



C. Byrne¹, C. Anderson², P. Brennan¹, A. Malone¹, C. Roberts-Smith¹, M.M. Kowalski¹, V. Peck¹, E.S. Dellon^{2,3}

¹Eupraxia Pharmaceuticals, Victoria, British Columbia, Canada, ²Center for Gastrointestinal Biology and Disease, Division of Gastroenterology and Hepatology, Department of Medicine, University of North Carolina School of Medicine, Chapel Hill, NC, United States of America, ³Center for Esophageal Diseases and Swallowing, Division of Gastroenterology and Hepatology, Department of Medicine University of North Carolina School of Medicine, Chapel Hill, NC, United States of America

PURPOSE / OBJECTIVES

Esophageal strictures are a common cause of dysphagia and odynophagia, primarily treated through endoscopic dilation. While the prevalence of esophageal strictures in the United States (US) has been recently detailed, the proportion of patients who have severe strictures and require frequent esophageal dilation procedures has not been described.

Here we examine the prevalence and potential causes of esophageal stricture diagnoses in the US, focusing on individuals requiring frequent, repeat esophageal dilations.

MATERIAL & METHODS

- Two large administrative databases were used:
- Merative MarketScan Commercial Claims and Encounters Database (MarketScan) for those <65 years old (yo)
 - Medicare Fee-for-Service Parts A and B insurance enrollment and claims (Medicare) for those ≥65 yo
- The following analyses were performed:
- Determination of the number of patients with esophageal strictures undergoing esophageal dilation via appropriate database codes for the years in which the most recent data was available (2021 for MarketScan and 2016 for Medicare).
 - Calculation of the annual prevalence of patients with strictures requiring 2+ dilations in the year following a stricture diagnosis and standardized this to the U.S. population.
 - Assessment of the most common causes of these strictures through examining patients' co-diagnoses.

RESULTS

- Results of the database analysis, standardized to be representative of the US population, showed:
- 506,102 US individuals <65 yo (MarketScan data) who were diagnosed with a stricture in 2021 (0.19% of the demographic).
 - Of these 506,102 individuals, 19,095 individuals (3.7%) required 2+ dilations, while 1,873 individuals (0.37%) required 4+ in the year following the stricture code (Figure 1A).
 - 519,741 US individuals ≥65 yo (Medicare Data) who were diagnosed with a stricture in 2016 (1.1% of the demographic).
 - Of these 519,741 individuals, 43,788 individuals (8.4%) required 2+ dilations, while 6,683 individuals (1.3%) required 4+ in the year following the stricture code (Figure 1B).
 - The most common causes of strictures requiring two or more dilations within the year of diagnosis were GERD and erosive esophagitis (82% in MarketScan and 92% in Medicare), followed by other esophagitis (35% and 34%) and eosinophilic esophagitis (29% and 3%) (Figure 2).

Esophageal strictures cause dysphagia and odynophagia and are primarily treated through endoscopic dilation

Data from two large US administrative databases were analyzed for 2021 and 2016

Standardized to the US population, >500,000 individuals <65 and >500,000 individuals ≥65 were diagnosed with a stricture

4% of individuals <65 and 8% of individuals ≥65 required 2 or more dilations in the year following diagnosis

There is unmet medical need for therapies to reduce frequency of, and delay recurrence of esophageal strictures

