**Methods:** This was a retrospective study of all patients who received EUS-guided fiducial marker insertion between March 2015 and October 2017. All patients suffering from esophageal carcinoma scheduled for radiotherapy underwent the procedure within one week of the scheduled appointment. Gold fiducial markers 5mm x 0.35mm (Visiocal, IBA Dosimetry, USA) were back loaded onto a 22-gauge needle (Vizishot, Olympus Medical, Japan) or (Expect, Boston Scientific, USA). The markers were placed under EUS guidance either intratumorally or in the normal submucosa just proximal and distal to the tumor. The submucosal planes were raised with diluted hyaluronic acid before insertion of the marker. Outcome parameters included tumor characteristics, early and late migration rates and tumor response rates.

**Results:** 35 patients were included in the study. The mean (S.D.) age was 61.0 (9.9) years old. The mean (S.D.) length of the tumor was 7.2 (6.0) cm and and 86.2% of the patients had stage 3 disease. 27 patients had markers inserted by EBUS and 71.4% in the submucosa. When comparing fiducials that were placed in the submucosa versus intratumorally, significantly more fiducials by EBUS and 71.4% in the submucosa. 86.2% of the patients had stage 3 disease. 27 patients had markers inserted or (Expect, Boston Scientific, USA). The markers were placed under EUS guided fiducial marker insertion between March 2015 and October 2017.

**Conclusion:** As EBUS in these cells increased cell migration and inhibited the induction of apoptosis. The results of the microarray analysis revealed that various matrix metalloproteinase (MMP) signaling pathway-related genes, such as MMP1, MMP12, and TIMP4, were up- or down-regulated in AE2-depleted KYSE170 cells. Immunohistochemical staining showed that AE2 was primarily located in the cell membranes or cytoplasm of carcinoma cells, and its expression pattern at the invasive front (IF) of the tumor was related to the pT category. Prognostic analyses revealed that the low-grade expression of AE2 at the IF was associated with shorter postoperative survival.

**Disclosure:** All authors have declared no conflicts of interest.

**Keywords:** cellular movement, Esophageal squamous cell carcinoma, Anion Exchanger 2, MMP signaling pathways

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**PS02.187: RELATIONSHIP BETWEEN REGIONAL LYMPH NODE SIZE AND PROGNOSIS IN ESOPHAGEAL CANCER PATIENTS**

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**Background:** Surgery for esophageal cancer, in many cases performed after chemotherapy or chemoradiotherapy. Because treatment policy is determined by pretreatment evaluation, improvement of diagnostic accuracy is important. Commonly, metastatic diagnosis is performed by uniformly defining the size. We examined whether evaluation of N classification reflecting more prognosis can be done by examining lymph node metastasis criteria by area in CT.

**Methods:** We surveyed 300 cases of thoracic esophageal cancer (squamous cell carcinoma) who underwent surgery at our hospital from September 2010 to December 2014. We defined lymph node with a minor axis of 5 mm or more from CT (5 mm slice) before treatment as ‘visible node’. We changed the cut off of lymph node short diameter for each area to 5 mm, 10 mm and 15 mm, and those with long diameter/short diameter ratio less than 1.5 were designated as ‘metastasis’. We examined the optimal size of lymph node which reflect prognosis. We compared the correlation with the prognosis based on the N category of the 8th edition UICC TNM classification and the 11th edition Japanese Classification of Esophageal Cancer, using the cutoff of short diameter examined for each area.

**Results:** We evaluated the cut off of each area lymph node except paraesophageal, 15 mm in the cervical, 10 mm in the recurrent nerve, 15 mm in the upper trachea, 15 mm in the lower trachea, and 10 mm in the epigastic. Classification based on the N classification of the 8th edition UICC TNM classification, overall survival declined in the order of N categories.

**Conclusion:** From this result, it was suggested that diagnosis based on lymph node size in CT reflects prognosis by prescribing cut off for each site. From now on, it would be possible to raise the diagnostic accuracy of N classification further by subdivision of cut off and accumulation of the case.

**Disclosure:** All authors have declared no conflicts of interest.

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**PS02.188: EXPRESSION AND ROLE OF ANION EXCHANGER 2 IN ESOPHAGEAL SQUAMOUS CELL CARCINOMA**

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**Background:** Recent studies have reported essential roles for various intracellular pH regulators in epithelial carcinogenesis and tumor progression. The aims of the present study were to investigate the role of anion exchanger 2 (AE2) in the regulation of tumor progression-related genes and the prognostic value of its expression in esophageal squamous cell carcinoma (ESCC).

