

## Introduction

- Acute and chronic pancreatitis are recognized as a continuum of the same disease, with a significant overlap in clinical manifestations
- The association between peptic ulcer disease (PUD) and acute pancreatitis (AP) has been described in the literature
- However, there is no available data on the prevalence of PUD in patients with chronic pancreatitis (CP)

## Methods and Materials

- The aim of this study was to investigate if CP is associated with increased overall risk of PUD, gastric ulcers, and duodenal ulcers
- Data was collected from a commercial database (Explorys Inc, Cleveland, OH), an aggregate of EHR data from 27 integrated healthcare systems in the US between 12/2016-12/2021
- We identified patients with CP based on SNOMED-CT and excluded patients with *H. pylori* infection of the gastrointestinal tract
- We compared the prevalence of peptic ulcer, gastric ulcer, and duodenal ulcer after at least 30 days following a diagnosis of CP to a cohort without CP
- A univariate analysis was conducted using Microsoft Excel and MedCalc statistical software

## Results

	Chronic Pancreatitis (CP)	No CP	Prevalence in CP /100,000	Prevalence in No CP /100,000	Relative Risk	95% CI
<b>Peptic Ulcer</b>	2480	160270	3726.52	477.08	7.81	7.51-8.12
Adults (18-65)	1640	74130	3964.23	374.11	10.60	10.1-11.1
Elderly (>65)	840	85440	3362.69	1088.74	3.09	2.89-3.30
Caucasian	1700	119480	3739.55	657.53	5.69	5.43-5.96
African American	670	24730	5153.85	648.38	7.95	7.38-8.57
Asian	20	2860	2985.07	536.31	5.57	3.61-8.58
Male	1210	64750	3587.31	434.60	8.25	7.81-8.73
Female	1270	95450	3861.36	516.79	7.47	7.08-7.89
<b>Gastric Ulcer</b>	2680	201600	4027.05	600.11	6.71	6.47-6.97
Adults (18-65)	1730	88420	4181.77	446.23	9.37	8.95-9.82
Elderly (>65)	940	112280	3763.01	1430.75	2.63	2.47-2.80
Caucasian	1830	149090	4025.52	820.48	4.91	4.69-5.13
African American	740	28950	5692.31	759.02	7.50	6.99-8.05
Asian	30	3690	4477.61	691.96	6.47	4.56-9.19
Male	1260	77990	3735.55	523.46	7.14	6.76-7.54
Female	1420	123300	4317.42	667.58	6.47	6.15-6.81
<b>Duodenal Ulcer</b>	1420	81920	2133.73	243.85	8.75	8.31-9.22
Adults (18-65)	860	31370	2078.80	158.31	13.10	12.3-14.0
Elderly (>65)	560	49880	2241.79	635.61	3.53	3.25-3.83
Caucasian	960	60480	2111.75	332.84	6.35	5.96-6.76
African American	400	11250	3076.92	294.96	10.40	9.46-11.5
Asian	20	1720	2985.07	322.54	9.26	6.00-14.3
Male	850	45120	2520.01	302.84	8.32	7.78-8.90
Female	570	36660	1733.05	198.49	8.73	8.04-9.48

Table 1. Baseline demographics and prevalence of peptic ulcer, gastric ulcer, and duodenal ulcer in patients with and without chronic pancreatitis

