

# Drug shows promise for subset of stage III colon cancer patients

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A subset of patients with stage III colon cancer had improved survival rates when treated with irinotecan-based therapy, according to a new study in *Gastroenterology*, the official journal of the American Gastroenterological Association.

When added to the standard chemotherapy [treatment](#)—fluorouracil and leucovorin—adjuvant irinotecan therapy improved overall [survival rates](#) for patients with the CpG island methylator phenotype (CIMP). CIMP is seen in about 10 to 20 percent of colorectal cancers. Patients with CIMP-negative tumors, however, exhibited significant harm from the addition of irinotecan—overall survival was 68 percent compared with 78 percent for those receiving the standard treatment alone.

"Our results serve as an example that the molecular characterization of individual tumors may help to determine the most appropriate treatment for patients with [colon cancer](#)," said lead study author Stacey Shiovitz, MD, from the department of medicine, University of Washington, Seattle, WA, and the clinical research division of Fred Hutchinson Cancer Research Center, also in Seattle. "Based on our findings, identification of a [tumor's](#) CIMP status should play a greater role in the clinical setting."

Researchers analyzed data from patients with stage III colon cancer randomly assigned to groups given fluorouracil and leucovorin or adjuvant irinotecan after surgery, from April 1999 through April 2001. Patients were followed for eight years. Patients with CIMP-positive tumors demonstrated a trend toward improved overall survival when treated with irinotecan versus the standard treatment alone, 69 percent versus 56 percent, respectively. Results were most pronounced among patients with stage III CIMP-positive, mismatch repair intact (MMR-I) colon cancer.

No significant associations or interactions between CIMP and KRAS or BRAF mutations were

observed, suggesting that the effectiveness of this treatment is not influenced by KRAS/BRAF mutation status.

"This analysis serves to increase our understanding of which subset of patients might benefit from irinotecan adjuvant therapy. This research is an important step in the medical community's work to classify tumors into groups that would result in optimized treatment strategies, thus delivering a higher level of personalized care to [patients](#)," added Dr. Shiovitz.

Future studies are needed to better understand the origin of the CIMP phenotype and to test these findings in a larger subset.

**More information:** 1 Shiovitz et al. CpG Island Methylator Phenotype Is Associated With Response to Adjuvant Irinotecan-Based Therapy for Stage III Colon Cancer. *Gastroenterology* 2014; 147(3): 637-645. [www.gastrojournal.org/article/.../14/00657-X/abstract](http://www.gastrojournal.org/article/.../14/00657-X/abstract)

Provided by American Gastroenterological Association

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