

Supplemental information

**Functional liver genomics identifies hepatokines
promoting wasting in cancer cachexia**

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Table S1: Characterization of gastrointestinal cancer patients (Patient cohort 1). Related to Figure 7.

Characterization of a human cohort of healthy individuals, patients with weight-stable cancer and cancer cachexia. Data are mean \pm SEM. Statistical analyses were performed using a one-way ANOVA in combination with Tukey's multiple comparisons test or a non-parametric Kruskal-Wallis test in combination with Dunn's multiple comparisons test. P-values of the one-way ANOVA or non-parametric tests are displayed in the column "p-value". Statistical significance of multiple comparisons between groups is indicated by "*" for "#". *p<0.05 Weight-stable cancer vs Cancer cachexia, **p<0.01 Weight-stable cancer vs Cancer cachexia, ****p<0.001 Weight-stable cancer vs Cancer cachexia, #p<0.05 Healthy control vs Cancer cachexia, #p<0.05 Healthy control vs Cancer cachexia, ### p<0.001 Healthy control vs Cancer cachexia, ##### p<0.0001 Healthy control vs Cancer cachexia. BMI: body mass index; CRP: C-reactive protein; HDL: high-density lipoprotein; LDL: low-density lipoprotein.

	Healthy controls	Weight-stable cancer	Cancer cachexia	p-value
Clinical information				
Male (n)	6	11	13	
Female (n)	0	9	8	
Age	49.83 \pm 7.98	59.25 \pm 2.66	61.76 \pm 3.45	0.229
BMI (kg/m ²)	27.30 \pm 1.15	25.13 \pm 0.61	21.61 \pm 0.77 ^{*,###}	0.0002
Body weight change (%)	0	-1.52 \pm 0.62	-13.95 \pm 1.65 ^{****,####}	<0.0001
Tumor site (n)				
Colon and rectum		17	15	
Stomach		3	6	
Tumor stage (n)				
I		5	2	
IIA/B/C		8	4	
III		1	4	
IIIB/C		1	4	
IV		2	3	
non classified		3	4	
Serum parameters				
Hemoglobin (g/dL)	14.80 \pm 0.44	13.13 \pm 0.36	11.29 \pm 0.51 ^{*,#}	0.0027
CRP (mg/L)	3.48 \pm 0.75	5.20 \pm 0.98	9.12 \pm 0.89 [*]	0.0129
Albumin (g/dL)	3.98 \pm 0.23	3.60 \pm 0.11	3.37 \pm 0.08 [#]	0.0241
Glucose (mg/dL)	91.17 \pm 18.64	60.05 \pm 6.61	46.00 \pm 5.80 [#]	0.0161
Cholesterol (mg/dL)	172.85 \pm 13.81	196.21 \pm 16.25	194.60 \pm 11.45	0.6939
HDL (mg/dL)	34.50 \pm 2.40	44.11 \pm 4.13	42.86 \pm 3.07	0.4116
LDL (mg/dL)	101.67 \pm 10.92	112.32 \pm 11.45	106.52 \pm 8.31	0.888
Triglycerides (mg/dL)	179.00 \pm 21.64	179.79 \pm 18.96	173.52 \pm 21.42	0.9747

Table S2: Characterization of pancreatic cancer patients (Patient cohort 2). Related to Figure 7.

Characterization of a human cohort of patients with weight-stable cancer and cancer cachexia. Data are mean \pm SEM. Statistical analyses were using a two-tailed student t-test or a non-parametric Mann Whitey test. P-values are displayed in the column "p-value". BMI: body mass index; CRP: C-reactive protein.

	Weight-stable cancer	Cancer cachexia	p-value
Clinical information			
Male (n)	9	20	
Female (n)	15	24	
Age	68.42 \pm 2.607	69.07 \pm 1.524	0.8180
BMI (kg/m ²)	25.31 \pm 0.6919	20.44 \pm 0.7060****	<0.0001
Body weight change (%)	-0.9700 \pm 0.3277	-12.69 \pm 1.094****	<0.0001
Tumor entity	Pancreatic cancer	Pancreatic cancer	
UICC Tumor stage (n)			
I	1	0	
II	9	22	
III	6	7	
IV	8	15	
Serum parameters			
CRP (mg/L)	18.10 \pm 7.800	31.78 \pm 8.312	0.0889
Albumin (g/dL)	4.135 \pm 0.07843	3.868 \pm 0.08529*	0.0420

Table S3: Characterization of lung cancer patients (Patient cohort 3). Related to Figure 7.

Characterization of a human cohort of patients with weight-stable cancer and cancer cachexia. Data are mean \pm SEM. Statistical analyses were using a two-tailed student t-test or a non-parametric Mann Whitey test in combination. P-values are displayed in the column "p-value". BMI: body mass index.

	Weight-stable cancer	Cancer cachexia	p-value
Clinical information			
Male (n)	27	14	
Female (n)	22	9	
Age	67.43 \pm 1.284	70.70 \pm 2.343	0.2149
BMI (kg/m ²)	27.12 \pm 0.6278	25.43 \pm 1.106	0.1612
Body weight change (%)	2.312 \pm 0.7995	-11.58 \pm 1.183****	<0.0001
Tumor entity			
Lung squamous cell carcinoma	9	8	
Lung adenocarcinoma	30	14	
Other	10	1	
Tumor stage at diagnosis (n)			
I	12	6	
II	14	4	
III	23	13	