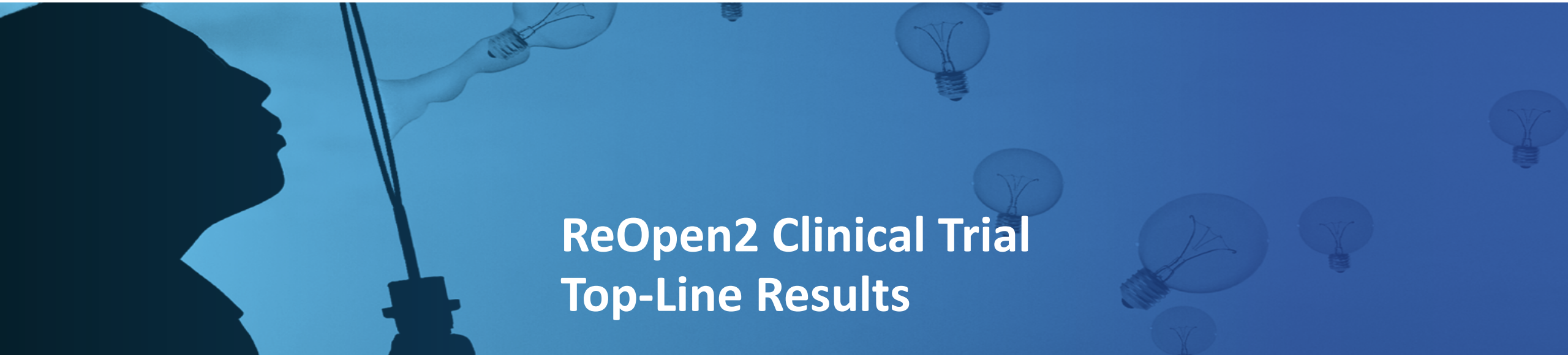
optinose®



ReOpen2 Clinical Trial Top-Line Results

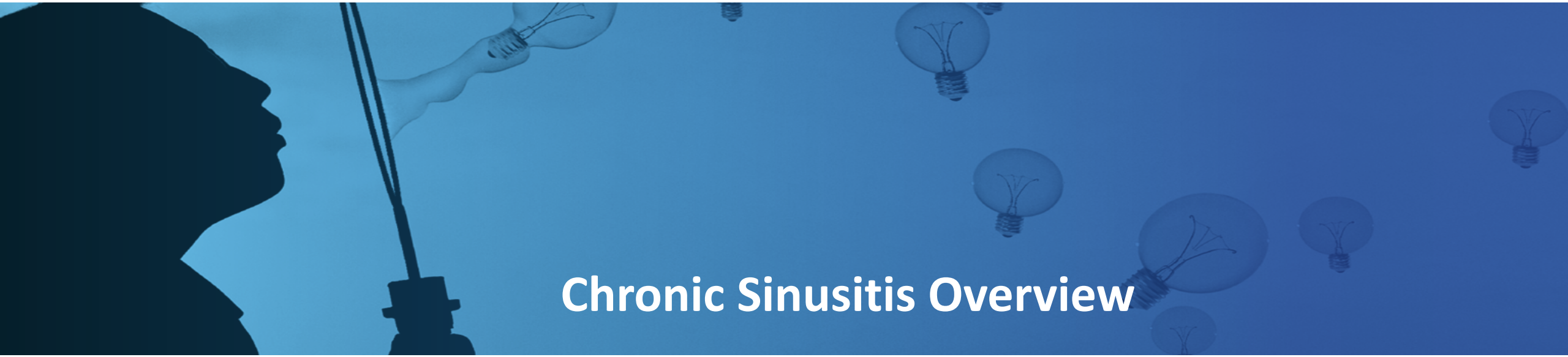
June 13, 2022

Forward-Looking Statements

This presentation and our accompanying remarks contain “forward-looking statements” within the meaning of the U.S. Private Securities Litigation Reform Act of 1995. All statements that are not historical facts are hereby identified as forward-looking statements for this purpose and include, among others, statements relating to: the potential benefits of XHANCE for treating chronic sinusitis; the Company's plans to seek FDA approval for a follow-on indication for XHANCE for the treatment of chronic sinusitis and the potential submission of a supplemental new drug application by this indication by the end of 2022; the potential for XHANCE to be the first FDA-approved drug product for the treatment of chronic sinusitis and potential benefits of such indication; the potential for XHANCE to become part of the standard of care for this disease; total addressable market opportunities for XHANCE; prospects for potential partnerships to promote XHANCE in primary care; and other statements regarding the Company’s future operations, financial performance, prospects, intentions, objectives and other future events.

