
Phathom
PHARMACEUTICALS
CHANGING THE LANDSCAPE IN GI
Going beyond to advance treatments for patients with acid-related disorders
CORPORATE OVERVIEW
March 2024

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, anticipated milestones, anticipated cash runway, expectations of generating stability data necessary to support the proposed shelf life of vonoprazan, 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 launch and successfully commercialize approved products containing vonoprazan; our new drug application for non-erosive GERD may not be approved by the FDA; our Phase 3 trial for as need dosing of vonoprazan for non-erosive GERD may not successfully be completed; 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.

Phathom PHARMACEUTICALS

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

VOQUEZNA® (vonoprazan) tablets 10mg 20mg

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

VOQUEZNA DualPak®
vonoprazan tablets 20 mg
amoxicillin capsules 500 mg

VOQUEZNA®:

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)

- First and only approved PCAB in the US
- US FDA approval for the treatment of Erosive GERD and *H. pylori* in adults
- VOQUEZNA launch underway

- Commercial product available as of 4Q 2023
- Potential to displace PPIs
- Large market opportunity

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 60% 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, 2023.

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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]

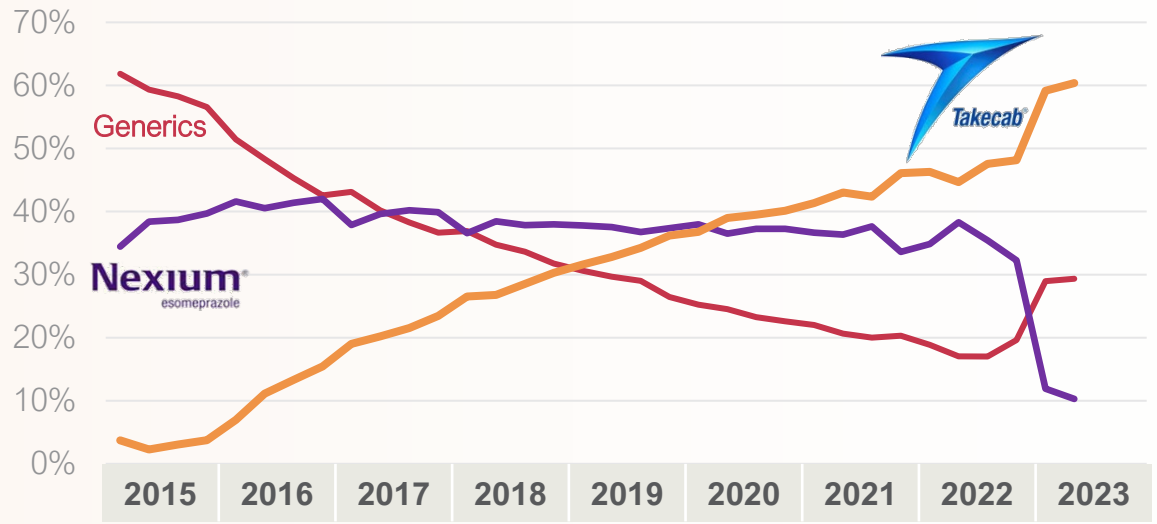
Vonoprazan has been highly successful in Japan

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, 2023.

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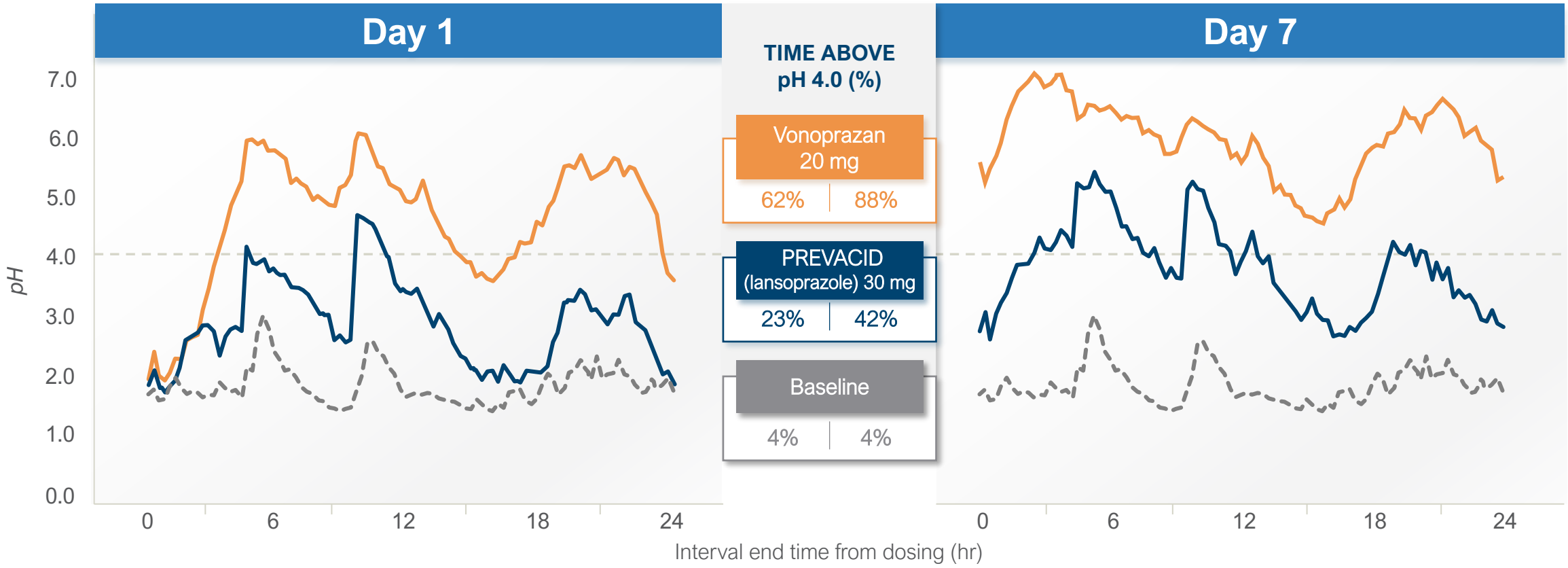
Vonoprazan demonstrated improved acid control versus PREVACID (lansoprazole) in a Phase 1 study

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 (out of 44 total subjects enrolled)

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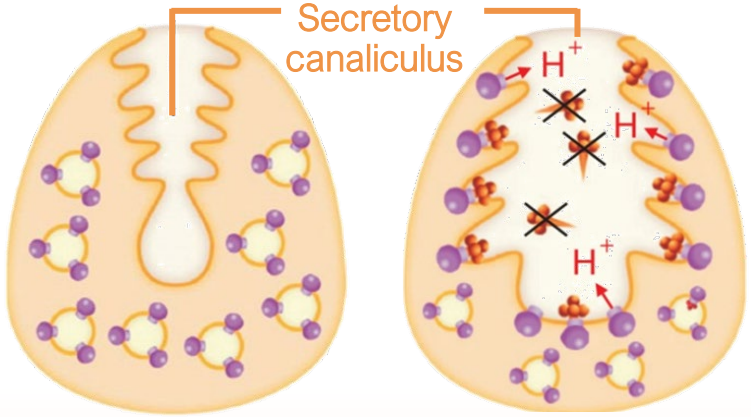
Mechanistic differences between PPIs and PCABs

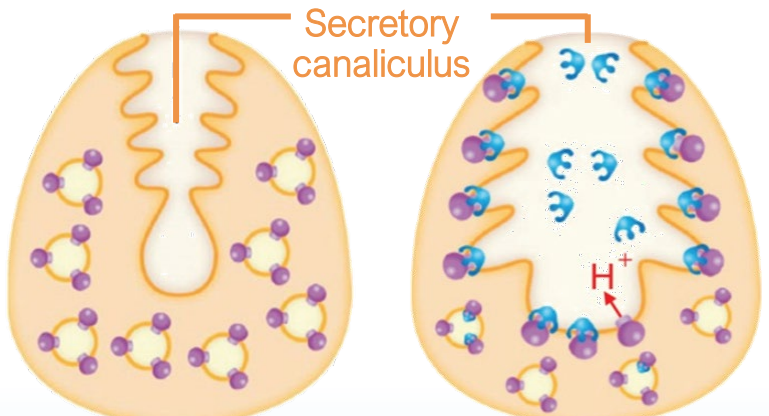
PPI:
COVALENTLY BINDING PRODRUG



- **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

VOQUEZNA:
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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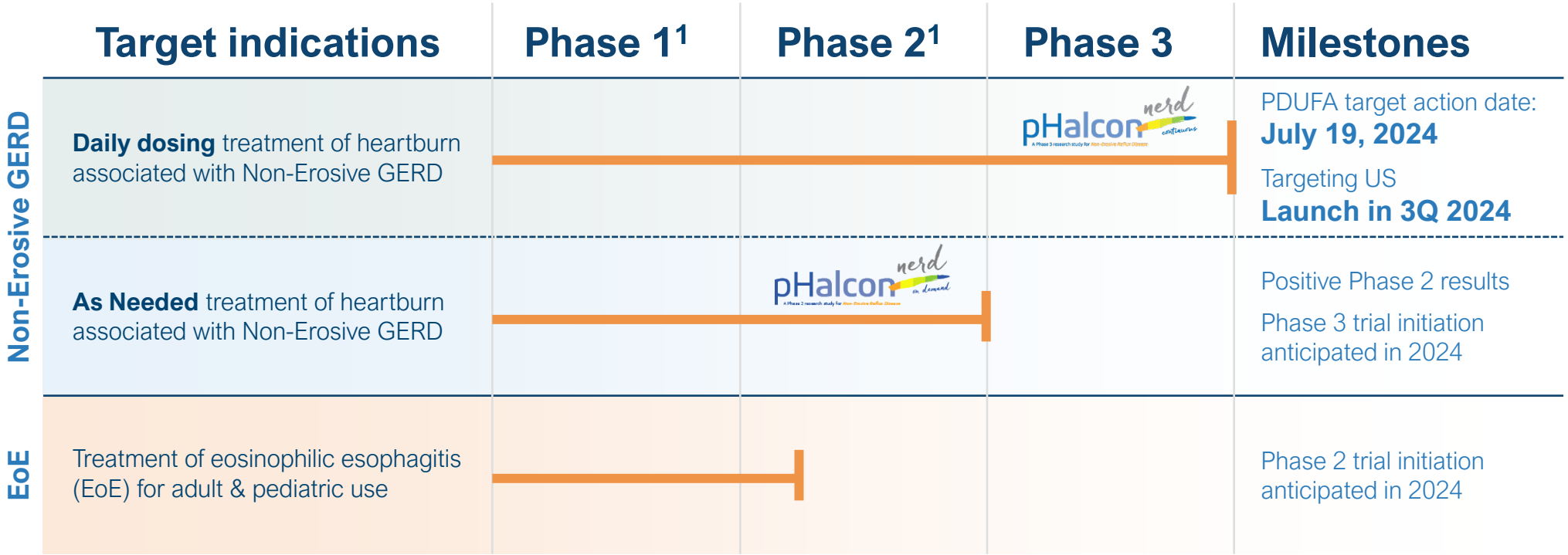
Three approved products across two indications, with more anticipated

