Brensocatib for Non-Cystic Fibrosis Bronchiectasis: Effectiveness and Value

Public Meeting — September 25, 2025

Meeting materials available at: https://icer.org/assessment/ncfb-2025

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CTAF
CALIFORNIA TECHNOLOGY ASSESSMENT FORUM

Participating Members of the CTAF

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Clinical Professor of Medicine, University of California, San Francisco

- **Felicia Cohn, PhD, HEC-C,** Bioethics Director, Kaiser Permanente Orange County
- **Robert Collyar,** Patient Advocate, Patient Advocates in Research
- **Paul Heidenreich, MD, MS,** Professor, Stanford University
- **Jeffrey Hoch, MA, PhD,** Professor, University of California, Davis
- **Jeff Klingman, MD,** Neurologist, The Permanente Medical Group
- **Sei Lee, MD, MAS,** Professor of Medicine, University of California, San Francisco
- **Kavita Nair, PhD,** Professor of Neurology and Pharmacy, University of Colorado Anschutz Medical Campus
- **Kathryn Phillips, PhD,** Professor, University of California, San Francisco
- **Rita Redberg, MD, MSc,** Professor of Medicine, University of California, San Francisco
- **Tony Sowry, MA,** National Patient Advocate Foundation

Patient Experts

Amy Leitman, JD, President, NTM Info & Research

- *45% of NTM Info and Research funding is received from health care companies.*

John Torrence, Patient Ambassador with the Bronchiectasis and NTM Association

- *The Bronchiectasis and NTM Association is a division of the COPD Foundation.*

Clinical Experts

Timothy R. Aksamit, MD, ATSF, FCCP, Professor of Medicine, Pulmonary Disease and Critical Care Medicine, Mayo Clinic

- *Dr. Aksamit is the investigator on Insmed trials for brensocatib.*

Paul Dieffenbach, MD, Associate Physician, Pulmonary and Critical Care Medicine, Brigham and Women's Hospital; Instructor in Medicine, Harvard Medical School

- *No conflicts to disclose.*

ICER Speakers

Sarah K. Emond, MPP
President & CEO

Jason H. Wasfy, MD, MPhil
Evidence Author, Associate Professor, Harvard Medical School

Dan Ollendorf, PhD, MPH
Chief Scientific Officer and Director of HTA Methods and Engagement

Kibum Kim, PhD
Lead Modeler, Assistant Professor, University of Illinois Chicago

Why are we here today?

“My life has been impacted profoundly by bronchiectasis. I no longer travel or attend events with crowds of people. Every decision is made with weighing the health risk factors and allowing time to do lung clearance…I never dreamed that this would be my life in my ‘golden years’ instead of traveling and spending time with friends and family who don’t live nearby.”

“It feels like I can’t get any air until I can get some medication into me for some days. I get a brief reprieve of several hours and I feel almost like human otherwise it is demoralizing to struggle with this condition.”

Individuals Living with NCFB

Why Are We Here Today?

- What happens the day this treatment receives FDA approval?
- Questions about:
  - What are the risks and benefits?
  - How do new treatments fit into the evolving landscape?
  - What are reasonable prices and costs to patients, the health system, and the government?
  - What lessons are being learned to guide our actions in the future?

The Impact on Rising Health Care Costs for Everyone

GALLUP®

APRIL 1, 2025

In U.S., Inability to Pay for Care, Medicine Hits New High

Rates among Hispanic, Black adults and those with lower incomes worsen markedly since 2021

Peterson-KFF
Health System Tracker

Health Spending

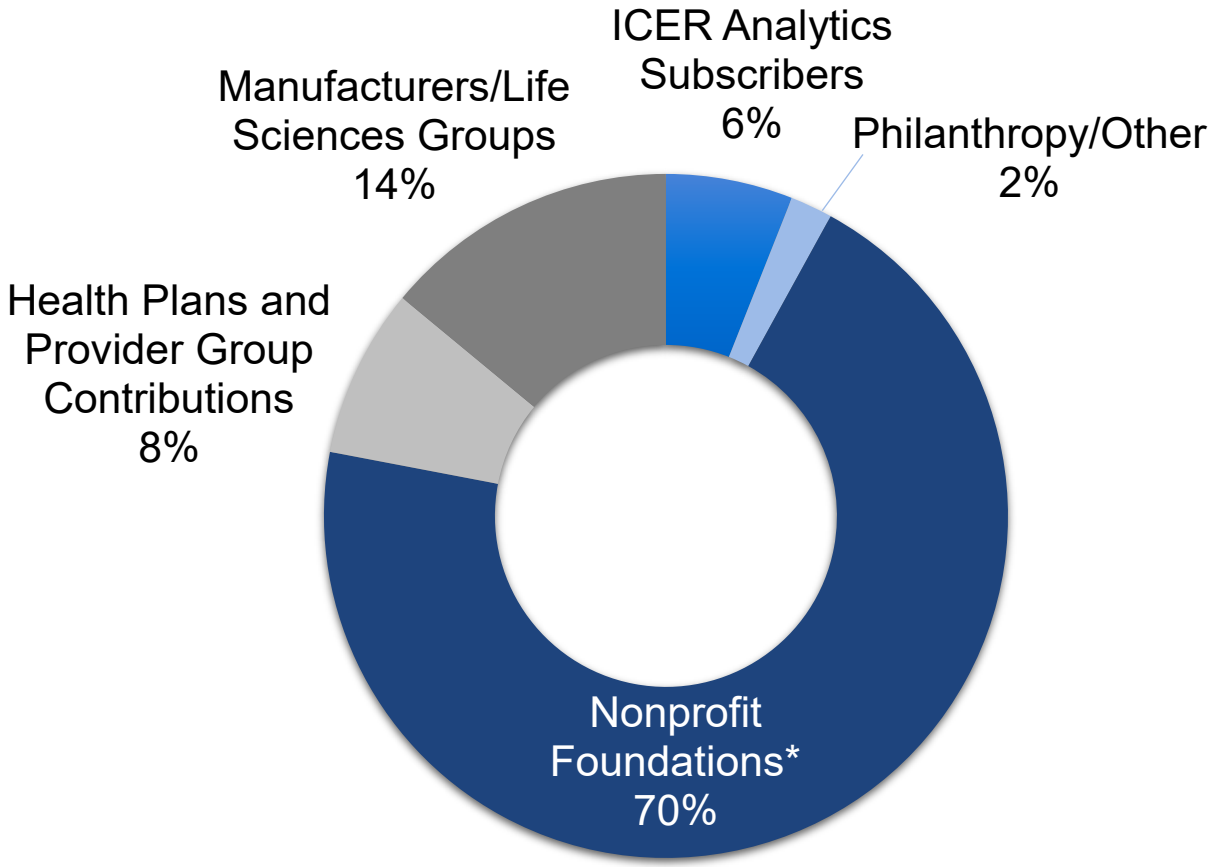
How much and why ACA Marketplace premiums are going up in 2026

Business Group on Health Survey: 9% Health Care Cost Increase for 2026

https://www.businessgrouphealth.org/newsroom/news-and-press-releases/press-releases/2026-employer-health-care-strategy-survey
https://www.healthsystemtracker.org/brief/how-much-and-why-aca-marketplace-premiums-are-going-up-in-2026/
https://news.gallup.com/poll/658148/inability-pay-care-medicine-hits-new-high.aspx

Organizational Overview

2025 Funding and Managing COIs



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ICER Policy Summit and non-report activities only

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Source: https://icer.org/who-we-are/independent-funding/sources-of-funding/

How Was the ICER Report Developed?

