

Countries with higher incidence were correlated with higher HDI ($r=0.31$, $p<0.001$) and a higher prevalence of smoking (0.26, 0.005) and overweight (0.20, 0.011, figure 1). The global ASR of mortality was 1.7. The highest rates were reported in Eastern Asia (ASR=2.4), whilst the lowest rates were found in Middle Africa (0.29). The mortality was the highest in countries with high HDI (1.9) as compared to those with very high (1.5), medium (1.5), and low HDI (0.45). Countries with higher mortality were correlated with higher HDI ($r=0.22$, $p=0.005$) and a higher prevalence of smoking (0.27, 0.003). No correlations with GDP or alcohol drinking were found ($p>0.05$).

Conclusions Higher incidence and mortality of gallbladder cancer were found in regions with higher HDI, higher prevalence of smoking and overweight. With population aging and growth, we might expect a further substantial increase in its disease burden, especially for countries with high socio-economic development. Preventive interventions on reducing the prevalence of risk factors for gallbladder cancer are warranted.

IDDF2020-ABS-0156 ASSOCIATION BETWEEN INCIDENCE AND RISK FACTORS OF LIVER CANCER: A GLOBAL COUNTRY-LEVEL ANALYSIS

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10.1136/gutjnl-2020-IDDF.156

Background Liver cancer is the sixth most common cancer and the fourth leading cause of cancer mortality globally. The global ASR of incidence of liver cancer was 9.3 per 100,000 persons in 2018. There was an estimated total of 471,000 and 168,200 new cases of liver cancer attributable to HBV and HCV in 2018, respectively. This study aimed to evaluate the association between incidence of liver cancer and its risk factors among 185 countries.

Methods The Age-standardised rates (ASR) for incidence of liver cancer in 2018 were extracted from Global Cancer Observatory (GLOBOCAN). The prevalence of smoking,

alcohol consumption, obesity, and diabetes in 2010 for each country were retrieved from the Global Health Observatory (GHO). **Primary Outcome:** To determine the association between incidence (ASR) and prevalence of risk factors by using multivariable linear regression adjusting for human development index (HDI) and gross domestic product (GDP) per capita.

Results The country with higher incidence was associated with a higher prevalence of smoking (males: $\beta=0.25$, $p=0.028$) and alcohol consumption (females: $\beta=0.94$, $p=0.042$) (table 1: β , beta coefficient refers to how much does the incidence (ASR) change per unit increase in risk factor). No association between the incidence and body mass index (BMI) or diabetes were found in the current analysis ($p>0.05$).

Conclusions Smoking and alcohol consumption remain as important risk factors for liver cancer at a country level. Smoking was associated with an increased risk of Country-specific preventive strategies in the reduction of liver cancer burden includes promoting smoking cessation and alcohol control for high-risk populations.

IDDF2020-ABS-0161 MIXED TYPE I AND II GALLBLADDER PERFORATION IN AN ASYMPTOMATIC ELDERLY PATIENT

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10.1136/gutjnl-2020-IDDF.157

Background Gallbladder perforation is a life-threatening event, a severe complication of acute cholecystitis. It is difficult to differentiate to uncomplicated acute cholecystitis. There are three types of gallbladder perforation; (I) acute free perforation into the peritoneal cavity; (II) subacute perforation with pericholecystic abscess; (III) chronic perforation with cholecystoenteric fistula. Type I and II mostly occurred in patients below 50-year-old, while type III in elderly patients with a long history of the biliary stone. We present a case of mixed type I and II gallbladder perforation in an asymptomatic patient.

Methods A 63-years old female with no medical comorbidity was admitted due to watery stool, without nausea, vomiting, abdominal pain or fever. She had a 10-year history of mild epigastric discomfort. She was normotensive, slightly tachycardia and tachypneu with no fever. There was a mass in the

Abstract IDDF2020-ABS-0156 Table 1 The associations between incidence of liver cancer and its risk factors

| Outcome (GLOBOCAN) | Risk factor (GHO) | Male | | | Female | | | | |
|--------------------|-------------------|---------|--------|-------|---------|--------|--------|------|-------|
| | | β | 95% CI | p | β | 95% CI | p | | |
| Incidence (ASR) | Smoking | 0.25 | 0.03 | 0.48 | 0.028 | -0.13 | -0.29 | 0.04 | 0.123 |
| | Alcohol drinking | 0.09 | -0.40 | 0.58 | 0.712 | 0.94 | 0.03 | 1.85 | 0.042 |
| | BMI | 0.64 | -0.49 | 1.77 | 0.265 | -0.51 | -1.58 | 0.55 | 0.342 |
| | Diabetes | 0.76 | -0.54 | 2.05 | 0.249 | 0.54 | -0.26 | 1.33 | 0.183 |
| | HDI | -22.7 | -51.5 | 6.07 | 0.121 | -3.54 | -19.2 | 12.2 | 0.656 |
| | GDP | 63.7 | -121.3 | 248.8 | 0.496 | -6.76 | -101.9 | 88.4 | 0.888 |