



Board Members

Hillel Tobias, MD, PhD
NYU School of Medicine
Chair

Donna R. Cryer, JD
President & CEO

Andrew Cameron, MD, PhD
Johns Hopkins School
of Medicine
Secretary

Victor J. Reyes, MBA
Deloitte Consulting
Treasurer

Dennis R. Cryer, MD, FAHA
CryerHealth, LLC

Brian Harvey, MD, PhD
U.S. FDA (Ret.)

Warren Jones, MD
AHIMA Foundation

Lewis R Roberts, M.B.ChB
Mayo Clinic

Rohit Satoskar, MD
Medstar Georgetown
University Medical Center

Amita Shukla, MBA
Vitamita

Melanie Thomas, MD, MS
Duke Health

Headquarters:
4323 Westover Place, NW
Washington, DC 20016

Operations:
1875 Connecticut Avenue, NW
10th Floor
Washington, DC 20009

November 20, 2019

Institute for Clinical and Economic Review
Two Liberty Square, Ninth Floor
Boston, MA 02109

VIA Electronic Delivery

RE: Draft Scope: Obeticholic Acid for the Treatment of Nonalcoholic Steatohepatitis with Fibrosis: Effectiveness and Value

Request for Comments

Dear Sir or Madam:

The undersigned organizations appreciate the opportunity to comment on the Institute for Clinical and Economic Review (ICER) draft scope entitled “Obeticholic Acid for the Treatment of Nonalcoholic Steatohepatitis with Fibrosis: Effectiveness and Value.”

Central to understanding the impact of NASH are 8 core issues that must be considered and addressed equally within the draft scoping document:

1. Lack of public and clinician awareness of NASH
2. The intrinsic link to other diseases
3. NASH impact on quality of life
4. Unique issues at each stage of the disease
5. Challenges in diagnosing NASH
6. Risks of adverse outcomes, including liver cancer
7. Lack of treatment options
8. Liver transplantation and complications

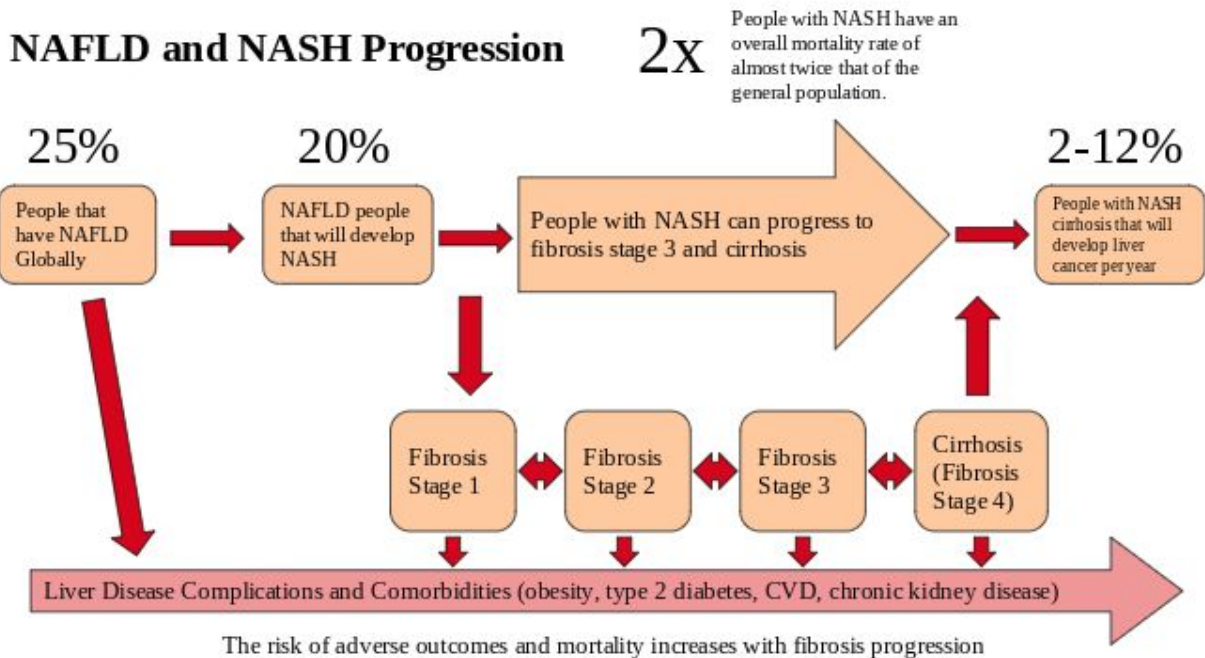
With the required length limitation we will focus this letter on 3 of the topics above.