NOW APPROVED & COMMERCIALLY AVAILABLE

VOQUEZNA® (vonoprazan) tablets 10 mg 20 mg

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

VOQUEZNA DualPak®
vonoprazan tablets 20 mg
amoxicillin capsules 500 mg



[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

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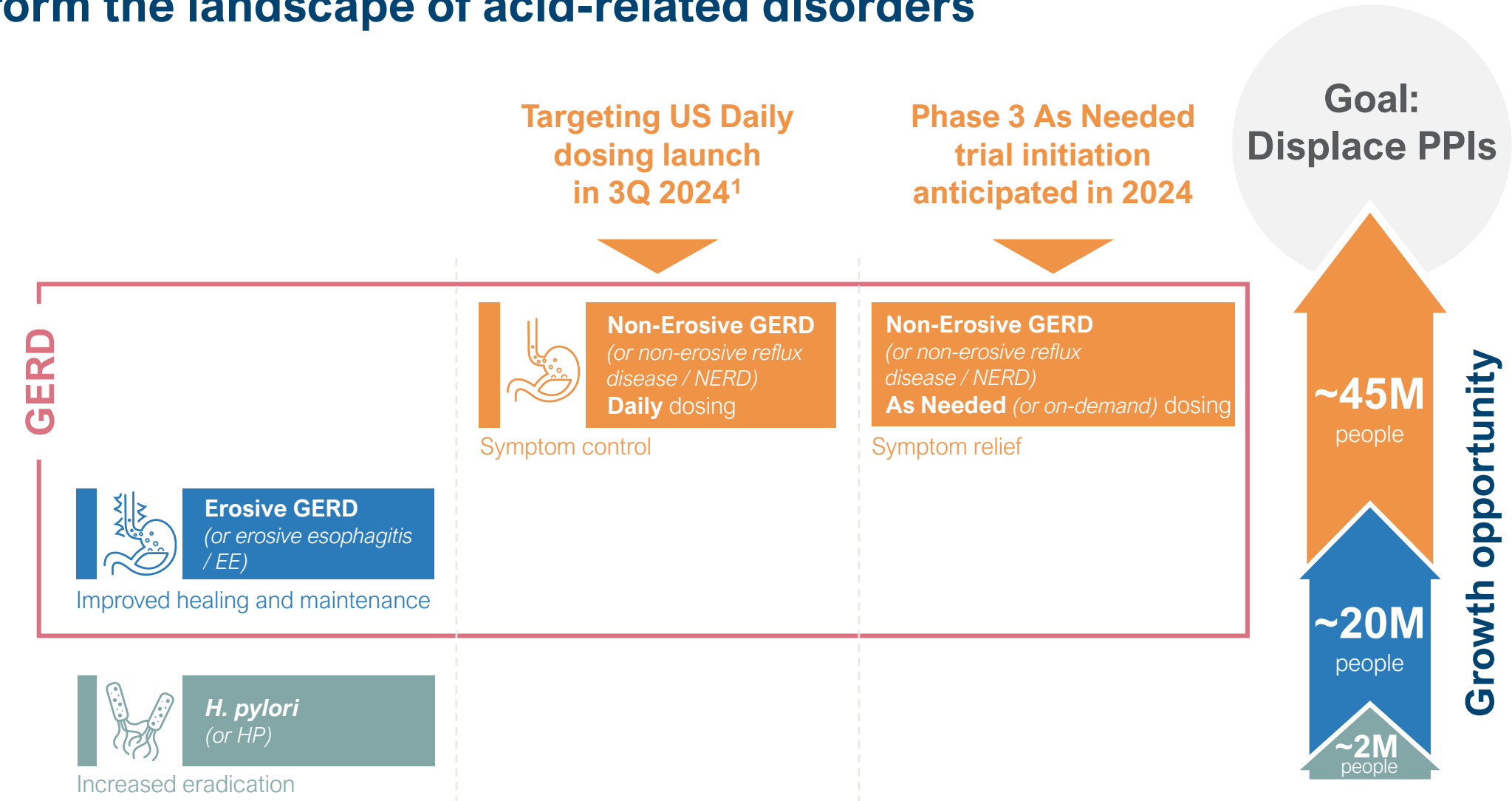
VOQUEZNA vision builds on each targeted indication with the potential to transform the landscape of acid-related disorders



[1] Pending FDA approval.

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VOQUEZNA is now the FIRST AND ONLY FDA APPROVED PCAB in the US

Commercial product NOW AVAILABLE

VOQUEZNA is indicated for the healing and maintenance of healing of all grades of erosive esophagitis and relief of heartburn in adults.

VOQUEZNA is a novel, first-in-class, potassium-competitive acid blocker (PCAB) and the first innovative acid suppressant from a new drug class approved in the US in over 30 years.

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Erosive GERD label includes multiple superiority claims

Healing

Healing of All Grades of Erosive Esophagitis

The primary endpoint, was endoscopically confirmed complete healing of all grades of erosive esophagitis at Week 2 or Week 8, as shown in Table 12.

Table 12: Rates of Healing of All LA Grades of Erosive Esophagitis at Week 2 or Week 8

Timepoint	Treatment Group		Treatment Difference (95% Confidence Interval)
	VOQUEZNA 20 mg Once Daily N=514 %	Lansoprazole 30 mg Once Daily N=510 %	
Week 2 or 8	93	85	8[a] (4.5, 12.2)
Week 2	74	68	

[a] Demonstrated noninferiority to lansoprazole.

Healing of Erosive Esophagitis in Subgroups with LA Grade C or D Esophagitis

For the secondary endpoint of complete healing of erosive esophagitis at Week 2, superiority was demonstrated in the subgroup of patients with LA Grade C or D disease, 70% of 177 VOQUEZNA treated patients and 53% of 174 lansoprazole treated patients achieved healing (18% treatment difference; 95% CI 7.4, 27.4).

Complete healing of erosive esophagitis at either Week 2 or Week 8 in the subgroup of patients with LA Grade C or D disease was 92% in patients treated with VOQUEZNA and 72% in patients treated with lansoprazole. This endpoint was not statistically significant under the prespecified multiple testing procedure.

Relief of Heartburn in Patients with Erosive Esophagitis During the Healing Phase

The percentage of 24-hour heartburn-free days through Week 8 was evaluated as a secondary endpoint and results are shown in Table 13.

Table 13: Percentage of 24-Hour Heartburn-Free Days in Patients with Erosive Esophagitis through Week 8

Parameter	Treatment Group		Treatment Difference (95% Confidence Interval)
	VOQUEZNA 20 mg Once Daily N=514 %	Lansoprazole 30 mg Once Daily N=510 %	
Mean ± SD	67 ± 35	64 ± 35	3[a] (-1.6, 7.0)
Median	81	78	

[a] Demonstrated noninferiority to lansoprazole.

Maintenance of Healing

Maintenance of Healed Erosive Esophagitis

The primary endpoint was maintenance of healed erosive esophagitis (all grades) through Week 24. A secondary endpoint was maintenance of healed erosive esophagitis in the subgroup of patients with LA Grade C or D disease prior to randomization in the healing phase of the study.

The maintenance rates of healed erosive esophagitis are shown in Table 14.

Table 14: Maintenance Rates of Healed Erosive Esophagitis in Adults through Week 24

Baseline Severity	Treatment Group		Treatment Difference (95% Confidence Interval)
	VOQUEZNA 10 mg Once Daily	Lansoprazole 15 mg Once Daily	
All LA Grades:	N=293	N=294	
Week 24	79%	72%	7[a] (0.2, 14.1)
LA Grade C or D:	N=95	N=96	
Week 24	75%	61%	13[b] (0.02, 26.1)

[a] Demonstrated non-inferiority and superiority to lansoprazole.
[b] Demonstrated superiority to lansoprazole.

Relief of Heartburn During Maintenance of Healed Erosive Esophagitis

The percentage of 24-hour heartburn-free days through Week 24 was evaluated for non-inferiority as a secondary endpoint as shown in Table 15.

Table 15: Percentage of 24-Hour Heartburn-Free Days through Week 24

Parameter	Treatment Group		Treatment Difference (95% Confidence Interval)
	VOQUEZNA 10 mg Once Daily N=293 %	Lansoprazole 15 mg Once Daily N=294 %	
Mean ± SD	81 ± 29	79 ± 27	2[a] (-2.3, 6.8)
Median	95	89	

[a] Demonstrated non-inferiority to lansoprazole.

