

# Characteristics of US Patients with Gastroesophageal Reflux Disease (GERD) Taking Vonoprazan or a Prescription Proton Pump Inhibitor (PPI)

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## BACKGROUND

- Patients with GERD often achieve inadequate relief and cycle between multiple PPI therapies.
- Vonoprazan is a first-in-class potassium-competitive acid blocker, FDA approved for healing and maintenance of healing in erosive GERD and relief of heartburn in erosive and non-erosive GERD.

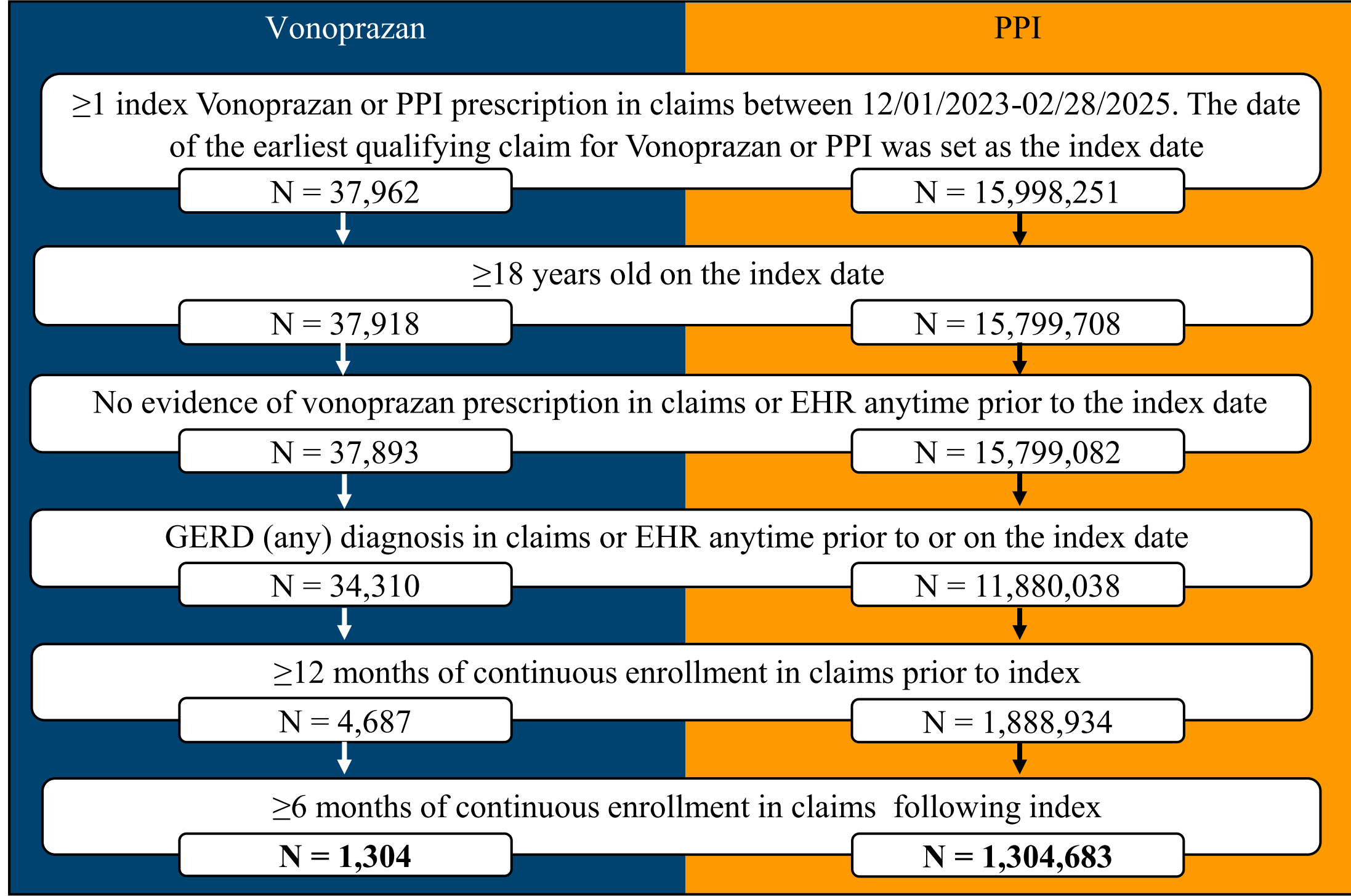
## OBJECTIVE

- This retrospective cohort study aimed to examine clinical characteristics, prior prescription PPI usage, and index treatment patterns among patients with GERD initiating vonoprazan or prescription PPIs in the US.

