LETTER – COLORECTAL CANCER

Vitamin D Status May Explain Some of the Racial Disparities in Rectal Cancer

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TO THE EDITOR:

The paper by Nitzkorski and colleagues determined that age, stage at diagnosis, and race were independent predictors of survival after diagnosis of rectal cancer.¹ They suggested that factors other than socioeconomic status might explain why blacks had lower survival rates than whites.

Overlooked in the discussion was vitamin D status. Higher serum 25-hydroxyvitamin D [25(OH)D] levels at time of diagnosis of colorectal cancer were found associated with lower mortality rates. Those in the highest quartile of 25(OH)D [mean value, 40.0 ng/ml) had an adjusted hazard ratio of 0.52 [95% confidence interval (CI), 0.29–0.94] for overall mortality compared with those in the lowest quartile (mean value, 16.5 ng/ml).² Colon and rectal cancer mortality rates have similar geographical variations in the United States with respect to solar ultraviolet-B doses, an index of vitamin D production, and often are combined due to the lower numbers of rectal cancer cases.³

The role of vitamin D status in explaining black-white disparities in survival rates after diagnosis of cancer was reviewed recently.⁴ Eleven types of cancer have been found to have black-white disparities in survival rates after consideration of socioeconomic status, stage at diagnosis, and treatment. Elderly black Americans have serum 25(OH)D levels near 16–17 ng/ml, whereas elderly white Americans have serum 25(OH)D levels near 25 ng/ml.⁵

Based on serum 25(OH)D level-colon cancer incidence rate relations, the difference is thought to be responsible for approximately a 25% difference in survival rates, which is within the range of 10–102% found by Nitzkorski et al.¹

Perhaps Nitzkorski and colleagues can add consideration of vitamin D in their future studies of rectal cancer outcome disparities.

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