

Coffee Intake, Recurrence, and Mortality in Stage III Colon Cancer: Results From CALGB 89803 (Alliance)

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Abstract

Purpose Observational studies have demonstrated increased colon cancer recurrence in states of relative hyperinsulinemia, including sedentary lifestyle, obesity, and increased dietary glycemic load. Greater coffee consumption has been associated with decreased risk of type 2 diabetes and increased insulin sensitivity. The effect of coffee on colon cancer recurrence and survival is unknown.

Patients and Methods During and 6 months after adjuvant chemotherapy, 953 patients with stage III colon cancer prospectively reported dietary intake of caffeinated coffee, decaffeinated coffee, and nonherbal tea, as well as 128 other items. We examined the influence of coffee, nonherbal tea, and caffeine on cancer recurrence and mortality using [Cox proportional hazards](#) regression.

Results Patients consuming 4 cups/d or more of total coffee experienced an adjusted hazard ratio (HR) for colon cancer recurrence or mortality of 0.58 (95% CI, 0.34 to 0.99), compared with never drinkers ($P_{\text{trend}} = .002$). Patients consuming 4 cups/d or more of caffeinated coffee experienced significantly reduced cancer recurrence or mortality risk compared with abstainers (HR, 0.48; 95% CI, 0.25 to 0.91; $P_{\text{trend}} = .002$), and increasing caffeine intake also conferred a significant reduction in cancer recurrence or mortality (HR, 0.66 across extreme quintiles; 95% CI, 0.47 to 0.93; $P_{\text{trend}} = .006$). Nonherbal tea and decaffeinated coffee were not associated with patient outcome. The association of total coffee intake with improved outcomes seemed consistent across other predictors of cancer recurrence and mortality.

Conclusion Higher coffee intake may be associated with significantly reduced cancer recurrence and death in patients with stage III colon cancer.

Footnotes

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- Terms in blue are defined in the glossary, found at the end of this article and online at www.jco.org.
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• Glossary Terms

Cox proportional hazards:

See *Cox proportional hazards regression model*.

C-peptide:

A protein fragment produced during the enzymatic cleavage of proinsulin to create insulin. It is secreted by pancreatic β -cells at equimolar concentrations to insulin but has a half-life in the circulation of two to five times longer. Because its greater stability in the peripheral circulation, C-peptide has been measured in research studies as a marker of pancreatic β -cell secretory activity.

Western pattern diet:

Western pattern diet is characterized by high intakes of red and processed meats, fat, refined grains, and dessert.