

Supplementary table 1. Sputum volume and cell populations in samples collected by Lung Flute in current and former smokers.

	Sputum collected in current smokers	Sputum collected in former smokers	P-value
Volume of sputum (median, SD)	2.7 ml (1.6)	2.6 ml (1.8)	0.36
Cell numbers per ml (median, SD)	2.6 (0.3) X10 ⁷ cells	2.5 (0.6) X10 ⁷ cells	0.49
% oral squamous cells (median, SD)	2.4 (0.3)	2.2 (0.6)	0.32
% alveolar macrophages (median, SD)	57 (5)	55 (6)	0.27

Supplementary table 2. Levels of miRNAs in sputum collected by spontaneously coughing from NSCLC patients and cancer-free smokers

miRNAs	Mean (SEM) in 56 controls *	Mean (SEM) in 43 NSCLC patients *	P-value	AUC (95% CI)	Sensitivity	Specificity
miR-31	0.51 (0.72)	3.56 (0.62)	< 0.01	0.78 (0.73 to 0.89)	63.58	84.93
miR-21	7.77 (1.96)	50.56 (6.83)	< 0.01	0.83 (0.75 to 0.87)	76.18	81.29
miR-210	7.08 (1.23)	68.83 (8.72)	< 0.01	0.82 (0.73 to 0.91)	81.38	79.06
Combined three miRNAs			< 0.01	0.90 (0.82 to 0.96)	83.72	87.50

* using spontaneously coughing, we collected sputum samples from 56 of 73 cancer-free controls and 43 of 56 lung cancer patients.

Abbreviations: NSCLC, non-small-cell lung cancer; SEM, the standard error of the mean;

AUC, the area under receiver operating characteristic curve; CI, confidence interval.