Guidance from patients, clinical experts, manufacturers, and other stakeholders

Evidence analysis in collaboration with Harvard University and cost-effectiveness modeling in collaboration with the University of Illinois Chicago

- **Doreen Addrizzo-Harris, MD**, Professor of Medicine NYU Grossman School of Medicine
- **Paul Dieffenbach, MD**, Instructor in Medicine, Harvard Medical School
- **Amy Leitman, JD**, President, NTM Info and Research
- **Julia F. Slejko, PhD**, Associate Professor, University of Maryland School of Pharmacy

Structured to support **CTAF** voting and policy discussion

Value Assessment Framework: Long-Term Value for Money

Agenda (PT)

9:00 AM	Meeting Convened and Opening Remarks
9:20 AM	Presentation of the Clinical Evidence
10:00 AM	Presentation of the Economic Model
10:40 AM	Public Comments and Discussion
11:00 AM	Lunch Break
11:50 AM	CTAF Deliberation and Vote
12:50 PM	Break
1:00 PM	Policy Roundtable Discussion
2:30 PM	Reflections from CTAF
3:00 PM	Meeting Adjourned

Presentation of the Clinical Evidence

Jason H. Wasfy, MD, MPhil

Associate Professor, Harvard Medical School

Heart and Vascular Institute and Mongan Institute, Mass General Brigham

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Key Team Members

Name	Title
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Belén Herce-Hagiwara	Research Assistant, Evidence Synthesis (Former)

Disclosures

Financial support provided to the JHW from the Institute for Clinical and Economic Review (ICER)

JHW has no conflicts to disclose. AM and SC are employees of ICER and have no conflicts to disclose.

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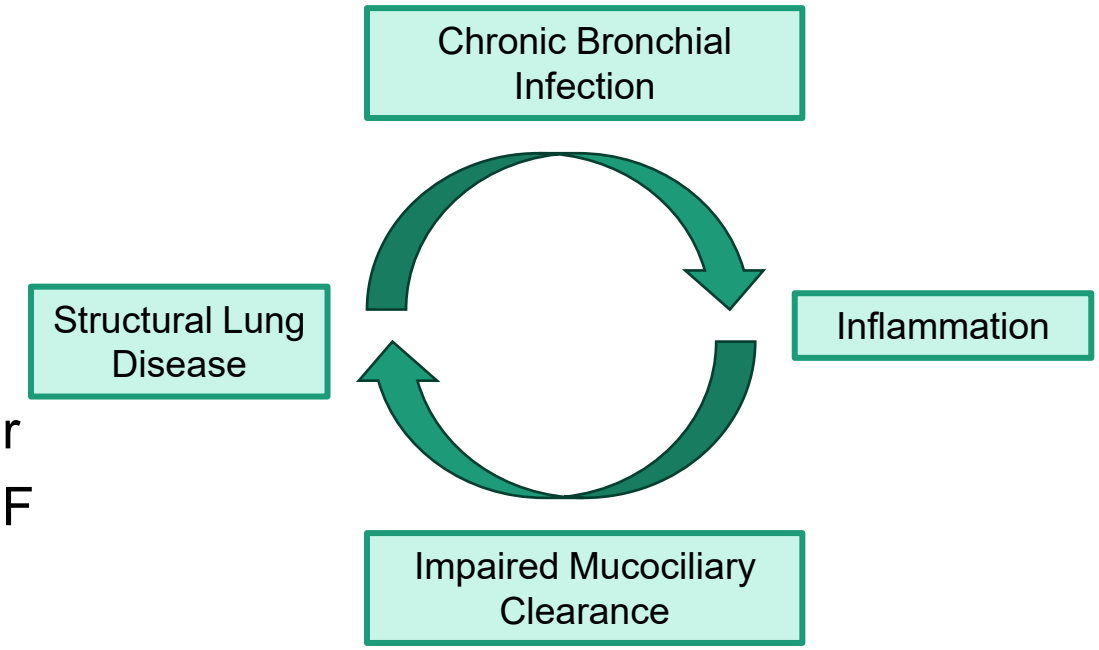
Non-cystic fibrosis bronchiectasis (NCFB)

- Chronic, progressive lung disease
- Symptoms vary but typically include daily cough, excess mucus, and shortness of breath
- Exacerbations occur, requiring escalation of antibiotics sometimes requiring inpatient care
- Bronchi enlarged (different than COPD) and similar appearance but different etiology/treatment than CF
- Affects 350-500K adults in the U.S.
- Many patients undiagnosed (CT scans are important)

Vicious cycle (or vicious vortex)



CF: cystic fibrosis, COPD: chronic obstructive pulmonary disease, CT: computed tomography, US: United States
Bronchi Visual: Radiopedia.org; Vicious Vortex Figure Adapted from: Cole 1986; Polverino 2017

NCFB Background

- Prevalence **increased** with age (markedly after age 45)
- **Two thirds** of people with NCFB have at least one exacerbation per year
- Costs in US are greater than **$14 billion per year, $2 billion for hospitalization alone, and 2-3x more than comparable countries**
- Often **idiopathic** but can be caused by prior infection/aspiration, autoimmune conditions, structural disorders of the trachea
- **Prognostic Risk Factors**: colonization (*Pseudomonas* and NTM), extent of lung involvement, symptoms, lower FEV1, higher age, lower BMI

BMI: body mass index, FEV1: forced expiratory volume in one second, NCFB: non-cystic fibrosis bronchiectasis, NTM: nontuberculous mycobacteria,

Standard of Care

Treatment Options

- Daily airway clearance using chest wall oscillators, nebulizers, physical therapy
- Prolonged inhaled and/or oral antibiotics (if 3+ exacerbations per year)
- Pulmonary rehabilitation in most severely affected
- In severe cases, surgical resection of part of lung or even transplant

Patient Community Insights

- Enormous response from the patient community:
  - Over 80 individual patient testimonials
- NCFB significantly affects many aspects of daily living, including work, home activities, and social engagement
- Symptom burden can be unpredictable from day to day
- History of bacterial colonization (e.g., P. aeruginosa, NTM) requires drastic changes to daily activities
- Specialty care and management often difficult to find

"My hope is to be able to work full time in a career that I love, and to be able to have more energy and be as active as I want to. My hope is to be able to hike again, to be able to not live in fear of a common cold, and to know that I can plan for a long life. Above all, I hope to live a life as normally as possible...I want to LIVE my life, not just survive it."

