

Supplementary Material

Table S1: Expression ratios (negative for down-regulation, *Italics*) of the top CHS and TLR signaling genes in cancer nodules “A”, “B”, and “C” compared to normal tissue “N”. The largest positive and negative expression ratios are in bold numbers.

<i>CHEMOKINE SIGNALING</i>		Expression ratio		
Gene	Description	A	B	C
GNAI2	guanine nucleotide binding protein (G protein), alpha inhibiting activity polypeptide 2	1.19	1.65	1.18
<i>RAC3</i>	ras-related C3 botulinum toxin substrate 3 (rho family, small GTP binding protein)	-2.11	-1.51	-1.35
<i>STAT2</i>	signal transducer and activator of transcription 2	<i>-1.12</i>	1.22	1.36
GNAI2	guanine nucleotide binding protein (G protein), alpha inhibiting activity polypeptide 2	1.19	1.65	1.18
<i>CXCL14</i>	chemokine (C-X-C motif) ligand 14	6.69	7.17	4.58
<i>NFKBIA</i>	nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha	2.23	2.90	1.60
GNAI2	guanine nucleotide binding protein (G protein), alpha inhibiting activity polypeptide 2	1.19	1.65	1.18
<i>NFKBIA</i>	nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha	2.23	2.90	1.60
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<i>NFKBIA</i>	nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha	2.23	2.90	1.60
<i>TOLL-LIKE RECEPTOR SIGNALING</i>				
STAT2	signal transducer and activator of transcription 2	<i>-1.12</i>	1.22	1.36
<i>MAP2K7</i>	mitogen-activated protein kinase kinase 7	-1.41	-1.08	-1.20
<i>PIK3R2</i>	phosphoinositide-3-kinase, regulatory subunit 2 (beta)	1.08	1.11	-1.13
NFKBIA	nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha	2.23	2.90	1.60
<i>IRF7</i>	interferon regulatory factor 7	3.02	4.15	2.05
<i>PIK3R2</i>	phosphoinositide-3-kinase, regulatory subunit 2 (beta)	1.08	1.11	-1.13
NFKBIA	nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha	2.23	2.90	1.60
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<i>NFKBIA</i>	nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha	2.23	2.90	1.60
<i>IRF7</i>	interferon regulatory factor 7	3.02	4.15	2.05

Table S2: Fold-change (negative for down-regulation, *Italics*) of the expression control strength of the top controlled genes in cancer nodules “A”, “B”, and “C” compared to normal tissue “N”. The extreme fold-changes were in bold numbers.

<i>CHEMOKINE SIGNALING</i>		Fold-change		
Gene	Description	A	B	C
<i>CCL15</i>	chemokine (C-C motif) ligand 15	-25.22	-5.21	-6.29
VAV2	vav 2 guanine nucleotide exchange factor	-8.23	-7.91	-1.02
KRAS	Kirsten rat sarcoma viral oncogene homolog	-3.29	-6.66	-2.60
<i>GNB1</i>	guanine nucleotide binding protein (G protein), beta polypeptide 1	23.99	1.38	2.04
<i>CXCL16</i>	chemokine (C-X-C motif) ligand 16	3.68	-1.09	-2.28
<i>FOXO3</i>	forkhead box O3	2.90	1.21	-1.99
<i>MAPK1</i>	mitogen-activated protein kinase 1	2.14	9.92	2.07
<i>GRK5</i>	G protein-coupled receptor kinase 5	2.82	6.92	1.12
<i>CCL16</i>	chemokine (C-C motif) ligand 16	-1.11	2.08	9.53
<i>CCL16</i>	chemokine (C-C motif) ligand 16	-1.11	2.08	9.53
VAV2	vav 2 guanine nucleotide exchange factor	-8.23	-7.91	-1.02
<i>PLCB1</i>	phospholipase C, beta 1 (phosphoinositide-specific)	1.12	1.77	7.93
<i>TOLL-LIKE RECEPTOR SIGNALING</i>				
<i>PIK3R1</i>	phosphoinositide-3-kinase, regulatory subunit 1 (alpha)	-3.49	-1.39	-1.17
<i>TBK1</i>	TANK-binding kinase 1	1.09	-3.12	-2.45
<i>PIK3CA</i>	phosphatidylinositol-4,5-bisphosphate 3-kinase, catalytic subunit alpha	-1.60	-2.29	-3.04
<i>TYK2</i>	tyrosine kinase 2	27.98	6.05	1.11
<i>RIPK1</i>	receptor (TNFRSF)-interacting serine-threonine kinase 1	3.32	-1.07	-1.08
<i>CD14</i>	CD14 molecule	4.72	4.51	2.10
<i>TOLLIP</i>	toll interacting protein	5.07	13.19	-1.10
<i>MAPK1</i>	mitogen-activated protein kinase 1	2.14	9.92	2.07
<i>IRF3</i>	interferon regulatory factor 3	-1.09	2.52	-2.34
<i>IRF5</i>	interferon regulatory factor 5	2.19	1.45	6.82
<i>MAP2K3</i>	mitogen-activated protein kinase kinase 3	1.50	-1.16	2.11
<i>CCL5</i>	chemokine (C-C motif) ligand 5	2.54	2.16	11.54

Table S3: Fold-change (negative for down-regulation, *Italics*) of the expression control strength of the least controlled genes in cancer nodules “A”, “B”, and “C” compared to normal tissue “N”. The extreme positive and negative fold-changes were in bold numbers.

