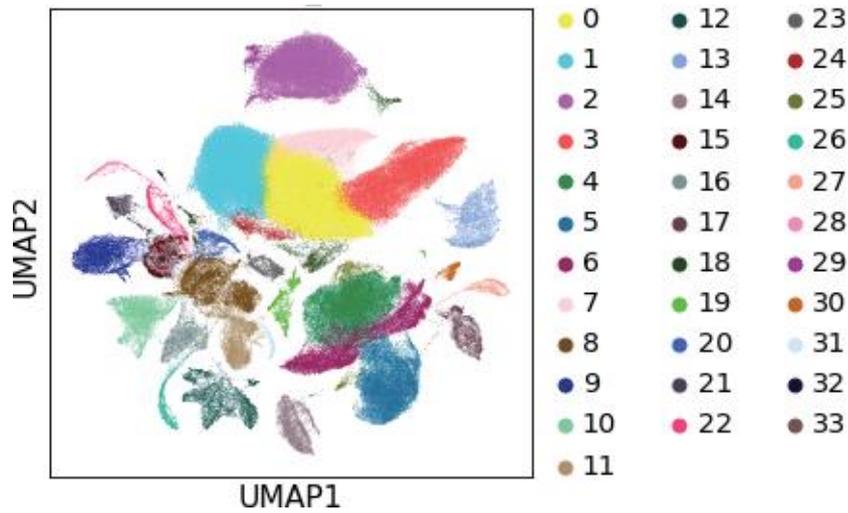
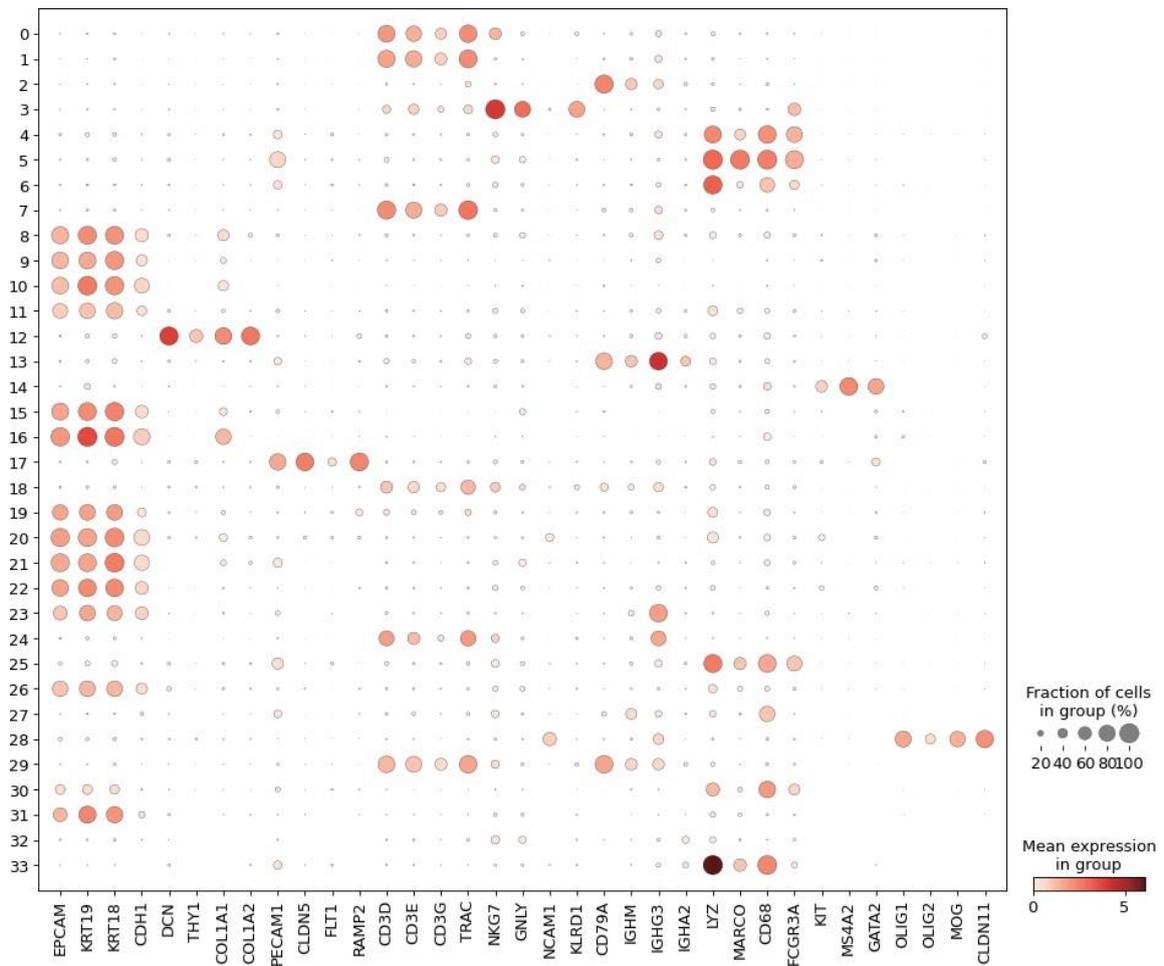


