

Supplementary materials

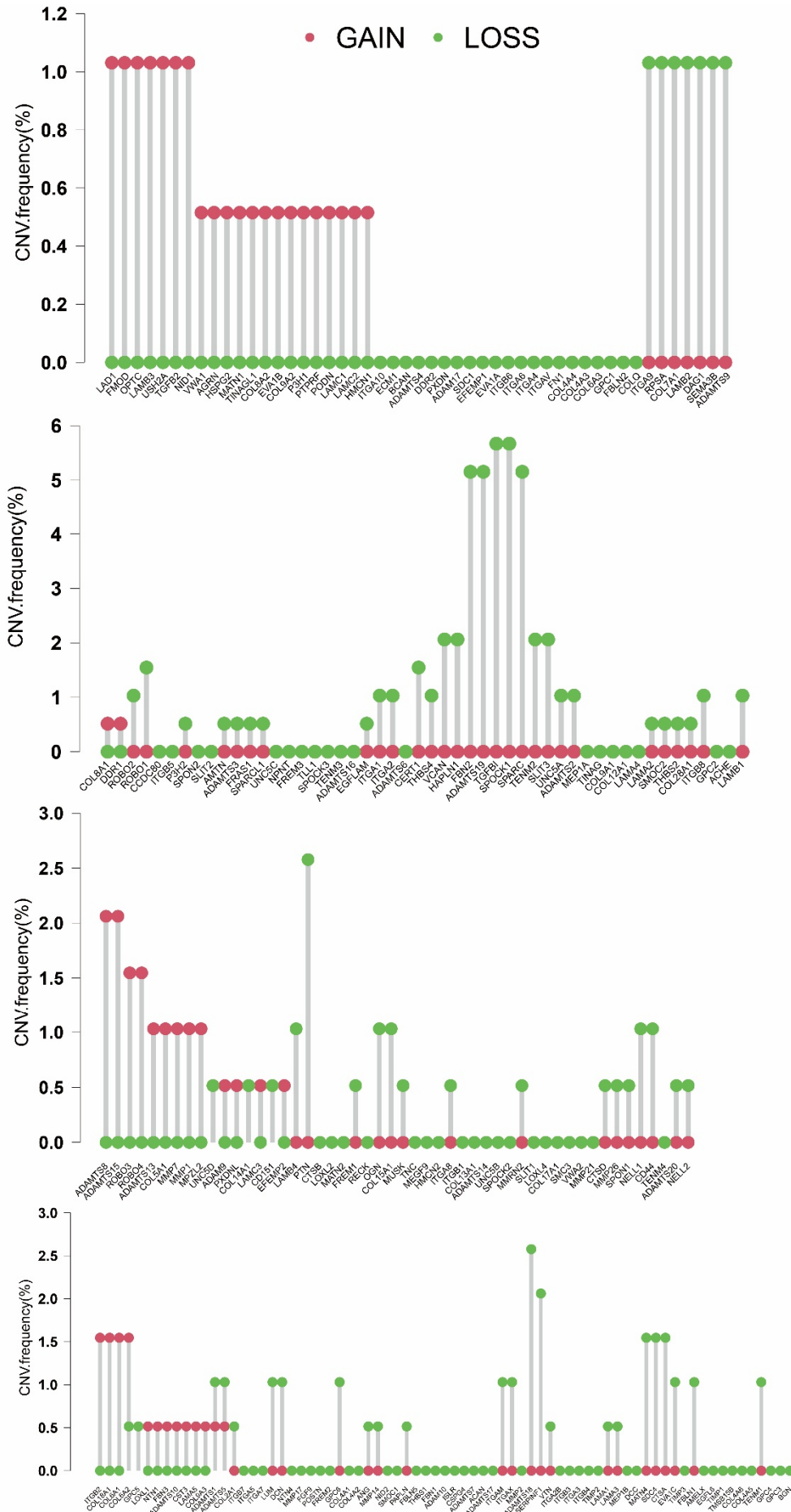
Supplementary Figure S1 Frequencies of CNV amplification and deletion among 222 BMGs.