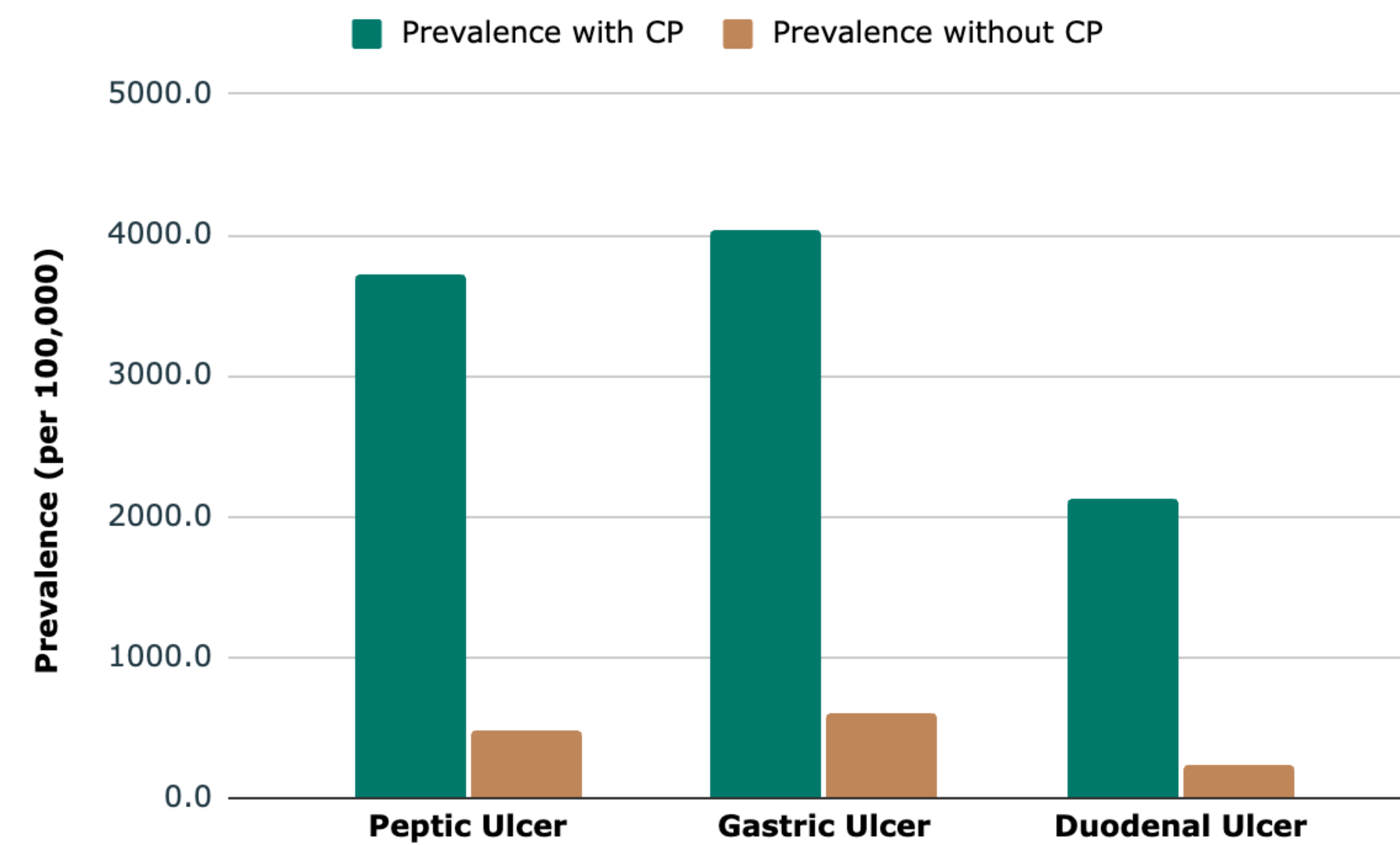


Figure 1. Prevalence per 100,000 persons of peptic, gastric, and duodenal ulcer

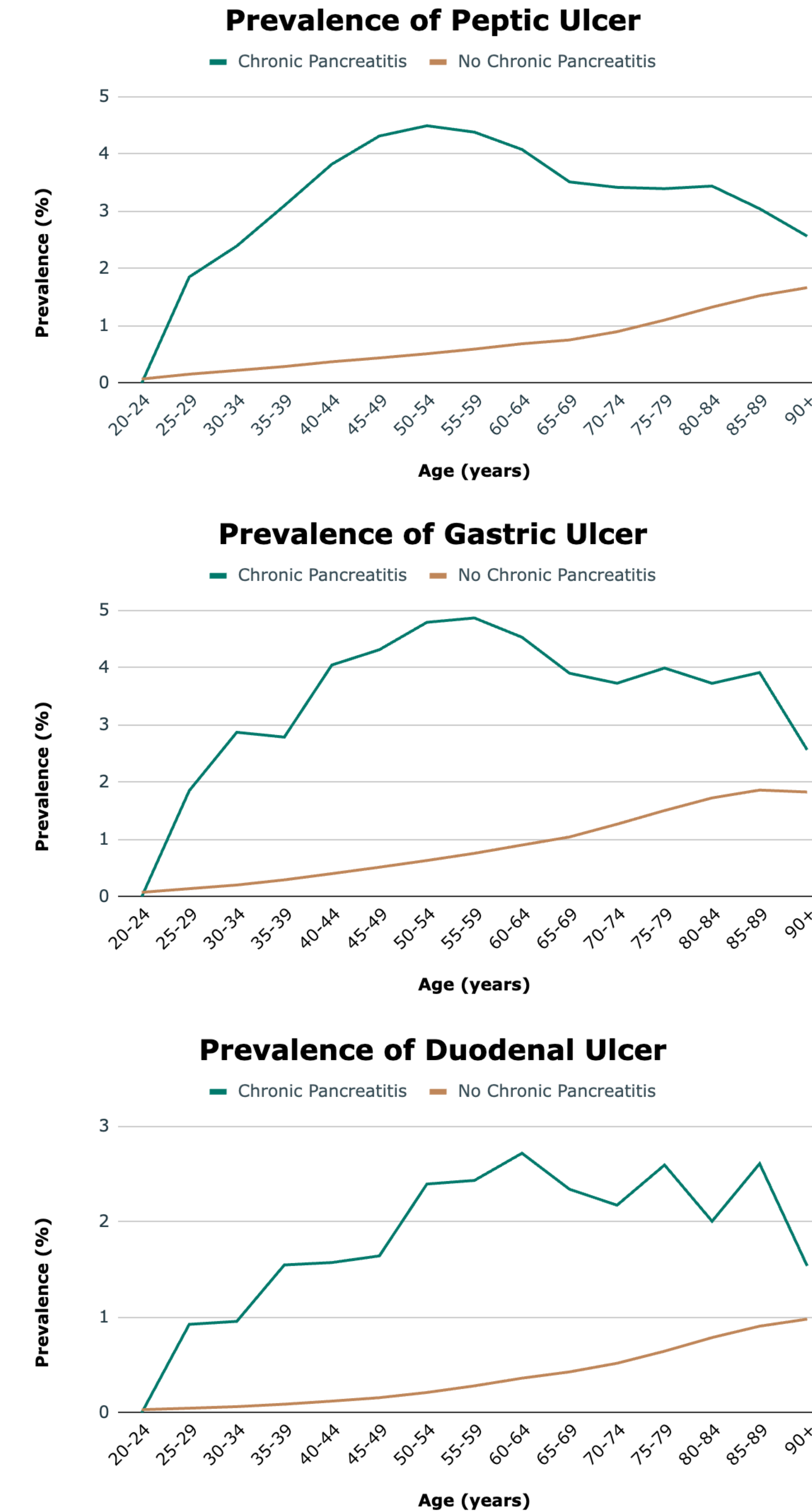


Figure 2. Prevalence (%) and age distribution of peptic, gastric and duodenal ulcer

## Results

- 33,660,510 patients identified in the database without *H. pylori*
- 66,550 cases of chronic pancreatitis
- Cases with vs without Chronic Pancreatitis
  - Peptic ulcer: 2,480 vs 160,270
  - Gastric ulcer: 2,680 vs 201,600
  - Duodenal ulcer: 1,420 vs 81,920
- Odds Ratio for Development of Ulcer after at least 30 days
  - Peptic ulcer: 7.81
  - Gastric ulcer: 6.71
  - Duodenal ulcer: 8.75
- Overall Prevalence (per 100,000)
  - Peptic ulcer: 3,727
  - Gastric ulcer: 4,027
  - Duodenal ulcer: 2,134

## Conclusions

- Peptic ulcer, gastric ulcer, and duodenal ulcer were all significantly more prevalent among patients with a diagnosis of CP
- Endoscopic and/or serum studies may be useful in identifying the pathophysiologic mechanisms of this association
- Limitations
  - Inability to exclude patients with a clearly documented history of NSAID use

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