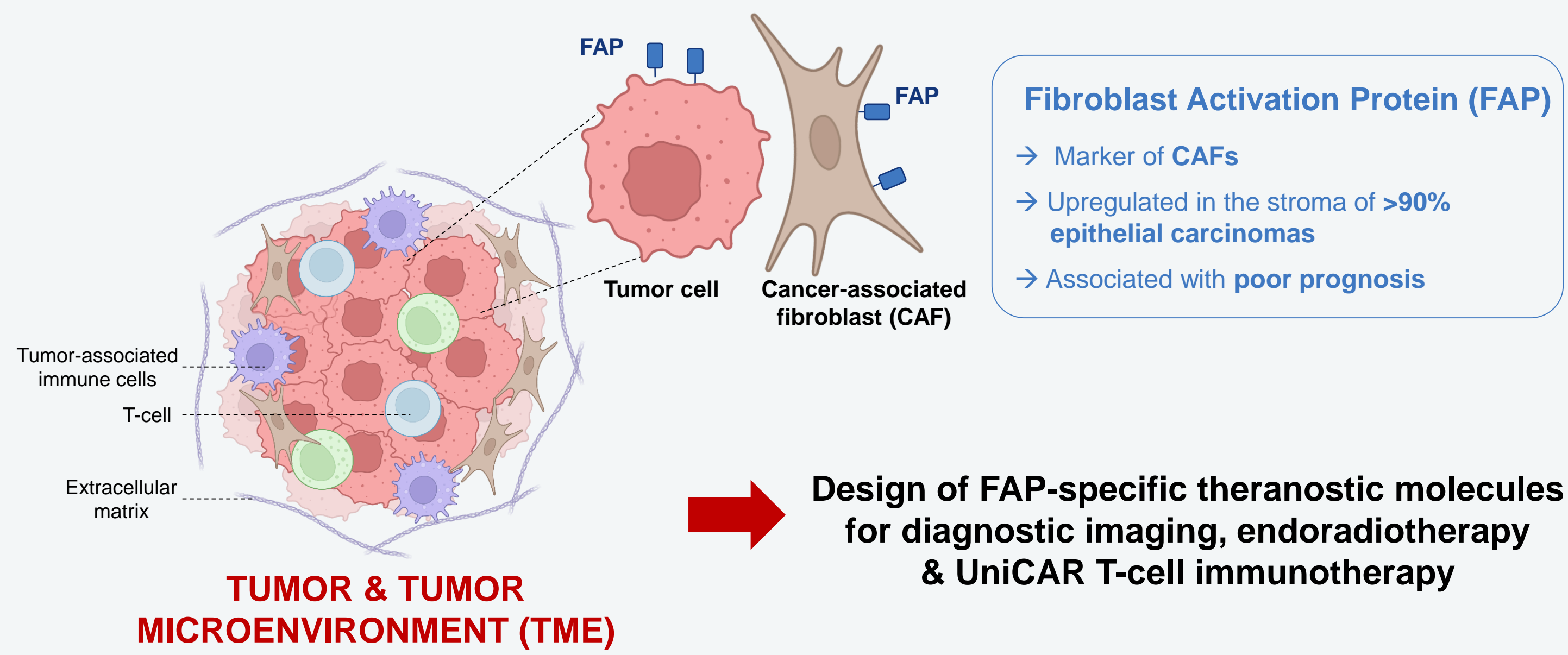


# Design of novel FAPI Target Modules for simultaneous diagnostic imaging, endoradiotherapy, and UniCAR T-cell immunotherapy

