

Recurrence of acute pancreatitis and long-term complications in people with severe hypertriglyceridemia: US electronic health records covering 137 million patient lives

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Presentation number 1293

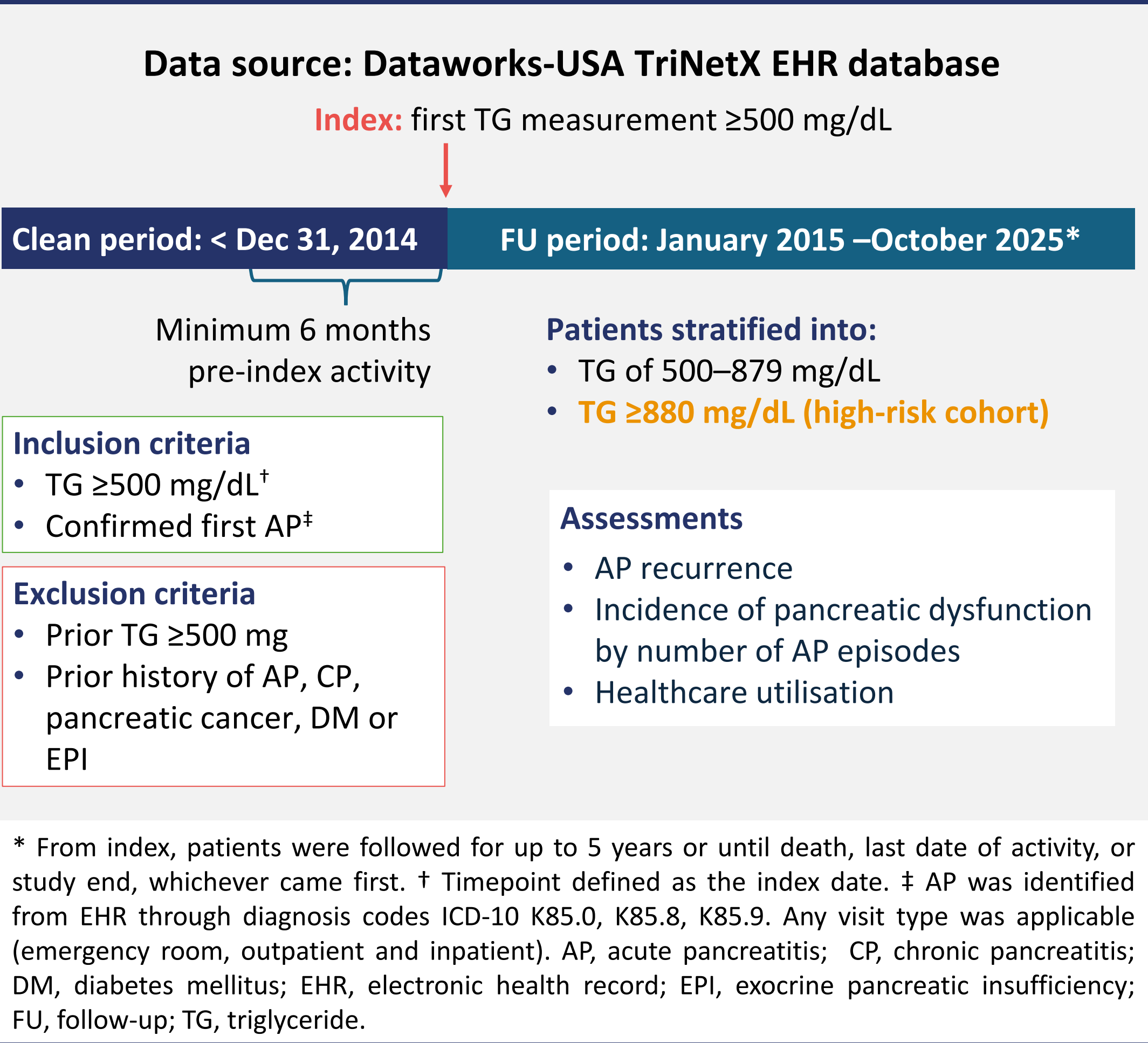
Background & Aim

- While severe hypertriglyceridemia (sHTG) is a well-recognized risk factor for acute pancreatitis (AP),¹⁻³ real-world data on AP recurrence patterns and long-term complications remain limited
- This analysis explored the burden and clinical course of AP among individuals with incident sHTG in a large, contemporaneous electronic health records (EHR) database

