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Background

Non-alcoholic fatty liver disease (NAFLD) has an estimated global prevalence of 25% of adults and is the second leading cause of liver transplant in the United States behind hepatitis C. We used the FIB-4 scoring system and elastography as noninvasive means of measuring hepatic fibrotic changes to identify patients for hepatology referral in order to minimize progression of disease and eventual need for transplant.

METHODS

We performed a chart review of patients at the Oklahoma State University Medical Center Internal Medicine Clinics from 2021-2023, screening patients at risk for NAFLD and excluding those with any other contributing diagnosis for hepatic fibrosis. We then calculated a FIB-4 score to stratify risk categories for hepatic fibrosis with patients at intermediate to high risk undergoing elastography or hepatology referral for further management.

Figure 1. Treatment Algorithm

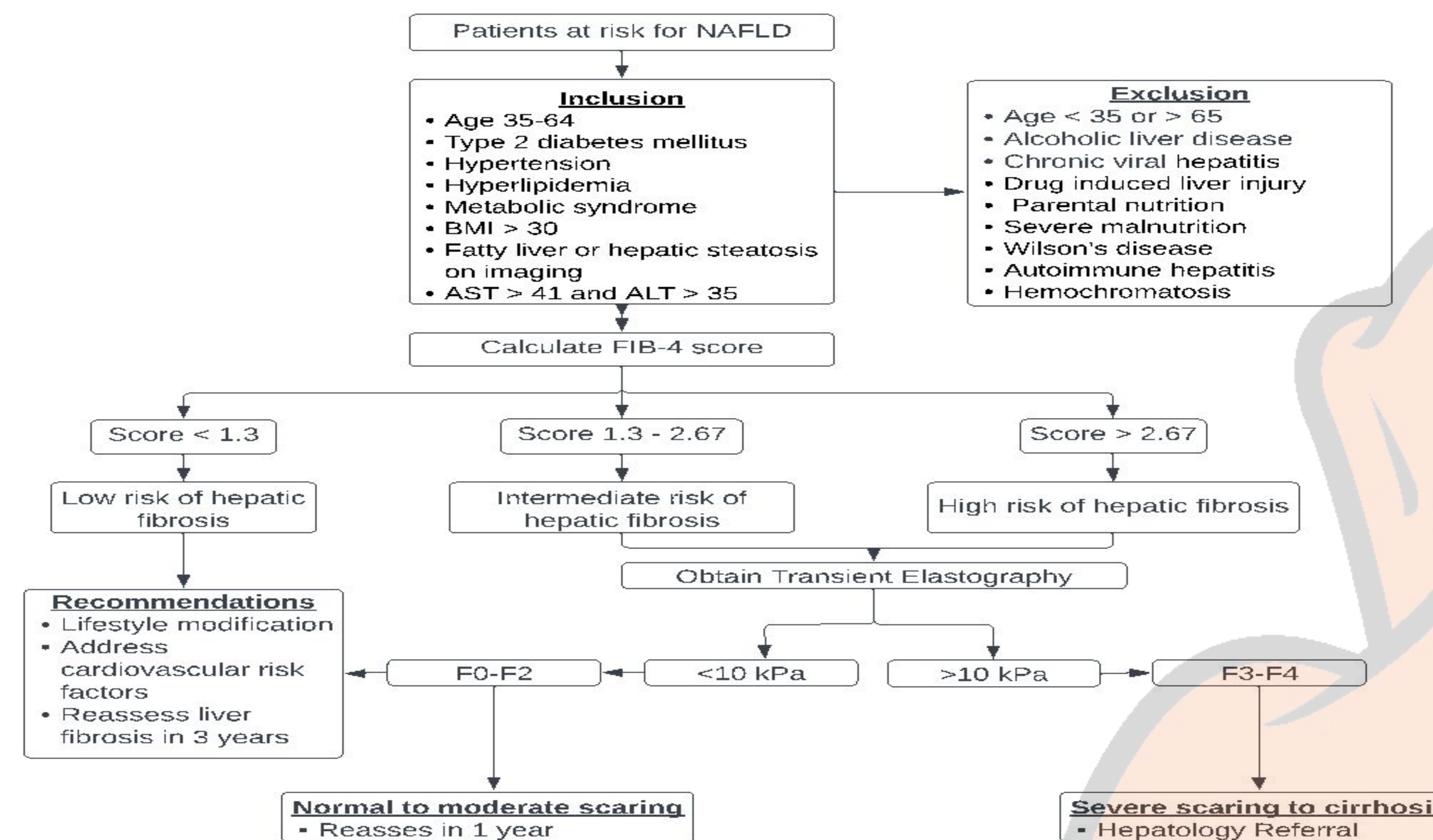
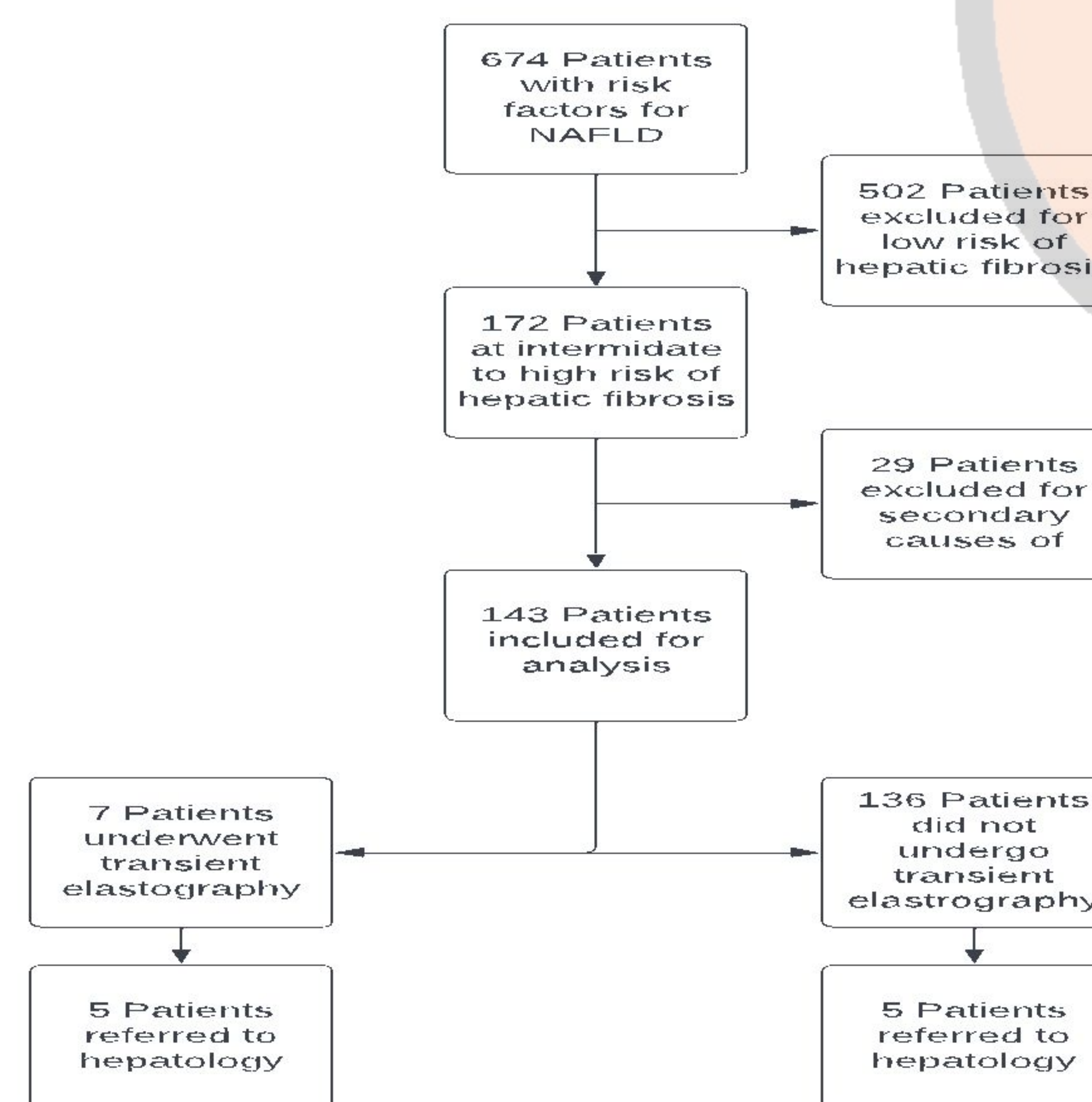


Figure 2. Study Participants



RESULTS

Our analysis included 143 patients. The average FIB-4 score was 1.98, indicating an intermediate risk of fibrosis. Of these patients, 21 (21/143, 14.7%) met criteria for being at a high risk of fibrosis. Only 7 (7/143, 4.9%) underwent elastography to measure for liver stiffness, and of these, 5 (5/7, 71.4%) were referred to hepatology. The average liver stiffness measurement was 11.9 kPa indicating severe scarring and increased risk of cirrhosis.

CONCLUSION

Our study highlights a key deficiency at identifying patients at risk for NAFLD and proceeding with imaging and referral as appropriate. This shortcoming has the potential to increase time to diagnosis and progression of disease. However, thorough chart review indicated that many of these patients underwent liver ultrasounds, were screened for secondary causes of hepatic steatosis, and started on appropriate treatments for NAFLD. Therefore, further education of resident and attending physicians is warranted to improve patient outcomes at risk of complications related to NAFLD.