

## INTRODUCTION

- Pancreatic cancer and cholangiocarcinoma have historically been associated with particularly poor survival rates.
- The aim of this study was to identify temporal trends for these two malignancies
  - in a national population cohort admitted to U.S. hospitals
  - from the years 2005-2019.

## METHODS

- The National Inpatient Sample (NIS) database for the years 2005-2019 was queried to identify adult (age >18 years) patients admitted with the principal procedural codes for pancreatic cancer and cholangiocarcinoma. Data was obtained from US states.
- We estimated trends in the total number of patients yearly, prevalence, mortality, and mortality rate for patients admitted for pancreatic cancer and cholangiocarcinoma.
- Weighted analysis utilizing Stata 17 MP was performed

## RESULTS

- A total of 1,406,778 patients had pancreatic cancer, of which 119,176 died. A total of 204,347 patients were found to have cholangiocarcinoma, of which 15,863 died.
- Throughout the years, there was an increase in the prevalence in pancreatic cancer from 0.19% to 0.33%, mortality rates decreased from 12% to 7.1% (p< 0.01), hospital length of stay decreased from 7.7 to 6.1 days (p< 0.01), total hospital charges increased from \$37575 in 2005 to \$73564 in 2019,
- Mean age remained the same 67.8 years in 2005 and 67 years in 2009 (p >0.05) (Table 1, 2).
- Over the same timeframe, there was an increase in the prevalence of cholangiocarcinoma from 0.02% to 0.07%, mortality rates decreased from 11.4% to 7.4% (p< 0.01), hospital length of stay decreased from 8.8 days in 2005 to 6.6 days in 2019 (p< 0.01), total hospital charges increased from \$35951 in 2005 to \$83729 in 2019 (p< 0.01), mean age remained the same- 67.9 years in 2005 and 68.3 years in 2019 (p< 0.01).

Table 1: Prevalence and mortality rates of Pancreatic Cancer from 2005-2019

Year	Total	Prevalence (%)	Mortality (n)	Mortality rate (%)	P value (Mortality rate)
2005	73,323	0.19%	8,929	12%	p<0.05
2006	74,048	0.19%	8,179	11%	p<0.05
2007	82,385	0.21%	8,041	9.8%	p<0.05
2008	89,488	0.22%	8,757	9.8%	p<0.05
2009	86,829	0.22%	8,162	9.4%	p<0.05
2010	95,014	0.24%	7,894	8.3%	p<0.05
2011	96,743	0.25%	7,785	8.0%	p<0.05
2012	90,504	0.25%	7,105	7.8%	p<0.05
2013	91,095	0.26%	7,015	7.7%	p<0.05
2014	95,130	0.27%	7,360	7.7%	p<0.05
2015	97,924	0.27%	3,757	7.7%	p<0.05
2016	102,250	0.29%	7,615	7.4%	p<0.05
2017	105,775	0.30%	8,320	7.8%	p<0.05
2018	110,220	0.31%	8,220	7.4%	p<0.05
2019	116,070	0.33%	8,280	7.1%	p<0.05

Table 2: Prevalence and Mortality rate of Cholangiocarcinoma from 2005-2019.

Year	Total	Prevalence (%)	Mortality (n)	(Mortality rate)	P value (Mortality rate)
2005	7,205	0.02%	825	11.4%	p<0.05
2006	7,405	0.02%	687	9.2%	p<0.05
2007	8,849	0.02%	875	9.9%	p<0.05
2008	9,737	0.02%	908	9.3%	p<0.05
2009	10,069	0.03%	919	9.1%	p<0.05
2010	11,864	0.03%	931	7.9%	p<0.05
2011	11,468	0.03%	878	7.7%	p<0.05
2012	11,945	0.03%	800	6.7%	p<0.05
2013	12,750	0.04%	970	7.6%	p<0.05
2014	13,970	0.04%	1,075	7.6%	p<0.05
2015	11,060	0.04%	620	8.1%	p<0.05
2016	18,990	0.05%	1,410	7.4%	p<0.05
2017	20,745	0.06%	1,470	7.1%	p<0.05
2018	22,815	0.06%	1,600	7.0%	p<0.05
2019	25,475	0.07%	1,895	7.4%	p<0.05

## DISCUSSION

- Pancreatic cancer and cholangiocarcinoma continue to be among the deadliest malignancies in terms of mortality rate. However, over the past 15 years advancements have been made in ERCP and EUS which have allowed for an increased rate of diagnosis.
- Furthermore, mortality rates have significantly decreased in both diseases, which further highlights the importance and efficacy of these diagnostic interventions in treating these malignancies.
- This is the first NIS study to analyze trends in these two disease entities over this specific period (2005-2019).
- Our study also reflects that the advancements in our diagnostic modalities have likely significantly improved mortality rates and demonstrates the importance of further development of these modalities in the future.

## DISCLOSURES: NONE