Methods

- Data source:** Dataworks-USA TriNetX EHR database, covering 137 million patient lives (**Figure 1**)
- Study period:** January 2015 to October 2025

Figure 1: Study design



Patient characteristics at baseline

- Of 4,365 patients with incident sHTG and subsequent AP, 2,350 (54%) had TG ≥ 500 –879 mg/dL and 2,015 (46%) had TG ≥ 880 mg/dL at index
- The mean (SD) age at index was 44.7 (12.1) years and 69% were male; the median index TG was 825 mg/dL
- In the 12 months pre-index, 14% reported abdominal pain and 15% of patients were on lipid lowering treatments

REFERENCES

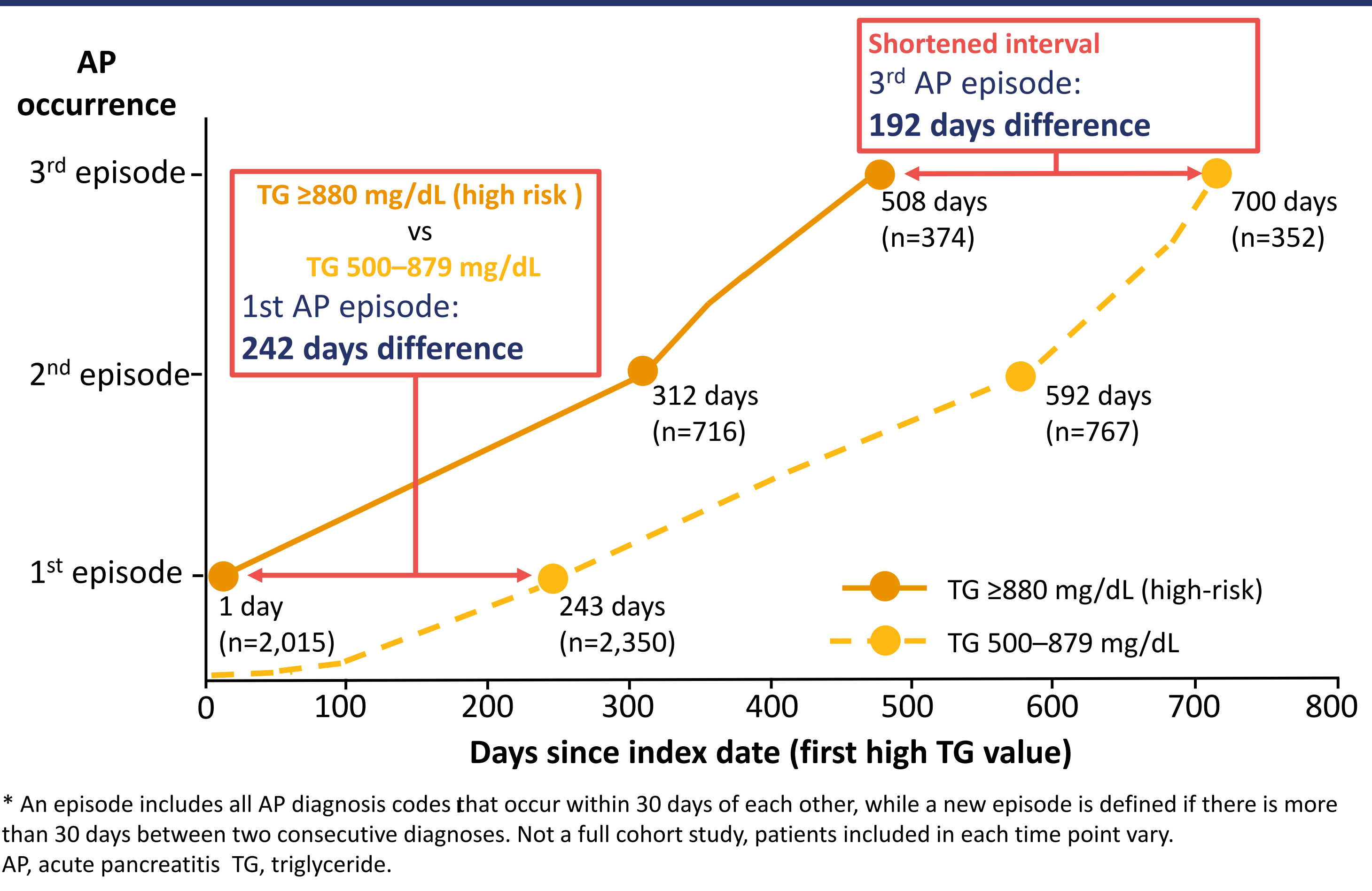
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RESULTS

