initial report), median PFS was 4.2 months (identical) and median survival was 25.8 months (24.9 in the initial report). At completion of this study, an amendment was introduced to add epacadostat 10 mg BID to pembrolizumab in the same patient population. Four patients were treated before the study was closed after the results of a randomized trial of the combination in melanoma failed to meet its primary endpoint. No patient responded (2 stable and 2 progressions). One patient developed grade 2 myocarditis. In study #2 a total of 26 patients with advanced thymic carcinoma were included, with a median follow up of 33.4 months. The response rate (19.2%) did not change, and no other autoimmune disorder appeared since the initial publication (5/26 = 19%). Median duration of response (9.7 months), median PFS (6.1 months) and median survival (14.5 months) did not change compared to the initial publication. No additional autoimmune disorders were documented compared to the original publication. A total of 5 patients received 2 years of pembrolizumab according to protocol; no patient continued beyond 2 years or was retreated upon progression with pembrolizumab. **Conclusion:** These two studies confirm definite activity of pembrolizumab in advanced thymic carcinoma. Recently pembrolizumab was included in the NCCN guidelines for thymic carcinoma. No additional autoimmune disorders were noted after discontinuation of pembrolizumab. There are significant differences in duration of response and overall survival in the 2 studies and potential factors are being investigated. In study #1 pembrolizumab was continued beyond 2 years in several patients and rechallenge was an available option. **Keywords:** Thymic carcinoma, Pembrolizumab, autoimmune disorders

MA20.06
Neutrophil to Lymphocyte Ratio Is an Independent Prognostic Predictor in Thymoma

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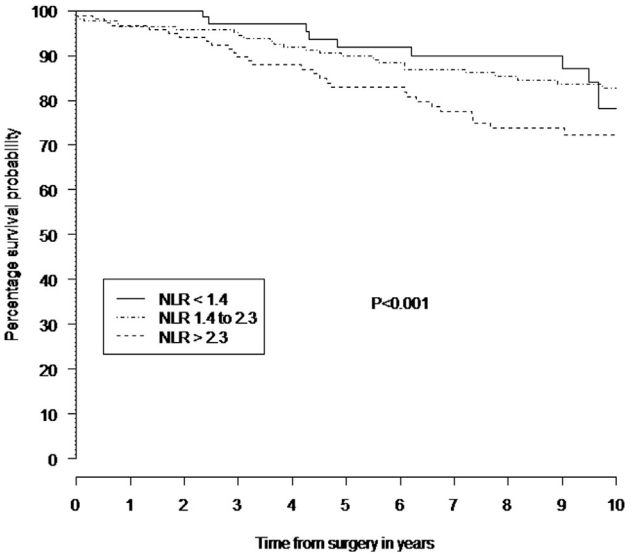
Background: Thymoma is the most common primary neoplasm of the anterior mediastinum in adults and conventional prognostic factors include Masaoka Stage, WHO histology and completeness of resection. Little is known of preoperative peripheral neutrophil-to-lymphocyte ratio (NLR) as an independent additional discriminator of prognosis. **Method:** We performed an international multicentre retrospective cohort study (UK Health Research Reference 19/HRA/0440 and EU internal approval reference xxxxxx). We included patients who underwent complete resection for thymoma and data was acquired through patient medical records with follow up data obtained through national database and hospital records. NLR calculated on pre-operation bloods results. **Result:** From July 1987 to December 2017, 433 patients underwent surgery for thymoma. The majority were male 228(53%) with a mean age (SD) of 55(15) years. The surgical approach was sternotomy in 335 patients (77%), thoracotomy in 23(5%) and VATS in 75(17%). The WHO classification was type A 63(15%), AB 126(29%), B1 98(23%), B2 55(13%) and B3 86(20%) patients. The Masaoka-Koga stage was I in 135(33%) II in 194(47%), III in 54 (13%) and IV in 31(7%) patients. Median (IQR) follow-up time was 86 (30 to 152) months with a 5 and 10-year survival of 88% and 79% respectively. The median NLR was 2.1 (1.5 to 3.1), when split into three groups (NLR < 1.4, NLR between 1.4 and 2.3 and NLR > 2.3), higher NLR was associated with poorer survival (log rank P<0.001) that persisted on Cox regression after adjustment for WHO grade and Masaoka stage with a HR of 1.69 (95% CI 1.20 to 2.39; P=0.002).



Conclusion: Pre-operative NLR is a simple, low cost biomarker that can stratify risk of death independent to WHO grade and Masaoka stage in patients undergoing surgery for thymoma. **Keywords:** THYMOMA, surgery, neutrophil to lymphocyte ratio

MA20.07
Thymomectomy and Total Thymectomy or Simple Thymomectomy for Early Stage Thymoma Without Myasthenia Gravis: An ESTS Thymic Working Group Study