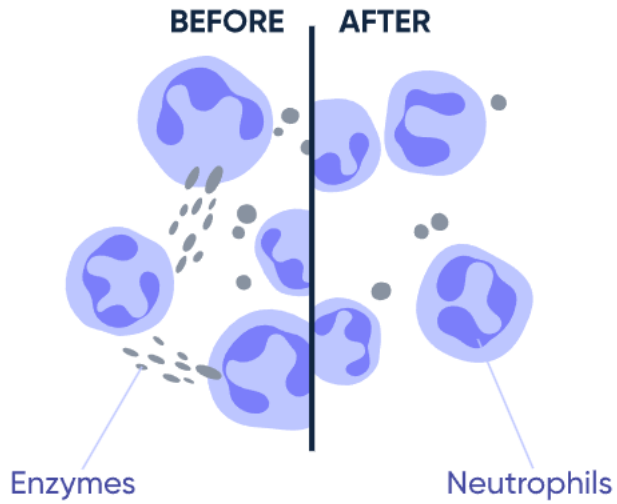
NCFB: non-cystic fibrosis bronchiectasis, NTM: nontuberculous mycobacteria

Scope of Review

Population	Adults and adolescents with non-cystic fibrosis bronchiectasis
Intervention	Brensocatib + Current Usual Care
Comparator	Current usual care alone, which may include antibiotics, mucolytics, pulmonary rehabilitation, and airway clearance devices
Outcomes	• Pulmonary Exacerbations • Quality of Life • Safety and Adverse Events

Brensocatib (Brinsupri™, Insmed, Inc.)

- Small-molecule reversible inhibitor of dipeptidyl peptidase 1 (DPP1)
  - Once-daily treatment in tablet form
- Reduces neutrophil signaling thought to be one of the drivers of NCFB inflammation as part of vicious vortex
- FDA approved on August 12, 2025



NCFB: non-cystic fibrosis bronchiectasis
Image Source: Brinsupri.com/about-brinsupri

Clinical Evidence

Evidence Overview

ASPEN Trial (N=1,721)

- 52-week phase 3 multinational RCT
- Adult participants (n=1,680) were randomized 1:1:1 and adolescent participants (n=41) were randomized 2:2:1 to 10 mg brensocatib, 25 mg brensocatib, or placebo.

Primary Endpoint	• **Annualized rate of pulmonary exacerbations**
5 Hierarchical Secondary Endpoints	• Time to first exacerbation • Percentage of patients remaining exacerbation-free • Change from baseline in forced expiratory volume in one second (FEV_1) • Annualized rate of severe exacerbations • Change from baseline in the score on the Respiratory Symptoms domain of the Quality of Life–Bronchiectasis questionnaire (QoL-B RSS)

- **Phase II WILLOW Trial** (N=256): results were similar to ASPEN, summarized in report supplement

Mg: milligram, n: number, N: total number, RCT: randomized controlled trial
Source: Chalmers et al. NEJM. 2025.

ASPEN Trial

Inclusion Criteria

- Aged between 12 – 85 with NCFB
- History of 2 pulmonary exacerbations in 12 months prior to screening (1 for adolescents)
- Must be able to produce sputum during screening (adults)
- Not receiving treatment for NTM infection
- Prohibited treatment: Immunomodulatory agents, continuous high-dose nonsteroidal anti-inflammatory drugs, and chronic systemic steroids

Baseline Characteristics

- Mean age of 60 years
- Predominantly White
- 64% Female
- Mean Bronchiectasis Severity Index (BSI) score of 7
- 29% had ≥ 3 exacerbations in prior 12 months
- 25% taking long-term antibiotics
- 58% taking inhaled glucocorticoids

NCFB: non-cystic fibrosis bronchiectasis, NTM: nontuberculous mycobacteria
Source: Chalmers et al. NEJM. 2025.

Primary Outcome: Annualized Rate of Exacerbations

Treatment with brensocatib reduced the annualized exacerbations relative to placebo

Primary Outcome		Brensocatib 10 mg	Brensocatib 25 mg	Placebo
Annualized Rate of Exacerbations	Events per year (95%CI)	1.02 (0.91, 1.13)	1.04 (0.93, 1.16)	1.29 (1.16, 1.43)
	Rate ratio (95%CI); p-value	0.79 (0.68, 0.92); p=0.004	0.81 (0.69, 0.94) p=0.005	Reference

95%CI: 95 percent confidence interval, Mg: milligram, N: total number
Source: Chalmers et al. NEJM. 2025.

Secondary Endpoint: Time to First Exacerbation

Treatment with brensocatib led to a longer time to first exacerbation compared to placebo

Outcome		Brensocatib 10 mg	Brensocatib 25 mg	Placebo
Time to First Exacerbation	Hazard ratio (95%CI); p-value	0.81 (0.70, 0.95); p=0.02	0.83 (0.70, 0.97); p=0.04	Reference

95%CI: 95 percent confidence interval, Mg: milligram, N: total number
Source: Chalmers et al. NEJM. 2025.

Secondary Endpoint: Exacerbation-free Participants

More participants who received brensocatib had no exacerbations during the treatment period than participants who received placebo

Outcome at Week 52		Brensocatib 10 mg	Brensocatib 25 mg	Placebo
Exacerbation-Free	Participants with no exacerbations during treatment period, %	48.5%	48.5%	40.3%
	Rate ratio (95%CI); p-value	1.20 (1.06, 1.37); p=0.02*	1.18 (1.04, 1.34); p=0.04*	Reference

*The reported p values are based on the odds ratios from logistic regression, as prespecified in the statistical analysis plan, because these p-values were used in the hierarchical testing

95%CI: 95 percent confidence interval, Mg: milligram, N: total number
Source: Chalmers et al. NEJM. 2025.

Secondary Endpoint: FEV1

The mean difference in FEV1 between brensocatib 25 mg and placebo was small

- MCID for change in FEV1 for NCFB have not been validated. For COPD, MCID is 100-140 mL change

Outcome at Week 52		Brensocatib 10 mg	Brensocatib 25 mg	Placebo
Post-Bronchodilator FEV_1, mL	Least Squares Mean Change from Baseline (SE)	-50 (9)	-24 (10)	-62 (9)
	Least Squares mean difference versus placebo (95%CI); p-value	11 (-14, 37) p=0.38	38 (11, 65); p=0.04	Reference

95%CI: 95 percent confidence interval, COPD: chronic obstructive pulmonary disease, FEV1: forced expiratory volume in one second, MCID: minimal clinically important difference, mg: milligram, mL: milliliter, N: total number, NCFB: non-cystic fibrosis bronchiectasis, SE: standard error
Source: Chalmers et al. NEJM. 2025.

