

Heated metal 'seed' could kill brain tumours in 10 minutes

By Sarah Knapton

DEADLY brain tumours could be removed in just 10 minutes with a groundbreaking new treatment which uses MRI scanners to heat up cancer cells until they die.

The therapy, developed by University College London (UCL), involves injecting a tiny magnetic metal "seed" into the bloodstream and directing it to the site of the cancer.

The scanner is then used to heat up the seed which causes the cells to die in the surrounding tissue. Not only does it quickly kill cancer cells, but it saves healthy cells from the damaging effects of invasive surgery or radiotherapy.

The team has already proven it is effective in the brains of pigs and plans human prostate cancer trials within two years with the hope it will be used for other cancers within five years.

Launching the technology at The Cheltenham Science Festival, Prof Mark Lythgoe of UCL said: "The patient goes into the scanner, you locate a tumour in the brain or the prostate and then we implant a tiny magnetic particle, a little bit smaller than a grain of rice, to the site of the tumour. We can guide it with real precision avoiding any areas that we don't want to go to... We're able to fire in a simple radio wave and these seeds heat up remarkably well, and kill all the cells around it. You then guide the seed through the tumour, killing all the cells."

The team believes the process could eventually be automated, with the scanner locating the tumour then "setting off on its own" to kill the cancer.

Prof Lythgoe added: "You want to go for brain tumours ... where the surgeon has to plough through a ton of normal tissue to get to it. We can get through a tumour in 10 minutes."