

Supplementary Table 2. List of published trials to study new drugs incorporating liquid biopsy as their other measures in hepatocellular carcinoma

NCT number	Title	Status	Enrollment/design	Study details	Liquid biopsy relevance
NCT03245190	Study of Chauranib in Patients With Advanced Hepatocellular Carcinoma	Completed	27/single group, open label	Efficacy and Safety of Chauranib in Advanced Hepatocellular Carcinoma	Screening characteristics of ctDNA measurement (24months)
NCT03893695	Combination of GT90001 and Nivolumab in Patients With Metastatic Hepatocellular Carcinoma (HCC)	Active, not recruiting	20/single group, open label two stage study	Safety and tolerability of both GT90001 and nivolumab	Exploratory biomarker discovery (alterations including VEGF and TGF-β pathway)
NCT04134559	Checkpoint Inhibition In Pediatric Hepatocellular Carcinoma	Recruiting	18/single group, open label	Phase II clinical trials test the safety and effectiveness of an investigational drug	Percent change immune phenotype and circulating DNA
NCT02837029	Nivolumab and Yttrium Y 90 Glass Microspheres in Treating Patients With Advanced Liver Cancer	Completed	27/single group, open label	Phase I/II, maximum tolerated dose (MTD), that is, the highest dose of the study drug nivolumab that does not cause unacceptable side effects, for combination treatment of nivolumab and yttrium Y 90 glass microspheres	ctDNA mutation
NCT04358185	Itacitinib in Advanced Hepatocellular Carcinoma	Recruiting	25/single group, open label	A Phase Ib Study of Itacitinib, a JAK1 Inhibitor, in Advanced Hepatocellular Carcinoma	Correlation of JAK1 mutation in ctDNA
NCT03144661	An Open-Label Safety and Tolerability Study of INCB062079 in Subjects With Advanced Hepatocellular Carcinoma and Other Malignancies	Terminated	25/parallel assignment, open label	A Phase 1, Open-Label, Dose-Escalation and Expansion, Safety and Tolerability Study of INCB062079 in Subjects With Advanced Hepatocellular Carcinoma and Other Malignancies	FGFR4 pathway mutation in ctDNA
NCT03044587	Na-IRI With 5-fluorouracil (5-FU) and Leucovorin or Gemcitabine Plus Cisplatin in Advanced Biliary-tract Cancer	Active, not recruiting	93/parallel, open label	Na-IRI* With 5-fluorouracil and Leucovorin or Gemcitabine Plus Cisplatin in Advanced Biliary-tract Cancer - An Open Label, Non-comparative, Randomized, Multicenter Phase II Trial	Other outcome: exploratory biomarker analysis (ctDNA exome sequencing)

*Nanliposomal irinotecan.