'Miracle cure' for cancer patient with weeks to live

Kat Lay Health Correspondent, Chicago

A woman told she had terminal breast cancer has been "cured" by a groundbreaking treatment that used her white blood cells to destroy the tumours.

Scientists extracted her T-cells to establish which were attacking the tumours, then grew billions more in a lab and put them back in her body.

At the American Society for Clinical Oncology (Asco) annual conference in Chicago, the results, published in the journal *Nature Medicine*, were hailed as "a paradigm shift".

It is the first time the treatment has been successful used for late-stage breast cancer, although the technique has been used in blood cancers and melanoma.

Judy Perkins, 52, from Florida, was told she had weeks or months to live, after a string of other treatments failed and the cancer spread to her liver. Toxic chemotherapies had left her ready to "get dying over with", she said.

She has now been free of disease for two years. Ms Perkins said: "It feels miraculous and I am beyond amazed that I have now been free of cancer for two years. Experts may call it extended remission but I call it a cure."

Scientists said they were hopeful the technique would work in other breast cancer patients, although not all will be eligible.

Stephanie Goff, who was involved in Ms Perkins's treatment, said: "For many years it was thought that widespread breast cancer could not be attacked by the immune system, but this opens the door to harnessing the body's own defences. This is the cutting edge of medicine. Judy could barely move she was in so much pain and now she's kayaking."

Judy Perkins had been ready to "get dying over with"

Michael Sabel, the chief of surgical oncology at the University of Michigan, said: "The theory is that these T-cells are within the tumour for a reason — they recognise the cancer."

He added: "You could apply this to many different types of tumour. It isn't as tumour specific as immunotherapy has been for many, many years. That's what's very exciting."

While Cancer Research UK said the technique was likely to cost "tens of thousands of pounds", Dr Sabel expects the price to fall as technology improves.

Ms Perkins had tumours as big as plums in her liver before she began treatment. Scientists analysed biopsies and discovered 62 mutations, four of which her own white blood cells were specifically able to seek and destroy. They removed a few hundred of those T-cells and over eight weeks grew 82 billion of them, which were then placed back into her body.

She was also given checkpoint inhibitor drugs, which reduce cancer cells' ability to hide from the immune system.

Ms Perkins said: "Within two weeks I could feel the tumours in my chest wall shrinking. Now I have gone back to normal everyday life."

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Times June 5 2018