O-19

Real World Trends in Telotristat Utilization for Carcinoid Syndrome in the United States: A National Epic Cosmos Analysis

Zaid Al Momani[1], Vasu Bansal[1], Aakriti Adhikari[1], Sawsan El Sweilmein[1], Anas Al Sadi[1], Osama Mosalem, MD[2]

[1]Internal Medicine Residency Program, University of Missouri–Kansas City (UMKC), Kansas City, Missouri, USA; [2]Division of Gastrointestinal Oncology, Saint Luke's Cancer Institute, Kansas City, Missouri, USA

BACKGROUND

Carcinoid syndrome (CS) is a rare functional syndrome affecting patients with metastatic neuroendocrine tumors (NET).Telotristat etiprate (Xermelo), a first-in-class oral tryptophan hydroxylase inhibitor, was FDA-approved in February 2017 for CS diarrhea inadequately controlled by somatostatin analog (SSA) therapy. Despite regulatory approval, real-world prescribing patterns, disparities, and geographic trends remain largely undescribed. We examined national telotristat utilization trends using a large electronic health record database.

METHODS

Using Epic Cosmos, we identified adults (age >=18) with a diagnosis of CS (ICD-10: E34.00, E34.09) and a prescription for telotristat etiprate from FDA approval (February 28, 2017) through (May 1, 2026). Prescribing trends were stratified by year, U.S. census region, race, gender, and payer status. Counts below 10 were suppressed per Cosmos privacy standards.

RESULTS

A total of 3,572 patients with CS received a telotristat prescription across the study period, with 3,131 prescribed between 2017-2025. Annual prescribing increased from 108 patients in 2017 to a peak of 543 in 2025, representing a 403% increase from 2017. Among 14,197 patients with CS identified in 2025, telotristat recipients (n=543) represented 3.8% of the diagnosed CS population, up from 1.4% (108 of 7,862) in 2017. Regional distribution in 2025 favored the South (n=256; 47%), followed by the Midwest (n=110; 20%), Northeast (n=89; 16%), and West (n=82; 15%). White patients comprised 85% of recipients in 2025 (n=459), while Black patients represented only 9% (n=49). Commercial insurance was the predominant payer (71% in 2025). Female patients received more prescriptions than males across all years (n=852 vs. n=623).

CONCLUSIONS

Telotristat prescribing for refractory CS diarrhea has increased steadily since FDA approval, yet total utilization remains low overall, reflecting the rarity of NETs and the narrow eligible refractory population requiring management beyond SSA therapy. Prescribing is concentrated in the South and showed marked difference by race and payer status with white and commercially insured comprising the majority of recipients. These findings suggest meaningful gaps in equitable access and warrants further investigation into access barriers to this first in class therapy for SSA refractory CS diarrhea.

ABSTRACT ID #36574