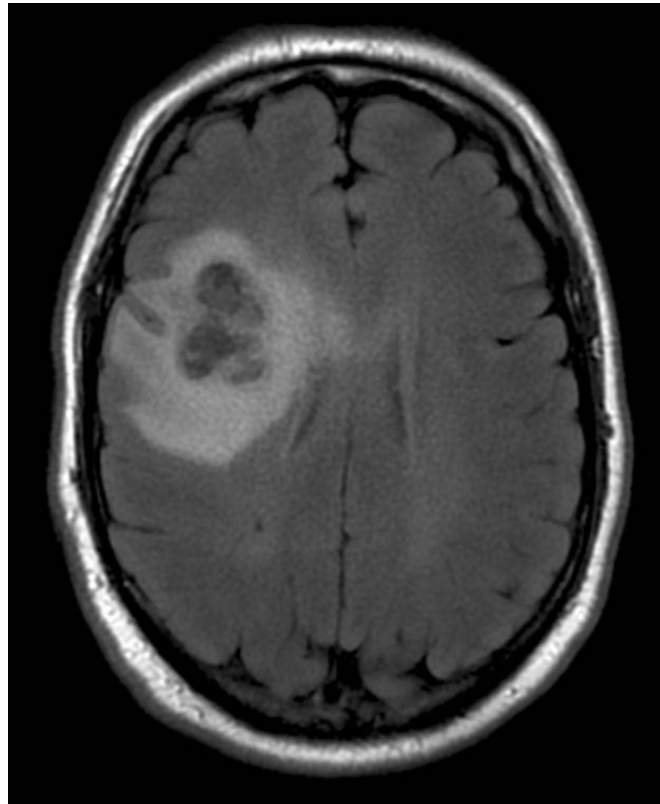


Newcastle Neuro-oncology Team Audit of Outcome of Glioblastoma Multiforme Chemoradiotherapy Treatment



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Audit Team

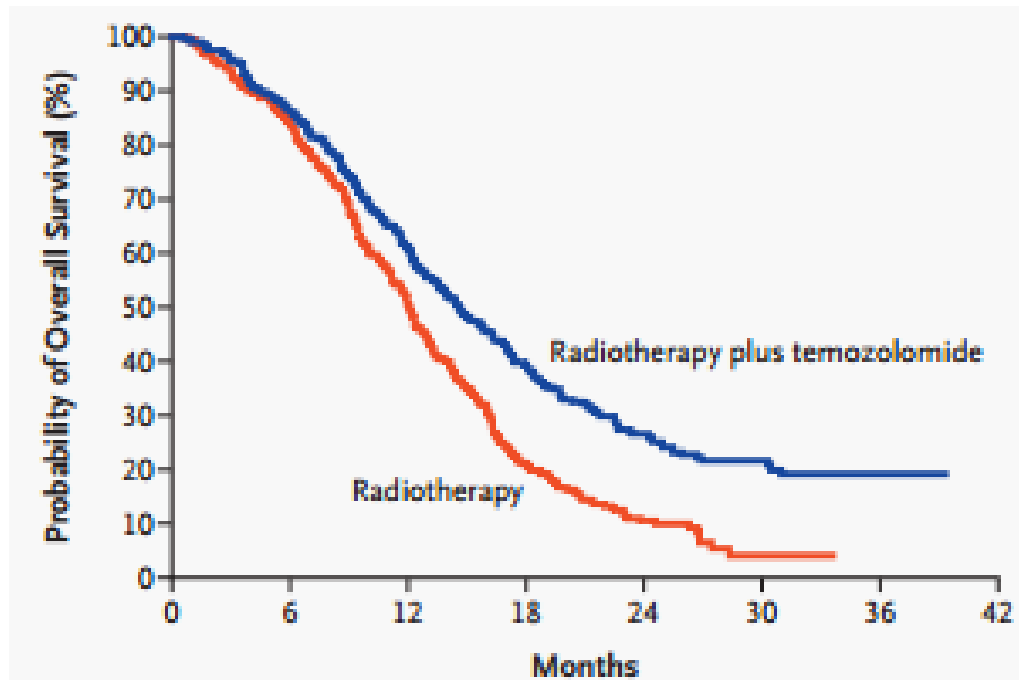
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The Stupp Trial - 2005

- Phase III EORTC clinical trial of 573 patients from 85 centres
- Compared radiotherapy alone with radiotherapy **PLUS** concurrent and adjuvant **temozolomide**
- 287 randomised to temozolomide
 - Concurrent phase: 75mg/m² delivered daily during the 6 weeks of standard dose radiotherapy
 - Adjuvant phase: a further 6 cycles of temozolomide – 150-200mg/m² alone (5 days during each 28 day cycle)

The Stupp Trial - Results

	Radiotherapy only	Radiotherapy + temozolomide
Mean survival	12.1 months	14.6 months
2 year survival	10.4%	26.5%



Statistically significant survival benefit with temozolomide

Newcastle Audit Aims

- To determine whether Stupp results were reproducible in GBM patients treated at RVI and Northern Centre for Cancer Care (NCCC)
- Further subset analysis – prognosis of debulking vs biopsy
 - Many prognostic factors – extent of surgery is one
 - Literature suggests a prognostic benefit to removing >98% of the tumour bulk

Cohort

- Data collected from patients diagnosed from December 2009 to December 2013
- All patients with GBM (grade 4) confirmed by histology aged 18 and over were included
- Exclusions:
 - Avastin trial
 - Patients who weren't treatment naive
 - Patients who did not commence Stupp protocol
 - Usually due to early/aggressive progression
- N=67
- Age range 19-70 years, median age 54.85 years