Forward-looking statements are based upon management’s current expectations and assumptions and are subject to a number of risks, uncertainties and other factors that could cause actual results and events to differ materially and adversely from those indicated by such forward-looking statements including, among others: potential for the full data set from ReOpen2, when available, to contain results that conflict with or are inconsistent with the top-line results; potential for varying interpretation of the top-line results from ReOpen1 and ReOpen2; uncertainties related to the clinical development program and regulatory approval of XHANCE for the treatment of chronic sinusitis; impact of, and uncertainties caused by the COVID-19 pandemic; physician and patient acceptance of XHANCE for its current and any potential future indication; the Company’s ability to maintain adequate third-party reimbursement for XHANCE (market access) for its current and potential future indication; the prevalence of chronic sinusitis and XHANCE market opportunities may be smaller than expected; and the risks, uncertainties and other factors discussed in the “Risk Factors” section and elsewhere in our most recent Form 10-K and Form 10-Q filings with the Securities and Exchange Commission – which are available at http://www.sec.gov. As a result, you are cautioned not to place undue reliance on any forward-looking statements. Any forward-looking statements made in this presentation speak only as of the date of this presentation, and we undertake no obligation to update such forward-looking statements, whether as a result of new information, future developments or otherwise.

optinose®



Chronic Sinusitis Overview

What is Chronic Sinusitis (CS)

CS is an inflammatory disease of the paranasal sinuses that is defined by the presence of at least two out of four cardinal symptoms (i.e., facial pain/pressure, hyposmia/anosmia, nasal drainage, and nasal obstruction) for at least 12 consecutive weeks, in addition to objective evidence

Prevalence

- Up to **30 Million** US Adults suffer from symptoms of CS and there are no FDA-approved drug treatments for the majority who do not have nasal polyps
- Approximately **10 Million** patients are treated by a physician annually

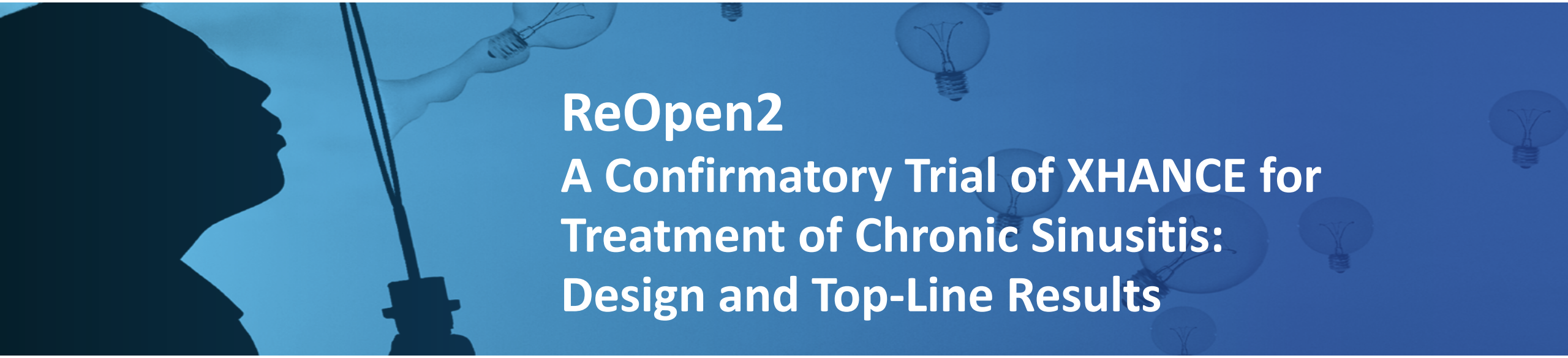
High Burden

- Disease persists for many years
- Significant harm to quality of life, comparable in magnitude to CHF or COPD

Sources: Sedaghat AR. Chronic Rhinosinusitis. Am Fam Physician. 2017 Oct 15;96(8):500-506. PMID: 29094889. Palmer J et al . A cross-sectional population-based survey of the prevalence, disease burden, and characteristics of the US adult population with symptoms of chronic rhinosinusitis (CRS). Poster session presented at: 62nd Annual Meeting of the American Rhinologic Society; September 16-17, 2016; San Diego, CA. Optinose Market Research. Data on file.

