

Data from late-stage cancer vaccine pipeline on distant horizon



[Evaluate Vantage](#)

Although real progress has been made in the last few years with cancer vaccines, the development history still contains more setbacks than successes. The approval of Dendreon's Provenge has no doubt lifted hopes, but considering the lack of late-stage data on the horizon, it seems unlikely that the product will be joined by anything similar soon.

The analysis below, of selected late-stage cancer vaccines, reveals that it will be a couple of years before many of the most promising projects report data. The next up could be a product from Menarini, which has been conducting a nine year trial with its ovarian cancer candidate, abagovomab.

Abagovomab is an anti-idiotypic antibody so not strictly a cancer vaccine, although it is trying to do the same thing: mimicking a tumour antigen highly expressed by ovarian cancer cells and triggering an immune response. The vaccine is designed to prevent recurrences of the disease in patients who responded to first line chemotherapy.

The trial, called Mimosa, started in December 2006 and was fully recruited two years later, and first results are due at the end of 2010, the private Italian company says on its website.

Bigger players

Amongst the other larger players with late-stage candidates, an update from Merck KGaA is still awaited on the clinical hold on Stimuvax. Before the study was suspended the product was looking promising, although results were not due for several years ([Merck halt cancer vaccine trials in another knock for sentiment, March 23, 2010](#)).

Glaxo appears to be making progress with its candidate, MAGE-A3, which is now being studied in two indications although again results are not due for a number of years; 2013 for melanoma and 2015 for lung cancer.

Smaller players

Lucanix, being developed by NovaRx, might also yield results late next year, according to [clinicaltrials.gov](#), although this looks ambitious considering the study is still open for recruitment.

The product consists of four non-small cell lung cancer cell lines that have been gene-modified to block a molecule called transforming growth factor-beta (TGF-beta), which is commonly produced by cancer cells. The molecule allows cancer to hide from the body's natural immune system. When TGF-beta is blocked, the immune system can see, find, and destroy the cancer naturally.

Started in mid-2008, the phase III study is seeking 700 patients with advanced lung cancer and is still recruiting.

Little information is available on The Vaccine Company's PR1 peptide vaccine, which is still ongoing in leukaemia, according to [clinicaltrials.gov](#); the trial was estimated to have ended last year. The company is private and makes few announcements.

Meanwhile a large trial of GV1001 is being carried out in the UK by the National Cancer Institute, in patients with pancreatic cancer, called Telovac. The vaccine already failed one pancreatic phase III trial, called Primovax, which differed in design. Rights to the drug were bought by a Korean company, KAEL-GemVax, earlier this year, from Affitech. The primary endpoint is survival at one year and 1,110 patients are being sought for recruitment, has yet to complete and results are probably a couple of years away.

And following the financial collapse of Biovest's parent company, Accentia Biopharmaceuticals, the path forward for BiovaxID remains unclear. A phase III trial is listed as underway on [clinicaltrials.gov](#), which was supposed to have completed last year.

Cancer Vaccines in Late Stage Development

Status	Product	Company	Pharmacological Class	Indication Summary
Phase III	Abagovomab	Menarini	Anti-CA125 vaccine	Ovarian cancer [Phase III]
	MAGE-A3 (astuprotimut)	GlaxoSmithKline	Anti-MAGE-A3 vaccine	Non-small cell lung cancer (NSCLC) [Phase III]; Melanoma [Phase III]
	Stimuvax (currently suspended)	Merck KGaA	Anti-MUC1 vaccine	Non-small cell lung cancer (NSCLC) [Suspended - Phase III]; Breast cancer [Suspended - Phase III]; Multiple myeloma [Suspended - Phase II]
	BiovaxID	Biovest	Cancer vaccine	Non-Hodgkin's lymphoma (NHL) [Phase III]
	Lucanix (belagenpumatucel)	NovaRx	TGF-beta inhibitor	Non-small cell lung cancer (NSCLC) [Phase III]
	PR1 Peptide vaccine	The Vaccine Company	Peptide vaccine	Leukaemia, acute myeloid (AML) [Phase III]; Leukaemia, chronic myeloid (CML) [Phase II]; Myelodysplastic syndrome [Phase II]
	GV1001	KAEL-GemVax	Anti-telomerase vaccine	Pancreatic cancer [Phase III]; Hepatoma, liver cancer [Phase II]; Non-small cell lung cancer (NSCLC) [Phase II]