

Circulating tumor cells associated with relapse in late-stage melanoma patients

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A study revealing a connection between circulating tumor cells (CTCs) and relapse in stage IV melanoma patients points to liquid biopsy as a potential predictor of patients at high risk for disease progression. CTCs, tumor cells shed into the bloodstream or lymphatic system, can lead to additional tumor growth and/or metastasis to distant sites.

Findings from the study, led by Anthony Lucci, M.D., professor of Breast Surgical Oncology and Surgical Oncology at The University of Texas MD Anderson Center, will be presented at the Nov. 7 annual meeting of the Western Surgical Association.

Based on earlier studies in which Lucci found significant levels of CTCs in [breast cancer](#), Lucci theorized that CTCs may also be present in [melanoma](#) patients.

"Optimal management of stage IV melanoma patients remains a challenge, since in spite of promising emerging therapies, many patients develop [disease](#) resistance," said Lucci. "This study, designed to determine if CTCs are associated with relapse, detected CTCs in approximately 40 percent of advanced stage melanoma patients."

The team conducted a CTC assessment through blood drawn from 93 melanoma patients at the time of stage IV diagnosis. Median follow-up was 17 months and average patient age was 55 years. CTCs were detected in 42 percent of patients at the time of blood draw. Fifty-seven of the 93 patients (61 percent) experienced disease relapse. The study showed that, within six months, 51 percent of patients who had tested positive for CTCs experienced relapse, while disease recurred in 15 percent of patients without CTCs. Over the five-year follow-up period, 82 percent of those patients who had tested positive for CTCs experienced relapse, while 46 percent of those

who did not have CTCs had disease recurrence.

"Based on our findings, it is clear that stage IV melanoma [cancer](#) patients with CTCs have a significantly higher chance of relapsing or progressing as compared to those without CTCs," said Lucci. "Hopefully, in the future this information could be used to guide treatment, or select patients for treatment - or maybe stop a treatment and switch to another - when it appears it is not working."

Lucci previously led the first study of CTCs in early-stage breast cancer, which followed 302 non-metastatic [breast cancer patients](#). Lucci's team discovered that CTCs were present in 24 percent of stage 1-3 breast cancer [patients](#), demonstrating CTCs as an independent predictor of worse, disease free, and overall survival. The results were published in *Lancet Oncology* in 2012.

Provided by University of Texas M. D. Anderson Cancer Center

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