
Phathom
PHARMACEUTICALS
CHANGING THE LANDSCAPE IN GI
Going beyond to advance treatments for patients with acid-related disorders
CORPORATE OVERVIEW
February 2023

Safe harbor statement

This presentation contains forward-looking statements. All statements other than statements of historical facts contained in this presentation, including statements regarding our future results of operations and financial position, business strategy, prospective products, product approvals, research and development costs, timing and likelihood of success, plans and objectives of management for future operations, and future results of current and anticipated products, are forward-looking statements.

In some cases, you can identify forward-looking statements by terms such as “may,” “will,” “should,” “expect,” “plan,” “anticipate,” “could,” “intend,” “target,” “project,” “contemplates,” “believes,” “estimates,” “predicts,” “potential” or “continue” or the negative of these terms or other similar expressions. These statements involve known and unknown risks, uncertainties and other important factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. These risks, uncertainties and other factors include, without limitation: our ability to obtain additional regulatory approvals for and successfully launch and commercialize products containing vonoprazan; our ability to demonstrate that the nitrosamine impurity in vonoprazan drug product will remain at or below the acceptable daily intake limit throughout the product’s shelf life in order to obtain FDA approval of our post-complete response letter resubmissions; the inherent risks of clinical development of vonoprazan; our dependence on third parties in connection with product manufacturing, research and preclinical and clinical testing; regulatory developments in the United States and foreign countries; unexpected adverse side effects or inadequate efficacy of vonoprazan that may limit its development, regulatory approval and/or commercialization, or may result in recalls or product liability claims; our ability to obtain and maintain intellectual property protection for vonoprazan; our ability to comply with our license agreement with Takeda; our ability to achieve and maintain adequate levels of coverage and reimbursement for vonoprazan; the availability of additional funds under our revenue interest financing agreement and term loan agreement; the sufficiency of our capital to fund our operations; and other risks described in our filings with the Securities and Exchange Commission (SEC), including our Annual Report on Form 10-K and any subsequent filings with the SEC. You are cautioned to place undue reliance on these forward-looking statements, which speak only as of the date hereof, and we undertake no obligation to revise or update this presentation to reflect events or circumstances after the date hereof. All forward-looking statements are qualified in their entirety by this cautionary statement, which is made under the safe harbor provisions of the Private Securities Litigation Reform Act of 1995.

This presentation also contains estimates and other statistical data made by independent parties and by us relating to market size and other data about our industry. This data involves a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates. In addition, projections, assumptions, and estimates of our future performance and the future performance of the markets in which we operate are necessarily subject to a high degree of uncertainty and risk.

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Going beyond

to advance treatments for patients with acid related disorders

Locations
HQ: Florham Park, NJ
Buffalo Grove, IL

Formed In 2019
Listed on NASDAQ: PHAT

FDA APPROVED PRODUCTS
Vonoprazan based *H. pylori* regimens

VOQUEZNA TriplePak
vonoprazan tablets 20mg | amoxicillin capsules 500mg | clarithromycin tablets 500mg

VOQUEZNA DualPak
vonoprazan tablets 20mg | amoxicillin capsules 500mg

Vonoprazan:

First innovative acid-suppressant from a new drug class in the US in over 30 years

Belongs to a novel class of therapies called PCABs (Potassium Competitive Acid Blockers)

- Positive Phase 3 trials for *H. pylori* (HP), erosive GERD, & non-erosive GERD
- FDA meeting scheduled for March 2023 to discuss resubmission review timelines for HP and erosive GERD

- Potential to displace PPIs
- Large market opportunity
- NCE exclusivity until 2032 under GAIN Act Extension

US / Europe / Canada rights licensed from **Takeda**

Approved in numerous countries in Asia & Latin America, including:
Japan, China, Brazil, & Russia

~$850M
Annual net sales in Japan. Achieving market leadership of 45% revenue-based market share[1]

[1] US dollars based on conversion rate of 0.0090 dollars to one yen. Annual net sales figure reflects the twelve-months ended Dec. 31, 2021. Revenue-based market share reflects the three-months ended June 30, 2022.

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Commercial success of acid suppression treatments

ANTACIDS — *Introduced in 1930s*: TUMS, Rolaids, Alka-Seltzer
Marketed OTC

H2 ANTAGONISTS — *Introduced in 1970s*: Tagamet, Pepcid, Zantac
~$3.5b peak US sales

PPIs — *First Introduced in 1989*: Prevacid (lansoprazole), Prilosec, Protonix (pantoprazole sodium), Nexium (esomeprazole), AcipHex
~$12.5B peak US sales

25 YEARS

No Innovation

PCAB — *Introduced in Japan 2015*: Takecab (vonoprazan)

>$850M annual net sales in Japan[1]

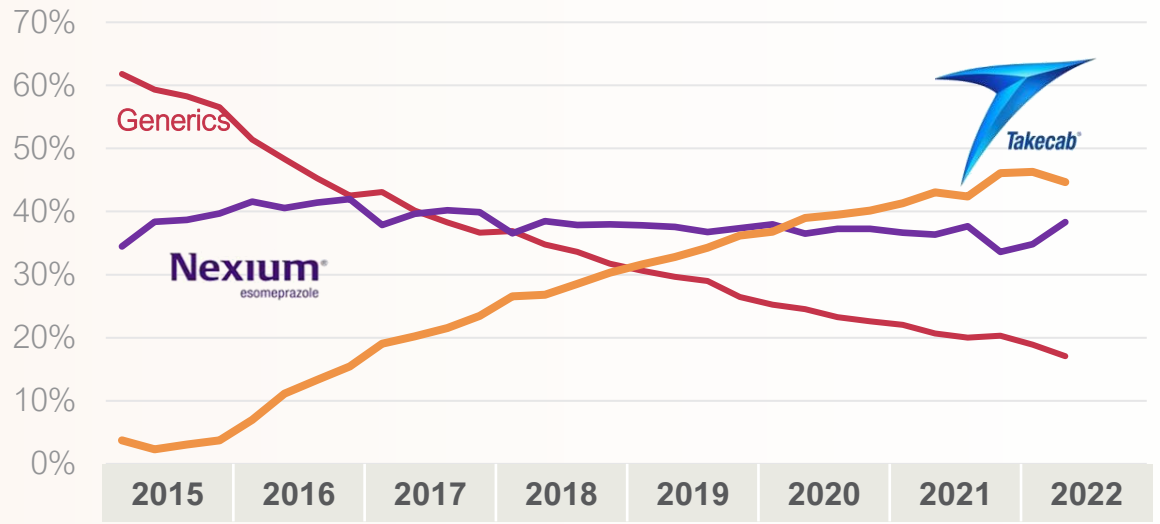
Vonoprazan has been highly successful in Japan

Driven predominantly by volumetric gains from generic competitors

Branded premium price

Majority of vonoprazan sales are in GERD

Japan Revenue-Based Market Share[1]



[1] US dollars based on conversion rate of 0.0090 dollars to one yen. Annual net sales figure reflects the twelve-months ended Dec. 31, 2021. Revenue-based market share reflects the three-months ended June 30, 2022.

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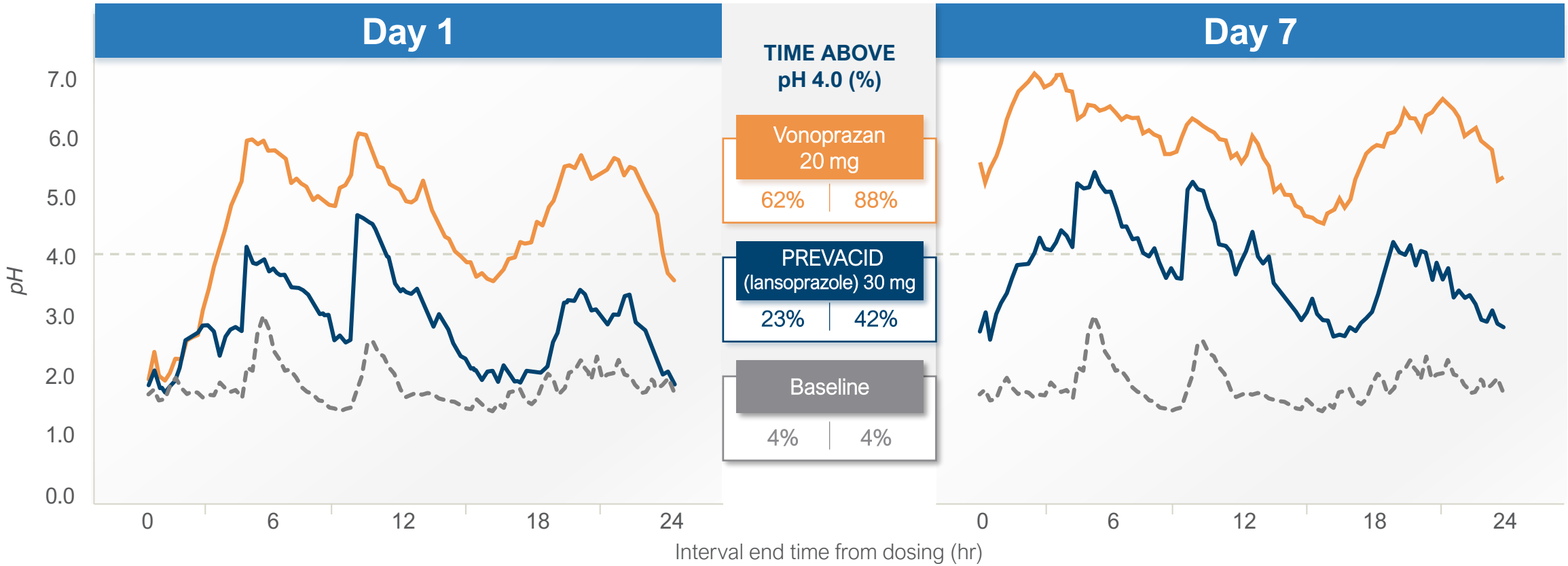
Vonoprazan demonstrated improved acid control versus PREVACID (lansoprazole)

RAPID, POTENT, DURABLE ACID SUPPRESSION*



Mean gastric pH profiles for vonoprazan were higher than PREVACID (lansoprazole) on both Days 1 and 7

* VONO-103: Mean 0-24 hour gastric pH profiles; study evaluating the PK, PD, safety and tolerability of vonoprazan in comparison to PREVACID (lansoprazole) in 41 healthy adult subjects

[1] Shah SC et al. Gastroenterology. 2021;160:1831–1841

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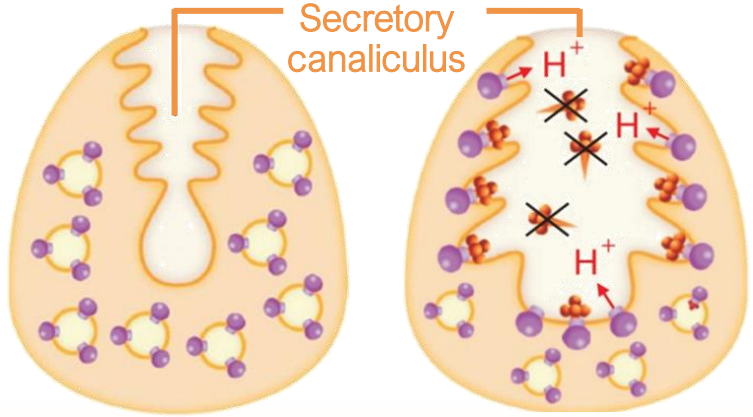
Mechanistic differences between PPIs and PCABs