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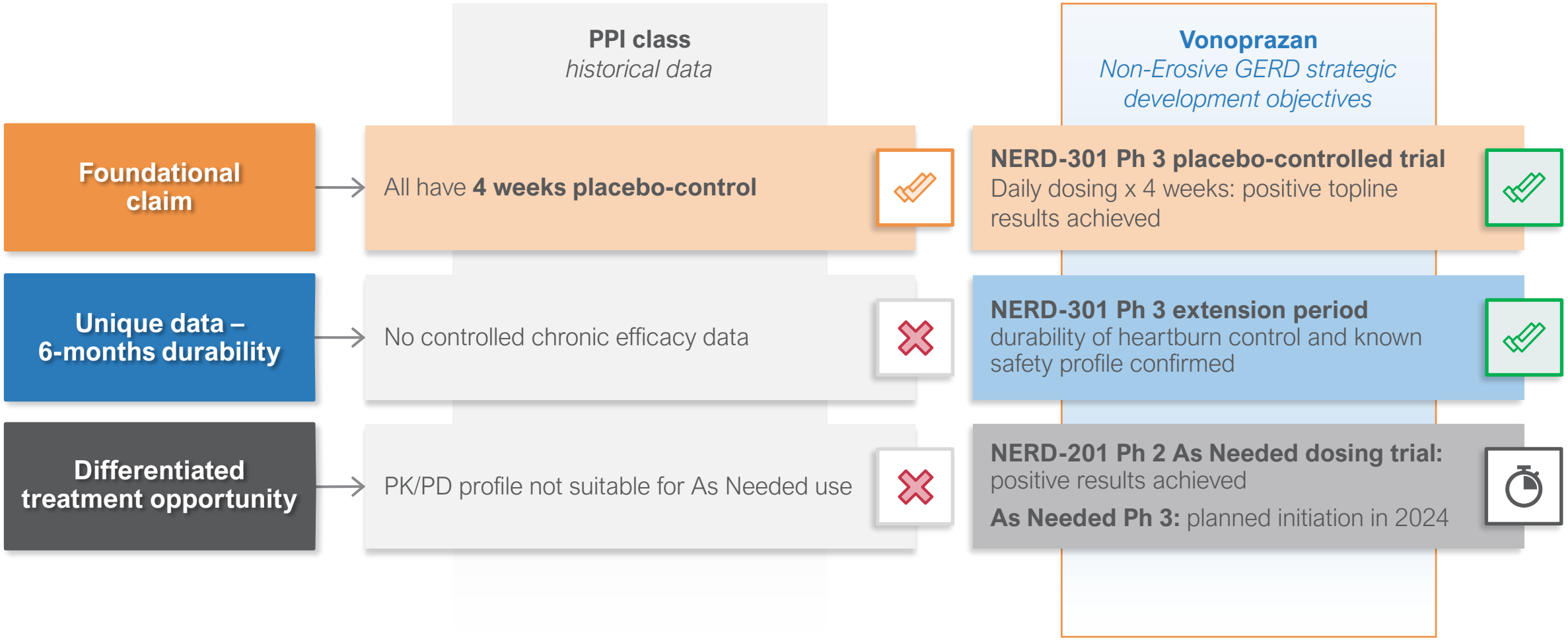
Phathom continues to demonstrate progress on the path to strategically developing vonoprazan for Non-Erosive GERD



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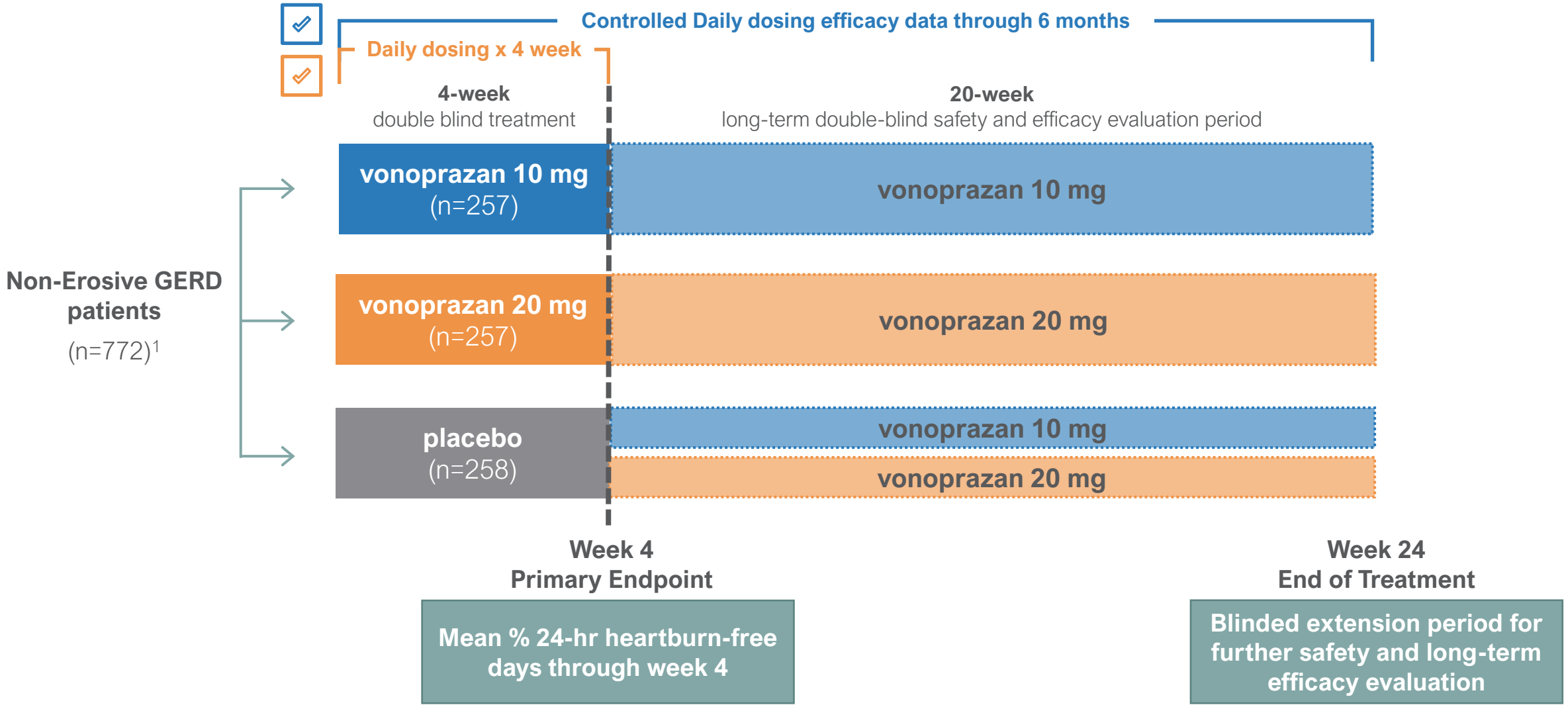
PHALCON-NERD-301 Phase 3 Daily dosing trial design



[1] A total of 772 patients with Non-Erosive GERD were randomized and dosed

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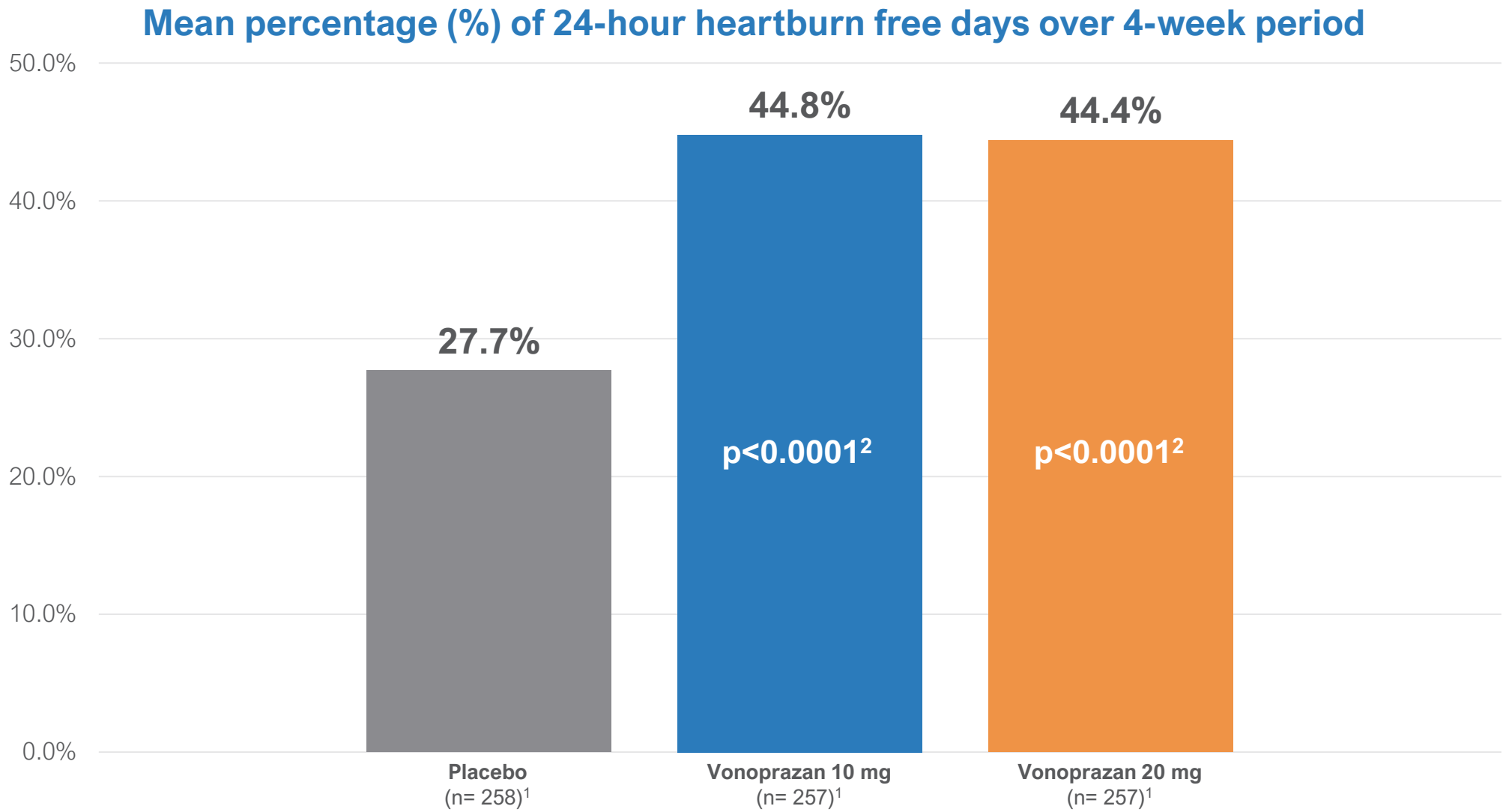
PHALCON-NERD-301 met the primary endpoint for both doses



[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 4-week placebo-controlled period of PHALCON-NERD-301

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	27.7%	44.8%	44.4%
P-value vs. Placebo[2]	--	p<0.0001	p<0.0001
Median	16.7%	48.1%	46.4%

