**Support**

# The Improved killing of both androgen-dependent and independent prostate cancer cells with etoposide loaded SPIONs coupled with NIR irradiation

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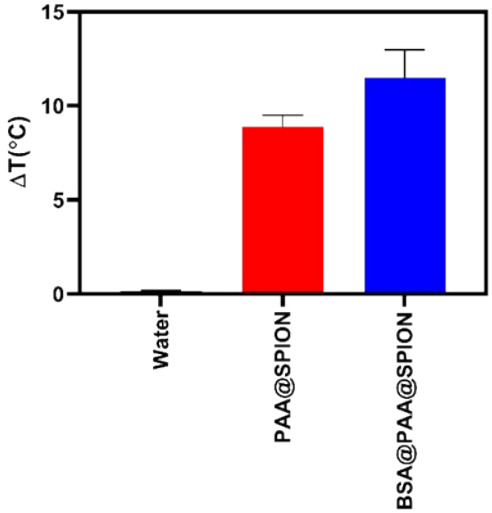


**Figure S1.** Measured temperature increase of water (control), PAA@SPION and BSA@PAA@SPION after 10 min of laser irradiation.

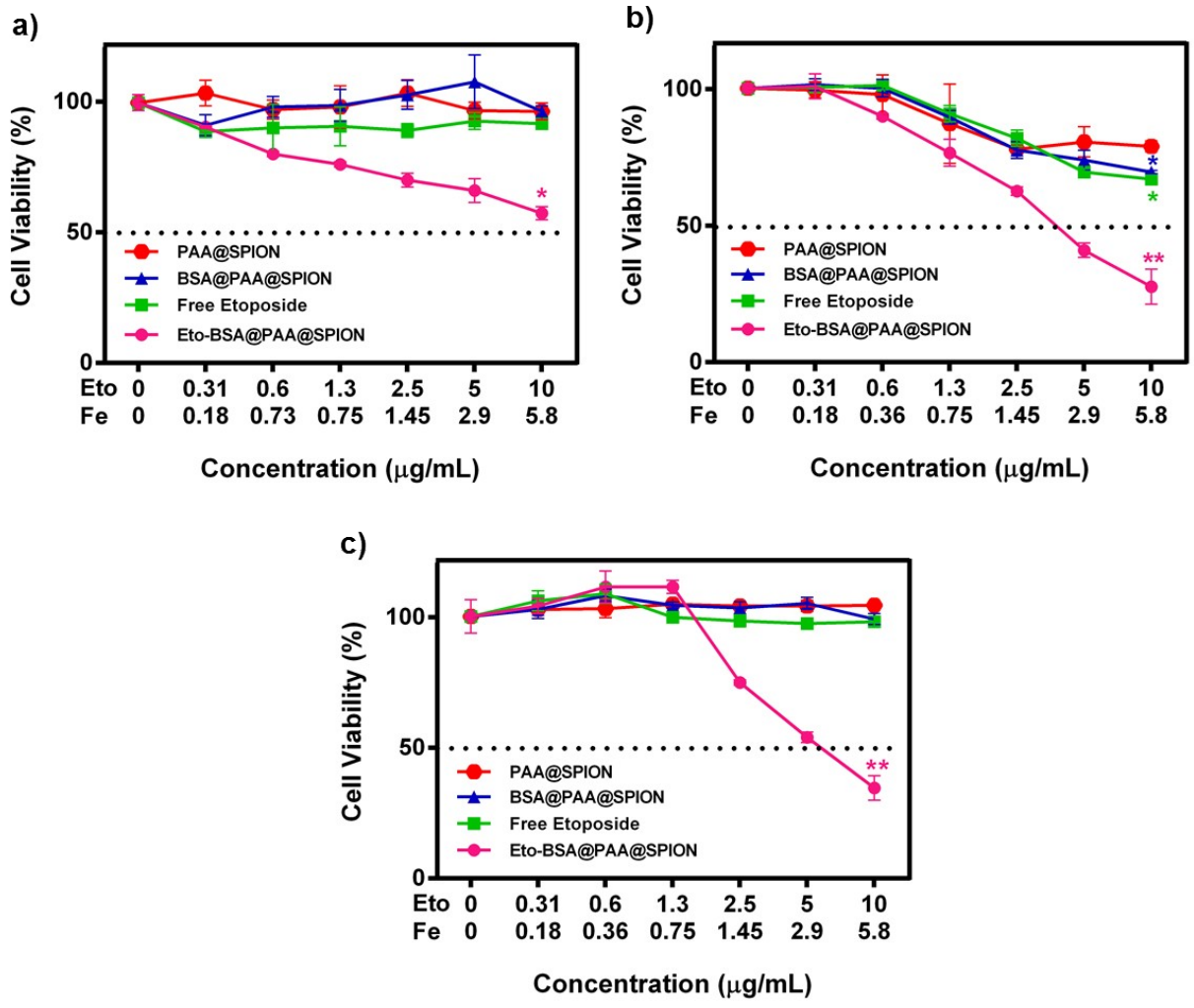

**Figure S2.