CDER SMALL BUSINESS AND INDUSTRY ASSISTANCE (SBIA)

Use of Biomarkers for Diagnosing and Assessing Treatment Response in Noncirrhotic NASH Trials

SEPT 18-19
VIA WEBCAST | www.fda.gov/CDERSBIA

U.S. FOOD & DRUG ADMINISTRATION

Version 11 – Updated September 18, 2023

AGENDA

All times are Eastern (EDT UTC-4)

DAY ONE – September 18

Session 1 (9:00 AM – 11:00 AM)
Considerations for Surrogate Endpoint Development and Approval Pathways

9:00 – 9:10
Welcome

Brenda Stodart, PharmD, BCGP, RAC-US
Captain, United States Public Health Service (USPHS)
Director, Small Business, and Industry Assistance (SBIA)
Division of Drug Information (DDI) | Office of Communications (OCOMM)
Center for Drugs Evaluation and Research (CDER)
Food and Drug Administration (FDA)

9:10 – 9:20
Opening Remarks

Jeffrey Siegel, MD
Office Director
Office of Drug Evaluation Sciences (ODES)
Office of New Drugs (OND)
CDER | FDA

9:20 – 9:40
Biomarkers and Surrogate Endpoints

Peter Stein, MD
Director
OND | CDER | FDA

9:40 – 9:55
Recent Example of Reasonably Likely Surrogate Endpoint Accepted by the FDA - Reduction in Amyloid Beta Plaques Measured by PET in Alzheimer's Disease

Kevin Krudys, PhD
Associate Director
Office of Neuroscience (ON)
OND | CDER | FDA

9:55 – 10:10
Lesson Learned from Makena Drug Development

Christina Chang, MD, MPH
Division Director
Office of Rare Diseases, Pediatrics, Urologic and
Reproductive Medicine (ORPURM)
Division of Urology, Obstetrics and Gynecology (DUOG)
OND | CDER | FDA

10:10 – 10:30
Approval Pathways and NASH/MASH Drug Development

George Makar, MD, MSCE
(Acting) Deputy Director
Division of Hepatology and Nutrition (DHN)
Office of Immunology and Inflammation (OII)
OND | CDER | FDA

10:30 – 10:45
Advancing Endpoint Development

Rebecca Hager, PhD
Lead Mathematical Statistician
Division of Biometrics III (DBIII)
Office of Biostatistics (OB)
Office of Translational Sciences (OTS) | CDER | FDA

10:45 – 11:00: BREAK

Session 2 (11:00 AM – 1:50 PM)
Identify Knowledge Gaps for Current Endpoints in NASH/MASH Clinical Trials

11:00 – 11:10
Introductions

Laura Lee Johnson, PhD
Division Director
DBIII | OB | OTS | CDER | FDA

11:10 – 11:25
**One Stage Reversal of Fibrosis –
How Do Hepatologists View This Change?**

Don C. Rockey, MD
Professor of Medicine
Specialties: Gastroenterology and Hepatology
College of Medicine
Medical University of South Carolina

11:25 – 11:40
**One Stage Reversal of Fibrosis –
How Do Pathologists View This Change?**

David E. Kleiner, MD, PhD
Senior Research Physician
Director, Laboratory Information System
Chief, Post-mortem Section
Laboratory of Pathology
National Cancer Institute (NCI)
National Institutes for Health (NIH)

11:40 – 11:55
NASH Resolution – How Do Hepatologists View This Change?

Naga Chalasani, MD
David W Crabb *Professor* of Gastroenterology and Hepatology
Vice President for Academic Affairs
Indiana University School of Medicine &
Indiana University Health

11:55 – 12:10
NASH Resolution – How Do Pathologists View This Change?

Cynthia Behling, MD, PhD
Pathologist
University of California, San Diego and
Pacific Rim Pathology Lab

12:10 – 12:30
The Value of Completing Clinical Benefit Trial for Validating Surrogate Endpoint – Clinician's View

Theo Heller, MD
Section Chief: Translational Hepatology Section, Liver Diseases Branch
Senior Investigator: Clinical Research Section, Liver Diseases Branch
National Institute of Diabetes and Digestive and Kidney Diseases (NIKDDK)
National Institute for Health (NIH)

12:30 – 12:45: BREAK

12:45 – 1:50
Q&A Discussion Panel

Moderators:

Naga Chalasani

and

Laura Lee Johnson, PhD
Division Director
Division of Biometrics III (DBIII)
Office of Biostatistics (OB)
Office of Translational Sciences (OTS)
CDER | FDA

Don C. Rockey, David E. Kleiner
Cynthia Behling, Theo Heller

and

Scott Friedman, MD
Dean for Therapeutic Discovery
Fishberg Professor of Medicine
Professor of Pharmacologic Sciences
Chief, Division of Liver Diseases
Icahn School of Medicine at Mount Sinai

Mary Rinella, MD
Director of the Metabolic and Fatty Liver Program
Professor of Medicine at the University of Chicago
Pritzker School of Medicine