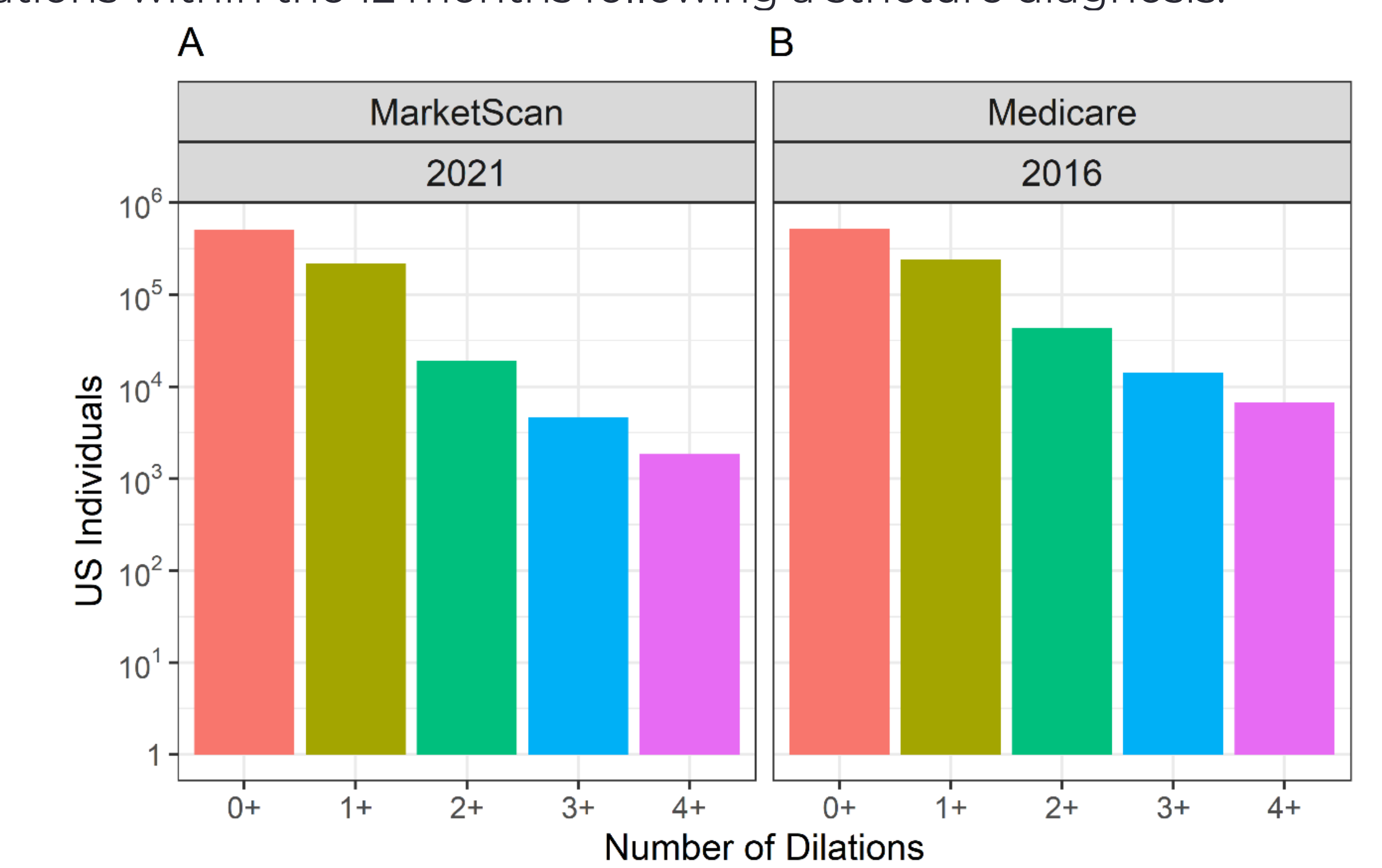
DISCLOSURES AND CONTACT

CB, PB, AM, CRS, MMK and VP: employees of Eupraxia Pharmaceuticals. **CA:** Nothing to disclose. **ESD:** Research funding: Adare/Eli Lilly, Allakos, Arena/Pfizer, AstraZeneca, Eupraxia, Ferring, GSK, Meritage, Miraca, Nutricia, Celgene/Receptos/BMS, Regeneron, Revolo, Sanofi, Shire/Takeda, Uniquity; Consultant: Abbott, Abbvie, Adare/Eli Lilly, Aimmune, Akesbio, Alfasigma, ALK, Allakos, Amgen, Apogee, Apollo, Aqilion, Arena/Pfizer, Aslan, AstraZeneca, Avir, Biorasi, Calypso, Celgene/Receptos/BMS, Celldex, Eli Lilly, EsoCap, Eupraxia, Dr. Falk Pharma, Ferring, GSK, Gossamer Bio, Holoclara, Invea, Knightpoint, Landos, LucidDx, Morphee, Nexstone Immunology/Uniquity, Nutricia, Parexel/Calyx, Phathom, Regeneron, Revolo, Roberts/Alimentiv, Salix, Sanofi, Shire/Takeda, Target RWE, Third Harmonic Bio, Upstream Bio Educational grant: Allakos, Aqilion, Holoclara, Invea.

Eupraxia Pharmaceuticals Inc., 201-2067 Cadboro Bay Road, Victoria, BC, Canada V8R 5G4.
www.eupraxiapharma.com or info@eupraxiapharma.com

