

Supplemental Table S1. Published lung cancer studies assessing IL-11 levels in various biological sources.

Reference	Pathology	Comparison	Source / Matrix	Collection method	Concentration Method	Assay Method	Assay kit / Manufacturer	Assay Range (pg/ml)	Findings (pg/ml)	Remarks / Comments
PMID: 27524264	Lung Cancer (LC) with or without chronic obstructive pulmonary disease (COPD)	1st validation cohort: Controls (n=20) vs. COPD (n=29) vs. LC (n=50) vs. COPD with LC (n=50)	Bronchoalveolar lavage fluid (BALF)	BALF samples were obtained by intillation of 40-60 ml of 0.9% sterile saline, sterile filtered, centrifuged to obtain supernatant stored in 2 ml aliquots, and frozen until usage.	Vacuum concentrated for proteomic studies: 4-8 ml of BALF sample per patient was vacuum concentrated to 1.5-2 ml over a 2-6 hour period. Protein concentration was assessed by RCDC method	ELISA	DY218 (R&D Systems)	31.3 – 2,000 pg/ml	1st validation cohort: 1) LUAD: median 107 pg/mL, IQR = 61–196 2) LUAD w/ COPD: median 72 pg/mL, IQR = 51–137 3) COPD alone, SCC or SCC w/ COPD did not significantly differ to controls 4) Controls: unspecified concentration. 5) Optimal diagnostic cut-off = 42.0 pg/mL; % Sensitivity = 78.8%, % Specificity = 88.7% in patients with adenocarcinoma	1) Unclear how the controls were selected to undergo BALF collection. 2) Unclear if reported concentrations have been corrected for concentration factor if concentrated samples were used to run ELISA. 3) Unclear on fold-dilutions (if any) for assay. 4) Unclear why optimal diagnostic cut-off for diagnosis of adenocarcinoma (ROC curve) was reduced in 2nd validation cohort from 42 to 29.5 pg/mL. 5) Graphical presentation of IL-11 concentration by ELISA in controls depict 0 values below the assay detection range.
		2nd validation cohort: Controls (n=20) vs. LC (n=66) vs. COPD with LC (n=74)							2nd validation cohort: 1) LUAD: median 104 (IQR: 53–166); 2) controls: unspecified concentration. 3) Diagnostic cut-off = 29.5 pg/mL; % Sensitivity = 90.6%, % Specificity = 83% in patients with adenocarcinoma	
PMID: 15072171	Pleural effusions from tuberculosis (TB), bronchial carcinomas (BC), secondary carcinomas (CA), congestive heart failure (CHF), and pneumonias (PN)	Pleural effusion and plasma of TB (n=16), BC (n=28), CA (n=17), CHF (n=9), PN (n=6)	Pleural effusion	The pleural fluid was extracted into EDTA-containing tubes. Aliquotted and stored at -70°C for later analysis.	No attempts on any sample concentration was mentioned.	ELISA	D1100 (R&D Systems)	31.3 – 2,000 pg/ml	1) "Only 36 of total 76 patients had positive IL-11 values in the pleural effusion" comprising of 21 patients in TB, CA groups (high) vs. 15 patients in BC, PN groups (low). 2) IL-6 levels were found in effusions of BC patients (8243±7722 pg/ml) with min whiskers in box-and-whiskers plots indicating 0 or close to zero values. 3) IL-11 levels were found in effusions in various disorders with min whiskers in box-and-whiskers plots indicated at zero values. 4) At diagnostic cut-off value of 206 pg/ml, TB and CA patients were assigned to high IL-11 group, whereas BC and PN patients were designated low IL-11 group. No sensitivity could be calculated at 95% specificity. Only at 87% specificity, a sensitivity of 38% could be found. Due to the fact that the ROC curve runs near the diagonal, no diagnostic separation was possible.	1) No compatible control pleural effusion/plasma from healthy controls. 2) No serum from diseased subjects with pleural effusions. 3) No mention of fasting status at time of blood collection. 4) Unclear on fold-dilutions (if any) for assay. 5) Mixed BC subjects comprising of lung adenocarcinoma (n=12), undetermined type NSCLC (n=5), small cell carcinoma (n=4), squamous cell carcinoma (n=3) and undifferentiated type (n=4). 6) 15 out of 28 BC pleura effusion were detected within the dynamic detection range. None of the paired plasma in same subjects recorded detectable IL-11 levels. 7) Graphical presentation of IL-11 concentration by ELISA in groups depict 0 values (min value of box-and-whiskers plot) below the assay detection range.
			Plasma	Blood was withdrawn from peripheral vein and collected in tubes containing EDTA. Aliquotted and stored at -70°C for later analysis.					1) "IL-11 could be found only in pleural effusions, similar to IL-6" i.e. IL-6 and IL-11 levels in peripheral blood (either plasma or serum) were under the detection limit of the current kit assay	
			Control sera (n=6)	Serum					Blood was withdrawn from peripheral vein and collected in plain tubes. Aliquotted and stored at -70 °C for later analysis.	
PMID: 31562055	Non-small cell lung cancer (NSCLC)	Adenocarcinoma (n=5) vs. squamous NSCLC (n=22)	Plasma	Serial collection of peripheral blood for plasma before starting treatment (T0), since beginning nivolumab monotherapy (T1), and progression of disease (2), if applicable. Collection tube for plasma is undetermined.	No attempts on any sample concentration was mentioned.	ELISA	D1100 (R&D Systems)	31.3 – 2,000 pg/ml	1) T0 (baseline prior to Nivolumab treatment): Adenocarcinoma: mean 12.24 ± 6.01 (SD) Squamous: 10.60 ± 6.04 (SD) 2) No significant differences in IL-11 levels were found between nivolumab responders vs. non-responders at all time points T0, T1, and T2. 3) Non-significant decrease in IL-11 levels were observed at T1 (vs. T0).	1) IL-11 concentrations reported are below dynamic detection range specified by assay. 2) Unclear if concentration of samples were performed for assay. 3) Unclear on fold-dilutions (if any) for assay. 4) No mention of fasting status at time of blood collection.
PMID: 34142593	NSCLC	NSCLC (n=91) vs. healthy volunteers (n=72)	Serum	5 ml of fasting venous blood collected in coagulation tube, centrifugation for serum collection, stored at -80 °C. No mention about aliquots, and undetermined blood tube.	No attempts on any sample concentration was mentioned.	ELISA	E-EL-H5022 (Elabscience)	31.3 – 2,000 pg/ml	1) Serum IL-11 levels: NSCLC: median 193.80 (IQR: 123.50–323.60) Healthy volunteers: median 44.51 (IQR: 23.24–77.05)	1) IL-11 concentrations in EBCs are generally below dynamic detection range specified by assay. 2) Unclear if concentration of samples were performed for assay. 3) Unclear on fold-dilutions (if any) for assay.
			Exhaled breath condensates	EBC was collected using EcoScreen condenser (Eric Jaeger Company), temperature set at -20 °C and collection time for 20 mins. Given limitations of subject cooperation only n=64 NSCLC and n=63 healthy volunteers were collected.					2) EBC IL-11 levels: NSCLC: median 45.86 (IQR: 26.73–75.76) Healthy volunteers: median 11.47 (IQR: 8.07–17.21)	