## Malignant pleural and peritoneal mesothelioma: clinical update 2018

With great pleasure we present this focused issue of *Translational Lung Cancer Research* (*TLCR*) on pleural and peritoneal mesothelioma which anno 2018 remain challenging health problems with a grim prognosis. In this special issue of *TLCR* we cover many of the current topics related to epidemiology, screening, diagnosis and especially, the different treatment modalities of pleural and peritoneal mesothelioma. Dedicated authors from renowned centers contributed to this issue.

As mesothelioma incidence is causally related to asbestos exposure, an overview of hot spots in Western Europe is provided, specifically in relation to asbestos industry and large ports where asbestos is traded, as in our own local Antwerp region.

Once diagnosis is unequivocally made, outcome is poor for most patients; so, screening and early diagnosis of mesothelioma have become hot topics. A systematic review on breath analysis is provided to define its promising role.

Precise pathological diagnosis of mesothelioma is quite challenging and for this reason, new insights in pathology and possible molecular targets are provided. The latter may initiate novel therapeutic options with combination therapies.

Several changes were implemented in the 8<sup>th</sup> TNM classification, mainly related to tumor (T) and nodal (N) descriptors. In fact, the most recent TNM classification has been simplified compared to the previous one. Nodal spread has been adapted to the specific growth pattern of mesothelioma.

As treatment of mesothelioma has not yet been standardized, this topic is discussed in greater detail. The role of extensive surgery is a hotly debated subject at major oncological and thoracic surgical conferences. The question still remains which procedure gives maximal tumor clearance and best medium-term prognosis. The most extensive operation, extrapleural pneumonectomy, provides extensive debulking but its indications are quite limited at the present time. Most centers have shifted towards extended pleurectomy/decortication due to its lower morbidity and mortality with similar or even better survival as extrapleural pneumonectomy. These interventions are discussed separately. As single modality therapy is not effective in mesothelioma, combined modality treatment provides a way forward incorporating different treatment schedules of chemotherapy, radiotherapy, surgery, and very recently, also immunotherapy which is the new kid on the block. Recent insights have become available on the role of prophylactic radiotherapy to tract sites, e.g., after a thoracoscopic procedure to obtain extensive biopsies for diagnosis and perform a pleurodesis. A specific chapter is devoted to our current European Organisation for Research and Treatment of Cancer (EORTC) 1205 trial which is a phase II study randomizing patients between induction and adjuvant chemotherapy with all patients having an extended pleurectomy/decortication and if necessary, with excision and reconstruction of pericardium and diaphragm to obtain a maximal tumor clearance.

As treatment is often demanding and extending over a longer time period with a clear impact on quality of life, the way patients experience this therapy has become a clinically relevant issue to consider. A literature survey is presented on patient-reported outcome measures (PROMs) in the overall management of mesothelioma.

Lastly, specific topics related to peritoneal mesothelioma are discussed separately providing more insight in this enigmatic disease.

With this focused issue we hope to have provided a clear update on pleural and peritoneal mesothelioma, to stimulate further research and hopefully, to provide a better outcome for patients with this still dreadful disease.

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