Early occurrence of a first AP episode

- Median time to a first AP episode was 243 days (n=2,350) following first recorded sHTG measurement in patients with triglycerides of 500-879 mg/dL
- In patients with TG above 880 mg/dl, the median time to first AP episode was 1 day (n=2,015), suggesting sHTG may coincide with the initial presentation of AP, highlighting an immediate threat in these patients (**Figure 2**)

Figure 2: Time from first high TG value to AP episode*



AP recurrence is common

- In patients with an elevated TG >500 mg/dL, 24% of patients experience an AP recurrence within a year (**Table 1**)
- The recurrence pattern of AP was comparable across different TG strata

Table 1: AP recurrence for overall cohort and by TG strata

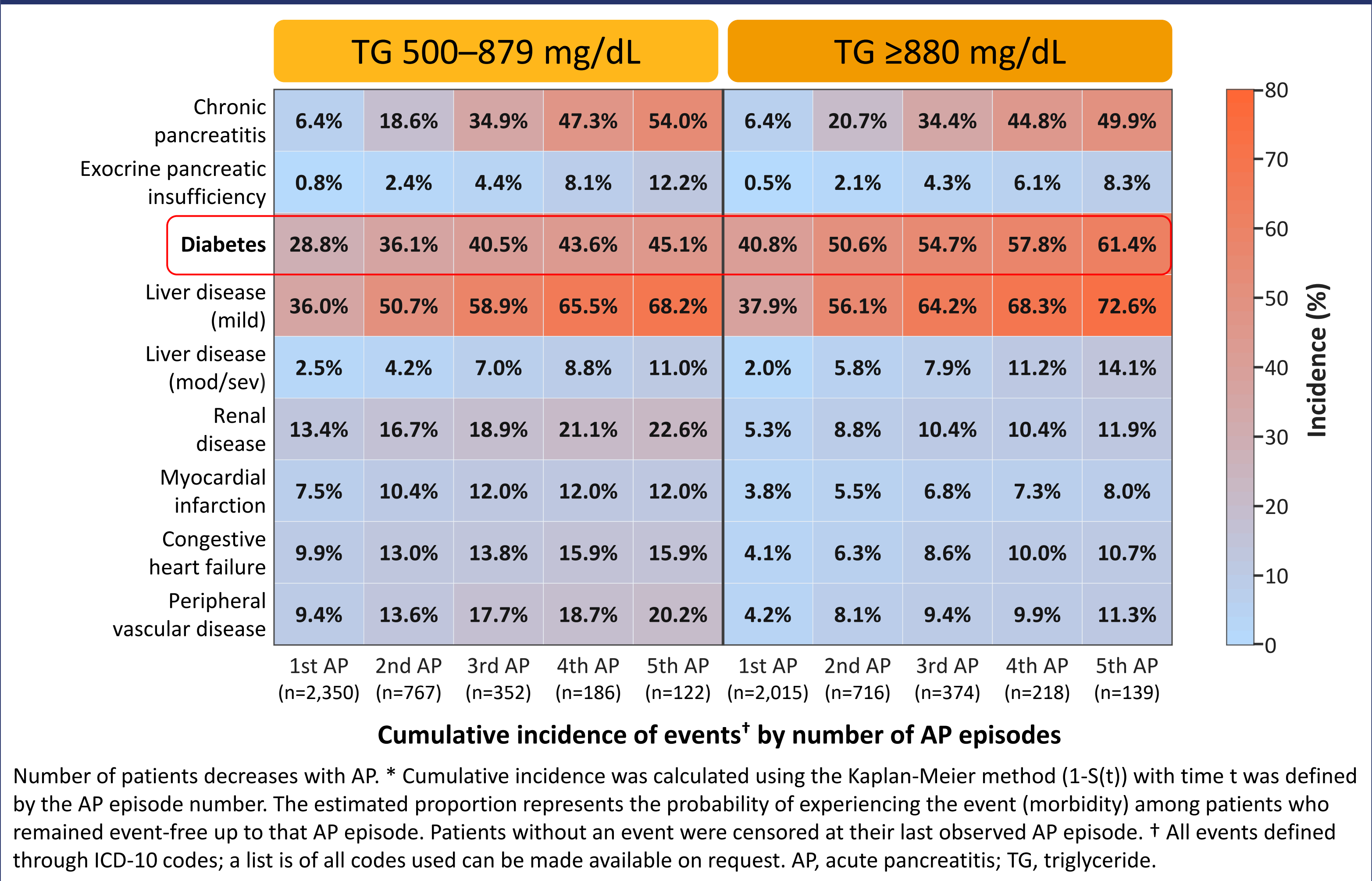
Cohort	AP recurrence, per 100 person-year
Overall	23.5
TG 500–879 mg/dL	22.8
TG ≥ 880 mg/dL	24.3

