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The impact of biological features for a better prediction of posttransplant hepatocellular cancer recurrence
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Abstract

Purpose of review Morphological criteria (i.e., Milan Criteria) have been considered for a long time to be the best tool for selecting patients with hepatocellular cancer (HCC) waiting for liver transplantation (LT). In the last ten years, a refinement of the selection criteria has been observed, with the introduction of biological tumor characteristics enabling to enlarge the number of potential transplant candidates and to select LT candidates with a lower risk of posttransplant recurrence. Recent findings Several biological tumor aspects have been explored and validated in international cohorts to expand the ability to predict patients at high risk for recurrence. Alpha-fetoprotein, radiological response to locoregional treatments, and other more recently proposed markers have been principally explored. Moreover, more complex statistical approaches (i.e., deep learning) have been advocated to explore the nonlinear intercorrelations between the investigated features. Summary The addition of biological aspects to morphology has improved the ability to discriminate among high- and low-risk patients for recurrence. New prognostic algorithms based on the more sophisticated artificial intelligence approach are further improving the capability to select LT candidates with HCC. © 2022 Lippincott Williams and Wilkins. All rights reserved.

Author Keywords

alpha-fetoprotein; deep learning; des-gamma carboxy-prothrombin; hepatocellular cancer recurrence; m-Response evaluation criteria in solid tumors

Index Keywords

alpha fetoprotein, decarboxyprothrombin, tumor marker, alpha fetoprotein; algorithm, artificial intelligence, cancer patient, cancer prognosis, cancer recurrence, cancer risk, high risk patient, human, liver cancer, liver transplantation, low risk patient, postoperative period, prediction, radiology, response evaluation criteria in solid tumors, Review, adverse event, liver cell carcinoma, liver tumor, pathology, patient selection, retrospective study, tumor recurrence; alpha-Fetoproteins, Artificial Intelligence, Carcinoma, Hepatocellular, Humans, Liver Neoplasms, Liver Transplantation, Neoplasm Recurrence, Local, Patient Selection, Retrospective Studies

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