

Fig. S1. The CCK-8 assays for human normal NK cells (six cases) treated with different concentrations of PARPis (72 hours) were determined to evaluate the toxicity *in vitro*.

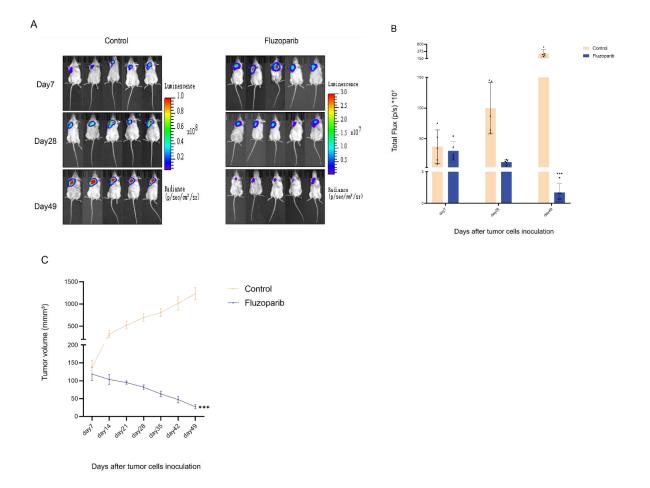


Fig. S2. Fluzoparib inhibits NKTCL cell growth *in vivo*. (A) IVIS imaging for the tumor burden. (B) Total flux (p/s) \*10<sup>7</sup> values for the result shown in A. (C) Tumor volume (mmm<sup>3</sup>) curves during treatment.

All data are expressed as the mean  $\pm$  SD.\*\*\*P < 0.001 vs. the control group.

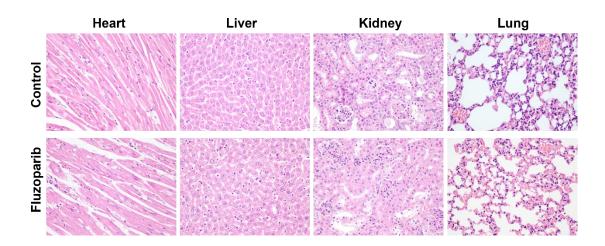


Fig. S3. The hematoxylin-eosin staining (× 100 magnification) for organs (heart, liver, kidney, and lung) of mice treated with fluzoparib or not was determined to evaluate the toxicity of fluzoparib *in vivo*.

LMO2 expression

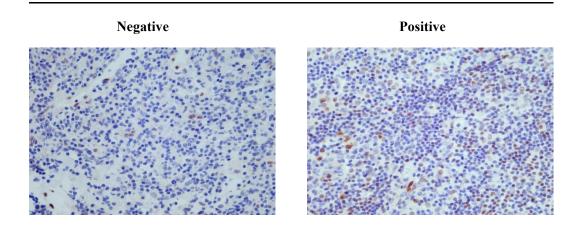


Fig. S4. Representative images (× 400 magnification) by immunohistochemistry of NKTCL tissues.