

# INCIDENCE OF NEUROPSYCHOLOGICAL DISTURBANCES IN LOW-GRADE GLIOMAS

V. Villani; Chiara Zucchella, E Galiè, Marta Maschio, A Pace

Neuro-Oncology Unit, "Regina Elena" National Cancer Institute, Via Elio Chianesi 53, 00144, Rome, Italy

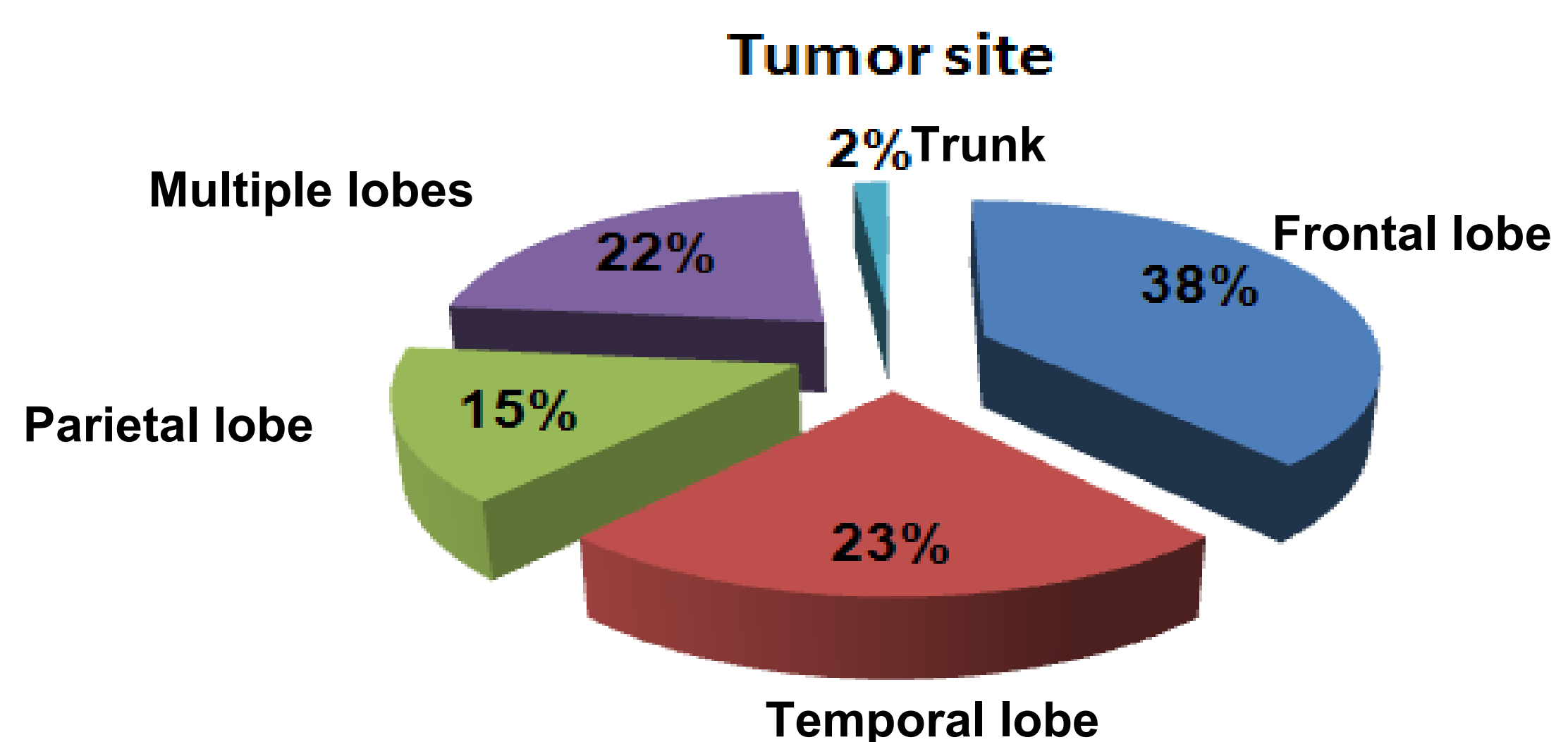
**BACKGROUND:** In addition to seizures, patients with low grade-gliomas (LGG) may, to a lesser extent, present with headaches, focal neurologic signs and cognitive impairment. However if patients do not experience seizures and obvious neurological deficits, they are often considered asymptomatic and neuropsychological disturbances may go unnoticed. Our aim was to describe the cognitive profile of patients suffering from LGG, giving a quantitative and qualitative characterization of the disorders.

**METHODS:** A retrospective analysis was performed, collecting data by the neuropsychological assessments of patients newly diagnosed with LGG, admitted to our center from 2009 to 2015. We also obtained data on tumor location and surgery/biopsy. Neuropsychological evaluation was performed by means of standardized tests assessing different cognitive functions; in all cases the assessment occurred after surgery/biopsy.

