

# Kadar Carcinoembryonic Antigen (CEA) Feses, Serum dan Skor Asia-Pacific Colorectal Screening pada Pasien Terduga Karsinoma Kolorektal di Rumah Sakit Umum Pusat Nasional Dr. Cipto Mangunkusumo = Fecal Carcinoembryonic Antigen (CEA) level, serum CEA level and Asia-Pacific Colorectal Cancer Screening Score in Suspected Colorectal Carcinoma Patients at Dr. Cipto Mangunkusumo Hospital

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## Abstrak

Karsinoma Kolorektal (KKR) merupakan keganasan keempat terbanyak dan penyebab kematian ketiga di dunia. Gejala awal KKR yang tidak jelas mengakibatkan sebagian besar pasien datang dalam stadium lanjut. Kolonoskopi sebagai standar diagnostik bersifat invasif, mahal, membutuhkan banyak persiapan, dan tidak dimiliki oleh semua rumah sakit di Indonesia. Pemeriksaan CEA serum saat ini hanya digunakan untuk menilai prognosis. Pemeriksaan CEA feses memberikan harapan dalam deteksi KKR dan terdapat peningkatan sensitivitas dan spesifitas apabila dikombinasikan dengan parameter lain. Sistem skoring Asia Pacific Colorectal Cancer Screening (APCS) berdasarkan data umur, jenis kelamin, riwayat keluarga menderita KKR dan riwayat merokok dapat meningkatkan efisiensi penapisan pasien KKR. Penelitian ini menganalisis kombinasi pemeriksaan CEA feses dan serum serta skor APCS dibandingkan dengan histopatologi sebagai baku emas. Desain penelitian potong lintang terhadap 60 pasien terduga KKR yang diperiksa CEA feses dan serum, dihitung skor APCS dan dilakukan biopsi kolonoskopi. Pada penelitian ini didapatkan perbedaan bermakna kadar CEA feses, CEA serum dan skor APCS pada kelompok KKR dan non-KKR. Median kadar CEA feses kelompok KKR dan non-KKR adalah 10726 ng/mL (32,9 – 30000 ng/mL) dan 3671,8 ng/mL (35,9 – 29454,8 ng/mL), median kadar CEA serum kelompok KKR dan non-KKR adalah 8,95 ng/mL (0,5 – 7757,9 ng/mL) dan 1,75 ng/mL (0,5 – 5,8 ng/mL), dan skor APCS kelompok KKR dan non-KKR adalah 3 dan 2. Berdasarkan hasil analisis multivariat variabel yang memiliki kemaknaan secara statistik dalam probabilitas terjadinya KKR adalah CEA feses dan CEA serum dengan rumus  $y = 1 / (1 + \text{Exp} (0,93 - 1,56 * \text{CEA feses} - 1,87 * \text{CEA serum}))$ .

.....Colorectal Cancer (CRC) is the fourth most common malignancy and third most deadly cancer in the world. The early nonspecific symptoms of CRC resulting most patients come in an advanced stage. Colonoscopy as a diagnostic standard is invasive, expensive, requires some preparation, and not available in all hospitals in Indonesia. Serum CEA is currently used only for prognostic purposes. Fecal CEA has advantage in detection of CRC and sensitivity and specificity increased as combined with the other parameters. The Asia Pacific Colorectal Cancer Screening (APCS) scoring system based on data of age, sex, family history of CRC and smoking history improve screening efficiency of CRC patients. This study analyzed combination of fecal and serum CEA, and APCS scores with histopathology as the gold standard. This is a cross sectional study in 60 suspected CRC who were examined for fecal and serum CEA, calculated APCS scores and performed colonoscopic biopsies. In this study, there were significant differences of fecal CEA, serum CEA and APCS scores in CRC and non-CRC groups. The median fecal CEA levels in CRC and non-CRC groups were 10726 ng/mL (32.9 – 30000 ng/mL) and 3671.8 ng/mL (35.9

– 29454.8 ng/mL), the median serum CEA levels in CRC and non-CRC groups were 8.95 ng/mL (0.5 – 7757.9 ng/mL) and 1.75 ng/mL (0.5 – 5.8 ng/mL), and APCS scores of CRC and non-CRC groups were 3 and 2. Based on the multivariate analysis, fecal and serum CEA were variables statistically significance in probability of CRC with formula  $y = 1 / (1 + \text{Exp} (0.93 - 1.56 * \text{fecal CEA} - 1.87 * \text{serum CEA}))$ .