

Supplementary Materials

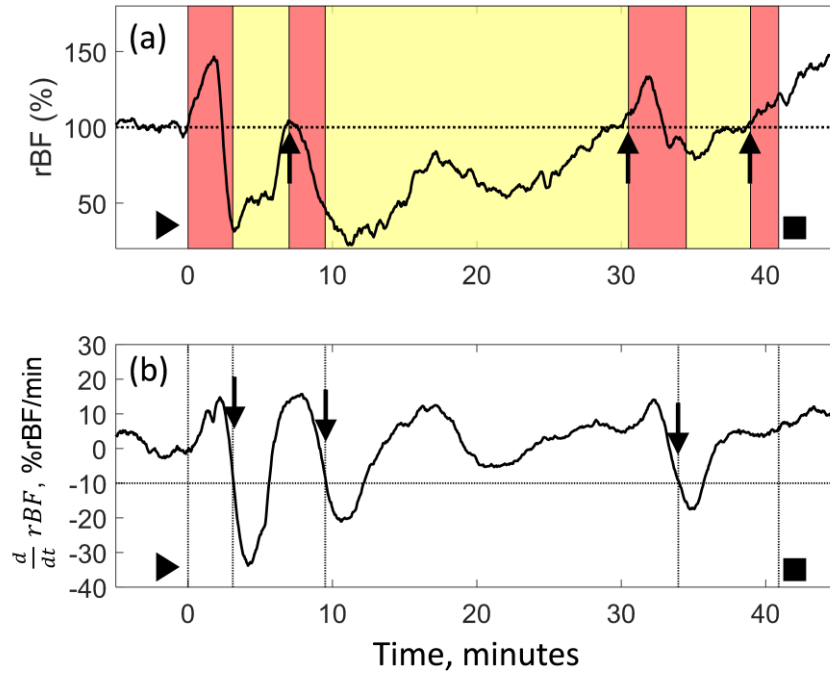


Figure S1. (a) Representative relative blood flow traces of RIF tumor for BFI-Irrad, and (b) the corresponding time derivative/slope of rBF computed in real-time from data in (a). Light delivery is indicated in (a) and is shaded in red or yellow for illumination at 150mWcm⁻² or 25mWcm⁻², respectively. ► and ■ indicate the initiation and completion of light delivery, respectively. Downward pointing arrows in (b) indicate instances when rBF decreases more than 10% per minute (or rBF slope $\leq -10\%rBFmin^{-1}$) and irradiance is attenuated from 150mWcm⁻² to 25mWcm⁻². Upward pointing arrows in (a) indicate instances when rBF(t) recovers to above rBF_{baseline}, and irradiance is increased from 25mWcm⁻² to 150mWcm⁻².

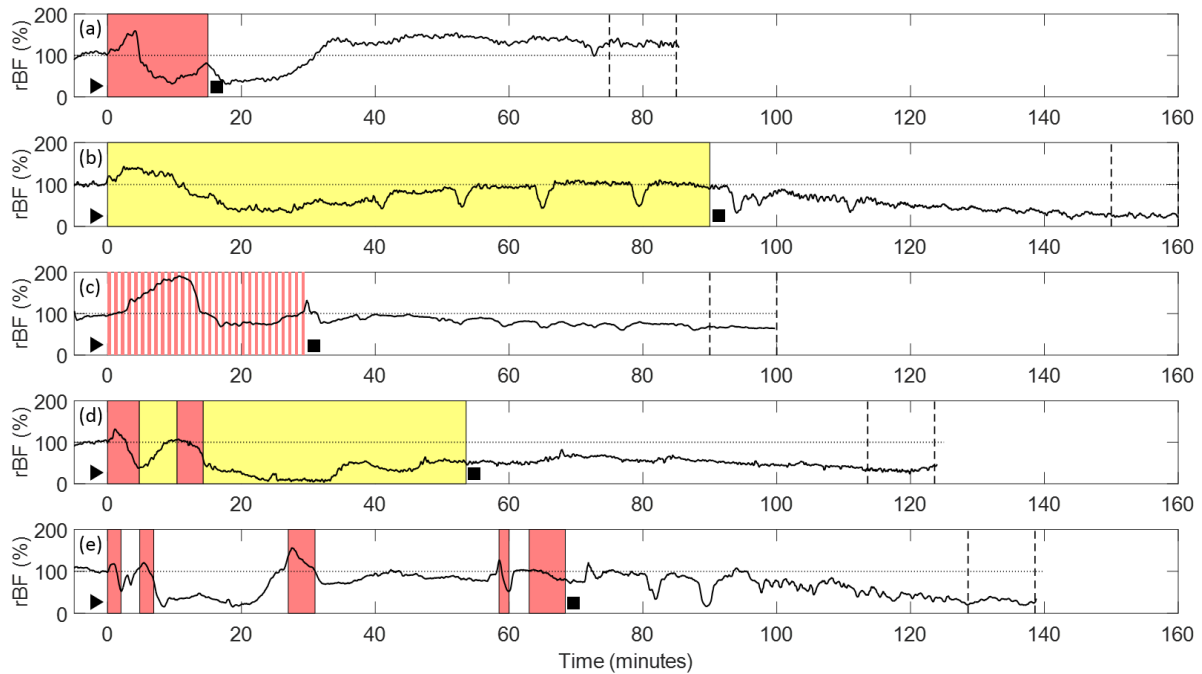


Figure S2. Representative blood flow traces of RIF tumors for the pre-PDT through post-PDT timeframe: (a) 150mWcm⁻² -continuous; (b) 25mWcm⁻²-continuous; (c) standard 150 mWcm⁻²-fractionated illumination; (d) BFI-Irrad; (e) BFI-Frac. ► and ■ indicate the initiation and conclusion of light delivery, respectively. Light delivery is shaded in red or yellow for illumination at 150mWcm⁻² or 25mWcm⁻², respectively, with unshaded areas representing periods without illumination. Vertical dashed lines indicate 60 and 70 minutes after completion of light delivery for each treatment condition.

Table S1. Summary of median (95% confidence interval) percent of complete response and time-to-400 mm³ for treatments of RIF tumors using each of the standard and BFI-PDT illumination schemes.

Type of PDT	Group	Percent of complete response (%)	Time-to-400 mm ³ (days)
		Median (95% CI)	Median (95% CI)
Standard	150 mWcm ⁻² - continuous	0	11 (6, *)
	25 mWcm ⁻² - continuous	30 (7, 65)	19.6 (12, *)
	150 mWcm ⁻² - fractionated	22 (2, 48)	18 (12, *)
Blood-flow informed	BFI-Irrad	40 (12, 74.5)	29 (18, *)
	BFI-Frac	56 (18, 91)	39 (18, *)

*Unable to estimate due to insufficient events. Response rates align with Kaplan Meier curves of Figure 5 (which incorporate censoring for fractionated treatments that produced morbidity).

Table S2. Summary of median (95% confidence interval) percent of complete response and time-to-400 mm³ for treatments of AB12 tumors using 150 mWcm⁻²-continuous, 25 mWcm⁻²-continuous and BFI-Irrad illumination schemes.

Group	Percent of complete response (%)	Time-to-400 mm ³ (days)
	Median (95% CI)	Median (95% CI)
150 mWcm ⁻² - continuous	33 (7, 71)	20 (6, *)
25 mWcm ⁻² - continuous	89 (52, 100)	>90 (*, *)
BFI-Irrad	100 (69, 100)	>90 (*, *)

*Unable to estimate due to insufficient events.