ESMO Open Cancer Horizons

Pemetrexed-cisplatin with concurrent thoracic radiation after pemetrexed-cisplatin induction in patients with unresectable locally advanced non-squamous NSCLC: results by age subgroup

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Concurrent chemoradiotherapy (CT+RT) is a standard of care for good-performance patients with unresectable stage IIIA/IIIB non-small cell lung cancer (NSCLC).[1 2] In a phase II study, treatment with two cycles of pemetrexed-cisplatin (Pem-Cis) induction, followed by full-dose Pem-Cis plus concurrent RT was well tolerated and effective in 90 patients with stage IIIA/IIIB unresectable, non-squamous NSCLC.[3] Here, we report by-age subgroup data for 17 elderly (aged >70 years) and 73 non-elderly patients (aged ≤70 years).

The Eastern Cooperative Oncology Group performance status 0–1, no prior systemic therapy, adequate pulmonary function (FEV1 >50% and carbon monoxide diffusing capacity (DLCO) >40% of predicted normal value) and a total lung volume to receive at least 20 Gy (V_{20}) of ≤35% were required (patient characteristics: see online supplementary material). Patients received two 3-week cycles of Pem 500 mg/m^2 and Cis 75 mg/m^2 as per PEM label (vitamin supplementation). Patients with complete response (CR), partial response or stable disease were then eligible for concurrent CT+RT, which included two additional cycles of full-dose Pem-Cis CT and RT (66 Gy, 33 fractions).

Of 17 elderly patients, 16 (94.1%) started concurrent CT+RT and 12 (70.6%) completed CT+RT as planned. Of 73 non-elderly patients, 59 (80.8%) started concurrent CT+RT and 52 (71.2%) completed CT+RT as planned.

The regimen was effective both in the elderly and non-elderly patient subgroups, with 1-year progression-free survival rates of 53.3% and 44.9% and median overall survival times of 25.1 and 26.2 months, respectively (figure 1). Two elderly patients achieved CR. In one patient, the tumour became amenable to surgical resection after CT+RT, response was classified as CR after surgery, the other achieved CR after CT+RT alone. Overall response and disease control rates in this subgroup were 64.7% and 94.1%, respectively (non-elderly: 58.9% and 74.0%).

During concurrent CT+RT, 8 of the 16 elderly patients who started CT+RT (50.0%) had grade (G)3/4 treatment-emergent adverse events (TEAEs; non-elderly: 25 of 59, 42.4%; details in online supplementary material). No elderly patient died due to drug toxicity, none required transfusions. Neutropaenia and leucopenia were the most frequent haematologic toxicities, oesophagitis and dysphagia were the most common non-haematologic toxicities; 18.8% of the elderly patients had G3 oesophagitis, none had febrile neutropaenia or G3/4 radiation dermatitis/mucositis, G3/4 radiation pneumonitis, G3/4 dehydration or diarrhoea.

These data align with results from the overall study population,[3] suggesting that this regimen is feasible in elderly and non-elderly patients alike and may help in making the disease surgically resectable in elderly patients with good performance. Findings should be interpreted with caution due to the exploratory nature and small number of elderly patients included. Nevertheless, to our knowledge, these are the first data for elderly patients receiving Pem-Cis induction followed by Pem-Cis and concurrent RT. The data suggest that fit elderly patients may tolerate concurrent CT+RT

