

Introduction

- Type 3c diabetes, or pancreatogenic diabetes, is a disorder in which the endocrine function of the pancreas fails due to an underlying condition resulting in impaired glucose control
- 80% of type 3c diabetes cases are caused by chronic pancreatitis (CP)
- Diabetes mellitus (DM) secondary to endocrine insufficiency in CP can develop at any time during the course of the disease
- Not much is known about the clinical characteristics and outcomes of these patients
- We aimed to study differences in pre-existing diabetes, early-onset diabetes, and late-onset diabetes in CP patients

Methods

- We retrospectively reviewed patients with CP seen at our Pancreas Center between January 2016 and April 2021.
- Patients were divided into 4 groups based on co-diagnosis with diabetes:
 - Without diabetes
 - Pre-existing diabetes before CP diagnosis
 - Early-onset diabetes (within 2 years of CP diagnosis)
 - Late-onset diabetes (more than 2 years of CP diagnosis)
- We then compared demographics, clinical characteristics, resource utilization, and outcomes

Results

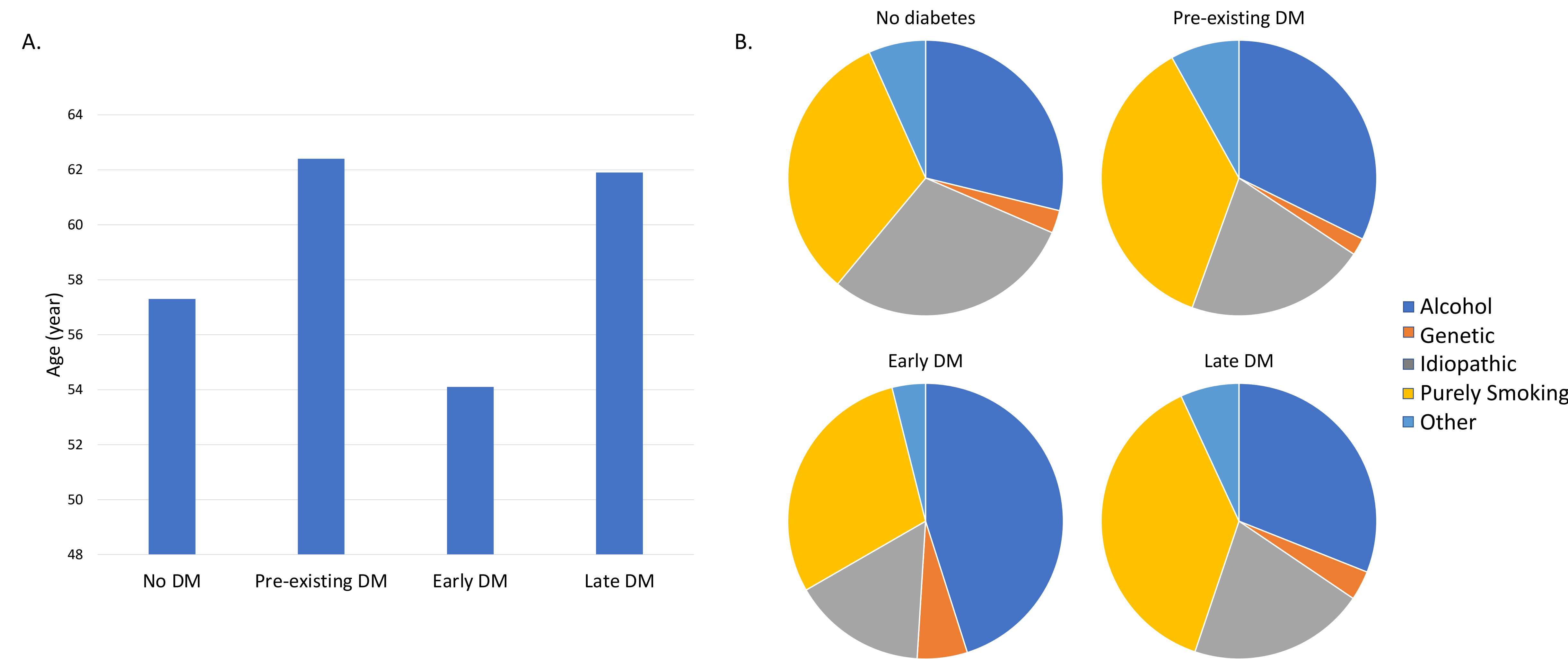


Figure 1: Age (A) and etiology of CP (B) of patients with no DM, pre-existing DM, early DM, and late DM

