

**Table S1.** Differences in serum miRNA expression between stages of disease.

miRNA	Resectable disease ( <i>n</i> =60) Log2 FD	LAPC ( <i>n</i> =41) Log2 FD	Metastatic disease ( <i>n</i> =19) Log2 FD	<i>P</i>
<i>Before start of FOLFIRINOX</i>				
hsa-miR-17-3p	Ref	-0.44	0.14	0.030
hsa-miR-373-3p	Ref	-0.29	-0.08	0.607
<i>After one cycle of FOLFIRINOX</i>				
hsa-miR-18a-5p	Ref	0.33	0.21	0.474
hsa-miR-194-5p	Ref	0.32	0.15	0.397
hsa-miR-24-3p	Ref	0.43	-0.03	0.198
hsa-miR-27a-3p	Ref	0.26	0.20	0.883

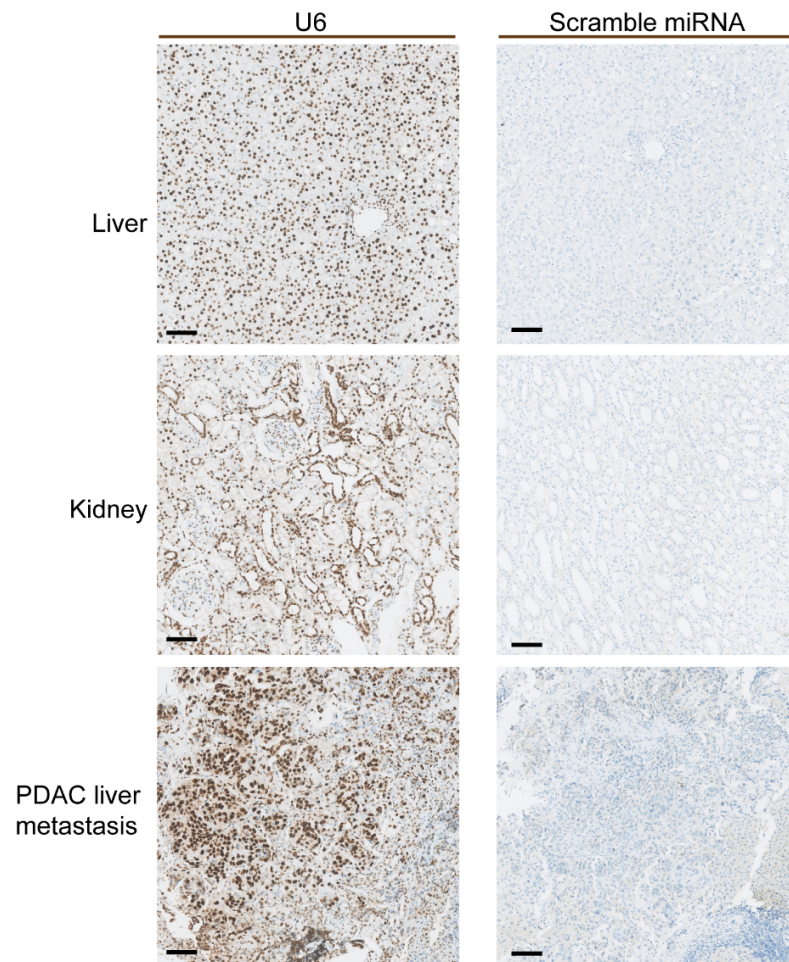
FD = fold difference, LAPC = locally advanced pancreatic cancer, hsa = homo sapiens (human), miR/miRNA = microRNA. *P*-values by one-way ANOVA.

**Table S2.** Differences in serum miRNA expression between patients with disease control and patients with progressive disease after FOLFIRINOX for the three different stages of disease.

miRNA	Resectable disease (n=60) Log2 FD*	P	LAPC (n=41) Log2 FD*	P	Metastatic disease (n=19) Log2 FD*	P
<i>Before start of FOLFIRINOX</i>						
hsa-miR-17-3p	0.58	0.040	0.09	0.829	-0.60	0.459
hsa-miR-373-3p	-2.16	0.566	1.56	<0.001	0.31	0.721
<i>After one cycle of FOLFIRINOX</i>						
hsa-miR-18a-5p	-0.03	0.874	0.03	0.880	0.04	0.900
hsa-miR-194-5p	-0.42	0.173	-0.36	0.434	-0.60	0.254
hsa-miR-24-3p	-0.13	0.689	-0.18	0.651	-0.40	0.401
hsa-miR-27a-3p	-0.54	0.287	-0.37	0.534	-0.79	0.354

FD = fold difference, LAPC = locally advanced pancreatic cancer, hsa = homo sapiens (human), miR/miRNA = microRNA. \*Fold differences are presented as the miRNA expression of progressive disease patients compared to disease control patients as reference group. *P*-values by t-tests.

**Figure S1.** In situ hybridization of liver, kidney, and pancreatic ductal adenocarcinoma (PDAC) liver metastasis tissue. Tissue sections are stained with U6 (positive control) or scramble miRNA probes (negative control), visualized with DAB. Scale bar = 100  $\mu$ m.





**Figure S2.** In situ hybridization of positive control tissues with miR-373-3p. Mir-373-3p expression is indicated in brown (DAB), cell nuclei are stained in blue with hematoxylin. MiR-373-3p is expressed by normal endothelium, hepatocytes, colon epithelium, renal tubular cells, neurons (brain), and in tonsillar B cell germinal centers. MiR-373-3p is also expressed in pancreatic acinar cells, but not in normal pancreatic ductal cells. Scale bar = 50  $\mu$ m.

