

# Predictors of Patients Receiving No Medication for Treatment of Eosinophilic Esophagitis in the United States: Data from the TARGET-EGIDS Cohort



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## Introduction

- Eosinophilic esophagitis (EoE) is a chronic immune-mediated condition that causes esophageal dysfunction.
- There are increasing options for pharmacologic treatments.
- This real-world analysis aims to evaluate predictors for absence of recorded medications and prescriptions prior to or following an initial EoE diagnosis.

## Methods

- Data from TARGET-EGIDS, a US-based consortium of academic medical centers that includes both unstructured and unstructured data from electronic health records, were analyzed.
- Three sites (1 west and 2 from the south census regions) contributed 1446 patients with an ICD-10 code for EoE (K20.0).
- Inclusion criteria:
  - Patients had an ICD-10 code as a primary EoE diagnosis and at least one of the following:
    - An encounter with a K20.0 primary diagnosis code
    - Record of an EoE-relevant treatment
      - Proton pump inhibitors (dexlansoprazole, esomeprazole, lansoprazole, omeprazole, pantoprazole, rabeprazole)
      - Corticosteroids (budesonide and fluticasone)
      - Dupilumab
    - Record of an endoscopy
    - An EoE-specific symptom or complication (dysphagia, chest pain, heartburn, food impaction, esophageal stricture, esophageal perforation)
    - Extra-esophageal non-specific symptom (abdominal pain, vomiting/nausea)
- Exclusion criteria:
  - An overlapping diagnosis at anytime of eosinophilic gastritis/astroenteritis or eosinophilic colitis (K52.81, K52.82)
- Patients were considered "newly diagnosed" if they had their first ICD-10 code for EoE (K20.0) on or after their first documented visit.
- Patient subgroups were those with and without EoE-specific treatments.
- Patient characteristics were summarized. P-values for continuous variables are from the Kruskal-Wallis test, and p-values for categorical variables are from the Cochran-Mantel-Haenszel general association test or Fisher's exact test.
- Multivariable logistic regression was used to estimate odds ratios (ORs) for the association between patient characteristics (mentioned in figure 2) and no reported EoE medications.