<i>CHEMOKINE SIGNALING</i>		Fold-change		
Gene	Description	A	B	C
GNG13	guanine nucleotide binding protein (G protein), gamma 13	4.25	3.43	6.26
<i>FGR</i>	FGR proto-oncogene, Src family tyrosine kinase	7.67	6.97	6.04
<i>CXCL9</i>	chemokine (C-X-C motif) ligand 9	2.16	9.44	1.97
CCL15	chemokine (C-C motif) ligand 15	-25.22	-5.21	-6.29
<i>CCL14</i>	chemokine (C-C motif) ligand 14	1.09	1.44	1.14
<i>CXCL11</i>	chemokine (C-X-C motif) ligand 11	1.66	1.47	2.46
CCL19	chemokine (C-C motif) ligand 19	7.40	1.05	-1.34
<i>CCL17</i>	chemokine (C-C motif) ligand 17	1.17	-2.58	1.90
<i>CXCL11</i>	chemokine (C-X-C motif) ligand 11	1.66	1.47	2.46
CCL19	chemokine (C-C motif) ligand 19	7.40	1.05	-1.34
<i>NFKB1</i>	nuclear factor of kappa light polypeptide gene enhancer in B-cells 1	-3.30	-1.20	-8.81
<i>CXCL9</i>	chemokine (C-X-C motif) ligand 9	2.16	9.44	1.97
<i>TOLL-LIKE RECEPTOR SIGNALING</i>				
CD86	CD86 molecule	6.12	3.95	3.24
<i>FOS</i>	FBJ murine osteosarcoma viral oncogene homolog	2.21	3.65	1.71
<i>CXCL9</i>	chemokine (C-X-C motif) ligand 9	2.16	9.44	1.97
TICAM2	TICAM2 – TIR domain containing adaptor molecule 2	-2.72	1.15	2.00
<i>SPP1</i>	secreted phosphoprotein 1	-1.31	1.93	2.84
<i>FOS</i>	FBJ murine osteosarcoma viral oncogene homolog	2.21	3.65	1.71
CXCL11	chemokine (C-X-C motif) ligand 11	1.66	1.47	2.46
<i>TNF</i>	tumor necrosis factor	1.41	-1.63	1.32
<i>CD86</i>	CD86 molecule	6.12	3.95	3.24
NFKB1	nuclear factor of kappa light polypeptide gene enhancer in B-cells 1	-3.30	-1.20	-8.81
<i>FOS</i>	FBJ murine osteosarcoma viral oncogene homolog	2.21	3.65	1.71
<i>TLR4</i>	toll-like receptor 4	2.28	1.40	-4.16

Table S4: Fold-change (negative for down-regulation, Italics) of the Gene Commanding Height scores of the key genes in cancer nodules “A”, “B”, and “C” compared to normal tissue “N”. The extreme fold-changes were in bold numbers.

<i>CHEMOKINE SIGNALING</i>		Expression ratio		
Gene	Description	A	B	C
<i>CCL15</i>	chemokine (C-C motif) ligand 15	-122.87	-12.42	-10.65
<i>PRKCD</i>	protein kinase C, delta	-4.40	-6.14	-2.72
<i>VAV2</i>	vav 2 guanine nucleotide exchange factor	-3.98	-5.87	-2.43
<i>GNB1</i>	guanine nucleotide binding protein (G protein), beta polypeptide 1	17.58	-1.28	2.34
<i>JAK2</i>	Janus kinase 2	5.19	2.34	1.67
<i>TYK2</i>	tyrosine kinase 2	11.09	3.97	1.36
<i>CCR6</i>	chemokine (C-C motif) receptor 6	3.00	4.01	-1.12
<i>CCR1</i>	chemokine (C-C motif) receptor 1	2.22	2.46	1.68
<i>BCAR1</i>	BCAR1 scaffold protein, Cas family member	1.70	2.48	2.32
<i>CCL16</i>	chemokine (C-C motif) ligand 16	1.04	-1.53	3.65
<i>PLCB1</i>	phospholipase C, beta 1 (phosphoinositide-specific)	2.19	1.30	8.54
<i>PREX1</i>	phosphatidylinositol-3,4,5-trisphosphate-dependent Rac exchange factor 1	-1.14	-1.06	3.77
<i>TOLL-LIKE RECEPTOR SIGNALING</i>				
<i>FADD</i>	Fas (TNFRSF6)-associated via death domain	-1.45	-3.25	-17.41
<i>IKBKB</i>	inhibitor of kappa light polypeptide gene enhancer in B-cells, kinase beta	-5.64	-6.45	-4.83
<i>MAP2K4</i>	mitogen-activated protein kinase kinase 4	-2.47	-2.60	-1.88
<i>RIPK1</i>	receptor (TNFRSF)-interacting serine-threonine kinase 1	4.56	1.16	2.04
<i>CD14</i>	CD14 molecule	8.17	2.15	4.39
<i>TOLLIP</i>	toll interacting protein	8.38	6.69	1.35
<i>TOLLIP</i>	toll interacting protein	8.38	6.69	1.35
<i>MAPK1</i>	mitogen-activated protein kinase 1	1.80	4.27	2.36
<i>MAP3K7</i>	mitogen-activated protein kinase kinase kinase 7	1.02	1.39	-1.56
<i>IRF5</i>	interferon regulatory factor 5	2.40	1.63	6.20
<i>IL1B</i>	interleukin 1, beta	3.43	1.54	7.23
<i>RIPK1</i>	receptor (TNFRSF)-interacting serine-threonine kinase 1	4.56	1.16	2.04