** Viability of a) LNCaP, b) DU145 and c) PC3 cells treated with free etoposide, PAA@SPION, BSA@PAA@SPION, and Eto-BSA@PAA@SPION after 48 h incubation performed by SRB assay.

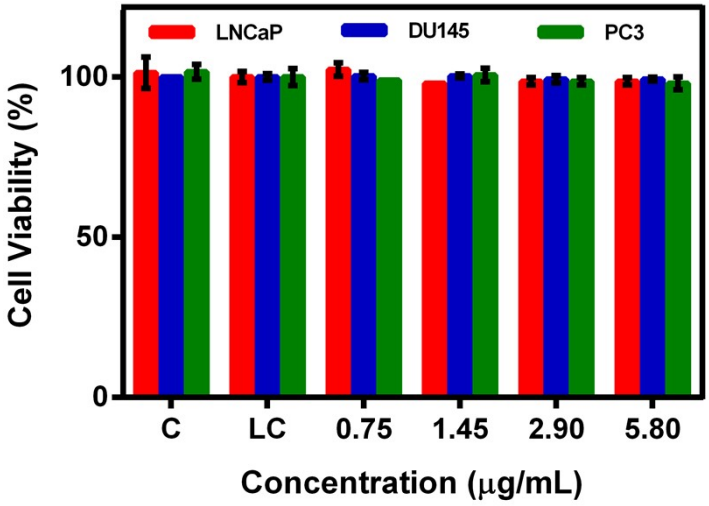


**Figure S3**. Influence of BSA@PAA@SPIONs on LNCaP, DU145, and PC3 cells with laser irradiation at different concentrations. C and LC represent only cell without NP or laser treatment and cells treated with only laser, respectively. All laser experiments were performed at the laser wavelength of 808 nm and intensity of 2.6 W/cm$^2$ for 10 min.