[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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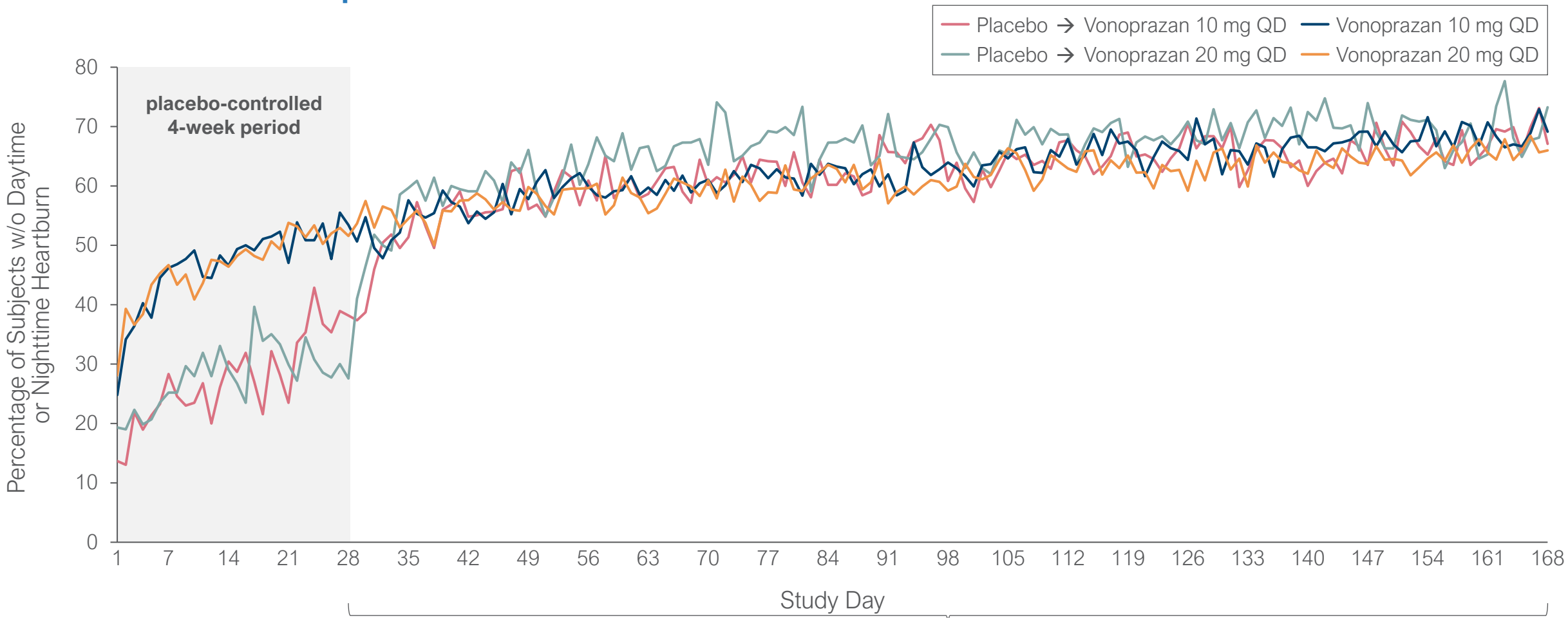
PHALCON-NERD-301 percentage of subjects without heartburn

Over both treatment periods: Intent-To-Treat Set[1]



20-Week Extension Period (Not Placebo-Controlled): Mean % of 24-hr Heartburn Free Days[2]			
Placebo → Vonoprazan 10 mg	Placebo → Vonoprazan 20 mg	Vonoprazan 10 mg	Vonoprazan 20 mg
61.9%	62.9%	62.6%	60.7%

[1] Intent-to-Treat Set: All subjects who received at least one dose of study medication, randomized treatment
[2] The 20-week extension period was not placebo-controlled; descriptive analysis only; no statistical comparisons were conducted

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Summary of PHALCON-NERD-301 safety data

Most Common Adverse Events[1] (≥ 2%), Safety Set[2]

Overall, the safety results observed in PHALCON-NERD-301 were consistent with those observed in prior clinical studies of vonoprazan

4-week placebo-controlled period

% (n)	Placebo (n=256)	Vonoprazan 10 mg (n=259)	Vonoprazan 20 mg (n=257)
Abdominal Pain	0.8% (2)	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 10 mg: viral pericarditis (1)
- Vonoprazan 20 mg: salivary gland calculus (1), fibula/tibia fracture (1)

20-week extension period

% (n)	Placebo → Vonoprazan 10 mg (n = 118)	Placebo → Vonoprazan 20 mg (n = 121)	Vonoprazan 10 mg (n = 248)	Vonoprazan 20 mg (n = 236)
Upper Respiratory Tract Infection	1.7% (2)	0.8% (1)	4.8% (12)	2.1% (5)
Sinusitis	1.7% (2)	1.7% (2)	3.2% (8)	1.3% (3)
Influenza	3.4% (4)	1.7% (2)	2.0% (5)	1.3% (3)
Urinary Tract Infection	1.7% (2)	--	2.0% (5)	2.5% (6)
Nasopharyngitis	1.7% (2)	--	--	2.1% (5)
Gastroenteritis	1.7% (2)	0.8% (1)	0.4% (1)	2.1% (5)
Nausea	0.8% (1)	0.8% (1)	1.2% (3)	2.1% (%)

[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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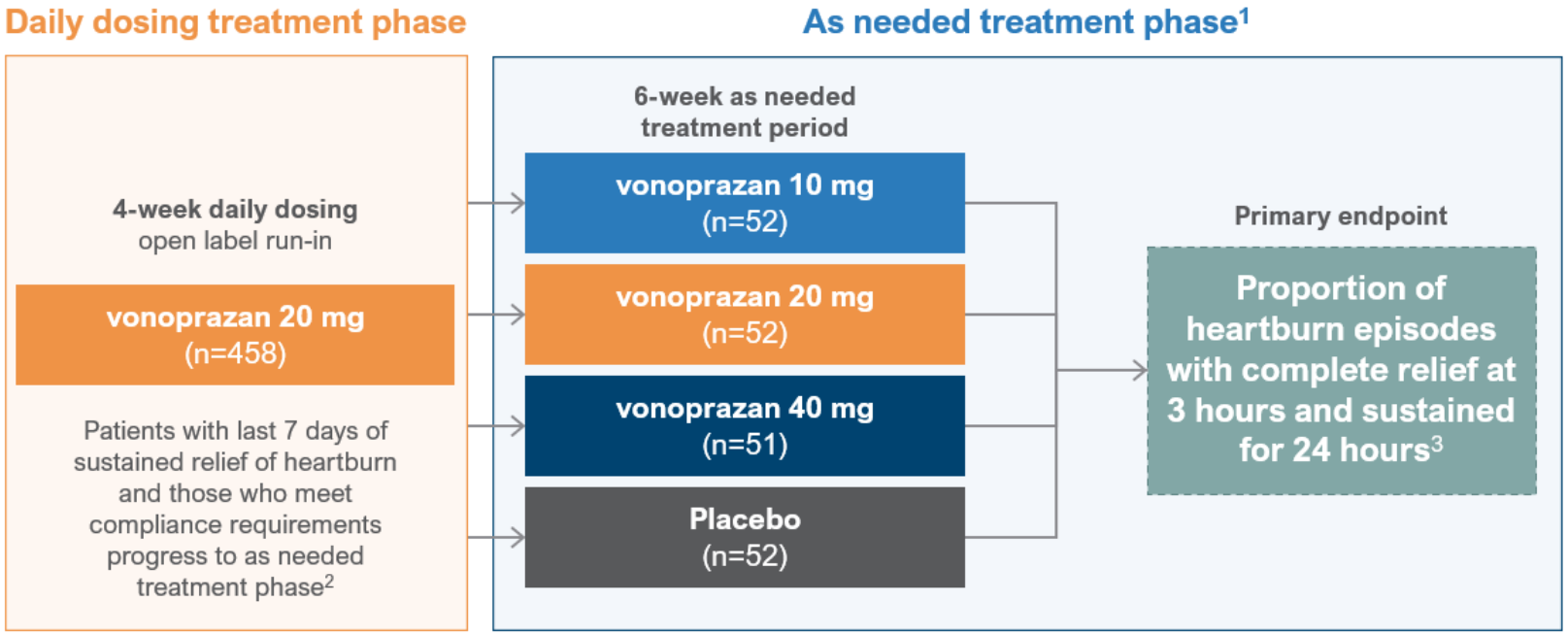
Completed Phase 2 Non-Erosive GERD As Needed dosing trial will serve as the foundation for the Phase 3 trial*

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

* Planning to initiate Phase 3 trial in 2024

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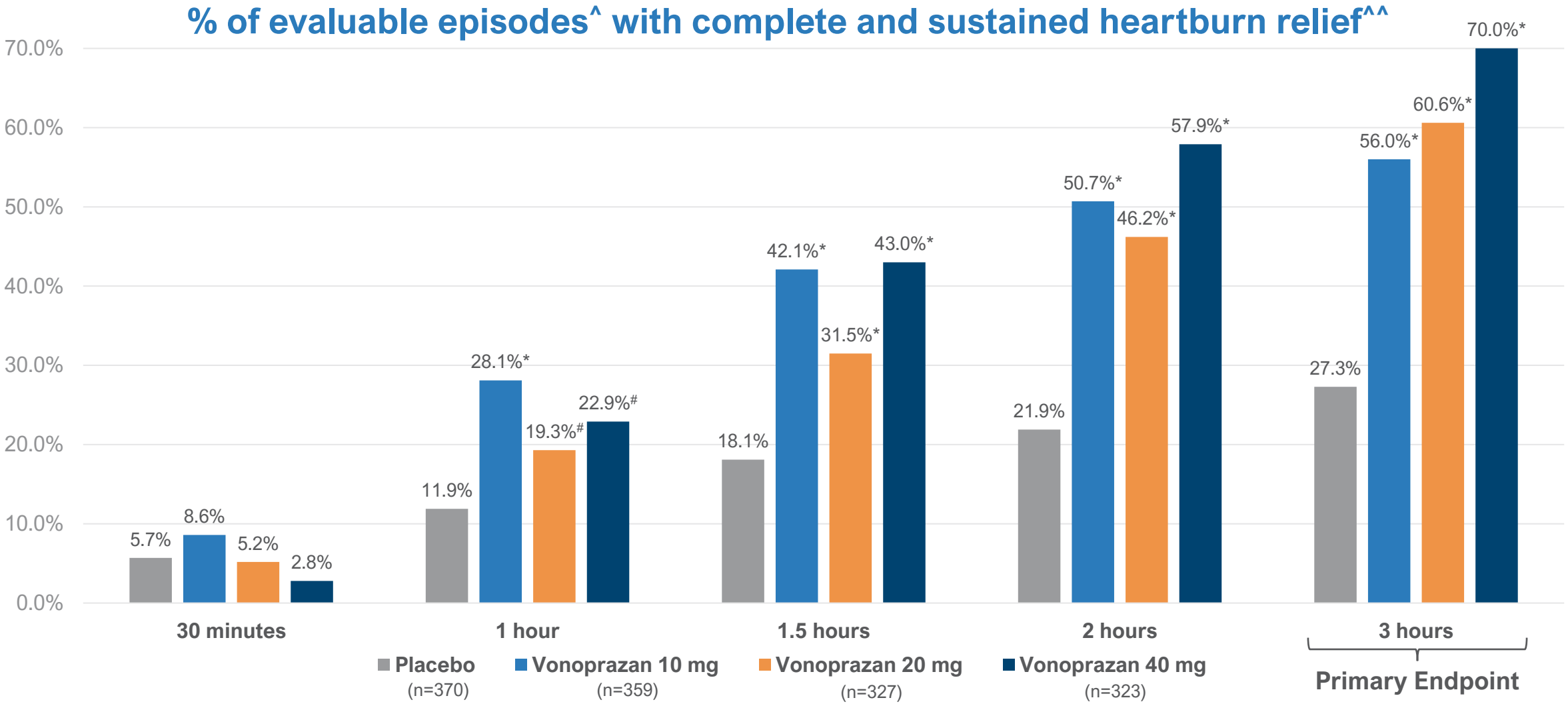
PHALCON-NERD-201 met the primary endpoint for all doses and demonstrated significance over placebo for all doses as early as 1-hour



