

Imaging Timing After Surgery for Glioblastoma (INTERVAL GB)

INTERVAL-GB Collaborative

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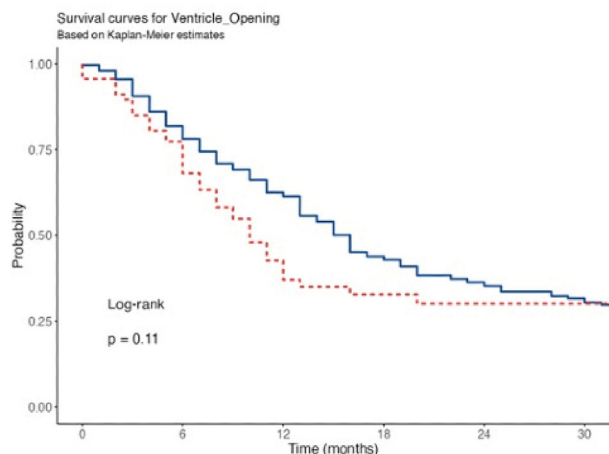
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	N	No (N=311)	Yes (N=69)	Test Statistic
Lesion Localization	380			X22=9.44, P=0.01 ²
Precentral		144/311	18/69	
Postcentral		58/311	18/69	
Temporoinsular		109/311	33/69	
Distance of the Enhancing Nodule from Ventricle	380			X26=34.00, P<0.01 ²
Continuous		65/311	35/69	
< 0.5 cm		33/311	12/69	
0.5 - 1 cm		46/311	5/69	
1 - 1.5 cm		44/311	3/69	
1 - 2 cm		39/311	4/69	
2 - 2.5 cm		39/311	4/69	
> 2.5 cm		45/311	6/69	
Tumor type	380			X27=8.47, P=0.29 ²
Glioblastoma		266/311	58/69	
Astrocytoma		25/311	3/69	
Gliosarcoma		2/311	1/69	
Oligoastrocytoma		1/311	0/69	
Oligodendroglioma		15/311	5/69	
Xanthoastrocytoma		1/311	1/69	
Anaplastic Ependymoma		1/311	0/69	
Anaplastic Ganglioglioma		0/311	1/69	
WHO grade 4	380	265/311	57/69	X21=0.30, P=0.59 ²
Presence of MGMT Methylation	380	127/311	25/69	X21=0.50, P=0.48 ²
IDH1 Mutated	380	38/311	8/69	X21=0.02, P=0.89 ²
IDH2 Mutated	380	2/311	1/69	X21=0.47, P=0.49 ²
Ki-67	298	20.0 32.0 60.0	20.0 35.0 70.0	F _{1,296} =0.71, P=0.40 ³
Presence of Meningeal Involvement	380	11/311	2/69	X21=0.07, P=0.79 ²
Presence of Ependymal Involvement	380	12/311	9/69	X21=9.13, P=0.01 ²
Corpus Callosum Involvement	380	29/311	10/69	X21=1.64, P=0.20 ²
LD Positioning	380	2/311	0/69	X21=0.45, P=0.50 ²
EVD positioning	380	0/311	6/69	X21=27.48, P<0.01 ²
EOR	380			X22=2.53, P=0.28 ²
STR		38/311	11/69	
GTR		249/311	56/69	
SupTR		24/311	2/69	

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BRAIN AND SPINE 3 (2023) 101794 102127
IMAGING TIMING AFTER SURGERY FOR GLIOBLASTOMA (INTERVAL GB):
A MULTI-CENTRE, UK AND IRELAND RETROSPECTIVE COHORT STUDY

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Oral e-Poster Presentations - Booth 3: Neuro-Oncology A (Malignant glioma), September 25, 2023, 1:00 PM - 2:30 PM

Background: The benefit of regular, scheduled follow-up MRI on glioblastoma patient management and outcomes is unclear. Our aim was to investigate national follow-up MRI surveillance practice after surgery for glioblastoma, assess compliance with recommendations from the National Institute for Health and Care Excellence (NICE), and determine the association with overall survival (OS) and progression-free survival (PFS).

Methods: Multi-centre retrospective observational cohort study of histopathologically confirmed glioblastoma (operated August 2018-February 2019) who received any adjuvant oncological treatment. Follow-up MRI schedules, indications, and clinical outcomes were collected. Primary objective was to assess compliance with NICE recommendations (Post-operative scan <72 hrs, MRI every 3-6 months). Secondary objectives were OS and PFS.

Results: 754 patients from 26 neuro-oncology centres were included. Most patients had post-operative MRI <72 hours of surgery (88.1%, N=407/462). 28.1% of patients had follow-up MRI in accordance with NICE recommendations (N=212/754). Median follow-up period was 10.5 months (IQR 5.3-19.4 months). Median overall survival was 15.1 months (95% CI 12.9-17.3) in the scheduled MRI group and 9.1 months (95% CI 7.8-10.4) in the non-compliant group. On multivariable cox regression analysis, regular, scheduled MRI was independently associated with longer overall survival (HR 1.67, 95% CI 1.33-2.10, P<0.001), but not PFS (HR 1.20, 95% CI 0.98-1.47, P=0.074). Having three or more scheduled scans in the first 12 months of follow-up was independently associated with increased OS (HR 2.03, 95% CI 1.41-2.94, P<0.001) and PFS (HR 1.67, 95% CI 1.25-2.23, P<0.001).

Conclusions: Following regular scheduled surveillance follow-up MRI for glioblastoma is associated with longer overall survival. Prospective trials are needed to determine whether regular or symptom-directed MRI influences survival outcomes and quality of life.

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THE ROLE OF P16 IMMUNOHISTOCHEMISTRY AS A PROGNOSTIC BIOMARKER IN MENINGIOMAS

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Oral e-Poster Presentations - Booth 3: Neuro-Oncology B (Meningiomas & Metastasis), September 26, 2023, 1:00 PM - 2:30 PM

Background: Despite best clinical management many patients suffering from meningioma experience tumor recurrence. During the last decades efforts have been made to improve the prognostic stratification regarding meningioma recurrence. In many other tumor entities, loss of p16 is associated with tumor progression. Evaluation of p16 staining for routine diagnostics and prognostic significance to identify meningiomas at risk for recurrence is of clinical interest.

Methods: In this retrospective single-institutional study the immunohistochemical staining for p16 was analyzed in 397 paraffin-embedded meningioma samples. The distribution and association with tumor grading, clinical data and progression-free survival according to follow-up MRI were assessed.

Results: Of 397 meningioma samples 69 tumors were immunopositive for p16