

## INTRODUCTION

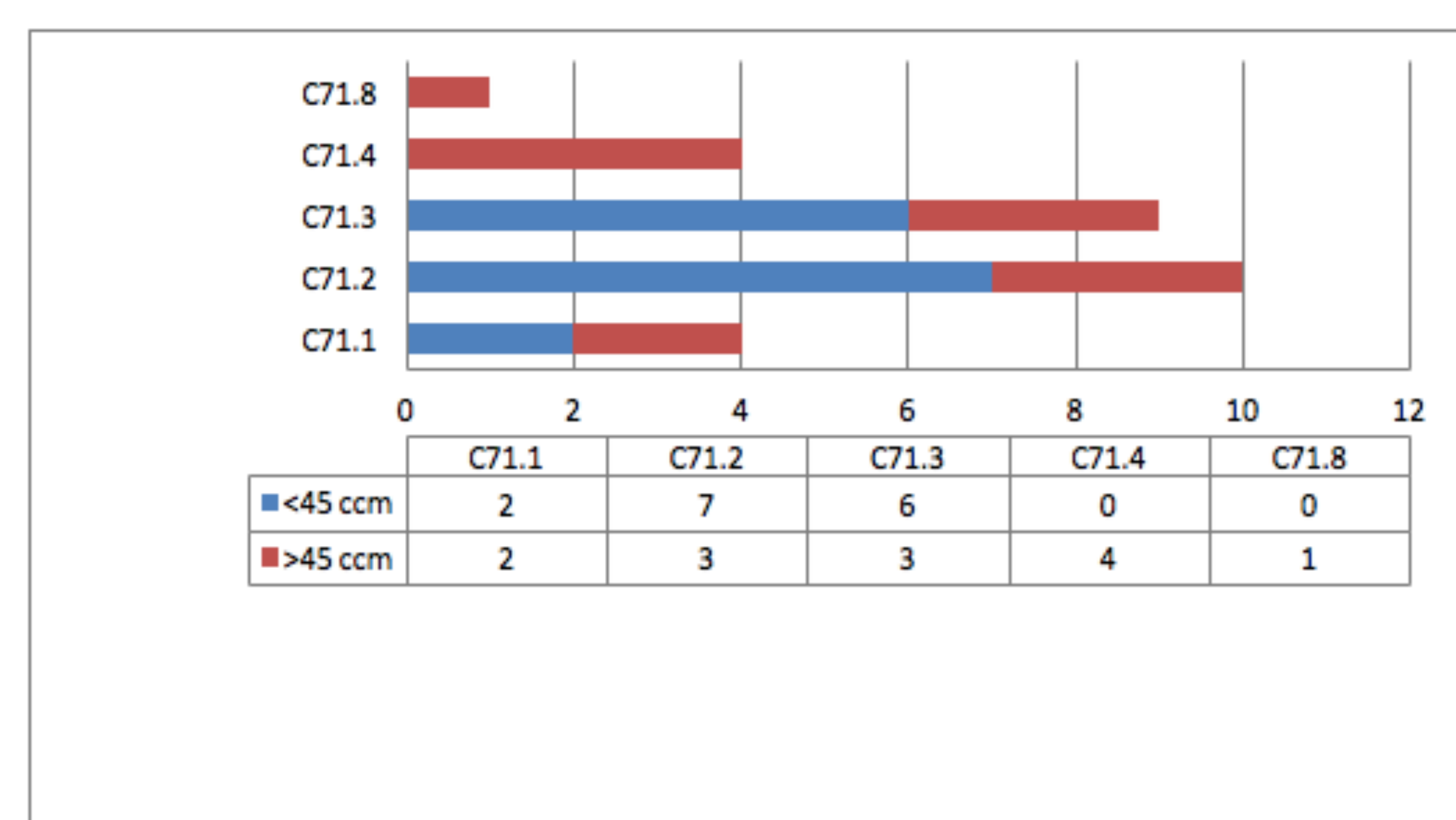
O(6)-methylguanine-DNA methyltransferase (MGMT) promoter methylation status is considered as an important prognostic marker in patients with glioblastoma multiforme. Patients with methylated MGMT promoter are considered that have better prognosis, have longer disease free survival and overall survival.

## METHODS

We performed retrospective analysis of 28 patients with glioblastoma multiforme intended to be treated with radiotherapy and with known MGMT promoter status. Volume of the tumor was measured on initial MR of the brain and it was delineated on transversal MR image DICOM datasets. "Tumor" was defined as contrast enhanced region in T1 weighted image after application of i.v. contrast.

