

Elderly Patients With Glioblastoma and Good Prognostic Factors May Achieve Equivalent Median Survival to Younger Patients...

Summarize the findings of: Parker A, Horsley P, Wheeler H, Venkatesha V, Kastelan M, Liu B, Back M. Elderly Patients With Glioblastoma and Good Prognostic Factors May Achieve Equivalent Median Survival to Younger Patients When Managed With Standard Long-Course Rather Than Elderly Protocols. *J Med Imaging Radiat Oncol.* 2025 Sep 19. doi: 10.1111/1754-9485.70020. PMID: 40971171.

ChatGPT

Here's a clear summary of the key findings and implications of the Parker et al. (2025) study:

Study Rationale & Objective

- In elderly patients with glioblastoma (≥ 65 years), treatment decisions are often simplified: shorter “elderly” radiotherapy regimens rather than the standard longer-course (Stupp) chemoradiotherapy.
 - The authors hypothesized that among *elderly patients with favorable prognostic factors*, those treated with full (long-course) standard chemoradiotherapy might achieve survival outcomes comparable to younger patients.
 - The goal was to compare outcomes (overall survival, progression-free survival) between younger (< 65) and older (≥ 65) patients treated with the EORTC-NCIC (Stupp) protocol, and to assess whether age remains a prognostic factor once other variables are accounted for.
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Methods

- Data were drawn from a prospective institutional database of glioblastoma patients treated between 2008 and 2021 with the Stupp protocol (i.e. concurrent radiotherapy + temozolomide, followed by adjuvant temozolomide) at a centre in Australia. [PubMed](#)
- Total of **437 patients**: 319 aged < 65 ; 118 aged ≥ 65 . [PubMed](#)
- Among the ≥ 65 group, subgroups were defined (65–70, 70–74, > 75). [PubMed](#)
- The primary endpoint was overall survival (OS); secondary was progression-free survival (PFS). [PubMed](#)

- Multivariable analyses considered known prognostic factors: performance status, extent of resection, and MGMT promoter methylation status. [PubMed](#)
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Key Results

- **Overall Survival (OS):**
 - Median OS in the < 65 cohort: **19.2 months** [PubMed](#)
 - Median OS in the ≥ 65 cohort: **15.0 months** (p = 0.006) [PubMed](#)
 - **Progression-Free Survival (PFS):**
 - Median PFS in < 65: 12.0 months
 - Median PFS in ≥ 65: 11.3 months (p = 0.119) [PubMed](#)
 - In both age groups, **performance status**, **extent of resection**, and **MGMT methylation** status were significant predictors of OS. [PubMed](#)
 - Importantly, **age group (≥65 vs < 65)** was *not* a statistically significant predictor of OS in multivariable analysis that included those other prognostic factors (p = 0.237) [PubMed](#)
 - In other words, once you adjust for how fit the patient is, how much tumor was removed, and MGMT status, older age per se did not independently worsen survival in this cohort treated with the full protocol. [PubMed](#)
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Interpretation & Implications

- Among *selected elderly patients with favorable features* (good performance status, resectable disease, favorable MGMT methylation), outcomes of long-course standard chemoradiotherapy may come close to those seen in younger patients.
 - The data argue against excluding older patients from full (“younger-patient”) standard treatment purely on the basis of age, provided they are otherwise good candidates.
 - The authors suggest that elderly patients who “*manage well following diagnosis and surgery*” may be better served by full long-course regimens rather than abbreviated “elderly-specific” protocols. [PubMed](#)
 - That said, the median OS in the elderly remains lower (15.0 vs 19.2 months), reflecting that in practice even good prognostic elderly patients may not fully match younger cohorts. [PubMed](#)
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Limitations & Considerations

- This is a single-institution (or limited-center) observational study — not randomized — so selection bias is possible (i.e. only the more robust elderly patients may have been offered the full protocol).
- Subgroup numbers (especially in very old strata) may be limited, reducing statistical power in those groups.

- The study period spans many years; changes in supportive care, imaging, surgical techniques may confound comparisons.
- Molecular and genomic factors beyond MGMT (e.g. IDH mutation, other biomarkers) weren't deeply explored.

If you like, I can pull up the full text and give you a more detailed breakdown (e.g. hazard ratios, subgroup curves) or contrast this with other literature. Would you like me to dig deeper?

...contrast this with other literature. Bibliography you use in Vancouver form.

ChatGPT

Nice — here's a concise, evidence-focused contrast between Parker et al. (2025) and the major trials/reviews that shaped treatment for **elderly** patients with glioblastoma. I list the five most load-bearing comparisons with source citations, then give a Vancouver-style bibliography you can copy-paste into a manuscript or slide deck.