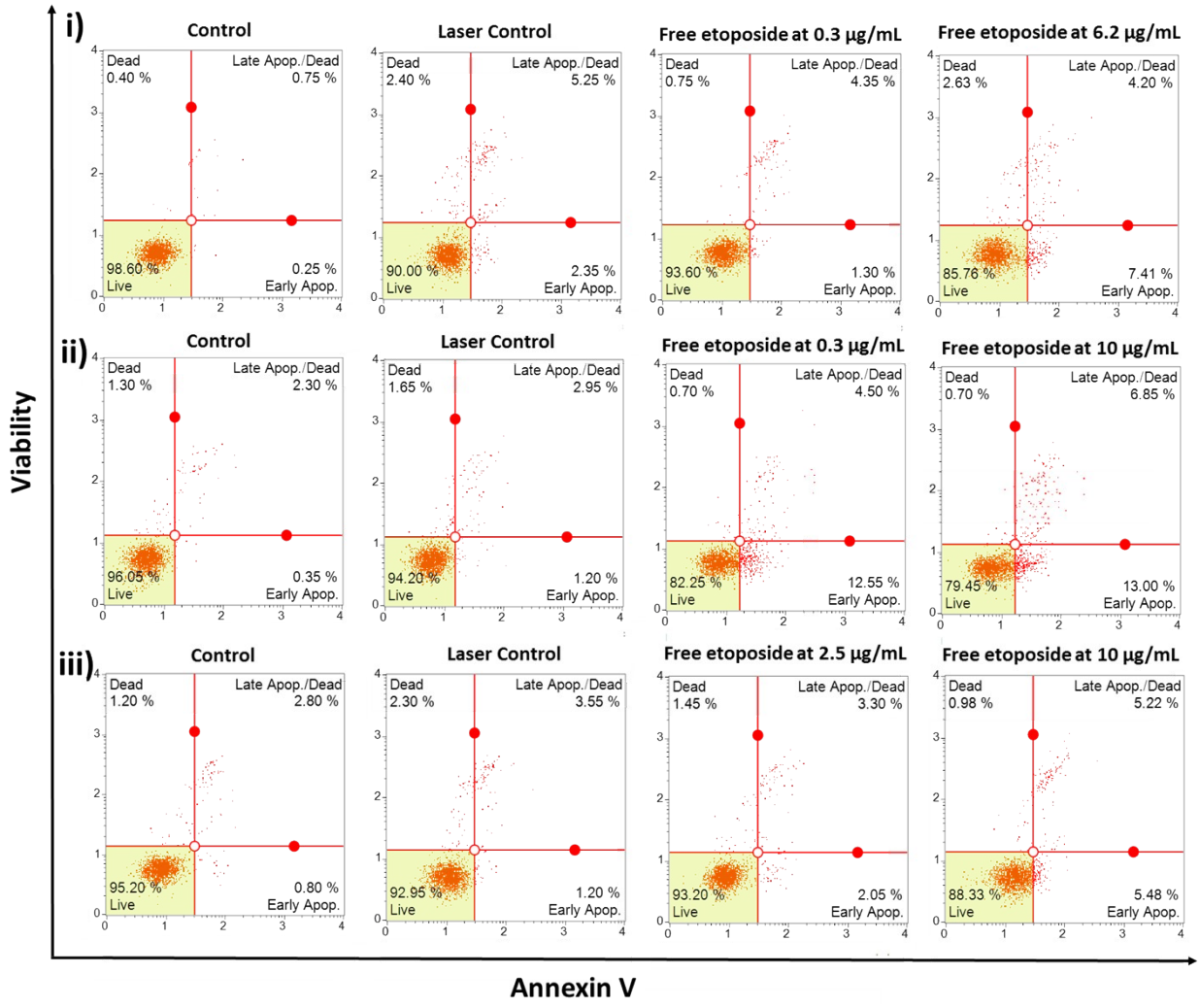


**Figure S4.** Flow cytometry analysis of i) LNCaP, ii) DU145 and iii) PC3 after only laser and free etoposide treatment by Annexin V/Dead cell assay.

