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Patterns of care and survival in a retrospective analysis of 1059 patients with glioblastoma multiforme treated between 2002 and 2007: a multicenter study by the Central Nervous System Study Group of Airo (italian Association of Radiation Oncology).

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Abstract

OBJECTIVE: To investigate the pattern of care and outcomes for newly diagnosed glioblastoma in Italy and compare our results with the previous Italian Patterns of Care study to determine whether significant changes occurred in clinical practice during the past 10 years. **METHODS:** Clinical, pathological, therapeutic, and survival data regarding 1059 patients treated in 18 radiotherapy centers between 2002 and 2007 were collected and retrospectively reviewed. **RESULTS:** Most patients underwent both computed tomography and magnetic resonance imaging either preoperatively (62.7%) or postoperatively (35.5%). Only 123 patients (11.6%) underwent a biopsy. Radiochemotherapy with temozolomide was the most frequent adjuvant treatment (70.7%). Most patients (88.2%) received 3-dimensional conformal radiotherapy. Median survival was 9.5 months. Two- and 5-year survival rates were 24.8% and 3.9%, respectively. Multivariate analysis showed the statistical significance of age, postoperative Karnofsky Performance Status scale score, surgical extent, use of 3-dimensional conformal radiotherapy, and use of chemotherapy. Use of a more aggressive approach was associated with longer survival in elderly patients. Comparing our results with those of the subgroup of patients included in our previous study who were treated between 1997 and 2001, relevant differences were found: more frequent use of magnetic resonance imaging, surgical removal more common than biopsy, and widespread use of 3-dimensional conformal radiotherapy + temozolomide. Furthermore, a significant improvement in terms of survival was noted ($P < .001$). **CONCLUSION:** Changes in the care of glioblastoma over the past few years are documented. Prognosis of glioblastoma patients has slightly but significantly improved with a small but noteworthy number of relatively long-term survivors.

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