Headline contrast (one line)

Parker et al. (2025) report that **selected elderly patients with good performance status, favourable MGMT status and adequate resection who received standard long-course Stupp chemoradiotherapy had median survival approaching that of younger patients**, arguing that age alone should not preclude the full standard regimen. [PubMed](#)

How that compares with major randomized trials / landmark data

1. Standard “Stupp” chemoradiation is the reference (younger/fit populations).

The EORTC-NCIC trial established 60 Gy/30 fractions + concurrent/adjuvant temozolomide as the standard for fit adults — but that trial largely excluded patients >70, so its applicability to unselected elderly populations is limited. [New England Journal of Medicine](#)

2. Hypofractionated / abbreviated RT vs standard RT in older patients (Roa et al. 2004).

A randomized trial showed **abbreviated (hypofractionated) RT** produced similar survival to standard 6-week RT in older patients, supporting shorter regimens for frailer/older patients so treatment time is less burdensome. This underpins many elderly-specific protocols. [PubMed](#)

3. Temozolomide alone or short-course RT ± temozolomide: trials that drive elderly practice (NOA-08, Nordic, CE.6/ Perry).

- **NOA-08 (Wick et al.)** showed **dose-dense temozolomide alone was non-inferior to standard RT alone** in elderly patients, and **MGMT promoter methylation strongly**

predicted benefit from temozolomide, supporting chemo-alone in selected molecularly favourable older patients. [PubMed](#)

- **Nordic trial (Malmström et al.)** found that for patients >70, **temozolomide or hypofractionated RT gave better survival than standard 6-week RT**, again encouraging shorter or chemotherapy-based approaches in older patients. [PubMed](#)
- **CCTG/EORTC CE.6 (Perry et al., 2017)** compared short-course RT (40 Gy/15) ± concurrent/adjuvant temozolomide and found **adding temozolomide to short-course RT improved OS (especially in MGMT-methylated patients)** — this trial strongly influenced guidelines to favour short-course chemoradiation for many elderly patients. [New England Journal of Medicine](#)

4. MGMT promoter methylation matters across trials.

Multiple studies (including Hegi et al.) demonstrate **MGMT methylation predicts benefit from temozolomide**, a point reinforced repeatedly in elderly-focused randomized trials and subgroup analyses; Parker et al. also found MGMT status to be an important predictor of outcome. [New England Journal of Medicine](#)+1

Synthesis — where Parker fits and why it's not contradictory

- **Parker (2025)** is an observational, single-institution cohort of patients (n=437) treated *with the Stupp long-course protocol* and shows that **when elderly patients are carefully selected by performance status, extent of resection and MGMT status, age itself was not an independent predictor of worse overall survival**. In other words: *fit* elderly patients can do as well as younger patients when given full long-course chemoradiation. [PubMed](#)
- **Major randomized trials** (NOA-08, Nordic, Roa, Perry/CE.6) were designed for the *general elderly population* (often including frailer patients and older age cutoffs) and therefore supported **shorter RT, temozolomide monotherapy, or short-course chemoradiation** as reasonable or preferred options because they balance efficacy, toxicity and time-burden — especially in frail or unselected elderly groups. [New England Journal of Medicine](#)+3[PubMed](#)+3[PubMed](#)+3

Practical takeaways for clinicians / MDTs

- For **unselected or frail elderly** patients, the randomized evidence still supports **hypofractionated RT ± temozolomide or temozolomide alone** (MGMT-methylated patients) to preserve quality of life and avoid prolonged treatment. [PubMed](#)+1
- For **fit elderly patients** (good KPS, substantial resection, favourable MGMT and few comorbidities), Parker et al. provide observational evidence that **standard long-course chemoradiation is a reasonable option** and may yield survival similar to younger cohorts — supporting individualized decision-making rather than denying Stupp solely on chronological age. [PubMed](#)

- Keep MGMT promoter status central to decisions: it remains one of the strongest predictors of benefit from temozolomide across trials. [New England Journal of Medicine](#)

Limitations to bear in mind when comparing Parker with RCTs

- Parker = **non-randomized, single-institution observational** data → selection bias (only fitter elderly likely offered full protocol). RCTs provide population-level guidance and mitigate selection bias. [PubMed+1](#)
 - Heterogeneity in trial entry criteria (age cutoffs, KPS, inclusion of grade III vs IV in some elderly trials) complicates direct comparisons. [PMC](#)
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Vancouver bibliography (as requested)