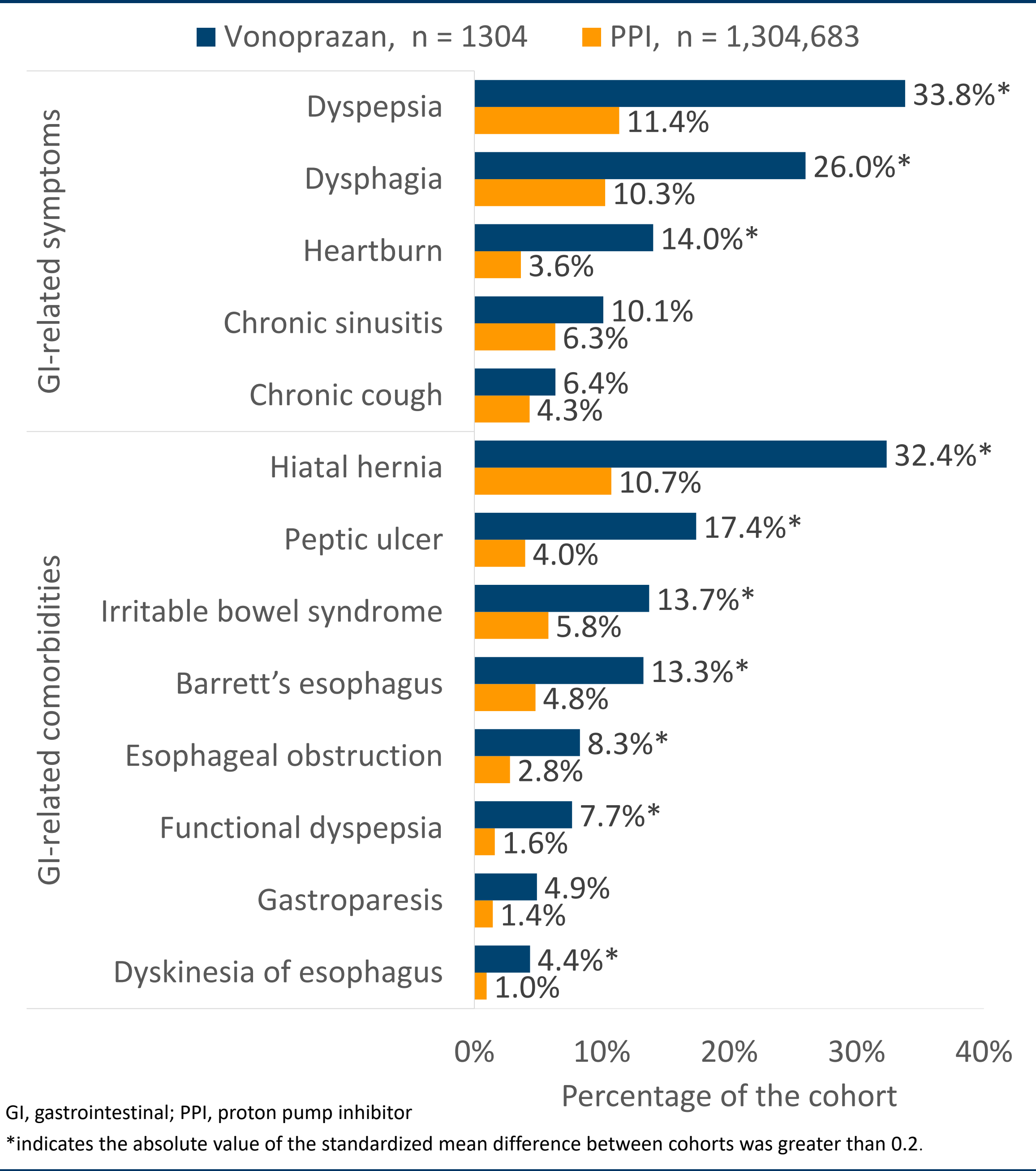