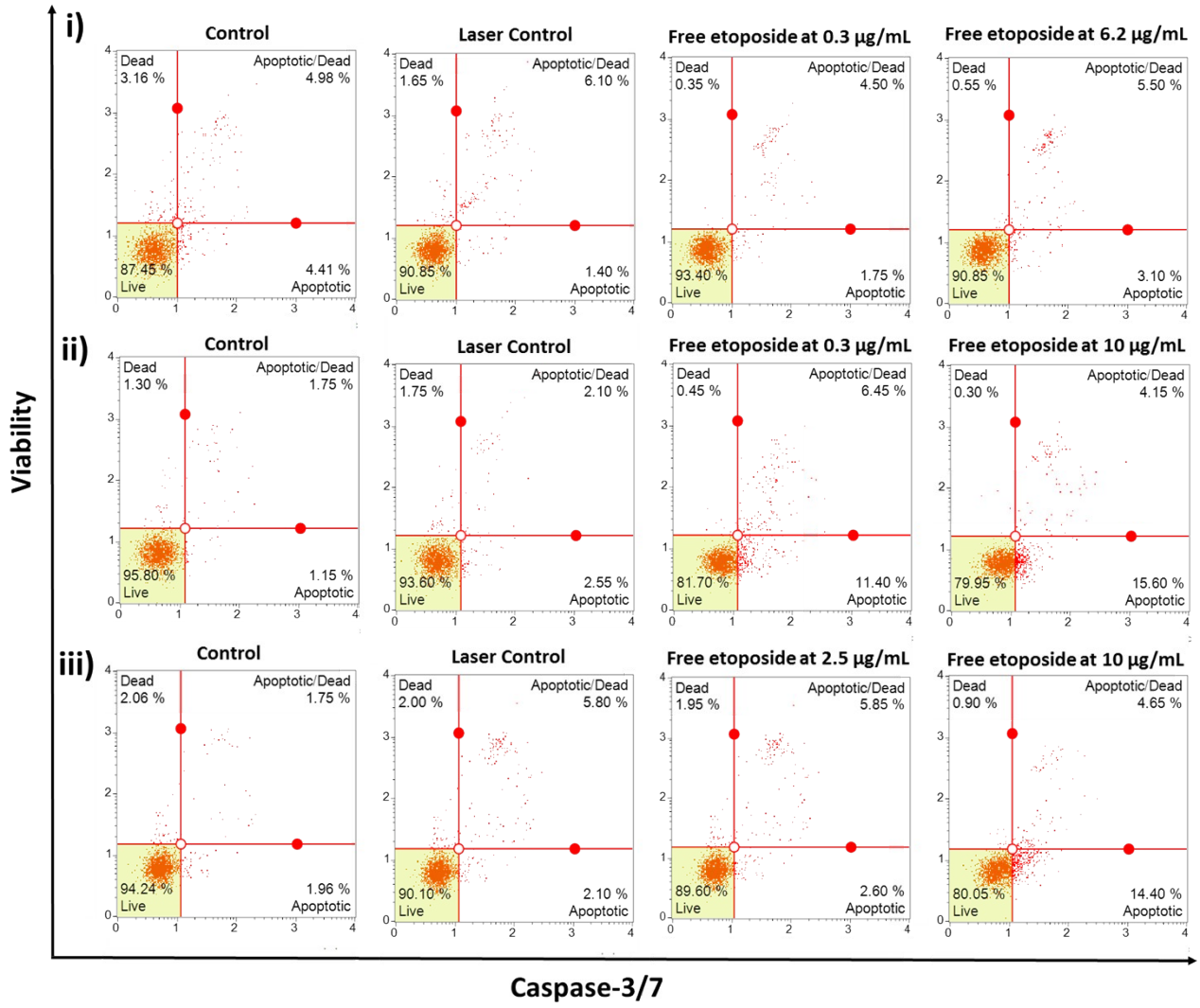


**Figure S5.** Flow cytometry analysis of i) LNCaP, ii) DU145 and iii) PC3 after only laser and free etoposide treatment by Caspase-3/7 assay.