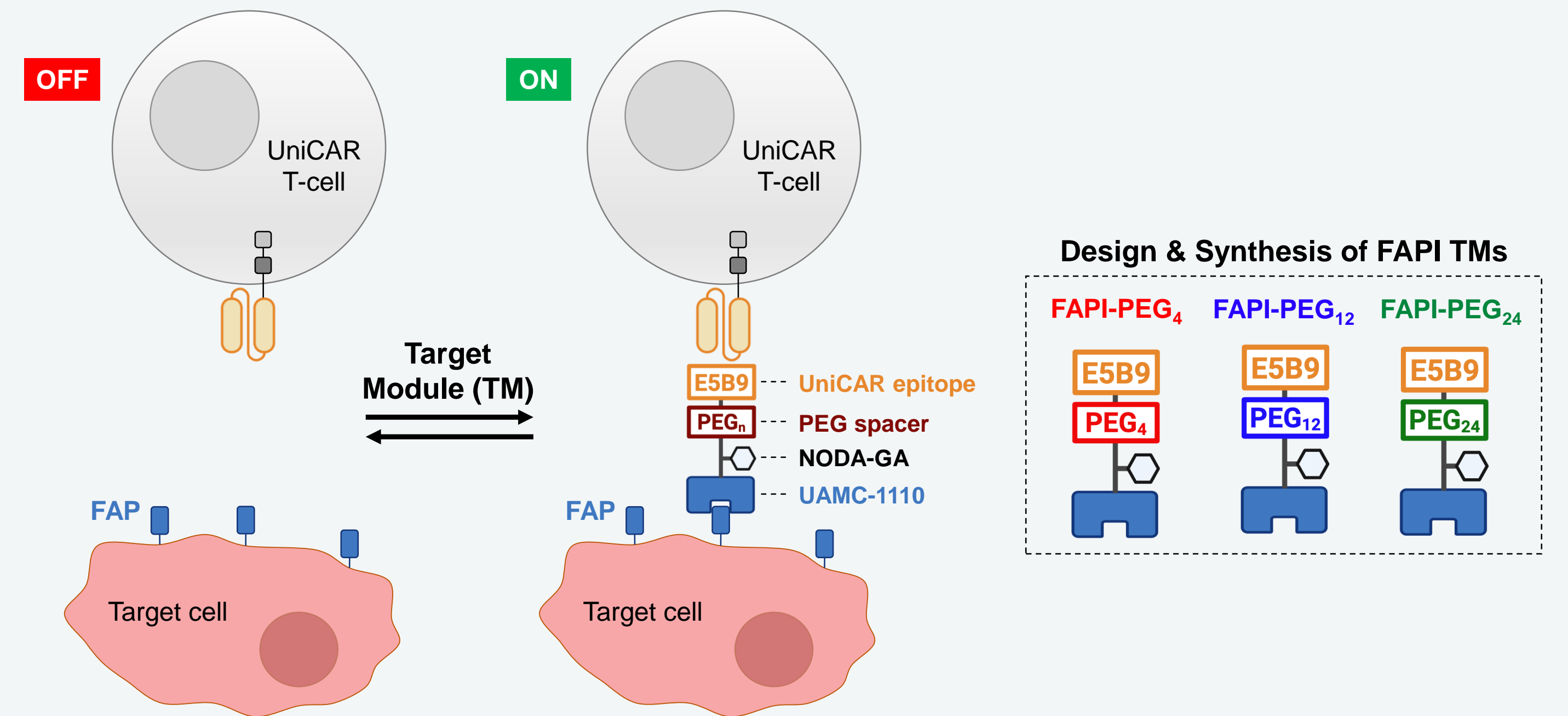
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## Tumor microenvironment targeting