## RESULTS

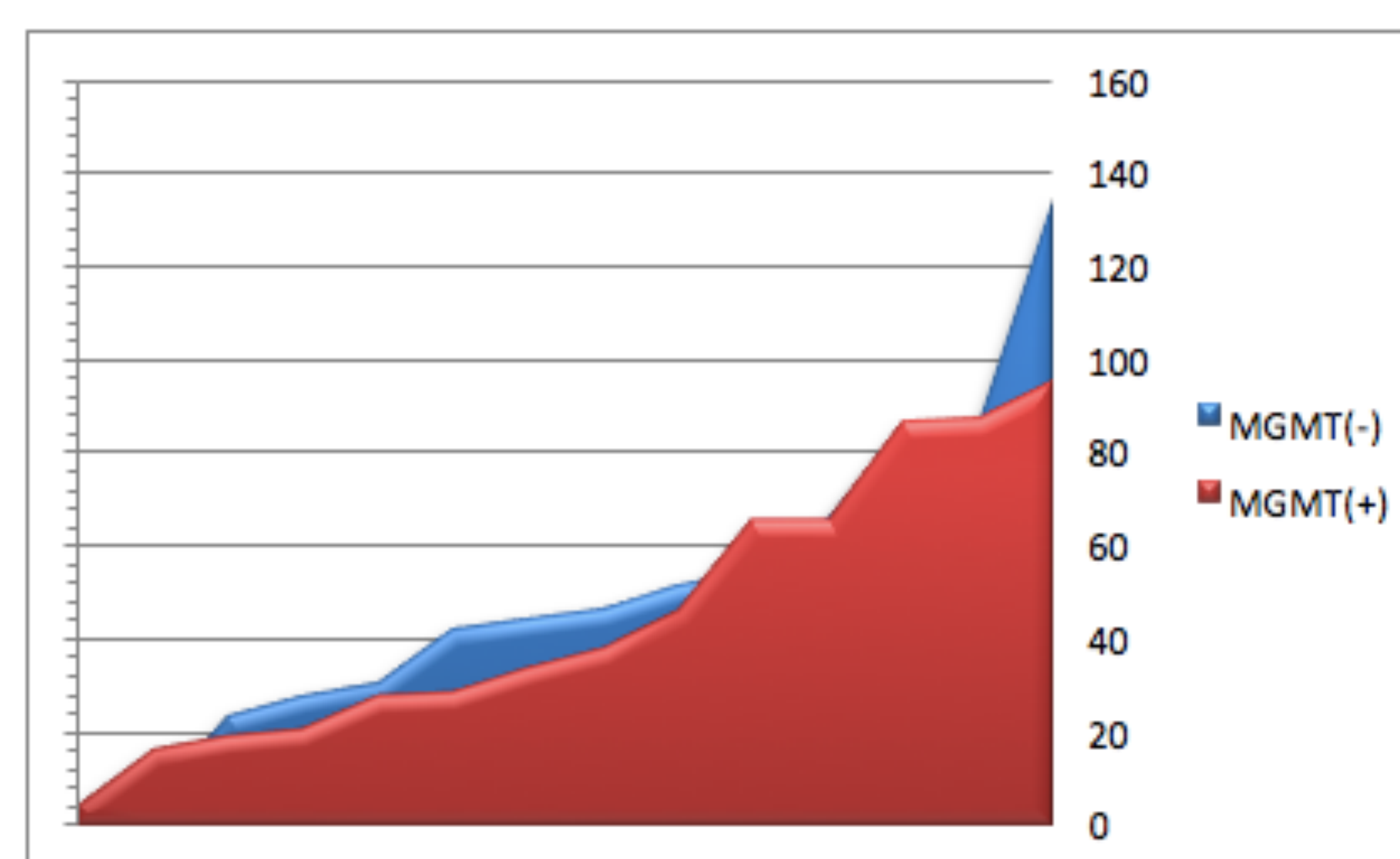
From 28 patients, 14 patients were with methylated MGMT promoter (MGMT-M) and 14 with wild type MGMT promoter (MGMT-W). Mean MRI tumor volume in MGMT-M group was 45,41 cm<sup>3</sup> (range 4,50 cm<sup>3</sup> - 95,26 cm<sup>3</sup>) and in MGMT-W group 50,46 (range 3,81 cm<sup>3</sup> - 134,79 cm<sup>3</sup>). Comparison of volumes of 2 groups has shown that there is not significant differences between tumor volumes in the groups p= 0.29864.



Distribution of patients according to primary tumor location

	avg	std	min	max
MGMT(+)	45,41	29,38	4,50	95,26
MGMT(-)	50,46	34,89	3,81	134,79

p= 0.29864 (ns)



Tumor volume distribution

## CONCLUSION

In our study we can conclude that there is no correlation between MGMT methylation status and initial tumor volume in patients with glioblastoma multiforme.