

30.5%.

【Conclusion】 Nivolumab in recurrent or metastatic head and neck cancer has the potential to maintain good outcomes while preserving QOL.

### 3-2.

#### **Infiltration of fibrosis- and tumor-associated macrophages on lung cancer with idiopathic pulmonary fibrosis**

(社会人大学院博士課程 1 年呼吸器・甲状腺外科)

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【Background】 Idiopathic pulmonary fibrosis (IPF) is associated with an increased risk of lung cancer, and lung cancer with IPF is poor prognosis. The pathophysiological mechanism is unknown that lung cancer and pulmonary fibrosis coexist in the patients. We investigated the pathophysiology with infiltration of fibrosis- and tumor-associated macrophage (FAM and TAM) on lung cancer with IPF.

【Method】 Among 175 primary lung cancer cases under surgery from 2016 to 2018, 26 cases were made histopathological diagnosis as lung cancer with IPF. Nineteen cases were enough areas for the interpretation of immunohistochemistry (IHC) staining between normal lung tissue, carcinoma and fibrosis areas. IHC antibodies were CD206, CD163, CD68, S100A4 and CD204 to evaluate infiltration of macrophages. A case was simultaneous bilateral lung cancer with IPF, and each tumor with different progression was evaluated by infiltration of macrophages.

【Result】 In CD206, S100A4 and CD204, the infiltration in fibrosis was high frequency than that in normal

lung and carcinoma (FAM). The normal lung had higher infiltration than carcinoma in CD206 and CD204. The infiltration of CD206 and CD68 was 100% in carcinoma (TAM). In normal lung, the advanced lung cancer cases had significant higher infiltration of FAM than the early stage cases. In the case of simultaneous bilateral lung cancer with IPF, the normal lung on the lobe with rapid growth cancer had FAM infiltration.

【Discussion】 It was suggested that the exacerbation of lung fibrosis as FAM infiltration influenced the progression of lung cancer.

### 3-3.

#### **27-hydroxycholesterol promotes proliferation of non-small cell lung cancer as a selective estrogen receptor modulator**

(社会人大学院博士課程 4 年呼吸器甲状腺外科)

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【Introduction】 An oxysterol, 27-hydroxycholesterol (27HC) has been reported to promote the proliferation of breast cancer cells as selective estrogen receptor modulator (SERM). We hypothesized that the 27HC may also promote the proliferation of lung cancer cells, because 27HC is mostly produced in alveolar macrophages by metabolizing of cholesterol through cytochrome P450 27A1 (CYP27A1) in vivo. This research evaluated the relationship between 27HC content and the pathology in lung cancer tissue, and the effect of 27HC on the proliferation of cultured lung cancer cell line (H23).

【Method】 In the tumor and nontumor regions of lung tissue collected from 25 patients with non-small cell lung cancer (NSCLC) who underwent surgery, we compared 27HC content and its synthetic and catabolic enzyme ex-