optinose®

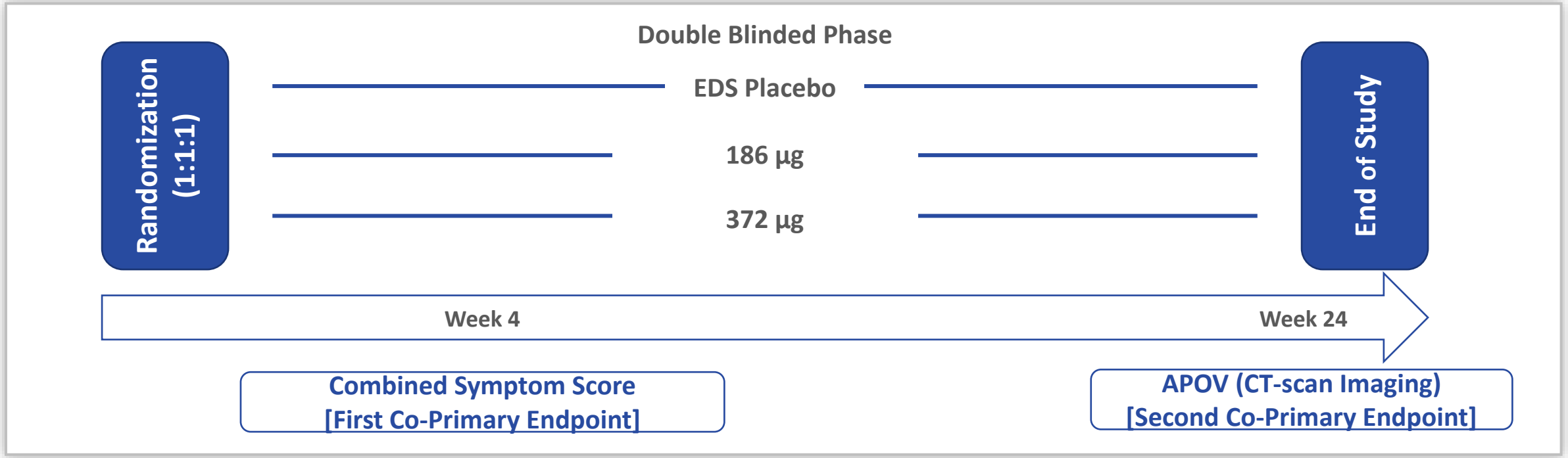
optinose®



ReOpen2
A Confirmatory Trial of XHANCE for Treatment of Chronic Sinusitis: Design and Top-Line Results

ReOpen2 Trial Design Summary

Randomized, double-blind, EDS-vehicle (placebo) controlled, parallel-group, multicenter study evaluating efficacy and safety of XHANCE 1 or 2 sprays (186 µg or 372 µg) twice daily in subjects with CS who do not have nasal polyps



Additional prespecified Type 1 error-controlled endpoints will include:
change in symptoms in subjects who were symptomatic at trial entry despite using a standard nasal steroid,
frequency of acute exacerbations of CS in pooled data from ReOpen1 and ReOpen2

