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Healing at Home: How NeOnc's Innovative Treatment Brings Brain Cancer Care to Patients' Doorsteps

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(PHOTO: DR. CHEN)



Brain cancer treatment has remained static for years because of the difficulty of getting drugs past the blood-brain barrier. That could be about to change thanks to [NeOnc's](#) innovative non-invasive nasal brain delivery system for brain cancer drugs.

Dr. Thomas Chen, a renowned neurosurgeon and professor at the University of Southern California, has spent his life working with patients with brain cancer. He's seen them grow frustrated with the lack of treatment options and the continued need for invasive procedures.

"One of my jobs at USC, besides operating and treating patients, is to develop new technologies that may enable new treatments for these patients," says Dr. Chen. The most significant problem with getting the right drugs to target brain cancers is the [blood-brain barrier](#).

"The blood brain barrier is used to keep unwanted compounds that may have entered our circulation away from the brain, but in the case of brain cancer, the disease is in the brain."

Other scientists have tried to deal with this conundrum by modifying the drugs they create to better permeate the blood-brain barrier, but Dr. Chen and his team at NeOnc chose another path: bypass it completely.

And they're not doing so by going the oral or intravenous route, either, but by a completely new method involving nasal-brain delivery systems. With this method, the patient inhales the compound and allows their cranial nerves to do the work.

The new system relies on the olfactory nerve, which governs the sense of smell. The nerve delivers the compound to the brain itself, allowing it to reach its target.

Not only does this treatment allow for the fast and non-invasive evasion of the blood-brain barrier, but it also makes it possible for patients to receive treatment at home. As Dr. Chen describes it, "It's kind of like a nebulizer treatment, where you sit for about 20 minutes four times a day, inhaling."

This could potentially revolutionize brain cancer treatment, letting patients remain at home instead of having to enter costly and stressful inpatient programs. It's not just the [NeOnc](#) team excited about this new delivery system — the California Treasury recently granted them the Drug Delivery Technology of the Year award.

It all comes down to clinical trials, however. The new treatment utilizes the company's lead drug NEO100 which has already been through Phase I trials, in which 12 patients participated. Because there were no toxicity issues, it was given the green light to progress to Phase IIa, which is currently enrolling patients with malignant gliomas (Grade III, IV with IDH1/2 mutations).

Before receiving FDA approval, the non-invasive brain cancer drug delivery system could require a Phase IIb with up to 60 patients. Because it's earned a fast-track designation, the prospect of getting it out to patients shortly isn't unreasonable. It's already extended the lives of several patients past the six month mark.

"Hope is so important in patients who are getting treated," says [Dr. Chen](#). "If they're optimistic, if they have hope, they tend to do better." Judging from the results this delivery system and our drug NEO100 is already achieving, hope is just one of the many benefits it offers.

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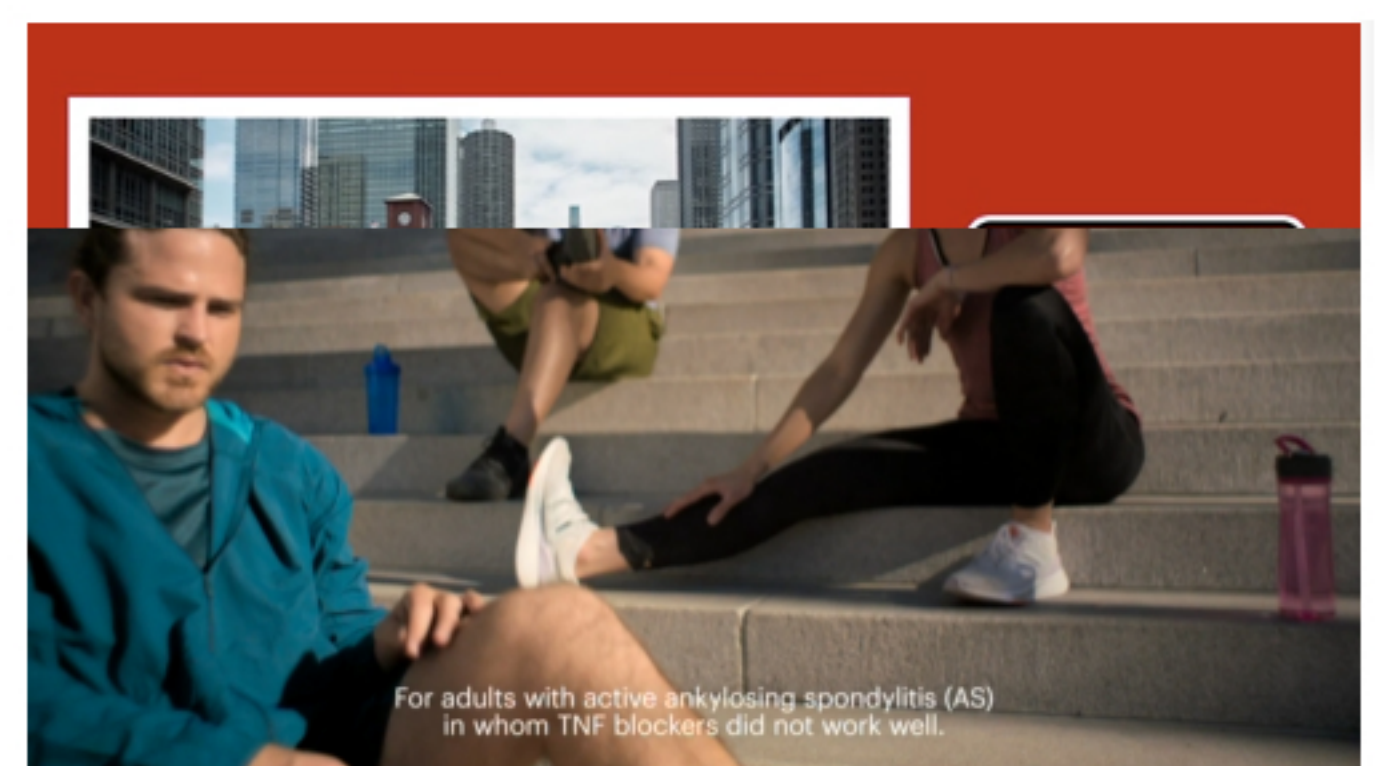
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