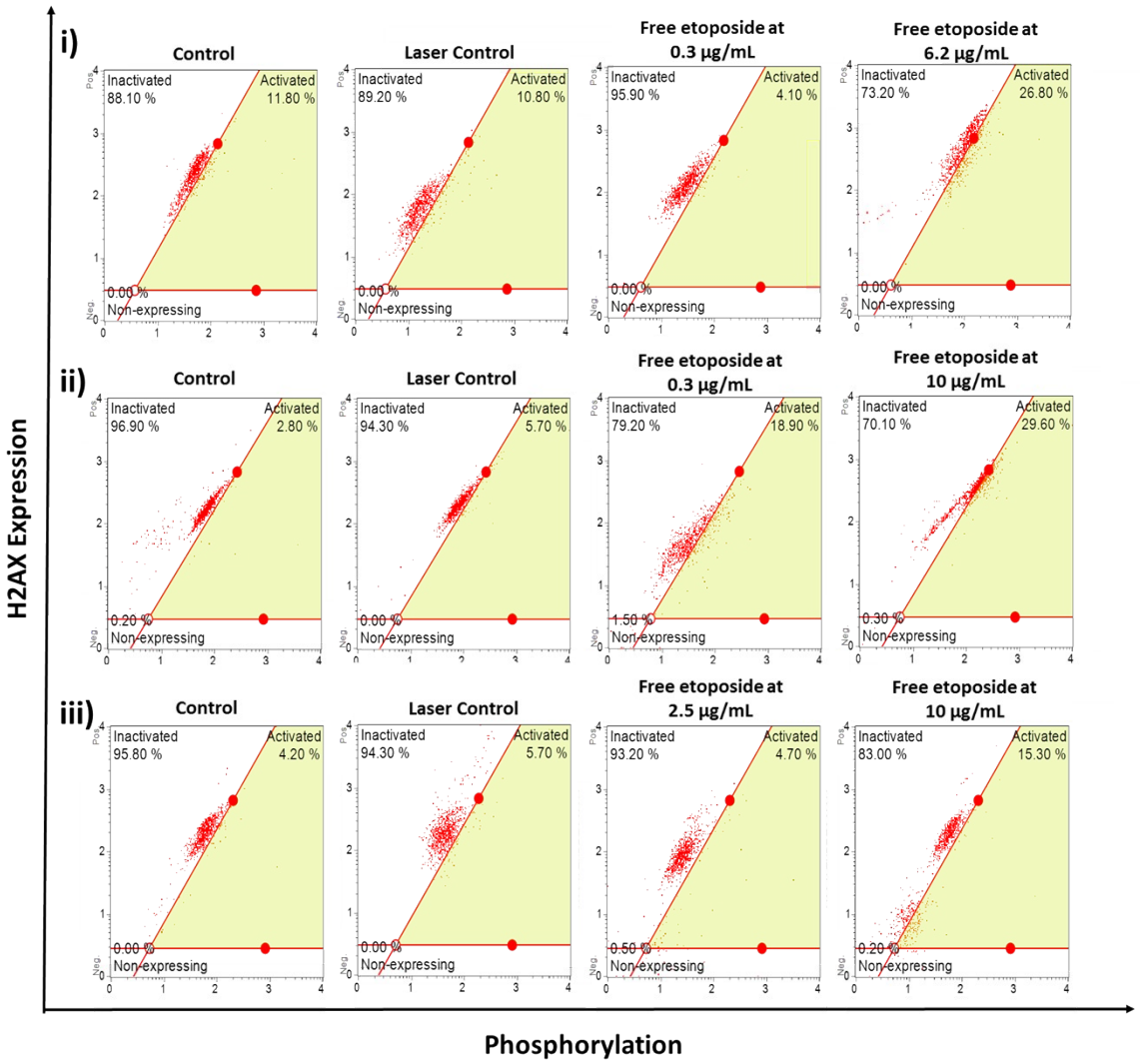


**Figure S6.** The γH2A.X levels in i) LNCaP, ii) DU145 and iii) PC3 cells after only laser and free etoposide treatment by flow cytometry.