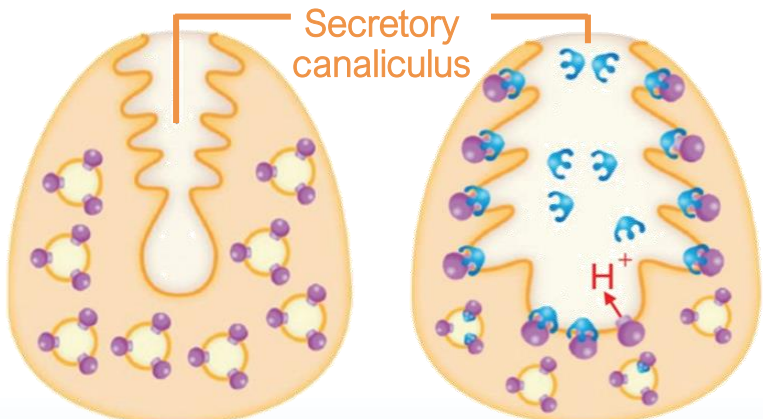
PPI:
COVALENTLY BINDING PRODRUG



- **Short** plasma half-life
- Acid needed for activation but **unstable** in presence of acid
- **Meal required** to stimulate pumps

- **Slow** onset of action
- **Limited** potency
- **Limited** duration of activity

Vonoprazan:
COMPETITIVE ENZYME INHIBITOR



- **Long** plasma half-life
- **Stable** in acid
- **High** accumulation in canaliculus
- **Very slow** dissociation rate

- **Rapid** onset of action
- **Potent** acid control
- **Durable** 24-hr activity

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Phathom pipeline: track record of success with three positive Phase 3 trials

	Target indications	Phase 1[1]	Phase 2[1]	Phase 3	Milestones	Approved
H. pylori	**Vonoprazan + antibiotics** — VOQUEZNA TriplePak (vonoprazan tablets 20 mg | amoxicillin capsules 500 mg | clarithromycin tablets 500 mg); VOQUEZNA DualPak (vonoprazan tablets 20 mg | amoxicillin capsules 500 mg)			pHalcon hp	***Meeting scheduled with the FDA for March 2023[2]*** *Resubmission pending*	***FDA approved May 2022***
Erosive GERD	**Vonoprazan** — Healing of erosive GERD (or erosive esophagitis / EE) & relief of heartburn; Maintenance of healing of erosive GERD (or erosive esophagitis / EE) & relief of heartburn			pHalcon ee	***Meeting scheduled with the FDA for March 2023[2]*** *Resubmission pending*	
Non-erosive GERD	**Vonoprazan** (daily dosing) — Daily dosing treatment of heartburn associated with non-erosive GERD (or non-erosive reflux disease / NERD)			pHalcon nerd continuous	***Positive topline Ph 3 results achieved*** *Regulatory submission expected 2H 2023[3]*	
Non-erosive GERD	**Vonoprazan** (as needed or on-demand dosing) — As needed (or on-demand) treatment of heartburn associated with non-erosive GERD (or non-erosive reflux disease / NERD)		pHalcon nerd on demand		*Positive Phase 2 results* ***Phase 3 trial design underway***	
EoE	**Vonoprazan** — Treatment of eosinophilic esophagitis (EoE) for adult & pediatric use				***Phase 2 trial design underway***	

[1] Phase 1 and 2 studies supporting applications for erosive GERD and H. pylori were conducted by Takeda. Phathom has development & commercialization rights to vonoprazan in the US, Europe, & Canada.
[2] On February 9, 2023, Phathom announced that it received complete response letters from the FDA regarding the erosive GERD NDA and H. pylori post approval supplement requesting additional stability data demonstrating that levels of the nitrosamine impurity in vonoprazan drug product will remain at or below the FDA-established acceptable daily intake limit throughout the product's proposed shelf life.
[3] Pending trial completion also expected in 2H 2023

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Vonoprazan vision builds on each indication with the potential to transform the landscape of acid-related disorders

PHALCON-NERD-301 topline results signal one step closer to:

- Expected regulatory submission of daily dosing data in 2H 2023[1]
- Design of Phase 3 as needed (or on-demand) dosing trial

Displace PPIs

GERD

Non-erosive GERD *(or non-erosive reflux disease / NERD)* **daily dosing**

Symptom control

Non-erosive GERD *(or non-erosive reflux disease / NERD)* **as needed** *(or on-demand)* **dosing**

Symptom relief

Erosive GERD *(or erosive esophagitis / EE)*

Improved healing and maintenance

H. Pylori *(or HP)*

Increased eradication

Growth opportunity

~45M people

~20M people

~2M people

Launch Sequence:	**Combined First Launch**	**Second Launch**	**Third Launch**

[1] Pending trial completion, expected in 2H 2023

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Superior efficacy results from PHALCON-EE Phase 3 study

If approved, vonoprazan would be the first product with superiority data in maintenance of healing of erosive GERD over a PPI, further differentiating the product from PPIs

PHALCON-EE outcomes support NDA submission with potential for two distinct indications

1. **Healing** of erosive GERD and relief of heartburn
2. **Maintenance** of healing of erosive GERD and relief of heartburn

Superiority **data provides potential clinical differentiation from a commonly prescribed proton pump inhibitor (PPI)**

- ***Superior*** healing at 2 weeks in patients with moderate-to-severe disease[1,2]
- ***Superior*** maintenance of healing in all patients
- ***Superior*** maintenance of healing in patients with moderate-to-severe disease[2]

[1] Healing rate in all patients was also numerically greater at week 2 but could not be formally tested based on pre-specified testing hierarchy
[2] Moderate-to-severe erosive GERD classified as LA Class Grade C/D

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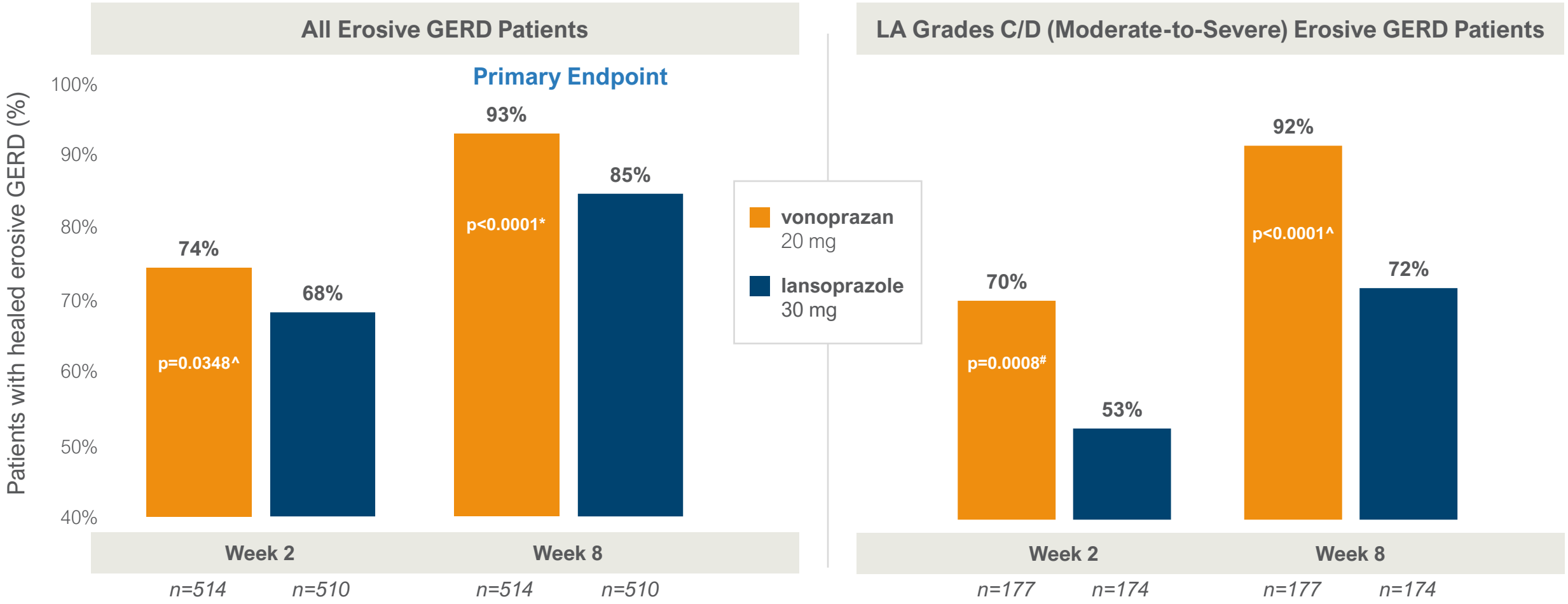
PHALCON-EE Phase 3 met primary and key secondary healing endpoints



^ nominal p-value presented, superiority comparison, not formally tested based on pre-specified testing hierarchy
* p-value for both primary non-inferiority endpoint and unadjusted p-value for exploratory superiority comparison
# p-value for pre-specified secondary endpoint superiority comparison

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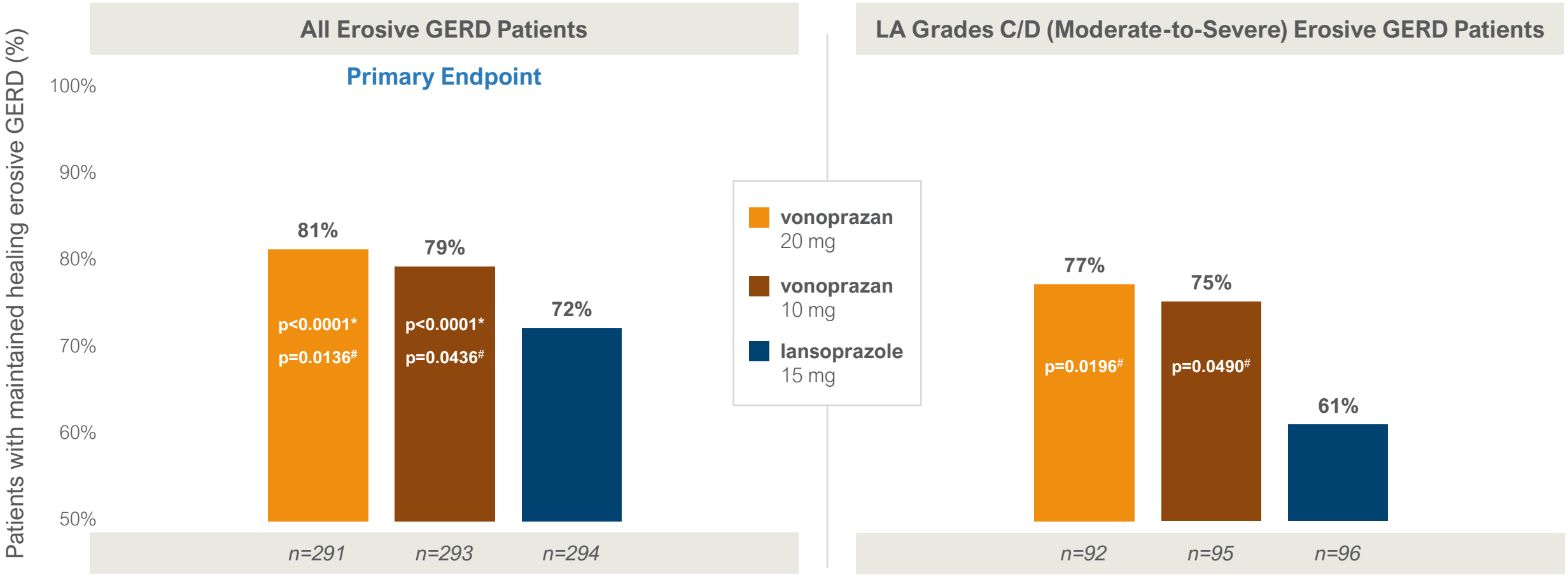
PHALCON-EE Phase 3 met all maintenance of healing endpoints



