Background: Advanced esophageal cancer often causes malignant obstruction, which is widely treated with palliative insertion of a self-expandable metallic stent (SEMS). The purpose of this study was to assess, in patients who had received SEMS for palliation of malignant obstruction caused by advanced esophageal cancer, the prognostic significance of loss of muscle mass during follow up.

Methods: 118 patients were included. 58 (49.2%) patients had squamous cell carcinoma, 52 (44.1%) adenocarcinoma and 8 (6.7%) other histology. Two sets of abdominal CT scans of EC patients who had a stent inserted for palliation of malignant obstruction between 2005 and 2013 were analyzed (N = 118). First scan was taken at stent insertion. Median time difference between scans was 92 days. The cross-sectional total muscle area (TMA) at the level of L3 was assessed and skeletal muscle index (SMI) was calculated by dividing the TMA with the square of the patients height in cm. Follow up lasted until death for all of the 118 patients.

Results: Median overall survival (OS) was 188 days (IQR: 124–255 days). Median amount of weight loss during follow up was 10 kg's (IQR: 7.0 -16.5 kg's). Median percentual loss of SMI was 11.6% (IQR: 1.1–19.5%). Loss of more than the median amount of %SMI correlated with worse OS (187 vs 242 days, P = 0.018), as seen in Figure 1.

Conclusion: In the setting of palliatively SEMS-treated esophageal cancer, the amount of skeletal muscle lost during follow up correlates with worse prognosis.

Disclosure: All authors have declared no conflicts of interest.

Keywords: Esophageal cancer, Skeletal muscle mass, Self-expanding metallic stents, Palliation

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**Table 2. Comparison of outcomes between group A and B**

<table>
<thead>
<tr>
<th>Variables</th>
<th>group A (65) (old protocol)</th>
<th>group B (61) (New protocol)</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ventilator stay (days)</td>
<td>1.29 ± 2.6</td>
<td>0.1 ± 0.6</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>ICU stay (days)</td>
<td>3.8 ± 3.2</td>
<td>1.4 ± 1.2</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Postoperative stay (days)</td>
<td>13.8 ± 6.9</td>
<td>9.2 ± 2.7</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Intraoperative blood loss (ml)</td>
<td>68.5 ± 22.8</td>
<td>70.8 ± 25.2</td>
<td>0.324</td>
</tr>
<tr>
<td>Intraoperative blood transfusions (yes)</td>
<td>(3/4.6%)</td>
<td>1(1.6%)</td>
<td>0.680</td>
</tr>
<tr>
<td>Operative time (minutes)</td>
<td>341.2 ± 48.5</td>
<td>338.5 ± 51.8</td>
<td>0.662</td>
</tr>
<tr>
<td>Complications (yes)</td>
<td>22(34%)</td>
<td>12(20%)</td>
<td>0.280</td>
</tr>
<tr>
<td>Hospital charges (US$)</td>
<td>8874 ± 3609.4</td>
<td>7145.6 ± 1121.5</td>
<td>0.073</td>
</tr>
</tbody>
</table>

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the VVC (% = 0.0178). In other factors, there is no significant difference between sarcoopenic and non-sarcoopenic groups. Compared with non-sarcoopenic patients, sarcoopenic patients had a higher risk of postoperative pneumonia and chylothorax (P = 0.0144 and P = 0.0105). For other complications, the differences were not significant. In univariate analysis, sarcopenia (P = 0.0144), hypoalbuminemia (P = 0.0236), operative blood loss (P = 0.0436) were associated with postoperative pneumonia. Multivariate analysis revealed that sarcopenia (P < 0.001) and longer operation time (P = 0.00354) were independent predictors of postoperative pneumonia.

Conclusion: Preoperative sarcopenia was identified as independent risk factor for postoperative pneumonia after esophagectomy. Preoperative nutrition and rehabilitation therapy may contribute to the prevention of pneumonia after surgery.

Disclosure: All authors have declared no conflicts of interest.

Keywords: Sarcopenia, muscle mass index, Esophageal cancer, postoperative pneumonia

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**RA00.04: RELATIONSHIP BETWEEN PROGNOSTIC NUTRITIONAL INDEX AND PERITUMORAL IMMUNE SYSTEM DYNAMICS IN ESOPHAGEAL CANCER**

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1Kumamoto university, KumamotoJAPAN, 2Kumamoto university, KumamotoJAPAN

Background: There have been reported that nutritional status and tumor-infiltrating lymphocytes (TILs) are prognostic factor for esophageal cancer. Prognostic Nutritional Index (PNI) is one of the most widely used indicators for nutritional status and also shows systemic immune competence. Because TILs is related to peritumoral immune system, there may be relation between PNI and TILs.

