European Respiratory Society
Annual Congress 2012

Abstract Number: 3165
Publication Number: 3267

Abstract Group: 11.1. Lung Cancer
Keyword 1: Lung cancer / Oncology **Keyword 2:** Thoracic oncology **Keyword 3:** Biomarkers

Title: TTF-1 for prediction of response to chemotherapy in patients with locally advanced or metastatic small cell lung cancer (SCLC)

Mr. Daniel 21063 Misch daniel.misch@helios-kliniken.de MD [1], Dr. Jens 21064 Kollmeier jens.kollmeier@helios-kliniken.de MD [1], Dr. Torsten 21067 Blum torsten-gerriet.blum@helios-kliniken.de MD [1], Dr. Sergej 21076 Griff sergej.griff@helios-kliniken.de MD [2], Mr. Christian 21077 Boch christian.boch@helios-kliniken.de MD [1], Mr. Timo 21085 Weiss timo.weiss@helios-kliniken.de MD [1], Dr. Catharina 21090 Crolow catharina.crolow@helios-kliniken.de MD [1], Dr. Wolfram 21091 Grüning wolfram.gruening@helios-kliniken.de MD [3], Dr. Thomas 21094 Mairinger thomas.mairinger@helios-kliniken.de MD [2] and Prof. Torsten 21095 Bauer torsten.bauer@helios-kliniken.de MD [1]. [1] Department of Pneumology, HELIOS Klinikum Emil von Behring, Pulmonary Diseases Clinic Heckeshorn, Berlin, Germany ; [2] Department of Pathology, HELIOS Klinikum Emil von Behring, Berlin, Germany and [3] Department of Pneumology, HELIOS Kliniken Schwerin, Germany .

Body: Background: The thyroid transcription factor-1 (TTF1) plays a crucial role in differentiating primary lung from other cancers, especially in adenocarcinoma (AC). Furthermore, data indicate a possible association between TTF1-status and overall survival (OS) in AC patients. So far, no impact on OS was described in SCLC patients. Besides OS, it is unknown if the TTF1-status influences chemosensitivity of SCLC and might therefore predict response to chemotherapy. Aim: To compare the response to chemotherapy in a population of patients with SCLC stage III/IV according to their TTF1-expression. Methods: We analyzed 294 patients (f, n=110; m, n=184) with SCLC stage III/IV (according to UICC-6, stage IIIA, n=32; IIIB, n=87; IV, n=175) diagnosed in our institution between 01/05 and 12/08. Median age was 65 (±10) years. TTF1-expression was prospectively determined. Response to treatment was evaluated using the Response Evaluation Criteria in Solid Tumors (RECIST Version 1.0). The overall response rate (ORR) and the disease control rate (DCR) were calculated and compared between the group of TTF1-positive and TTF1-negative SCLC. Results: The information on TTF1 and response to treatment was available in 178 (77%) cases. 150 (84%) had TTF1-positive and 28 (16%) TTF1-negative SCLC. Analyzing the DCR, we observed a better response to treatment for patients with TTF1-expression (DCR 90%) as compared to those with TTF1-negative SCLC (DCR 71%; p=0.013). Regarding the ORR, there was no statistically significant difference between both groups (TTF1-pos. 75% vs. TTF1-neg. 71; p=0.642). Conclusion: TTF1-expression may be associated with better response to chemotherapy in SCLC.