



Supplementary figure S1.

Overview of CTC research: The development of CTC capture techniques, molecular profiling methods, single-cell analysis, and CTC-derived clinical models promote the clinical application of CTCs in HCC. There is an urgent need for non-label capture and in-situ inspection methods to facilitate subsequent technology improvement analyses. For molecular profiling and single-cell analysis, the omic technologies should be combined for an in-depth understanding of CTC biology. As for preclinical models, the establishment of CDXs and CDOs in HCC still requires our continued efforts for further improvement.