

# East Lancashire Prostate Cancer Support Group Newsletter



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## *Orchid funds blood cell discovery that identifies patients with aggressive prostate cancer*

Published: 16th June 2017

Patients who have aggressive prostate cancer could be identified by a highly accurate and simple blood test, according to an early study by Queen Mary University of London (QMUL).

The research discovered rare cells in the blood that could be used to identify patients who are 10 times more likely to die of their prostate cancer, allowing targeted treatments to be offered as early as possible.

Prostate cancer is the most common cancer in Western men and the fourth most common overall, with more

than [1.1 million new cases](#) recorded in 2012. Identifying patients with aggressive cancer could have major implications for their treatment; however, methods to detect whether the cancer has spread (metastasis) are costly and expose patients to radiation. A simple blood test that is accurate and has the ability to predict earlier whether the prostate cancer has become metastatic would meet a key unmet medical need.

The study, published in the journal *Clinical Cancer Research*, analysed blood samples

from 81 prostate cancer patients using a new cell capture technology called Parsortix™ developed by the British company ANGLE plc. Unlike many other systems, the Parsortix system captures all types of circulating tumour cells (CTCs) – cancer cells that have left the original tumour and entered the bloodstream prior to spreading around the body. Metastasis is responsible for over 90 per cent of cancer-related deaths. The researchers investigated various types of CTCs including two that are involved in the metastasis process.



The number of 'EMTed' CTCs, which had previously not been possible to capture by many other systems, was associated with poor patient survival, while the presence of 'EMTing' CTCs was closely correlated with whether the patient's cancer had become metastatic.

Using the Parsortix system, the researchers also discovered the presence of rare cells in the blood, known as 'megakaryocytes' – large bone marrow cells which produce platelets for blood clotting. Megakaryocytes have never before been linked to cancer prognosis, but the presence of these cells was found to be strongly linked to patient survival, with better outcomes for patients with greater numbers of megakaryocytes.

Lead researcher Dr Yong-Jie Lu from QMUL's Barts Cancer Institute said: "This work opens up a wide range of exciting opportunities to benefit cancer patients. We have already started to test more patient samples and will soon move on to wider clinical trials to confirm the efficacy of the test. We are also working to see if this test can be used on other types of cancer."

The team found that combining the number of 'EMTing' CTCs with the patient's 'Prostate-Specific Antigen' level (used in currently available tests) gave the best predictor of metastasis (over 92 per cent accuracy), significantly out-performing all current tests.

They also developed a combined scoring system, taking into account the numbers of both 'EMTed' CTCs and megakaryocytes harvested by the Parsortix system from a patient's blood. The scoring system was developed with 40 patients who had their disease monitored over a 20 month period, and was able to identify patients who were 10 times more likely to die from their disease in the short term.

Rebecca Porta, CEO of Orchid – Fighting Male Cancer, the main funder of the study, added: "This is a very promising study for patients and has the potential to significantly increase the ability of clinicians to act earlier to treat those who are at a higher risk of dying earlier from their cancer. Delivering more appropriate treatment more quickly could help to save lives and pro-long life expectancy."

Dr Catherine Pickworth, Cancer Research UK's science information officer, said: "Cancers spreading to new areas of the body is the main reason why people die from the disease. This study shows a potential new way of helping to monitor this spread in men with prostate cancer. It was able to predict which patients were likely to fare better than others, based on the number of a rare type of immune cell found in the blood. This may help doctors make better-informed treatment decisions based on the extra information, and ultimately improve survival."

The research was funded by Orchid – Fight Male Cancer, Cancer Research UK and ANGLE plc, developers of the Parsortix™ system. The Chinese Scholarship Council provided funding support for PhD studentships to some of the researchers.

Orchid relies solely on donations in order to fund over £1.3 million of research and awareness every year.