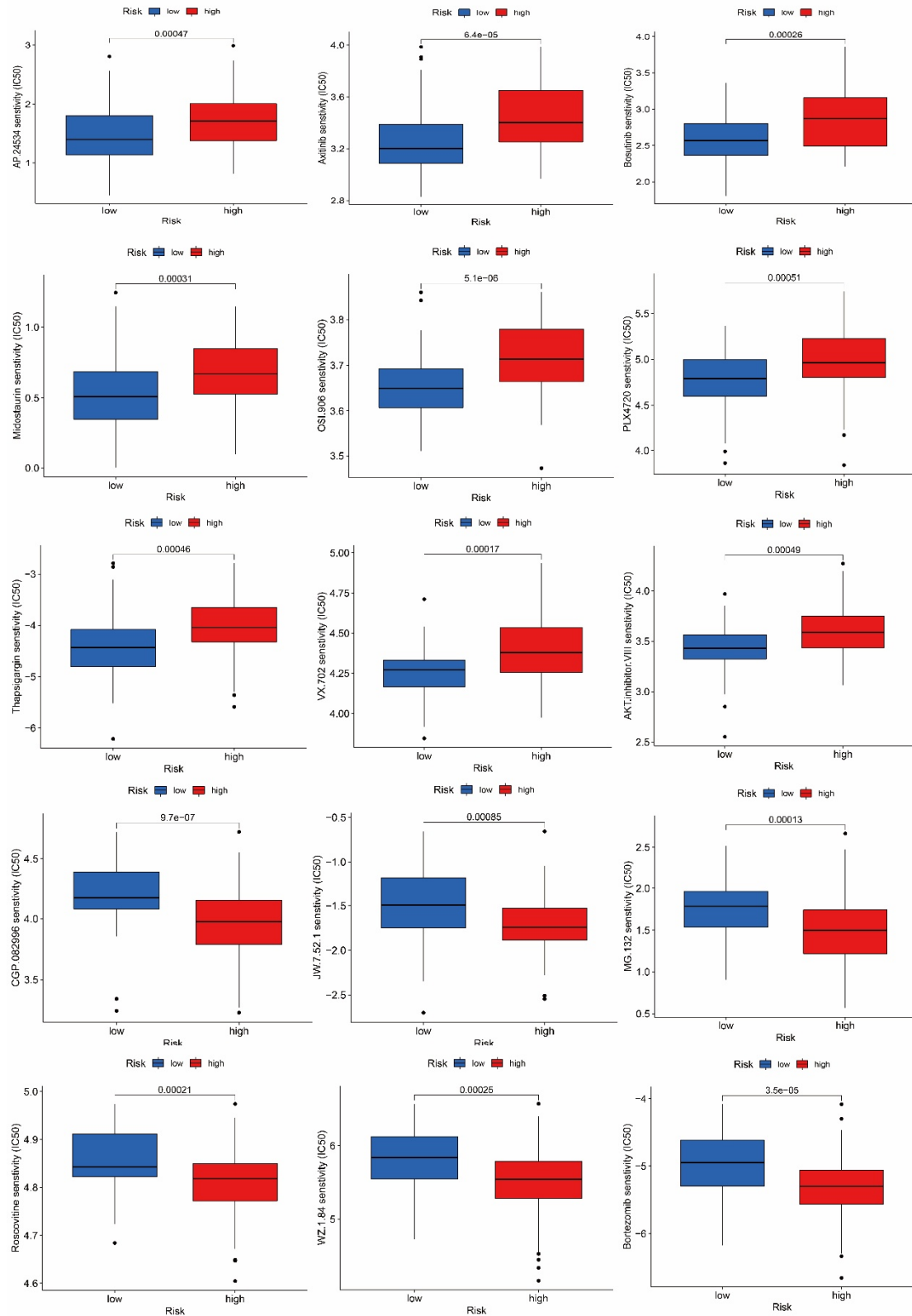
Supplementary Figure S2 The relationship between high-risk and low-risk groups and sensitive drugs.

Supplementary Table S1 The list of 222 BMGs from previously published articles.

Supplementary Table S2 The coefficient of 3 BMGs after multivariate Cox regression analysis.