1. Parker A, Horsley P, Wheeler H, Venkatesha V, Kastelan M, Liu B, Back M. Elderly Patients With Glioblastoma and Good Prognostic Factors May Achieve Equivalent Median Survival to Younger Patients When Managed With Standard Long-Course Rather Than Elderly Protocols. *J Med Imaging Radiat Oncol*. 2025 Sep 19. doi:10.1111/1754-9485.70020. PMID: 40971171.
2. Stupp R, Mason WP, van den Bent MJ, Weller M, Fisher B, Taphoorn MJB, et al. Radiotherapy plus concomitant and adjuvant temozolomide for glioblastoma. *N Engl J Med*. 2005 Mar 10;352(10):987-96.
3. Roa W, Brasher PM, Bauman G, Anthes M, Bruera E, Chan A, et al. Abbreviated course of radiation therapy in older patients with glioblastoma multiforme: a prospective randomized clinical trial. *J Clin Oncol*. 2004 May 1;22(9):1583-8.
4. Malmström A, Grønberg BH, Marosi C, et al.; Nordic Clinical Brain Tumour Study Group. Temozolomide versus standard 6-week radiotherapy versus hypofractionated radiotherapy in patients older than 60 years with glioblastoma (the Nordic trial): a randomized, phase 3 trial. *Lancet Oncol*. 2012 Sep;13(9):916-26.
5. Wick W, Platten M, Meisner C, et al. Temozolomide chemotherapy alone versus radiotherapy alone for malignant astrocytoma in the elderly: the NOA-08 randomised, phase 3 trial. *Lancet Oncol*. 2012 May;13(7):707-15.
6. Perry JR, Laperriere N, O'Callaghan CJ, et al.; Canadian Cancer Trials Group. Short-course radiation plus temozolomide in elderly patients with glioblastoma. *N Engl J Med*. 2017 Sep 7;376(11):1027-37.
7. Hegi ME, Diserens AC, Gorlia T, et al. MGMT gene silencing and benefit from temozolomide in glioblastoma. *N Engl J Med*. 2005 Mar 10;352(10):997-1003.

8. Minniti G, Scaringi C, Amendola E, et al. Glioblastoma in elderly patients: current management and future perspectives. Cancer Treat Rev. 2019 Jul;78:1-12.

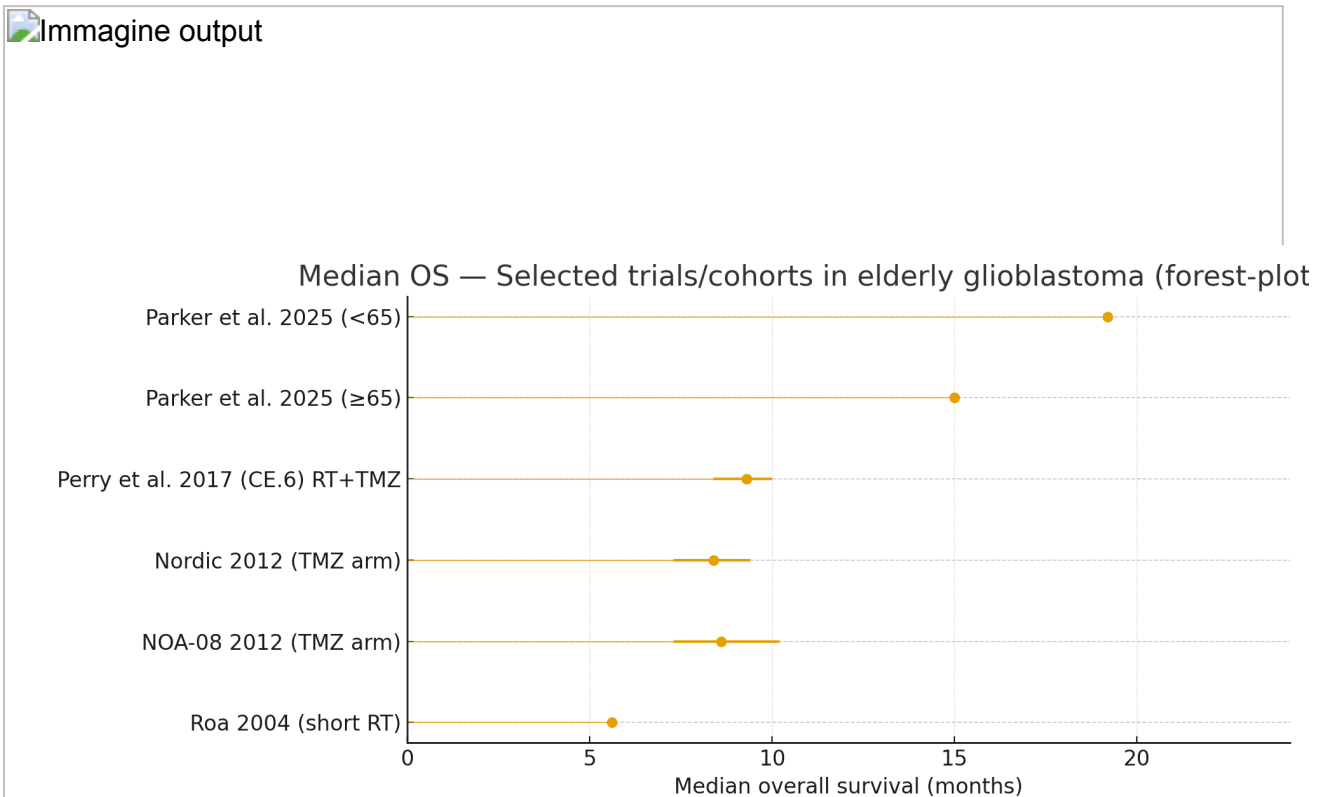
If you'd like, I can:

