

Chairperson's Introduction

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Lung cancer is the most frequent cause of cancer death worldwide and its global incidence has steadily increased during the last decades. Non-small cell lung cancer (NSCLC) accounts for more than 75% of all lung cancer cases and the vast majority of these patients will present with advanced (stage IIIB or IV) disease. The management of stage IIIB NSCLC remains a clinical challenge. Indeed, this stage includes a wide variety of patients – from still operable cases to those with pleural effusion, amenable only to palliative approaches. Additionally, many NSCLC patients are not candidates for aggressive therapy due to poor performance status or comorbidities. In general, locally advanced NSCLC patients necessitate multidisciplinary management including local and systemic therapies.

Surgery, the main modality in NSCLC may be considered in only a small proportion of stage IIIB patients, and is usually accompanied by various combinations of chemotherapy and radiotherapy. In inoperable disease, constituting the majority of stage IIIB cases, high-dose external-beam radiotherapy has traditionally been considered an intended treatment for the cure. Unfortunately, in most instances this method does not

allow for eradication of bulky tumour in the thorax and does not prevent uncontrolled systemic disease.

In search of a way of improving the outcome, several refinements of radiation techniques have been introduced. These include the use of multileaf beam collimators, sophisticated three-dimensional computerised planning systems, image-guided radiotherapy and respiration accommodating techniques, all allowing an escalation of the total radiation dose. Another avenue of clinical investigation has been a strategy of combining chemotherapy and radiation. This method, as opposed to local therapeutic approaches, may potentially increase the cure rate not only by improving tumour control in the thorax, but also by eliminating or delaying the emergence of metastatic disease.

All these approaches will be addressed in this chapter and their relevance in particular categories of patients discussed.

Conflict on interest statement

None declared.