



**Supplementary Figure 1: Circulating tumor cell (CTC) capture strategy.** (A) Schematic drawing showing the size-based capturing principle of the Parsortix microfluidic device (*left*). Plot showing the capture efficiency of the Parsortix microfluidic device for MCF7 cells spiked in healthy blood samples (*right*). Representative images of a captured MCF7 single cell, a cell cluster (green) and a contaminant white blood cell (WBC; red) in the Parsortix microfluidic cassette (*bottom*). (B) Representative images of a captured single CTC, a CTC cluster (green) and a contaminant WBC (red) from a breast cancer patient sample. (C) Bar graph showing the number of patients in whom no CTCs, single CTCs or CTC clusters were found.