* p-value for primary endpoint non-inferiority comparison
\# p-value for pre-specified secondary endpoint superiority comparison

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Summary of PHALCON-EE Phase 3 safety data

Overall, the safety results observed in PHALCON-EE were consistent with those observed in prior clinical studies of vonoprazan

Healing Phase

Most Common Adverse Events

% (n)	Vonoprazan 20 mg	Lansoprazole 30 mg
Diarrhea	2.1% (11)	2.5% (13)

Maintenance Phase

Most Common Adverse Events (≥ 5%)

% (n)	Vonoprazan 20 mg	Vonoprazan 10 mg	Lansoprazole 15 mg
Abdominal Pain	5.4% (16)	4.1% (12)	2.4% (7)
Gastritis	2.7% (8)	6.4% (19)	2.7% (8)
COVID-19	10.1% (30)	6.1% (18)	6.7% (20)

Both Phases

Serious Adverse Events (>1 patient)

	Vonoprazan 20 mg	Vonoprazan 10 mg	Lansoprazole 15 mg
COVID-19* (n)	5	2	0

[1] No COVID-19 SAEs were deemed related to the study drug by the investigator | Safety Set: All subjects who received at least one dose of study medication

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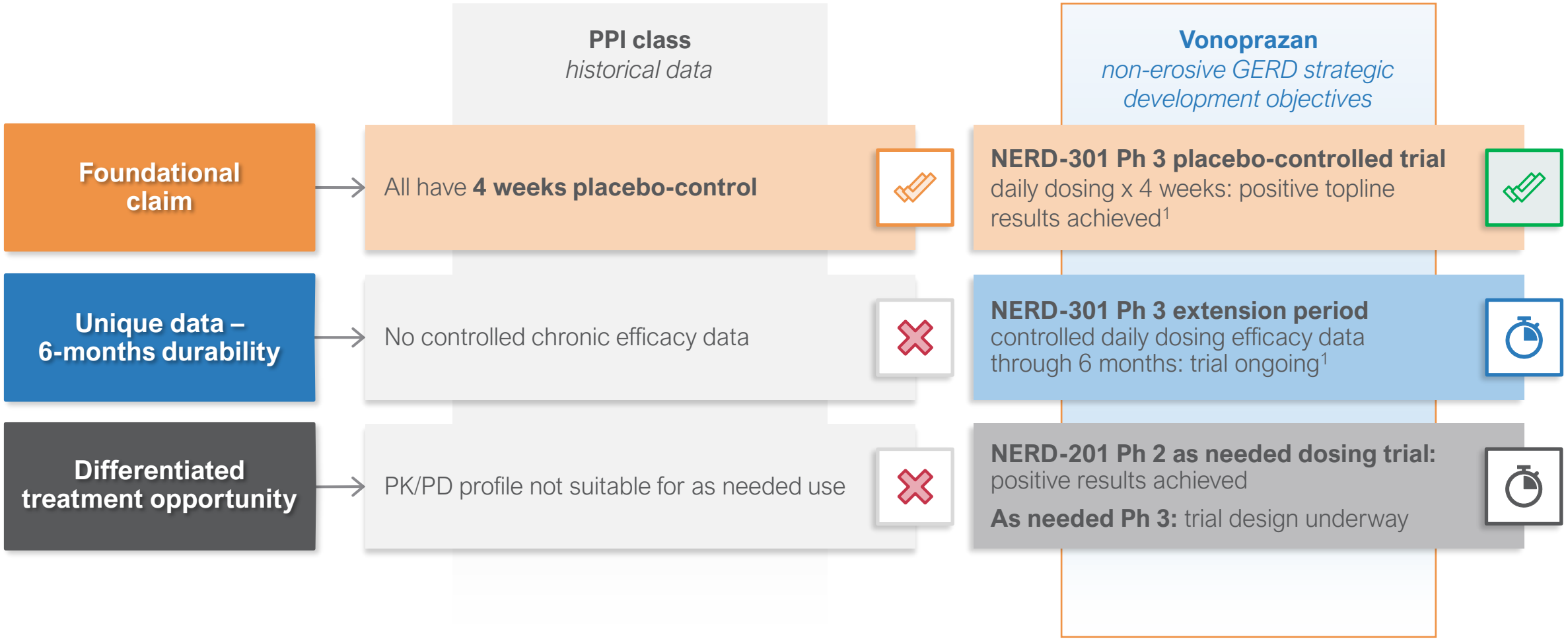
Phathom continues to demonstrate progress on the path to strategically developing vonoprazan for non-erosive GERD



[1] Only the 4-week placebo-controlled results of PHALCON-NERD-301 have been reported so far. The 20-week long-term extension period of the trial is currently ongoing and expected to conclude in 2H 2023.

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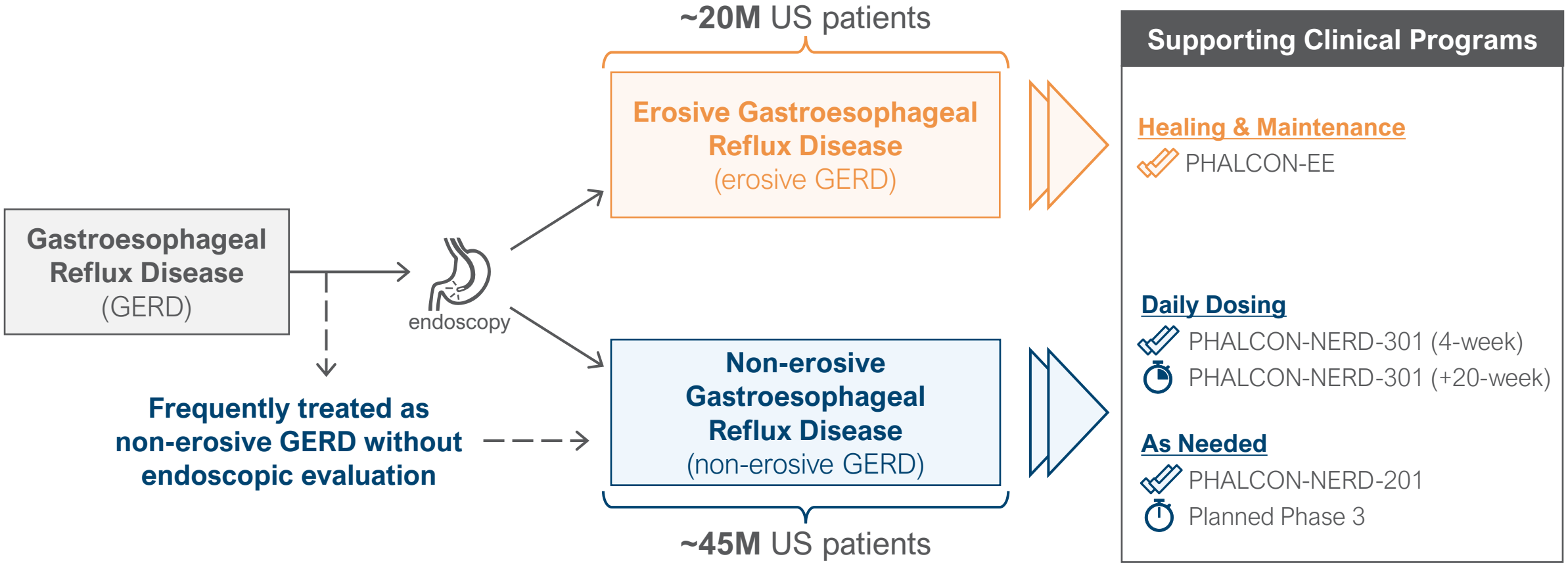
If approved, vonoprazan has the potential to become a differentiated therapy for GERD



Topline PHALCON-NERD-301 results expected to support regulatory submission for non-erosive GERD, pending completion of study

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The positive topline results from PHALCON-NERD-301 further support the potential for vonoprazan to meaningfully impact the GERD market

The trial was designed to support two objectives:

1) A regulatory submission for the daily treatment of patients with non-erosive GERD
2) Continuation of our novel as needed clinical development program (i.e., Phase 3)

PHALCON-NERD-301 topline primary endpoint results with high statistical significance vs. placebo ($p<0.0001$ for both doses tested) strongly support these strategic objectives

PHALCON-NERD-301 results, if completed successfully, support the potential to unlock access to the entirety of the GERD market (~65M US patients)

We believe these topline results support vonoprazan's potential to become a differentiated GERD therapy:

- Superiority data vs. a PPI when used for erosive GERD healing (week 2 moderate-to-severe patients)
- Superiority data vs. a PPI when used for maintenance of erosive GERD in all patients
- Short-term and long-term heartburn symptom control with daily treatment in non-erosive GERD patients
- Unique as needed treatment strategy option for non-erosive GERD patients

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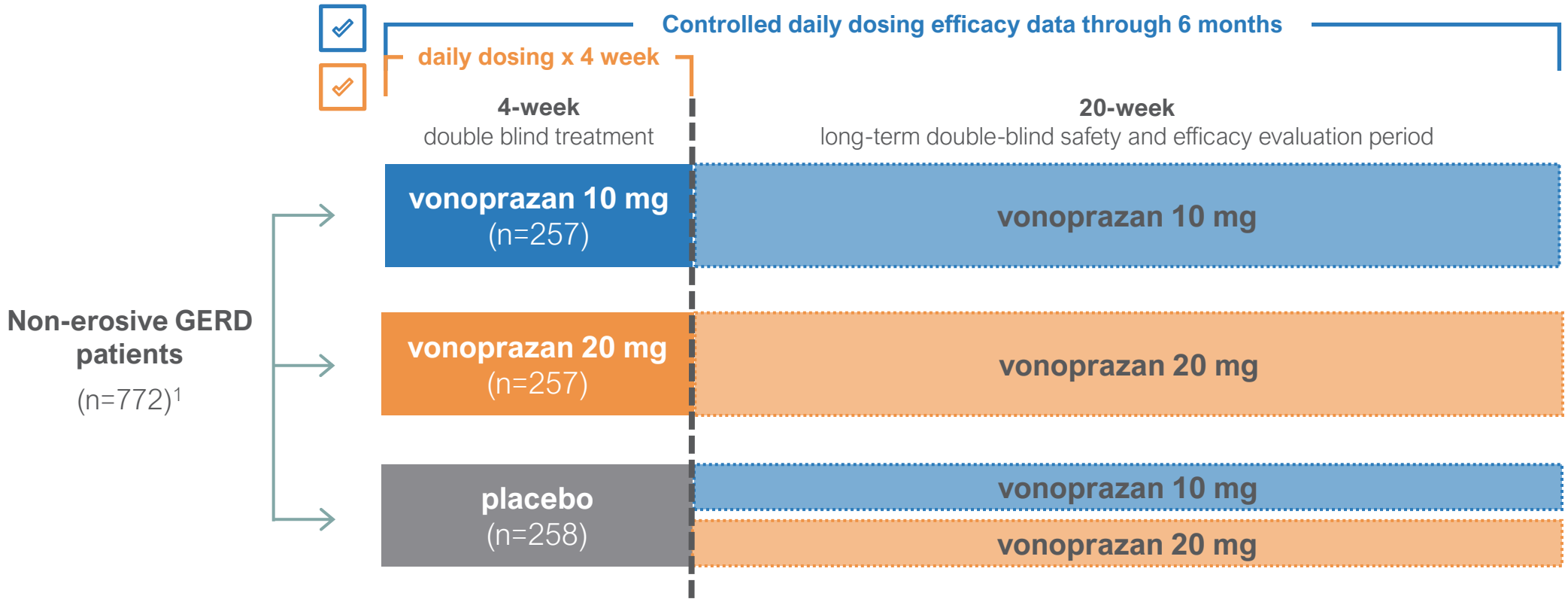
PHALCON-NERD-301 Phase 3 daily dosing trial design



