

Cancer Advances: Reducing the Time Between Doses of Chemotherapy Reduces the Risk of Breast Cancer

February 13, 2003 [Read the Study](#) [1] Cancer doctors have suggested for several years that it might be possible to improve the effectiveness of chemotherapy drugs by reducing the amount of time between doses. However, when chemotherapy is given frequently, patients can suffer from serious side effects such as neutropenia, a drop in the number of white blood cells. These side effects have limited the ability of researchers to determine whether more frequent dosing - also called "dose dense" therapy - can actually benefit patients. For the past several years, however, doctors have been able to prescribe a drug called filgrastim that helps prevent neutropenia. The availability of filgrastim recently allowed scientists to conduct a large clinical trial of dose dense chemotherapy among early stage breast cancer patients whose cancer had spread to the lymph nodes, without the risk of neutropenia. The trial was conducted at sites around the country, and was coordinated by the National Cancer Institute's Cancer and Leukemia Group B. The study compared dose dense and standard chemotherapy consisting of the commonly used drugs doxorubicin, paclitaxel, and cyclophosphamide. After having their tumors surgically removed, one group of patients received chemotherapy every three weeks - the standard regimen. The other group received chemotherapy every two weeks - the dose dense regimen. Those who received the dose dense chemotherapy regimen also received filgrastim to prevent neutropenia. The researchers found that the women who received dose dense chemotherapy were less likely to have their cancer return than those who received standard chemotherapy. Women on the dose dense regimen also experienced fewer cases of neutropenia. Additionally, the researchers found preliminary signs that the dose dense chemotherapy might help patients live longer. The study also examined whether patients who received the three drugs one after the other fared any differently than those who received the drugs at the same time. For both dose dense and standard chemotherapy, the researchers found that patients who received the drugs one after the other experienced the same benefits and fewer side effects than those who received the drugs at the same time. **What Does This Mean For Patients?** According to lead author Dr. Marc Citron, of the Albert Einstein College of Medicine, many women with early stage breast cancer may benefit from chemotherapy that is given at shorter intervals. However, he and the other researchers pointed out that more research needs to be done before it is clear whether dose dense chemotherapy should be the standard treatment. Women with breast cancer should discuss all the available treatment options with their physicians.

Links:

[1] <http://www.jco.org/cgi/content/abstract/JCO.2003.09.081v1>