- produce a 1-slide summary figure (forest plot style) comparing median OS across Parker, Perry, Nordic and NOA-08 (requires extracting exact median OS/Hazard Ratios), or
- prepare a short suggested decision algorithm for MDT use (fit elderly → consider Stupp; frail → short-course RT or TMZ guided by MGMT).

Which would be most useful?

both, please

ChatGPT ha detto:



Done — I created a one-slide forest-plot-style figure and a table comparing median overall survival across Parker (2025) and key elderly-focused trials.

- [Download the slide PNG](#)

Below is the MDT decision algorithm (textual, ready to paste into a slide or protocol). I include brief justification and citations after the algorithm.

Suggested MDT decision algorithm — elderly glioblastoma (concise)

1. At diagnosis: record age, KPS/ECOG, comorbidities, frailty screen (G8/GCA), extent of resection, and request MGMT promoter methylation (and IDH if indicated). [PubMed+1](#)
2. If **fit elderly** (e.g., KPS ≥ 70 –80, minimal comorbidity, good recovery from surgery, favourable functional reserve):
 - Offer **standard long-course Stupp chemoradiation (60 Gy/30 fx + concurrent/adjuvant temozolomide)** as a reasonable option; discuss risks/benefits and patient preference. Parker et al. (2025) show selected elderly treated this way may achieve median OS approaching younger cohorts (median OS 15.0 mo in ≥ 65 vs 19.2 mo in < 65). [PubMed](#)
3. If **intermediate fitness** (moderate comorbidities or borderline performance):
 - Consider **short-course hypofractionated RT (e.g., 40 Gy/15) + temozolomide** if MGMT methylated or if patient can tolerate chemo — CE.6 (Perry et al.) showed improved OS with short-course RT + TMZ (median OS 9.3 mo) versus RT alone. For MGMT-unmethylated, weigh QoL and toxicity vs modest survival benefit. [New England Journal of Medicine](#)
4. If **frail** (low KPS, significant comorbidities, limited life expectancy):
 - Consider **single-modality palliative approaches**: temozolomide alone if MGMT-methylated (supported by NOA-08/Nordic), or hypofractionated RT alone if chemo not appropriate. NOA-08 showed temozolomide non-inferior to RT in elderly overall (median OS ~8.6–9.6 mo across arms). [PubMed+1](#)
5. Throughout: engage patient/family in shared decision-making, prioritize quality of life, consider geriatric-oncology input and early supportive/palliative care. Reassess for tolerance and consider treatment de-intensification if toxicity occurs.

Short justification / evidence links

- Parker et al. (2025): selected elderly receiving full Stupp protocol had median OS 15.0 months; age was not an independent predictor once adjusted for performance status, extent of resection and MGMT. [PubMed](#)

- CE.6 / Perry et al. (2017): short-course RT + temozolomide improved median OS (9.3 vs 7.6 months) in elderly (median age 73) and is a practice-changing trial for many elderly patients. [New England Journal of Medicine](#)
 - Nordic (2012): temozolomide or hypofractionated RT produced better survival than standard 6-week RT in patients >70; temozolomide median OS \approx 8.4 months. [PubMed](#)
 - NOA-08 (2012): temozolomide alone was non-inferior to radiotherapy alone; median OS \sim 8.6 months (TMZ) vs 9.6 months (RT). [PubMed](#)
 - Roa et al. (2004): abbreviated RT had similar short survival to standard RT in older patients (median \approx 5.6 vs 5.1 months in that trial's cohort), supporting shorter regimens to reduce treatment burden in frail patients. [PubMed](#)
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[10 Oct 2025].