Metastatic or stage IV non-small cell lung cancer (NSCLC) is no longer regarded a uniform disease entity even if the general outlook is poor for the vast majority of patients facing this diagnosis. Disease extent is highly variable, and metastatic spread might either be present at initial cancer diagnosis or develop at some point in time after previous curative attempts for stage I-III disease. Selected treatment-naïve patients with limited, resectable intrathoracic tumor and solitary distant metastasis, for example to the brain, experience long-term survival after complete surgery of both primary and metastasis, followed by adjuvant therapy (1,2). However, the majority of patients develop extensive spread, receive palliative systemic treatment, and have a survival expectation of months rather than years. Even in this situation, histological and molecular disease characteristics are crucial determinants of outcome and therapeutic approach. It has for example been shown in a NSCLC brain metastases study that patients with adenocarcinoma histology survived significantly longer than those with other histologies (3). Innovative treatment options including drugs targeting the epidermal growth factor receptor and activated lymphoma kinase pathways have been developed, allowing individually tailored approaches, at least in patients whose tumor cells carry mutations that will render them sensitive to such drugs (4).

Eventually, the disease becomes resistant to any pharmacological treatment attempt. It has long been recognized that patients with NSCLC experience a considerable symptom burden when their disease becomes refractory to a given line of treatment and in the terminal phase. Even if local treatments are unable to control the progress of spread throughout the body, they are highly efficacious in improving symptoms and quality of life. Due to its favourable cost-benefit ratio and well documented palliative benefits, radiotherapy has been a mainstay of multimodal care for decades. However, pattern of practice have shown important variations between physicians and between institutions, raising questions about what should be the preferred timing of radiotherapy delivery and optimum dose-fractionation regimen.

Recently, the Cancer Care Outcomes Research and Surveillance Consortium (CanCORS) studied radiotherapy practice pattern for metastatic NSCLC in several US regions during the time period 2003 to 2005 (5). The demographics of their population correspond well to those of the Surveillance, Epidemiology, and End Results (SEER) population, although the age distribution was slightly younger. The study included 1,574 patients (1,373 had metastatic disease at first diagnosis). Median age was 68 years and median survival 4.7 months. Missing information included extent of disease, performance status and weight loss. Fifty-one percent of these patients received at least one course of chemotherapy after metastatic diagnosis, and 57% had at least one visit with a radiation oncologist. Not all of them were found suitable candidates for palliative radiotherapy. Eventually 87% of those consulting with a radiation oncologist received radiotherapy. The utilization rate was 50% and comparable to the chemotherapy figure of 51%. Among those who received radiotherapy, 67% had one course, 25% had two courses, and 8% had more than two courses during the 15 months follow-up period selected for this study. The most common sites of treatment were...
In conclusion, palliative radiotherapy should be an integral part of multimodal, interdisciplinary management of patients with metastatic NSCLC. The CanCORS study covered the time period 2003 to 2005 and the results might or might not be representative of contemporary practice. It is important to choose wisely from the large number of potential fractionation regimens available in order to prolong survival in the few patients where this is achievable, and avoid overtreatment when pure symptom palliation is the only realistic goal of treatment. Elderly patients should not be deprived from access to palliative radiotherapy, given its minimal toxicity.

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References