Topline Results Presented on Following Slides

Week 4
Primary Endpoint

Mean % 24-hr heartburn-free days through week 4

Week 24
End of Treatment

Blinded extension period for further safety and long-term efficacy evaluation

[1] A total of 772 patients with non-erosive GERD were randomized and dosed

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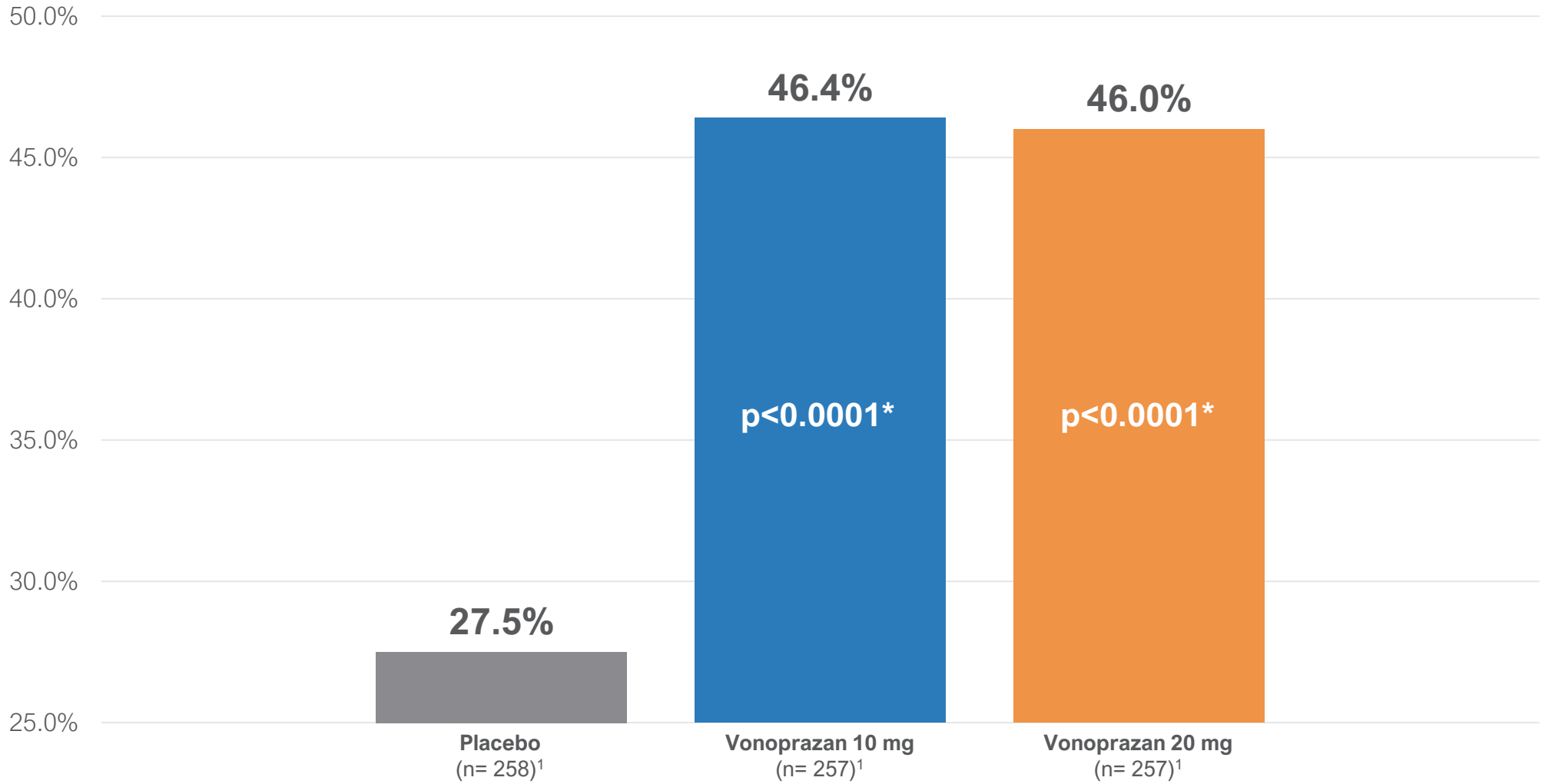
PHALCON-NERD-301 met the primary endpoint for both doses

Full results from the study are expected 2H 2023

Mean percentage (%) of 24-hour heartburn free days over 4-week period



[1] Intent-to-Treat Set: All subjects who received at least one dose of study medication, randomized treatment

[2] p-values from general linear model with treatment group as a factor and severity and frequency of heartburn at baseline as covariates

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Detailed summary of PHALCON-NERD-301 data (placebo controlled period)

Primary endpoint: mean percentage of 24-hour heartburn free days

% of 24-hr heartburn free days	Placebo (n=258)[1]	Vonoprazan 10 mg (n=257)[1]	Vonoprazan 20 mg (n=257)[1]
Mean	27.5%	46.4%	46.0%
P-value vs. Placebo[2]	--	p<0.0001	p<0.0001
Median	17.0%	48.3%	46.7%

[1] Intent-to-Treat Set: All subjects who received at least one dose of study medication, randomized treatment
[2] p-values from general linear model with treatment group as a factor and severity and frequency of heartburn at baseline as covariates

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Summary of PHALCON-NERD-301 safety data (placebo controlled period)

The overall adverse events for all vonoprazan arms were comparable to placebo and consistent with what was reported in previous studies

Most Common Adverse Events[1]

AEs ≥ 2%, Safety Set[2]

% (n)	Placebo (n=256)	Vonoprazan 10 mg (n=259)	Vonoprazan 20 mg (n=257)
Abdominal Pain	0.4% (1)	1.5% (4)	2.3% (6)
Constipation	0.8% (2)	2.3% (6)	0.8% (2)
Diarrhea	1.2% (3)	2.3% (6)	0.4% (1)
Nausea	0.4% (1)	2.3% (6)	3.1% (8)

Serious Adverse Events[1] from the Safety Set[2] (n):

- Placebo: n/a (--)
- Vonoprazan 10mg: viral pericarditis (1)
- Vonoprazan 20mg: salivary gland calculus (1), fibula/tibia fracture (1)

[1] Summary results only include adverse events that are treatment emergent (i.e., started after treatment)
[2] Among all subjects who received at least one dose of study medication, actual treatment received

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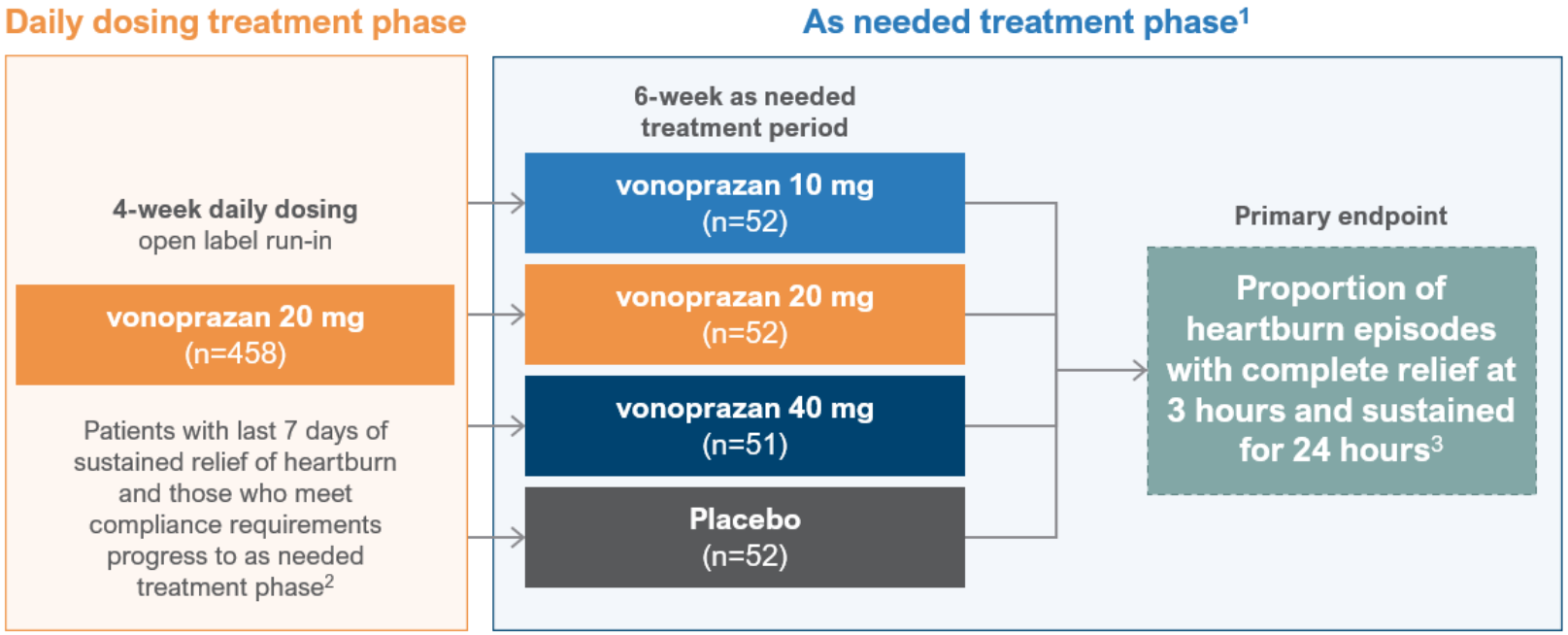
Completed Phase 2 non-erosive GERD as needed dosing trial will serve as the foundation for the Phase 3 trial[1]

PHALCON-NERD-201 Phase 2 trial design (completed)



[1] Dosing initiated at onset of a heartburn episode; rescue antacid medication allowed after 3 hours of taking test medication
[2] Patients must meet study drug and diary completion compliance requirements
[3] Primary endpoint for non-erosive GERD Phase 2 trial is complete heartburn relief at 3 hours that is sustained for 24 hours. Primary endpoint for Phase 3 trial will be based on non-erosive GERD Phase 2 results and subsequent FDA discussions