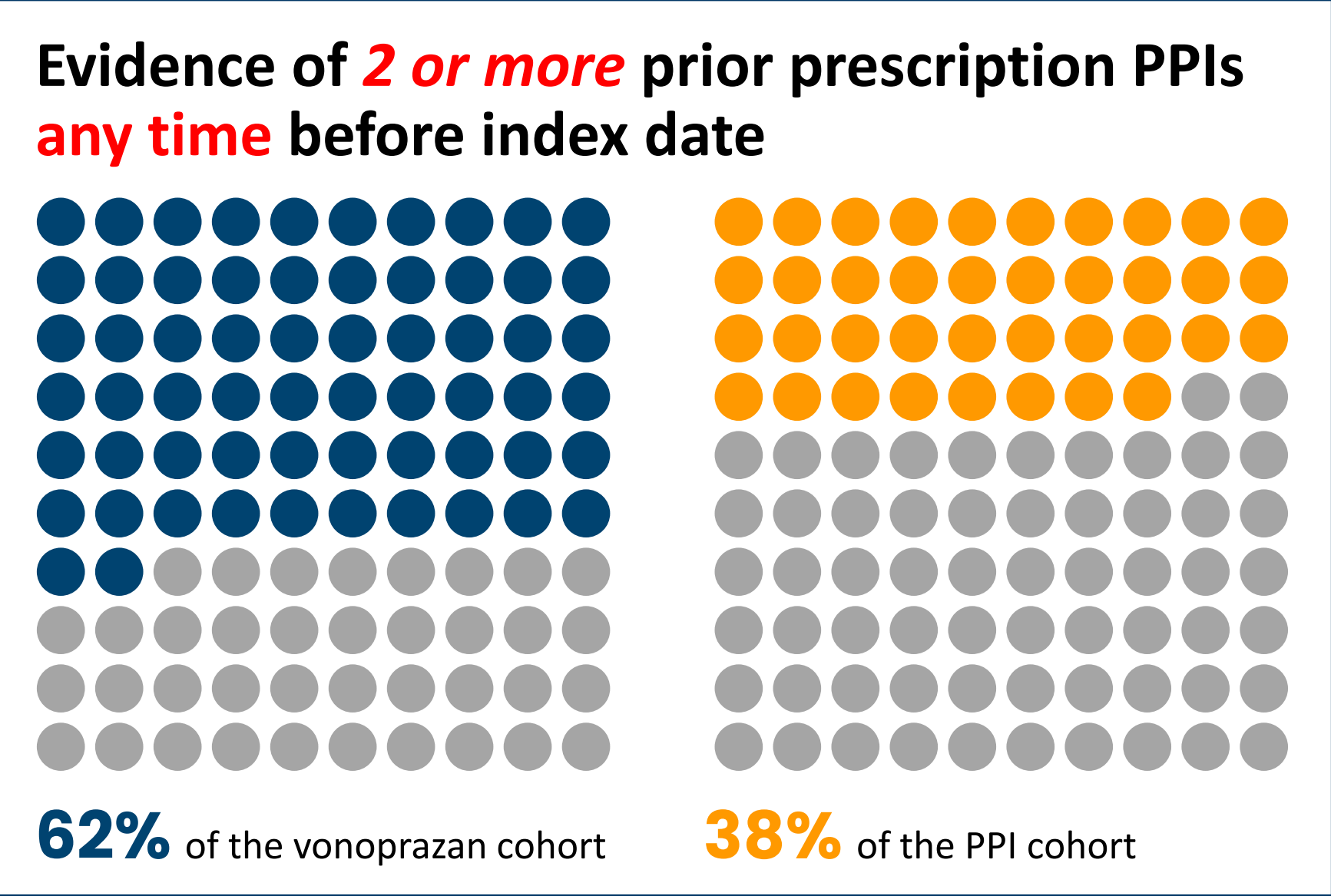
