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Pioneering Non-Invasive Treatments: NeOnc's Breakthrough in Brain Cancer Care

By [Spencer Hulse](#)



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Brain cancer is always a devastating diagnosis. And despite decades of research into [cancer treatment](#), patients with some types of brain tumors only have months to live. Now, thanks to a new development by biotech company [NeOnc](#), there may be hope for previously hopeless cases.

NeOnc's founder and CEO, [Dr. Thomas Chen](#), has dedicated his life to achieving better outcomes for people diagnosed with brain cancer. He is the University of Southern California's director of surgical neuro-oncology, and he's also a professor of neurosurgery and pathology.

Dr. Chen's breakthrough brain cancer treatment — an intranasal medication delivery system — might seem like the result of a lightbulb moment. But for him, it's a culmination of his life's work.

Though Dr. Chen isn't the only surgeon trying to improve the way we treat brain cancer, with brain cancer research seemingly stagnating, he realized that if he wanted to come up with a solution, he needed to look at the situation entirely differently. That change in perspective proved to be pivotal.

"A lot of companies are developing new drugs and new treatments for brain cancer," he says. "But the main question is, 'How do we get that drug to the target?'"

To understand why that question is so difficult to answer, you need to understand a bit about the blood-brain barrier. "The blood-brain barrier is something that we all have," says Dr. Chen. "It's something that's used to keep various pathogens that may have entered our circulation away from our brain."

Protecting the brain from foreign particles in the bloodstream is usually a good thing — unless those foreign particles are life-saving cancer drugs and the cancer you're trying to treat is in the brain.

Thus far, many biotech companies have chosen to work on treatments (either oral or injected) that have an easier time crossing that barrier. NeOnc has gone a different route altogether.

"What we're trying to do is something that nobody else is doing for brain cancer," Dr. Chen says. "We're bypassing the blood-brain barrier and not by an oral or intravenous route. We're doing what we call nasal brain delivery. That means you're inhaling the compound, and you're letting your cranial nerves deliver the drug to the brain."

This is the same way your sense of smell works, but instead of scent molecules traveling to your brain, it's aerosolized particles of cancer-fighting drugs.

Currently, the nasal delivery system is in phase II FDA trials, where Dr. Chen is seeing promising results. "The results look very, very good so far," he says. "We are prolonging lives; we have had a couple of patients whose tumors went away on the scan. We're still following these patients."

It's easy to be skeptical of that kind of success. As a lifelong physician, surgeon, and [medical researcher](#), Dr. Chen understands that skepticism completely — but he's staying the course.

"It's a game-changing process," he says. "And you know, sometimes, when things are very game-changing, people are just scratching their heads because it's hard to believe."

Tags

[biotech](#), [brain cancer](#), [NeOnc](#)



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Spencer Hulse is the Editorial Director for Grit Daily Group. He works alongside members of the platform's Leadership Network and covers numerous segments of the news.



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