

**Supplementary Table 1. Summary of ongoing clinical studies about neoadjuvant therapy in hepatocellular carcinoma**

<b>NCT number</b>	<b>Treatment arms</b>	<b>Conditions</b>	<b>Primary outcome measures</b>	<b>Secondary outcome measures</b>	<b>Phase</b>
NCT04961 138	TACE	Resectable HCC	1-year DFS	1-year OS   R0 resection rate   ORR	NA
NCT04777 942	TACE-HAIC	Resectable HCC	PFS	OS	NA
NCT04424 043	TACE-HAIC	Resectable HCC	PFS	OS	NA
NCT04181 931	TACE-HAIC	Resectable HCC with PVTT	PFS	OS	NA
NCT04025 437	RT	Resectable HCC with PVTT	OS	RFS	PHASE II   PHASE III
NCT05598	SBRT	Resectable	AEs	RFS   PFS   OS   Time to	PHASE I

060		HCC		Progress   Quality of life Intraoperative number of packed red blood cells   Toxicity of radiation therapy   Duration of surgery   Volume of intraoperative blood loss   Quality of life   AEs   Postoperative mortality rate   OS   DFS	PHASE I
NCT04587 739	SBRT	Resectable HCC	Drop-out rate	operation time, transfusion, postoperative hospital stay, and complication.	OBSERVATIO NAL
NCT06571 396	ICIs	Resectable HCC		PFS   OS	OBSERVATIO NAL
NCT06405 321	HAIC/TACE/TKIs/ICI s/RT	Resectable HCC	1-year OS	1-year PFS	OBSERVATIO NAL

NCT05471 674	Nivolumab	Resectable HCC	pCR	RFS   OS   Operation time   blood loss and transfusion requirement during surgery   complication rate   AEs	PHASE II
NCT03337 841	Pembrolizumab	Resectable HCC	1-year RFS rate	RFS   OS   ORR   Tumor markers   AEs	PHASE II
NCT05807 776	Tislelizumab or combined with Lenvatinib	Resectable HCC	MPR	1-year and 2-year DFS   Surgery delay rate   MVI rate   mOS   AEs	PHASE II
NCT05621 499	HAIC or Lenvatinib combined with Sintilimab	Resectable HCC	1-year DFS rate	MVI rate   pCR   ORR   2-year DFS rate   2-year OS rate   AEs	NA
NCT05440	Durvalumab and	Resectable	AEs	AEs   ORR   pCR   rates of	PHASE II

864	Tremelimumab in Resectable HCC	HCC		R0 resection	
NCT05389527	Pembrolizumab and Lenvatinib	Resectable HCC	MPR	pCR   ORR   R0 resection rate   DFS   1-year DFS rate   Overall survival   AEs	PHASE II
NCT04954339	Aatezolizumab plus Bevacizumab	Resectable HCC	pCR   Immunophenotypes and dynamic changes of tumor-infiltrating immune cells	R0 resection rate   PFS   RFS   Characterization of immunologic and genomic features   Dynamic changes in T-cell receptor	PHASE II
NCT04123379	Nivolumab with CCR2/5-inhibitor/Anti-IL-8	Non-small Cell Lung Cancer   Resectable HCC	MPR	Time to Surgery   AEs   Radiographic response rate   PFS   OS	PHASE II
NCT04930315	SHR-1210 combined with Apatinib	Resectable HCC	1-year RFS rate	OS   1-year OS rate   R0 resection	PHASE II

				rate   MPR   pCR   Surgical resection rate   AEs	
NCT04888 546	TQB2450 combined with Anlotinib	Resectable HCC	pCR   ORR	PFS   OS   AEs	PHASE I   PHASE II
NCT03867 370	Toripalimab in combination with Lenvatinib	Resectable HCC	pCR	ORR   R0 resection rate   Time to operation   PFS   AEs	PHASE I   PHASE II
NCT03510 871	Nivolumab plus Ipilimumab	Resectable HCC	MPR		PHASE II
NCT05908 786	Atezolizumab and Bevacizumab/ Tiragolumab and Tobemstomig	Resectable HCC	MPR	pCR   RFS   EFS   OS   2-year OS rate   3-year OS rate   ORR   Downstaged rate   R0 Resection rate   AEs   Surgical Complication rates   Post-Operative	PHASE I   PHASE II

