

Supporting Information

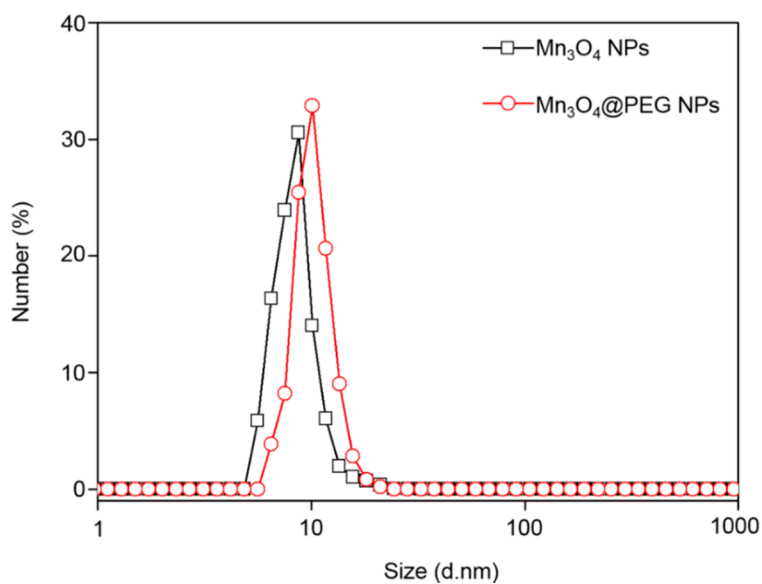


Figure S1. Size analysis of Mn₃O₄ and Mn₃O₄@PEG NPs by dynamic light scattering (DLS).

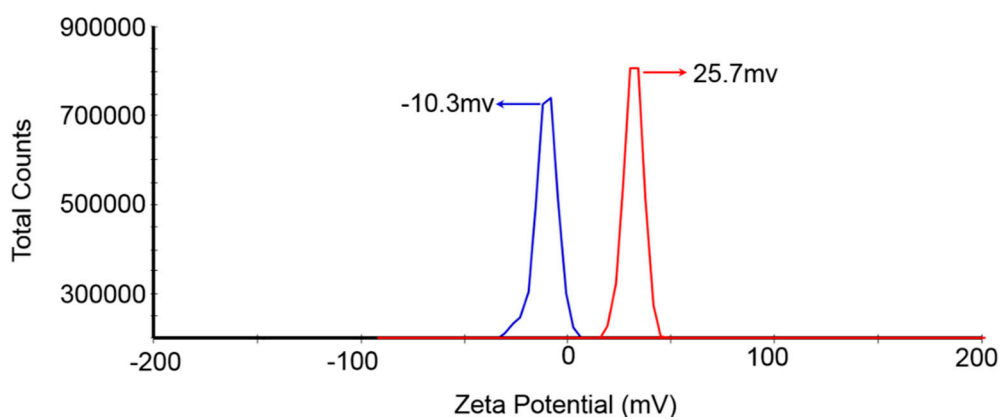


Figure S2. Zeta potential analysis of Mn₃O₄@PEG NPs and Mn₃O₄@PEG-Cy_{7.5} NPs by Malvern Zetasizer Nano ZS.

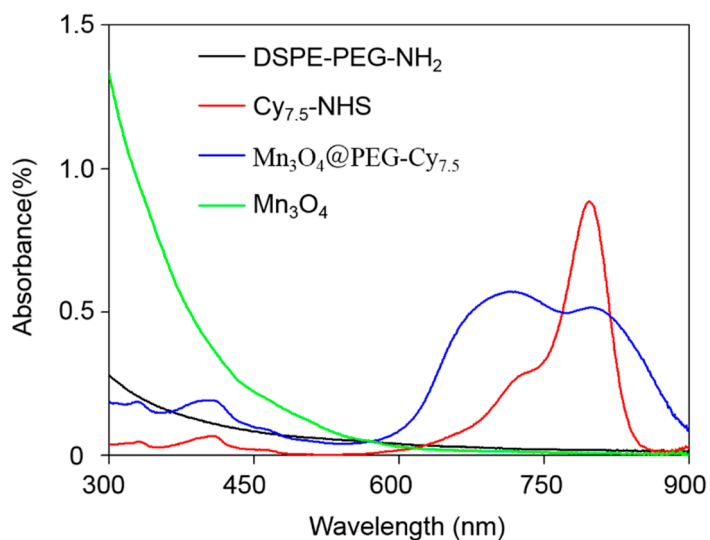


Figure S3. Absorbance spectra of Cy_{7.5}-NHS, Mn₃O₄, Mn₃O₄@PEG-Cy_{7.5}, and DSPE-PEG-NH₂ as determined by UV spectrophotometer. NHS = N-Hydroxysuccinimide; DSPE = 1,2-Distearoyl-sn-glycero-3-phosphoethanolamine.

