

UDK 615.451/457:615.013.41

ASSOCIATION OF CHEMORADIOTHERAPY WITH OUTCOMES AMONG PATIENTS WITH STAGE I TO II VS STAGE III SMALL CELL LUNG CANCER*Pulnyi Y. Y., Panfilova H. L.***National University of Pharmacy, Kharkiv, Ukraine**

Introduction. Small cell lung cancer (SCLC) accounts for 10% to 20% of lung cancer cases. A 2-tier staging system, introduced by the Veterans Administration Lung Cancer Study, classifies disease into limited or extensive stage according to whether the tumor is localized to one hemithorax [1,2]. On the basis of several meta-analyses and landmark trials, standard treatment for limited-stage SCLC is chemoradiotherapy using twice-daily radiotherapy delivered early with chemotherapy. Patients with treatment response should also be offered prophylactic cranial irradiation (PCI).

Aim. To examine the characteristics and outcomes among patients with stage I to II SCLC treated with modern chemoradiotherapy

Materials and methods. Statistical analysis was conducted on the basis of scientific articles on this topic.

Results and discussion. A total of 509 (277 [54.4%] men; mean [SD] age, 61.5 [8.3] years) of 543 patients (93.7%) with TNM staging information were eligible for this subgroup analysis, and 86 of the 509 (16.9%) had TNM stage I to II disease. The median gross tumor volume was smaller in patients with stage I to II disease (38.4 cm³; range, 2.2-593.0 cm³) compared with patients with stage III disease (93 cm³; range, 0.5-513.4 cm³) ($P < .001$). No other significant differences were found in baseline and treatment characteristics and chemoradiotherapy adherence between the 2 groups or the number of patients with stage I to II disease (78 [90.7%]) and stage III disease (346 [81.8%]) who received PCI ($P = .10$). Patients with stage I to II disease achieved longer OS (median, 50 months [95% CI, 38 to not reached months] vs 25 months [95% CI, 21-29 months]; hazard ratio, 0.60 [95% CI, 0.44-0.83]; $P = .001$) compared with patients with stage III disease. In patients with stage I to II disease, no significant survival difference was found between the trial arms (median, 39 months in the once-daily arm vs 72 months in the twice-daily arm; $P = .38$). Apart from lower incidence of acute esophagitis in patients with stage I to II disease compared with patients with stage III disease (grade ≥ 3 , 9 [11.3%] vs 82 [21.1%]; $P < .001$), the incidences of acute and late toxic effects were not significantly different.

Conclusions. Patients with stage I to II SCLC in CONVERT achieved long-term survival with acceptable toxic effects after chemoradiotherapy and PCI. This study suggests that patients with stage I to II small cell lung cancer treated with modern chemoradiotherapy have better outcomes compared with patients with stage III disease, providing information that practitioners can potentially give their patients to aid clinical decisions.

References

1. Khajedaluee M, Dadgarmoghaddam M, Saeedi R, IzadiMood Z, Abrishami M, Zamani M. Mortality, morbidity, survival, and burden of top 9 cancers in a developing country // Raz Int J Med – 2014 – №2 – P.1-9.
2. Siegel RL, Miller KD, Jemal A. Cancer statistics, 2020. CA // Cancer J Clin. – 2020 –№70(1) – P.7-30.