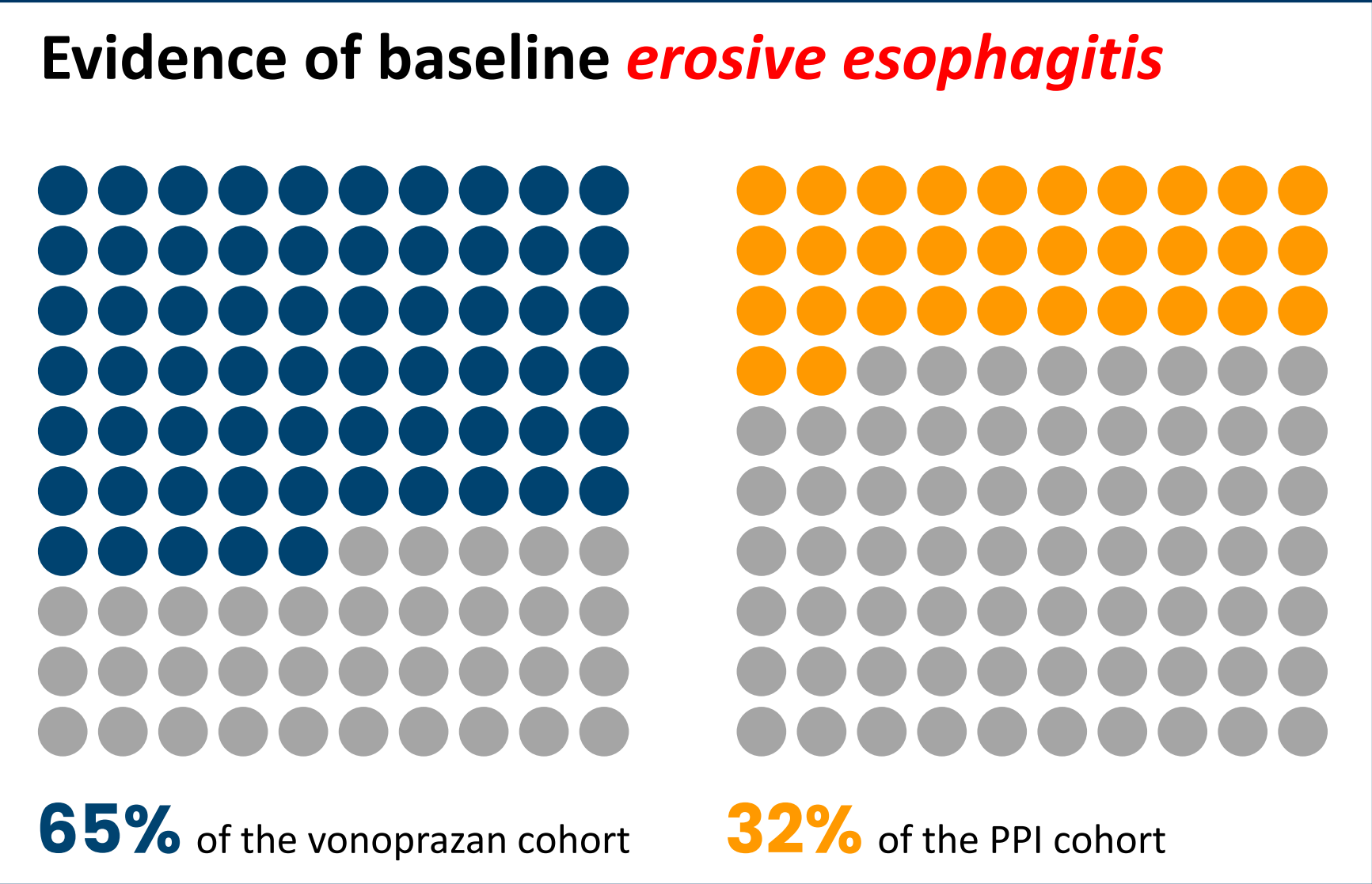
## METHODS

