

# Peran matrix metalloproteinase-9 feses dalam diagnosis pasien terduga kanker kolorektal di RSUPN Dr. Cipto Mangunkusumo = The Role of faecal matrix metalloproteinase-9 in the diagnosis of patients with suspected colorectal cancer in Cipto Mangunkusumo National General Hospital

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## Abstrak

### <b>ABSTRAK</b>

Menurut Jakarta Cancer Registry tahun 2012, kanker kolorektal merupakan kanker terbanyak kedua pada laki-laki dan terbanyak keempat pada perempuan di Indonesia. Pemeriksaan skrining kanker kolorektal yang saat ini tersedia memiliki berbagai keterbatasan. Matrix metalloproteinase-9 (MMP-9) adalah endopeptidase yang berperan dalam degradasi matriks ekstraseluler, dan disekresi oleh berbagai sel seperti sel tumor, sel radang, dan fibroblas. Penelitian ini bertujuan untuk mengetahui peran diagnostik MMP-9 feses dibandingkan dengan gambaran histopatologi sebagai baku emas. Desain penelitian adalah potong lintang. Penelitian dilakukan terhadap 52 subjek terduga kanker kolorektal yang menjalani kolonoskopi. Kadar MMP-9 feses diperiksa menggunakan kit MMP-9 dari R&D Systems dengan metode ELISA. Akurasi diagnostik kadar MMP-9 feses sebesar 0,855. Titik potong kadar MMP-9 feses didapatkan 1,237 ng/ml dengan sensitivitas 88,9%, spesifisitas 76,7%, nilai prediksi positif 44,4%, dan nilai prediksi negatif 97,1%. Pemeriksaan kadar MMP-9 feses dapat dipertimbangkan dalam skrining kanker kolorektal.

### <hr><i><b>ABSTRACT</b>

According to Jakarta Cancer Registry 2012, colorectal cancer is the second most common cancer in men and fourth in women in Indonesia. Colorectal cancer screening tests currently available, have various limitations. Matrix metalloproteinase-9 (MMP-9) is endopeptidase which plays a role in the degradation of the extracellular matrix, and is secreted by various cells such as tumor cells, inflammatory cells, and fibroblasts. This is a cross sectional study aims to determine the diagnostic role of faecal MMP-9 compared to histopathological features as gold standard. The study was conducted on 52 subjects with suspected colorectal cancers who underwent colonoscopy. The levels of faecal MMP-9 were examined using MMP-9 kit from R&D Systems using ELISA method. Diagnostic accuracy of faecal MMP-9 levels is 0.855. The cutoff point was 1.237 ng/ml with sensitivity of 88.9%, specificity of 76.7%, positive predictive value of 44.4%, and negative predictive value of 97.1%. Faecal MMP-9 can be considered as a screening test in colorectal cancer.