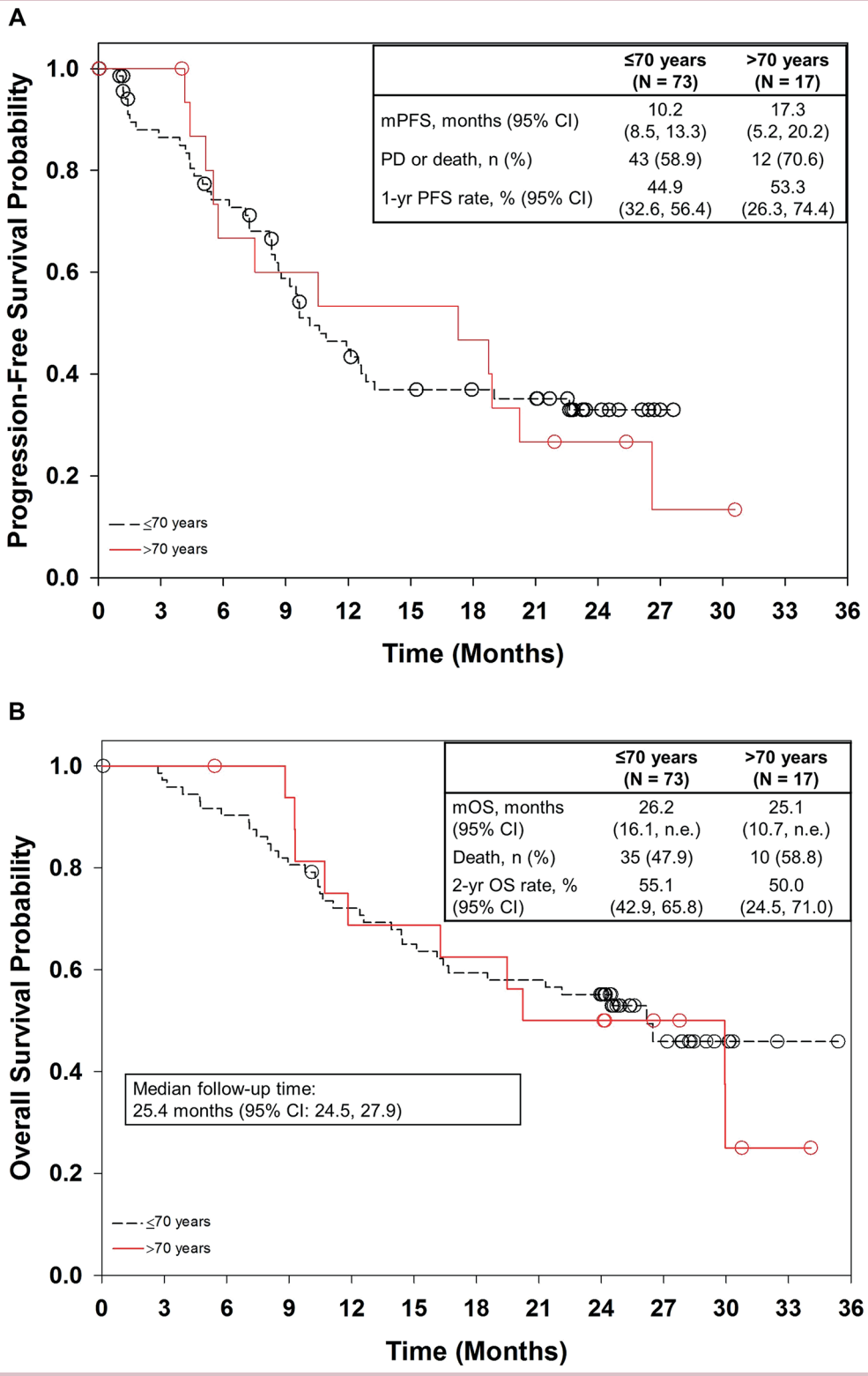

Figure 1 Progression-free (a) and overall (b) survival by age subgroup, Kaplan-Meier plots. CI, confidence interval; m, median; N, number of all patients; n, number of patients with event; n.e., not estimable; OS, overall survival; PD, progressive disease; PFS, progression-free survival. Circles indicate censored patients.

and stand to gain survival benefits. The data provide a rationale for conducting more prospective studies in elderly patients with locally advanced NSCLC that may help to develop evidence-based recommendations to improve management of these patients. Until more evidence is generated, performance status and comorbidities should predominate over age alone with respect to decision-making.[4]

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Notes