First, there is a lack of public and clinician awareness of NASH, leading to underreported and varying prevalence.^{1,2,3} Symptoms of NASH are non-specific and often misinterpreted.^{2,4} NASH is typically only detected once it has progressed to cirrhosis or liver cancer,⁴ therefore most people live for years unaware of the damage. Existing data is derived from

people with NAFLD selected for biopsy. Given that liver biopsy is rarely performed outside of a specialist setting, this is not truly representative of the scope of the NAFLD population, and plays a role in the under-reporting of NASH in primary care settings.⁵

Second, there are major concerns with the “gold standard” for NASH diagnosis, liver biopsy. The risky, invasive, and expensive procedure can also be subject to sampling variability and should be a diagnostic test of last resort.^{2,6} Biopsy also plays a role in the high costs associated with NAFLD care, independent of metabolic comorbidities. The largest increases in health care utilization and costs in NAFLD are represented by liver biopsies and hospitalizations.⁷ Currently, acceptable and relatively accurate non-invasive tests (NIT) exist and are being developed to assess liver fibrosis.^{8,9,10,11}

Third, the risk of adverse outcomes and mortality increases with fibrosis progression. NASH patients have a seven year mortality rate of 7.9%, almost twice that of the general population.^{12,13,14,17} Presence and degree of fibrosis are main factors in determining disease outcome of NASH.^{12,13,14} The rate of disease progression is not uniform; some patients experience fast fibrosis progression while others follow a slower, or regressive, course.¹⁶ CVD is the most common cause of death, followed by cancer outside the liver and liver related complications (due to cirrhosis and liver cancer).^{12,13,15} Approximately 2–12% of NASH patients develop liver cancer annually.¹⁸ For people with end-stage liver disease and/or NASH-related liver cancer liver transplantation is the only option.¹⁹



The rise of NASH, its complications and comorbidities carry significant economic costs for health systems and society. The efficacy and side effects of OCA or any other pharmacologic intervention should be evaluated against the cost of disease progression and cost as well as efficacy of current standard of care (weight loss). Existing analyses show increasing costs with increasing severity of disease.^{17,20} Including inpatient,

outpatient, professional services, emergency department, and drug costs, the lifetime direct costs of the total U.S. NASH population is \$222.6 billion.²¹ Advanced NASH patients are estimated to be 20% of the total NASH population, but account for almost half of the cost total (\$95.4 billion).^{21 22}

Each critical point highlighted in this letter must be considered across each stage of NASH, and when looking at potential other benefits offered by the intervention not considered as part of the evidence on comparative clinical effectiveness.

We look forward to continuing to work together on a report that correctly captures the costs associated with this life threatening disease.

