

Adjuvant chemotherapy in elderly patients: an analysis of National Cancer Institute of Canada Clinical Trials Group and Intergroup BR.10

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Background: Recent trials have shown significant survival benefit from adjuvant chemotherapy after resection of NSCLC. Whether elderly patients tolerate platinum-based adjuvant chemotherapy and derive the same survival advantage is unknown. This retrospective study evaluated the influence of age on survival, chemotherapy delivery and toxicity in NCIC CTG BR.10.

Methods: Pretreatment characteristics and survival benefit from treatment were compared for patients ≤ 65 and >65 . Chemotherapy delivery and toxicity were compared for 213 treated patients.

Results: There were 327 young and 155 elderly patients. Baseline prognostic factors by age were similar with the exception of histology (adeno 58% young, 43% elderly; squamous 32% young, 49% elderly; $p=0.001$) and PS (PS 0 53% young, 41% elderly; $p=0.01$). Overall survival by age showed a trend favoring the young in univariate (HR 0.77, CI 0.58-1.04, $p=0.084$) and multivariate analyses (HR 0.75, CI 0.56-1.01, $p=0.059$). Patients >75 years had significantly shorter survival than those aged 66-74 (HR 1.95, CI 1.11-3.41, $p=0.02$). Overall survival for patients >65 was significantly better with chemotherapy *v* observation (HR 0.61, CI 0.38-0.98, $p=0.04$). Chemotherapy administration and toxicity were evaluated in 63 elderly and 150 young patients. Mean dose intensities of vinorelbine (V) and cisplatin (C) were 13.2 and 18.0 in the young and 9.9 and 14.1 in the elderly (V $p=0.0004$; C $p=0.001$). The elderly received significantly fewer doses of V ($p=0.014$) and C ($p=0.006$). Fewer elderly patients completed treatment and more refused treatment compared to young patients ($p=0.03$). There were no significant differences in toxicities, G-CSF use or hospitalization by age group, except for myalgias and mood alteration (more frequent among the young). Six of 126 deaths (4.8%) in the young were due to non-malignant causes *v* 12 of 71 (16.9%) in the elderly ($p=0.008$).

Conclusions: In spite of receiving less chemotherapy than young patients, adjuvant chemotherapy improves overall survival in patients aged >65 with acceptable toxicity. Adjuvant chemotherapy should not be withheld from elderly patients, although patients over 75 years of age require further study.