

Accelerated chemotherapy given before surgery benefits patients with muscle-invasive bladder cancer

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For some patients with muscle-invasive bladder cancer, treatment may begin before they undergo cystectomy, or surgical removal of the bladder. They may be advised by oncologists to receive chemotherapy before surgery. A large randomized clinical trial published in 2003 demonstrated a survival benefit for neoadjuvant, or pre-surgical, MVAC (methotrexate, vinblastine, doxorubicin and cisplatin) using a standard dose and schedule. However, in an effort to improve toxicity, standard MVAC has been essentially abandoned in favor of other regimens. All current standard neoadjuvant regimens require 12 weeks of chemotherapy.

Now, final results from a phase II clinical trial at Fox Chase Cancer Center-to be presented at the 2012 American Society of Clinical Oncology Annual Meeting on Saturday, June 2-point to a treatment regimen that delivers benefits comparable to those of standard MVAC but without the same time requirement. Preliminary findings from the trial show that when MVAC is administered on an accelerated schedule (six weeks instead of 12), accelerated MVAC (AMVAC) patients experienced similar response rates and lower [toxicity](#).

"Accelerated MVAC is an excellent option in terms of efficiency, quick time to surgery, tolerability, and complete response rate," says Elizabeth Plimack, M.D., a medical oncologist at Fox Chase. "It means less time off work for the patient, and less time elapses between their diagnosis

and surgery. We hope that this regimen, which is well tolerated and can be given efficiently and quickly without sacrificing effectiveness, will help improve acceptance of neoadjuvant chemotherapy in the medical oncology and urology community."

Plimack and her colleagues recruited patients with muscle-invasive bladder cancer from Fox Chase and the Kimmel Cancer Center at Thomas Jefferson University in Philadelphia. Patients underwent AMVAC every two weeks for six weeks and had a radical cystectomy within 8 weeks of the last chemotherapy.

Of the 33 patients who underwent all three rounds of AMVAC, for whom final data is available, 13 (39.1 percent) had a pathologic complete response at the time of surgery. Pathologic complete response, a common prognostic indicator for bladder cancer, indicates that the pathology evaluation of the resected bladder revealed no cancerous cells. The tumors of an additional three patients (9.1 percent) were downstaged during the pathology evaluation, suggesting that AMVAC had some effect in those patients as well. Final data will be presented at the meeting.

The AMVAC data suggest an accelerated course of chemotherapy before surgery confers comparable benefit as standard, 12-week MVAC- but without the high toxicity associated with standard treatment.

The National Cancer Institute estimates that nearly 75,000 people will be diagnosed with bladder cancer in 2012, and nearly 15,000 will die from the disease. Patients who are diagnosed with bladder cancer that has spread into the muscle layer of the bladder wall have significantly lower survival rates than those patients whose tumors are confined to the inside lining of the organ. Existing treatment for [invasive bladder cancer](#) is unlikely to cure the disease, though it may prolong the time before the disease progresses or symptoms reappear.

"As medical [oncologists](#), we are able to offer cancer-specific therapy to many of our bladder cancer patients, but unfortunately at this time there are few situations where chemotherapy helps achieve cure," says Plimack. "Neoadjuvant [chemotherapy](#) has been shown to provide incremental benefit in what I think is the most important endpoint, which is bladder cancer specific survival at five years. Most patients who are cancer free at five years do not experience a recurrence of their cancer. Our goal is to improve the chance of cure for patients going to cystectomy."

At Fox Chase, Plimack specializes in researching and treating patients with kidney, bladder, prostate and testicular cancers. She often recommends AMVAC to her own patients, and points out that the regimen is the preferred neoadjuvant, or pre-surgery, treatment at many academic centers in the United States and abroad.

Provided by Fox Chase Cancer Center

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