Gregory Levin, PhD
Associate Director for Statistical Science and Policy
OB | OTS | CDER | FDA

1:50 – 2:50: LUNCH BREAK

Session 3 (2:50 PM – 4:55 PM)
Liver Biopsy: New Techniques for Interpretation of Histopathology

2:50 – 3:00
Introductions

George Makar, MD, MSCE
(Acting) Deputy Director
Division of Hepatology and Nutrition (DHN)
Office of Immunology and Inflammation (OII)
OND | CDER | FDA

3:00 – 3:15
Alternative Methods for Histologic Assessment

Zachary Goodman, MD, PhD
Director, Liver Pathology Research
Center for Liver Diseases
Inova Fairfax Hospital

3:15 – 3:30
Understanding Artificial Intelligence – Promises, Challenges, and Opportunities

Nicholas Petrick, PhD
Deputy Director
Division of Imaging, Diagnostics, and Software Reliability (DIDSR)
Office of Science and Engineering Laboratories (OSEL)
Center for Devices and Radiological Health (CDRH) | FDA

3:30 – 3:45
Strengths and Limitations of Artificial Intelligence or Machine Learning – Liver Histology Reading Methods

Cynthia D Guy, MD
Professor of Pathology, Liver Pathology *Division Chief*
Department of Pathology, Duke University Health Systems

3:45 – 4:45
Q&A Discussion Panel

Moderators:

George Makar

and

Prakash Jha MD, MPH
Medical Officer
Division of Molecular Genetics and Pathology
OHT7: Office of In Vitro Diagnostics
Office of Product Evaluation and Quality (OPEQ)
CDRH | FDA

David Kleiner, Zachary Goodman, Nicholas Petrick
Cynthia Behling, Cynthia Guy

and

Katy Wack, PhD
Vice President, Clinical Development Strategy, PathAI, Inc.
Board of Directors, Digital Pathology Association (DPA)

Dean Tai, PhD
Managing Director & *Chief Scientific Officer*
HistoIndex Pte Ltd

4:45 – 4:55
Day One Wrap Up

Frank A. Anania, MD, FACP, AGAF, FAASLD
(Acting) Director
DHN | OII | OND | CDER | FDA

4:55: ADJOURN

DAY TWO – September 19

Session 1 (9:00 AM – 9:25 AM)
Considerations for Surrogate Endpoint Development

9:00 – 9:10
Welcome Remarks

Insook Kim, PhD
Master Scientist
Division of Inflammation and Immune Pharmacology (DIIP)
Office of Clinical Pharmacology (OCP)
Office of Translational Sciences (OTS)
CDER | FDA

9:10 – 9:25
Biomarkers and Surrogate Endpoints in the Regulatory Framework

Rebecca Hager, PhD
Lead Mathematical Statistician
Division of Biometrics III (DBIII)
Office of Biostatistics (OB)
OTS | CDER | FDA

Session 2 (9:25 AM – 11:25 AM)
Imaging Based Biomarkers for Noncirrhotic NASH Clinical Trial

9:25 – 9:35
Introductions

Abbas Bandukwala, MS
Commander
United States Public Health Service (USPHS)
Science Policy Analyst
Biomarker Qualification Program
Office of New Drugs (OND) | CDER | FDA

9:35 – 9:50
Ultrasound Based Liver Stiffness

Philip Newsome MD, PhD, FRCPE
Director, Centre for Liver & GI Research
University of Birmingham

9:50 – 10:05
Magnetic Resonance Elastography (MRE)

Claude Sirlin, MD
Professor of Radiology
Liver Imaging Group
University of California, San Diego

10:05 – 10:25
Corrected T1 (cT1) MRI and MRI-PDFF

Scott B. Reeder, MD, PhD
Professor and Senior Vice Chair (Research)
Chief of Magnetic Resonance Imaging
Departments of Radiology, Medical Physics, Biomedical Engineering, Medicine, and Emergency Medicine
University of Wisconsin-Madison

10:25 – 11:25
Q&A Discussion Panel

Moderators:

Abbas Bandukwala

and

Daniel Krainak, PhD
Assistant Director
Division of Radiological Imaging & Radiation Therapy Devices
Office of Radiological Health (OHT8)
Office of Product Evaluation and Quality (OPEQ)
Center for Devices and Radiological Health (CDRH)
FDA

Phillip Newsome, Claude Sirlin, Scott Reeder

and

Rajarshi Banerjee
DPhil, MPH, MA, BM BCh, MRCP
CEO, Perspectum Ltd
Honorary Consultant Physician, Oxford University Hospitals NHS Trust

Richard L. Ehman, MD
Professor of Radiology
Blanche & Richard Erlanger Endowed *Professor of Medical Research*
Mayo Clinic

David T. Fetzer, MD
Assistant Professor, Abdominal Imaging Division
Medical Director, Ultrasound
Department of Radiology
UT Southwestern Medical Center (UTSW)

