

2023 Chemotherapy Shortage Did Not Cause More Cancer Deaths

Shortages led to a 2.7% decrease in use of two common platinum-based chemotherapies: cisplatin and carboplatin.

January 8, 2025 By Laura Schmidt

A nationwide shortage of [chemotherapy drugs](#) announced by the Food and Drug Administration (FDA) in 2023 caused thousands to experience [delays in treatment](#). Thankfully, the shortage did not lead to more cancer deaths, a study [published in the Journal of the National Cancer Institute](#) found.

In 2023, [chemotherapy](#) medications were among the top five drugs affected by a drug shortage, notably cisplatin and carboplatin, two generic platinum-based therapies widely used to treat lung, bladder, ovarian, uterine, testicular and head and neck cancers.

“At the time, [national surveys showed that most cancer centers](#) in the U.S. were reporting shortages of these platinum chemotherapies, but it wasn’t clear how the shortages were actually affecting patients,” said lead author Jacob Reibel, MD, a third-year fellow in hematology-oncology at Penn Medicine, in [a university news release](#).

Researchers tracked data on nearly 12,000 individuals with cancer who were treated throughout the United States in 2023. All had advanced cancers for which platinum chemotherapy is typically recommended.

Researchers hypothesized that people with advanced cancers would be most affected by the drug shortage because at the time those with curable cancers were being prioritized for platinum chemotherapies.

“When we looked at the data on prescribing practices over the shortage period, compared to the previous year, we found that although reporting of the shortages was widespread, it didn’t affect as many patients as we had feared,” Reibel said.

During the peak shortage, prescriptions for the meds dropped 15%. But overall from February 2023 to January 2024, platinum chemotherapy use decreased by only 2.7% compared with the previous year, translating to 137 fewer patients with advanced cancer receiving this type of treatment. Overall, researchers estimate that about 1,000 patients in the United States were affected during this period.

Researchers credit the use of [effective alternative medications](#) recommended by medical experts, such as immune checkpoint inhibitors, targeted therapy or other forms of chemotherapy, for the limited impact on mortality.

“We always want to prioritize the best treatments that we have for patients, and platinum chemotherapies just happen to also be very cost-effective because they’re generic and have been around for decades,” senior author Ronac Mamtani, MD, told Penn Medicine. “While the alternative options may be effective, we want to be able to provide the ‘standard-of-care’ medications to any patient in need. Even 100 patients who can’t get the preferred chemotherapy for their cancer type due to supply chain issues is far too many.”

Shortages for cisplatin [ended by June of 2024](#), but carboplatin remains in short supply. Despite this, researchers found that prescribing levels for carboplatin have returned to normal.

In related news, in October 2024, President Joe Biden’s [Cancer Moonshot initiative announced a new private sector pilot program](#) to maintain uninterrupted access to seven critical pediatric cancer medications during the drug shortage, since [children with cancer](#) often have fewer treatment options than adults.

For more, click [#Chemotherapy](#) or read Cancer Health’s [Basics on Chemotherapy](#). It reads in part:

Chemotherapy literally means using chemicals to treat disease, but it usually refers to medications that fight cancer. Cytotoxic (also known as antineoplastic) chemotherapy halts cell division and kills rapidly growing cells. Unfortunately, it affects not only cancer cells but also fast-growing healthy cells, which can lead to side effects, such as nausea, hair loss and susceptibility to infections.

In contrast to traditional chemotherapy, which has been used since the 1940s, a newer type of treatment known as [targeted therapy](#) works more specifically against cancer cells with certain gene mutations or other characteristics, while [immunotherapy](#) helps the immune system fight

cancer. Chemotherapy is often tried first before targeted therapy or immunotherapy, but these types of treatment may also be used together.

How does chemotherapy work?

Chemotherapy works by interfering with cancer cell multiplication. Normal cells undergo a regular cycle of growth, division and resting phases, but cancer cells grow out of control. Some chemotherapy drugs only affect actively dividing cells, while others are most effective during the resting phase.

Many chemotherapy drugs interfere with DNA, the cell's genetic blueprint. Medications known as alkylating agents cause cross-links in DNA strands that prevent copying and repair of genetic material. These include drugs derived from mustard gas (for example, cyclophosphamide and mechlorethamine) and platinum (for example, cisplatin and carboplatin).