[1] Trial design underway with the FDA

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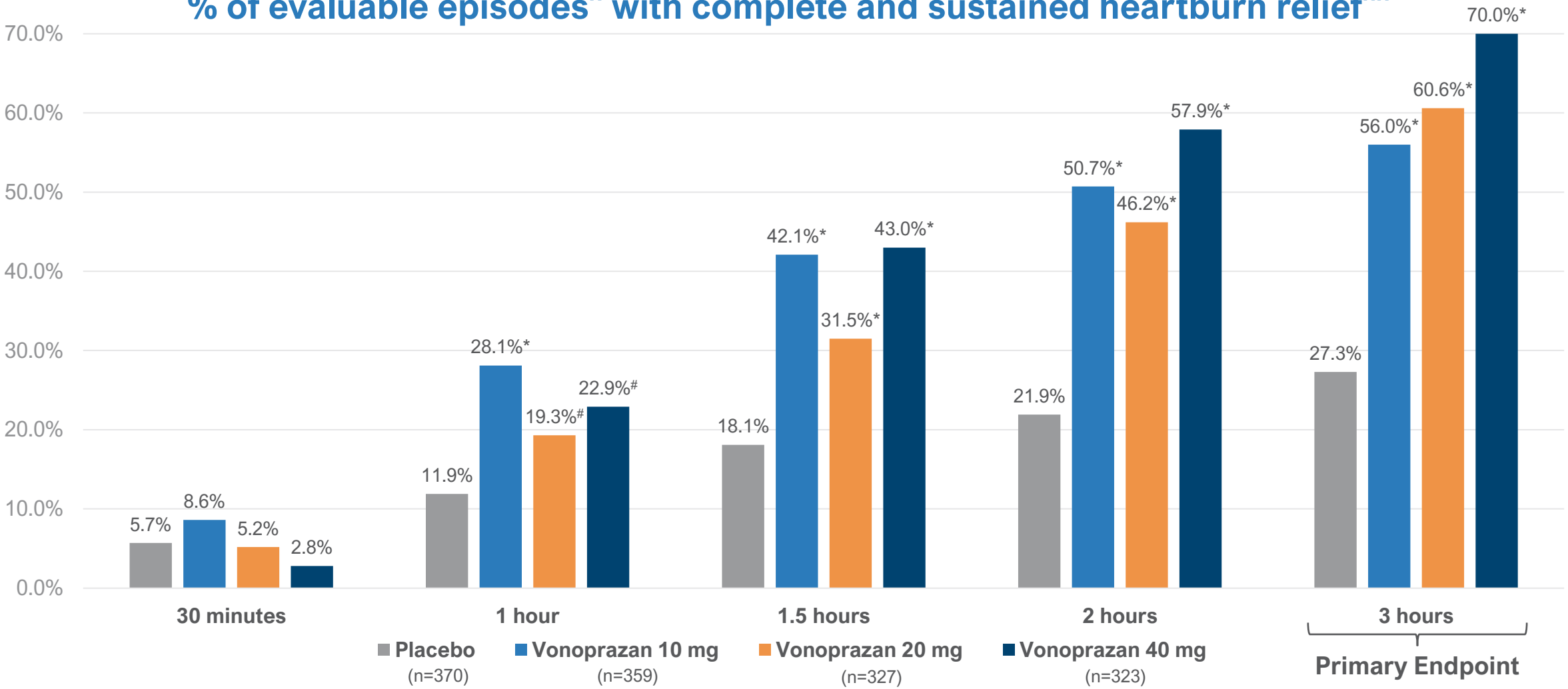
PHALCON-NERD-201 met the primary endpoint for all doses and demonstrated significance over placebo for all doses as early as 1-hour

% of evaluable episodes^ with complete and sustained heartburn relief^^



* Denotes p < 0.0001 statistically significant difference from placebo
\# Denotes p < 0.01 statistically significant difference from placebo
^ Evaluable episode = heartburn episode for which subject completes a minimum of one timed assessment
^^ Complete relief: Full symptom relief with no rescue antacid taken (must be achieved within 3 hours of study drug); Sustained relief: No further episodes recorded within following 24 hours

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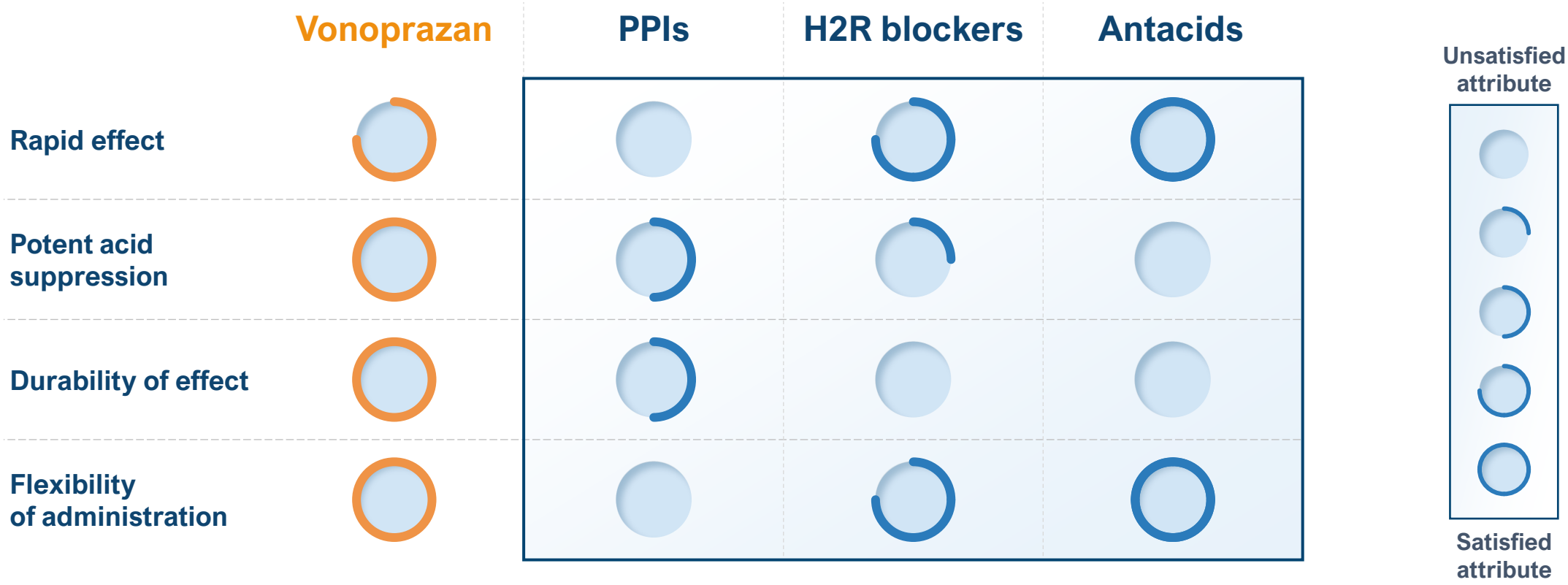
We believe vonoprazan's pharmacologic profile is well suited for the treatment of non-erosive GERD with as needed dosing



Topline results from PHALCON-NERD-301 demonstrated efficacy in daily dosing[1]

[1] Pending trial completion, expected in 2H 2023

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GERD represents a large US market with high unmet need

Legend
Dx = Diagnosed
Tx = Treated

~65M people in the US with GERD[2,3]

~20M people with erosive GERD[2,3,4]

~17M adults with erosive GERD

~9M adults Dx with erosive GERD

~7M adults Dx & Tx with erosive GERD*

~45M people with non-erosive GERD[2,3,4]

~38M adults with non-erosive GERD

~19M adults Dx with non-erosive GERD

~15M adults Dx & Tx with non-erosive GERD*

We believe the positive Phase 3 results to date support the potential to unlock access to the entire GERD market

VOQUEZNA potential peak revenue opportunity >$3B*

[1] Vaezi MF, Brunton S, Mark Fendrick A, et al. Patient journey in erosive esophagitis: real-world perspectives from US physicians and patients. BMJ Open Gastroenterology 2022;9:e000941. doi: 10.1136/bmjgast-2022-000941
[2] El-Serag HB, Sweet S, Winchester CC, Dent J. Update on the epidemiology of gastro-oesophageal reflux disease: a systematic review. Gut. 2014;63(6):871-880. doi:10.1136/gutjnl-2012-304269
[3] Machicado J.D., Greer J.B., Yadav D. (2020) Epidemiology of Gastrointestinal Diseases. In: Pitchumoni C., Dharmarajan T. (eds) Geriatric Gastroenterology. Springer, Cham. https://doi.org/10.1007/978-3-319-90761-1_7-1
[4] US Census Bureau. US and World Population Clock. Accessed May 2022. https://www.census.gov/popclock.
* Based on Phathom market research; subject to FDA approval.

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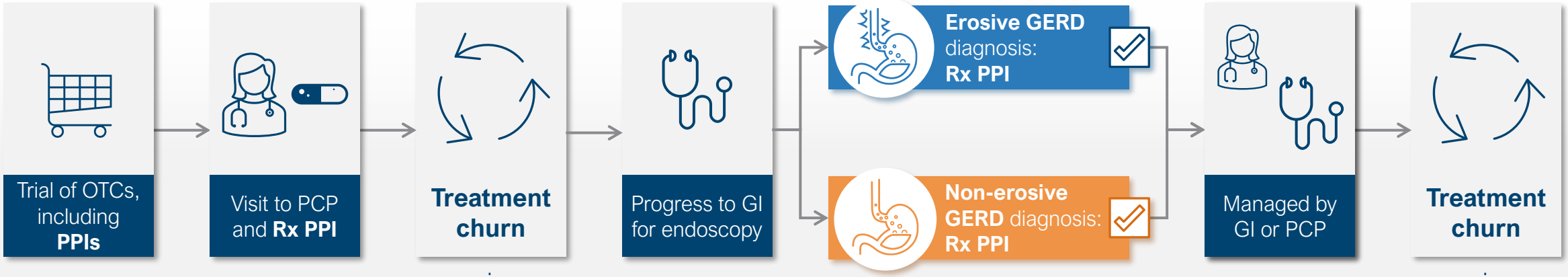
Typical GERD patient journey highlights current dissatisfaction

Erosive & Non-erosive GERD patient journeys are similar; both include multiple lines of PPI therapy



~50% of patients progress line of therapy[1]

Non-erosive GERD development strategy designed to address patient unmet needs throughout journey

[1] Symphony APLD claims analysis
Source: Visual represents a summary of patient journey qualitative market research, May 2020

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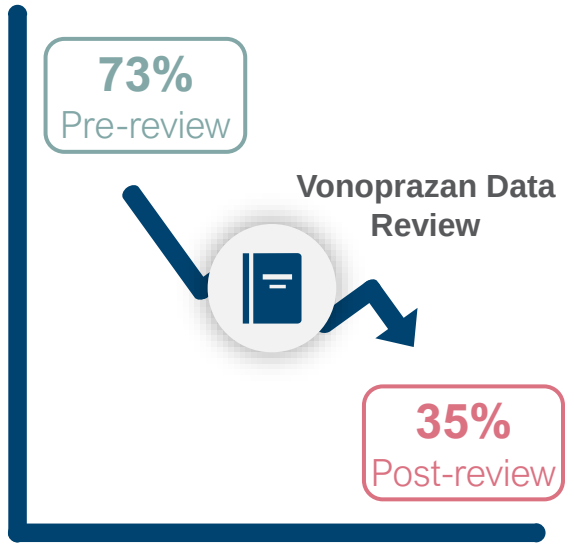
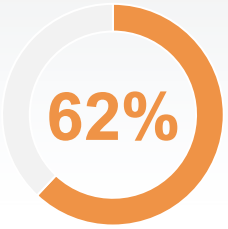
HCPs see vonoprazan as differentiated from PPIs

HCP's perception of PPI potency falls drastically after seeing vonoprazan clinical data

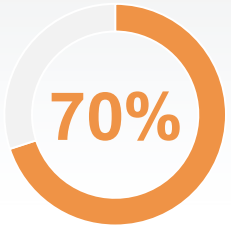
% of HCPs that "strongly agree" PPIs are the most potent acid suppressing agent [2]