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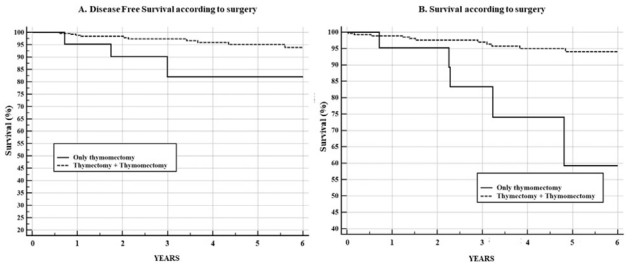
Background: Resection of thymic tumors has traditionally included removal of the tumor and the thymus gland (thymothymomectomy). Nevertheless, in recent years, some authors questioned the need to remove the thymus gland in non-MG thymomas, suggesting that resection of the tumor (simple-thymomectomy) is enough from an oncological point of view in Stage I (TNM stage classification) thymoma patients. The aim of our study was to compare short- and long-term outcome of thymothymomectomy vs. simple-thymomectomy using European Society of Thoracic Surgeons (ESTS) Thymic Database. **Method:** We investigated 1131 patients with thymic epithelial tumors included in the ESTS-Thymic Database. Three-hundred twenty-four clinical stage I (cT1N0M0, according to the 8th edition of the UICC/AJCC TNM stage classification) without Myasthenia Gravis (non-MG) thymoma cases were evaluated from 23 contributing centers (2000-2017), of which 300 (93%) thymothymomectomy and 24 (7%) simple-thymomectomy. Surgical upstaging was evaluated. In pathological stage I, we compared the completeness of resection, the rate of complications, the 30-day mortality, the overall survival and the disease-free survival (DFS). **Result:** Overall, we observed an upstaging to stage III in 10 (3%) patients. We did not observe any significant difference between the two techniques in terms of the completeness of resection, the rate of complications and the 30-day mortality. The 5-year overall survival rate was 94% in the thymothymomectomy group and 56% in the simple-thymomectomy group (Figure 1 - P= 0.0004). The 5-year DFS was 95% in the thymothymomectomy group and 82% in the simple-thymomectomy group (Figure 1 -P= 0.013).



Conclusion: Patients affected by stage I TNM non-MG thymoma submitted to thymothymomectomy presented a significantly better DFS and overall survival than those submitted to simple-thymomectomy. Thymothymomectomy should be considered the procedure of choice in Stage I TNM non-MG thymomas, also considering the not negligible rate of pathological upstaging. **Keywords:** THYMOMA, Thymomectomy, Recurrence

MA20.09
Breast Implant Associated Anaplastic Large Cell Lymphoma: Outcomes of a Newly-Recognized Malignancy of the Thoracic Wall

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Background: In 2016, the World Health Organization provisionally classified breast implant-associated anaplastic large cell lymphoma (BIA-ALCL) as a novel lymphoma and the National Comprehensive Cancer Network (NCCN) established evidence-based consensus guidelines for the diagnosis and surgical management of the disease. BIA-ALCL progresses locally as a solid tumor, invading the chest wall and mediastinum and leading to respiratory compromise in advanced cases. Local disease is treated surgically while aggressive disease involving regional lymph nodes and metastasis are currently managed with systemic chemotherapy, most commonly CHOP regimens (cyclophosphamide, vincristine, doxorubicin and prednisone). The goal of this study is to evaluate the efficacy of different therapies in the treatment of BIA-ALCL with chest wall invasion. **Method:** A prospective study of all institutional cases from 2013 to 2018 was performed for patients with advanced disease (Stage IIA-III) locally invasive into the chest wall. Pathologic findings, treatments, and outcomes were reviewed. **Result:** Eighteen consecutive patients were identified with BIA-ALCL Stage IIA-III. The median and mean follow-up times were 42 and 27 months, respectively (range, 6 to 226 months). Patients who underwent a complete en bloc resection had better OS (P = .022) and EFS (P = .014) than did patients who received partial resection, systemic chemotherapy, or radiation therapy. Perioperative complications included one pneumothorax. Two disease recurrences (7.8%) were noted at an average of 5 months from surgery. All patients eventually achieved complete remission (100%). The median overall survival (OS) time after diagnosis was 13 years, and the OS rate was 94% and 90% at 3 and 5 years, respectively. Patients presenting with chest wall invasion demonstrated significantly longer time from diagnosis to definitive surgery (21 versus 8 months, P = 0.039). Partial tumor resection resulted in disease hyperprogression in two cases. **Conclusion:** BIA-ALCL with chest wall invasion may be a consequence of a delay in diagnosis or treatment. Complete en bloc surgical excision is essential for curative treatment of BIA-ALCL. Patients who receive textured surface breast implants need to be advised of the risk of developing BIA-ALCL, as well as the common presenting symptoms, such as a mass or delayed onset (>1 year) of effusion. When treated appropriately and in a timely fashion, BIA-ALCL has an excellent prognosis. Future research is warranted to determine modifiable risk factors and stratification of at-risk populations. **Keywords:** rare chest wall tumor, anaplastic large cell lymphoma, breast implant

MA20.10
Long-Term Prognostic Factors After Minimally Invasive Esophagectomy (MIE) for Esophageal Cancer

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Background: MIE has been demonstrated to associate a better perioperative outcome to treat esophageal cancer as compared to that done by open surgery. However, the long-term clinical impact of MIE and its prognostic factors still requires further clarification. **Method:** In current study, we evaluated the survival results and the factors influencing the prognosis of patients with esophageal cancer who received total minimally invasive esophagectomy using thoracoscopic and laparoscopic esophagectomy and esophageal reconstruction. **Result:** A total of 483 patients were included in the study with 179 and 304 receiving Ivor Lewis and McKeown MIE respectively. Neoadjuvant chemoradiation was administered to 379 (78 %) of the patients. The overall and disease progression-free survival curves of all the patients were constructed with five-year survival rates of 48.3% and 40.3% respectively. Multivariate analysis revealed that pathological tumor stage was a significant factor for prognosis after surgery both in the patients treated with and without neoadjuvant CCRT (P< 0.05). Of the patients with patholoigical stage I or ypStage I esopahgeal cancer after CCRT, overall survival was significantly improved with the increased number of dissected lymph nodes (P=0.022). **Conclusion:** The survival of patients with esophageal cancer undergoing MIE was influenced by their tumor staging, irrespective the use of neoadjuvant CCRT. Of these patients with stage I and ypStage I disease, improved survival can be facilitated with increased number of dissected lymph nodes during MIE. **Keywords:** minimally invasive esophagectomy (MIE), esophageal cancer