Supplementary Figure S1: Left: CEA expression by immuno-histochemistry in the LS174T tumor mouse model: homogeneous cytoplasmic antigen distribution. Right: CEA expression in one of the treated patients (colorectal cancer): heterogeneous cytoplasmic antigen distribution with polarized apical accumulation.

Supplementary Figure S2: Values of the estimated uptake ratio of the expected extravasation/penetration parameter from [8] based on LST174 data across indications in the 8 CEA+ patients.

Supplementary Figure S3: Comparison of QW versus Q2W CEA-IL2v dosing schedule. Top panel: Predicted pharmacokinetic population profile from cycle 1 to 4 at 20 mg QW (left); Predicted corresponding tumor uptake (right). Bottom panel: same two graphics for Q2W schedule (pharmacokinetic – left, and tumor uptake – right).

Supplementary Table S1: Characteristics in terms of CEA status, dose received and cancer indication of the 14 patients from the functional imaging study.

Supplemental Table S2: Model parameter estimates. For model equations, refer to supplemental material.