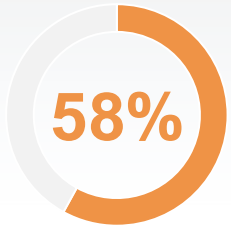
HCPs agree vonoprazan is differentiated vs. existing treatments by having…[1]



superiority in healing of erosive GERD erosions among moderate-to-severe patients



a different **MOA**



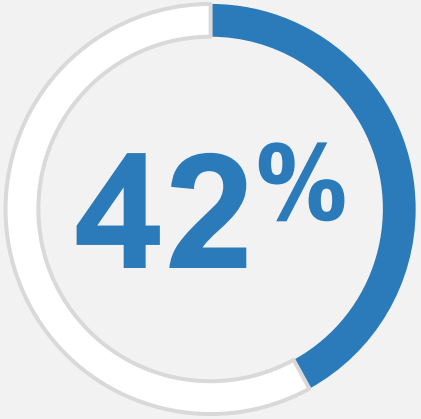
Superior efficacy in maintenance of healed esophageal erosions

[1] Erosive GERD Demand Study / Jan 2022 / n=301 (151 GI; 100 PCP; 50 APP)
[2] HP Messaging / November 2021 / n=222 (111 GI; 83 PCP; 28 APP)

Phathom PHARMACEUTICALS

Physician research indicates high intention to prescribe vonoprazan

Erosive GERD



HCPs expect to prescribe vonoprazan to 42% of their erosive GERD patients[1]

H. pylori infection

HCPs expect to prescribe vonoprazan to 53% of their HP patients[2]

[1] Erosive GERD Demand Study / Jan 2022 / n=301 (151 GI; 100 PCP; 50 APP)
[2] HP Demand Study / July 2021 / n=242 (100 GI; 102 PCP; 40 APP)

Phathom PHARMACEUTICALS

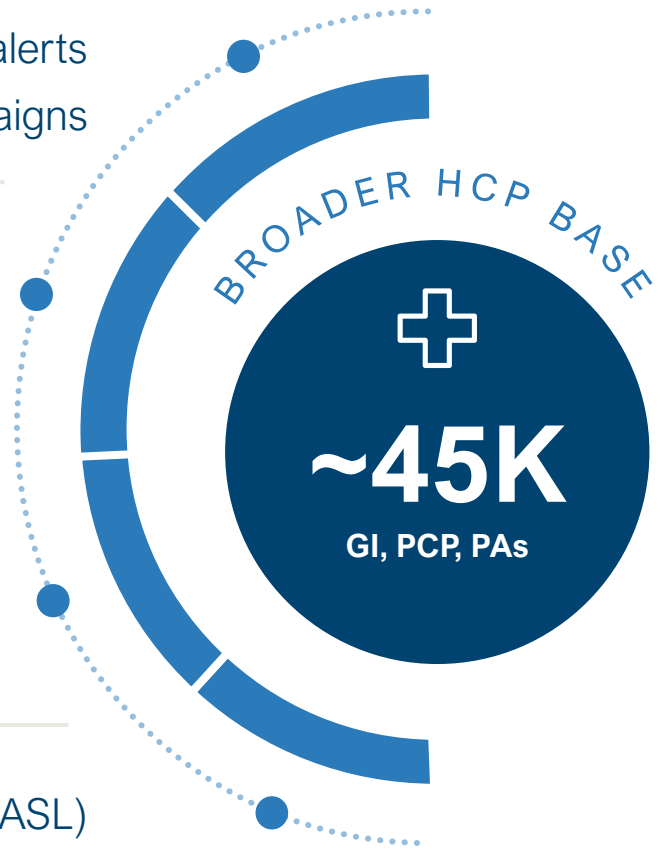
High volume HCPs to be reached by salesforce coupled with broad and aggressive communication campaign

Digital promotion
Mobile alerts
Targeted marketing campaigns

Scientific education
Scientific publications & literature
Medical meetings

Patient reimbursement assistance
Co-pay cards

Cloud pharmacy (ASL)



[1] Indicates the number of reps planned for the simultaneous launch of erosive GERD and H. pylori
Source: Internal analysis of IQVIA Xponent Retail PPI Rx data (2020) in conjunction with Symphony Health claims analysis (2017-2019)

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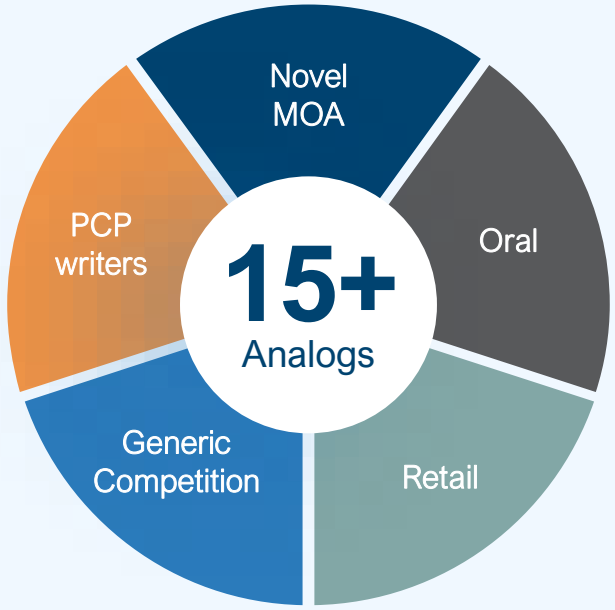
Vonoprazan access and pricing strategy intended to achieve broad access

VOQUEZNA Pak/HP price
$812 (14 days therapy inclusive of antibiotics)[1]

VOQUEZNA TRIPLE PAK & DUAL PAK access
51% of commercial lives covered to date[2]



Payer Input

PBM
NATIONAL
REGIONAL

Vonoprazan
PRICE POTENTIAL

- Differentiated MOA
- Superiority vs. standard of care
- High switch market

Superiority data + Price based on value + Discount for placement = **ACCESS**

[1] Vonoprazan is taken BID during the 14 day regimen (i.e., 28 vonoprazan pills per therapy).
[2] Per MMIT formulary lookup tool as of February 21, 2023.

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Significant opportunity and attractive commercial dynamics exist for blockbuster potential

Large Unmet Needs

Large population & high level of dissatisfaction

Differentiated Profile

Novel MOA & clinical differentiation

Physician Attractiveness

Strong physician interest & concentrated high prescribers

No Branded Competition

No branded competition & share of voice ownership

Goal to displace PPIs and become the #1 selling acid suppressant

RAPID

POTENT

DURABLE

®

[1] Important Safety Information and the full Prescribing Information available at http://www.phathompharma.com/wp-content/uploads/VOQUEZNA-TRIPLE-PAK-and-VOQUEZNA-DUAL-PAK-FDA-Final-Label-3.pdf

Phathom PHARMACEUTICALS

Financial highlights (as of December 31, 2022)

$155.4M
cash and cash equivalents

Up to **$200M** remaining in royalty financing[1]
+
$100M available via term loan[2]

~41M shares
outstanding

~49M shares
fully diluted

Based on our current operating plan:
We believe our existing cash, cash equivalents, and other anticipated capital[3] will be sufficient to **fund operations through the end of 2024**

[1] The total royalty interest financing agreement accounts for up to $300M. To date, Phathom has received $100M under the royalty interest financing agreement which is included in cash and cash equivalents. Phathom will receive an additional $175M upon FDA approval of the erosive GERD NDA on or before 3/31/2024 and the final $25M upon satisfaction of a specified performance milestone.
[2] All tranche terms have been satisfied, allowing Phathom to draw down remaining funds strategically, at any time.
[3] Assumes full drawdown of the remaining $100M available under the term loan, receipt of the $175M erosive GERD approval milestone under the royalty interest financing agreement, and anticipated future product sales, pursuant to the operating plan.

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Upcoming milestones

	Target indications[1]		Anticipated Milestones
H. pylori	**Vonoprazan + antibiotics**	VOQUEZNA TriplePak vonoprazan tablets 20 mg | amoxicillin capsules 500 mg | clarithromycin tablets 500 mg VOQUEZNA DualPak vonoprazan tablets 20 mg | amoxicillin capsules 500 mg	Meeting scheduled with the FDA for March 2023[2] Resubmission pending
Erosive GERD	**Vonoprazan**	Healing of erosive GERD and relief of heartburn Maintenance of healing of erosive GERD and relief of heartburn	Meeting scheduled with the FDA for March 2023[2] Resubmission pending
Non-erosive GERD	**Vonoprazan** (daily dosing)	Daily dosing treatment of heartburn associated with non-erosive GERD	Complete PHALCON-NERD-301 and submit for regulatory approval of vonoprazan dosed daily for the treatment of non-erosive GERD in 2H 2023 As needed non-erosive GERD Ph3 trial design underway
Non-erosive GERD	**Vonoprazan** (as needed)	As needed treatment of heartburn associated with non-erosive GERD	
EoE	**Vonoprazan**	Treatment of eosinophilic esophagitis (EoE) for adult & pediatric use	Ph 2 trial design underway

[1] Phase 1 and 2 studies supporting applications for erosive GERD and H. pylori were conducted by Takeda. Phathom has development & commercialization rights to vonoprazan in the US, Europe, & Canada.
[2] On February 9, 2023, Phathom announced that it received complete response letters from the FDA regarding the erosive GERD NDA and *H. pylori* post approval supplement requesting additional stability data demonstrating that levels of the nitrosamine impurity in vonoprazan drug product will remain at or below the FDA-established acceptable daily intake limit throughout the product's proposed shelf life.

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Appendix: **Phathom's Clinical Trial Results**

