282
Overall Survival			
Clinical cohort		TCGA-dataset	
Intercept	Coefficient α	Intercept	Coefficient α
2.3296	CXCR-4: 0.02996 CXCR-7: -0.5862 SDF-1 β : 0.5028	0.3529	CXCR-4: 0.1022 CXCR-7: 0.1708 SDF-1: -0.18