## Results

Figure 1. Consort of newly diagnosed EoE patients

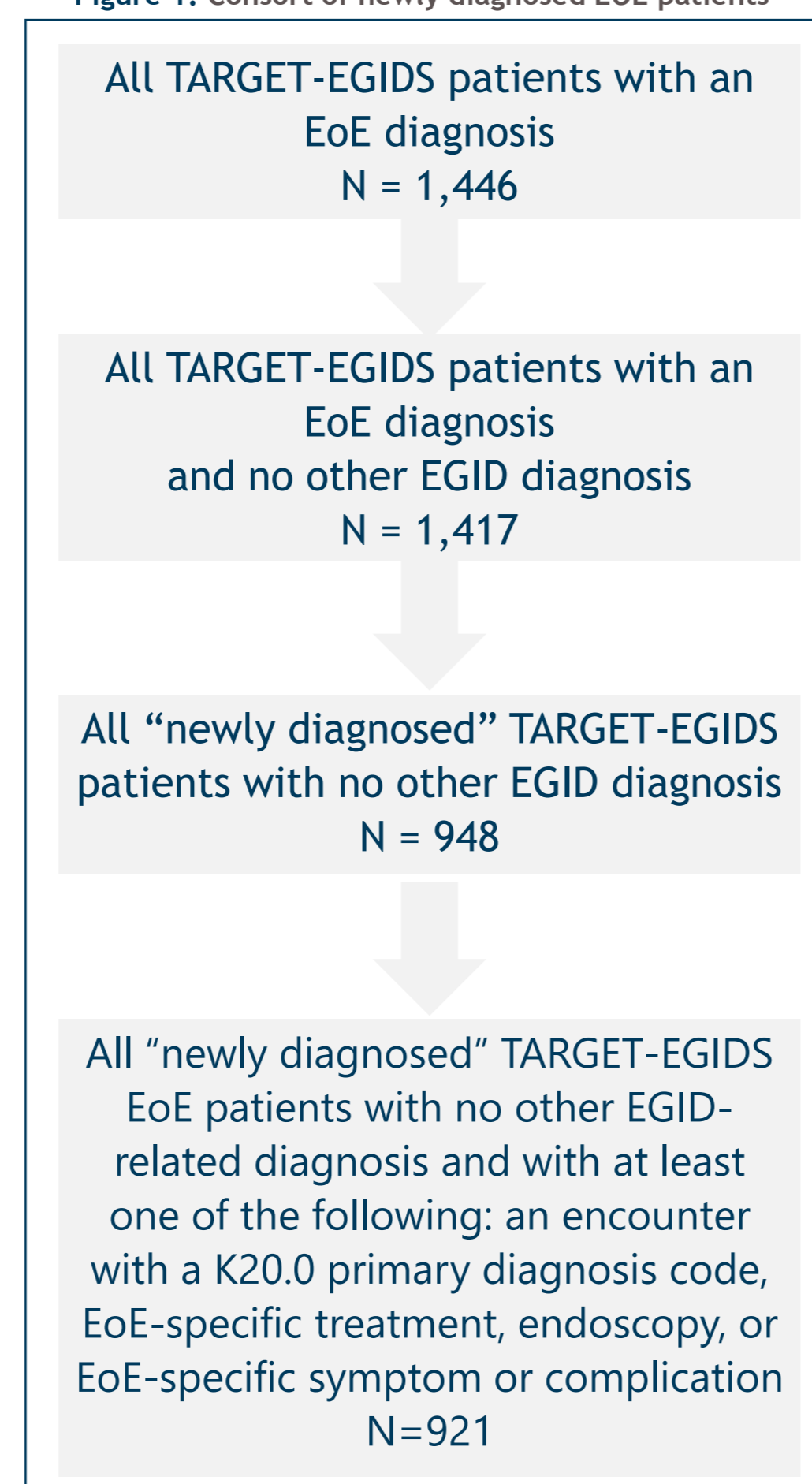


Table 1. Demographics and comorbidities of newly diagnosed EoE patients

	Any Reported EoE Treatment?		P-value	All Patients (N=921)
	No (N=97)	Yes (N=824)		
Age at EoE diagnosis (years)				
Mean (SD)	49.5 (16.2)	44.9 (16.7)	0.008	45.4 (16.7)
Median (n)	51.0 (97)	45.0 (824)		45.0 (921)
Q1 - Q3 (IQR)	38.0 - 61.0 (23.0)	32.0 - 57.0 (25.0)		33.0 - 58.0 (25.0)
Age category at EoE diagnosis (years), n (%)				
<18	0 (0.0%)	22 (2.7%)	0.04	22 (2.4%)
18-29	16 (16.5%)	149 (18.1%)		165 (17.9%)
30-49	28 (28.9%)	328 (39.8%)		356 (38.7%)
50-64	34 (35.1%)	209 (25.4%)		243 (26.4%)
>=65	19 (19.6%)	116 (14.1%)		135 (14.7%)
Sex, n (%)				
Female	43 (44.3%)	375 (45.5%)	0.83	418 (45.4%)
Male	54 (55.7%)	449 (54.5%)		503 (54.6%)
Race/Ethnicity, n (%)				
Asian	5 (5.2%)	32 (3.9%)	0.73	37 (4.0%)
Hispanic/Latino	5 (5.2%)	48 (5.8%)		53 (5.8%)
Non-Hispanic Black	3 (3.1%)	49 (5.9%)		52 (5.6%)
Non-Hispanic White	79 (81.4%)	663 (80.5%)		742 (80.6%)
Other/Unknown	5 (5.2%)	32 (3.9%)		37 (4.0%)
Insurance type, n (%)				
Medicaid	3 (3.1%)	76 (9.2%)	0.18	79 (8.6%)
Medicare	13 (13.4%)	115 (14.0%)		128 (13.9%)
Private	77 (79.4%)	583 (70.8%)		660 (71.7%)
VA/Other	1 (1.0%)	28 (3.4%)		29 (3.1%)
None / Not Reported	3 (3.1%)	22 (2.7%)		25 (2.7%)

### Comorbidities (reported at any time)

Allergic rhinitis, n (%)	18 (18.6%)	213 (25.8%)	0.12	231 (25.1%)
Asthma, n (%)	16 (16.5%)	223 (27.1%)	0.02	239 (26.0%)
Eczema / atopic dermatitis, n (%)	0 (0.0%)	25 (3.0%)	0.10	25 (2.7%)
Food allergy, n (%)	4 (4.1%)	66 (8.0%)	0.17	70 (7.6%)

