Immunotherapies for cancer: An update

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The past few years have witnessed a booming development of drugs for the treatment of hepatocellular carcinoma (HCC). The paradigms has rapidly shifted from chemotherapy to molecular targeted therapy, and to immunotherapy.

Although the tumor response rate of single-agent anti-PD1 is around 15%, the quality of response appears to be superior, with many remitted metastatic tumors remain under control for a long time. This observation has encouraged resection or ablation for the residual hepatic tumors and thus brings closer of medical oncologists and other experts performing locoregional intervention. Further, peri-operative administration of immune checkpoint inhibitors (ICIs) may further enhance the host immunity against tumors. Pivotal trials are enthusiastically testing the efficacy of adjuvant or neoadjuvant ICIs in HCC. Taiwan Cooperative Oncologic Group (TCOG), a clinical trial group under National Health Research Institute (NHRI), is pioneering one of the few neo-adjuvant ICIs in HCC.

Combinations of ICIs with multi-target TKIs or selected VEGF antibody may further improve tumor response and patient survival. One of the study, recently approved by FDA for the 1L treatment of advanced HCC, tested the combination of atezolizumab (anti-PDL1) and bevacigumab (Anti-VEGF). The results are epoch-making, with tumor response rate around 30%, and median over cell survival not reached at reporting. Several large phase III clinical trials are testing combinations in the first line.