Table 1 shows the 5 treated groups with prostate tumor-bearing mice. After treatment, animals were allowed to survive for 4 weeks. Tumor growth delay was monitored by MRI (Figure 1). The formulation of the PTX-encapsulated nanodroplets is as follows: PTX dose 20 mg/kg, Nanoemulsion composition 0.5% PTX, 1% perfluorocarbon and 2% stabilizing block copolymer. Ultrasound treatment parameters were 1MHz, 25W acoustic power, 10% duty cycle and 60 sec for each sonication. The pFUS treatment parameters were selected from our previous studies and considered to be “optimal”.

Table 1. The treated groups. (ND-PTX) = nanodroplet-encapsulated paclitaxel; pFUS = pulsed high intensity focused ultrasound and ND = nanodroplets

Figure 1. T2-weighted MR image showing the prostate tumor (arrow).

Figure 2. Showing relative tumor volumes. Compared with the control group, significant tumor growth delay was observed in group 1 with p=0.004, 4 weeks after treatment. There were no significant tumor growth delay observed for group 2 (p=0.285), group 3 (p=0.452) and group 4 (p=0.158).