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Measurement of total antioxidant response in colorectal cancer using a novel automated method


Abdullah ÖZGÖNÜL¹,
Nurten AKSOY²,
Fuat DİLMEÇ³,
Ali UZUNKÖY¹,
Şahin AKSOY⁴

¹ Department of General Surgery,
Faculty of Medicine,
Harran University,
Şanlıurfa - TURKEY

² Department Clinical Biochemistry,
Faculty of Medicine,
Harran University,
Şanlıurfa - TURKEY

³ Department Medical Biology,
Faculty of Medicine,
Harran University,
Şanlıurfa - TURKEY

⁴ Department Medical Ethics,
Faculty of Medicine,
Harran University,
Şanlıurfa - TURKEY

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 [Authors](#)



medsci@tubitak.gov.tr

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Abstract: Aim: The aim of this study was to compare the antioxidative status in patients with colorectal cancer and healthy controls, based on measurements made using a novel method. Materials and Methods: The study was conducted between 2005 and 2007, and included 30 patients with colorectal cancer and 30 healthy controls. To determine the antioxidative status of the patients and healthy controls, serum total antioxidant capacity was measured using a novel automated method. Blood samples were taken from the healthy controls and the patients. Results: Total serum antioxidant capacity was significantly lower in colorectal cancer patients than in healthy persons ($P < 0.023$). Conclusions: Patients with colorectal cancer are exposed to oxidative stress, which may have a role in the pathogenesis of the disease. The novel automated method used in this study was developed in our laboratory, and is feasible and fully automated; therefore, it may be useful for evaluating oxidative-antioxidative balance in patients with colorectal cancer.

Key Words: Oxidative stress, Colorectal neoplasm, Total antioxidant capacity

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