

Glioblastoma clinical trial shows combined therapy extends life for patients 65 and older

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Treating older patients who have malignant brain cancer with the chemotherapy drug temozolomide plus a short course of radiation therapy extends survival by two months compared to treating with radiation alone, show clinical trial results published today in the *New England Journal of Medicine*.

For 45% of the study participants, improved survival almost doubled - from 7 months to 13.5 months, says co-principal investigator Normand Laperriere, radiation oncologist at Princess Margaret Cancer Centre, University Health Network. This was linked to a [molecular marker](#) that indicated if a DNA repair mechanism against the drug was active. When the mechanism was "off", tumours responded better to treatment.

"Everyone benefited to a varying degree and the study confirmed the predictive nature of the molecular marker in the largest sample to date where the status was known. We anticipate this combined therapy will be the treatment strategy broadly adopted around the world for patients 65 and older because it makes a significant difference in the course of this terrible disease," says Dr. Laperriere, who is also a Professor in the Department of Radiation Oncology, University of Toronto.

The trial was conducted with co-investigators Dr. James Perry, Sunnybrook Health Science and Odette Cancer Centres, Toronto, Dr. Christopher O'Callaghan, Canadian Cancer Trials Group, Kingston, ON, and international collaborators from Europe, Australia, New Zealand, Japan.

From 2007 to 2013, the randomized Phase III clinical trial enrolled 562 patients with glioblastoma, the most common [malignant brain cancer](#) in adults. Average age of onset is 65 and there is no cure. The incidence of glioblastoma is increasing in

aging societies with half of all patients now 65 or older. In the study, patients ranged in age from 65 to 90; two-thirds were 70 or older.

This was the first study to investigate combining the drug with radiotherapy in [older patients](#). Two previous studies had looked at either the role of the drug alone or the role of radiotherapy alone in treating glioblastoma.

"There has been no clear standard of care for treatment of glioblastoma in the elderly," says Dr. Laperriere. "For patients under 65, the protocol is six weeks of [radiation therapy](#) plus the drug, but this regimen is poorly tolerated by older patients."

Temozolomide is an oral chemotherapy (taken as a pill) which is extremely well tolerated, and participants in both arms of the study reported no differences in quality of life. "The [drug](#) is so well tolerated, there is no downside in administering it to all glioblastoma [patients](#)," says Dr. Laperriere. "Thankfully in such a terrible disease, at least we have therapies that are easy on the patient and easy to take."

Provided by University Health Network

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