

Kombinasi Pemeriksaan Messenger Rna Carcinoembryonic Antigen, Messenger Rna Cyclooxygenase 2, Dan Faecal Immunochemical Test Pada Feses Sebagai Penanda Diagnostik Kanker Kolorektal = Combination of Messenger RNA Carcinoembryonic Antigen Examination, Messenger RNA Cyclooxygenase 2, and Faecal Immunochemical Test in Feces as a Diagnostic Marker for Colorectal Cancer

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Abstrak

Latar belakang: Kanker kolorektal merupakan keganasan peringkat ketiga terbesar di dunia dengan insidensi dan penyebab kematian terbanyak, Peran deteksi dini kanker kolorektal dengan visualisasi langsung dan penanda tertentu terbukti menurunkan angka insidensi dan kematian, namun program ini memiliki tingkat partisipasi yang rendah. Metode non invasif pemeriksaan berbasis feses telah digunakan dan dikembangkan. Kombinasi mRNA CEA, mRNA COX-2 dan FIT pada feses diharapkan sebagai metode deteksi dini non invasif dengan sensitivitas dan spesifitas yang baik dalam penanda diagnostik kanker kolorektal.

Tujuan: Mengevaluasi nilai diagnostik kombinasi pemeriksaan mRNA CEA, mRNA COX-2 dan FIT pada feses sebagai penanda diagnostik kanker kolorektal

Metode: Studi potong lintang dengan populasi terjangkau pasien dewasa yang diduga kanker kolorektal di Rumah Sakit Ciptomangunkusumo pada bulan November 2015 hingga Februari 2016, Uji diagnostik digunakan untuk mengevaluasi nilai sensitivitas, spesifisitas, NPP, NPN, PLR, NLR pada kombinasi dalam mendeteksi kanker kolorektal dengan pemeriksaan histopatologi jaringan yang diambil dari kolonoskopi sebagai baku emas.

Hasil: Dari total 97 subjek penelitian, rerata usia 56 tahun, 50,5% pria dan 77,3% berusia > 50 tahun.

Keluhan klinis perdarahan nyata saluran cerna terbanyak dengan 43,3%. Lokasi tumor terbanyak pada kolon descenden, sigmoid, dan rektum yaitu 8,24%, 6,18%, dan 5,15%. Proporsi lesi kanker kolorektal (adenokarsinoma) sebanyak 15% dan lesi non kanker kolorektal sebanyak 84.5%. Nilai sensitivitas dan spesifitas pada kanker kolorektal sebesar 93,33% (IK 95% 70,18-98,81) dan 60,98% (IK 95% 50,15-70,82). NPP, NPN, PLR, dan NLR berturut turut 30,43% (IK 95% 19,08-44,81), 98,04% (IK 95% 89,70- 99,65), 2,39 (IK 95% 1,28-4,48), dan 0,11 (IK 95% 0,02 – 0,79). Skor AUC untuk membedakan kanker kolorektal adalah 77,2 % (IK 95% 66,3 – 88,0)

Kesimpulan: Nilai sensitivitas, spesifitas, NPP, NPN, PLR dan NLR kombinasi pemeriksaan mRNA CEA, mRNA COX-2 dan FIT pada feses untuk mendeteksi kanker kolorektal berturut-turut adalah 93,33%, 60,98%, 30,43%, 98,04%, 2.39, dan 0,11.

.....Background: Colorectal cancer is the third largest malignancy in the world with the highest incidence and cause of death. The role of early detection of colorectal cancer with direct visualization and certain markers has been proven to reduce incidence and death rates, however this program has a low participation rate. Non-invasive methods of stool-based examination have been used and developed. The combination of CEA mRNA, COX-2 mRNA and FIT in feces is expected to be a non-invasive early detection method with good sensitivity and specificity as a diagnostic marker for colorectal cancer.

Aim: Evaluating the diagnostic value of a combination of CEA mRNA, COX-2 mRNA and FIT examination in feces as a diagnostic marker for colorectal cancer

Method: Cross-sectional study with an accessible population of adult patients suspected of colorectal cancer at Ciptomangunkusumo Hospital from November 2015 to February 2016. Diagnostic tests were used to evaluate the value of sensitivity, specificity, NPP, NPN, PLR, NLR in combination in detecting colorectal cancer with histopathological examination tissue taken from colonoscopy as the gold standard.

Results: Of the total 97 research subjects, the average age was 56 years, 50.5% were men and 77.3% were > 50 years old. Clinical complaints of real gastrointestinal bleeding were the highest with 43.3%. The most common tumor locations were the descending colon, sigmoid and rectum, namely 8.24%, 6.18% and 5.15%. The proportion of colorectal cancer lesions (adenocarcinoma) was 15% and non-colorectal cancer lesions was 84.5%. The sensitivity and specificity values for colorectal cancer were 93.33% (95% CI 70.18-98.81) and 60.98% (95% CI 50.15-70.82). NPP, NPN, PLR, and NLR respectively 30.43% (95% CI 19.08-44.81), 98.04% (95% CI 89.70- 99.65), 2.39 (95% CI 1 .28-4.48), and 0.11 (95% CI 0.02 – 0.79). The AUC score for differentiating colorectal cancer is 77.2% (95% CI 66.3 – 88.0)

Conclusion: The sensitivity, specificity, NPP, NPN, PLR and NLR values of the combination of CEA mRNA, COX-2 mRNA and FIT examination in feces to detect colorectal cancer were 93.33%, 60.98%, 30.43%, 98.04%, 2.39, and 0.11.