* 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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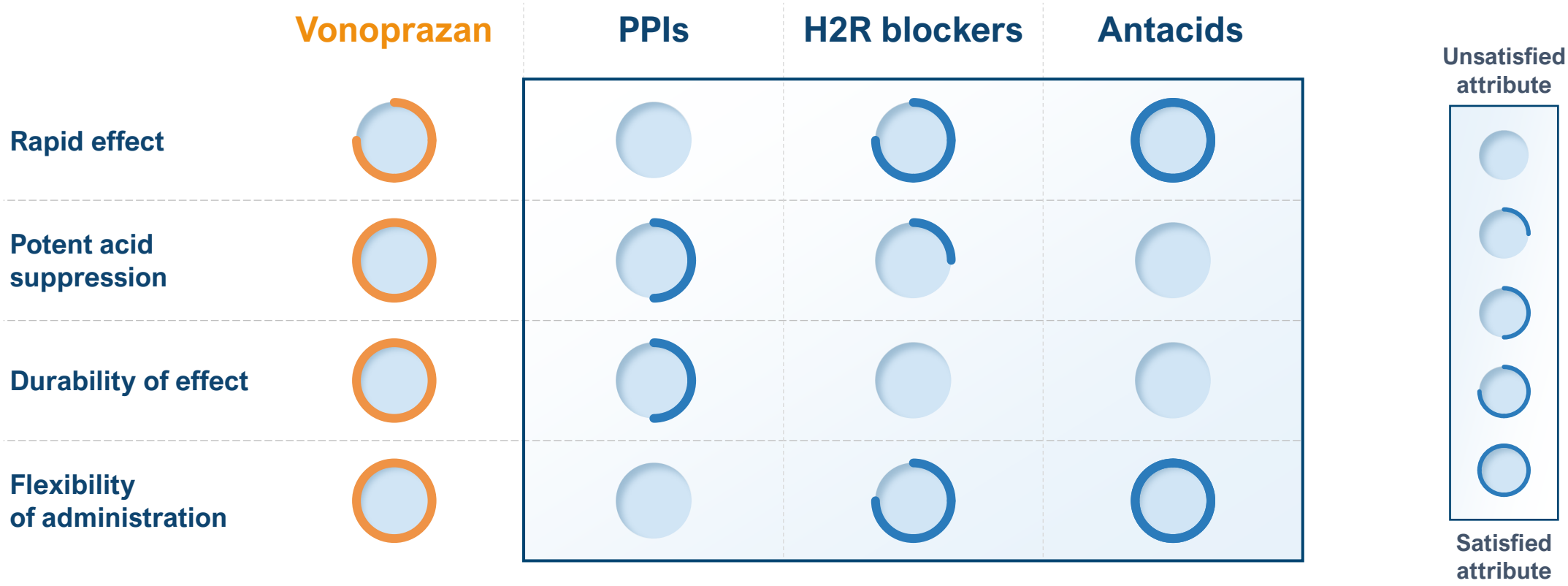
We believe vonoprazan's pharmacologic profile is well suited for the treatment of Non-Erosive GERD with As Needed dosing



Topline results from PHALCON-NERD-301 demonstrated efficacy in Daily dosing

FOR ILLUSTRATIVE PURPOSES ONLY – vonoprazan has not been determined by the FDA to be safe or effective for the treatment of Non-Erosive GERD patients, and no head-to-head studies have been conducted comparing vonoprazan to these agents in the Non-Erosive GERD patient population. Caution should be exercised when comparing data across unrelated studies due to differences in subject characteristics, trial designs, and other factors.

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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[1,2]

~20M people with Erosive GERD[1,2]

~45M people with Non-Erosive GERD[1,2]

~17M adults with Erosive GERD[3]

~38M adults with Non-Erosive GERD[3]

~9M adults Dx with Erosive GERD

~19M adults Dx with Non-Erosive GERD

~7M adults Dx & Tx with Erosive GERD*

~15M adults Dx & Tx with Non-Erosive GERD*

VOQUEZNA US potential peak revenue opportunity >$3B*

[1] 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
[2] 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
[3] US Census Bureau. US and World Population Clock. Accessed May 2022. https://www.census.gov/popclock.
* Company estimates based on its market research.

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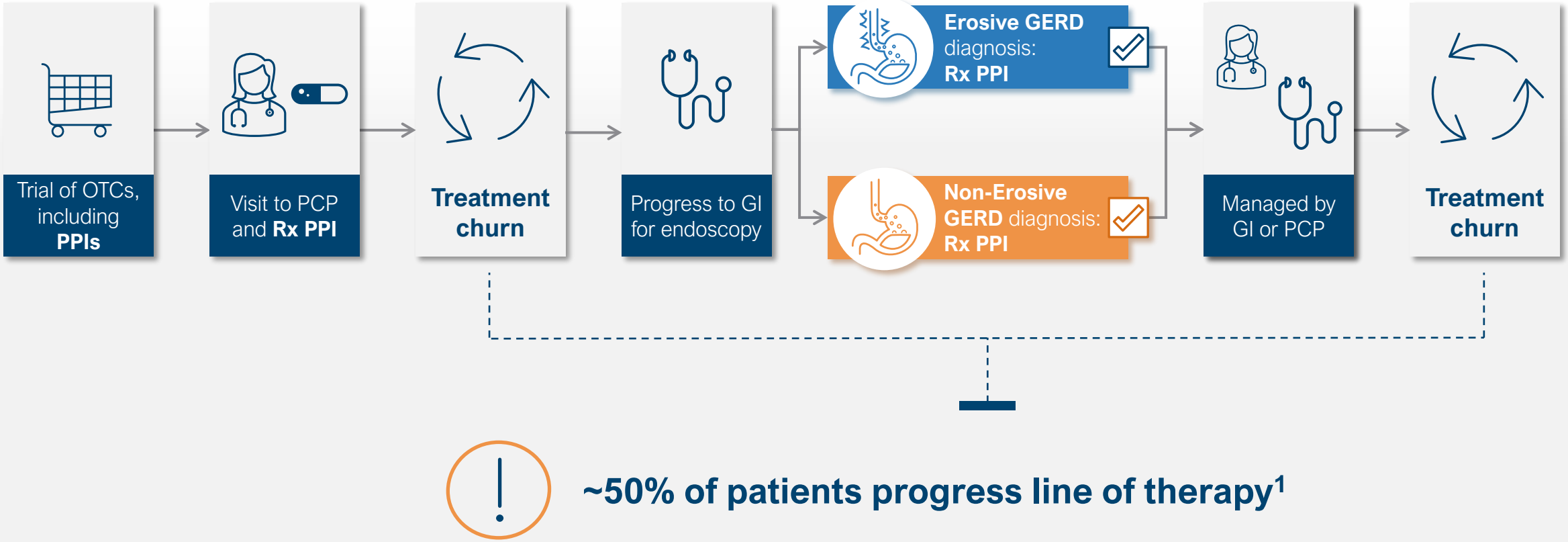
Typical GERD patient journey highlights current dissatisfaction

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



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

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

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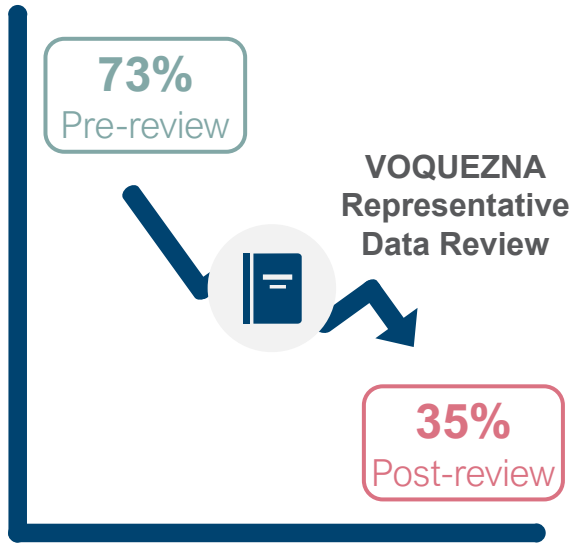
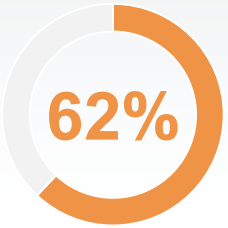
HCPs see VOQUEZNA as differentiated from PPIs

HCP's perception of PPI potency fell drastically after seeing representative VOQUEZNA clinical data

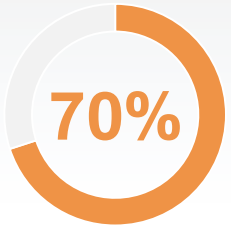
% of HCPs that "strongly agree" PPIs are the most potent acid suppressing agent [1]



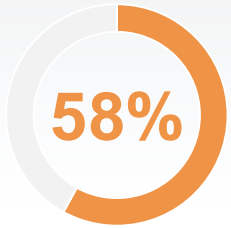
HCPs agree VOQUEZNA is differentiated vs. existing treatments by having demonstrated…[2]



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



a different **MOA**



Superior efficacy in maintenance of healed esophageal erosions

[1] HP Messaging / November 2021 / n=222 (111 GI; 83 PCP; 28 APP)
[2] GERD Buying Process / October 2020 / n=302 (150 GI; 152 PCP)

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Physician research indicates high intention to prescribe VOQUEZNA

HCPs expect to prescribe VOQUEZNA to 42% of their Erosive GERD patients[1]

HCPs expect to prescribe VOQUEZNA 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)