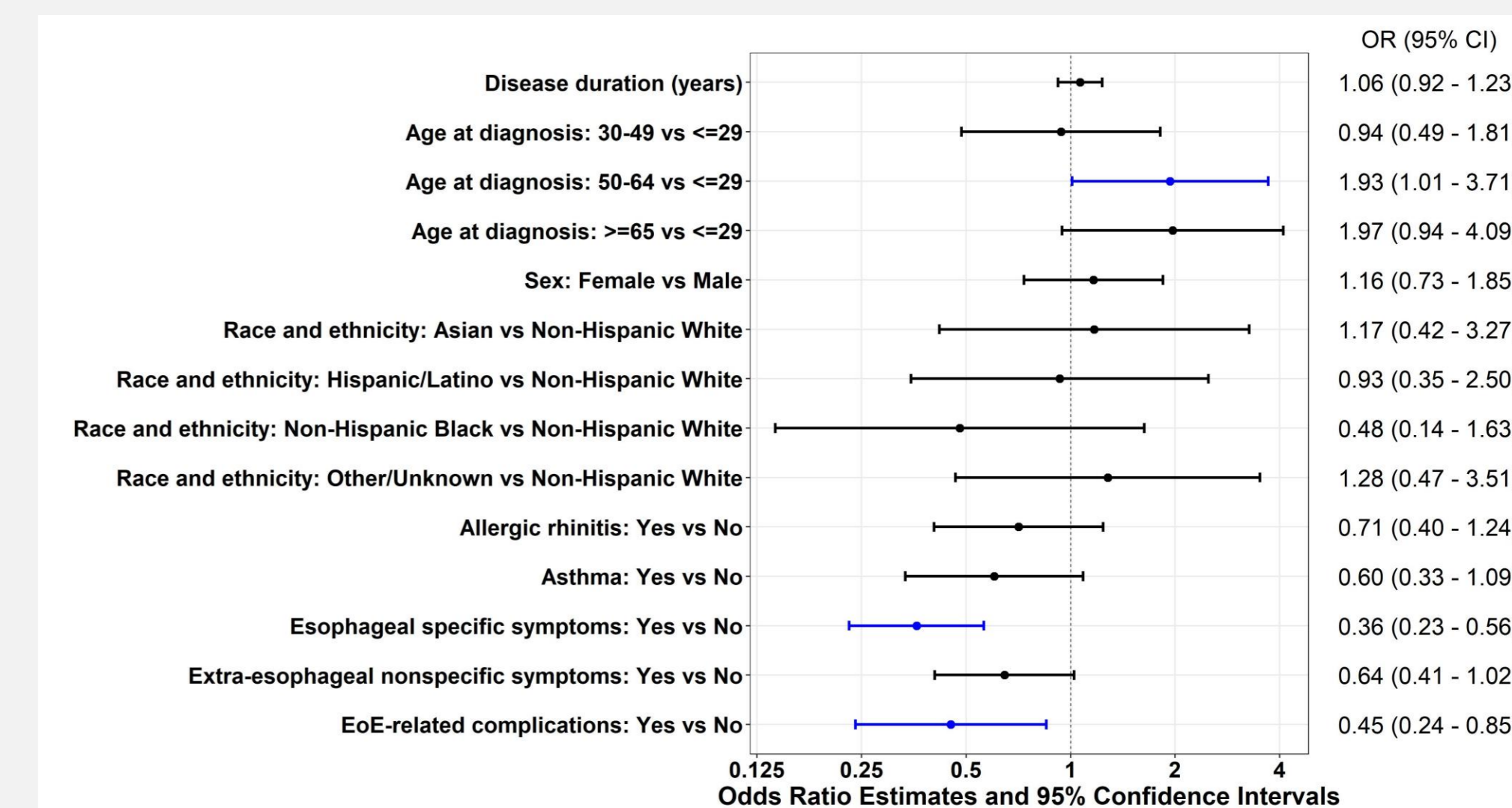
### EoE-related symptoms/complications (reported at any time)

Esophageal specific symptoms, n (%)	49 (50.5%)	614 (74.5%)	<.001	663 (72.0%)
Extra-esophageal nonspecific symptoms, n (%)	41 (42.3%)	438 (53.2%)	0.04	479 (52.0%)
EoE-related complications, n (%)	13 (13.4%)	202 (24.5%)	0.01	215 (23.3%)

Esophageal specific symptoms: dysphagia, chest pain, and heartburn; Extra-esophageal non-specific symptoms: abdominal pain and vomiting/nausea; Complications: food impaction, esophageal stricture, and esophageal perforation

- Among the 921 qualifying patients, the mean age at EoE diagnosis was 45.4 years.
- 54.6% were male, 80.6% non-Hispanic White, and 71.7% had private insurance.
- Asthma and allergic rhinitis were the most common atopic comorbidities.
- More than half of patients experienced esophageal-specific and extra-esophageal nonspecific symptoms (72.0% and 52.0%, Table 1).
- Nearly 1/4 of patients experienced EoE-related complications (23.3%, Table 1).

Figure 2. Adjusted odds ratios of having no reported EoE medications



- Across all patients, the mean follow-up time from diagnosis to most recent visit date was 20.8 months (median 16.9 months).
- From the overall population, there were 97 (10.5%) patients who had no reported pharmacologic treatment.
- The odds of receiving no medication were significantly higher among 50-64 year-olds compared to patients ≤29 years (OR, 1.93; 95% CI, 1.01-3.71).
- The odds of receiving no medication were significantly lower in those who experienced an esophageal-specific symptom (OR, 0.36; 95% CI, 0.23-0.56) or any EoE-related complication (OR, 0.45; 95% CI, 0.24-0.85) (Figure 1).

## Conclusions

- Among newly diagnosed patients with EoE, ~1 in 10 had no recorded pharmacologic therapy.**
- Older patients and those without complications were more likely not to receive a medication for EoE.**
- Further evaluation, including whether alternative treatments were used and outcomes, is warranted for this group.**

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