- Data Source
  - Veradigm Network EHR linked to Komodo Health claims
- Patient Selection
  - Adults (18+) with a diagnosis code for GERD
  - A pharmacy claim for vonoprazan or PPI (Dec. 1, 2023–Feb. 28, 2025)
    - Earliest qualifying claim = index date
  - No evidence of vonoprazan prescription anytime prior to the index date
  - ≥12 months of baseline and ≥6 months of follow-up continuous claims enrollment
- Study Measures
  - Demographics: age at index, sex, race, ethnicity, and geographic region
  - Baseline clinical characteristics: Charlson Comorbidity Index, GERD subtype, general comorbidities, GI-related comorbidities, and GI-related symptoms
  - Prior PPI therapy: generic name of PPI and number of PPI lines of therapy in the 12-month baseline period and anytime prior to index.
  - Treatment characteristics: Index dosing, number of dispensing's of index drug and days' supply per dispensing,
- Statistics
  - All comparisons between cohorts were statistically significant using Student's t-test (continuous data) or Chi-Square test (categorical data)
  - Meaningful differences between cohorts were assessed using the standardized mean difference (SMD) as a measure of effect size.
  - Differences were considered meaningful if the |SMD| > 0.2.

Figure 1. Patient Selection



This large retrospective analysis found that in the real-world setting **vonoprazan** is being prescribed to patients with **more severe disease** who have often tried **multiple courses of prescription PPI therapy**.



## RESULTS

Table 1. Patient Characteristics

|                                            | Vonoprazan  | PPI             | Standardized Difference |
|--------------------------------------------|-------------|-----------------|-------------------------|
|                                            | n = 1,304   | n = 1,304,683   |                         |
| Age, mean (SD)                             | 57.1 (14.6) | 63.0 (15.5)     | -0.39                   |
| Sex <sup>a</sup>                           |             |                 | 0.10                    |
| Female, n (%)                              | 854 (65.5%) | 786,728 (60.3%) |                         |
| Male, n (%)                                | 450 (34.5%) | 517,951 (39.7%) |                         |
| Race, n (%)                                |             |                 | 0.08                    |
| White                                      | 762 (58.4%) | 806,960 (61.9%) |                         |
| Black                                      | 91 (7.0%)   | 95,365 (7.3%)   |                         |
| Asian                                      | 51 (3.9%)   | 41,335 (3.2%)   |                         |
| Other                                      | 146 (11.2%) | 144,559 (11.1%) |                         |
| Unknown/Not Reported                       | 254 (19.5%) | 216,464 (16.6%) |                         |
| Ethnicity, n (%)                           |             |                 | 0.18                    |
| Hispanic                                   | 60 (4.6%)   | 46,380 (3.6%)   |                         |
| Non-Hispanic                               | 913 (70.0%) | 825,772 (63.3%) |                         |
| Unknown/Not Reported                       | 331 (25.4%) | 432,531 (33.2%) |                         |
| GERD Subtype, n (%)                        |             |                 | 0.68                    |
| Erosive                                    | 842 (64.6%) | 421,110 (32.3%) |                         |
| Non-erosive (only)                         | 462 (35.4%) | 883,573 (67.7%) |                         |
| CCI, mean (SD)                             | 1.7 (2.0)   | 2.2 (2.5)       | -0.19                   |
| General comorbidities <sup>b</sup> , n (%) |             |                 |                         |
| Cardiovascular disease                     | 846 (64.9%) | 968,386 (74.2%) | -0.20                   |
| Hypertension                               | 701 (53.8%) | 863,468 (66.2%) | -0.26                   |
| Diabetes                                   | 262 (20.1%) | 399,173 (30.6%) | -0.24                   |
| Nephropathy                                | 133 (10.2%) | 227,702 (17.5%) | -0.21                   |