**Figure S1.** Immunohistochemical analysis of MAFB expression in lung adenocarcinoma showing metastasis potential. The left panel shows (A) Lung adenocarcinoma samples with negative metastasis, (B) the calculation of total tissue area in yellow color, and (C) the number of MAFB positive area in red color. The right panel shows (D) Lung adenocarcinomas samples with positive metastasis, (E) the calculation of total tissue area in yellow color, and (F) the number of MAFB positive area in red color. Scale bar 100 µm, X10.

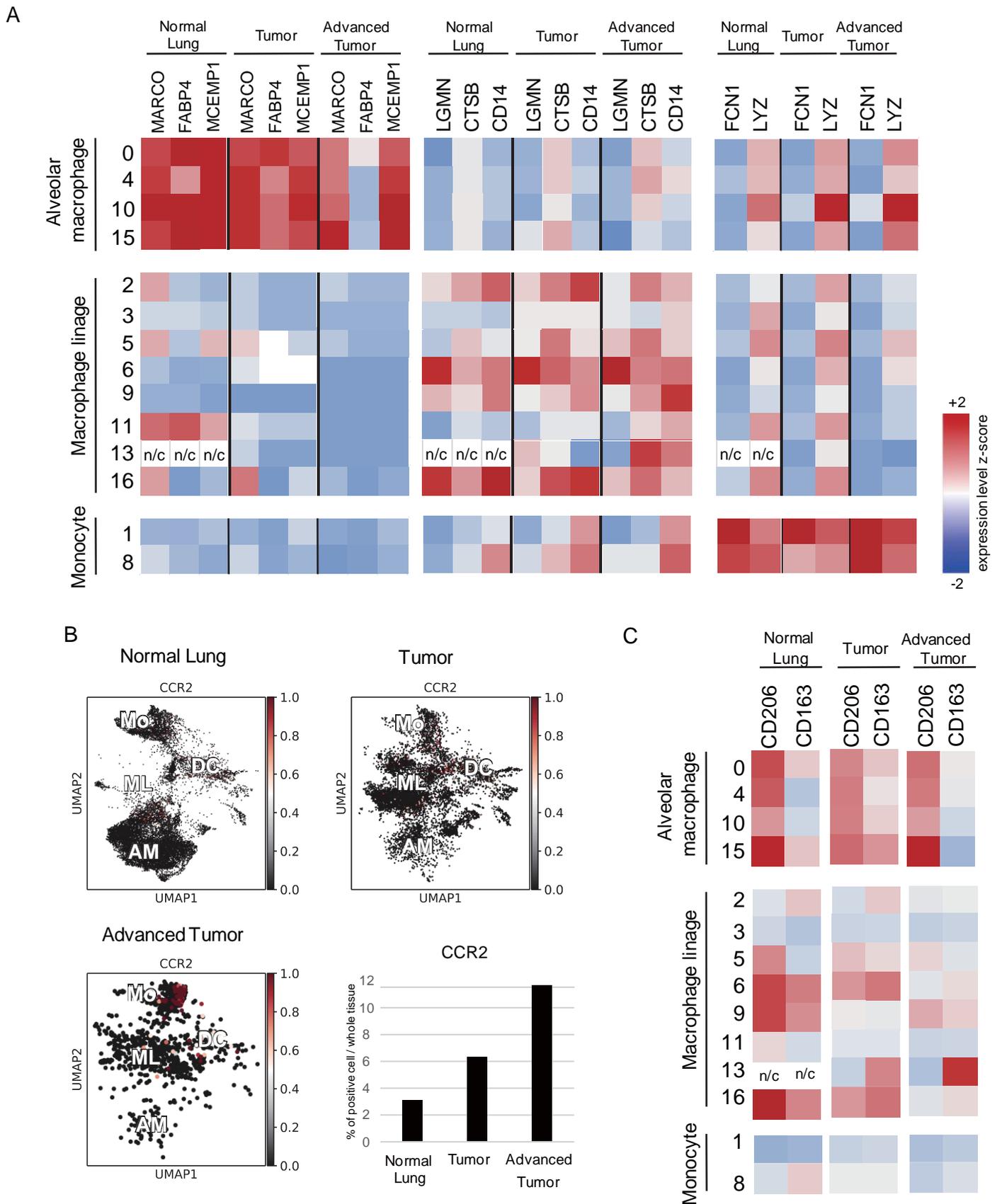
A



B

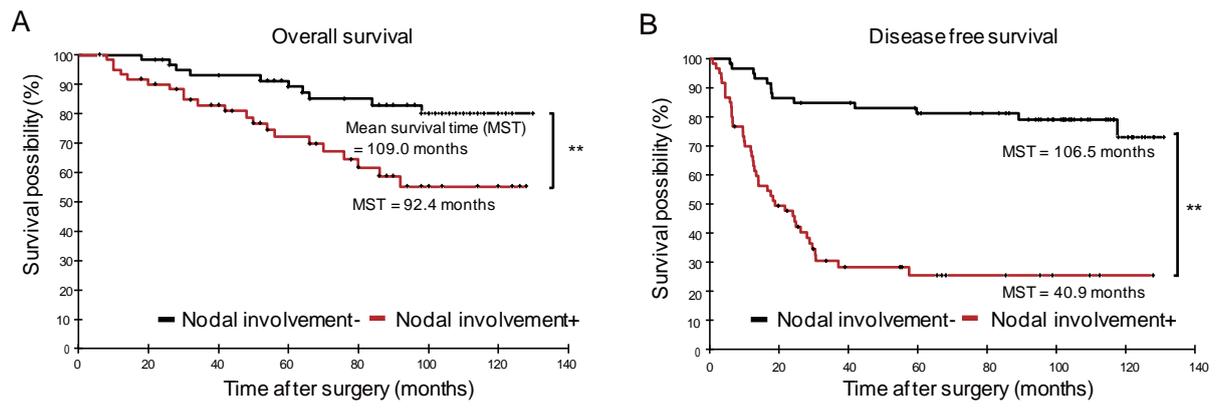


**Figure. S2.** Clustering strategy of myeloid series. (A) 0-33 clusters were analyzed. (B) myeloid series(Cluster 4, 5, 6, 25, 30 and 33) were extracted by using myeloid makers, LYZ, MARCO, CD68, FCGR3A.