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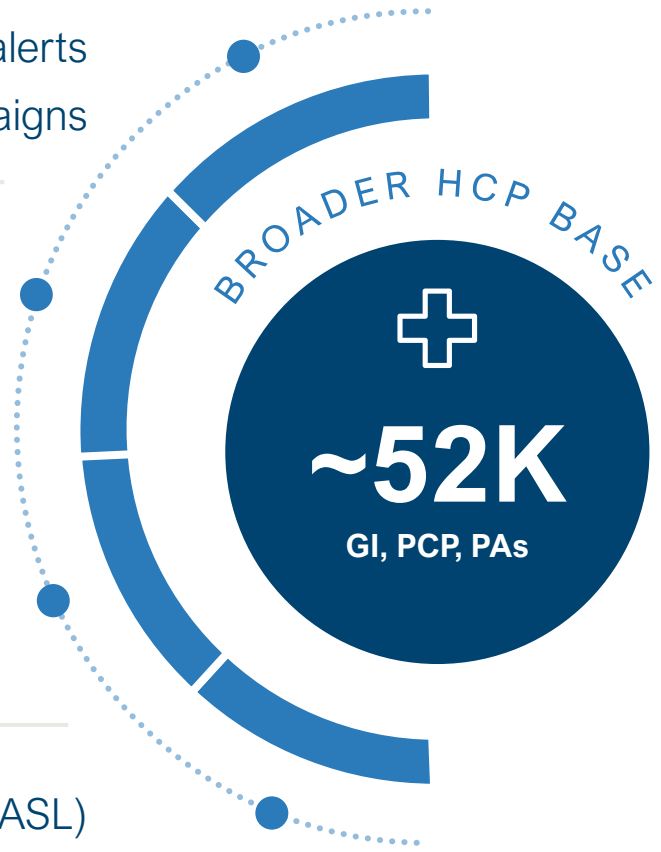
High volume HCPs to be reached by salesforce coupled with broad and aggressive communication campaign

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 for the combined launch of Erosive GERD and *H. pylori* indications
Source: Internal analysis of IQVIA Xponent Retail PPI Rx data (2020) in conjunction with Symphony Health claims analysis (2017-2019)

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VOQUEZNA access and pricing strategy intended to achieve broad access

VOQUEZNA 10mg & 20mg: Pricing[1]
$650 (30 count bottles)

VOQUEZNA 10mg & 20mg: Commercial Access
As of March 2024[2]: 38% coverage | ~60M lives covered

Payer Input

PBM
NATIONAL
REGIONAL

VOQUEZNA PRICE POTENTIAL

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

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

[1] Wholesale acquisition cost per treatment course.
[2] Per MMIT formulary lookup tool as of 3/4/2023.

Phathom PHARMACEUTICALS

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 ®

Note: For full prescribing and safety information, please visit VOQUEZNA.com

Phathom PHARMACEUTICALS

Financial highlights

$381.4M
cash and cash equivalents

(As of December 31, 2023)

$0.7M
in 4Q 2023 net revenues

(1st partial quarter of launch)

Debt Facility
$300M

$40M drawn in Dec. 2023

$140M principal outstanding
$160M potentially available[1]

~58M shares
outstanding

~65M shares
fully diluted

(As of December 31, 2023)

Based on our current operating plan:
We believe our existing cash, cash equivalents, and other anticipated capital[2] will be sufficient to **fund operations through 2026**

[1] The remaining $160M, of the $300M term loan, is potentially available in five tranches: (1) $10M through March 15, 2024 (2) $25M through June 15, 2024 (3) $25M through December 15, 2024 (4) $50M subject to the achievement of a specified revenue milestone through June 30, 2025 (5) $50M subject to the achievement of a specified revenue milestone through December 31, 2025.
[2] Assumes full drawdown of the remaining $160M under the amended term loan and anticipated future product sales, pursuant to the operating plan.

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Regulatory exclusivity expected through November 2032

Regulatory Exclusivity

5 years NCE exclusivity +

5 years GAIN Act NCE exclusivity +

6 months pediatric exclusivity =

☆ **November 2032** ☆

Key Considerations

- GAIN Act NCE exclusivity anticipated to apply to all Phathom products containing vonoprazan, regardless of indication
- First ANDA seeking approval of a generic vonoprazan cannot be filed until expiration of regulatory exclusivity
- Subsequent generic launch timing subject to FDA review and approval

Patent Exclusivity*

Vonoprazan Species

Vonoprazan Species US Patent
7,977,488 expires
Aug. 11, 2028

Expiration date with expected patent term extension:
April 1, 2030

Vonoprazan Fumarate

Vonoprazan Fumarate Formulation US Patent
9,186,411 expires
Aug. 11, 2030

*All patent terms will be extended by 6 months if pediatric exclusivity is granted

Phathom PHARMACEUTICALS

Upcoming milestones

	Target indications[1]	Anticipated Milestones
H. pylori	VOQUEZNA TriplePak® vonoprazan tablets 20 mg amoxicillin capsules 500 mg clarithromycin tablets 500 mg VOQUEZNA DualPak® vonoprazan tablets 20 mg amoxicillin capsules 500 mg VOQUEZNA Triple Pak & VOQUEZNA Dual Pak are indicated for the treatment of *Helicobacter pylori (H. pylori)* infection in adults.	PAS approved October 30, 2023 Commercial product NOW AVAILABLE
Erosive GERD	VOQUEZNA® (vonoprazan) tablets 10 mg 20 mg VOQUEZNA is indicated for the healing and maintenance of healing of all grades of erosive esophagitis and relief of heartburn in adults.	NDA approved November 1, 2023 Commercial product NOW AVAILABLE
Non-Erosive GERD	**Vonoprazan** (Daily dosing) Daily dosing treatment of heartburn associated with Non-Erosive GERD	PDUFA target action date for Daily dosing July 19, 2024 Targeting US Daily dosing launch in 3Q 2024
Non-Erosive GERD	**Vonoprazan** (As Needed) As Needed treatment of heartburn associated with Non-Erosive GERD	Planning to initiate Phase 3 As Needed trial in 2024
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.

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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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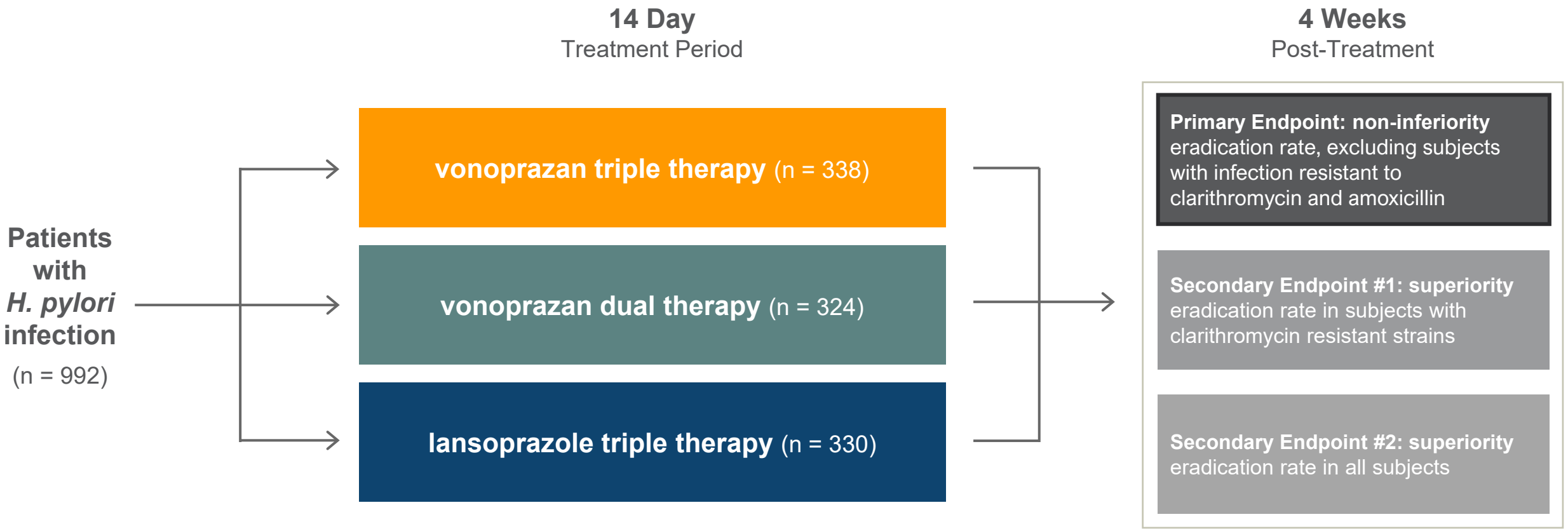
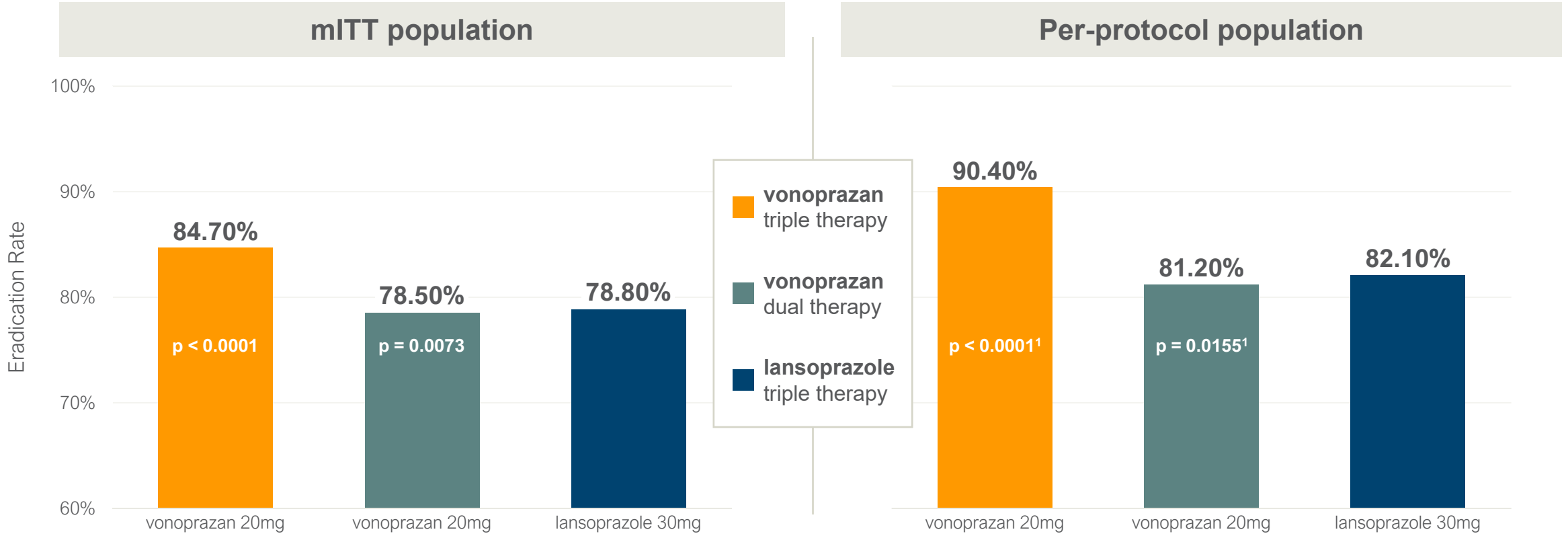
PHALCON-HP Phase 3 study design