## UniCAR T-cell technology



## I - TM computational design and chemical synthesis

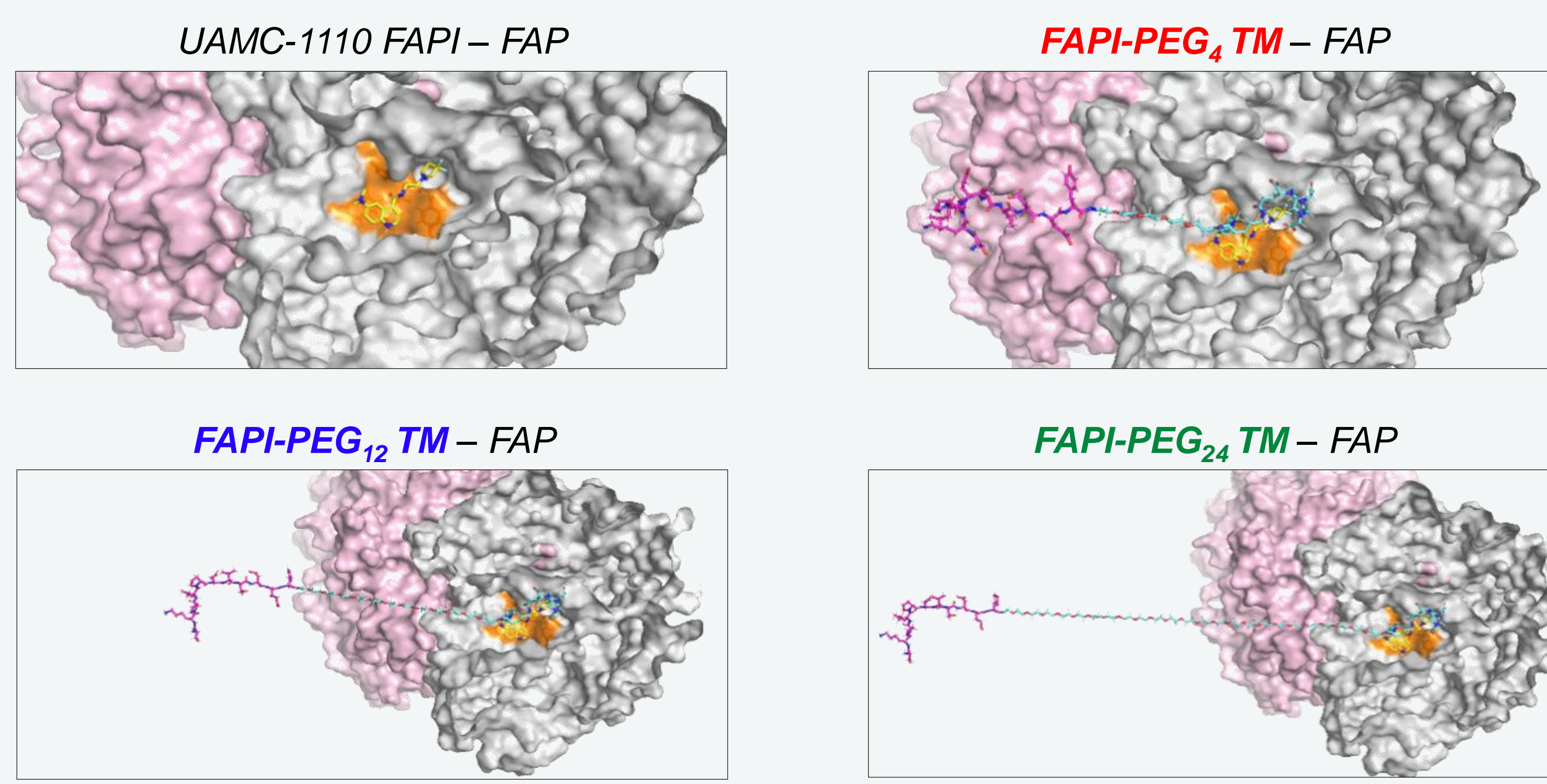


Fig. 1. Molecular docking study of FAPI TMs and the FAP enzyme using SwissDock with the AutoDock Vina algorithm. FAP dimer (grey, pink), UAMC-1110 FAPI moiety (yellow), PEG spacer (blue), E5B9 peptide (purple)