**National male cancer helpline 0808 802 0010**



# *Terminal cancer patients in complete remission after one gene therapy treatment*

**The  
Telegraph**

By Sarah Knapton, SCIENCE EDITOR, AND ASSOCIATED PRESS  
28 February 2017 • 5:53pm

A groundbreaking gene therapy treatment which boosts a patient's own immune cells has been shown to clear disease from one third of terminal patients.

US pharmaceutical company [Kite Pharma released results](#) from the first six months of its trial of the new treatment, called CAR-T cell therapy.

Some 36 per cent of the 101 patients on the trial were still in [complete remission](#) at six months, and eight in 10 saw their cancer shrink by at least half during the study.

"The numbers are fantastic," said Dr Fred Locke, a blood cancer expert at [Moffitt Cancer Center](#) in Tampa who co-led the study.

"These are heavily treated patients who have no other options."

The treatment, which has been dubbed 'a living drug' by doctors, works by filtering a patient's blood to remove key immune system cells called T-cells, which are then genetically engineered in the lab to recognise cancer cells.

Cancer cells are very good at evading the immune system, but the new therapy essentially cuts the brakes, allowing immune cells to do their job properly.

Martin Ledwick, [Cancer Research UK's](#) head cancer information nurse, said: "These results are promising and suggest that one day CAR-T cells could become a treatment option for some patients with certain types of lymphoma.

"But, we need to know more about the side effects of the treatment and long term benefits."

Patients in the study had one of three types of non-Hodgkin lymphoma, a blood cancer which affects 13,600 patients in Britain, and had failed all other treatments. Most patients with such an advanced condition only live for six months but half of the trial group are still alive nine months since the trial began, and a third may be cured.

Dimas Padilla, 43, of Orlando, who was warned his case was worsening after chemotherapy stopped working, is now in complete remission after undergoing the therapy last August.

After learning his cancer was probably terminal he said: "I was thinking how am I going to tell this to my mother, my wife, my children," he said.

After CAR-T therapy he saw his tumours "shrink like ice cubes" and is now in complete remission.

"They were able to save my life," Mr Padilla added.

However there are still concerns that the treatment has significant side effects, and can even kill some patients, as it puts the immune system into a state of over-drive. During the trial two people died from the therapy, rather than their cancer.

Of the study participants, 13 per cent developed a dangerous condition where the immune system overreacts in fighting the cancer, and roughly a third of patients developed anaemia or other blood-count-related problems.

Nearly one third also reported neurological problems such as sleepiness, confusion, tremor or difficulty speaking, but these typically lasted just a few days.

Full results will be presented at the [American Association for Cancer Research](#) conference in April and the company plans to seek approval from European regulators later this year.

"It's a safe treatment, certainly a lot safer than having progressive lymphoma," said the cancer institute's Dr Steven Rosenberg,

Other companies, such as Juno Therapeutics, have had to halt trials into CAR-T treatments following patient deaths.

## *“August 3rd Meeting”*

*Due to the unavailability of a Venue for the August Meeting, We will be Hosting another Social Event.*

*Afternoon tea at The Ribchester Arms, Ribchester.*

*The Cost Will be £10 pp*

*Please Let Dave Riley or Stuart Marshall Know if You Wish to Attend.*

*Riley.d7@sky.com*

*stumar12@yahoo.com*

*Usual Time*

*2pm—4pm*



## Contact Information

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From Left to Right Hazel Goulding (Treasurer) Leon D Wright (IT Admin) Stuart Marshall (Secretary) Steve Laird (Vice Chairman) Dave Riley (Chairman)

We are a group of local people who know about prostate cancer. We are a friendly organisation dedicated to offering support to men who have had or who are experiencing the effects of this potentially life threatening disease.

The East Lanc's Prostate Cancer Support Group offers a place for free exchange of information and help for local men and their supporters (family and friends) who may be affected by this increasingly common form of male cancer.

At each meeting we strive to be a happy, supportive and upbeat group of people; encouraging open discussion on what can be a very difficult and perhaps for some an

