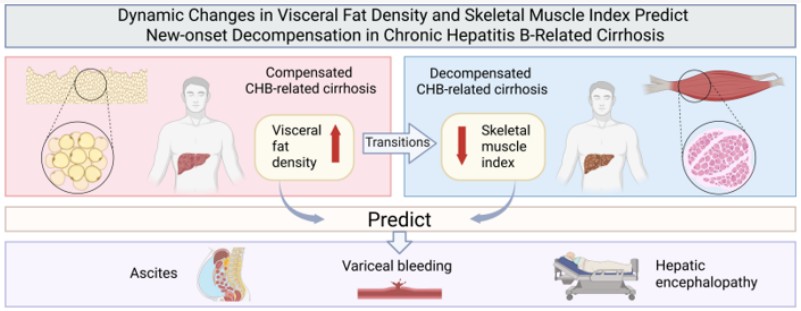
CT-measured fat and muscle changes predict severe liver complications in Chronic Hepatitis B-Related Cirrhosis

FAYETTEVILLE, GA, UNITED STATES, July 20, 2026 /EINPresswire.com/ -- Researchers tracked longitudinal alterations in adipose and muscle tissue through routine CT scans. Worsening visceral fat tissue degeneration predicts complications for compensated chronic hepatitis B-related cirrhosis, while sustained muscle loss signals risk in decompensated patients.



BODY COMPOSITION MARKERS FOR PREDICTING CHRONIC HEPATITIS B-RELATED CIRRHOSIS DECOMPENSATION ACROSS DISEASE STAGES.

Each year, millions of people live with chronic hepatitis B that slowly develops into cirrhosis. Once cirrhosis patients suffer decompensation issues including fluid buildup in the belly and dangerous esophageal bleeding, their risks of repeated hospital stays and early death rise sharply.

Clinicians mostly judge liver risk through one-time liver blood tests, which miss gradual whole-body tissue changes that drive disease deterioration. In a study published in Hepatobiliary Communications, researchers from The First Hospital of Lanzhou University uncovered clear, stage-specific tissue patterns from standard CT scans to predict upcoming severe liver complications.

“We found that visceral fat and muscle shifts carry totally different warning meaning based on how advanced a patient’s cirrhosis is,” shares co-lead author Xiaoyue Zhang. “For patients with compensated early-stage cirrhosis, gradual degeneration of visceral fat signals a significantly higher risk of complications, and for those who have already experienced severe hepatic decompensation events, persistent muscle wasting serves as the primary warning marker.”

The researchers confirmed tracking long-term tissue shifts delivers much more accurate risk alerts than isolated examinations. “Above all, these fat and muscle changes can be spotted on routine abdominal CT scans that every cirrhosis patient already undergoes, with no extra expensive or invasive testing needed,” adds Zhang.

According to senior and corresponding author Junfeng Li, the team's findings addressed an unmet clinical demand in daily liver disease management. "Past research rarely split cirrhosis patients by disease stage to sort out these tissue warning signals," explains Li. "This easy CT monitoring method allows clinicians to launch personalized nutritional and metabolic support early, effectively slowing liver damage and lifting long-term survival chances for hepatitis B cirrhosis patients."

References

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