Secondary Endpoint: Annualized Rate of Severe Exacerbations

The annualized rate of severe exacerbations was numerically lower in brensocatib groups compared to placebo

Outcome		Brensocatib 10 mg	Brensocatib 25 mg	Placebo
Annualized Rate of Severe Exacerbations	Events per year (95%CI)	0.14 (0.10, 0.18)	0.14 (0.11, 0.18)	0.19 (0.14, 0.24)
	Rate ratio (95%CI); p-value	0.74 (0.51, 1.09); NA*	0.74 (0.52, 1.06); p=0.21	Reference

* Statistical testing was not performed according to hierarchical testing procedure

95%CI: 95 percent confidence interval, Mg: milligram, N: total number
Source: Chalmers et al. NEJM. 2025.

Secondary Endpoint: Quality of Life – Bronchiectasis RSS

Modest differences in quality of life were observed between brensocatib and placebo groups

Outcome at Week 52		Brensocatib 10 mg	Brensocatib 25 mg	Placebo
QoL-B Respiratory Symptom Score	Least Square Mean Change from Baseline (SE)	6.84 (0.77)	8.58 (0.76)	4.81 (0.75)
	Least Square Mean Difference vs. placebo (95%CI); p-value	2.03 (-0.08, 4.14); NA*	3.77 (1.68, 5.85); NA*	Reference

* Statistical testing was not performed according to hierarchical testing procedure

95%CI: 95 percent confidence interval, MCID: minimal clinically important difference, Mg: milligram, N: total number, NA: not applicable, QoL-B RSS: Quality of Life- Bronchiectasis Respiratory Symptoms Scale, SE: standard error
Data Source: Chalmers et al. NEJM 2025.
MCID Source: Quittner et al. Thorax. 2015; Barker et al. Lancet. 2014

Heterogeneity of treatment effects / subgroup analysis

- No clear treatment vs placebo differences in key subgroups (study was not statistically powered to detect them):
  - FEV_1 <50%
  - BSI ≥9
  - Individuals with asthma

BSI: bronchiectasis severity index, FEV1: forced expiratory volume in one second
Source: Chalmers et al. NEJM. 2025.

Harms

ASPEN

- Similar rates of overall (77-79%) and serious AEs (17-19%) as well as AEs leading to discontinuation (4%) in brensocatib and placebo arms
- Serious Adverse Events:
  - Hyperkeratosis: 1.4 - 3.0% in brensocatib groups and <1% in placebo group
  - No detectable differences in rates of pneumonia, severe infection, or periodontitis/gingivitis
- 14 deaths in study (none deemed to be treatment-related)

AE: adverse event
Source: Chalmers et al. NEJM. 2025.

Sources of Uncertainty

Does brensocatib…

- **help less symptomatic or asymptomatic individuals?** (inclusion criteria: 2+ exacerbations per year)
- **help severely ill patients?** (e.g., FEV1 <50%, BSI ≥9)
- **have different effects in children?** (Small adolescent subgroup, n=41)
- **reduce need for long-term antibiotics and airway clearance?** (~1/4 had taken long-term antibiotics)
- **have additive benefits over time with reduction of lung tissue destruction?**
  - Both groups worsened but the 25 mg brensocatib dose was associated with less worsening (38 mL relative to placebo). A MCID would likely be 100-140 mL.
- **affect daily symptoms other than annualized exacerbations?**

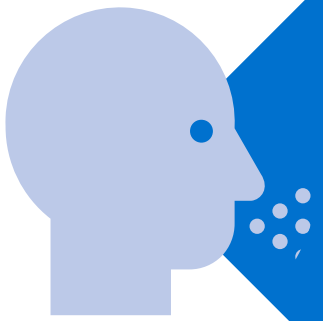
BEST: Bronchiectasis Exacerbation and Symptom Tool, BSI: bronchiectasis severity index, FEV1: forced expiratory volume in one second, MCID: minimal clinically important difference, mg: milligram, mL: milliliter

Benefits Beyond Health and Special Ethical Priorities

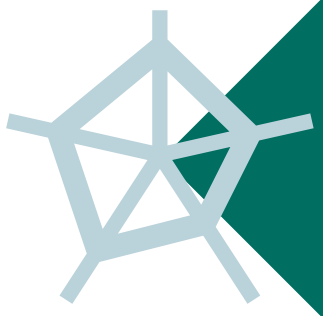
Key Points

- Brensocatib is the first disease specific treatment for NCFB; in the setting of low evidence, there are not yet clinical practice guidelines specific to the United States.
- Brensocatib has the *potential* to reduce the need for complex home care including airway clearance therapy and nebulizers.
- As an oral medication, brensocatib may be easier to administer than conventional therapies which include complex care at home that requires specialized equipment. Whether brensocatib reduces the need for such care is speculative.

Public Comments Received



To our knowledge, an MCID for FEV1 in the NCFB population has not been established and MCIDs represent individual-level meaningful change thresholds, cautioning their use to directly compare treatment groups.



We have clarified that there is no validated MCID for FEV1 change in this specific condition (although the change is far less than the MCID for COPD)

MCID threshold for QOL-B-RSS has been used variably (change from baseline vs. difference from placebo). Even if the MCID is interpreted as change from baseline and not difference from placebo, the magnitude of difference is relatively small.

COPD: chronic obstructive pulmonary disease, FEV1: forced expiratory volume in one second, MCID: minimal clinically important difference, QoL-B RSS: Quality of Life-Bronchiectasis Respiratory Symptoms Scale

Summary

Brensocatib + usual care for adults and adolescents with NCFB compared to usual care alone:

- Likely incremental or possibly substantial net benefits in well designed large trial
- Relatively small benefits in terms of daily symptoms
- Conceptual possibility of additive benefit over time
- No current evidence suggesting harm

ICER Evidence Rating for Brensocatib

Treatment	Comparator	Population	Evidence Rating
Brensocatib + Usual Care	Usual Care alone	Adolescents and adults with NCFB	**B+**

NCFB: non-cystic fibrosis bronchiectasis

Questions?

Presentation of the Economic Model

Kibum Kim, PhD

Assistant Professor, Department of Pharmacy Systems, Outcomes and Policy

University of Illinois Chicago

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Key Team Members

Name	Title
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Marina Richardson, PhD, MSc	Associate Director, HTA Methods and Health Economics, ICER
Marie Phillips, BA	Health Economics Research Assistant, ICER

Disclosures

Financial support provided to KK and DT from the Institute for Clinical and Economic Review (ICER) via University of Illinois Offices of Sponsored Program.

