# FDA Approves First Electrical Therapy for Pancreatic Cancer

Tumor-treating fields therapy uses electricity generated by a wearable device to disrupt cancer cell division.

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The Food and Drug Administration this month approved Optune Pax, from Novocure—a wearable tumor-treating fields (TTFields) device that uses electric fields to kill cancer cells—for the treatment of pancreatic cancer, in combination with chemotherapy. As the first new approved therapy for locally advanced pancreatic cancer in nearly three decades, Optune Pax "has the potential to be practice changing," according to clinical trial investigator.

Pancreatic cancer is often detected late, when it is difficult to treat, and it has one of the lowest survival rates of all cancer types. Standard treatment may include surgery, radiation, chemotherapy, targeted medications and immunotherapy, but relapse and metastasis are common, and more options are needed.

"The approval of Optune Pax is an important milestone for the pancreatic cancer community," PanCAN chief scientific and medical officer Anna Berkenblit, MD, said in a Novocure news release. "Survival rates for pancreatic cancer have seen only modest improvements over time and treatment advances have remained limited, underscoring how challenging this disease is to treat."

TTFields therapy takes advantage of cancer cells' unique electrical properties and rapid growth to interfere with processes critical for their survival while sparing healthy cells. The portable Optune Pax device delivers alternating low-intensity electric fields via an array of wearable electrodes on the abdomen to disrupt cancer cell replication. TTFields therapy was previously approved for glioblastoma brain cancer, non-small-cell lung cancer and pleural mesothelioma. Brain cancer patient Adam Hayden, a Cancer Health blogger before his death late last year, wrote about his experience using an Optune device.

"Pancreatic cancer is one of the most challenging cancers to treat, and patients have long needed new therapeutic options," said Michelle Tarver, MD, PhD, director of the FDA's Center for Devices and Radiological Health. "This approval provides a novel, non-invasive approach that can be integrated into patients' daily lives, expanding access to cancer care beyond traditional clinical settings."

The new pancreatic cancer approval is supported by results from the Phase III PANOVA-3 trial, which showed patients with inoperable locally advanced pancreatic cancer who used Optune Pax in combination with gemcitabine and nab-paclitaxel (Abraxane) chemotherapy had delayed pain progression (from 9.1 months to 15.2 months) and improved overall survival (from 60% to 68% at one year). Study results were presented at the 2025 ASCO annual meeting and published in the Journal of Clinical Oncology.

“[T]reatment with Optune Pax resulted in a statistically significant improvement in overall survival without adding to the systemic side effects commonly associated with existing therapies,” PANOVA-3 investigator Vincent Picozzi, MD, of Virginia Mason Medical Center, said in the Novocure news release. “It also significantly extended time to pain progression, helping to preserve overall quality of life, which is a priority when I am treating patients living with pancreatic cancer.”

TTFields therapy is generally safe and well tolerated. The most common side effect in people using the Optune device is mild to moderate skin irritation, though the accompanying chemotherapy can come with other adverse effects.

“This approval for locally advanced disease highlights the importance of continued innovation and investment in new approaches for difficult-to-treat cancers and represents meaningful progress for patients who urgently need more options,” Berkenblit said.

Click here for more news about pancreatic cancer.

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