Is Screening for Hepatocellular Cancer associated with a cancer related mortality benefit in non-Hepatitis B cirrhosis?

Sreepriya Balasubramanian MD MPH, Michael Hartmann, Jasdeep Boparai MD, Hien Bui PharmD, Nizar Mukhtar MD, Varun Saxena MD MAS, Brock Macdonald MD, Krishna Chai MD, Douglas Corley MD PhD, Julie Schmittdiel PhD MA.

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| Challenge | **Hepatocellular carcinoma (HCC) screening is recommended in cirrhosis by international societies for liver disease such as AASLD and EASL. While a mortality benefit for HCC screening has been demonstrated with chronic hepatitis B, there are no comparable data from randomized control trials in cirrhosis in Western populations.** |
| Existing Evidence | Support for HCC screening has been suggested in observational and cohort studies that demonstrated associations with improved outcomes with early detection while controlling for lead time bias. However, a randomized clinical trial failed to meet enrollment goals, and, notably, a United States case control study found no benefit to HCC surveillance in a predominantly male US population. |
| Target Population | Patients with non-hepatitis B cirrhosis |
| Intervention or Exposure | Screening for HCC by an imaging study in the 2-year period prior to diagnosis of HCC |
| **Outcomes/Key Findings** | **Patients with non-hepatitis B cirrhosis who died of HCC were more likely, rather than less likely, to be screened for HCC in routine clinical practice (not as part of a screening program).**  The association is clinically implausible and may reflect some residual confounding despite best efforts at matching cases to controls. Cases had higher comorbidity scores and more advanced liver disease (significant predictors of mortality), than controls. AASLD guidelines recommend HCC screening in patients with low MELD and CPT scores with good health who are likely to benefit from curative therapy. Since patients were not in a systematic screening program, sicker patients may have received more screening in the population studied (which is an association that has also been reported in other studies) and may have been ineligible for curative therapy. Treatment data was not assessed, so it is not known if patients received therapy for HCC.  Given these factors, this is not a definitive study to overturn national society recommendations or standard of care, which is to perform biannual screening for HCC in patients with non-hepatitis B cirrhosis with ultrasound and AFP. |
| **Resulting Action/Change** | **At this time: ensuring that HCC screening is guideline concordant and limited to patients who are candidates for curative therapy (Hepatic resection or liver transplantation). Childs C patients should only be screened if candidates for/already listed for liver transplantation.** |
| Additional Recommendations | Await randomized control trial data to assess if screening for HCC results in improved cancer related mortality and outcomes.  Await data that allows risk stratification of patients with non-hepatitis B cirrhosis who are a) at higher risk for cancer and b.) more likely to benefit from therapy for HCC |
| Implementation Tools | Educate AFM, GI physicians and APPs who perform HCC screening as part of a program or routine clinical care.  Amend econsult page for hepatoma screening to reflect assessment for treatment candidacy |
| Implementation Measurement | Incorporate MELD scores, CTP scores and transplant listing status into HCC screening rate measurements, when performed. |
| Reference | Figure, table, graphical abstract  doi: |