

Inflammatory Biomarkers Can Predict Colorectal Cancer Recurrence and Mortality

Clinicians can utilize this information to better monitor their patients and improve CRC outcomes with evidence-based treatment solutions.

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Interleukin 6 (IL-6) and tumor necrosis factor-alpha (TNF-a) are inflammatory biomarkers that are capable of activating Janus kinase signaling pathways, nuclear factor signaling pathways, and C-reactive protein (CRP) transcription. CRP tests are commonly used in cancer care to predict prognosis, as activation of the Janus kinase and nuclear factor signaling pathways can aid in tumor expansion and metastasis. Additionally, high-sensitivity CRP tests (hsCRP) are able to identify small amounts of CRP in blood samples.

[One recent study](#) assessed the association between these inflammatory biomarkers (IL-6, TNF-a, and hsCRP) with CRC recurrence and mortality in 1,494 stage III colorectal cancer (CRC) patients. This was the largest study assessing the relationship between these inflammatory biomarkers and CRC survival as of yet.

While the study recruited a diverse sample of individuals, the final sample was overwhelmingly White (82.3%) and non-Hispanic (94.5%). Future studies should prioritize racial diversity to more accurately assess this association, as [racial disparities](#) exist in CRC diagnoses and outcomes.

Researchers collected plasma samples from participants 3-8 weeks following their surgery but prior to chemotherapy. These plasma samples were then analyzed for IL-6, TNF-a, and hsCRP. The primary study outcome was disease-free survival and secondary outcomes were recurrence-free survival and overall survival. Participants who had higher concentrations of IL-6, TNF-a, and hsCRP were more likely to have CRC recurrence. High levels of these biomarkers were also found to be associated with an increased risk of mortality.

[This study](#) reveals that there is a significant association between inflammation following stage III diagnosis and poor CRC outcomes. Clinicians can utilize this information to better monitor their patients and improve CRC outcomes with evidence-based treatment solutions.

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