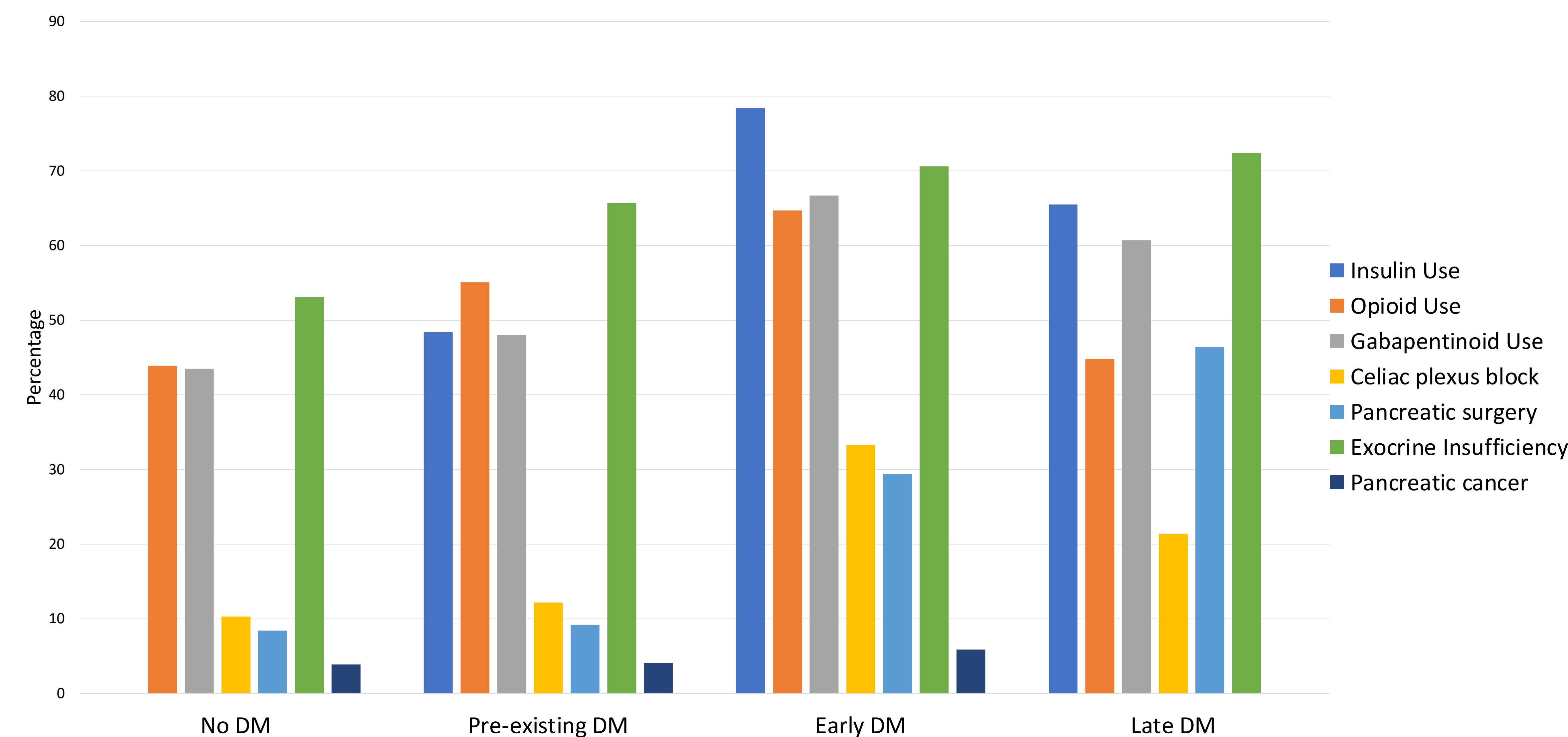


Figure 2: Clinical characteristics and outcomes of CP patients with no DM, pre-existing DM, early DM, and late DM

Discussion

- Patients with early-onset diabetes are more likely to:
 - Be younger
 - Have alcohol associated CP
 - Have poorer glucose control (higher hemoglobin A1c)
 - Be on insulin
 - Use opioids, gabapentinoids, and celiac plexus blocks
- Patients with late-onset diabetes were more likely to have pancreatic surgery for pain control
- Patients with diabetes were more likely to have other exocrine deficiencies
- There was no significant difference in rates of pancreatic cancer for all four groups
- In conclusion, CP patients who are younger, use more alcohol, and use opioids are at higher risk of developing DM earlier and extra attention should be paid to these patients due to worse outcomes

References

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2. Ewald N, Kaufmann C, Raspe A, Kloer HU, Bretzel RG, Hardt PD. Prevalence of diabetes mellitus secondary to pancreatic diseases (type 3c). *Diabetes Metab Res Rev.* 2012;28(4):338-342.
3. Whitcomb DC. Genetic risk factors for pancreatic disorders. *Gastroenterology.* 2013;144(6):1292-1302.