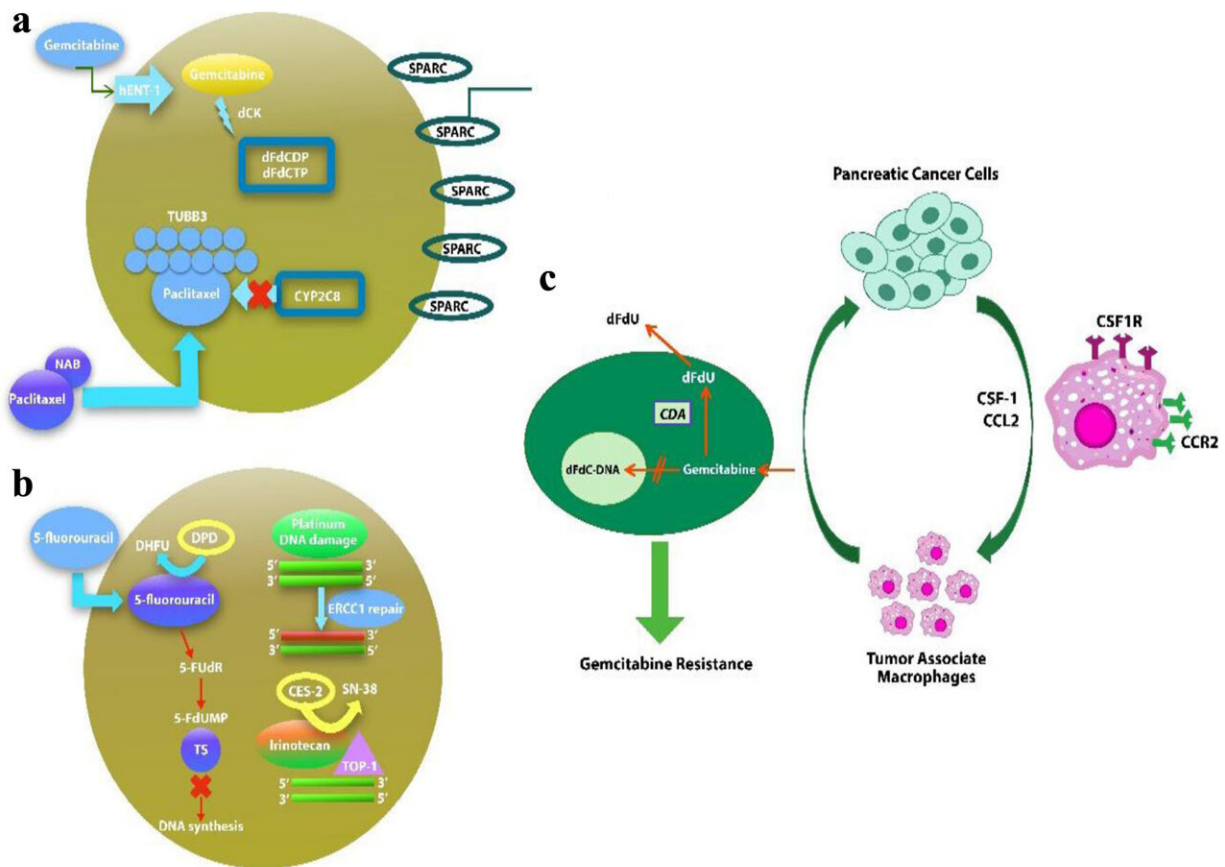


Review paper compares two leading pancreatic cancer drugs

February 8 2024, by Tyrel Linkhorn



Potential biomarkers in nab-paclitaxel/gemcitabine (a), Folfirinox (b) regimens of drug metabolism and mechanism of action. (c) Macrophages induce gemcitabine resistance by up-regulation of CDA. Credit: *World Journal of Oncology* (2023). DOI: 10.14740/wjon1604

An in-depth analysis of two common treatments for advanced pancreatic cancer from The University of Toledo has found the combination chemotherapy drug Folfirinox is more likely to promote progression-free survival—a notable benchmark given the speed with which pancreatic cancer can kill.

Pancreatic cancer is the 10th most common cancer in the United States but the third most deadly, claiming more than 50,000 lives annually.

"Unfortunately, it's one of the most stubborn and most difficult-to-treat cancers," said Dr. Nooraldin Merza, an assistant professor in the UToledo College of Medicine and Life Sciences and board-certified internal medicine specialist. "There are a lot of new medications coming to the field day after day, but we still have lengthy miles to go. In the meantime, it's important we're doing everything we can to ensure we're using the medications we do have to the best of our ability."

For the last decade, Folfirinox has been one of two primary first-line treatments for metastatic [pancreatic cancer](#). The other is a separate combination chemotherapy regimen of gemcitabine paired with nab-paclitaxel

Merza recently led a [systematic review](#) and meta-analysis of 21 studies containing data from more than 7,000 patients taking one of those two therapies, looking at the likelihood their tumors would respond to [treatment](#), how long patients survived after treatment was implemented and each therapy's ability to promote progression-free survival.

While the analysis found there was no significant difference in response rate or overall survival, Folfirinox showed a significant benefit in [progression-free survival](#).

[The study](#) was published in the *World Journal of Oncology*.

"Progression-free survival is essentially a measure of how long the cancer is held in check. The disease is still there, but it's not advancing," Merza said. "The ultimate goal of cancer treatment is putting the disease in remission but for aggressive, hard-to-treat cancers like pancreatic cancer that's not often possible. Being able to keep the tumor at bay for a longer period of time has value for many patients."

The review also looked at adverse effects from treatment, finding Folfirinox was more likely to cause hematological problems like anemia while gemcitabine and nab-paclitaxel was more associated with gastrointestinal issues like diarrhea.

"Both of these therapies are widely used in patients with pancreatic cancer but there is a lack of data directly comparing the two. We wanted to fill some of that gap in the literature and hopefully provide data that physicians can use to better treat each individual patient," Merza said. "With time and with more research put toward this subject, we will advance more toward having some better outcomes."

More information: Nooraldin Merza et al, Folfirinox vs. Gemcitabine + Nab-Paclitaxel as the First-Line Treatment for Pancreatic Cancer: A Systematic Review and Meta-Analysis, *World Journal of Oncology* (2023). [DOI: 10.14740/wjon1604](https://doi.org/10.14740/wjon1604)

Provided by University of Toledo

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