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Abstracts

AT-13. R9802: PHASE III STUDY OF RADIATION THERAPY (RT) WITH OR WITHOUT PROCARBAZINE, CCNU, AND VINCRISTINE (PCV) IN LOW-GRADE QLIOMA: RESULTS BY HISTOLOGIC TYPE

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BACKGROUND: Recent results of R9802 (Buckner et al; J Clin Oncol 32:5s, 2014 (suppl; abstr 2000)) demonstrated that PCV given with RT at the time of initial diagnosis prolongs both progression-free survival (PFS) and overall survival (OS) for all patients enrolled in the trial. Herein, we report the impact of treatment on PFS and OS based upon specific histologic type. METHODS: Eligibility criteria included age <40 years with subtotal resection or biopsy, age >40 with any extent of resection, and supratentorial grade ll oligodendroglioma (O), oligo-astrocytoma (OA), or astrocytoma (A). Patients were stratified by age, histology, Karnofsky Performance Status, and presence versus absence of contrast enhancement on the preoperative imaging study and randomized to RT alone (54 Gy in 30 fractions) or RT followed by 6 cycles of PCV chemotherapy. In an exploratory analysis, we used the log rank test to compare survival and progression free survival (PFS) distributions for each histologic type. RESULTS: 251 eligible patients were accrued from 1998 to 2002: 107 had O, 79 had OA, and 65 had A. In total, 67% have progressed and 55% have died. Median PFS (RT vs. RT + PCV) overall, O, OA, and A, respectively, are 4.0 vs 10.4 ($p < 0.001$); 6.0 vs not reached (NR) ($p < 0.001$); 3.0 vs 8.9 ($p = 0.01$); and 1.8 vs 3.7 ($p = 0.06$) years. Median survival times (RT vs. RT + PCV) overall, O, OA, and A, respectively, are 7.8 vs 13.3 ($p = 0.002$); 10.8 vs NR ($p = 0.008$); 5.9 vs 11.4 ($p = 0.05$); and 4.4 vs 7.7 ($p = 0.31$) years. CONCLUSIONS: For grade 2 glioma patients with less than gross total tumor resection or >40 years of age, PCV + RT prolongs both OS and PFS compared with RT alone. The observed benefit is most definitive for O and OA patients.