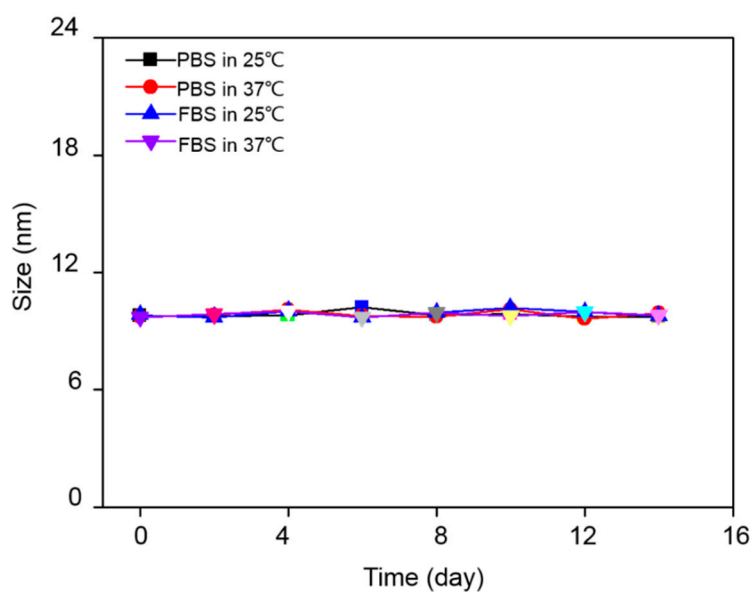


Figure S4. The size stability of Mn₃O₄@PEG-Cy_{7.5} NPs in PBS and 10% fetal bovine serum (FBS) varies with time and different temperatures in two weeks.

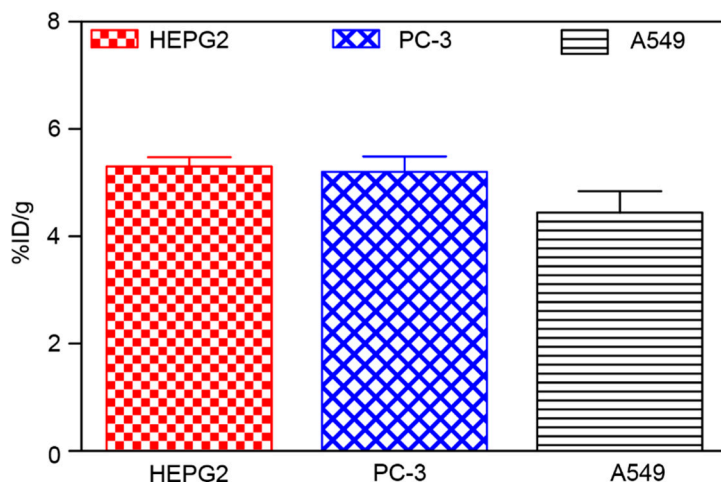


Figure S5. Quantitative analysis of cell uptake based on the detection of the content of Mn at 48 h by Inductively Coupled Plasma-Atomic Emission Spectrometry (ICP-AES) (n = 3).

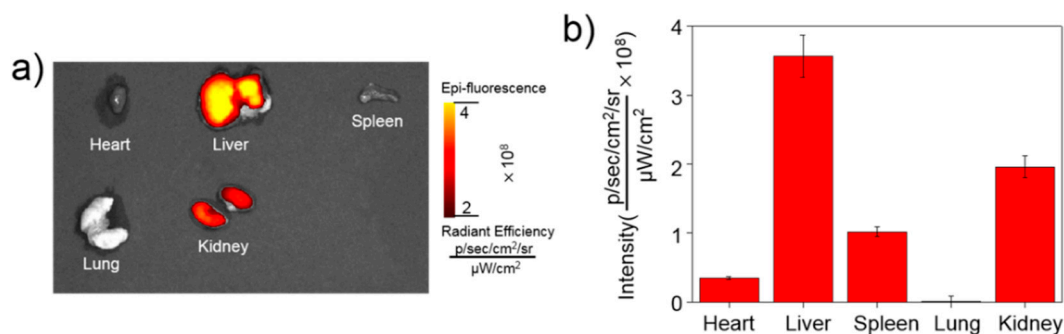


Figure S6. Ex vivo imaging of Mn₃O₄@PEG-Cy_{7.5} NPs at 48 h following intravenous injection of Mn₃O₄@PEG-Cy_{7.5} NPs (n = 3 per group). (a) Ex vivo FI images of main organs. (b) Quantitative analysis of the FI images of the main organs (n = 3 per group).