SK has no conflicts to disclose. MR and MP are employees of ICER and have no conflicts to disclose.

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Objective

To evaluate the lifetime cost-effectiveness of brensocatib as an add-on to usual care compared to usual care alone for the treatment of non-cystic fibrosis bronchiectasis (NCFB).

Unmet Need

Condition	Absolute evLY Shortfall	Proportional evLY Shortfall
NCFB	7.3	37%
Other Example Conditions		
COPD	8.1	54%
Multiple Sclerosis	18.9	52%
Osteoporosis	2.6	19%

COPD: chronic obstructive pulmonary disease, evLY: equal value of life years, NCFB: non-cystic fibrosis bronchiectasis

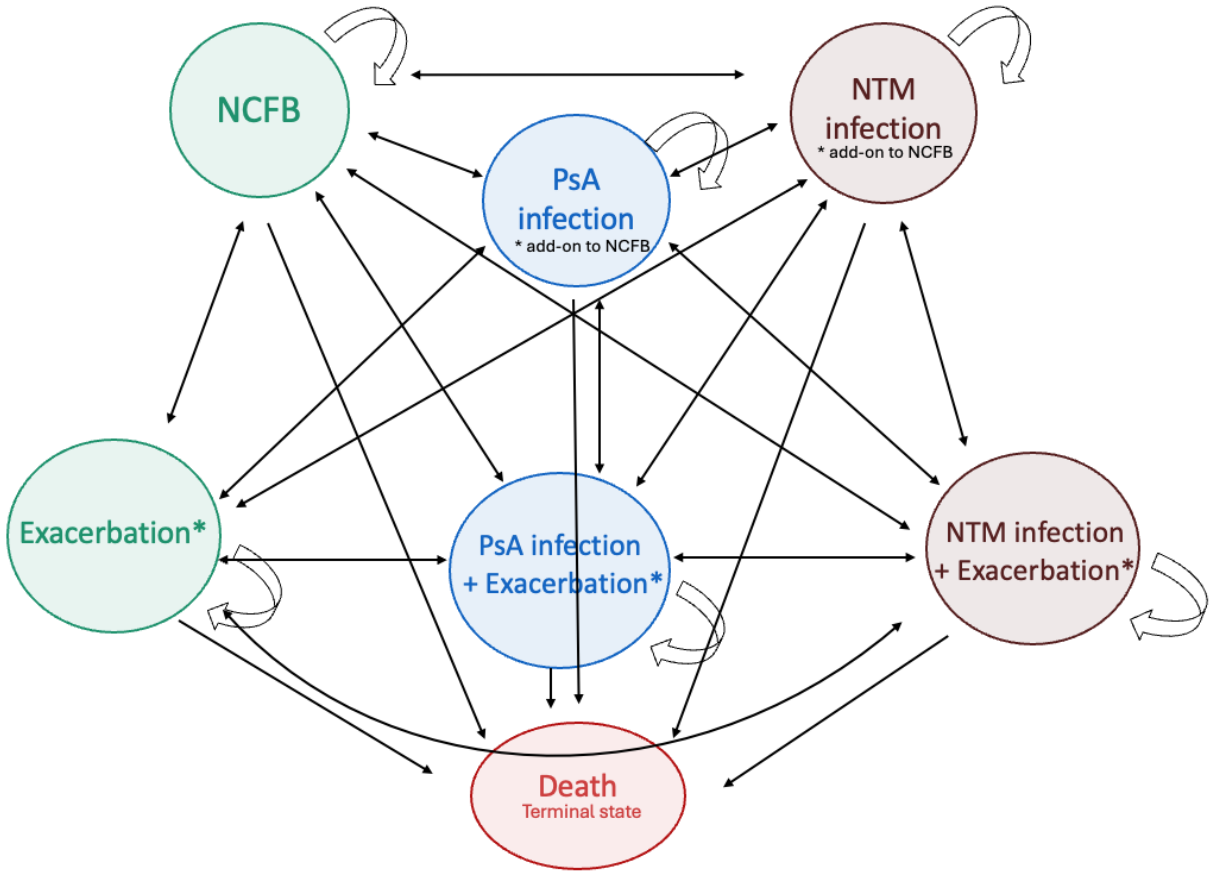
Methods in Brief

Methods Overview

Domain	Approach
Model	Markov cohort model
Setting	United States
Perspective	Health Care Sector Perspective and Modified Societal Perspective*
Time Horizon	Lifetime
Discount Rate	3% per year (costs and outcomes)
Cycle Length	One month
Primary Outcome	Cost per life year (LY) gained; Cost per quality-adjusted life year (QALY) gained; Cost per equal value life year (evLY) gained; Cost per pulmonary exacerbation (PEx) averted

Note: The results of the modified societal perspective analysis did not meet the criteria of a co-base case as described in ICER's Reference Case, The results were presented as a scenario analysis 1.

Model Schematic



Key Inputs

- Impact of Brensocatib versus Placebo on
  - Risk of NCFB Pulmonary Exacerbation (PEx)
  - Risk of chronic infection
- Impact of chronic infection on the risk of NCFB exacerbation
- Impact of chronic infection and/or exacerbation on mortality rate

- Costs and Utilities of each health state

Note: Each exacerbation health state includes a proportional individual who experienced hospital admission

Model Cohort Characteristics

- Target Population
  - Adolescents and adults with NCFB treated with brensocatib plus usual care (“Brensocatib”) compared with usual care alone (“Usual Care”)
  - Patients who had at least two PEx in the year prior to beginning treatment with Brensocatib (or Usual Care)

	Value	Primary Source
Mean Age, Years	59.8	Chalmers, 2024
Female, %	63.5%	
≥3 Exacerbations in Prior 12 Months, %	29.2%	
Pseudomonas Aeruginosa Positive, %	35.0%	

NCFB: non-cystic fibrosis bronchiectasis PEx: pulmonary exacerbations

Key Assumptions

1. The risk of PEx increases with PsA or NTM infections

- Clinical symptoms of NCFB are likely to worsen with chronic infection. Therefore, patients with PsA and NTM have a higher chance of having PEx.

2. Brensocatib efficacy data were based on the ASPEN trial 25 mg once daily arm.

- Brensocatib 25 mg slowed the loss of lung function compared with placebo, while 10 mg dose did not.

3. Adverse events impact treatment discontinuation, without impact on costs or outcomes were modeled.

- The proportion of individuals who experienced adverse events was similar between the treatment and placebo groups.

