Glioblastoma in the elderly

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Glioblastoma in the elderly

- **Frequent**
  - < 70 years MS = 17 mo [16-18]
  - ≥ 70 years MS = 8 mo [6-11]

- **Severe**

...No standard treatment

*CBTRUS; database Mazarin*
Specific management of GBM

- Surgery
- Radiotherapy
- Chemotherapy
GBM: Surgery in elderly patients

Undertreated?

Biopsy vs Resection (n = 806)

<table>
<thead>
<tr>
<th>Age</th>
<th>Resection</th>
<th>Biopsy</th>
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<tbody>
<tr>
<td>&lt;70</td>
<td>65%</td>
<td>35%</td>
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<tr>
<td>≥70</td>
<td>34%</td>
<td>66%</td>
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A randomized study (n=30)

\[ HR = 0.38 \text{ (CI 0.02-0.97)} \]

\[ P = 0.035 \]

\[ p < 0.0001 \]

Data base Mazarin; Vuorinen et al. Acta Neurochir, 2003; 145: 5-10
Radiotherapy vs Best Supportive Care
(Age $\geq 70$ years, KPS $\geq 70$)

**Survival**

![Survival Graph]

- Probability of Survival
- SC vs SC + RT
- 29 weeks
- 17 weeks
- $p = 0.004$
- HR = 0.49

**Quality of life: QLQ-C30**

- Global: 0.70*
- Physical: 0.59*
- Role: 0.84*
- Emotional: 0.53*
- Cognitive: 0.34*
- Social: 0.23*

*Treatment effect (Least-square means)

..Accelerated irradiation

GBM: Randomized trials comparing RT and Temozolomide (Tmz) in the elderly patients

**NOA-08** ($n=373$; med. age 72 yrs)
- TMZ dose-dense (week on/week off)
- RT 54-60 Gy (30 fx)

**NORDIC** ($n=342$ pts; med. age 70 yrs)
- TMZ standard (5/28d)
- RT 60 Gy (30 fx)
- RT hypofx 34 Gy (10 fx)

**Median survival:**
- RT 9.8 mo / TMZ 8.6 mo
- Hazard ratio 1.28 (0.94-1.63)
- RT$_{60}$ 6.0 / RT$_{34}$ 7.5 / TMZ 8.3 mo

**Conclusions:**
- TMZ alone possibly inferior to RT
- TMZ may be an alternative to RT

GBM: RT vs RT + TMZ (concomitant/adjuvant) in the elderly

Ongoing EORTC/NCIC Intergroup Trial (EORTC 26062-22061 / NCIC CE.6)

Inclusion Criteria / Design
- Newly diagnosed GBM
- Age ≥ 65 years
- 560 pts to be randomized
- Target hazard ratio < 0.75

RT alone (15 x 2.66 Gy)

TMZ/RT* → Adjuvant TMZ (max 12 cycles)
GBM: treatment of elderly patients with poor functional status (IK<70)?
Phase II study of temozolomide in GBM patients with poor functional status (Age ≥ 70, KPS < 70) (N=70)

- PD: 48.5%, n=33
- OR: 26.5%, n=18
- SD: 25%, n=17

Overall Survival
Median: 25 weeks (IC 95%: 19-28)

1 year OS: 11.4% (ET 3.8%)

9 cycles of TMZ

Phase II study of temozolomide in GBM patients with poor functional status (Age ≥ 70, KPS < 70)

**Performance, cognition, QoL**
- Improved KPS during treatment (p<0.001)  
  18 patients (26%) reached a KPS ≥ 70
- Improved MMS during treatment (p<0.001)
- Improved global QoL before progression  
  (eortc QLQ-C30, p<0.01)

**Methylation of MGMT promoter**
- Improved KPS during treatment (p<0.001)
- Improved MMS during treatment (p<0.001)
- Improved global QoL before progression  
  (eortc QLQ-C30, p<0.01)

Median OS: 31 w vs 18.7 w  
\( p = 0.03 \)

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_Gallego Perez-Larraya et al, JCO 2011; 29:3050-5_
« Tough to treat GBM in elderly patients? »

- Strong motivation to participate in clinical trials
- Lucidity

« From a grateful writer who would like to live one more year without too much decline »