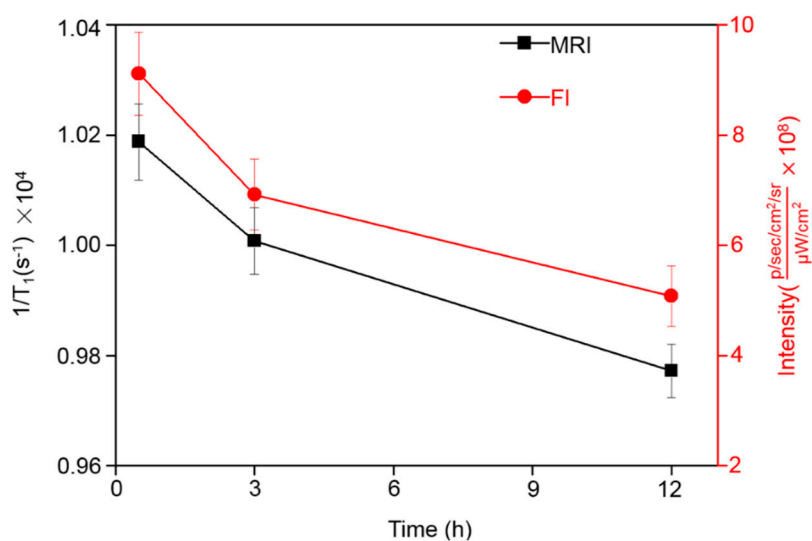


Figure S7. Quantitative analysis of the FI and MRI biodistribution pattern data in vivo. Time-activity curves of the liver following intravenous injection of Mn₃O₄@PEG-Cy_{7.5} NPs at 0.5 h, 3 h, and 12 h (n = 3 per group).

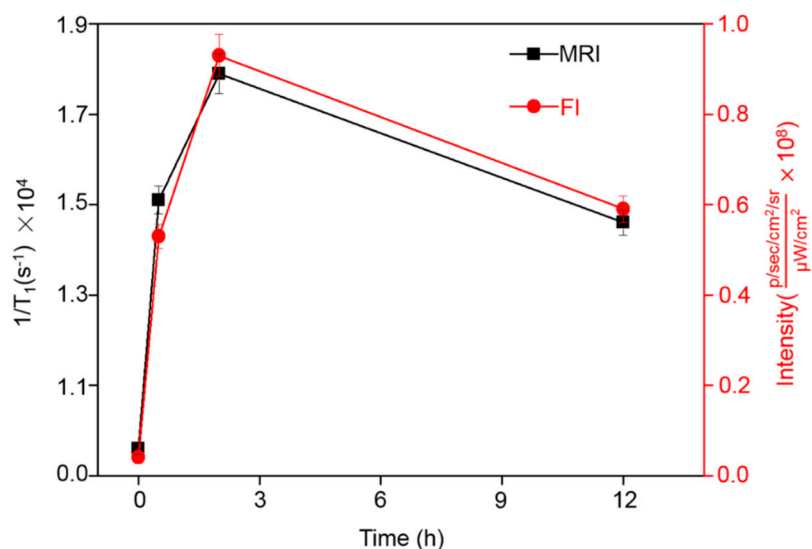


Figure S8. Quantitative analysis of the FI and MRI data in lymph nodes. Time-activity curves of the lymph node following subcutaneous intravenous injection of $Mn_3O_4@PEG-Cy7.5$ NPs at 0.5 h, 2 h, and 12 h (n = 3 per group).

Table S1 Serum level of liver and kidney function markers in mice 2 weeks after injection of $Mn_3O_4@PEG-Cy7.5$ NPs (20 mg/kg). n = 3. AST = aspartate aminotransferase; ALT = alanine aminotransferase; ALP = alkaline phosphatase; TBIL = total bilirubin (TBIL); CREA = serum creatinine; UREA = serum urea.

Sample	ALT (U/L)	AST (U/L)	ALP (U/L)	ADA (U/L)	UREA(mmol/L)	CREA(μ mol/L)
Control	53.49 \pm 2.56	133.45 \pm 4.38	110.37 \pm 3.15	5.6 \pm 0.43	13.32 \pm 0.19	2.4 \pm 0.04
NPs	51.27 \pm 2.38	131.37 \pm 3.19	113.29 \pm 4.11	5.9 \pm 0.39	13.45 \pm 0.17	2.1 \pm 0.03