SUPPLEMENTARY TABLES

Please browse Full Text version to see the data of Supplementary Table 1

Supplementary Table 1. 433 genes with FDR less than 0.05 in univariate survival analysis.

Supplementary Table 2. 126 genes were obtained through RFE features selection.

| Gene     | Entrezid | Gene    | Entrezid | Gene    | Entrezid | Gene    | Entrezid |
|----------|----------|---------|----------|---------|----------|---------|----------|
| TSPAN32  | 10077    | NCR3    | 259197   | MCM10   | 55388    | CCNB1   | 891      |
| RASGRP2  | 10235    | ASPM    | 259266   | DEPC1   | 55635    | SELENBP1| 8991     |
| CDKN3    | 1033     | STAP1   | 26228    | PBK     | 55872    | PRC1    | 9055     |
| NDC80    | 10403    | AMPD1   | 270      | KIF15   | 56992    | CD1B    | 910      |
| CENPA    | 1058     | HPGDS   | 27306    | PTGDS   | 5730     | CD1C    | 911      |
| CENPE    | 1062     | GNG7    | 2788     | SPC25   | 57405    | CD1D    | 912      |
| RAD51AP1 | 10635    | LINC00926 | 283663 | DNASE2B | 58511    | CD1E    | 913      |
| PLK4     | 10733    | C11orf21| 29125    | RGS13   | 6003     | CCNB2   | 9133     |
| KIF2C    | 11004    | RACGAP1 | 29127    | RRM2    | 6241     | EXO1    | 9156     |
| UBE2C    | 11065    | HLA-DOB | 3112     | BLK     | 640      | CD5     | 921      |
| CHEK1    | 1111     | BIRC3   | 330      | NCAPG   | 64151    | AURKB   | 9212     |
| ZWINT    | 11130    | BIRC5   | 332      | SFTPB   | 6439     | CACNA2D2| 9254     |
| OIP5     | 11339    | IL16    | 3603     | SLAMF1  | 6504     | CD19    | 930      |
| FCRL1    | 115350   | KLRRB1  | 3820     | SLCA18A2| 6571     | MS4A1   | 931      |
| CCR6     | 1235     | KIF11   | 3832     | SPIB    | 6689     | SIGLEC6 | 946      |
| ADH1A    | 124      | LY9     | 4063     | AURKA   | 6790     | KIF23   | 9493     |
| ADH1B    | 125      | MAD2L1  | 4085     | BUB1B   | 701      | CD40LG  | 959      |
| COL4A3   | 1285     | MAL     | 4118     | TK1     | 7083     | ESPL1   | 9700     |
| CR2      | 1380     | MKI67   | 4288     | CLEC3B  | 7123     | CD79A   | 973      |
| CTSG     | 1511     | MYBL2   | 4605     | TOP2A   | 7153     | CD79B   | 974      |
| DNASE1L3 | 1776     | NEK2    | 4751     | TTK     | 7272     | ACAP1   | 9744     |
| FAM129C  | 199786   | PAX5    | 5079     | CCR2    | 729230   | DLGAP5  | 9787     |
| SKA1     | 220134   | NUSAP1  | 51203    | VIPR1   | 7433     | CDK1    | 983      |
| MS4A2    | 2206     | GTSE1   | 51512    | DSCC1   | 79075    | MELK    | 9833     |
| FGER2    | 2208     | PLK1    | 5347     | ANKR55  | 79722    | CDC6    | 990      |
| TMEM130  | 222865   | POLE2   | 5427     | CXorf21 | 80231    | CDC20   | 991      |
| TPX2     | 22974    | ERCC6L  | 54821    | TRAF3IP3| 80342    | KIF14   | 9928     |
| FOXM1    | 2305     | PARPB   | 55010    | TLR10   | 81793    | CD302   | 9936     |
| NCAPH    | 23397    | CEP55   | 55165    | CDC45   | 8318     | CDC25C  | 995      |
| TNFRSF13B| 23495    | FANCI   | 55215    | ATP13A4 | 84239    | HS3ST2  | 9956     |
| LILRA4   | 23547    | NEIL3   | 55247    | FCRLA   | 84824    |         |          |
| KIF4A    | 24137    | HJURP   | 55355    | CCNA2   | 890      |         |          |
Supplementary Table 3. Distinct clinical characteristics between 2 LUAD subtypes.

