

Supporting Information for

Size-dependent Tumor Response to Photodynamic Therapy and Irinotecan Monotherapies Revealed by Longitudinal Ultrasound Monitoring in an Orthotopic Pancreatic Cancer Model

Michael Pigula, Huang-Chiao Huang, Srivalleesha Mallidi, Sriram Anbil, Joyce Liu, Zhiming Mai, Tayyaba Hasan

Table S1. Cost comparison of using ultrasound and weight to generate growth curves.

Financial cost:

	<i>Ultrasound</i>			<i>Weight</i>	
	Unit cost (\$)	# of units	Cost	# of units	Cost
<i>Mice</i>	\$70	54 mice	\$3,780	432 mice	\$30,240
<i>Housing</i>	\$1.27	360 cage* days	\$457	1,620 cage*days	\$2,057
<i>Total</i>			\$4,237		\$32,297

Time expense:

	<i>Ultrasound</i>			<i>Weight</i>	
	Hours per unit	# of units	Person hours	# of units	Person hours
<i>Tumor implantation</i>	0.5	54 mice	27	432 mice	216
<i>Treatments</i>	1	40 treatments	40	324 treatments	324
<i>Ultrasound monitoring & analysis</i>	0.125	432 US measurements	54	0	0
<i>Sacrifice, harvesting, & analysis</i>	0.2	0	0	432 mice	86
<i>Total</i>			121 hours		626 hours

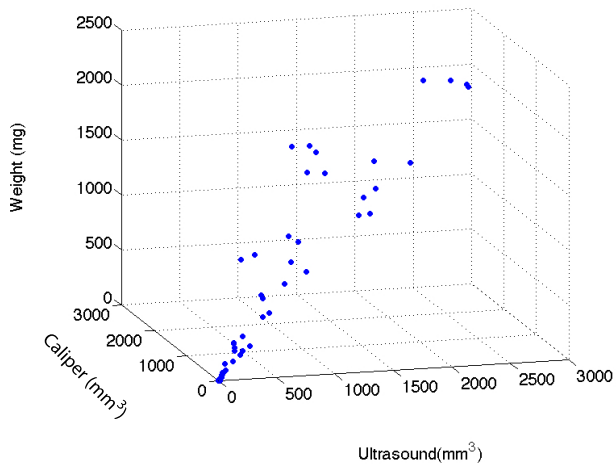


Figure S1. 3D plot of tumor sizes measured by ultrasound, calipers, and weight. Plotted in MatLab.

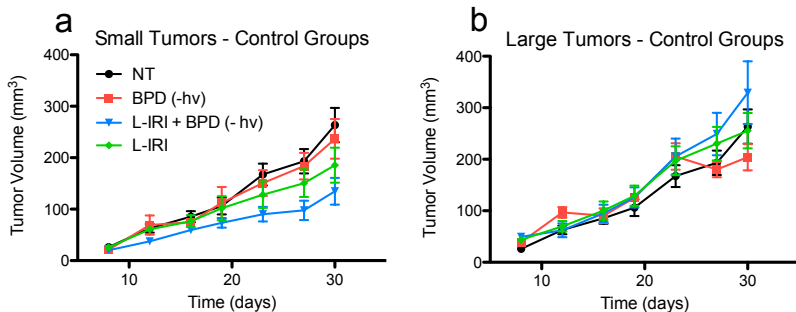


Figure S2. Longitudinal growth of large and small untreated tumors. No treatment curves presented in Figure 5 use the combined curve in blue here. Differences in size between large and small untreated tumors is statistically significant ($P < 0.05$) only at day 8.

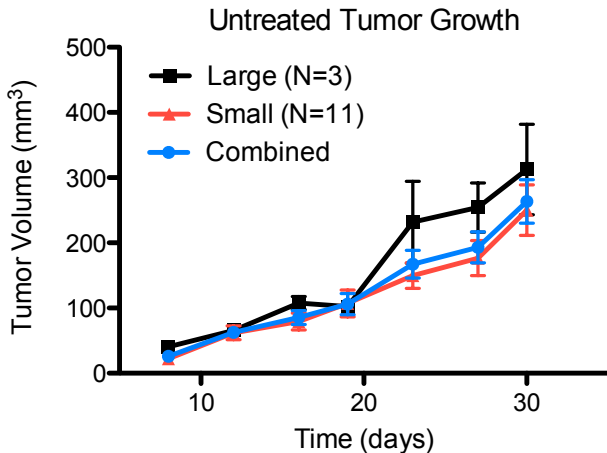


Figure S3. Longitudinal growth curves for BPD – no light control groups in large and small tumors. No statistically significant difference in tumor size are seen at any time point between BPD ($-h\nu$) and NT or between L-IRI + BPD ($-h\nu$) and L-IRI in either large or small tumors (two-tailed t-tests).

Intraperson Variation

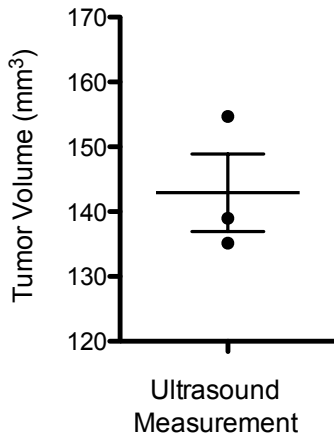


Figure S4. Intraperson variation of tumor volume measurements determined by ultrasound. The same tumor was independently measured 3 separate times over the course of a day. The mean volume was $142.9 \text{ mm}^3 \pm 6.0 \text{ mm}^3$.