NCFB: non-cystic fibrosis bronchiectasis, NTM: nontuberculous mycobacteria, PEx: pulmonary exacerbations, PsA: Pseudomonas Aeruginosa

Key Assumptions

4. Acute medical attention for PEx would not continue for more than one cycle for most of the patients.

- Based on expert opinion, we assumed that usual care with or without brensocatib would suffice for 90% of those with PEx.

5. The proportion of severe PEx (hospitalization) out of all PEx is similar between Brensocatib and Usual Care, while the overall rate of PEx is lower with brensocatib.

- The annualized rate of severe PEx was lower with Brensocatib than Usual Care but overlapping confidence intervals indicate uncertainty.

Key Model Inputs: Clinical Inputs

Characteristic	Input	Source
Incidence of PEx (1 Month)*	0.0870	Chalmers, 2025
Risk Ratio for PEx	0.81	Chalmers, 2025
Proportion of Severe PEx out of all Exacerbations	0.147‡	Chalmers, 2025
Mortality Ratio, NCFB with PEx vs NCFB	1.16	Chalmers, 2018
Incidence of PsA Infection per Cycle	0.0025	Aksamit, 2024
Incidence of NTM Infection per Cycle	0.0034	Aksamit, 2024
Risk Ratio for PsA or NTM Infection	0.79†	Chalmers, 2025

Note: Risk ratios were calculated for and applied as a comparative effectiveness input for Brensocatib vs. Usual Care unless otherwise specified
*The 1-month probabilities were calculated from the 1-year probability available from ASPEN trial report
†Derived from the rates of infection or infestation. The overall infection rates of 4.0% for brensocatib 25 mg versus 5.2% for placebo.
‡The proportion and risk ratio of severe exacerbations were derived from annualized rates of severe exacerbations (0.14 for brensocatib 25 mg vs. 0.19 for placebo) relative to annualized rates of all exacerbations (1.04 for brensocatib 25 mg vs. 1.29 for placebo).

Key Model Inputs: Health State Utilities

Health State	Input	Source
NCFB	0.719	Chalmers, 2025
NCFB with PEx	0.545	Chalmers, 2025
NCFB with PsA Infection	0.503	Chalmers, 2014
NCFB with NTM Infection	0.503	Chalmers, 2021; Jiang, 2021; Expert Opinion
Severe PEx*	0.493	Camac, 2021

*Severe PEx is a transient state. Utility input was calculated from COPD exacerbation and hospital admission.

Key Model Inputs: Costs

Costs	Input	Source
Monthly Cost of Brensocatib	$5,133 ($61,600 annually)	Gardner, 2025
Monthly Usual Care Cost (non-exacerbated state)	$131	Tkacz, 2024
Cost of PEx, excluding Hospital Admission Costs	$1,324	
Cost of Hospital Admission for Severe PEx	$24,538	
Monthly Cost of PsA Infection*	$3,097	Blanchette, 2017
Monthly Cost of NTM Infection*	$4,457	Marras, 2018

*Costs of PsA infection and NTM infection is not inclusive of exacerbation costs. Costs of exacerbation were applied on top of PsA and NTM infection costs for the exacerbation + chronic infection states.

Results

Base-Case Results

Intervention	Total Cost*	QALYs	evLYs	Life Years	Number of PEx†
Brensocatib	$1,153,000	9.32	9.33	13.72	14.69
Usual Care	$367,000	9.18	9.18	13.67	17.73

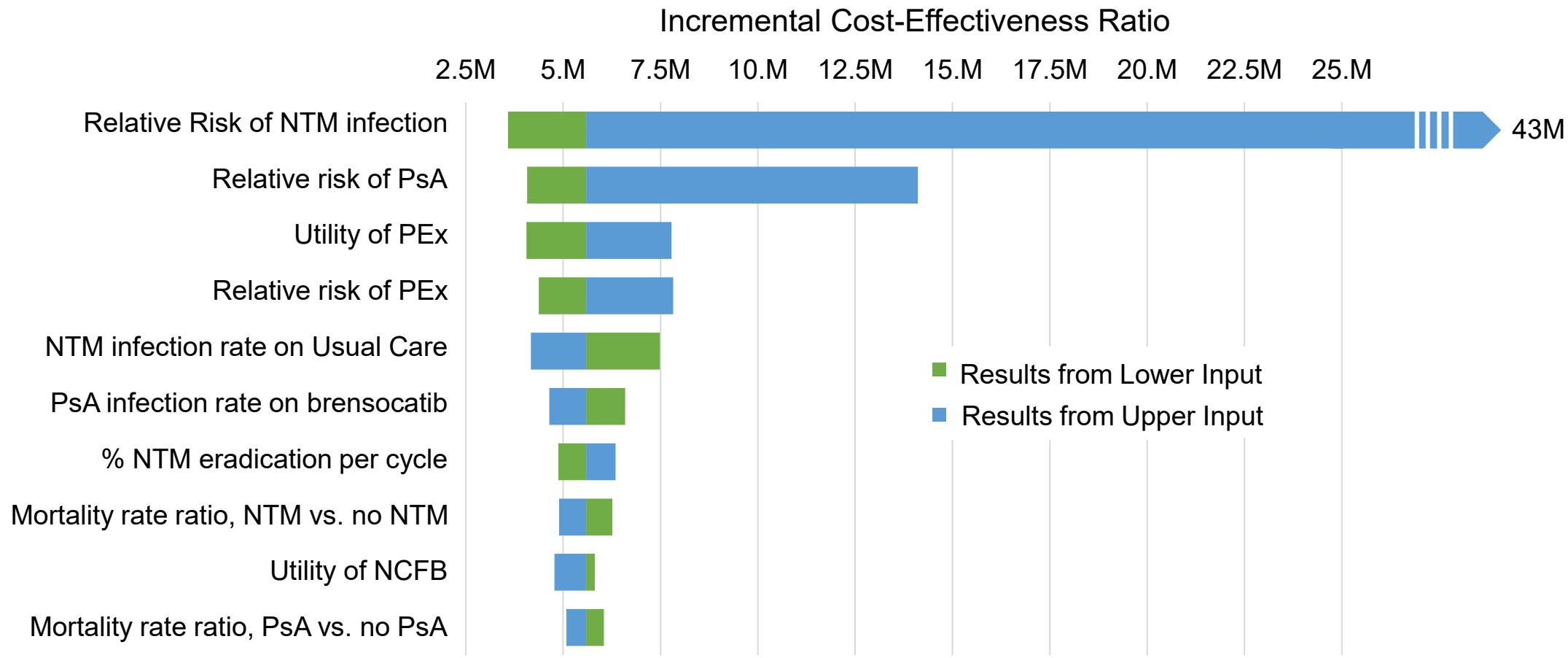
*Total costs include treatment (brensocatib + usual care) and direct medical costs other than the treatment cost.
†Number PEx was discounted at an annual rate of 3%. The undiscounted life-time number of exacerbations for Brensocatib and Usual Care strategies were 20.12 and 24.27, respectively.