Methods: Using a database of 300 curatively resected esophageal cancer from April 2005 to Jun 2013, we evaluated the relationship between PNI and TILs. PNI was calculated using serum albumin and total lymphocyte count. TILs were histologically estimated using postoperative samples. Studying the expression of CD8 and Foxp3 by immunohistochemical staining, we tried to reveal which subsets of lymphocyte were relevant to PNI.

Results: PNI high group (N = 198) experienced better overall survival (P < 0.001) and cancer specific survival (P < 0.001) compared with PNI low group (N = 102). PNI was significantly related to the TILs status (P < 0.01). CD8 positive lymphocyte was also significantly related to the PNI (P = 0.013) but Foxp3 wasn’t (P = 0.62). CD8 positive lymphocyte high group (N = 224) was significantly better in overall survival (P = 0.028) and cancer specific survival (P = 0.012) than low group (N = 76). There was no significant difference between Foxp3 high group (N = 225) and Foxp3 low group (N = 75) about overall survival (P = 0.87) and cancer specific survival (P = 0.90).

Conclusion: PNI was predictive prognostic marker for esophageal cancer and had relation to TILs status. It means systemic immune competence may affects peritumoral immune system. Among subsets of lymphocyte, CD8 positive lymphocyte had relation to PNI and was prognostic factor. In this study, Foxp3 didn’t have any relation to PNI and prognosis.

Disclosure: All authors have declared no conflicts of interest.

Keywords: Prognostic Nutritional Index, TILs, CD8, Foxp3

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**RA00.05: LOSS OF SKELETAL MUSCLE MASS IN FOLLOW UP IN PALLIATIVELY STENTED ESOPHAGEAL CANCER PATIENTS PREDICTS WORSE OUTCOME**

Tommi Järvinen, Ilkka Ilonen, Jari Rasanen

Helsinki University Central Hospital, HelsinkiFINLAND

Background: Advanced esophageal cancer often causes malignant obstruction, which is widely treated with palliative insertion of a self-expandable metallic stent (SEMS). The purpose of this study was to assess, in patients who had received SEMS for palliation of malignant obstruction caused by advanced esophageal cancer, the prognostic significance of loss of muscle mass during follow up.

Methods: 118 patients were included. 58 (49.2%) patients had squamous cell carcinoma, 52 (44.1%) adenocarcinoma and 8 (6.7%) other histology. Two sets of abdominal CT scans of EC patients who had a stent inserted for palliation of malignant obstruction between 2005 and 2013 were analyzed (N = 118). First scan was taken at stent insertion. Median time difference between scans was 92 days. The cross-sectional total muscle area (TMA) at the level of L3 was assessed and skeletal muscle index (SMI) was calculated by dividing the TMA with the square of the patients height in cm. Follow up lasted until death for all of the 118 patients.

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Disclosure: All authors have declared no conflicts of interest.

Keywords: Esophageal cancer, Skeletal muscle mass, Self-expanding metallic stents, Palliation

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**RA01: Regular Abstracts I: Malignant (10 minutes each)**

Chairs: Xavier D. Journo, France & Hirokazu Nosho, Japan

Room: Hörsaal 02

**RA01.01: THORACOSCOPIC ESOPHAGECTOMY IN SEMIPRONE POSITION**

Suraj Pawar

Kolhapur Cancer Centre, KolhapurIndia

Description: To assess the feasibility of Thoracoscopic Esophagectomy in the Dorso-Lateral position with the intention of reducing the disadvantages and increasing the benefits of lateral approach and prone approach which are the 2 conventional approaches. Methods: Thoracoscopic Esophagectomy is routinely performed in 2 positions. The left lateral decubitus position is the commonly used position at most of the centres. However prone jack-knife position as described by Cushieri is another alternative. To combine the advantages and reduce the disadvantages of the these 2, we started performing this procedure in a Dorso-Lateral position since 1st October 2008. This is a position midway between the Lateral and Prone position i.e. Left lateral position with an inclination making an angle of 45 degrees with the horizontal. Operating Surgeon and assistant are positioned anteriorly facing the ventral aspect of the patient. A three-port approach is taken with port placements in the 5th, 7th and 9th intercostals spaces in the posterior, mid and anterior axillary lines. Pneumothorax is created with CO2 pressure of 5–7 mm Hg. Although single lung ventilation is preferable the procedure can be done with routine dual lung ventilation with a 4th port being used to retract the lung if necessary. Esophagus is mobilized en-block with posterior mediastinal lymphadenectomy. The Azygos vein and right Bronchial artery are preferably preserved to maintain vascularity of right bronchus. Following this patient is turned supine and Stomach mobilization and coeliac dissection is done laparoscopically. Left neck incision is taken and esophagus is divided in the neck. Specimen is delivered in the abdomen and extra-corporeally through a mini-laparotomy.