



Editorial

The clinical management of hepatocellular carcinoma in China: Progress and challenges

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Primary liver cancer, which mainly comprises hepatocellular carcinoma (HCC), poses a significant public health burden, especially in China and other Asian countries/territories.^{1,2} The major etiology of HCC in China is chronic hepatitis B virus (HBV) infection, which confers a more malignant phenotype in terms of higher serum level of alpha-fetoprotein (AFP) and rapid progression.^{3,4} Primary prevention through universal vaccination against hepatitis B has successfully reduced HCC incidence and mortality in China.⁵ In prospective randomized clinical trials, screening and surveillance of HCC in high-risk populations identified more cases at early stages and improved the clinical outcomes compared with no surveillance.^{6,7} High-quality research from China on the diagnosis, staging, and treatment of HCC has provided important evidence for developing guidelines.⁸⁻¹⁰

In an article published in the current issue of *Clinical and Molecular Hepatology*, Dr. Xie and colleagues¹¹ from Zhongshan Hospital, Fudan University, Shanghai, China, provided

an excellent overview of the advances in the clinical management of HCC in China. This review article depicted the key points of the 2022 updated guidelines and the big picture of real-world clinical HCC management in China, while focusing on the rationale and evidence supporting the recommendations. First, the surveillance of HCC by AFP measurement and ultrasonography every six months is recommended in the high-risk population, and the diagnosis of suspected nodules can be confirmed by enhanced multiphasic CT/MRI. Second, the China Liver Cancer Staging System (CNLC) is recommended for use because it is better reflective of individual subgroup survival, facilitating allocation of therapeutic modalities. Third, the University of California San Francisco criteria for liver transplant are adopted and offer HCC patients more transplant opportunities than the Milan criteria but yield a similar post-transplant outcome. Last, this article also discussed multimodal and high-intensity anti-tumor strategies for HCC patients in real-life practices in China, such as the addition of immunotherapy-based systemic therapy to local modalities, which may improve the chance of receiving cura-

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tive therapy and long-term survival for patients with non-early-stage HCC.

Although great progress has been achieved, control and management of HCC remain significant challenges in China. First, the total burden of HCC is high, although the age-standardized incidence and mortality rates are declining.¹² The high burden is mainly due to the huge number of people living with chronic HBV infection, who carry a high risk of HCC development and require long-term antiviral therapy to reduce progression to cirrhosis and HCC. However, the diagnosis and treatment rates of chronic HBV infection are low despite the increasing trend.^{13,14} Second, due to poor adherence to long-term HCC surveillance,¹⁵ most patients with HCC are in intermediate or advanced stage, which carries a very poor survival rate since such patients are not eligible for curative therapy.¹⁶ Third, compliance with clinical HCC management guidelines must be improved. Real-life practice of HCC management is highly heterogeneous and subject to personal opinion, local expertise, or available resources rather than clinical study evidence and guideline recommendations. Last, survival disparity exists between populations with different insurance types, which may reflect the different socioeconomic statuses of the patients.¹⁷

To meet the aforementioned challenges, consensus on the primary, secondary, and tertiary prevention methods of primary liver cancer has been published in China in 2018, 2021, and 2022, respectively.¹⁸⁻²⁰ Universal infant HBV vaccination combined with a triple elimination program to prevent mother-to-child transmission of human immunodeficiency virus, syphilis, and HBV,²¹ together with large-scale diagnosis and treatment of CHB will eventually reduce the incidence of HCC. Population-based cancer screening and surveillance programs, including those for HCC, in rural areas are well-planned and pending implementation.²² HCC surveillance will increase the opportunity for curative treatment.²³ Furthermore, the advent and validation of novel serum biomarkers and models may also facilitate surveillance and identification of early-stage HCC.²⁴ Finally, the timely updating and advocating of evidence-based HCC guidelines will help improve the quality of care in real-world practice to improve clinical outcomes of HCC patients in China.

Authors' contribution

Drafting of the manuscript: Shan Shan; Critical revision of the manuscript: Jidong Jia.

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Conflicts of Interest

The authors have no conflicts to disclose.

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Abbreviations:

HCC, hepatocellular carcinoma; HBV, hepatitis B virus; AFP, alpha-fetoprotein; CNLC, China Liver Cancer Staging System

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