Mortality

NCT04521 153	Camrelizumab combined with Apatinib	Resectable HCC	EFS   MPR	OS   DFS   R0 resection rate   pCR	PHASE II   PHASE III
NCT04615 143	Tislelizumab or Tislelizumab combined with Lenvatinib	Resectable HCC	DFS	ORR   AEs   MPR rate	PHASE II
NCT06524 466	SBRT Combined with Lenvatinib and Pucotenlimab	Resectable HCC with PVTT	ORR   CR	PFS   OS   AEs   perioperativ e complication rate   pCR	PHASE II
NCT06512 467	Donafenib combine with Sintilimab and HAIC	Resectable HCC	MPR	ORR   DCR   RFS   OS   R0 resection   pCR	PHASE II
NCT05171 166	HAIC/TACE plus Donafenib	Resectable HCC	PFS	OS   Time To Progression   ORR   DCR   A Es	PHASE II   PHASE III

NCT05578 430	Cadonilimab combining with TACE	Resectable HCC	MPR rate	1-year recurrence rate   ORR   IAEs	PHASE II
NCT04850 157	Tislelizumab combined with IMRT	Resectable HCC with PVTT	RFS	R0 resection rate   ORR   OS   AEs	PHASE II
NCT06664 996	Sintilimab combined SBRT	Resectable HCC with PVTT	1-year DFS rate		PHASE II
NCT06467 799	HAIC and PD-1 plus Adjuvant PD-1	Resectable HCC	RFS	ORR   pCR   OS   perioperati ve complication rate   AEs	PHASE II
NCT05185 531	Tislelizumab with SBRT	Resectable HCC	Delay to surgery   ORR   pCR   MP R   AEs	DFS   OS	PHASE I
NCT06405 061	HAIC combination with Adebrelimab and Bevacizumab	Resectable HCC	ORR	MPR   DCR   R0 resection rate   pCR   EFS   OS	PHASE II

NCT06349 317	IMRT combined with Camrelizumab and Apatinib	Resectable HCC with PVTT	1-year EFS rate	EFS   OS   DFS   R0 resection rate   ORR	PHASE II
NCT06003 673	Tislelizumab combined with TACE and Lenvatinib	Resectable HCC	RFS	ORR   pCR   MPR   R0 Resection rate   OS	PHASE IV
NCT05920 863	Lenvatinib combined with Tislelizumab and TACE	Resectable HCC	MPR	pCR   R0 resection rate   ORR   DCR   AEs   RFS	PHASE II
NCT05701 488	SIRT with Tremelimumab and Durvalumab	Resectable HCC	AEs	pCR   mOS   mPFS   CD8+/ CD4+T Cells Level   Dendritic Cells Level   Cytokines Level   Number of Participants with Surgical Complications	PHASE I



NCT05613 478	Camrelizumab combined with Apatinib and TACE	Resectable HCC	RFS	R0 resection rate   MPR   pCR   OS   EFS   1-year RFS   AEs	PHASE III
NCT05250 843	TACE/HAIC combined with Lenvatinib and Sintilimab	Resectable HCC	RFS	AEs	PHASE II   PHASE III
NCT04857 684	SBRT + Atezolizumab + Bevacizumab	Resectable HCC	AEs	ORR   R0 resection rate   CR   OS   RFS	EARLY PHASE I
NCT04850 040	Camrelizumab in Combination with Apatinib and Oxaliplatin	Resectable HCC	MPR	ORR   1-year RFS rate   DFS   Intraoperative and postoperative complications	PHASE II
NCT06569 498	TACE Combined with Lenvatinib plus Cadonilimab	Resectable HCC	MPR rate   AEs   Operative mortality   Operative complications	RFS   ORR   R0 resection rate   OS	OBSERVATIO NAL

| Reoperation rate

NCT06538 935	SBRT Combined with Adbelimumab and Apatinib	Resectable HCC	pCR   ORR	EFS   MPR   AEs	PHASE II
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NCT: National Clinical Trials; TACE transcatheter arterial chemoembolization; HAIC: hepatic artery infusion chemotherapy; RT: radiotherapy; SBRT: stereotactic body radiotherapy; HCC: hepatocellular carcinoma; PVTT: portal vein tumor thrombus; OS: overall survival; PFS: progression free survival; AEs: adverse events; DFS: disease-free survival; ORR: objective response rate; MPR: major patho-logical response; pCR: pathological complete response; RFS: recurrence free survival; DCR: disease con-trol rate; MVI: microvascular invasion; ICIs: immune checkpoint inhibitors; EFS: Event-Free Survival; NA, not available



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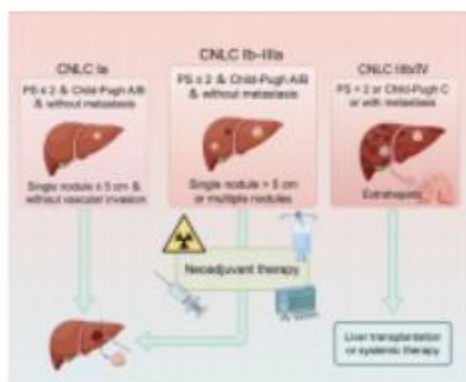
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