## Intraoperative Diagnosis of Early Lymphatic Metastasis Using Neodymium-Based Rare-earth NIR-II Fluorescence Nanoprobe

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#### Abstract

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Fig. S1. Characterizations of $\mathrm{NaGdF}_{4}: 5 \% \mathrm{Nd} @ \mathrm{NaLuF}_{4}$ NPs. a) Diameter distribution of Gd:Nd-RENPs. b) UV-vis-NIR absorption spectrum of core/shell Gd:Nd-RENPs. c) Photostability of Gd:Nd-RENPs in $\mathrm{H}_{2} \mathrm{O}$ and PBS.


Figure S2 Fourier transform infrared spectra of OA and PEG modified Gd:Nd-RENPs nanoparticles


Fig. S3. NIR-II fluorescence images of early metastatic SLNs (left side) and normal LNs (right side) at different time points after injection of Gd:Nd-RENPs.


Fig. S4. NIR-II fluorescence images of advanced metastatic SLNs (left side) and normal LNs (right side).


Fig. S5. MR images of popliteal and sciatic LNs at different time points after injection of Gd:Nd-RENPs.