optinose®

ReOpen2: Disposition and Baseline Characteristics

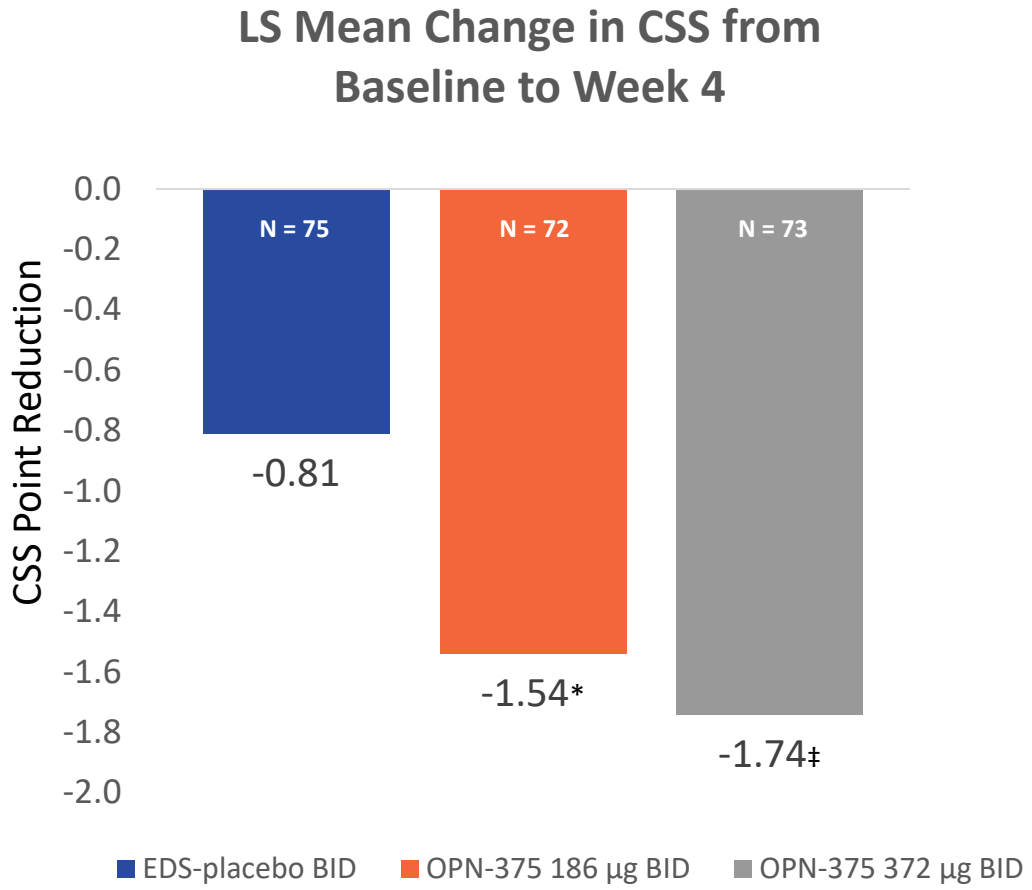
	EDS-vehicle (Placebo)	XHANCE 186 mcg	XHANCE 372 mcg
Subjects Randomized	75	74	74
Subjects Treated	75	73	74
Subjects Who Completed Study	69	70	71
Subjects Discontinuing Early*	6 (8%)	3 (4.1%)	3 (4.1%)
Full Analysis Set	75	72	73
Mean Baseline CSS Score	6.15	5.87	5.97
Mean Baseline APOV	64.09	60.51	61.50

APOV (average of percentages of opacified volume across ethmoid and maxillary sinuses); **CSS** (composite symptom score)

* Adverse events were the most common reason for early discontinuation

optinose®

ReOpen2: Combined Symptom Score (Co-Primary Endpoint)



Summary

- Confirmatory Phase 3 results demonstrate statistically significant improvement in combined symptoms with XHANCE
- Magnitude of improvement comparable to ReOpen1, NAVIGATE I, and NAVIGATE II

BID, twice daily; CSNS, composite symptom nasal score.

*$P \leq .05$ vs EDS placebo.

‡$P \leq .001$ vs EDS-placebo.

