

Sorafenib vs nivolumab in patients with hepatocellular carcinoma

Abstract

In the friction process of two materials and in the presence of some proper lubricants, The incidence of hepatocellular carcinoma HCC rises from the past decades. Only 25% of patients with HCC are able for curative therapy e.g. resection/ablation or liver transplantation.¹ Those who are not candidates of curative therapy has limited treatment options like TACE and sorafenib, the only an FDA approved drug.²

Keywords: hepatocellular carcinoma, sorafenib, liver transplantation, tumour, nivolumab

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Abbreviations: HCC, hepatocellular carcinoma; FDA, food and drug administration; TACE, transarterial chemoembolization

Sorafenib

Sorafenib, a multikinase inhibitor is an only FDA approved molecular targeted agent for treatment of hepatocellular carcinoma that shows some survival benefits.³ In STORM study sorafenib was used to suppress recurrence of HCC but it does not revealed difference between recurrence free survivals as compared to placebo.³

In intermediate stage: clinical trials were conducted in Japan and Korea to investigate the use of sorafenib for residual tumour and tumour recurrence but founds that sorafenib fails to providing time to progression in these patients.⁴ In advanced stage of hepatocellular carcinoma sorafenib is potent 1st line agent therapy. However 2% (30% of shrinkage of tumour) with overall survival of 10-11 months were noted in various trials.⁵

Nivolumab

Nivolumab is a human IgG4 monoclonal antibody that blocks programmed death protein 1. By this re-enable immune response against tumor cells, this drug was approved for different tumors like lung, Hodgkin lymphoma, renal cell carcinoma and head and neck tumors, but recently a trial by the name of CHECKMATE 040 with 2 phase dose expansion is undertaken, which shows the promising effects in patients with HCC.⁶

In this study 1st group received 10mg/kg nivolumab intravenous infusion while 2nd group received 3.0mg/kg dose of nivolumab. All the patients had liver biopsy confirmed advanced HCC with CHILD PUGH score of <7. About 80% of patients in the study are males with median age of 68 years. 51% were non B and non C aetiology, 23% had hepatitis C and quarter had hepatitis B.⁶ Overall 68% of patients experience some level of disease control of HCC. In escalation phase 6% had complete response, 8% partial response, 50% had stable disease and 31% had progressive disease status. In expansion cohort 2% had complete response, 15% had partial response, 52% stable disease and 29% had progressive disease noted.⁶ Overall median survival was 14 months with well toleration of therapy. Only 4% of patients experience some adverse effects that include fatigue, rash and purities.⁶

Conclusion

The overall survival rate was encouraging and notable disease stabilization was observed, including in some patients who progressed on prior sorafenib therapy," they added. "The manageable safety profile was similar to what has been observed in other tumor types without any new safety signals". This study challenges the assumption that immune therapy cannot be effective for patients with a high tumor burden.

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Conflicts of interest

The authors declared that there is no conflict of interest.

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