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Reply to “Abbreviated MRI to screen for HCC in patients with cirrhosis. A step forward but a long road ahead”

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To the Editor:

We thank Dr. Pavlides and colleagues for their interest in and comments on our systematic review. The authors have highlighted several important issues related to hepatocellular carcinoma (HCC) screening in the context of abbreviated magnetic resonance imaging (AMRI). First, the authors raise the concern that improved detection may not translate to improved survival in patients undergoing HCC screening. Several studies, including a few recent ones, have reported improved survival in patients with cirrhosis undergoing regular surveillance with ultrasound (US). In fact, most of these studies have highlighted that HCC screening is underutilized. The most common reasons for the underuse of screening are the lack of regular outpatients visits and screening orders for patients with known cirrhosis. Even when patients are advised routine screening, non-compliance is reported in up to 40% of the patients. Compliance with HCC screening is associated with longer adjusted OS.

Second, regarding the comparison of diagnostic performance of AMRI and US, we included studies where both the tests were used for HCC screening. However, we agree with the authors that randomized control trials and prospective studies comparing AMRI and US for HCC screening are lacking.

Third, the authors raised the issue of false-positive diagnosis with AMRI. While we agree that our systematic review did not adequately address the false positive rate of AMRI, we emphasize that the UK Biobank imaging study cited by the authors to suggest that AMRI for HCC screening may have a very high false-positive rate may be interpreted with caution. UK Biobank imaging study evaluated potentially serious incidental findings in the brain, cardiac, and body MRI and was not limited to liver MRI in
cirrhotic patients.\textsuperscript{[7]} We want to refer to a recent study that reported that one-fourth of patients underwent further diagnostic workup or biopsies due to false positive or indeterminate screening tests (alpha-fetoprotein/ US).\textsuperscript{[8]} We suggest a lower false-positive diagnosis with AMRI than US screening. In a recent study evaluating prospectively recruited HCC screening cohort, pseudolesions were identified in 53.3% of the US scans compared to 39.2% on AMRI.\textsuperscript{[9]}

Fourth, we agree with the authors that analyzing feasibility and patient acceptance of AMRI is essential. Although this analysis was not a part of our systematic review, we would like to stress that the authors’ interpretation regarding the poor patient acceptance of AMRI should be viewed cautiously. Poor compliance with standard HCC surveillance has also been reported in a few studies.\textsuperscript{[3, 4]} Thus, there is a need for improved patient awareness regarding HCC surveillance regardless of the method of surveillance.

Finally, we echo the authors’ concerns regarding potential tissue accumulation and adverse effects of gadolinium if contrast-enhanced (CE)-AMRI is used for HCC screening. Not only this, CE-AMRI is associated with greater acquisition time and cost and may hamper patient compliance. Thus, we assert that for AMRI to be safe and acceptable, non-contrast rather than CE-AMRI should be utilized.
References