## RESULTS : demographic and clinical data

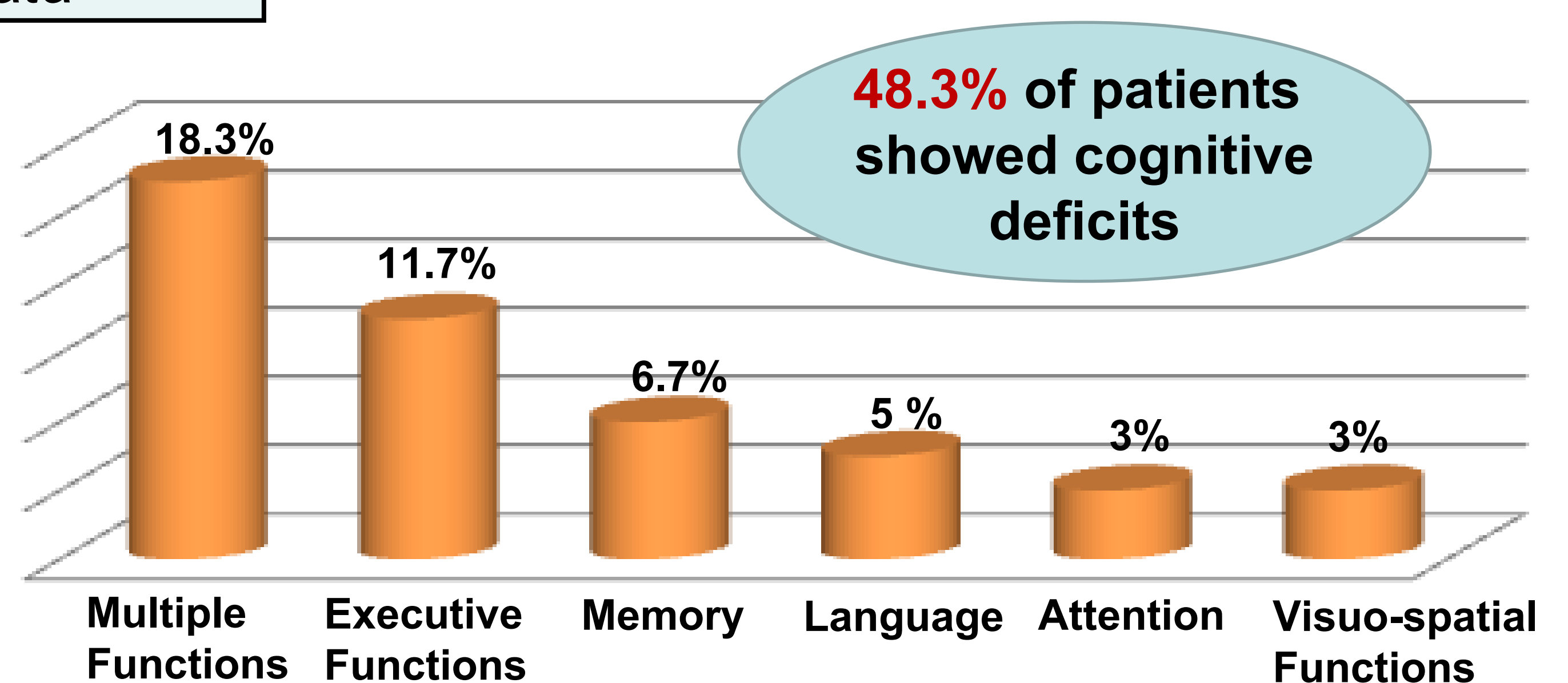
**STUDY SAMPLE:** 60 LGG patients (35M/25F, mean age 45.7±14.2 years).  
46 (77%) underwent surgical resection;  
14 (23%) biopsy.

**Tumor side:**  
Right: 29 (48.3%)  
Left: 28 (46.7%)  
Bilateral: 3 (5%)



## RESULTS : neuropsychological data

Neuropsychological battery
Mini Mental State Examination
Logical Memory
Rey Auditory Verbal Learning Test
Digit Span
Corsi Test
Raven Progressive Matrices 1938
Phonemic and semantic fluency
Frontal Assessment Battery
Trail Making Test A and B
Rey-Osterreith Complex Figure – copy and recall



**CONCLUSIONS:** Nearly half of LGG patients have neuropsychological impairments that, even mild, may negatively affect health-related quality of life, professional reintegration, interpersonal relationships, and leisure activities. **An extensive assessment of higher functions should be performed in a more systematic way in patients with LGG, with the aim to use this information actively to select the best individualized therapeutic management with preservation of QoL.**