**Methods:** In human ESCC cell lines, knockdown experiments were conducted using AE2 siRNA, and the effects on cellular movement and survival were analyzed. The gene expression profiles of cells were examined using a microarray analysis. An immunohistochemical analysis was performed on 61 primary tumor samples obtained from ESCC patients who underwent esophagectomy.

**Results:** AE2 was strongly expressed in KYSE170 and TE13 cells. The depletion of AE2 in these cells increased cell migration and inhibited the induction of apoptosis. The results of the microarray analysis revealed that various matrix metalloproteinase (MMP) signaling pathway-related genes, such as MMP1, MMP12, and TIMP4, were up- or down-regulated in AE2-depleted KYSE170 cells. Immunohistochemical staining showed that AE2 was primarily located in the cell membranes or cytoplasm of carcinoma cells, and its expression pattern at the invasive front (IF) of the tumor was related to the pT category. Prognostic analyses revealed that the low-grade expression of AE2 at the IF was associated with shorter postoperative survival.

**Disclosure:** All authors have declared no conflicts of interest.

**Keywords:** esophageal squamous cell carcinoma, Anion Exchanger 2, MMP signaling pathways

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**PS02.189: A STUDY ON PRETREATMENT NUTRITIONAL SCORE OF ESOPHAGEAL CANCER PATIENTS WHO UNDERTAKE PREOPERATIVE TREATMENT**

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**Background:** Esophageal cancer tends to be malnourished due to anorexia, transit disorder, so it is important to conduct sufficient nutritional assessment and treatment. For standard treatment of neoadjuvant chemotherapy for esophageal cancer, Cisplatin + 5-fluorouracil (FP) therapy is common, but sufficient therapeutic effect has not been obtained. As a more powerful regimen, DCF therapy with Docetaxel added to FP therapy and chemoradiotherapy have been introduced. In this study, we examined pretreatment nutritional score of esophageal cancer patients who underwent neoadjuvant therapy.

**Methods:** We studied 105 patients undergoing preoperative treatment diagnosed as esophageal cancer or esophagogastric junctional carcinoma from July 2012 to August 2017. Esophagectomy with lymph node dissection after neoadjuvant therapy. Relationship between Glasgow Prognostic Score (GPS) and Controlling Nutrition Status Score (CONUT) score, sex, age, staging, main tumor location, adverse event, postoperative complication and tube feeding nutrition age examined.

**Results:** Median age was 66 years, male/female = 92/13, and cases requiring tube feeding were 29 cases. The breakdown of the clinical stage is Stage IA, B/IIA, B/IIIA, B/IVA = 9/34/50/2. The breakdown of neoadjuvant therapy is FP/DCF/FPRT/DCFR/T = 92/37/26/39/4. The incidences of grade 3/4 adverse events during preoperative treatment were 66 cases (63%) in 105 patients. The treatment effect is CR/PR/SD/PD = 6/41/50/8. Histopathological result is Grade 0/1a/1b/2/3 = 3/52/13/6/31. Postoperative complications were Clavien-Dindo classification Grade IIIa or more in 20 cases, in-hospital death was 1 case:CONUT score was judged to be cut-off by more than 2, there was a significant relationship between presence of tube nutrition and treatment result (P = 0.0376, 0.0231). GPS was judged to be 1 or more cutoff, there was a significant association with tube nutrition availability and histopathological result (P = 0.0019, 0.0083). There was no significant difference between occurrence of adverse events and occurrence of postoperative complications.

**Conclusion:** It was suggested that CONUT score and GPS at hospitalization are useful as predictors of treatment result and histopathological result in esophageal cancer patients who undergo neoadjuvant therapy.

**Disclosure:** All authors have declared no conflicts of interest.

**Keywords:** neoadjuvant therapy, Esophageal cancer, Glasgow prognostic score, Controlling nutritional status

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**PS02.190: THE SIGNIFICANCE OF INTRAOPERATIVE PATHOLOGICAL RECURRENT NERVE NODE IN NECK-FIELD LYMPH NODE DISSECTION OF ESOPHAGEAL CANCER**

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