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PHALCON-HP

Phase 3 trial for *H. pylori* infection

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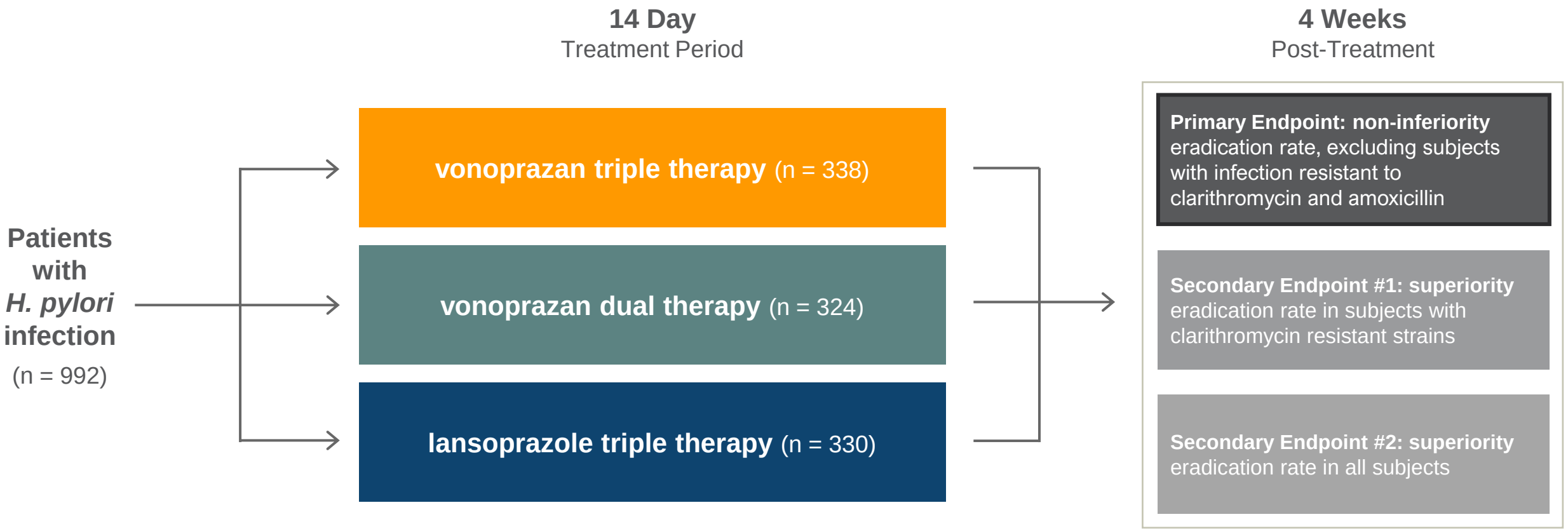
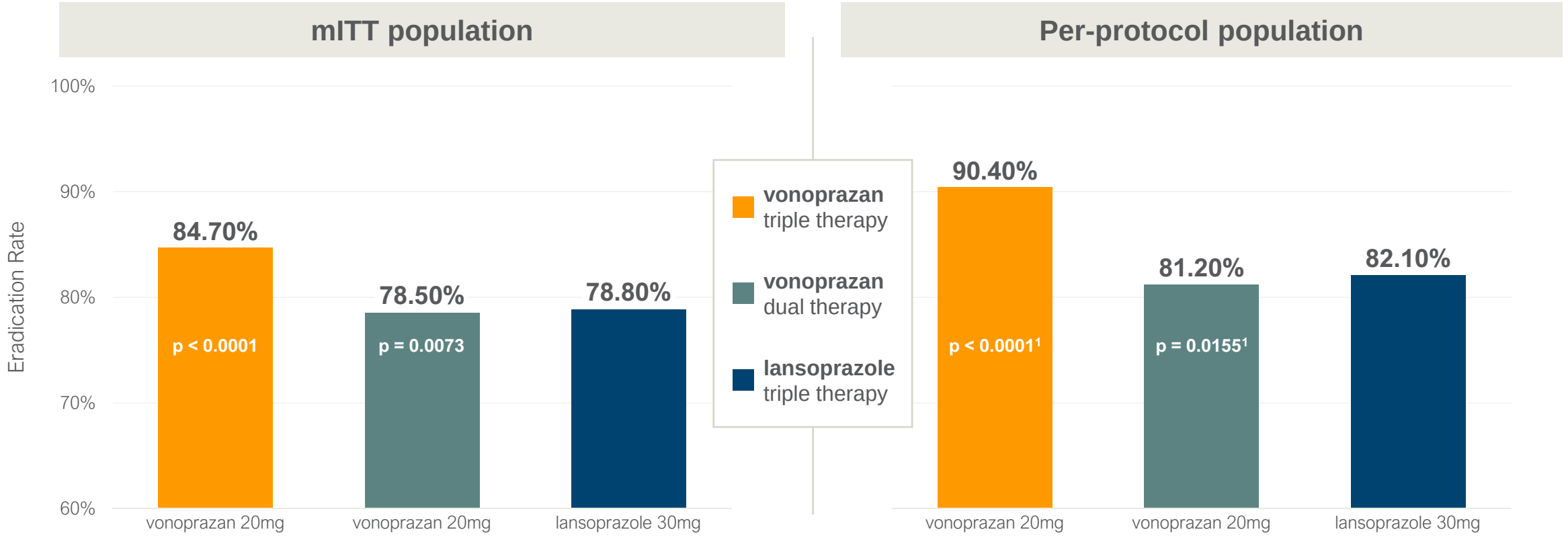
PHALCON-HP Phase 3 study design



Diagnosis of infection and test of cure confirmed by 13C-urea breath test
Vonoprazan dual therapy = vonoprazan 20 mg BID + amoxicillin 1 g TID
Vonoprazan triple therapy = vonoprazan 20 mg BID + amoxicillin 1 g BID + clarithromycin 500 mg BID
Lansoprazole triple therapy = lansoprazole 30 mg BID + amoxicillin 1 g BID + clarithromycin 500 mg BID

PHALCON-HP met primary endpoints

Eradication rates (%) among patients without clarithromycin- or amoxicillin-resistant strains



[1] Not adjusted for multiple comparisons

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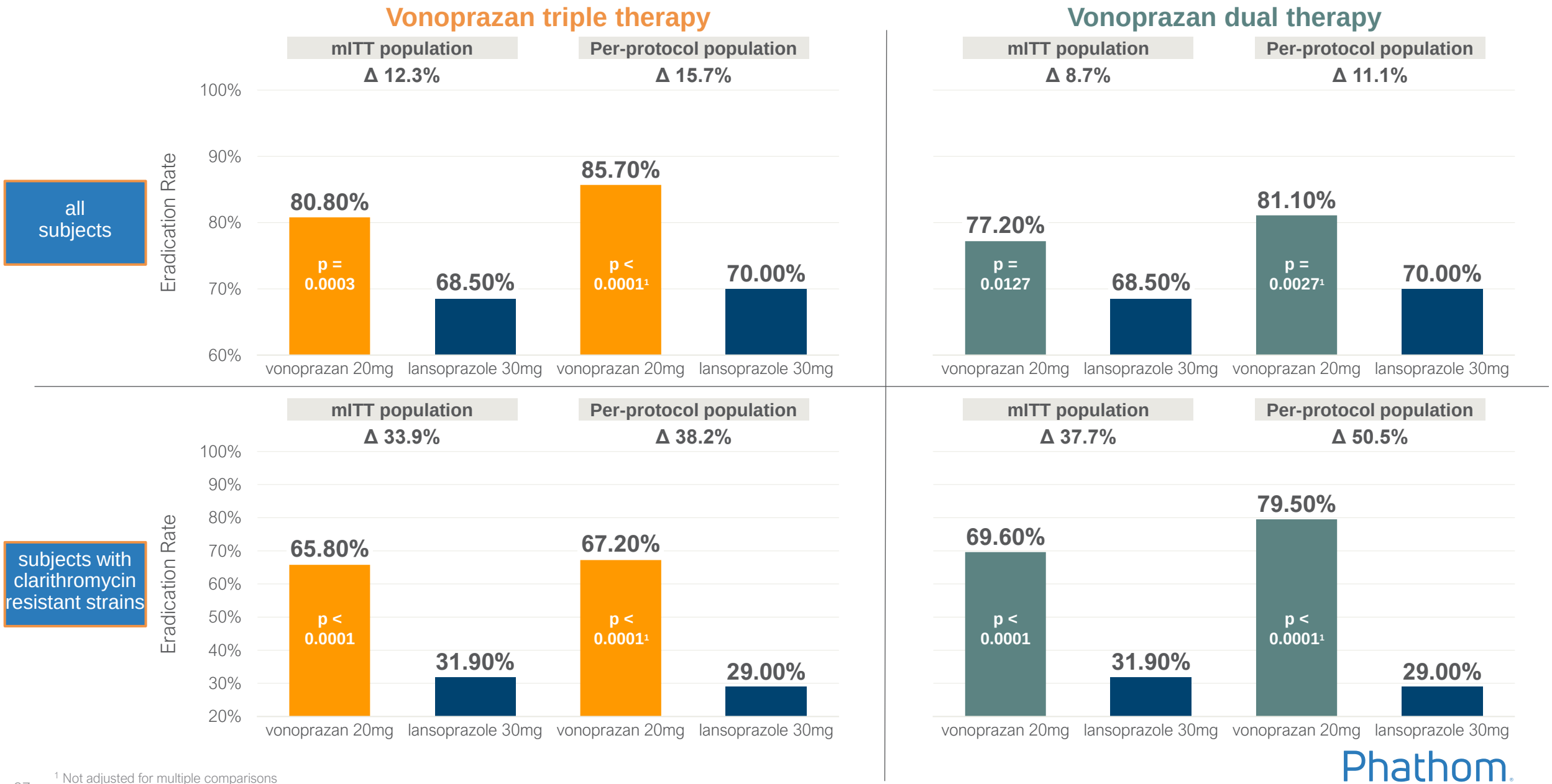
Both vonoprazan-based therapies met superiority for secondary endpoints



[1] Not adjusted for multiple comparisons

Phathom PHARMACEUTICALS

Safety profile

Vonoprazan-based regimens generally well tolerated; comparable to lansoprazole triple therapy

Most frequent (>2.0%) adverse events in PHALCON-HP subjects

% (n) with adverse event	Vonoprazan triple therapy (n=346)	Vonoprazan dual therapy (n=348)	Lansoprazole triple therapy (n=345)
Diarrhea	4.0% (14)	5.2% (18)	9.6% (33)
Nausea	1.7% (6)	1.7% (6)	2.6% (9)
Dysgeusia	4.3% (15)	0.6% (2)	6.1% (21)
Headache	2.6% (9)	1.4% (5)	1.4% (5)
Vaginal infection	2.3% (8)	0.9% (3)	0.3% (1)

Safety Set: All subjects who received at least one dose of study medication

PHALCON-EE

Phase 3 trial for erosive GERD

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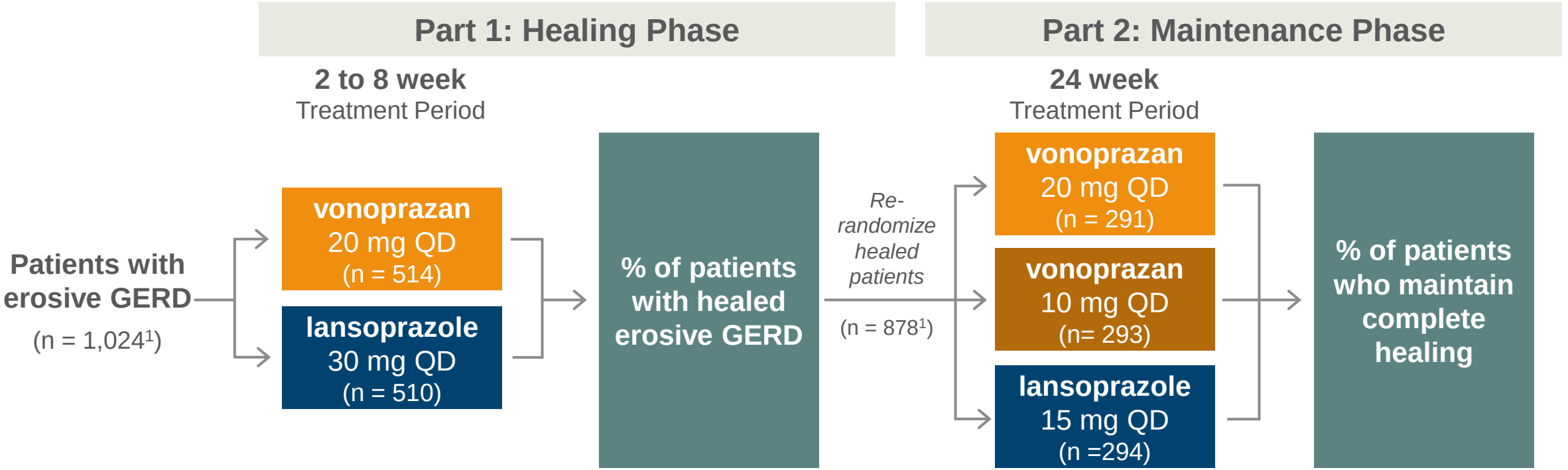
PHALCON-EE Phase 3 study design

