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Editorial Updates for Chest Tumors

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Editorial

Updates for Chest Tumors

This thematic issue covers a different aspect of management for lung cancer. Lung cancer is the major cause of cancer mortality in men and women worldwide. The current role and recent advances of screening, imaging, staging, pathology [1], molecular markers, surgery, radiotherapy, systemic therapy, and palliative care are reviewed. The entire thematic issue has many illustrative clinical cases which will be of great teaching value for clinicians in practice or in training. Regarding lung cancer screening, the Cancer Care Ontario Guidelines [2] suggest using low-dose Computerized Tomography (CT) to screen asymptomatic patients between 55-74 years of age with at least a 30 pack-year smoking history who are current smokers or have quit within the previous 15 years.

Beginning in 2018, the eighth edition of American Joint Commission on Cancer staging will be used [3]. The comparison can be seen in details in the overview by Davidson *et al.*, In 2011, the International Association for the Study of Lung Cancer, American Thoracic Society, and European Respiratory Society (IASLC/ATS/ERS) proposed a modified lung adenocarcinoma classification [4]. Changes in the 2004 WHO Classification include the removal of the term “Bronchioloalveolar Carcinoma” (BAC) and the addition of the terms “Adenocarcinoma *In Situ*” (AIS) and “Minimally Invasive Adenocarcinoma” (MIA). Further changes are seen in the 2015 WHO Classification, in the overview by Davidson *et al.*, [1]. Only resection specimen can diagnose adenocarcinoma *in situ*, not based on small biopsy or cytology in which the proper terminology is adenocarcinoma with lepidic pattern. Apart from lung cancer, mesotheliomas and thymomas are discussed in the overview of Lee, *et al.* An advanced large cell neuroendocrine carcinoma (stage III and IV) is treated like Extensive Stage Small Cell Lung Cancer (ES-SCLC) by chemotherapy and then Prophylactic Cranial Irradiation (PCI) for responders [5].

Systematic reviews show that complex radiation technology with Image-Guided Radiotherapy (IGRT) improves the precision of radiation treatment and minimizes toxicity. The current standard of care for ES-SCLC recommends PCI for responders. The landmark EORTC study by Slotman *et al.*, [6] had criticized that patients did not have baseline MRI. A randomized Japanese study of 169 patients mandated baseline MRI to rule out brain metastases before enrolment. The median follow-up was 9 months as the trial was stopped early due to futility. There was a trend towards inferior survival as the overall median survival rates were 10.1 and 15.1 months with and without PCI ($P=0.091$) [7]. Researchers from the University of Heidelberg studied 136 ES-SCLC patients. Baseline contrast CT or MRI head did not show any significant difference in survival [8]. Their results showed an overall survival benefit of PCI. Similarly, the 318 ES-SCLC patients in the North Central Cancer Treatment Group pooled analysis benefit from PCI. In the past, neurotoxicity of PCI could not be demonstrated but RTOG 2012 documented this at 12 months [9]. PCI is not recommended in patients with poor performance status, impaired neurocognitive function and is questioned in resected stage I small cell lung cancer and the elderly of 80 years old or more [10, 11].

Physicians tend to overestimate the life expectancy of cancer patients [12]. This leads to over-treatment of patients, and wasting resources. Early palliative care for metastatic non-small cell lung cancer patients is associated with less aggressive treatments, better quality of life, mood of patients/ caregivers, and longer survival (11.6 months vs. 8.9 months, $P=0.02$) [13]. Careful selection of patients for radical or palliative treatment is required. Different models are proposed to predict life expectancy of sick cancer patients in the overview of palliative care by Lee *et al.*, To relieve respiratory symptoms, modern procedures include bronchoscopic stenting to establish airway patency, brachytherapy, electro-cautery or balloon bronchoplasty to control hemoptysis, or endoscopic debridement by cryosurgery, photo-resection to debulk tumors and heliox (combination of helium and oxygen) [14].

Expedited referral pathways, or rapid access program was first implemented in Vancouver, Canada. Researchers reported that, in retrospective comparison to their standard clinic, improved wait times, increased connections with supportive services, and more efficient clinical workload was achieved through their newer streamlined process. Their report specifically indicated a quicker median wait time from referral to the consultation of 7 days; with almost three-quarters receiving radiation treatment on the same day as their first consult, and with over half of the patients connected to an additional desired health service [15]. End of life issues *e.g.* euthanasia and medically assisted suicide are ethical controversial hot topics that many countries are debating. Wright *et al.* showed that end of life discussion resulted in less aggressive treatment, like intensive care unit admission [16]. Aggressive treatment is associated with worse quality of life of patient and caregiver bereavement adjustment. End of life care for lung cancer varies with different countries. In the present thematic issue, we have invited oncologists from Hong Kong, France and Canada to express their opinions about palliative and end of life care. These have been discussed in the last review of the thematic issue.

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