Results

- **Stupp vs. Newcastle**

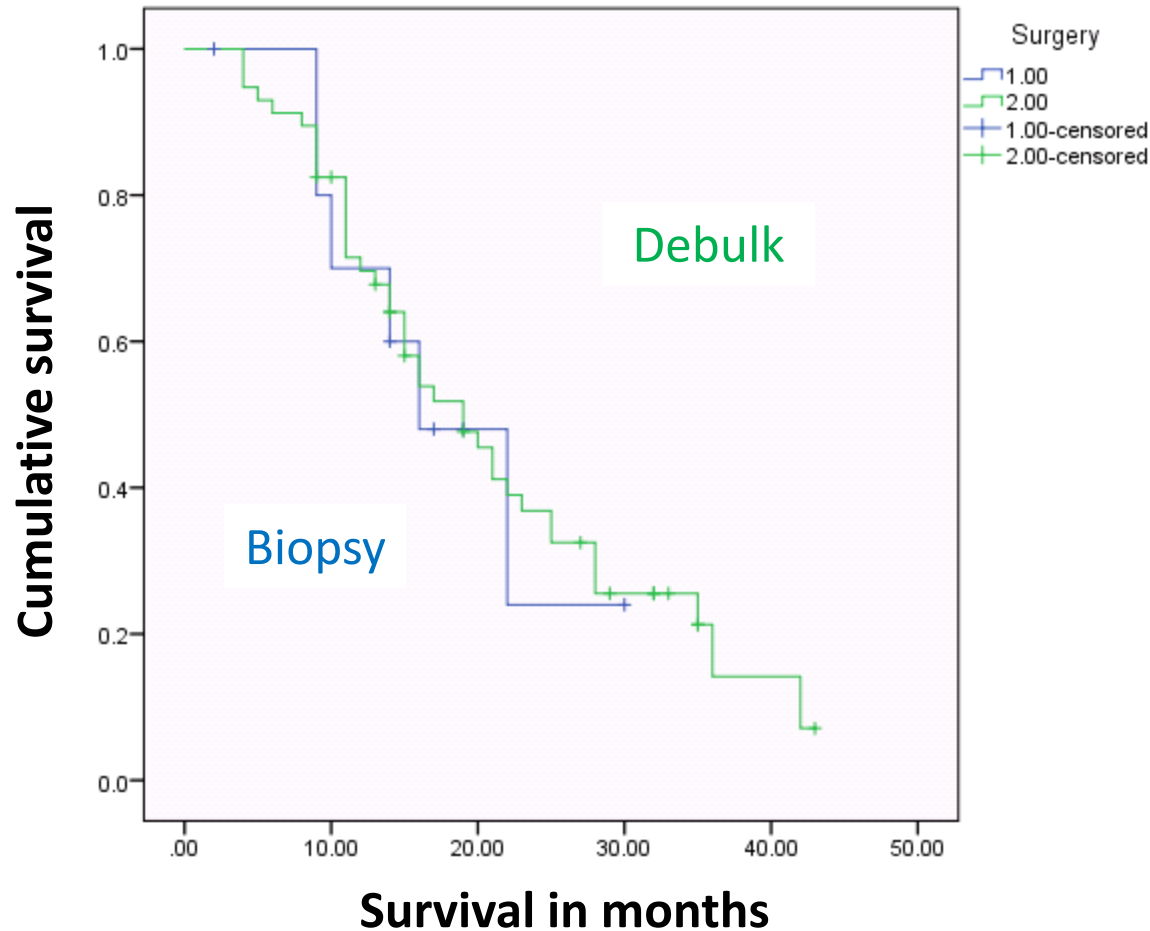
	Stupp	RVI
Median age at diagnosis	56 years	54.85 years
Median OS	14.6 months	16.7 months
2 year survival	26.2%	?

- **Biopsy vs. Debulking**

	Biopsy (n=11)	Debulking (n=56)
Median age at diagnosis	54.5 years	55.2 years
Median survival	14.7 months	18.7 months

- Not statistically significant due to small number of patients in biopsy group ($p=0.881$)

Kaplan-Meier curve



Adjuvant chemotherapy

Number of cycles completed	Number of patients (n=67)
0	8
1	2
2	3
3	4
4	2
5	4
6	44

- RVI: **65.7%** patients treated at the NCCC completed the 6 cycles of adjuvant temozolomide
- Stupp trial: **47%** completed 6 cycles of adjuvant temozolomide
- RVI: **4.5%** (3/67) did not complete concurrent temozolomide - all received 0 cycles of adjuvant chemotherapy
- Stupp trial: **13%** did not complete concurrent temozolomide

Reasons for non-completion

Reason	RVI Number of patients (n=23) and (%)
Progression	12 (52.2%)
Myelosuppression	4 (17.4%)
Pseudoprogression	3 (13%)
Isolated thrombocytopaenia	1 (4.3%)
Depression	1 (4.3%)
Infection	1 (4.3%)
'not coping'	1 (4.3%)

- RVI: **52.2%** of patients failing to complete 6 cycles did so due to progression, **26%** due to toxicities
- Stupp trial: **39%** due to progression, **8%** due to toxicities, 4% 'patient decision'

Conclusions

- Stupp protocol considered standard since 2005
- Newcastle cohort overall survival 16.7 months
- Remains unclear whether extent of surgery impacts on prognosis significantly
 - Our results not statistically significant: literature review of post-Stupp data reveals similar findings elsewhere
- 65.7% patients completed 6 cycles adjuvant TMZ
- Main reasons for non completion are progression (52.2%) and toxicity (26%)

Questions?

Thank you for listening!

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Neurosurgery SSC

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