

Supplementary Data

A decade of GWAS results in lung cancer

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Supplementary Table 1. Genetic loci associated with lung cancer survival identified by GWAS

Reference	Population ^a	Cancer type & stage	Sample size (death/total)	Tx	Median survival time (years)	Platform (# SNPs)	Region	Gene	Key SNPs
Huang et al. (1)	USA Norway	Early stage NSCLC	43/100 55/89	8 adj radio, 1 adj chemo <i>none</i>	6.3 3.7	Affymetrix 250K (74,666)	2q24.3	<i>STK39</i>	rs10176669 rs4438452
							16p13.3	<i>RBFOX1</i>	rs12446308
							20q13.12	<i>EYA2</i>	rs13041757
							4p15.1	<i>PCDH7</i>	rs10517215
Wu et al. (2)	Han Chinese	SCLC	186/245 191/305	Platinum- based chemo	1.6 1.9	Affymetrix 5.0 (265,996)	11q22	<i>YAP1</i>	rs10895256 rs1820453
							11q22.3	<i>DYNC2H1</i>	rs716274
Sato et al. (3)	Japan	Advanced NSCLC	89/105	Carboplatin and paclitaxel	1.4	Illumina Human-1 (109,365)	2q37.1	<i>EIF4E2</i>	rs1656402
							21q22.2	<i>ETS2</i> <i>DSCAM</i>	rs1209950 rs9981861
Wu et al. (4)	USA USA Spain	Advanced NSCLC	NA/327 NA/315 NA/420	Platinum- based chemo (no surgery)	1.1 1.4 0.7	Illumina HumanHap 300, 317 (307,260)	12q23.3	<i>CMKLR1</i>	rs1878022
							4p16.1	<i>SORCS2</i>	rs10937823
Hu et al. (5)	Nanjing Beijing China USA	Advanced NSCLC	206/303 101/225 120/340 353/409	Platinum- based chemo (no surgery)	1.2 1.9 2.0 1.0	Affymetrix 6.0 (576,351)	3p22.1	<i>CTNNB1</i>	rs7629386
							5p14.1	<i>CDH9</i>	rs969088
							7q31.31	<i>CFTR</i> <i>WNT2</i> <i>ST7</i>	rs41997

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							9p21.3 14q24.3	<i>ELAVL2</i> <i>SKIIP</i> <i>ALKBH1</i> <i>NRXN3</i>	rs12000445 rs3850370
Lee et al. (6)	Korea	Advanced NSCLC	316/348	Chemo (no surgery)	2.1	Affymetrix 5.0 (271,827)	9p22.1	<i>FAM154A</i>	rs1571228
							2q34 4q25	<i>CPS1</i> <i>EGF</i>	rs2371030 rs11098063 rs11568927
Wu et al. (7)	USA USA <i>Taiwan</i>	Never smokers NSCLC	217/327 187/293 <i>875/1256</i>	Surgery, radio, chemo, chemoradio	NA NA NA	llumina HumanHap 370, 660	6q16	<i>EPHA7</i>	rs6901416
							11p15.1	<i>NELL1</i>	rs10766739
Tang et al. (8)	China	Early stage NSCLC with surgery	83/354 <i>35/327</i>	22 adj chemo <i>13 adj chemo</i>	4.9 <i>6.1</i>	Affymetrix 6.0 (589,102)	4q26	<i>CAMK2D</i>	rs10023113
Galvan et al. (9)	UK <i>Italy</i>	Adenocarci noma, Stage I-IV	172/289 <i>377/748</i>	188 chemo, 54 radio, 92 surgery <i>748 surgery</i>	NA NA	llumina (30,568)	3p21-p14	<i>PTPRG</i>	rs2107561
							5q23.1		rs6882451 rs1826692 rs6595026

Abbreviations: Tx: Treatment.

^aItalic indicates replication cohorts.

References

1. Huang YT, Heist RS, Chirieac LR, Lin X, Skaug V, Zienolddiny S, et al. Genome-wide analysis of survival in early-stage non-small-cell lung cancer. *J Clin Oncol*. 2009;27:2660-7.
2. Wu C, Xu B, Yuan P, Miao X, Liu Y, Guan Y, et al. Genome-wide interrogation identifies YAP1 variants associated with survival of small-cell lung cancer patients. *Cancer Res*. 2010;70:9721-9.
3. Sato Y, Yamamoto N, Kunitoh H, Ohe Y, Minami H, Laird NM, et al. Genome-wide association study on overall survival of advanced non-small cell lung cancer patients treated with carboplatin and paclitaxel. *Journal of thoracic oncology : official publication of the International Association for the Study of Lung Cancer*. 2011;6:132-8.
4. Wu X, Ye Y, Rosell R, Amos CI, Stewart DJ, Hildebrandt MA, et al. Genome-wide association study of survival in non-small cell lung cancer patients receiving platinum-based chemotherapy. *J Natl Cancer Inst*. 2011;103:817-25.
5. Hu L, Wu C, Zhao X, Heist R, Su L, Zhao Y, et al. Genome-wide association study of prognosis in advanced non-small cell lung cancer patients receiving platinum-based chemotherapy. *Clin Cancer Res*. 2012;18:5507-14.
6. Lee Y, Yoon KA, Joo J, Lee D, Bae K, Han JY, et al. Prognostic implications of genetic variants in advanced non-small cell lung cancer: a genome-wide association study. *Carcinogenesis*. 2013;34:307-13.
7. Wu X, Wang L, Ye Y, Aakre JA, Pu X, Chang GC, et al. Genome-wide association study of genetic predictors of overall survival for non-small cell lung cancer in never smokers. *Cancer Res*. 2013;73:4028-38.
8. Tang S, Pan Y, Wang Y, Hu L, Cao S, Chu M, et al. Genome-wide association study of survival in early-stage non-small cell lung cancer. *Annals of surgical oncology*. 2015;22:630-5.
9. Galvan A, Colombo F, Frullanti E, Dassano A, Noci S, Wang Y, et al. Germline polymorphisms and survival of lung adenocarcinoma patients: a genome-wide study in two European patient series. *International journal of cancer Journal international du cancer*. 2015;136:E262-71.