## III – In vivo UniCAR T-cell immunotherapy mediated by FAPI TMs

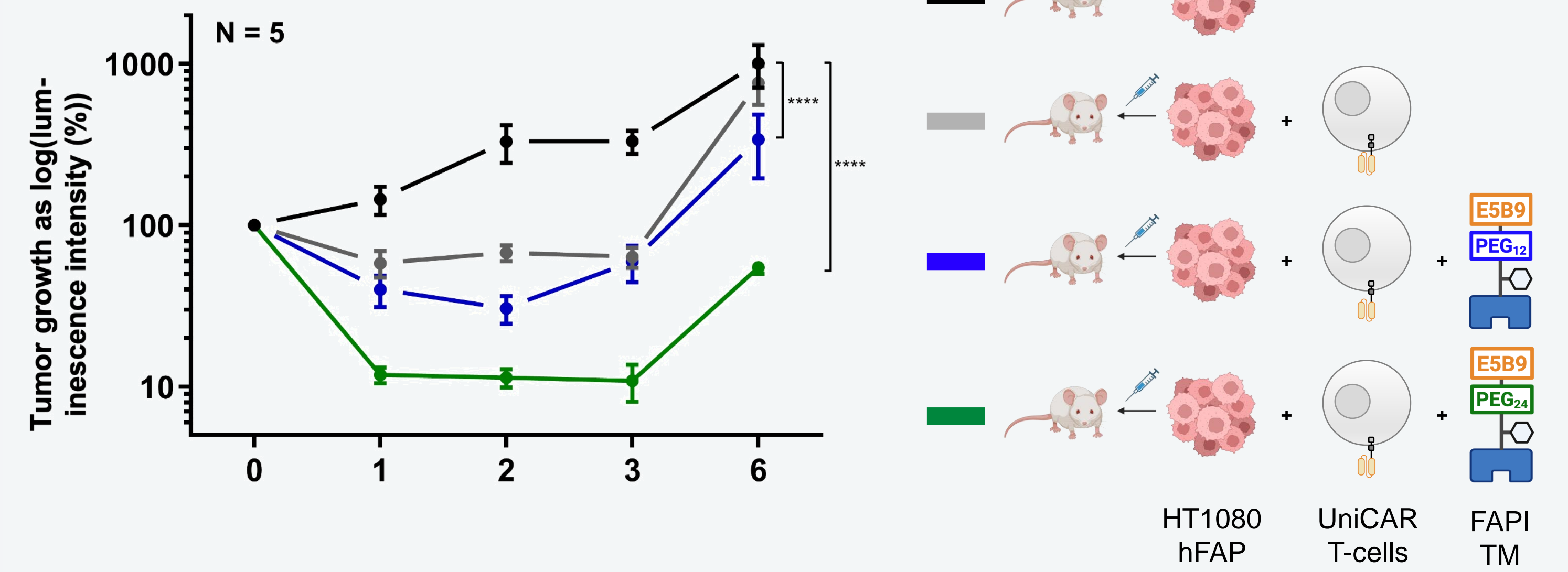


Fig. 3. Killing of HT1080 hFAP tumor cells in immunodeficient mouse model by UniCAR T-cells redirected by FAPI TMs.

## II – In vitro redirection of UniCAR T-cells by FAPI TMs

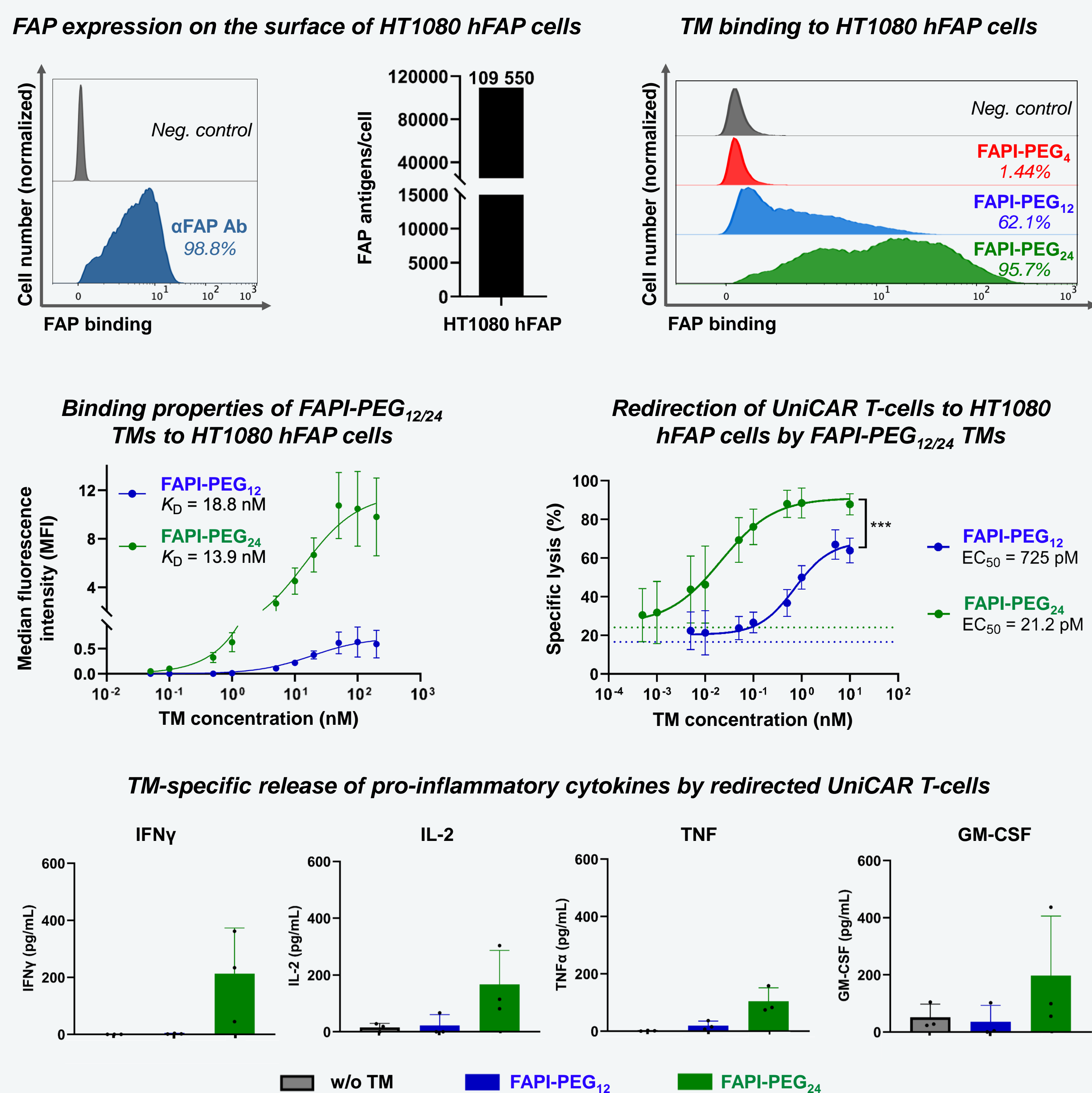


Fig. 2. Assessment of the binding properties of FAPI TMs to HT1080 hFAP cells and evaluation of cytotoxicity and pro-inflammatory cytokine production by UniCAR T-cells redirected by FAPI TMs.

