




# BCLC 2022 Update: Still a Long Way to Prove the Efficacy of External Beam Radiation Therapy

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Recently, the Barcelona Clinic Liver Cancer (BCLC) group has updated its recommendation for the management of hepatocellular carcinoma (HCC) to emphasize personalized treatment.<sup>1</sup>

One major change in the BCLC 22 update is the incorporation of “treatment stage migration (TSM)” defined as upstaging of patient profile leading to shifting of recommendation to the option that would be considered for more advanced stage. It is surprising that in the present update, external beam radiation therapy (EBRT) has not been included in the treatment algorithm.

Various studies have been published that have demonstrated the safety and efficacy of EBRT such as stereotactic body radiation therapy (SBRT) and proton therapy in BCLC A-B HCC.<sup>2</sup> Mathew et al have demonstrated 1-, 3- and 5-year overall survival (OS) of 77.3%, 39.0%, and 24.1%, respectively, in 297 patients (pts) with 436 HCCs. BCLC-C group includes both pts with macrovascular invasion and those with extrahepatic metastasis. Studies have shown improved survival with SBRT in pts with macrovascular invasion who are not fit for other modalities of local treatment.<sup>3</sup>

The study by Collen et al in patients with synchronous oligometastatic—non small cell lung cancer (NSCLC) patients treated with SBRT had demonstrated a median overall survival (mOS) of 23 months.<sup>4</sup> Similarly, SBRT can be considered to be the primary lesion along with oligometastatic sites in HCC resulting in improved quality of life and extending survival.<sup>5</sup> Choi et al has reported mOS of 13.3 months in pts with Hep B-related BCLC-C group of patients.<sup>6</sup>

Evolving evidence has also suggested that concurrent use of immunotherapy with SBRT (SBRT-IO) has resulted in more powerful immune activation effects. In a study by Chiang et al, the overall response rate (ORR) was 87.5% (CR: 50%, PR: 37.5%) in the SBRT-IO arm as compared with 17% (CR: 2.4%, PR: 14.3%) in the TACE alone group. Similarly, the 12 months OS was 93.8% versus 80.4%, respectively.<sup>7</sup>

EBRT has been included as one of the treatment options in a selected group of population with HCC by the National Comprehensive Cancer Network (NCCN), American Association for the Study of Liver Diseases (AASLD).<sup>8,9</sup> Recently the American Society for Radiation Oncology (ASTRO) has also recommended the use of EBRT in HCC. As per guidelines, radiation therapy can be used as a first-line option in patients with early disease not amenable to other local therapies. Further ASTRO has also recommended RT to consolidate other local therapies after incomplete response or recurrence. In the BCLC-C group of the population, it can be used with palliative intent.<sup>10</sup>

In conclusion, evidence is available for the use of EBRT in all stages of BCLC, especially in patients with progressive or metastatic disease but more randomized prospective trials results are required. We do hope that in future updates of BCLC guidelines, incorporation of EBRT will be considered as a treatment option for patients with HCC.

## Authors' Contributions

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## Conflict of Interest

None declared.

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