CCI, Charlson comorbidity index; PPI, proton pump inhibitor

<sup>a</sup> Sex was missing in 4 patients in the PPI cohort

<sup>b</sup> Only reporting general comorbidities where the standardized difference between cohorts was ≥|0.2|

Table 2. Treatment Patterns

|                                                          | Vonoprazan   | PPI               | Standardized Difference |
|----------------------------------------------------------|--------------|-------------------|-------------------------|
|                                                          | n = 1,304    | n = 1,304,683     |                         |
| PPI LOTs anytime prior to index <sup>a,b,c</sup> , n (%) |              |                   | 0.61                    |
| 0                                                        | 76 (5.8%)    | 79,949 (6.1%)     |                         |
| 1                                                        | 418 (32.1%)  | 726,918 (55.7%)   |                         |
| 2+                                                       | 810 (62.1%)  | 497,816 (38.2%)   |                         |
| PPI LOTs in 12-month baseline <sup>a,b</sup> , n (%)     |              |                   | 0.58                    |
| 0                                                        | 293 (22.5%)  | 201,794 (15.5%)   |                         |
| 1                                                        | 723 (55.4%)  | 1,008,613 (77.3%) |                         |
| 2+                                                       | 288 (22.1%)  | 94,276 (7.2%)     |                         |
| Top 3 PPIs in the 12-month baseline, n (%)               |              |                   |                         |
| Pantoprazole                                             | 548 (42.0%)  | 443,893 (34.0%)   | 0.17                    |
| Omeprazole                                               | 380 (29.1%)  | 566,678 (43.4%)   | -0.30                   |
| Esomeprazole                                             | 131 (10.0%)  | 71,849 (5.5%)     | 0.17                    |
| GLP-1 RA prescription in 12-month baseline, n (%)        | 158 (12.1%)  | 153,255 (11.7%)   | 0.01                    |
| GLP-1 RA prescription in follow-up, n (%)                | 153 (11.7%)  | 188,240 (14.4%)   | -0.08                   |
| Number of dispensing's of index drug, mean (SD)          | 3.7 (2.6)    | 2.9 (1.8)         | 0.35                    |
| Days' supply per dispensing, mean (SD)                   | 36.4 (17.7)  | 67.3 (27.6)       | -1.33                   |
| Days' supply per dispensing, median (IQR)                | 30 (30-30)   | 90 (30-90)        |                         |
| Vonoprazan dosing                                        |              |                   |                         |
| Index dose 10 mg, n (%)                                  | 187 (14.3%)  |                   |                         |
| Index dose 20 mg, n (%)                                  | 1117 (85.7%) |                   |                         |
| Dose reduction to 10 mg, n (%)                           | 147 (13.2%)  |                   |                         |
| Top 3 index PPIs, n (%)                                  |              |                   |                         |
| Omeprazole                                               |              | 664,443 (50.9%)   |                         |
| Pantoprazole                                             |              | 512,740 (39.3%)   |                         |
| Esomeprazole                                             |              | 78,735 (6.0%)     |                         |
| PPI index dosing, n (%)                                  |              |                   |                         |
| QD (once daily)                                          |              | 1,116,317 (85.6%) |                         |
| BID (twice daily),                                       |              | 187,379 (14.4%)   |                         |

IQR, interquartile range; PPI, proton pump inhibitor; SD, standard deviation;

<sup>a</sup>Baseline PPI lines of therapy were calculated from the first PPI prescription in the baseline period (anytime prior to index or 12-months prior to index) until the earliest of the index date, a switch to a different prescription PPI, or a treatment gap of 30 days

<sup>b</sup>For the PPI cohort the baseline lines of therapy can include their index medication.

<sup>c</sup>Data capture for anytime prior to index starts on 1/1/2016.

## LIMITATIONS

- PPI use is likely underestimated because PPIs are widely available over the counter, which would not be captured in the dataset
- Unlike the vonoprazan cohort, patients in the PPI cohort were not required to be newly starting their medication.

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