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Novocure aims to plough a new field

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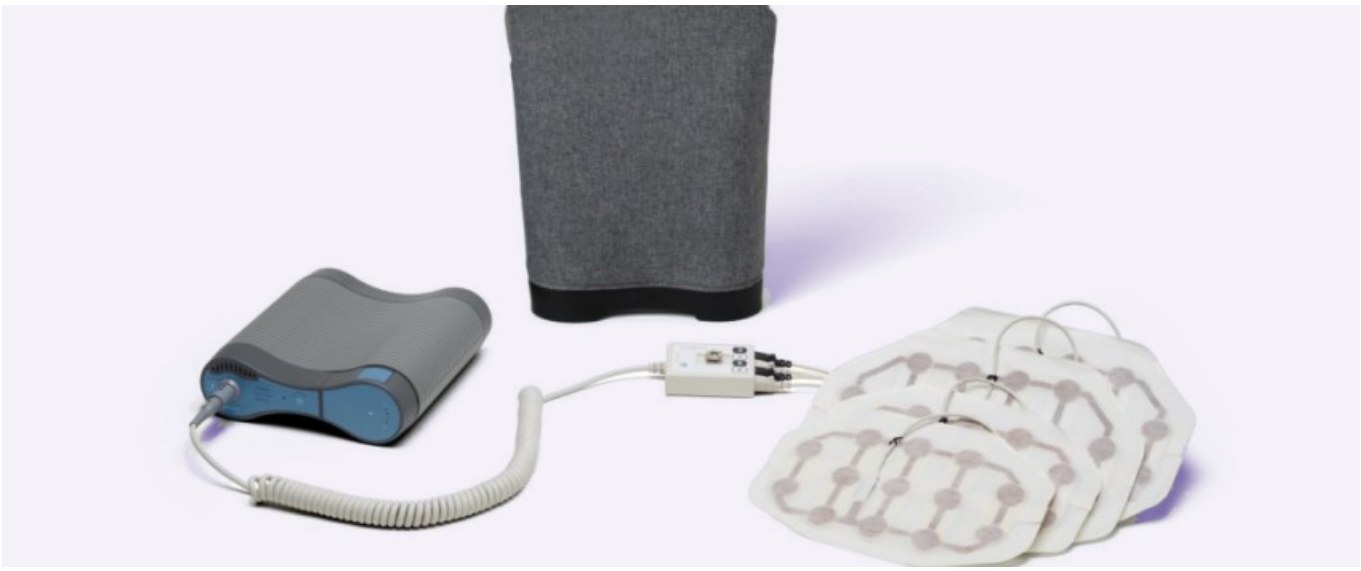

Lung cancer approval for the group’s electric fields-based therapy could come this year, but Novocure has broader solid tumour ambitions.

As the year began Novocure disclosed that the pivotal trial of its technology had succeeded in non-small cell lung cancer. With only the topline hit to go on, however, it has been hard to fathom exactly where the technology might fit in the treatment sequence – more specifically, whether it will be given along with, or after, checkpoint inhibitors.

Bill Doyle, Novocure’s executive chairman, is confident of NovoTTF-200T’s approval in NSCLC this year, probably in the post-PD-(L)1 setting, he tells *Evaluate Vantage*. But the product’s uptake will also depend on patients going for a machine that has to be worn as a backpack or shoulder bag, with large electrodes taped to the chest – a big ask when immunotherapy already works pretty well.

The phase 3 Lunar NSCLC trial evaluated NovoTTF-200T, one of several slightly different machines that emits the electrical energy the company calls tumour treating fields, intended to disrupt cancer cell division. The device was administered on top of doctors’ choice of either docetaxel or checkpoint inhibitors in an advanced patient group who had failed platinum chemotherapy, and produced a “statistically significant and clinically meaningful” improvement in overall survival versus those drugs alone.

Separate analysis of the different pharmacology approaches throws up an interesting finding: addition of the TTF device to anti-PD-(L)1s produced a significant survival benefit versus the drugs alone, whereas its addition to docetaxel only produced a “positive trend” on survival versus the chemo by itself.

A look at the numbers behind the top line will be required to explain that finding, while the extent of TTF's benefit is also important to know. It might be that efficacy is driven by baseline imbalances or an effect in checkpoint-naive patients, and of course chemo alone is no longer a first-line NSCLC standard.

A big deal

The full dataset is due for presentation at a conference mid-year – the company is presumably gunning for Asco – and Mr Doyle is upbeat: “I can’t wait for June,” he says.

Approval in NSCLC would be a big deal. Glioblastoma and mesothelioma, the two cancers for which TTF is already approved, are relatively small uses, though still generated revenues over $500m last year, with 3,430 active patients on therapy. Around 250,000 patients are diagnosed with NSCLC each year in the US. The question is how many of these will opt to strap a TTF device to themselves for months or years.

“Every patient has to make their own decision – some lung cancer patients choose not to receive any therapy,” Mr Doyle says. “I don’t think it’d be 100% of the patients, but those who are interested in making it to next Christmas, making it to their kids’ weddings, making it to that hike in Scotland that they’ve always wanted to take, those are the patients who will seek this therapy.”

Novocure's shares surged 69% when Lunar was toplined in January, so it seems the full data are expected to be a slam-dunk, leading to rapid approval. Investors had a wobble a couple of weeks ago when the group’s chief medical officer departed, a reaction Mr Doyle dismisses as “a complete knee-jerk”.

Should the second-line nod come, Novocure will try to shift TTF to first line, on top of checkpoint inhibitors. The company is working with Merck & Co on a phase 2 single-arm trial called Keynote-B36, testing the device co-administered with Keytruda in untreated NSCLC. Data could come next year.

Catalysts

After that, the clinical events come thick and fast. The group should get topline pivotal results from trials in ovarian cancer, brain metastases from NSCLC and first-line pancreatic cancer all in the next 18 months.

Novocure's products and pipeline	
Device	**Status**
Optune (NovoTTF-200A)	Approved in the US for 2L glioblastoma Apr 2011, and 1L Oct 2015
Optune Lua (NovoTTF-100L)	Approved in the US via HDE for 1L mesothelioma May 2019
NovoTTF-200T	Pivotal Lunar trial in advanced NSCLC hit Jan 2023; full data due mid-2023 Pivotal Panova-3 trial in locally advanced pancreatic cancer to report mid-2024 Pilot Keynote-B36 trial + Keytruda in 1L NSCLC to report 2024
NovoTTF-200O	Pivotal Engot-ov50/Innovate-3 trial in recurrent ovarian cancer; topline data due mid-2023
NovoTTF-200M	Pivotal Metis trial in newly diagnosed brain metastases from NSCLC to report late 2023/early 2024
HDE=humanitarian device exemption. Source: Evaluate Medtech & company website.	

On top of this Novocure intends to start another study with Merck, looking at a Keytruda combo in first-line glioblastoma. A liver cancer study is also in the works. The company already has a trial collaboration with Roche covering a Tecentriq combination in pancreatic cancer, and another with Bristol Myers Squibb and Johnson & Johnson examining an Opdivo combo in the same indication.

“There’s no reason this physically shouldn’t work,” says Mr Doyle. “If it works in GBM, and it works in NSCLC, there’s no reason to presuppose it won’t work in all of the difficult-to-treat solid tumours.” Whether that is true ought to become clear over the next couple of years.