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Telotristat Ethyl in Carcinoid Syndrome: Safety and Efficacy Results of an Open-Label Extension of the TELECAST Phase 3 Clinical Trial

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BACKGROUND: The TELECAST study assessed telotristat ethyl (TE), a tryptophan hydroxylase inhibitor, in patients with carcinoid syndrome (CS) with ≥ 1 CS symptom/sign and a mean of 2.5 bowel movements (BMs) per day. Patients were somatostatin analog treated (89%), with gastrointestinal (90%; [diarrhea, 70%]) and cardiac disorders (42%), including carcinoid heart disease. At Week (W) 12, TE (250 and 500 mg 3 times per day; tid) significantly reduced urinary 5-hydroxyindoleacetic acid (u5-HIAA) and BMs per day versus placebo ($p \leq 0.008$). After W12, patients crossed over to an Open-label Extension (OLE) with TE 500 mg tid (W13–W48). This report provides additional OLE data on TE safety and activity.

METHODS: A 7-day blinded titration was included at OLE start. Safety and efficacy were assessed up to W48.

RESULTS: 76 patients were randomly assigned; 67 entered the OLE period (mean 63.3 years, 58.2% male), receiving (from W13 to W48) a mean of 30 additional weeks of TE exposure (median 36 weeks). The OLE period was completed by 47 patients, while 20 discontinued (7 due to adverse events). There were no deaths. No new safety signals were observed in the OLE period. Changes from study start Baseline u5-HIAA at W12 were +98%, -33%, and -76% on placebo, TE 250 mg, and TE 500 mg, respectively, and ranged from -46% to -68% at W18, W24, and W48. Improvements in European Organisation for Research and Treatment of Cancer Quality of Life Questionnaire-Core 30 (EORTC QLQ-C30) diarrhea scores on TE were 10–21 points at W12 and 17–18 points at W24 and W48.

CONCLUSION: TE was generally well tolerated. Reductions in u5-HIAA and improvements in diarrhea scores were maintained with TE over 48 weeks.