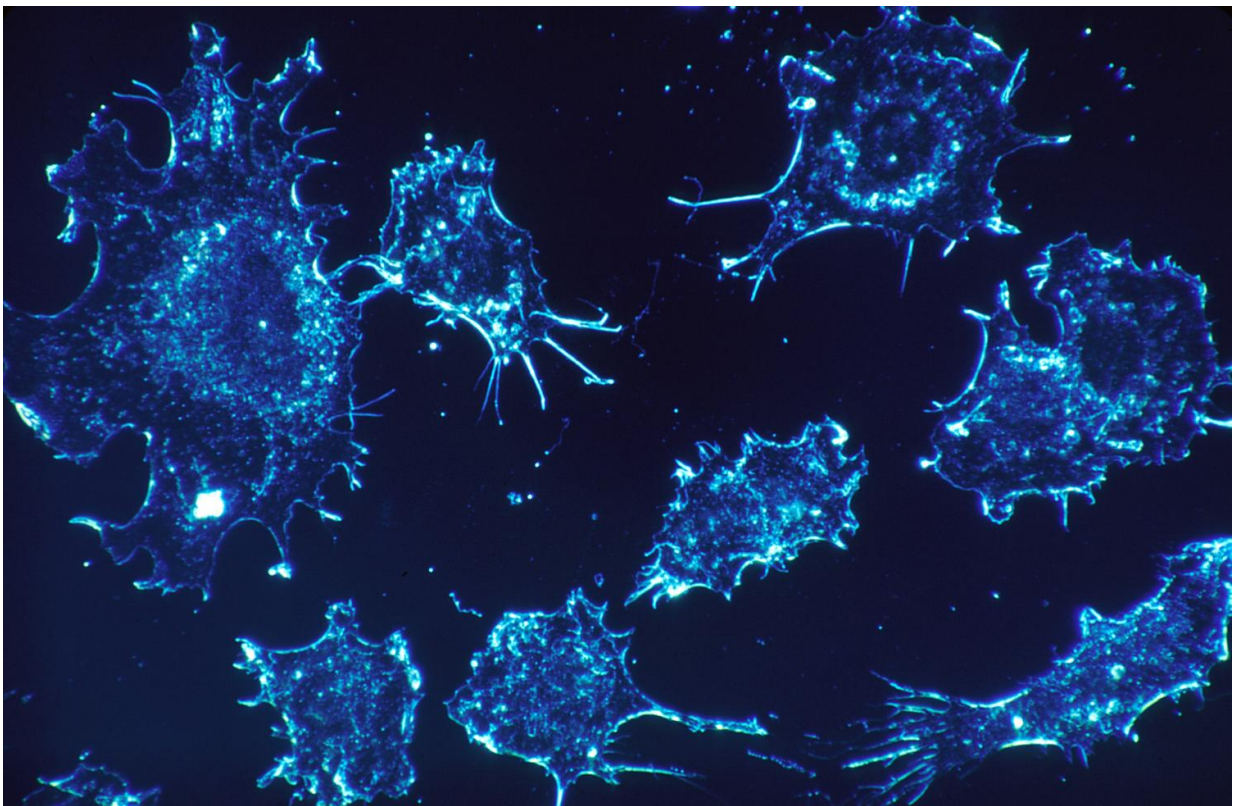


# Researchers compare chemotherapy regimens for best outcomes in invasive bladder cancer

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Patients with muscle-invasive bladder cancer have been shown to benefit from chemotherapy prior to surgical removal of the bladder. But which

type of chemotherapy leads to the best outcomes in terms of complete response rates or cancer control? Moffitt Cancer Center researchers examined data from more than 800 surgical patients with advanced bladder cancer. The results, published online by *JAMA Oncology*, show higher likelihoods of complete response or down-staging associated with a chemotherapeutic combination called ddMVAC.

Bladder [cancer](#) is the sixth most common cancer in the United States, with an estimated 81,000 people diagnosed annually. One in four of these patients will be diagnosed with cancer that has invaded the muscle wall of the bladder (MIBC), which carries a high risk of spread and an immediate threat to life.

Treatment guidelines from a number of organizations including the American Urological Association recommend neoadjuvant chemotherapy (NAC) as standard treatment for MIBC. Yet the adoption of these guidelines in practice has been modest. Clinicians may choose among several [chemotherapy regimens](#) with varying associated toxicities. However to date, few studies exist comparing [cancer control](#) and survival outcomes for these NAC regimens.

A team of Moffitt researchers led by Scott Gilbert, M.D., M.S., associate member of both the Genitourinary Oncology and Health Outcomes & Behavior Programs, analyzed records of 1,113 Moffitt patients who underwent cystectomies for bladder cancer from 2007 to 2017. A cohort of 824 patients had been diagnosed with invasive or advanced cancers, of whom 332 received chemotherapy prior to surgery. Most (204) received combined gemcitabine and cisplatin (GC), the standard NAC for [bladder cancer](#). A total of 46 patients received methotrexate, vinblastine, doxorubicin and cisplatin delivered on a dose-dense accelerated schedule (ddMVAC). The remainder received other agents and/or combinations.

"We observed a complete response rate of 41 percent for patients who received just over 3 cycles of ddMVAC on average," said Gilbert. "This was significantly higher than the rate of 25 percent for those who received the standard GC therapy. Patients treated with ddMVAC also had higher survival rates than those treated with other regimens, although those findings did not reach statistical significance. Larger comparative studies are needed to definitively answer questions regarding survival."

The team's analysis also indicated that another common NAC regimen, gemcitabine and carboplatin, appears essentially ineffective, with predictors of complete pathological response no different than those achieved with surgical [bladder](#) removal alone.

**More information:** *JAMA Oncology* (2018). [DOI: 10.1001/jamaoncol.2018.3542](#)

Provided by H. Lee Moffitt Cancer Center & Research Institute

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