

The Interactive Augmented Modelling (IAM, iam.cvc.uab.es) from the CVC works with Institute Josep Carreras, Hospital General and Clinic in the PEARSON project focused in the development of deep Learning Algorithms in the diagnosis of adenomas and early colorectal cancer.

Adenocarcinoma in the earliest stage infiltrates the submucosa (pT1 CRC) and through the lymphatic vessels can spread to the lymph nodes. There are no specific morphological characteristics that accurately predict lymph node involvement to guide the best treatment after the endoscopic resection of a pT1 CRC.

Inspection of H&E histopathological images combined with clinical risk factors could define a new biomarker in pT1 CRC with which to stratify the risk of lymph node involvement to decide the best treatment.

The goal of this work is to extract visual information from histopathological images and combine it with clinical risk factors in a multimodal approach to find a new biomarker with which to stratify the risk of lymph node involvement at the time of the endoscopic resection to decide the best treatment. The benefits of contrastive representation learning to learn a latent visual space discriminating between the different types of tissue present in a tissue sample might be explored.