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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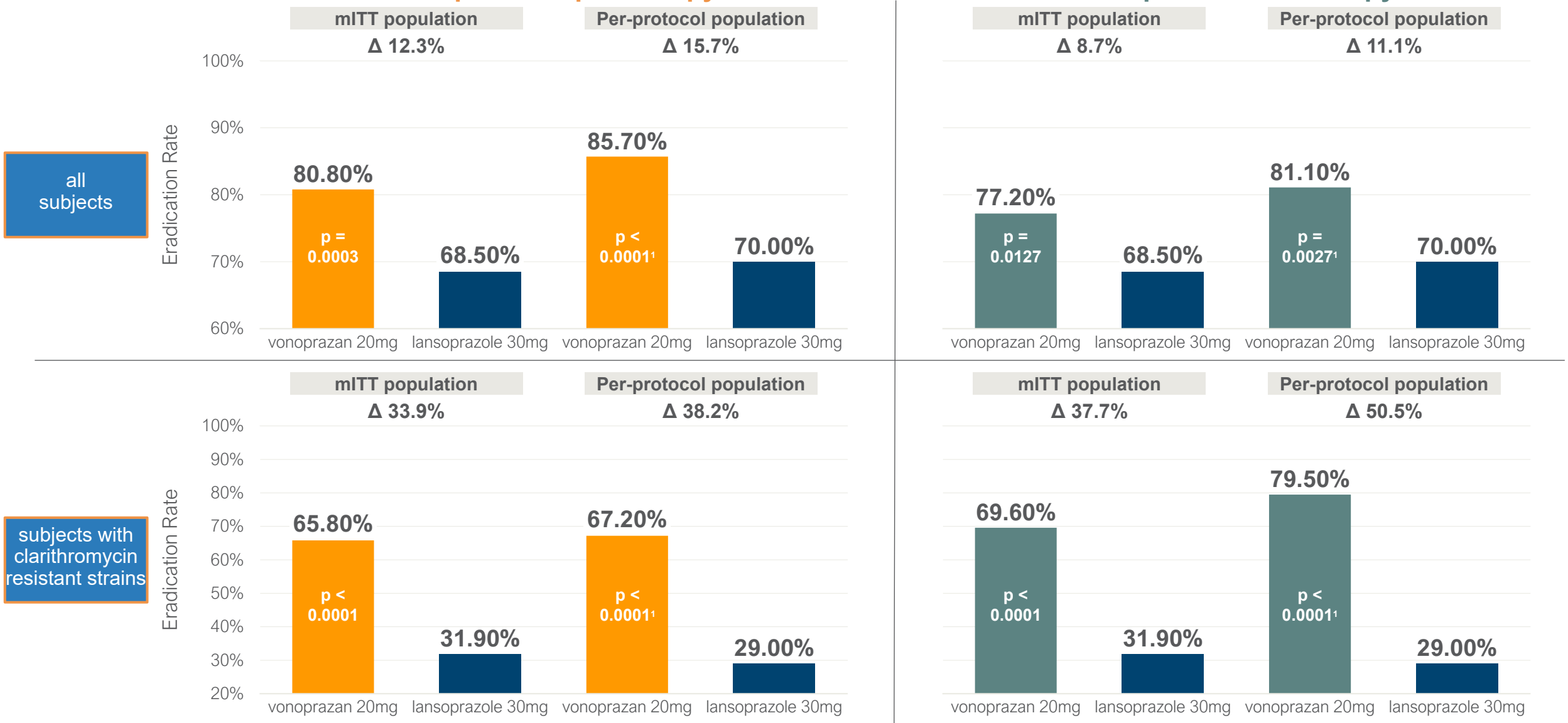
Both vonoprazan-based therapies met superiority for secondary endpoints

Vonoprazan triple therapy

Vonoprazan dual therapy



[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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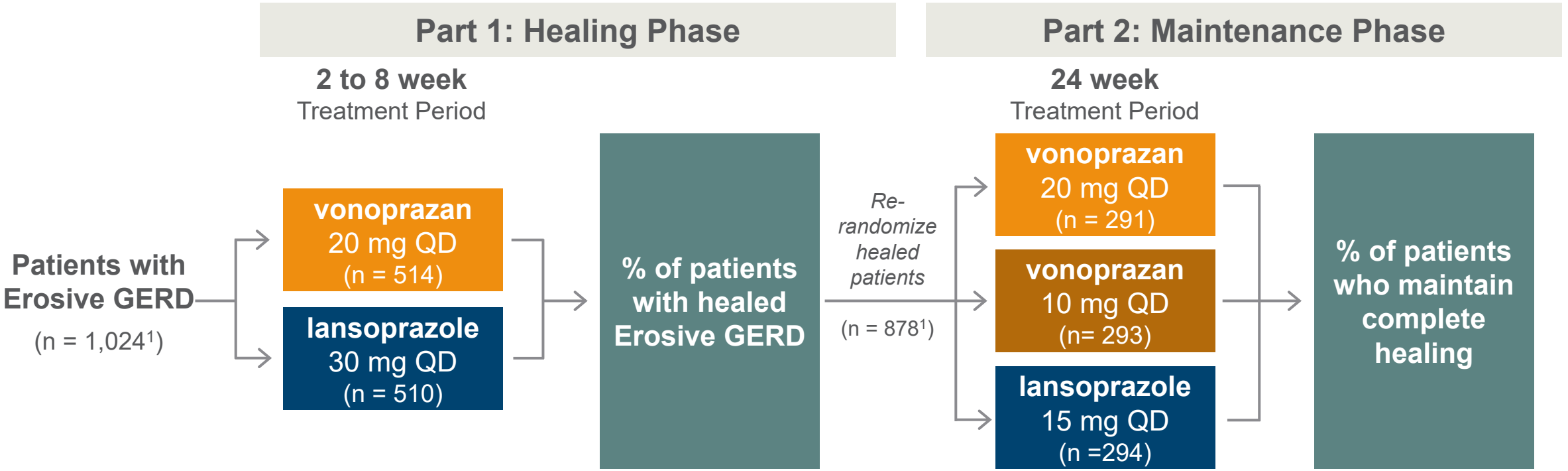
PHALCON-EE Phase 3 study design

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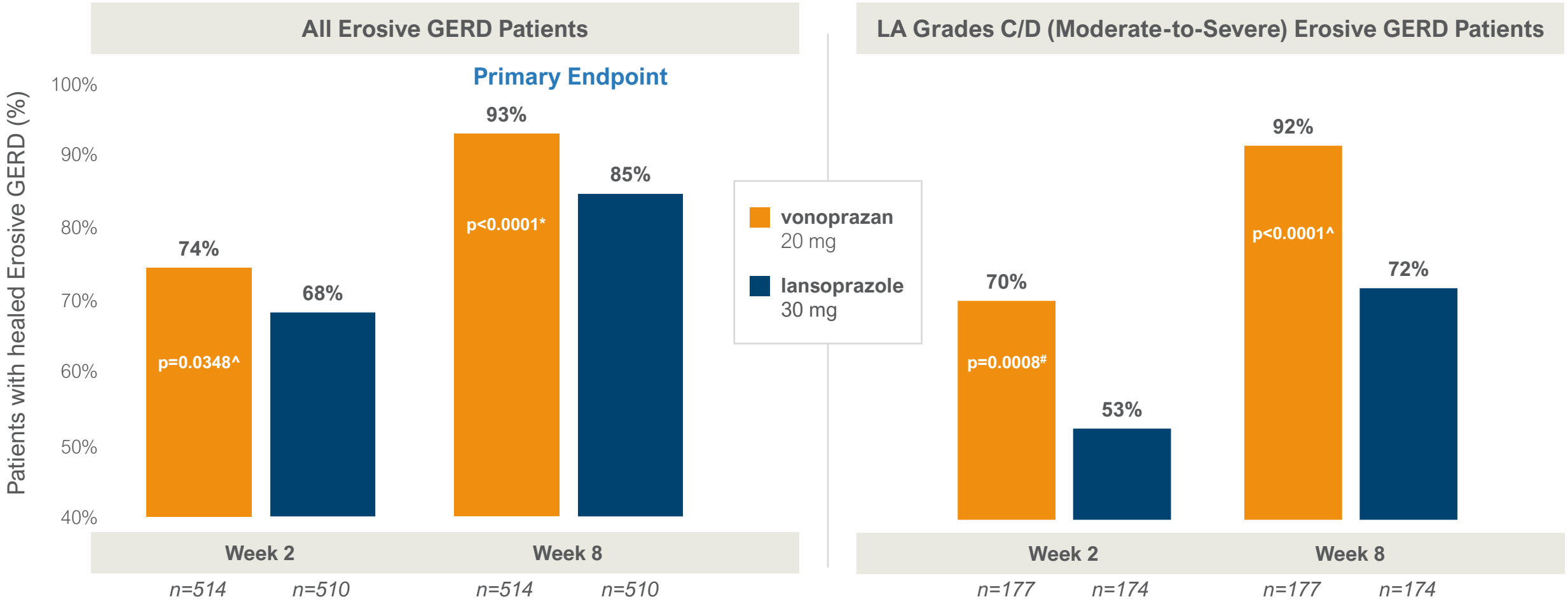
PHALCON-EE Phase 3 met primary and key secondary healing endpoints



