

### Exploring the association between Steatotic Liver Diseases (SLD) and Colorectal Cancer (CRC)

One of the major gastrointestinal metabolomic disorders; Non-alcoholic liver disease (NAFLD) is recognized as the most common liver disease with one in four individuals worldwide suffers from NAFLD<sup>1</sup>. NAFLD is characterized by hepatic lipid accumulation and diagnosed through imaging or histology after the exclusion of secondary aetiology. Various factors are known as contributors for the development of NAFLD such obesity, diet, type 2 diabetes, and metabolic syndrome, which are significantly associated with increased susceptibility to cardiovascular incidents and malignancies<sup>2</sup>. While NAFLD is a leading cause of chronic liver disease, second cause of death among NAFLD patients are attributed to malignancies at both gastrointestinal and extra-intestinal site<sup>3</sup>. Moreover, recent evidence suggests that NAFLD could be a risk factor for extra-hepatic cancers, particularly in the gastrointestinal tract<sup>3</sup> such as colorectal cancer (CRC). Therefore, investigating the association between steatotic liver disease and CRC is crucial.

Additionally, a new consensus-driven definition has been recently proposed for metabolic dysfunction-associated fatty liver disease (MAFLD) and metabolic dysfunction-associated steatotic liver disease (MASLD). These definitions have garnered significant attention in the field of metabolic research, as it represents more than just a name change but rather than a choice made under comprehensive understandings of the disease. Since their definitions are associated with higher overall mortality and cancer-specific mortality, they have been suggested to be linked with increased risk of CRC. However, prospective data on this are largely lacking, with little insight on metabolic pathways linking SLD with colorectal tumorigenesis. Since there is largely lacking study of exploring the association between MAFLD/MASLD and development of CRC, I will introduce a prior study that has investigated the association between fatty liver disease (FLD) – NAFLD or MAFLD and CRC risk and how the transition would impact CRC risk, touching upon the new definitions of both MAFLD and MASLD.

#### References

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