2021 in Hong Kong were identified. The primary endpoint was a composite of intensive care unit admission, use of invasive mechanical ventilation, and/or death. PPI user was identified by PPI use within 12 months before the diagnosis of COVID-19. In subgroup analysis, current PPI users were defined as patients who used PPIs within 1 month before the diagnosis of COVID-19; past PPI users were defined as patients who used PPIs 1 to 12 months before COVID-19 diagnosis. We performed sensitivity analysis after excluding patients with short-term new NSAID use within 1 month before COVID-19 diagnosis to minimize reverse causation bias.

**Results** We identified 8,675 COVID-19 patients (mean age 46 years, 49% male, 97.6% of all the reported cases in Hong Kong); 579 (6.7%) patients had used PPI. PPI users were older, more likely to have comorbidities, concomitant medications and unfavorable laboratory parameters than non-users. Of 8,675 COVID-19 patients, 500 (5.8%) developed the primary endpoint. After propensity score (PS) balancing for patients’ demographics, comorbidities, laboratory parameters, and use of medications, PPI use was not associated with the development of primary endpoint in PS weighting (weighted hazard ratio [HR] 1.11, 95% confidence interval [CI] 0.83–1.47, P=0.482) (IDDF2021-ABS-0122 Figure 1. Cumulative incidence of primary endpoint (a composite endpoint of intensive care unit [ICU] admission, use of invasive mechanical ventilation [IMV], and death) in COVID-19 patients who were and were not proton-pump inhibitor (PPI) users after propensity score (PS) weighting in a single multiple imputation data set.), and PS matching analysis (weighted HR 0.81, 95%CI 0.57–1.14, P=0.228) (IDDF2021-ABS-0122 Figure 2. Cumulative incidence of primary endpoint (a composite endpoint of intensive care unit [ICU] admission, use of invasive mechanical ventilation [IMV], and death) in COVID-19 patients who were and were not proton-pump inhibitor (PPI) users after propensity score (PS) matching in a single multiple imputation data set). Consistent non-association was observed after multivariable adjustment (adjusted HR 0.84, 95%CI 0.66–1.07, P=0.151), in subgroups of current and past PPI users, and in sensitivity analysis after excluding short-term new NSAID users.

**Conclusions** PPI use is not associated with adverse clinical outcomes in COVID-19 patients. The result remains robust after PS weighting, PS matching, multivariable adjustment, and subgroup analyses.

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**METABOLIC DYSFUNCTION-ASSOCIATED FATTY LIVER DISEASE INCREASES COLON CANCER RISK: A NATIONWIDE COHORT STUDY**

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**Background** The association between nonalcoholic fatty liver disease (NAFLD) and colorectal cancer (CRC) has been controversial. Using the new consensus-driven definition, we evaluated the association of metabolic dysfunction-associated fatty liver disease (MAFLD) with the risk of developing CRC.

**Methods** From a nationwide health screening database, we included 8,933,017 participants (48.6% male) aged 40-64 years between 2009 and 2010. Participants were categorised by the presence of fatty liver disease (FLD)—NAFLD and MAFLD, separately—and by the combination of the two definitions: Neither-FLD, NAFLD-only, MAFLD-only, or Both-FLD. The primary outcome was the development of CRC.

**Results** Among the participants, 2,517,330 (28.2%) had NAFLD and 3,337,122 (37.4%) had MAFLD, while 2,465,151 (27.6%) met both NAFLD and MAFLD definitions. Over a median follow-up period of 10.1 years, 60,888 new
CRC cases developed. NAFLD and MAFLD were each associated with a significantly higher risk of developing CRC. When the Neither-FLD group was the reference, multivariable-adjusted hazard ratios (95% confidence interval) for CRC were 1.16 (1.06-1.28) in the NAFLD-only group, 1.18 (1.16-1.20) in the Both-FLD group, and 1.32 (1.28-1.35) in the MAFLD-only group. The presence of advanced liver fibrosis further increased CRC risk in each FLD group.

Conclusions FLD was associated with a higher risk of CRC development. CRC risk was higher in the presence of MAFLD, especially when accompanied by liver fibrosis.