

Circulating tumor cells not linked to survival in newly diagnosed inflammatory breast cancer

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The presence of circulating tumor cells in the blood appears to have no relationship to survival in women who have just been diagnosed with inflammatory breast cancer, according to new research from Fox Chase Cancer Center. However, the research shows that these stray tumor cells may signal that the disease has spread to other parts of the body, even before imaging reveals any metastases. The results will be presented on Friday, December 9 at the 2011 CTRC-AACR San Antonio Breast Cancer Symposium.

If a woman is diagnosed with inflammatory [breast cancer](#), a particularly fast-growing form of the disease, doctors should consider close imaging to monitor and possibly continue [aggressive treatment](#) if she also has [circulating tumor cells](#) (CTCs), regardless of what imaging shows, recommends study author Massimo Cristofanilli, M.D., F.A.C.P., chair of the department of [medical oncology](#) at Fox Chase. "You should be careful before stopping treatment in someone who has evidence of circulating cells, particularly when dealing with a disease like inflammatory breast cancer, which can progress rapidly."

Previous research by Cristofanilli and his colleagues found that the number of stray [cancer cells](#) circulating in the blood is the best predictor of both how long a woman with metastatic breast cancer will live and the amount of time until her cancer progresses. But the researchers have also found that the presence or lack of CTCs has little to say about prognosis

in [women](#) with metastatic inflammatory breast cancer, an [aggressive disease](#) with extremely poor outcomes in spite of multidisciplinary modality treatment.

During the current study, Cristofanilli and his team reviewed the records of 84 women who had just learned they have inflammatory breast cancer, either in [stage III](#) or stage IV. A total of 64 (76.2%) women had at least 1 CTC and 29 (34.5%) had at least 5. The researchers found that women with no CTCs had comparable survival and spent the same amount of time progression-free as women with one or more CTCs. The results suggest that there is little prognostic value in measuring CTCs in women newly diagnosed with inflammatory breast cancer.

It's not clear why CTCs appear to be linked to prognosis in some forms of cancer but not others, says Cristofanilli. Inflammatory breast cancer is already an aggressive disease, he says, so compared to other forms of breast cancer whether or not cells have broken off and entered the blood may say little more about an otherwise already aggressive disease.

Inflammatory breast tumors are typically fast-growing, and travel quickly to lymph nodes and the brain. During follow-up in the current study, which lasted more than 22 months for half of patients, more than 30% of the entire group had died.

Perhaps "the most important finding from the study," says Cristofanilli, is that more than three-quarters of women who just learned they have inflammatory breast cancer had CTCs that can be detected in the blood. In comparison, he adds, only 15% of women with non-inflammatory breast cancer typically have CTCs. "So there is a huge difference in inflammatory breast cancer and other forms of breast cancer." These stray [tumor cells](#), therefore, may indicate something about inflammatory breast cancer, he reasons, perhaps serving as an early sign that it has already spread. Indeed, only approximately one-third of women with

inflammatory breast cancer have detectable metastases at diagnosis, but 60% will eventually develop them.

Currently, says Cristofanilli, doctors primarily measure CTCs in women with metastatic disease, since a decrease in CTCs can signal that treatment is working. But given that most women with inflammatory breast cancer are likely metastatic at the time of diagnosis, this test could serve another purpose – to guide doctors towards more aggressive and prolonged forms of treatment, says Cristofanilli. "If women with [inflammatory breast cancer](#) have CTCs, perhaps we should continue to treat them as if they have already established metastatic breast cancer, even if imaging does not show metastases."

Provided by Fox Chase Cancer Center

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