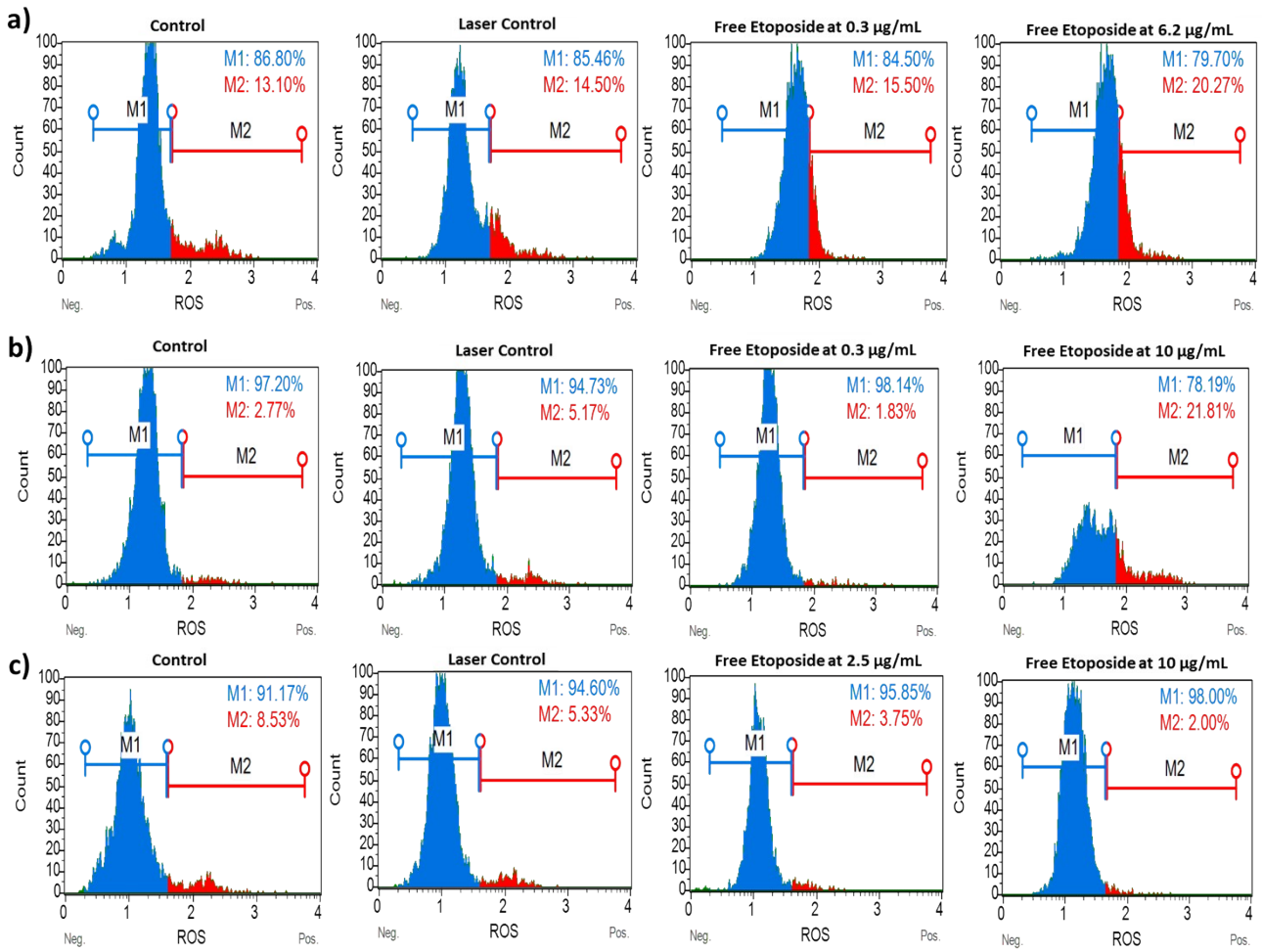


**Figure S7.** ROS generation in i) LNCaP, ii) DU145 and iii) PC3 cells after only laser and free etoposide treatment at different cocentrations.