

Giving chemotherapy after radiotherapy improves survival for patients with rare brain tumour

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Credit: Cancer Research UK

GIVING chemotherapy after radiotherapy delays further growth of a rare type of brain tumour, increasing the number of patients alive at five years from 44 per cent to 56 per cent.

These results - from a clinical trial for [patients](#) with anaplastic glioma run by the European Organisation for Research and Treatment of Cancer (EORTC) and funded in UK by Cancer Research UK - were presented at the 2016 American Society of Clinical Oncology (ASCO) Annual Meeting in Chicago today (Friday).

The [phase III clinical trial](#) compared survival for patients whose tumours were thought to be less likely to respond to chemotherapy because they did not have mutations in two genes called 1p and 19q.

750 patients from institutes around the world were split into four groups and either given:

1. Radiotherapy alone

2. Radiotherapy at the same time as chemotherapy

3. Radiotherapy then chemotherapy

4. Radiotherapy at the same time as and followed by chemotherapy.

Giving chemotherapy after [radiotherapy](#) (groups three and four) halted tumour growth for 43 months after treatment, compared with 19 months for those who only had radiotherapy (groups one and two).

This improvement resulted in 56 per cent of patients given radiotherapy then chemotherapy surviving for five years, compared with only 44 per cent of those who did not.

While giving chemotherapy after radiotherapy has improved survival and is now standard care for these patients, the benefits of chemotherapy at the same time as radiotherapy are still unclear and need further follow-up.

Around 280 people are diagnosed with anaplastic gliomas each year in England.

UK trial lead Dr Sara Erridge, consultant oncologist at the Edinburgh Cancer Centre, said: "Our important study showed that giving [temozolomide chemotherapy](#) after radiotherapy delays progression and significantly improves survival for this group of patients. This trial has changed the way we manage patients with this type of tumour with radiotherapy followed by temozolomide chemotherapy now being the standard of care."

Martin van den Bent, member of the EORTC Board and study coordinator, said: "This study demonstrates the value of collaborative academic research in improving the standard of care for rare cancers. Through this partnership between

EORTC, Cancer Research UK, North American and Australian study groups we were able to involve a large enough group of patients with this rare tumor type, allowing us to draw definitive conclusions that guide future treatment decisions in this disease."

Cancer Research UK scientists led the development of temozolomide [chemotherapy](#), including its discovery in the lab and the development and first [clinical trials](#) of the drug in cancer patients. The treatment is used worldwide to treat glioblastoma - the most common type of adult primary [brain tumour](#).

Dr Ian Walker, Cancer Research UK's director of clinical research, said: "The data from this trial is an important step forward for patients with anaplastic glioma. Many types of brain [cancer](#) are difficult to treat which is why we have committed to investing in more research in these hard-to-treat cancers. It wouldn't have been possible for our researchers to discover and develop temozolomide without the generous donations of our supporters. And thanks to research like this we hope to be able to increase survival for more patients in the future."

Provided by Cancer Research UK

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