Base-Case Incremental Cost-Effectiveness Ratio Results

Drug	Cost per QALY Gained	Cost per evLY Gained	Cost per LY Gained	Cost per PEx Avoided
Brensocatib + Usual Care vs. Usual Care alone	$5,592,000	$5,249,000	$14,210,000	$258,000

evLYs: equal value of life years, LY: life years; QALYs: quality-adjusted life years, PEx: Pulmonary Exacerbation

One Way Sensitivity Analyses: Tornado Diagram



Note: Risk ratios were applied as a comparative effectiveness input for Brensocatib vs. Usual Care unless otherwise specified

NCFB: non-cystic fibrosis bronchiectasis, NTM: non-tuberculous mycobacteria, PEx: pulmonary exacerbation
PsA: Pseudomonas Aeruginosa, VS: versus

Probabilistic Sensitivity Analysis

	Cost-Effective at $50,000 per QALY or evLY Gained	Cost-Effective at $100,000 per QALY or evLY Gained	Cost-Effective at $150,000 per QALY or evLY Gained	Cost-Effective at $200,000 per QALY or evLY Gained
Brensocatib + Usual Care vs. Usual Care alone	0%	0%	0%	0%

evLY: equal value life year, QALY: quality-adjusted life year

Scenario Analyses

	Cost per QALY Gained	Cost per evLY Gained
Base-Case	$5,592,000	$5,249,000
Modified Societal Perspective	$5,522,000	$5,182,000
Impact of Brensocatib on Decline in Lung Function	$1,634,000	$1,601,000
Severe Real-World Case Scenario	$4,023,000	$3,688,000

evLY: equal value of life years, QALY: quality-adjusted life year

Health Benefit Price Benchmark (HBPB)

Annual Price Benchmark for Brensocatib

Intervention	Annual WAC	Annual Price at $100,000 per QALY Gained Threshold	Annual Price at $150,000 per evLY Gained Threshold	Range of Discount from WAC to Reach Threshold Prices
Brensocatib	$88,000	$3,100	$3,700	95.9% - 96.4%

evLYs: equal value of life years, QALY: quality-adjusted life year; WAC: wholesale acquisition cost

Limitations

- Limited clinical efficacy/effectiveness data
- No NCFB-specific mortality rates
- Lack of data on caregiver disutility of loss of productivity to discuss the differential impact on NCFB symptoms between Brensocatib and Usual Care

Comments Received

- The model used cost of care for PEx that underrepresents disease burden.
- The impact of PEx on caregiver's loss of productivity was not accounted for in the model.
- Heterogeneous real-world outcomes, such as effectiveness among severe real-world cases and outcomes among elderly population, were not fully captured and projected.

Conclusions

- Treatment with Brensocatib resulted in:
  - improvements in quality of life through a reduction in the number of PEx and chronic PsA and NTM infections
  - higher costs primarily due to the cost of the treatment, compared to usual care alone
- At a net price of $61,600 annually, brensocatib would not meet commonly used cost-effectiveness thresholds

NTM: Non-tuberculous mycobacteria, PEx: Pulmonary Exacerbation; PsA: Pseudomonas Aeruginosa

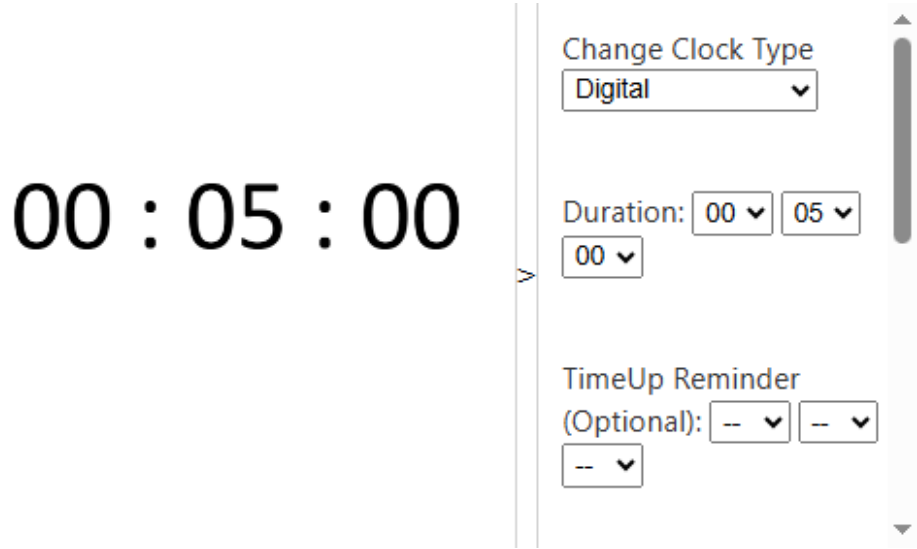
Questions?

Public Comment and Discussion

Mary Kitlowski, BA, President and Founder Running On Air

Conflicts of Interest:

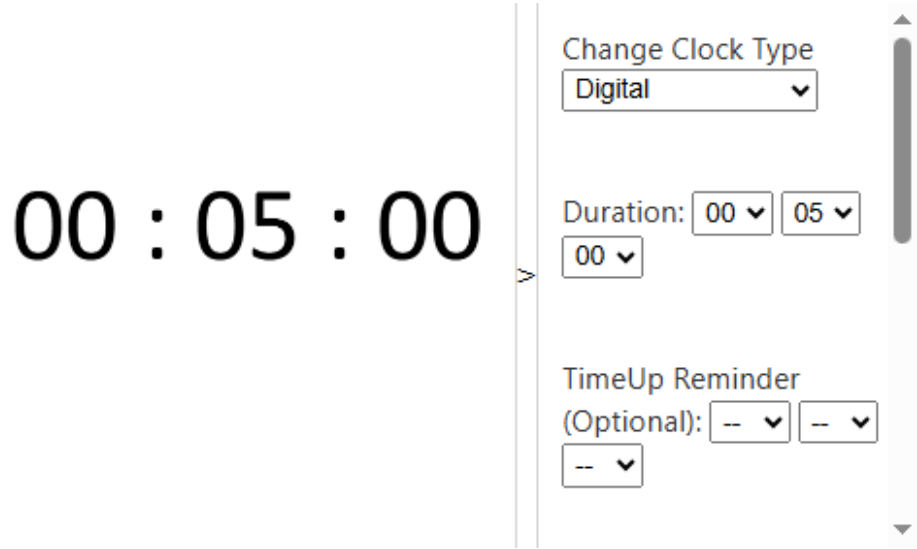
- *80% of Running on Air's annual funding comes from Insmed, Boehringer Ingelheim, Inogen.*