## IV – Successful non-invasive diagnostic imaging

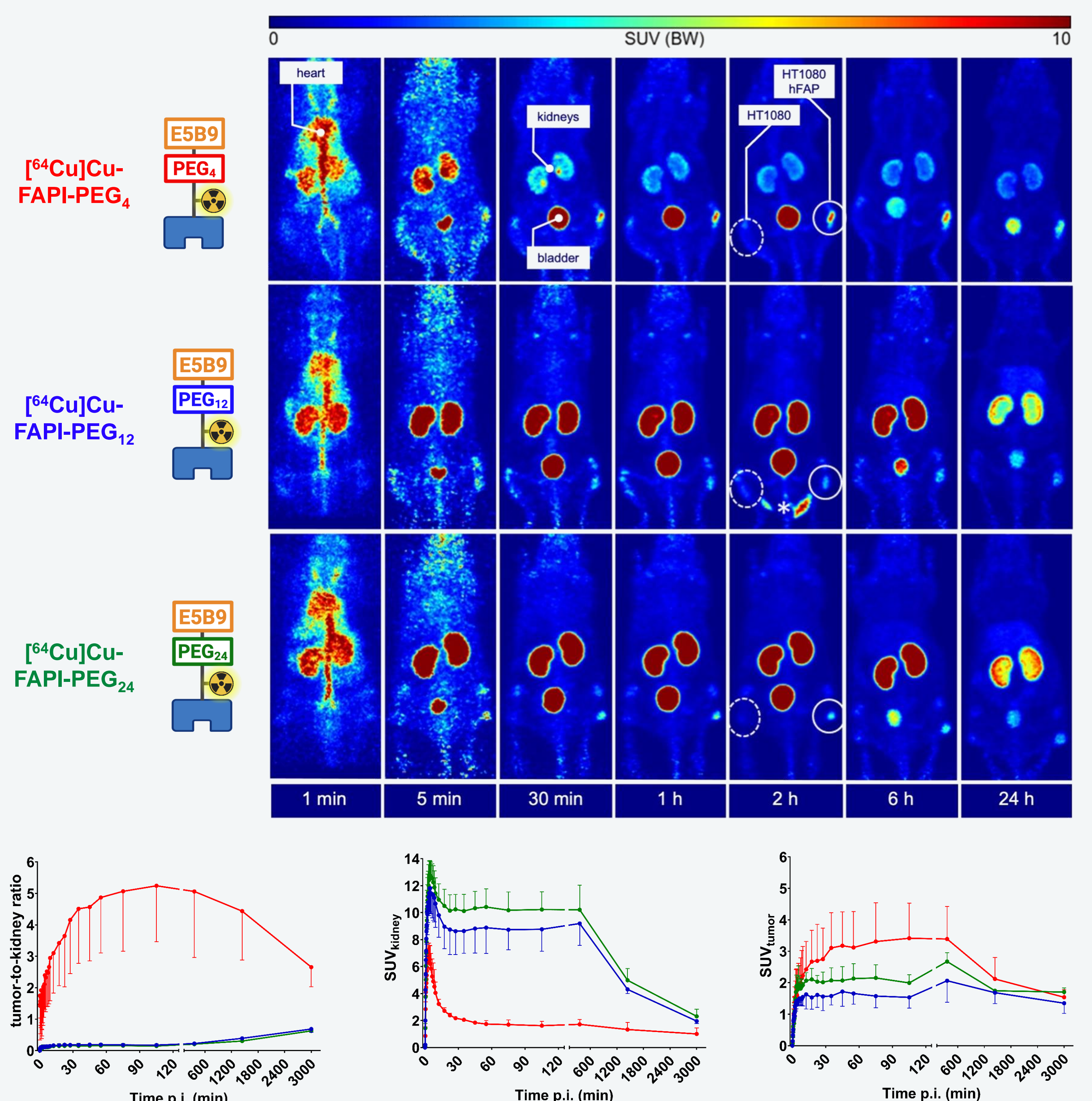


Fig. 4. Specific accumulation of copper-64 radiolabeled FAPI TMs in FAP+ tumors in vivo.