| Characteristics      | Low risk (n=210) | High risk (n=256) | P     |
|----------------------|------------------|-------------------|-------|
| Age (years)          | 66.6±9.1         | 64.2±10.6         | 0.125 |
| Gender               |                  |                   |       |
| Female               | 137 (65.2)       | 120 (46.9)        | <0.001|
| Male                 | 73 (34.8)        | 136 (53.1)        |       |
| Stage                |                  |                   |       |
| I                    | 139 (66.2)       | 115 (44.9)        | <0.001|
| II                   | 38 (18.1)        | 74 (28.9)         |       |
| III                  | 25 (11.9)        | 50 (19.5)         |       |
| IV                   | 8 (3.8)          | 17 (6.6)          |       |
| Smoking status       |                  |                   |       |
| Never smoker         | 39 (18.6)        | 31 (12.1)         | <0.001|
| Non-smoker>15 years  | 69 (32.9)        | 52 (20.3)         |       |
| Non-smoker<15 years  | 67 (31.9)        | 95 (37.1)         |       |
| Current smoker       | 35 (16.7)        | 78 (30.5)         |       |

Supplementary Table 4. Summary of TCGA and 9 validation datasets included in this study.

| Datasets   | Platforms                                                                 | Sample size |
|------------|---------------------------------------------------------------------------|-------------|
| TCGA       | Illumina RNAseq HTSeq                                                    | 502         |
| GSE72094   | Rosetta/Merck Human RSTA Custom Affymetrix 2.0 microarray               | 398         |
| GSE68465   | Affymetrix Human Genome U133A Array                                      | 442         |
| GSE50081   | Affymetrix Human Genome U133 Plus 2.0 Array                              | 127         |
| GSE42127   | Illumina HumanWG-6 v3.0 expression beadchip                              | 132         |
| GSE41271   | Illumina HumanWG-6 v3.0 expression beadchip                              | 181         |
| GSE31210   | Affymetrix Human Genome U133 Plus 2.0 Array                              | 226         |
| GSE30219   | Affymetrix Human Genome U133 Plus 2.0 Array                              | 85          |
| GSE13213   | Agilent-014850 Whole Human Genome Microarray 4x44K G4112F               | 117         |
| GSE11969   | Agilent Homo sapiens 21.6K custom array                                  | 90          |
| Total      |                                                                           | 2300        |
| Characteristics | TCGA | GSE72094 | GSE68465 | GSE50081 | GSE42127 | GSE41271 | GSE31210 | GSE30219 | GSE13213 | GSE11969 |
|-----------------|------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Number of patients | 502 | 398 | 422 | 127 | 132 | 181 | 226 | 85 | 117 | 90 |
| Age (years) | 65.3 ± 9.9 | 69.4 ± 9.5 | 64.5 ± 10.1 | 68.7 ± 9.7 | 65.8 ± 10.3 | 64.6 ± 10.4 | 59.6 ± 7.4 | 61.5 ± 9.3 | 60.7 ± 10.2 | 61.1 ± 9.8 |
| Gender | | | | | | | | | | |
| Male | 209 | 174 | 219 | 65 | 67 | 91 | 105 | 66 | 60 | 47 |
| Female | 257 | 219 | 214 | 62 | 65 | 90 | 121 | 19 | 56 | 43 |
| Stage | | | | | | | | | | |
| I | 254 | 254 | | 92 | 89 | 95 | 168 | | 78 | 52 |
| II | 112 | 67 | | 35 | 22 | 27 | 58 | | 13 | 13 |
| III | 75 | 57 | | 0 | 20 | 43 | 0 | | 25 | 25 |
| IV | 25 | 15 | | 0 | 1 | 16 | 0 | | | |
| Grade | | | | | | | | | | |
| G1 | | 60 | | | | | | | | 25 |
| G2 | | | 208 | | | | | | | 31 |
| G3 | | | 165 | | | | | | | 34 |
| Smoking status | | | | | | | | | | |
| Never smoker | 70 | 298 | 15 | 23 | | 25 | 111 | | 55 | 45 |
| Ever smoker | | | 30 | 94 | 56 | | 156 | 115 | | 61 | 45 |
| Current smoker | 113 | | 16 | 36 | | | | | | |
| Non-smoker>15 years | 121 | | | | | | | | | |
| Non-smoker<15 years | 162 | | | | | | | | | |
| NA | | 65 | | | | | | | |