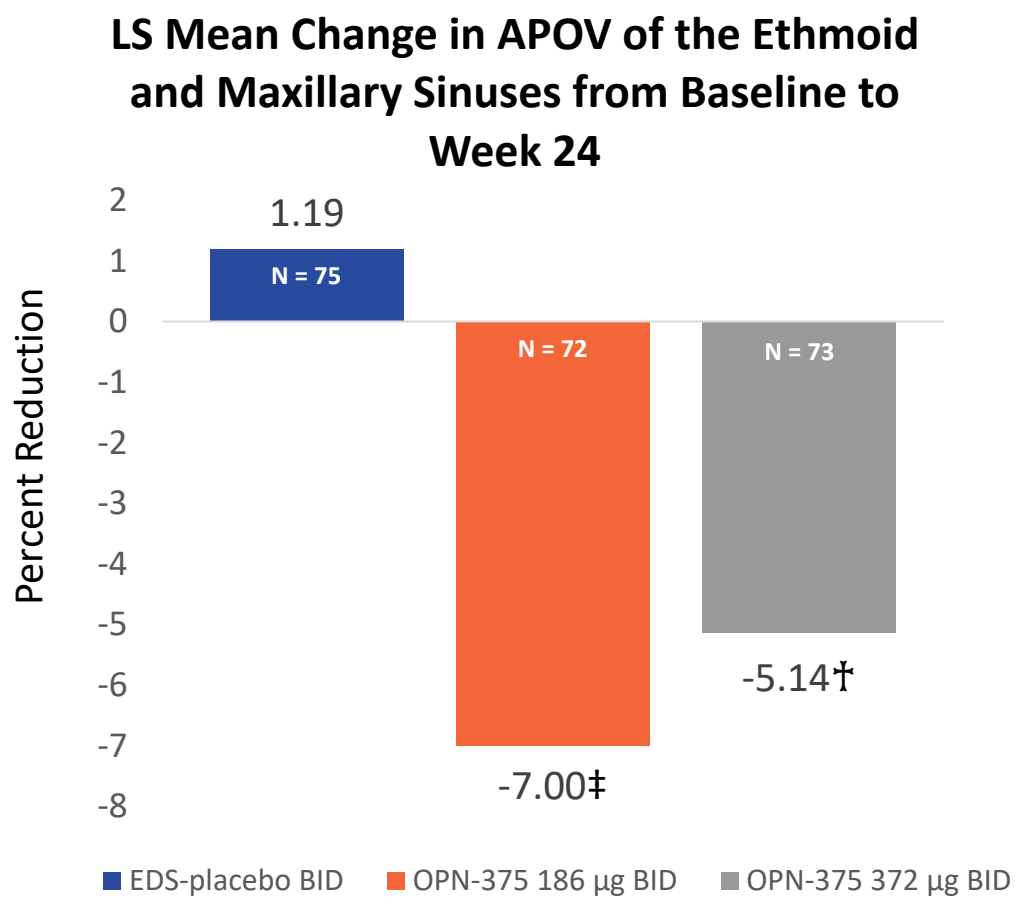
optinose®

ReOpen2: Average of Percentages of Opacified Volume (Ethmoid and Maxillary)

Objective Evidence of Effect in Sinus Cavities by CT Scan; Co-Primary Endpoint

Summary

- Confirmatory Phase 3 results demonstrate statistically significant improvement inside the sinus cavities with XHANCE
- Magnitude of improvement similar to ReOpen1
- First ever replicated large controlled trial evidence for a nasal treatment to improve both symptoms and inflammation inside the sinuses



OPN-375 is XHANCE; APOV, average percent of opacified volume; BID, twice daily.

†$P \leq .01$ vs EDS-placebo.
‡$P \leq .001$ vs EDS-placebo.

AEs Occurring in ≥3% of Patients and More Common Than Placebo

Adverse Event (AE)	EDS-placebo BID (N =75) n (%)	XHANCE 186 mcg BID (N =73) n (%)	XHANCE 372 mcg BID (N =74) n (%)
COVID-19	2 (2.7)	3 (4.1)	7 (9.5)
Epistaxis	0 (0.0)	4 (5.5)	7 (9.5)
Headache	6 (8.0)	2 (2.7)	7 (9.5)
Depression	1 (1.3)	0 (0.0)	3 (4.1)

Anticipated Next Steps

- Complete analysis of ReOpen2
- Complete pre-specified pooled analyses of ReOpen1/2 data
  - Notably, reduction of disease exacerbations is an important endpoint pre-specified to be evaluated in pooled data
- Meeting with FDA prior to data submission
- Development of sNDA underway with a target of submitting by the end of 2022
- FDA notification on acceptance due within 74 days of submission date
  - If sNDA accepted, action date is provided at that time

optinose®

optinose®

Market Opportunity

Successful Development of XHANCE as the First FDA-approved Drug Treatment for Chronic Sinusitis Creates Multiple New Opportunities for Growth

Today

$1B TAM

optinose®

Up to **~1 Million** patients with nasal polyps (NP) are treated by specialty physicians in our current sales deployment

With a CS Indication

$3B TAM

optinose®

Up to **~3 Million** patients with either NP or CS are treated by specialty physicians in our current sales deployment

$10B TAM

Up to **~10 Million** patients with either NP (~3M) or CS (~7M) are treated by a specialty or PCP physician annually