Céline Fournier, PhD
Chief Medical Officer
Echosens

Lori E Dodd, PhD
Mathematical Statistician
Clinical Trials Research Section
Biostatistics Research Branch
Division of Clinical Research
NIAID | National Institutes of Health (NIH)

11:25 – 12:25: LUNCH BREAK

Session 3 (12:25 PM – 2:25 PM)
Circulating Biomarkers for Noncirrhotic NASH Clinical Trials

12:25 – 12:35
Introductions

Tram Tran, MD, FACG, FAASLD
Physician | *Medical Officer*
Division of Hepatology and Nutrition (DHN)
Office of Immunology and Inflammation (OII)
OND | CDER | FDA

12:35 – 12:50
FIB4/APRI Score

Richard K. Sterling, MD, MSc, FACP, FACG, FAASLD, AGAF
Professor of Medicine and *Chief of Hepatology*
Chief Clinical Officer, Stravitz-Sanyal Institute for Liver Disease and Metabolic Health
Virginia Commonwealth University

12:50 – 1:05
ELF Test

Keyur Patel, MD, PhD
Professor of Medicine, University of Toronto
Staff Hepatologist, UHN Division of Gastroenterology

1:05 – 2:05
Q&A Discussion Panel

Moderators:

Tram Tran

and

Paula V. Caposino, PhD
(Acting) Deputy Director
Division of Chemistry and Toxicology Devices (DCTD)
Office of Health Technology 7 (OHT7)
Office of In Vitro Diagnostics
OPEQ | CDRH | FDA

Richard Sterling, Keyur Patel, Insook Kim

and

Naim Alkhouri, MD, FAASLD
Chief Medical Officer (CMO)
Director of the Fatty Liver Program
Hepatology, Arizona Liver Health (ALH)

Matthew Gee, MSc
Director, Regulatory Affairs
Siemens Healthcare Diagnostics Inc.

Anup Amatya, PhD
Division of Biostatistics V (DBV)
OB | OTS | CDER | FDA

2:05 – 2:25: BREAK

Session 4 (2:25 PM – 5:20 PM)
Future Considerations for NITs in Clinical Trials and Clinical Practice

2:25 – 2:35
Introduction

Frank A. Anania, MD, FACP, AGAF, FAASLD
(*Acting*) *Director*
DHN | OII | OND | CDER | FDA

2:35 – 2:50
Using NITs as Diagnostic Biomarkers and to Assess Treatment Response for Noncirrhotic NASH Trials - NIMBLE

Arun J. Sanyal, MBBS, MD
Director, Stravitz-Sanyal Institute for Liver Disease and Metabolic Health
Professor of Medicine, Physiology, and Molecular Pathology
Virginia Commonwealth University School of Medicine

2:50 – 3:05
Using NITs as Diagnostic Biomarkers and to Assess Treatment Response for Noncirrhotic NASH Trials - LITMUS

Professor Quentin M. Anstee BSc (Hons), MB BS, PhD, MRCP(UK), FRCP
Deputy-Dean of Research & Innovation – Faculty of Medical Sciences
Professor of Experimental Hepatology & *Consultant Hepatologist*
Translational & Clinical Research Institute, Faculty of Medical Sciences, Newcastle University

3:05 – 3:20
Identify Knowledge Gaps of Circulating NITs (As diagnostic biomarkers and to assess treatment response for noncirrhotic NASH trials)

Mazen Noureddin, MD, MHSc
Professor of Medicine at the Lynda K. and David M. Underwood Center for Digestive Disorders
J.C. Walter Jr. Transplant Center

3:20 – 3:35
Identify Knowledge Gaps of Imaging NITs (As diagnostic biomarkers and to assess treatment response for noncirrhotic NASH trials)

Laurent Castera, MD, PhD
Professor of Hepatology, Université Paris Cité
Head of the NASH program, Department of Hepatology
Hôpital Beaujon, Assistance Publique - Hôpitaux de Paris, Clichy, France

3:35 – 3:50
Clinical Practice - Use of NITs

Timothy R. Morgan, MD
Director, VA National Liver Disease Program
Deputy Director VA National Gastroenterology and Hepatology Program
Veterans Health Administration
Professor of Medicine, University of California

3:50 – 4:05: BREAK

4:05 – 5:05
Q&A Discussion Panel

Moderators:

Frank A. Anania

and

Veronica Miller, PhD
Director, Forum for Collaborative Research
Adjunct Professor, Division of Infectious Diseases and Vaccinology
School of Public Health
University of California Berkeley

Arun J. Sanyal, Quentin M. Anstee
Mazen Noureddin, Laurent Castera, Timothy R. Morgan

and

Laura Lee Johnson, PhD
Division Director
Division of Biometrics III (DBIII)
Office of Biostatistics (OB)
Office of Translational Sciences (OTS)

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Vlad Ratziu, MD, PhD
Professor of Hepatology, Sorbonne University
Institute for Cardiometabolism and Nutrition (ICAN)
Paris, France

5:05 – 5:20
Day Two Wrap Up

Ruby Mehta, MD
Lead Physician
DHN | CDER | FDA

5:20: ADJOURN