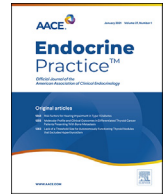




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Editorial

A Path Toward Improving Nonalcoholic Fatty Liver Disease Care Among Non-hepatologists



Nonalcoholic fatty liver disease (NAFLD) is a common chronic liver disease with a significant impact on public health and health-care utilization.¹ NAFLD, a clinically and biologically heterogeneous condition, represents a spectrum of histopathological changes with adverse hepatic and non-hepatic outcomes.² Most patients with NAFLD have simple steatosis; however, a subset of patients develop nonalcoholic steatohepatitis (NASH), a progressive form of NAFLD, with the potential of disease progression to advanced fibrosis, cirrhosis, and hepatocellular carcinoma.^{3–5}

The incidence and death rate of NAFLD is higher than other causes of chronic liver diseases, based on the analysis from the Global Burden of Disease, Injuries, and Risk Factor 2007-2017.⁶ The incidence of liver cirrhosis secondary to NASH increased by 105% from 1990 to 2017.⁷ A Markov modeling forecasts a significant increase in the incidence of decompensated cirrhosis, hepatocellular carcinoma, and liver-related mortality by 168%, 137%, and 178%, respectively, over the next decade.⁸ Strategies to tackle and appropriate management of NAFLD are essential to mitigate the disease burden.

The initial step is how to screen for and diagnose those who are at risk for NAFLD. This pivotal stage also poses a follow-up question on who should be responsible for such tasks. Factors associated with adverse outcomes in NAFLD have been studied. Clinically, the presence of type 2 diabetes mellitus (DM) and metabolic syndrome is the key driver for mortality.^{5,9} Patients with these conditions, unfortunately, do not receive their initial care by hepatologists but rather by their primary care providers and/or endocrinologists. A systemic approach to screen patients at a high risk of developing NAFLD and possible adverse outcomes is essential and should be considered in the primary care or endocrinology practice. Early diagnosis will help with the timely implementation using available strategies and triaging those who may require a referral to hepatologists.¹⁰ While the strategy seems simple, at present, there are several challenges. In the real world, the study found the diagnostic gap and under-recording of NAFLD in primary care settings.¹¹ This observation may indicate the missed opportunities or lack of confidence in making the diagnosis.¹¹ Additionally, for those with the diagnosis, the appropriate risk-stratification, i.e., screening for underlying fibrosis, is not performed, precluding those with a high risk of disease progression being referred to specialty care, such as hepatologists.¹¹ Likewise, despite the high prevalence of NAFLD among patients with type 2 DM, underlying liver disease is frequently overlooked during routine care in diabetes care clinics.^{12,13} Appropriate tests for diagnosing and staging NAFLD

are rarely performed, especially among those with relatively normal serum aminotransferase levels.¹³ Taken together, it is time for primary care providers and endocrinologists to be more vigilant in the screening and diagnosis of NAFLD. However, there is no specific guidance available on how to appropriately manage these patients in primary care and clinical endocrinology practice.

In this issue of *Endocrine Practice*, the American Association of Clinical Endocrinology (AAACE) Clinical Practice Guidelines Oversight Committee, its Board of Directors, in collaboration with the American Association for the Study of Liver Diseases, has published a *Clinical Practice Guideline for the Diagnosis and Management of Nonalcoholic Fatty Liver Disease in Primary Care and Endocrinology Clinical Settings*.¹⁴ This guideline covers essential management with question-based approaches with special emphasis on the metabolic and endocrinologic aspects of diagnosis, screening for those with high risk for disease progression and treatment for NAFLD patients. The objectives are to increase awareness and provide pragmatic and easy to implement recommendations to guide primary care providers and endocrinologists for the assessment and management of NAFLD in their practices.

In general, screening a population at risk for a specific phenotype is controversial and not routinely recommended, notably if the method is not cost-effective and it lacks effective therapies or interventions.¹⁰ However, early implementation of lifestyle intervention and weight loss strategies reverses hepatic steatosis and fibrosis.¹⁵ This guideline focuses on such interventions available to primary care providers and endocrinologists and addresses the role of diabetes treatment agents and any other agent with safety and effectiveness profiles, based on randomized clinical trials. Early identification and risk stratification of patients with NAFLD, especially the degree of hepatic fibrosis, are required to reduce downstream healthcare costs and triage unwarranted specialty care referrals.¹⁰ On the other hand, an effective screening strategy may also identify those in primary care and endocrinology settings who may benefit from an appropriate referral to hepatologists before the development of portal hypertension complications, decompensated liver disease, and hepatocellular carcinoma.¹⁰ As a front-line provider, screening for patients with high-risk NAFLD is challenging, as most are asymptomatic and advanced disease may present in patients with normal transaminases.¹⁶ The guideline recommends the use of several noninvasive techniques, serum-based biomarker scores and imaging-based quantification of liver stiffness, to screen for underlying fibrosis. The use of the FIB-4 index, based on age and routine laboratory data, can be easily implemented in primary care and endocrinology settings. A point-of-care liver stiffness measurement with transient elastography

See related White Paper by Cusi et al in this issue ([10.1016/j.eprac.2022.03.010](https://doi.org/10.1016/j.eprac.2022.03.010)).

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may not be widely available in primary care settings and, therefore, a referral to hepatology practices may be needed.¹⁷ The applications of a simple algorithm, as outlined in the guideline, to assess the risk for underlying fibrosis using serum-based markers in combination with transient elastography are cost-effective and facilitate the identification of high-risk NAFLD patients in primary care and endocrinology settings.^{17–19}

The necessity for a clinical guideline arises due to the inability of providers to easily keep up with relevant and most up-to-date studies.²⁰ In using the society-developed guideline, the providers tend to coordinate their clinical practices to align with the latest and evidence-based research findings to improve patient care.²⁰ In my perspective, as a hepatologist, this AACE guideline is very practical and easy to incorporate into routine practice in primary care and endocrinology settings. However, the level of uptake and usage of the guideline may be an obstacle. We have learned that the real-world management of NASH differs substantially, based on geographic locations, from society-developed clinical practice guideline recommendations.²¹ Such a challenge will also be true for this AACE Guideline; the emerging issues will be related to its uptake and continuing use by primary care providers and endocrinologists. The next effort should gear toward distributing this guideline to the targeted providers and developing the “feedback platforms” on its execution in the real world practice.²² The successful implementation of this AACE Guideline by the primary care providers and endocrinologists, hopefully, will deescalate the future burden of NAFLD-related morbidity and mortality.

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