Chemotherapy May Improve Outcomes for Patients With Resected Non-Small Cell Lung Tumors

The results of the randomized International Adjuvant Lung Cancer Trial were presented by researchers from the Institut Gustave Roussy in Villejuif, France. In this study, 1,867 patients from 148 centers in 33 countries were randomized into two treatment arms: cisplatin-based chemotherapy or no chemotherapy. All patients had complete resection of non-small cell lung carcinomas. A total of 935 patients were allocated to the treatment arm and 67% received at least 300 mg/m² of cisplatin. The drug was combined with etoposide and a vinca alkaloid. The other 932 patients in the control arm did not receive chemotherapy. A significant difference existed between the study arms in the two- and five-year survival rates (70% and 45%) in the chemotherapy arm versus 67% and 40% in the control arm; \( R^2 = 0.86 \), confidence interval = 0.76–0.98, \( p < 0.03 \). The study arms also differed in the two- and five-year disease-free survival (61% and 39% in the chemotherapy arm versus 55% and 34% in the control arm; \( R^2 = 0.83 \), confidence interval = 0.74–0.94, \( p < 0.003 )

Toxicities included neutropenia (40%), neutropenia fever (7%), anemia (6%), fatigue (5%), anorexia (2%), nausea (2%), thrombocytopenia (2%), diarrhea (1%), neuropathy (1%), and hypersensitivity (<1%). For all patients, 43% had stable disease. Partial or complete remission occurred in 9% of patients taking pemetrexed and 9% of patients taking docetaxel. Patients taking pemetrexed were less likely to experience severe chemotherapy-related side effects such as fever and infections, be hospitalized because of side effects, or experience hair loss or peripheral neuropathy. The researchers concluded that because of the reduction in side effects, pemetrexed might replace docetaxel for recurrent non-small cell lung cancer.

Pemetrexed May Be Effective for Patients With Non-Small Cell Lung Carcinoma

Researchers from Indiana University presented the results of a multicenter, phase III trial of pemetrexed versus docetaxel for patients with recurrent non-small cell lung cancer. Pemetrexed is an inhibitor of folic acid synthesis. Folic acid is essential for cell growth, and pemetrexed interferes with the activity of three enzymes necessary for cell division. A total of 571 patients who had been treated previously with chemotherapy were randomized into one of two treatment groups: pemetrexed 500 mg/m² IV supplemented with vitamin B₁₂ injections, folic acid, and dexamethasone, or docetaxel 75 mg/m² IV with dexamethasone on day one of 21-day cycles. Ten months after the final patient entered the study, 52% (299 patients) had died. Toxicities included neutropenia (40%), neutropenia fever (7%), anemia (6%), fatigue (5%), anorexia (2%), nausea (2%), thrombocytopenia (2%), diarrhea (1%), neuropathy (1%), and hypersensitivity (<1%). For all patients, 43% had stable disease. Partial or complete remission occurred in 9% of patients taking pemetrexed and 9% of patients taking docetaxel. Patients taking pemetrexed were less likely to experience severe chemotherapy-related side effects such as fever and infections, be hospitalized because of side effects, or experience hair loss or peripheral neuropathy. The researchers concluded that because of the reduction in side effects, pemetrexed might replace docetaxel for recurrent non-small cell lung cancer.