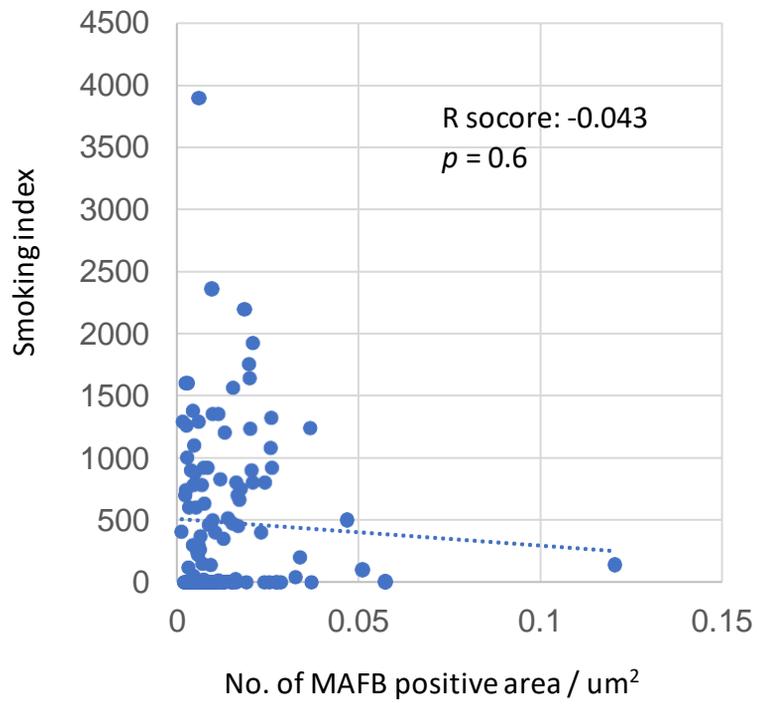


**Figure S3.** Analysis of myeloid cluster.

(A) Marker gene expression for Alveolar macrophage, Macrophage lineage and Monocyte were shown by heatmap. (B) The CCR2 UMAP of Normal lung, Tumor, Advanced Tumor (C) The other TAM marker, CD206, CD163 expression

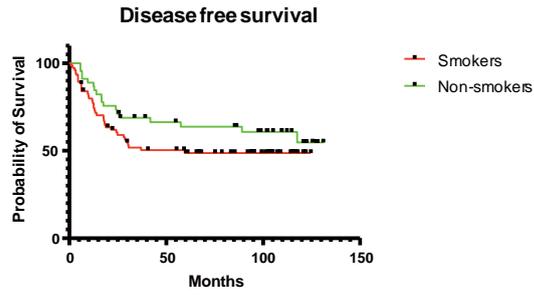
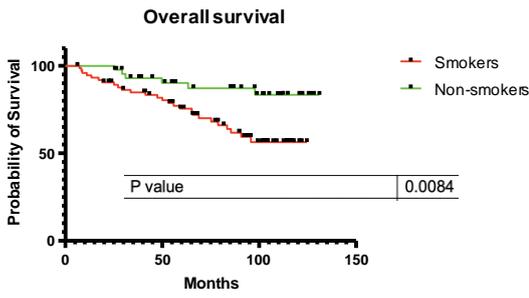


**Figure S4.** (A) Overall survival of patients with or without nodal involvement. (B) Disease free survival with or without nodal involvement. \*\*,  $p < 0.001$ .



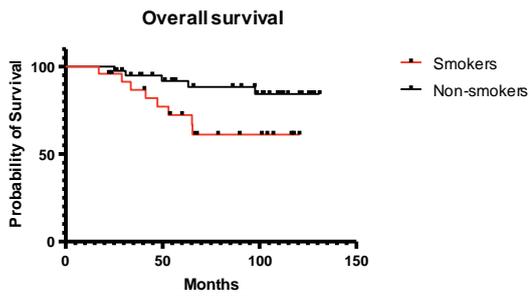
**Figure S5.** Smoking Index and tumor diameter werenot correlated with MAFB expression  
Pearson Correlation analysis was performed between MAFBexpression and Smoking index (R  
score: -0.043,  $p = 0.6$ )