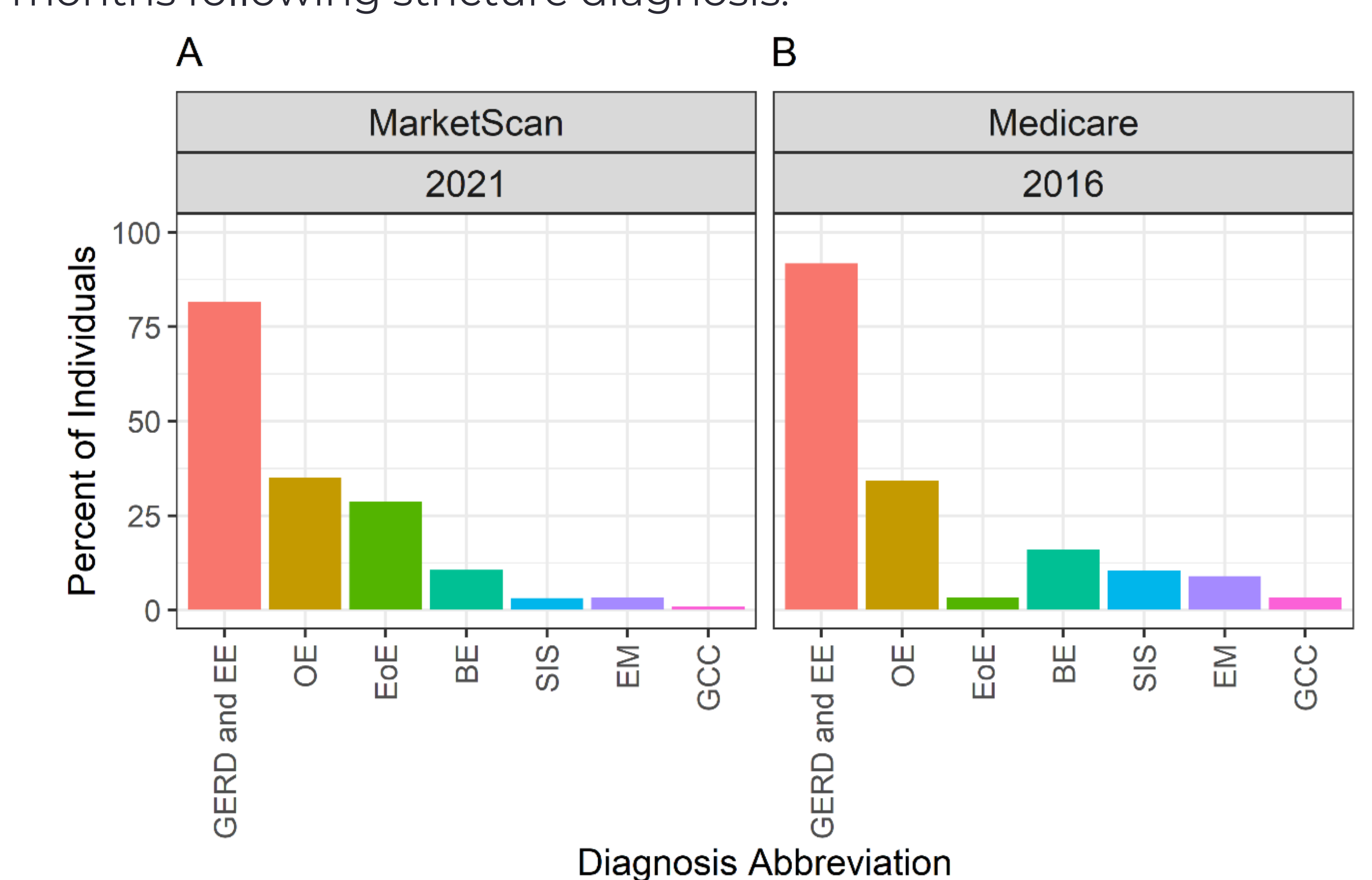
RESULTS

Figure 1: Predicted number of individuals in the US receiving 0-4+ dilations within the 12 months following a stricture diagnosis.



Panel A displays results extrapolated from MarketScan data and shows cases of US individuals <65 yo in 2021. Panel B displays results extrapolated from Medicare data and shows cases of US individuals ≥65 yo in 2016.

Figure 2: Potential causes of strictures in individuals receiving 2+ dilations in 12 months following stricture diagnosis.



Abbreviations: GERD and EE= gastroesophageal reflux disease and erosive esophagitis, OE = other esophagitis (lymphocytic esophagitis, pill-induced esophagitis, drug-induced strictures, and chemotherapy-induced strictures), EoE = eosinophilic esophagitis, BE = Barrett's esophagus, SIS = sepsis-induced strictures, EM = esophageal malignancy including esophageal adenocarcinoma, esophageal squamous cell carcinoma, and metastatic esophageal neoplasm, GCC = gastric cardia cancer.

SUMMARY / CONCLUSION

The prevalence of esophageal strictures requiring at least 2 dilations in the year following a stricture diagnosis increases substantially with age, with 7/100,000 US individuals <65 yo and 92/100,000 US individuals ≥65 yo, representing approximately 6% of the overall stricture population, and extrapolating to 72,571 patients in the current US population.