intensive care unit admission, elective or emergency operations and endoscopy. The COVID-19 period was defined as the time after the first local case in January 2020, week 4.

**Results** We recorded a total of 195,867 hospital admissions related to GI diseases during the study period, and 125,049 of them were included in the final analysis. Comparing the same pre-COVID19 and COVID-19 periods, we observed a significant decline in the average number of hospitalizations for GI diseases (17.0% reduction, \( P < 0.001 \)). (Figure 1) In-hospital mortality did not differ significantly (11.2% vs 11.7%, \( P = 0.063 \)). Overall ICU admission rate was static (5.3% vs 5.1%, \( P = 0.218 \)). More emergency endoscopies were performed in patients with UGIB (30.0% vs 38.9%, \( P < 0.001 \)) and benign pancreaticobiliary conditions (17.5% vs 24.4%, \( P < 0.001 \)). Higher proportion of patients underwent emergency operations during their hospitalization (6.7% vs 8.0%, \( P < 0.001 \)).

**Conclusions** The number of hospitalizations related to GI diseases reduced drastically during the COVID-19 epidemic, yet no excessive in-hospital mortality was observed. More emergency endoscopies and operations were required, particularly for UGIB and benign pancreaticobiliary conditions.

**Abstract IDDF2020-ABS-0140 Figure 1** The global ratio of age-standardized incidence for oesophageal adenocarcinoma and squamous cell carcinoma

**Background** Worldwide, oesophageal cancer is one of the most common cancers and a leading cause of cancer mortality. Owing to its aggressive disease nature and poor survival rate, it contributes to a substantial burden to global health and clinical practice. This study aimed to estimate the worldwide...
incidence and risk factors of oesophageal cancer by histological subtypes using data from 178 countries.

Methods The data on the incidence of oesophageal cancer by histological types in 2018 were estimated from GLOBALCAN and Cancer Incidence in Five Continents (CI5). Age-standardized rates (ASRs) for oesophageal cancer incidence by histological subtypes were evaluated by Segi–Doll population. The prevalence of tobacco use, alcohol drinking, physical inactivity, obesity, diabetes, and lipid disorders for each country were retrieved from the Global Health Observatory. The association between the ratio of histological subtypes and risk factors was examined by multivariable linear regression.

Results We estimated a total of 63,470 (12.6%) and 502,669 new cases of oesophageal adenocarcinoma (AC) and squamous cell carcinoma (SCC) in 2018, respectively. The incidence among males was 3.6-fold and 2.2-fold of that among females for AC and SCC, respectively. The highest AC:SCC ratio was found in the UK (ratio 2.880, ASR 7.5), New Zealand (2.667, 4.2), the Netherlands (2.536, 7.7), Bahrain (2.143, 4.6), and Canada (2.000, 3.7) among males (figure 1). As for females, the highest AC:SCC ratio was observed in Moldova (1.000, 0.2), the Netherlands (0.800, 1.2), Iceland (0.750, 0.5), the UK (0.700, 1.4), and Cyprus (0.667; 0.3). A higher AC:SCC ratio was associated with a higher prevalence of obesity (male: β 0.039, 95% CI 0.023 to 0.055; female: 0.009, 0.004 to 0.146) and high cholesterol (male: 0.028, 0.010 to 0.047; female: 0.011, 0.004 to 0.019); but a lower prevalence of tobacco use (male: -0.007, -0.014 to -0.001) and diabetes (male: 0.009, 0.004 to 0.146; female: -0.021, -0.038 to -0.003).

Conclusions While SCC is the predominant subtype of oesophageal cancer, the incidence of AC has surpassed SCC in a substantial proportion of countries, probably due to the increasing prevalence of obesity and metabolic disorders. Future research should investigate the reasons behind these epidemiological changes.

Methods Here, we present a comprehensive metagenome association study and serum metabolomics profiling in a registry of Chinese Longevity cohort aged from 20–111 years (n = 151) and Kunming cohort ages ranging from 20–80 years (n = 80).

Results We identified uremic toxins as key factors in serum metabolomics highly associated with aging, and this finding has been validated in an independent Kunming-Aging cohort aged from 20–80 years (n = 80). We also observed that aging-associated systemic inflammation levels were positively associated with uremic toxins. Moreover, the increased Escherichia coli, Odoribacter splanchnicus, Bilophila wadsworthia and Parabacteroides spp. abundances were related to serum levels of uremic toxins, and the accumulating rate of uremic toxins and specific microbial species was robustly much slower in centenarians than in nonagenarians. We further investigated the frailty and health status in long-living individuals aged above 90 years, and found that the frailty status might be a putative extreme aging phenomenon characterized by novel uremic toxin accumulation patterns.

Conclusions Our findings reveal novel potential links between gut microbiota alterations, uremic toxins and aging, and highlight the preponderance of gut microbiota and serum metabolism in aging.