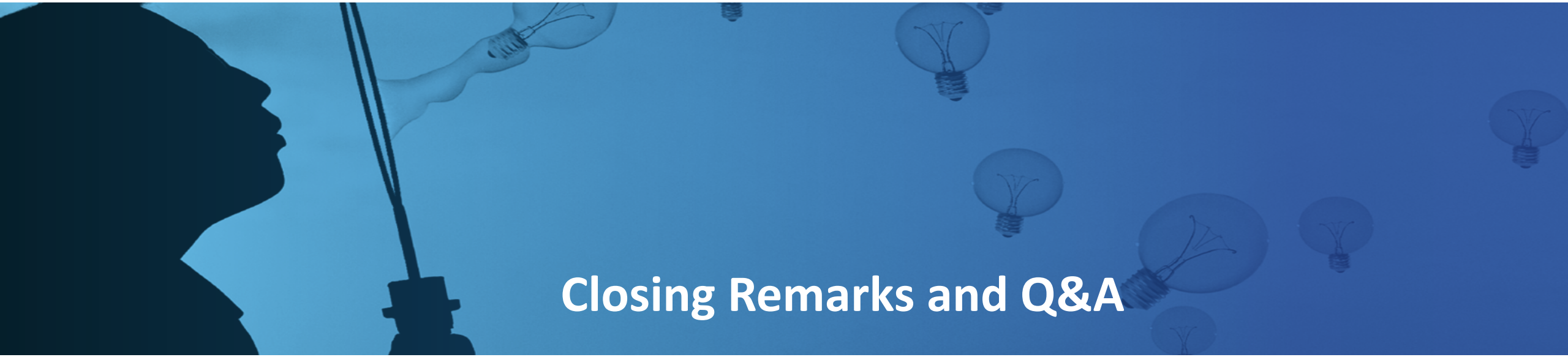
For a Partner, there are **6 to 7 million** NP+CS patients currently treated by a Primary Care Physician plus **20 million** lapsed patients that could be activated into care

Successful Development of XHANCE as a Treatment for Chronic Sinusitis Would Increase Opportunity and Address Certain Barriers to Broader Prescribing that Exist Today

Insurance

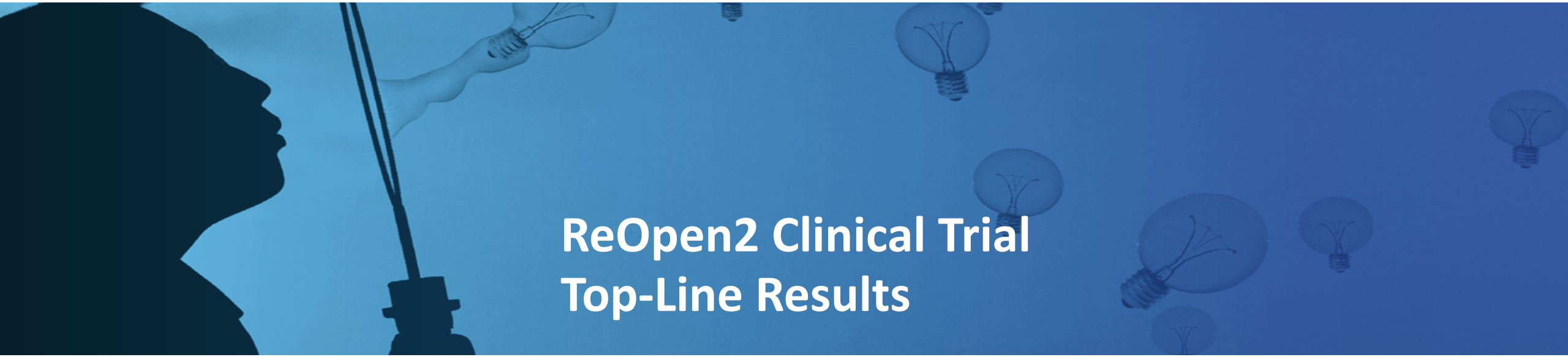
- Today, **~80%** of commercial lives are in plans that cover XHANCE, but **~half** require physicians to attest that they are prescribing for the approved indication
- This is important because chronic sinusitis (CS) is diagnosed much more frequently than nasal polyps (NP)
- **~10 million** patients diagnosed with CS are actively treated by physicians compared to **~1 million** with NP

optinose®



Closing Remarks and Q&A

optinose®



ReOpen2 Clinical Trial Top-Line Results

June 13, 2022