Combined Radiotherapy, Anti-angiogenesis and Immune Checkp oint Blockade Inhibition of Portal Vein Tumor Thrombus in Hepato cellular Carcinoma

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## Background



Hepatocellular carcinoma (HCC) with portal vein tumo r thrombus (PVTT) has an extremely poor prognosis



A previous study proved that low-dose radiotherapy (RT) could prolong the prognosis of HCC patients with PVTT



This study aims to explore whether PVTT is more sensitive than primary tumors to RT treatment

## **Methods**



- Patients were selected based on imaging diagnosis of HCC accompanied by PVTT and received combined treatment of radiotherapy, antiangiogenic drugs and immune checkpoint inhibitors, followed by hepatectomy or liver t ransplantation from January 2019 to August 2022.
- The efficacy was evaluated by **RECIST** guidelines and pathological assess ment.
- The sensitivity of tumor cells to the treatment was compared between the primary tumor (PT) and PVTT by analyzing their residual tumor and path ologic complete remission (PCR) incidence

## Results



- The size of PVTT decreased more significantly than that of the primary tu mor in the imaging study (p < 0.05).
- The residual cancer of the primary tumor was significantly higher than that of PVTT based on pathologic diagnosis (p=0.008).
- The PCR incidence of the **primary tumor (21.42%)** was significantly lower (p=0.008) than that of **PVTT(78.57%)** in the pathologic study.
- ●Imaging analysis showed that 42.86% of patients had SD and 57.14% PR for the primary tumor, whereas 50% of patients had SD and 50% PR for P VTT.

## Conclusion

PVTT is more sensitive to radiotherapy treatment than the primary tumor

This combination therapy might be an effective downstaging treatment for HCC patients with PVTT

