A new look at cancer treatments during pregnancy

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For an OB-GYN, one of the worst-case scenarios runs like this: A woman comes in, overjoyed that she is finally pregnant after years of fertility treatments. Then a month later, she finds out she has

cancer—news that is devastating for the patient and difficult for the doctor because options, both practically and politically, can be limited.

It's this scenario that starts the commentary penned by UW Medicine OB-GYNs Drs. Alisa Kachikis and Linda Eckert in support of research published April 17 in *JAMA Network Open*.

Researchers from the University of Paris and Sorbonne University analyzed pregnancy and neonatal outcomes of 3,558 patients who received chemotherapy during pregnancy, including 91 who were treated with drugs called immune checkpoint inhibitors.

Immune checkpoint inhibitors block proteins from binding with their partner proteins in the body. In the treatment of cancer, the inhibitors allow T cells from the immune system to find and destroy cancer cells, according to the National Cancer Institute.

In the 91 cases that received immune checkpoint inhibitors, almost 60% did not report an adverse outcome for the mother or the fetus.

The data analysis study was not an endorsement for using cancer therapeutics on pregnant patients, authors of the commentary said. In fact, the authors warn against using the drugs, if possible, during pregnancy, while acknowledging that immune checkpoint inhibitors were better tolerated than first thought.

"I think this study isn't designed to give a simple answer," said Eckert. "It's designed to say that, if the use of immune checkpoint inhibitors for cancer treatment is one of the options, at least there is a little bit of data now available."

The researchers were particularly interested in the safety of immune checkpoint inhibitors because they have been shown to be effective

against a number of cancers, and their use in treating pregnant patients is expected to rise.

In their accompanying commentary, the authors noted that the fact that the study was conducted and published is a step in the right direction.

The lack of "data on the use of critically important therapeutic agents in pregnant individuals is not new," they wrote. "Partially a result of the devastating legacy of thalidomide use in pregnancy, decisions to limit medication exposures of pregnant individuals and to exclude them from clinical trials as vulnerable population has contributed to the dearth of data on use of many medications in pregnancy."

Kachikis and Eckert stressed that more research and funding are needed, specifically in treatments that might help women remain pregnant while fighting cancers and other diseases.

This policy came to the forefront when the COVID-19 pandemic hit in 2020. When the vaccine arrived for the general population in 2021, pregnant individuals had not yet been included in clinical trials to establish the vaccines' safety. Many pregnant individuals received the COVID-19 vaccines with almost no information about their safety. Many pregnant women refused the shots. Later, research determined the vaccines were safe.

The French researchers gleaned the information in their report by reviewing 3,500 patient cases for 45 distinct adverse pregnancy, fetal and neonatal outcomes. They scrutinized the outcomes after immune checkpoint inhibitors and other cancer-fighting drugs were taken. The data came from the World Health Organization's international database.

"Reproductive health research has historically been underfunded," Kachikis said. "And yet we still have to discuss treatment options with

our patients, with or without this data."

For clinicians in states that ban abortions, even discussion of the impact of cancer treatment on the fetus may be illegal.

"What is a pregnant person with cancer to do if she needs information and her obstetrician cannot have a discussion about the impact of the cancer treatment on the pregnancy, because it might suggest the need to terminate a pregnancy?" Eckert asked.

"In some states, we can't even discuss these options," Kachikis added.

The study's limitations include not also investigating long-term outcomes after birth. However, Eckert said, "the data, though limited, is reassuring. And information does offer a little bit of hope."

More information: Alisa Kachikis et al, Pregnancy and Cancer—Navigating Impossible Decisions, *JAMA Network Open* (2024). DOI: 10.1001/jamanetworkopen.2024.6486

Paul Gougis et al, Immune Checkpoint Inhibitor Use During Pregnancy and Outcomes in Pregnant Individuals and Newborns, *JAMA Network Open* (2024). DOI: 10.1001/jamanetworkopen.2024.5625

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