AP, acute pancreatitis TG, triglyceride.

Frequent hospitalisation for AP

- Inpatient hospitalisation during a first AP episode was common, occurring in 63% of patients. Around 40% of patients were hospitalised in subsequent episodes; lower than expected hospitalisation rates likely reflect EHR coding limitations rather than clinical severity. Subsequent episodes might be recognised and managed earlier and in an outpatient setting
- Length of time spent in hospital was similar for first and recurrent AP episodes, with a median inpatient stay of 5 days (IQR 4,9 days)

Figure 3: Cumulative incidence* of morbidities



- In both cohorts of patients, the incidence of chronic pancreatitis, diabetes, and mild liver disease incrementally increased with number of AP episodes (**Figure 3**)
- The incidence of new diabetes mellitus was high from first high TG value ≥ 500 mg/dL, especially in the ≥ 880 mg/dL high-risk subgroup

Conclusions

- The disease burden for patients with incident sHTG is high, including early first AP, AP recurrence, and frequent hospitalisation for AP
- Long-term morbidities increase with number of AP episodes, indicative of pancreatic dysfunction and increasing metabolic burden
- Early identification and effective management of sHTG is key to prevent a first AP episode and its long-term sequelae, especially in patients with TG ≥ 880 mg/dL

DISCLOSURES

AF, SWB: Employees and shareholders Sobi; ASK and NT: Employees and shareholders Ionis

ACKNOWLEDGEMENTS

This study was funded by Sobi. The authors wish to acknowledge the patients for their contribution to the analysis. The authors also wish to acknowledge Chuang Liu from Sobi (Basel, Switzerland) for his contributions to the interpretation and visualisation of the results interpretation, Kathleen York, CMPP from Sobi (Basel, Switzerland) for publication coordination and Miriam Souto from Cactus Life Sciences® (Meggen, Switzerland), for medical writing and editorial support, funded by Sobi, based on the authors' input and direction, and in accordance with Good Publication Practice (GPP) 2022 guidelines (<https://www.ismpp.org/gpp-2022>).

