In this month’s journal, Hoehn et al. present an important analysis of patients with AJCC stage I and II hepatocellular carcinoma (HCC) from the American College of Surgeons National Cancer Data Base (NCDB) highlighting underutilization and significant disparities in receipt of potentially curative surgical therapy for HCC. Curative surgical therapies were defined in this study as resection, transplantation and ablation, which will collectively be referred to in this review as liver-directed therapy (LDT). The authors provide additional evidence of differential care for patients with HCC, namely LDT, based on race/ethnicity, insurance and socioeconomic status and facility type, and these findings testify in a timely manner to fundamental inequalities in HCC management within the US healthcare system.

A notable limitation of this study relates to the lack of pertinent data used in clinical practice to make appropriate treatment decisions, including LDT, for patients with HCC. Optimal management of HCC is complex and influenced by many interacting factors. Patient factors including performance status, medical comorbidities, substance and alcohol abuse, and treatment preferences influence recommended care. In addition, liver-related factors including the presence of advanced liver disease and portal hypertension and functional reserve impact treatment options, as do tumour-related factors including stage, size and location. In general, LDT should not be offered to patients with a poor performance status or end-stage liver disease who would not tolerate or benefit from such intervention. Further, cultural, socioeconomic and geopolitical factors influence the type of care recommended and received by patients with HCC. For this reason, patients diagnosed with HCC should be referred to a multidisciplinary care team encompassing liver surgeons, hepatologists, radiologists, pathologists and oncologists for consensus recommendations and to tailor a treatment plan. Therapeutic interventions should also be shaped by patient preference after they are educated about the pros and cons and outcomes of various treatment options.

The authors’ state that ‘patients with stage I or II HCC are curable’ and, therefore, candidates for LDT and that failure to receive one of these LDTs constitutes underutilization of effective therapy. However, many patients with early stage HCC are not curable based on advanced underlying liver disease or other comorbid conditions that render the morbidity and mortality associated with invasive LDT in excess of potential benefit with regard to survival or improvement in quality life years gained. Over 80% of HCC patients have underlying cirrhosis and may not tolerate potentially curative therapy given an inadequate liver reserve and the risk for decompensation. Hence, failure to offer LDT to these patients should be regarded as appropriate, rather than underutilized care. Unfortunately, the NCDB does not collect data on many of the factors discussed above that underlie decision-making in HCC, and, therefore, represents a weakness of this study. It is not possible to know to what extent appropriate curative care was unjustifiably or inequitably withheld owing to non-medical reasons or whether curative care was appropriately withheld because of any number of tumour and/or medical reasons, including patient preference. In contrast, disadvantaged populations are more likely to have advanced cirrhosis owing to a lack of access to screening, preventive care and the management of liver disease and comorbidities, including substance abuse. It is, therefore, important to note that the reason patients may not be candidates for potentially curative therapy, namely the severity of underlying liver disease, may also be related to race and socioeconomic status.

While rigorous, the multiple logistic regression model used in this study to analyse predictors of LDT and 30-day mortality is weakened by use of AJCC stage I and II data, which are entirely based upon tumour stage as opposed to other more clinically useful staging systems such as the widely adopted Barcelona Clinical Liver Cancer Study Group Staging system which incorporates performance status, liver function, tumour number and size. It is also curious that almost half of the patients in the NCDB with stage I and II HCC reported in the study by Hoehn had a Charlson score of zero because the presence of cirrhosis would account for at least one point in the...
Charlson score. Therefore, the data presented by Hoehn are not consistent with the demographics of HCC and suggest there may be under-reporting of cirrhosis in the NCDB.

Despite weakness in the data source, it is clear from this and other studies that utilization of potentially curative therapy for HCC is limited, and that access is inequitable. However, only a minority of patients with HCC meet the criteria to receive surgical care, as outlined by established consensus guidelines. Nevertheless, fundamental disparities are known to exist across the spectrum of HCC disease prevention, screening and management, all of which impact differential outcomes and survival. First, HCC disproportionately affects disadvantaged populations with the highest incidence rates occurring among ethnic minorities and those of low socioeconomic status who have higher rates of chronic viral hepatitis, the leading risk factor for HCC, and diminished access to consistent medical care. Given that HCC rates are rising, and the population of ethnic minorities in the US is expanding, this is an increasingly pertinent issue. Further, curative options are most often available for those with compensated liver disease diagnosed with early stage HCC, as detected by routine surveillance which is known to improve early tumour detection, delivery of curative therapy and overall survival in patients with cirrhosis. It is key to acknowledge that rates of guideline-consistent HCC surveillance are inadequate overall, and there are significant racial and socioeconomic disparities in receipt of surveillance. Hence, improving preventive care, including access to viral hepatitis therapy and cirrhosis management, will likely have a greater impact on HCC survival and outcomes for disadvantaged populations than expanding access to LDT.

Universal access to appropriate care across the spectrum of liver disease is a key element of a high-value health care system, and current disparities in access are a threat to such a value. Hoehn’s study also reveals that care for patients with HCC must be accessible in academic medical centres to be of high value. While there are no data in the NCDB that disclose why this may be the case, it is presumed that is because academic centres are more likely than community hospitals to have advanced technology (for both diagnosis and treatment) and employ more experienced clinicians to deliver patient-specific multidisciplinary therapy according to evidence-based consensus guidelines. Great strides have been made to improve outcomes and survival for patients afflicted with HCC. Unfortunately, these advances in care appear to be disproportionately shared in the United States. This paper adds fuel to a fire that will hopefully accelerate change through progressive health care reforms that translate to improved care, ranging from prevention to cure, for disadvantaged populations who bear the greatest burden of HCC.

References