A



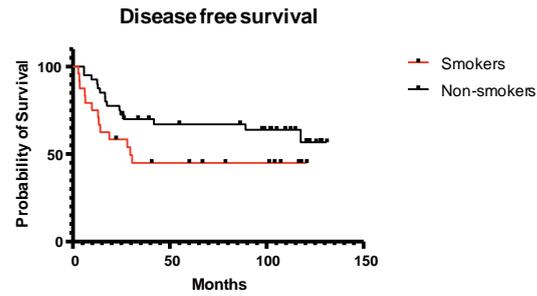
B

ALL female smokers and non-smokers



Log-rank (Mantel-Cox) test	
Chi square	4.481
df	1
P value	0.0343
P value summary	*
Are the survival curves sig different?	Yes

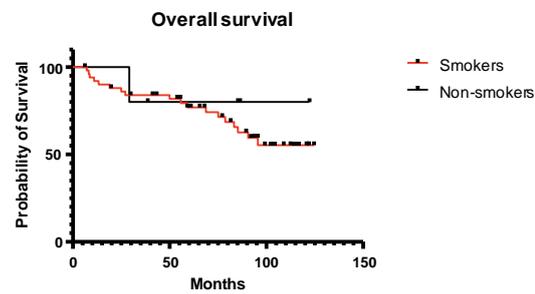
ALL female smokers and non-smokers



Log-rank (Mantel-Cox) test	
Chi square	2.762
df	1
P value	0.0965
P value summary	ns
Are the survival curves sig different?	No

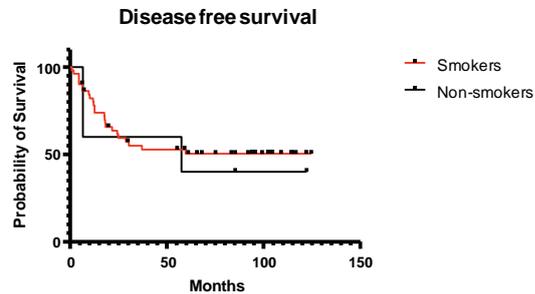
C

All male smokers and non-smokers



Log-rank (Mantel-Cox) test	
Chi square	0.3803
df	1
P value	0.5374
P value summary	ns
Are the survival curves sig different?	No

All male smokers and non-smokers



Log-rank (Mantel-Cox) test	
Chi square	0.1741
df	1
P value	0.6765
P value summary	ns
Are the survival curves sig different?	No

Figure S6. (A) Overall survival (OS) and Disease free survival (DFS) of patients of smokers and non-smokers. (B) OS and DFS of female patients of smokers and non-smokers. (C) OS and DFS of male patients of smokers and non-smokers.

	Nodal involovement (N-)	Nodal involovement (N+)	<i>P vaule of Fisher's exact test</i>
Variables	( <i>n</i> = 60)	( <i>n</i> = 60)	
<b>Age (yr)</b>			
<70	40	34	0.3479
≥70	20	26	
<b>Gender</b>			
Male	27	29	0.8549
Female	33	31	
<b>Smoking history</b>			
Never	23	22	1
Former or current	37	38	
<b>Clinical Stage</b>			
I ( <i>n</i> = 57)	57	0	<0.0001
II+III ( <i>n</i> = 63)	3	60	
<b>MAFB positive cells density</b>			
Low	24	6	0.0003
Mid+High	36	54	
<b>Cancer Recurrence</b>			
Positive	13	42	<0.0001
Negative	47	18	
<b>Lymphatic permeation</b>			
Ly(-)	52	19	<0.0001
Ly(+)	8	41	
<b>Vessel invasion</b>			
V(-)	42	12	<0.0001
V(+)	18	48	
<b>Pleural infiltration</b>			
PL(-)	43	24	0.0009
PL(+)	17	36	

**Table S1.** Relationship between MAFB+ cells density and the Clinicopathological features in Nodal involovement-negative (*n* = 60) and nodal involovement-positive (*n* = 60) groups inpatients with non-metastatic lung adenocarcinoma. The correlations were evaluated by Fisher's exacttest, \**p* < 0.05, \*\**p* < 0.001