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PLENARY SESSION “Combined treatment for lung cancer: Chemical and biological radio modulation”

Radiochemotherapy in non-small cell lung cancer (NSCLC): A critical review



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Stage III lung cancer remains a heterogeneous disease affecting up to a third of newly diagnosed NSCLC patients annually. Measurable successes have been made over the last decade, but substantial room for improvement remains.

Combined cytotoxic chemotherapy and radiation therapy is established as the standard treatment for patients with medically inoperable or technically unresectable stages II–III NSCLC. Multiple randomized studies and meta-analyses demonstrate that concurrent radiochemotherapy results in improved survival compared with sequential chemoradiotherapy or RT alone.

Although numerous phase III trials have clearly demonstrated a survival benefit in those patients who receive combined modality therapy, many questions remain. The most effective combination of drugs, their optimal mode of administration, the use of either induction or consolidation therapy in addition to a backbone of concurrent therapy, remain important issues to define. To date there have been

no conclusive clinical trials suggesting one radiochemotherapy platform is superior to others. Neither there are no convincing randomized phase III data to date supporting a survival advantage for combining molecularly targeted agents with chemoradiotherapy in the setting of locally advanced NSCLC.

Combining chemotherapy and radiation therapy has still not been able to overcome high rates of local failure, and toxicities from these regimens remain an issue. Efforts to address these concerns with regards to radiation therapy have focused on improving tumor target definition, appropriately designing treatment fields, and dose escalation. A recently presented study demonstrates that radiotherapy dose escalation did not improve chemoradiotherapy outcomes.

Finally investigations are ongoing regarding how to optimally integrate modern radiotherapy techniques with standard chemotherapy in patients with limited metastatic disease.