Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

to the presence or absence of these criteria: 63.4% (443/698) of patients were at very low risk (<1%), 30.7% (214/698) at low risk (<10%), and 5.9% (41/698) at high risk (>10%).

Conclusions: Safe selection for NAC for colon cancer can be informed by using two features that are available before treatment initiation and identify a small number of patients with high risk of preoperative obstruction.

Clinical trial identification: NCT00647530.

Legal entity responsible for the study: Birmingham Clinical Trials Unit, University of Birmingham.

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390MO Colorectal (CRC) cancer screening and diagnosis during the COVID-19 pandemic in Quebec, Canada

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Background: CRC, 3rd most common cancer in Quebec, is the 2nd and 3rd cause of cancer related death in men and women respectively. This study aimed to assess how the provincial screening program and CRC diagnosis were disrupted during the COVID-19 pandemic.

Methods: Ministry of Health of Quebec data related to cancer screening programs and diagnosis during the periods of March 2019 to February 2020 and March 2020 to February 2021 were recently reported (ISBN: 978-2-550-888379-1). We analyzed and compared the data related to Fecal Occult Blood Test (FOBT), colonoscopy, and CRC surgery rates for two comparative 4-month periods (April to July).

Results: Status of public health emergency was declared in Quebec on March 16, 2020. All elective procedures were therefore suspended on that date. From April to July 2020, FOBT decreased by 67.26%, colonoscopy procedures by 57.8% and CRC surgery by 29.5% compared to the same period from 2019. Peak of suspension of these activities was reached in April and May 2020. The waiting list for colon endoscopy increased by 210% from April to July 2020 and by 141% from August to October 2020. After the first pandemic wave, from August to October 2020, activities were resumed, colonoscopies were 11.4% less by comparison to the same period in 2019 (57 887 vs 65 326 procedures respectively). Primary CRC surgery procedures done between April and July 2020 were 29.5% less compared to the same period in 2019. For the whole year from March 2020 to February 2021, 21% less CRC resections were done compared to the year March 2019 — February 2020. The waiting list for surgery was reduced by 30% from April to July 2020 most probably because of a lower surgical referral.

Conclusions: The COVID-19 affected screening and lead to decreased CRC diagnosis rate. Even with the recovery to pre-pandemic activities, catching up with the delays is a challenge for health authorities. The impact of the offloading of diagnostic and surgical activities on cancer mortality is hard to be estimated but is likely to be significant.

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391MO Impact of diabetes and metformin use on recurrence and outcome in early colon cancer (CC) patients: A pooled analysis of 3 adjuvant trials

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Background: Obesity and diabetes mellitus type 2 are associated with an increased risk of colorectal cancer. Recent studies have suggested beneficial effects of metformin in patients with cancer and diabetes. We sought to investigate the impact of metformin on recurrence and survival in a large, pooled analysis of non-metastatic colon cancer (CC) patients.

Methods: A patient-level meta-analysis from three randomized adjuvant trials was performed. All patients had resection with curative intent of a stage II or III CC and were treated with standard adjuvant fluoropyrimidine and oxaliplatin (+/- cetuximab). We investigated the impact of metformin on time to recurrence (TTR) and overall survival (OS). Multivariable analyses were adjusted for age, ECOG, T-stage, N-stage, grade, and primary tumor location.

Results: 5922 patients were available for this analysis with a median follow-up of 6.8 years. 621 of 5922 patients (10.5%) had diabetes at the time of their diagnosis of CC. Of those with diabetes, 327 (52.7%) were defined as metformin-users and 294 patients (47.3%) as non-metformin-users. As expected, baseline characteristics associated with diabetes differed between non-diabetic, metformin-diabetic and non-metformin-diabetic CC patients whereas tumor-related characteristics were shown to be well balanced. CC patients with diabetes had a significantly shorter median TTR (adjHR: 1.21; 95% CI, 1.03 to 1.42; p=0.027) and median OS (adjHR: 1.29; 95% CI, 1.09 to 1.52; p=0.002) compared to non-diabetic CC patients. Diabetic CC patients not receiving metformin had a significantly worse OS (adjHR: 1.41; 95% CI, 1.13 to 1.77; p=0.017); however, use of metformin appeared to attenuate this effect on OS (adjHR: 1.18; 95% CI, 0.95 to 1.48; p=0.017).

Conclusions: CC patients with diabetes type 2 had a significantly worse survival as well as shorter TTR. Furthermore, our data suggest that metformin may attenuate the detrimental effect of diabetes on CC patient outcomes.

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392P Integrating fragmentomic features for non-invasive early detection of colorectal advanced adenoma and adenocarcinoma

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Background: Previous studies on liquid biopsy-based detection of advanced colorectal adenoma (advCRA) and early stage adenocarcinoma (CRC) were limited by low sensitivity. To this end, we performed a prospective study and established an integrated model using multiple fragmentomic profiles of plasma cell-free DNA (cfDNA) for accurately and cost-effectively detecting stage 0/I CRC and advCRA.

Methods: This study enrolled a total of 621 participants, including 298 CRC patients (34 stage 0, 264 stage I), 92 advCRA patients and 231 healthy controls. Plasma cfDNA samples were prepared for low coverage whole-genome sequencing (~5X). Participants were randomly divided into a training cohort (N = 310) and a test cohort (N = 311). An ensemble stacked model differentiating healthy controls from advCRA/CRC patients was trained using four machine learning models and five cfDNA fragmentomic features, including fragment size distribution and ratio, end and breakpoint motif, and copy number alteration, which was then validated in the test cohort.

Results: Our model showed an Area Under the Curve (AUC) of 0.988 for differentiating advCRA/CRC patients from healthy individuals. The model performed even better for identifying CRC patients (AUC 0.990) compared to advCRA patients (AUC