Amy Leitman, JD, President
NTM Info & Research

Conflicts of Interest:

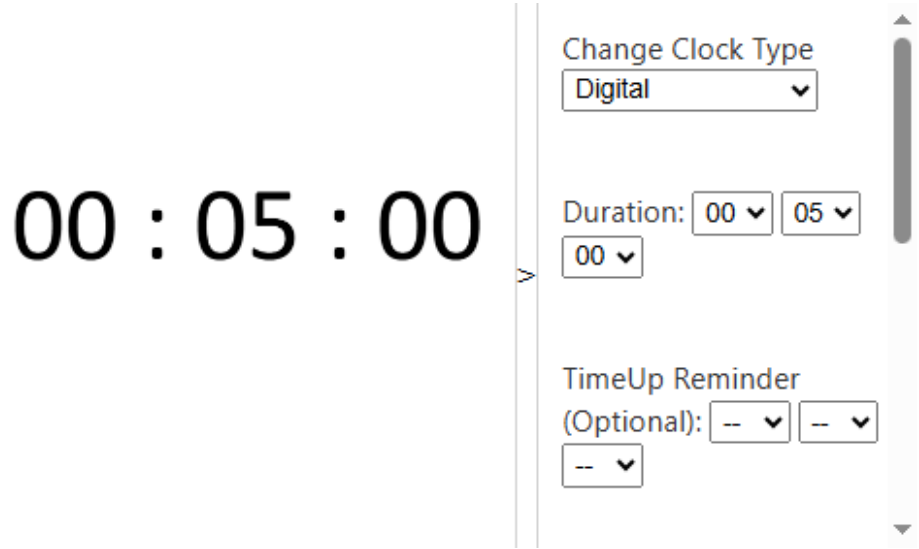
- *45% of NTM Info and Research funding is received from health care companies.*



Elisha Malanga, BS, Executive Director, Bronchiectasis and NTM Association & Chief Corporate Relations Officer COPD Foundation

Conflicts of Interest:

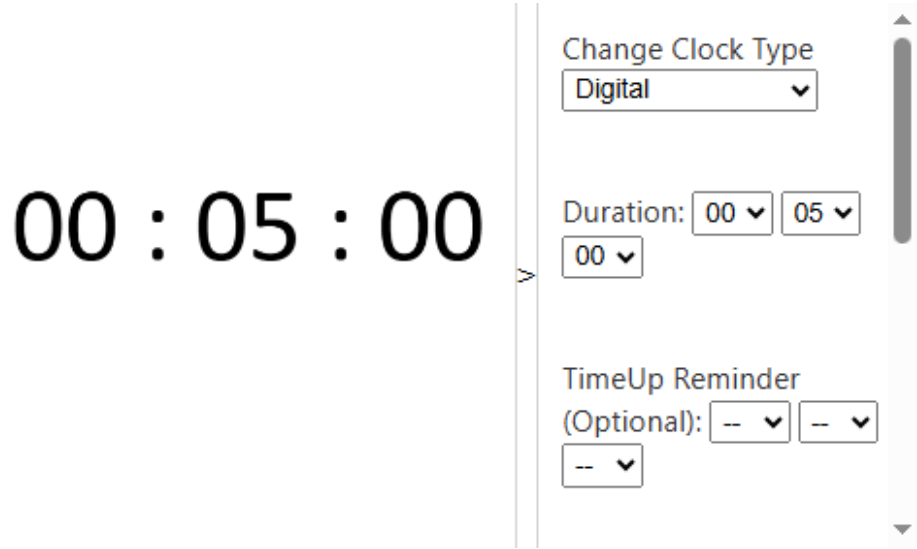
- *68% of annual funding for the COPD Foundation (including funding for the DBA-Bronchiectasis and NTM Association) is received from health care companies including Insmed Incorporated and AstraZeneca Pharmaceuticals LP.*



Shelbi Stoudt, BA
Patient Representative

Conflicts of Interest:

- *No conflicts to disclose.*



Lunch

Meeting will resume at 11:50AM PT

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Voting Questions

Patient Population for all questions: *Adolescents and Adults with Non-Cystic Fibrosis Bronchiectasis (NCFB).*

Note for all questions: *Usual care may include antibiotics, mucolytics, pulmonary rehabilitation, and airway clearance.*

Clinical Evidence

1. For patients with NCFB, is the current evidence adequate to demonstrate that the net health benefit of brensocatib as an add-on therapy to usual care is greater than that of usual care alone?

Benefits Beyond Health and Special Ethical Priorities

To help inform judgments of overall long-term value for money, please indicate your level of agreement with the following statements:

2. There is substantial unmet need despite currently available treatments.

3. This condition is of substantial relevance for people from a racial/ethnic group that have not been equitably served by the healthcare system.

To help inform judgments of overall long-term value for money, please indicate your level of agreement with the following statements based on the relative effects of brensocatib as add on therapy to usual care versus usual care alone.

4. The treatment is likely to produce substantial improvement in caregivers' quality of life and/or ability to pursue their own education, work, and family life.

5. The treatment offers a substantial opportunity to improve access to effective treatment by means of its mechanism of action or method of delivery.

Long-Term Value for Money

6. Given the available evidence on comparative clinical effectiveness and incremental cost- effectiveness, and considering benefits beyond health and special ethical priorities…

6. What is the long-term value for money of brensocatib as add-on therapy to usual care compared to usual care alone at assumed pricing?

Break

Meeting will resume at 1:00PM PT

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Policy Roundtable

Policy Roundtable

Participant	Conflict of Interest
Vicky Brown, PharmD, BCOP, Associate Vice President Clinical Drug Strategies, Humana Pharmacy Solutions	Dr. Brown is a full-time employee at Humana Pharmacy Solutions.
Paul Dieffenbach, MD, Associate Physician, Pulmonary and Critical Care Medicine, Brigham and Women's Hospital; Instructor in Medicine, Harvard Medical School	No conflicts to disclose.
Amy Leitman, JD, President, NTM Info & Research	45% of NTM Info and Research funding is received from health care companies.
John Torrence, Patient Ambassador with the Bronchiectasis and NTM Association	The Bronchiectasis and NTM Association is a division of the COPD Foundation.
Emily Tsiao, PharmD, BCPS, Senior Clinical Pharmacist, Trend Management Strategies and Programs, Premera Blue Cross	Dr. Tsiao is a full-time employee at Premera Blue Cross.

CTAF Council Reflections

Next Steps

- Meeting recording posted to ICER website next week
- Final Report published on or around October 27, 2025
    - Includes description of CTAF votes, deliberation, policy roundtable discussion
- Materials available at: https://icer.org/assessment/ncfb-2025/

Adjourn

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