With appreciation and respect,

American Gastroenterological Association
Global Liver Institute

Endnotes

1. Nascimbeni F, Pais R, Bellentani S, *et al.* 2013. From NAFLD in clinical practice to answers from guidelines. *59(4)*: 859-71
2. Cook NS, Nagar SH, Jain A, *et al.* 2019. Understanding patient preferences and unmet needs in nonalcoholic steatohepatitis (NASH): Insights from a qualitative online bulletin board study. *Advances in Therapy 36(2)*: 478-91
3. Ratziu V, Cadranel J-F, Serfaty L, *et al.* 2012. A survey of patterns of practice and perception of NAFLD in a large sample of practicing gastroenterologists in France. *Journal of Hepatology 57(2)*: 376-83
4. Rinella ME. 2015. Nonalcoholic fatty liver disease: a systematic review. *Journal of the American Medicinal Association 313(22)*: 2263-73
5. Blais P, Husain N, Kramer JR, *et al.* 2015. Nonalcoholic fatty liver disease is underrecognized in the primary care setting. *The American Journal of Gastroenterology 110(1)*: 10
6. Castera L, Friedrich-Rust M, Loomba R. 2019. Noninvasive assessment of liver disease in patients with nonalcoholic fatty liver disease. *Gastroenterology 156(5)*: 1264–81.e4
7. Alina M. Allen, Holly K. Van Houten, Lindsey R. Sangaralingham, Jayant A. Talwalkar, and Rozalina G. McCoy. Healthcare Cost and Utilization in Nonalcoholic Fatty Liver Disease: Real-World Data From a Large U.S. Claims Database. *Hepatology*. American Association for the Study of Liver Diseases. *Hepatology*, VOL. 68, NO. 6, 2018
8. European Association for the Study of the Liver, European Association for the Study of Diabetes, European Association for the Study of Obesity. 2016. EASL-EASD-EASO Clinical Practice Guidelines for the management of non-alcoholic fatty liver disease. *Journal of Hepatology 9(2)*: 65-90
9. Younossi ZM, Koenig AB, Abdelatif D, *et al.* 2016. Global epidemiology of nonalcoholic fatty liver disease—meta-analytic assessment of prevalence, incidence, and outcomes. *Journal of Hepatology 64(1)*: 73-84
10. Rinella ME, Sanyal AJ. 2016. Management of NAFLD: a stage-based approach. *Nature Reviews Gastroenterology & Hepatology 13(4)*: 196
11. Alexander M, Loomis AK, Fairburn-Beech J, *et al.* 2018. Real-world data reveal a diagnostic gap in nonalcoholic fatty liver disease. *BMC medicine 16(1)*: 130
12. Angulo P, Kleiner DE, Dam-Larsen S, *et al.* 2015. Liver fibrosis, but no other histologic features, is associated with long-term outcomes of patients with nonalcoholic fatty liver disease. *Gastroenterology 149(2)*: 389-97.e10
13. Ekstedt M, Hagström H, Nasr P, *et al.* 2015. Fibrosis stage is the strongest predictor for disease-specific mortality in NAFLD after up to 33 years of follow-up. *Hepatology 61(5)*: 1547-54
14. Hagström H, Nasr P, Ekstedt M, *et al.* 2017. Fibrosis stage but not NASH predicts mortality and time to development of severe liver disease in biopsy-proven NAFLD. *Journal of Hepatology 67(6)*: 1265-73
15. Targher G, Day CP, Bonora E. 2010. Risk of cardiovascular disease in patients with nonalcoholic fatty liver disease. *New England Journal of Medicine 363(14)*: 1341-50
16. McPherson S, Hardy T, Henderson E, *et al.* 2015. Evidence of NAFLD progression from steatosis to fibrosing-steatohepatitis using paired biopsies: implications for prognosis and clinical management. *Journal of Hepatology 62(5)*: 1148-55
17. European Association for the Study of the Liver. ILC 2019 Media Kit. Available from: <https://ilc-congress.eu/wp-content/uploads/2019/04/EASL-ILC-2019-Media-Kit-Final.pdf#page=5> [Accessed 13/05/2019]
18. Anstee QM, Reeves HL, Kotsiliti E, *et al.* 2019. From NASH to HCC: current concepts and future challenges. *Nature Reviews Gastroenterology & Hepatology*: 1
19. European Association for the Study of the Liver. 2016. EASL Clinical Practice Guidelines: Liver transplantation. *Journal of Hepatology 64(2)*: 433-85
20. Younossi ZM, Blissett D, Blissett R, *et al.* 2016. The economic and clinical burden of nonalcoholic fatty liver disease in the United States and Europe. *Journal of Hepatology 64(5)*: 1577-86
21. Younossi ZM *et al.* *Hepatology*. 2019;69:564–572, Estes C *et al.* *Hepatology*. 2018

²² Estes, C., Razavi, H., Loomba, R., Younossi, Z., & Sanyal, A. J. (2018). Modeling the epidemic of nonalcoholic fatty liver disease demonstrates an exponential increase in burden of disease. *Hepatology (Baltimore, Md.)*, 67(1), 123–133. doi:10.1002/hep.29466