^ 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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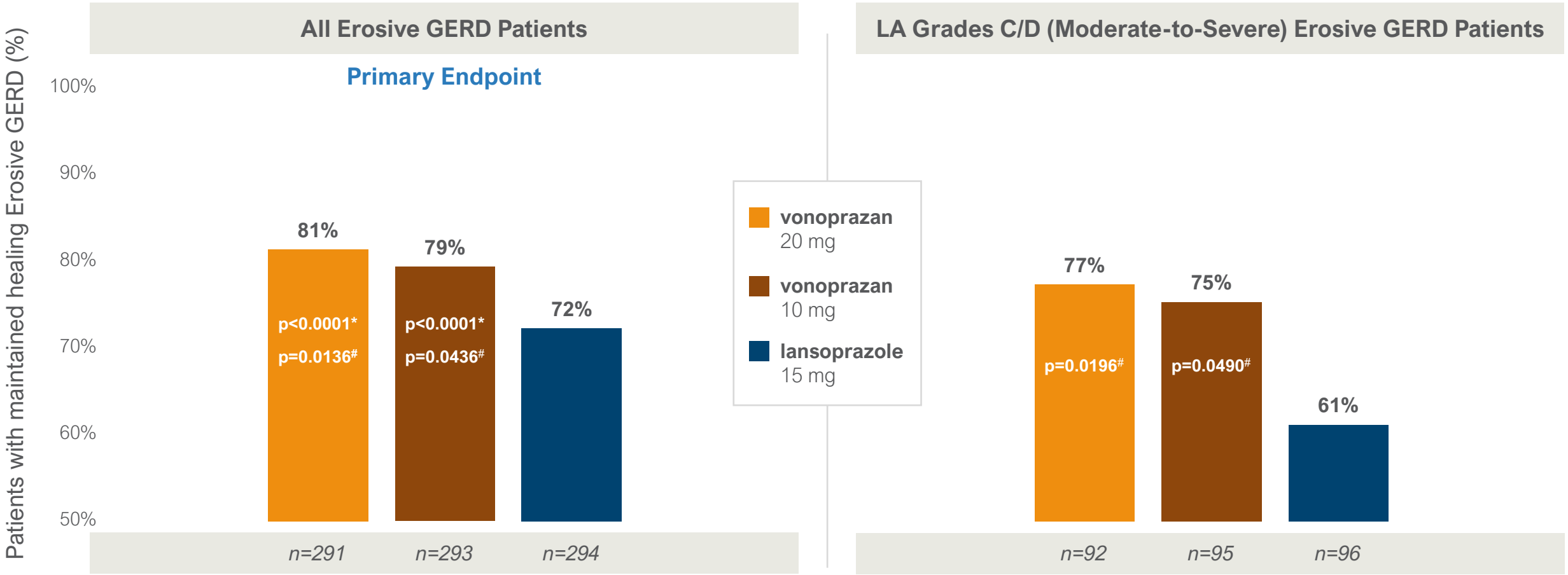
PHALCON-EE Phase 3 met all maintenance of healing endpoints



* 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[1] (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

Phathom PHARMACEUTICALS

PHALCON-EE Phase 3 met primary and key secondary endpoints

Healing Phase

	Vonoprazan 20 mg
☆ *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 20 mg	Vonoprazan 10 mg
☆ *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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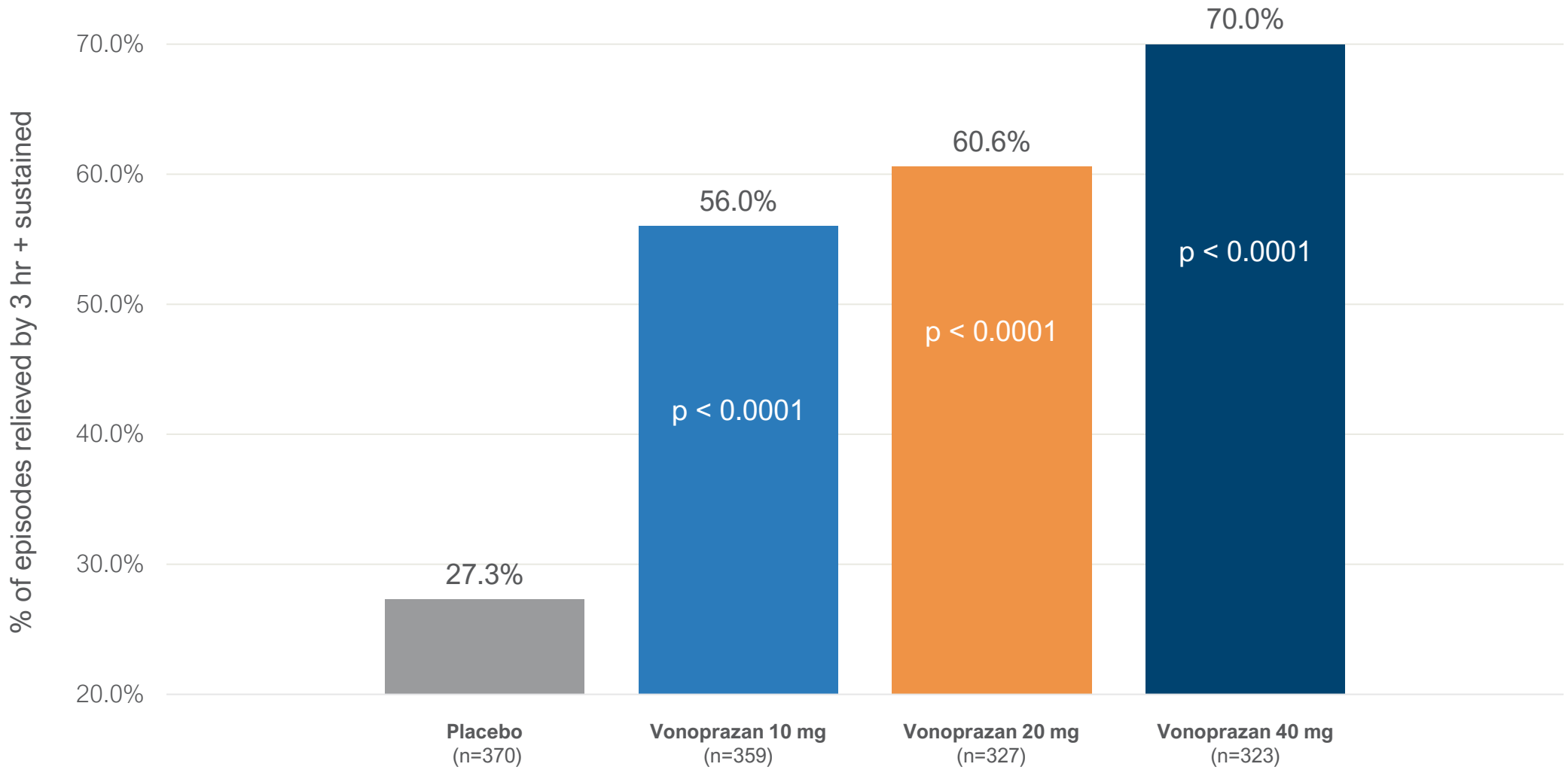
PHALCON-NERD-201 met the primary endpoint for all doses

% 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

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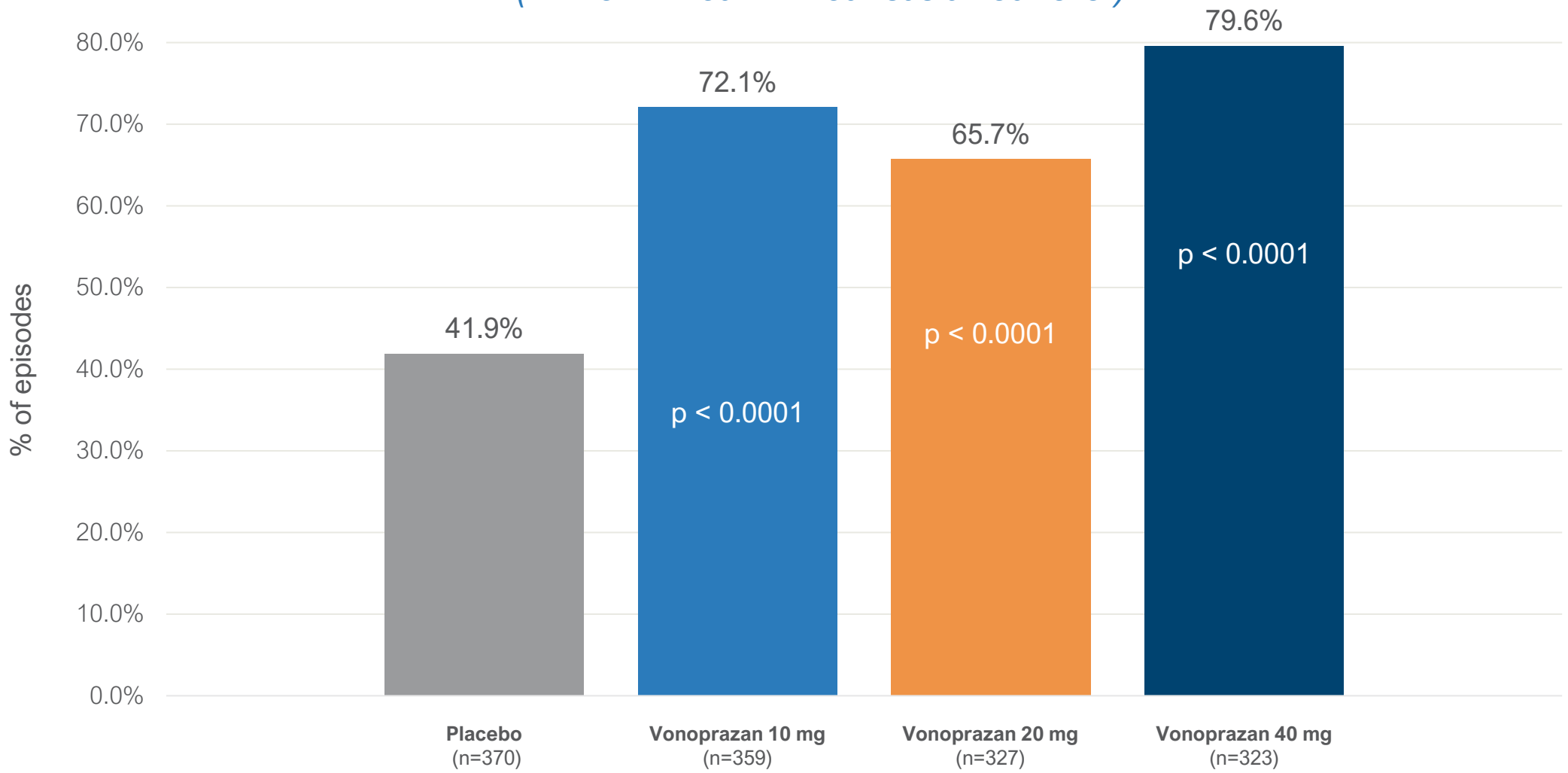
PHALCON-NERD-201 met the key secondary endpoint with all doses resulting in more complete relief of heartburn episodes compared with placebo

% 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)

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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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