US/Europe study in erosive GERD

pHalcon ee
A research study for Erosive Esophagitis



[1] Represents modified intent to treat (mITT) population

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PHALCON-EE Phase 3 met primary and key secondary endpoints

Healing Phase

	Vonoprazan 20mg
☆ *Noninferiority:* % of subjects with complete healing of erosive GERD by Week 8	p<0.0001*
Noninferiority: % of 24-hour heartburn-free days over the Healing Period	95%CI: (-1.60,7.03)
Superiority: % of Grades C/D subjects who have healing at Week 2	p=0.0008
Superiority: % of subjects with onset of sustained resolution of heartburn by Day 3	p=0.4392
Superiority: % of Grades C/D subjects who have healing by Week 8	*not tested in hierarchy* p<0.0001 (nominal)
Superiority: % of subjects (All Grades) who have healing at Week 2	*not tested in hierarchy* p=0.0348 (nominal)

Maintenance Phase

	Vonoprazan 20mg	Vonoprazan 10mg
☆ *Noninferiority:* % of subjects who maintained healing through Week 24	p<0.0001^	p<0.0001^
Superiority: % Grades C/D maintain healing through Week 24	p=0.0196	p=0.0490
Superiority: % all Grades maintain healing through Week 24	p=0.0136	p=0.0436
Noninferiority % of 24-hour heartburn-free days through Week 24	95%CI: (-2.63, 6.72)	95%CI: (-2.27, 6.84)

☆ Denotes primary endpoints tested for noninferiority; endpoints were also tested for superiority

* Healing phase primary endpoint, exploratory superiority comparison, nominal p<0.0001

^ Maintenance phase primary endpoint, prespecified secondary superiority comparison: vonoprazan 20 mg: p=0.0136; vonoprazan 10 mg p=0.0436

Sustained resolution of heartburn is defined as seven (7) consecutive days without heartburn symptoms. For this test to be satisfied a patient must commence the seven consecutive day period on either day 1, 2 or 3 and last, respectively, up to day 7, day 8 or day 9.

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PHALCON-NERD-201

Phase 2 trial for non-erosive GERD

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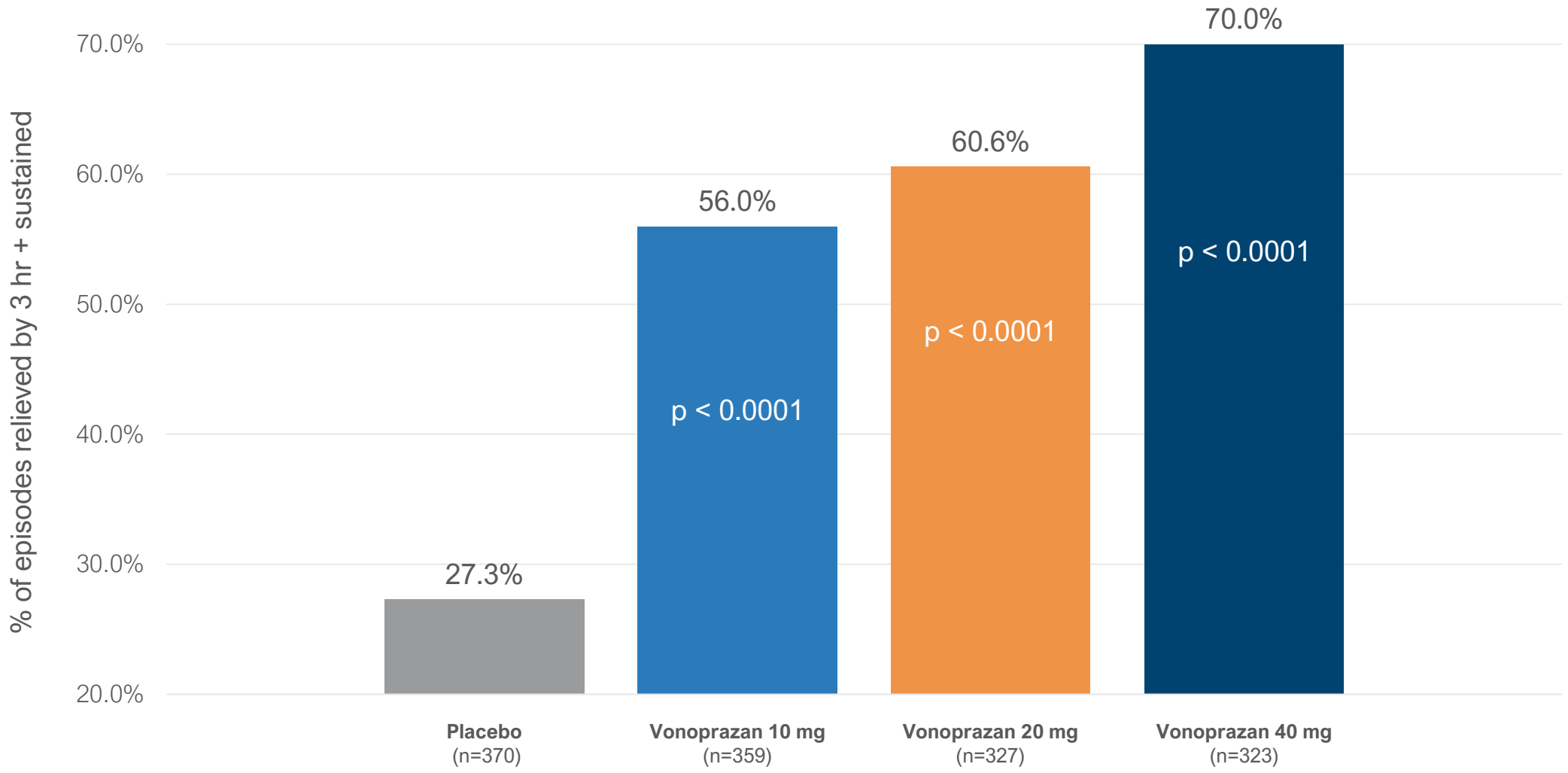
PHALCON-NERD-201 met the primary endpoint for all doses

% of evaluable episodes* with complete and sustained heartburn relief within 3 hours^



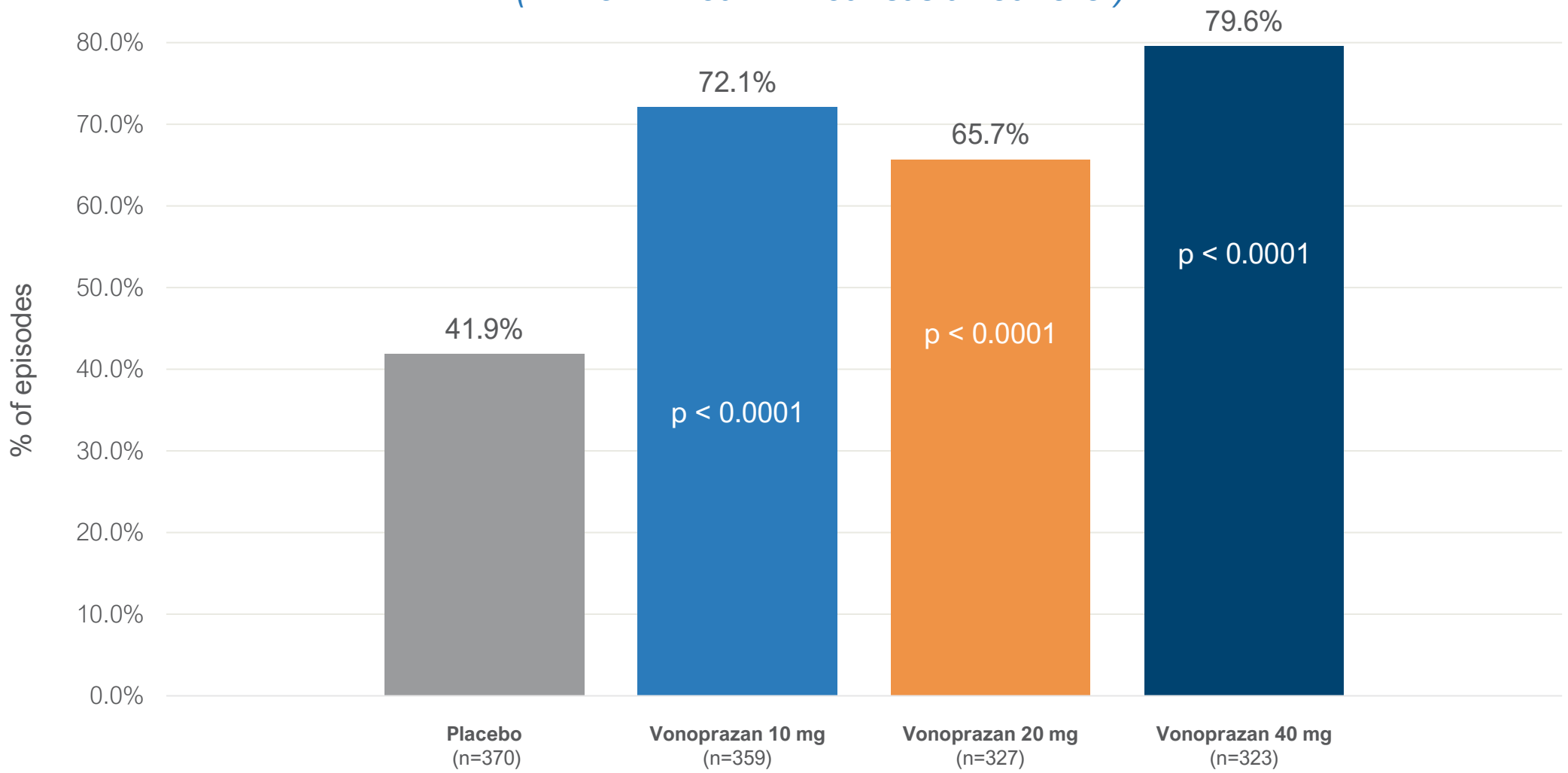
* Evaluable episode = heartburn episode for which subject completes a minimum of one timed assessment
^ Complete relief: Full symptom relief with no rescue antacid taken (must be achieved within 3 hours of study drug); Sustained relief: No further episodes recorded within following 24 hours

Phathom PHARMACEUTICALS

PHALCON-NERD-201 met the key secondary endpoint with all doses resulting in more complete relief of heartburn episodes compared with placebo

% of evaluable episodes* with complete heartburn relief within 3 hours^

(with or without 24-hour sustained relief)



* Evaluable episode = heartburn episode for which subject completes a minimum of one timed assessment

^ Complete relief: Full symptom relief with no rescue antacid taken (must be achieved within 3 hours of study drug)

Phathom PHARMACEUTICALS

PHALCON-NERD-201 safety data

The safety data for all vonoprazan arms were comparable to placebo and consistent with what was reported in previous studies

Daily dosing treatment phase
Vonoprazan 20 mg QD

- Most commonly reported events (> 1% of subjects)
  - Abdominal distension 1.3%
  - Diarrhea 1.5%
  - Nausea 1.3%
- 4 SAEs
  - 1 study drug related SAE (anaphylactic reaction)

As needed treatment phase

	Placebo (n=52)	Vonoprazan 10 mg (n=52)	Vonoprazan 20 mg (n=52)	Vonoprazan 40 mg (n=51)
% (n) of subjects with at least 1 AE	21.3% (10)	16.3% (8)	18.4% (9)	16.7% (8)

- No individual AE was reported by more than one subject in a treatment group
- No SAEs

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