A New Horizon in Liver Disease

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On May 26–27, 2016, the 6th International Kyoto Liver Cancer Symposium (IKLS) was held in Kyoto in conjunction with the 89th annual meeting of the Japan Society of Ultrasonics in Medicine (JSUM), the 8th Asian Conference on Ultrasound Contrast Imaging (ACUCI), the 12th congress of the Asian Federation of Societies for Ultrasound in Medicine and Biology (AFSUMB), and the 36th annual meeting of the Japan Association of Breast and Thyroid Sonology (JABTS). The theme of this symposium was ‘A New Horizon in Liver Disease’.

The 1st IKLS was held on Awaji Island, Hyogo, in 2005, in conjunction with a single-topic conference on hepatocellular carcinoma (HCC) organized by the Japan Society of Hepatology (JSH) (Congress President: Prof. M. Kudo). The 2nd IKLS was held in Kobe in 2009, in conjunction with the 45th annual congress of the JSH (Congress President: Prof. M. Kudo). The 3rd IKLS was held in Osaka in 2011, in conjunction with the 2nd Asian Pacific Primary Liver Cancer Expert (APPLE) Meeting (Congress President: Prof. M. Kudo). The 4th IKLS was held in 2014 in Kyoto, in conjunction with the 50th annual congress of the Liver Cancer Study Group of Japan (Congress President: Prof. M. Kudo). The 5th IKLS was held in 2015 in Kyoto, in conjunction with the 6th APPLE Meeting (Congress President: Prof. M. Kudo).

All of these symposia were successful. This issue of *Oncology* includes selected articles from the 6th IKLS.

Hagiwara et al. [1] describe the outcome of combination therapy with sofosbuvir and ledipasvir for those with

chronic viral type C liver disease. They conclude that a favorable sustained viral response was achieved by sofosbuvir/ledipasvir therapy, even in elderly patients, those with liver cirrhosis, and those who underwent curative treatment for liver cancer.

Yada et al. [2] describe the influence of liver inflammation on measurements of liver stiffness in patients with autoimmune hepatitis. They conclude that the simultaneous use of shear wave and strain imaging [3], i.e., combination elastography, was useful for evaluating not only the degree of liver fibrosis, but also the degree of liver inflammation.

Kwok et al. [4] report a case of malignant transformation of hepatocellular adenoma (HCA) in a 20-year-old male; this disease is very rare in Japan. Although the factors underlying HCA development are unclear, the diagnosis of β -catenin-activated HCA was correct in this case, in which HCC with similar immunopathological features and structural atypia might have developed from β -catenin-activated HCA. To the best of their knowledge, this is the first case to be reported in Japan [5, 6], although many such cases have been reported in Western countries.

Kono et al. [7] state that low mechanical index contrast tissue harmonic imaging was superior to conventional contrast harmonic imaging [8, 9] for the delineation of hepatic nodular lesions, and might provide better sonographic images to guide radiofrequency ablation and early responses to this type of treatment.

Tochio et al. [10] report 4 cases of hepatic angiomyolipoma showing an abundance of CD68-positive cells. This was initially suggested by imaging [11], i.e., positive uptake of a contrast agent within the tumor during the postvascular (Kupffer) phase of Sonazoid-enhanced ultrasonography, and was finally confirmed pathologically by immunohistochemical staining for CD68. This is the first report that CD68-positive cells are abundant in hepatic angiomyolipoma [12].

Nishida and Kudo [13] describe the immunological microenvironment of HCC and its clinical implications. They state that the immune response to HCC is determined by the balance between tumor antigenicity and the immunological microenvironment within cancer tissues. The former is also attributed to the accumulation of mutations and aberrations in cellular signaling pathways [14]. They conclude that an immunosuppressive microenvironment within an HCC tumor may result in resistance to immunotherapies such as immune checkpoint blockade [15]; therefore, modification of the tumor microenvironment may restore normal anticancer immune responses.

Kudo [16] describes both basic research and ongoing clinical trials of immune checkpoint inhibitors with respect to HCC. The author states that the results of a phase I/II nivolumab trial are promising, with patients tolerating the treatment well. Currently, two phase III trials are ongoing: one is a first-line trial of nivolumab and the other is a second-line trial of pembrolizumab. Furthermore, combination trials of PD-1/PD-L1 and CTLA-4 in advanced HCC patients are ongoing, as are combination trials of locoregional therapy with immune checkpoint inhibitors [17]. The author notes that immune checkpoint inhibitors will open new avenues for the treatment of HCC.

Finally, I firmly believe that the articles presented herein will provide new insight into recent advances in the field of liver disease; thus, this issue will be a most valuable resource for all the readers of *Oncology*.

Disclosure Statement

The author declares no conflict of interest regarding this study.

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