S1





Supplementary Table S1 The list of 222 BMGs from previously published articles.

| Gene | Type |
|----------|------|
| ACAN | BM |
| ACHE | BM |
| ADAMTS1 | BM |
| ADAMTS2 | BM |
| ADAMTS3 | BM |
| ADAMTS4 | BM |
| ADAMTS5 | BM |
| ADAMTS6 | BM |
| ADAMTS7 | BM |
| ADAMTS8 | BM |
| ADAMTS9 | BM |
| ADAMTS10 | BM |
| ADAMTS13 | BM |
| ADAMTS14 | BM |
| ADAMTS15 | BM |
| ADAMTS16 | BM |
| ADAMTS17 | BM |
| ADAMTS18 | BM |
| ADAMTS19 | BM |
| ADAMTS20 | BM |
| AGRN | BM |
| AMELX | BM |
| AMTN | BM |
| ANG | BM |
| BCAN | BM |
| BGN | BM |
| CCDC80 | BM |
| CERT1 | BM |
| COL2A1 | BM |
| COL4A1 | BM |
| COL4A2 | BM |
| COL4A3 | BM |
| COL4A4 | BM |
| COL4A5 | BM |
| COL4A6 | BM |
| COL5A1 | BM |
| COL6A1 | BM |
| COL6A2 | BM |
| COL6A3 | BM |
| COL7A1 | BM |
| COL8A1 | BM |

| | |
|---------|----|
| COL8A2 | BM |
| COL9A1 | BM |
| COL9A2 | BM |
| COL9A3 | BM |
| COL12A1 | BM |
| COL14A1 | BM |
| COL15A1 | BM |
| COL17A1 | BM |
| COL18A1 | BM |
| COL28A1 | BM |
| COLQ | BM |
| CST3 | BM |
| CTSA | BM |
| CTSB | BM |
| CTSD | BM |
| DCN | BM |
| ECM1 | BM |
| EFEMP1 | BM |
| EFEMP2 | BM |
| EGFL6 | BM |
| EGFLAM | BM |
| FBLN1 | BM |
| FBLN2 | BM |
| FBLN5 | BM |
| FBN1 | BM |
| FBN2 | BM |
| FBN3 | BM |
| FGF9 | BM |
| FMOD | BM |
| FN1 | BM |
| FRAS1 | BM |
| FREM1 | BM |
| FREM2 | BM |
| FREM3 | BM |
| HAPLN1 | BM |
| HMCN1 | BM |
| HMCN2 | BM |
| HSPG2 | BM |
| ISLR | BM |
| LAD1 | BM |
| LAMA1 | BM |
| LAMA2 | BM |
| LAMA3 | BM |

| | |
|-------|----|
| LAMA4 | BM |
| LAMA5 | BM |
| LAMB1 | BM |
| LAMB2 | BM |
| LAMB3 | BM |
| LAMB4 | BM |
| LAMC1 | BM |
| LAMC2 | BM |
| LAMC3 | BM |
| LOXL1 | BM |
| LOXL2 | BM |
| LOXL4 | BM |
| LUM | BM |
| MATN1 | BM |
| MATN2 | BM |
| MATN4 | BM |
| MEP1A | BM |
| MEP1B | BM |
| MMP1 | BM |
| MMP2 | BM |
| MMP7 | BM |
| MMP17 | BM |
| MMP21 | BM |
| MMP26 | BM |
| MMRN2 | BM |
| NELL1 | BM |
| NELL2 | BM |
| NID1 | BM |
| NID2 | BM |
| NPNT | BM |
| NTN1 | BM |
| NTN4 | BM |
| OGN | BM |
| OPTC | BM |
| P3H1 | BM |
| P3H2 | BM |
| PAPLN | BM |
| PODN | BM |
| POSTN | BM |
| PTN | BM |
| PXDN | BM |
| PXDNL | BM |
| RECK | BM |

| | |
|----------|----|
| SERPINF1 | BM |
| SLIT1 | BM |
| SLIT2 | BM |
| SLIT3 | BM |
| SEMA3B | BM |
| SMC3 | BM |
| SMOC1 | BM |
| SMOC2 | BM |
| SPARC | BM |
| SPARCL1 | BM |
| SPOCK1 | BM |
| SPOCK2 | BM |
| SPOCK3 | BM |
| SPON1 | BM |
| SPON2 | BM |
| TGFB2 | BM |
| TGFB1 | BM |
| TGFBI | BM |
| THBS1 | BM |
| THBS2 | BM |
| THBS4 | BM |
| TIMP1 | BM |
| TIMP2 | BM |
| TIMP3 | BM |
| TINAG | BM |
| TINAGL1 | BM |
| TLL1 | BM |
| TNC | BM |
| USH2A | BM |
| VCAN | BM |
| VTN | BM |
| VWA1 | BM |
| VWA2 | BM |
| ADAM9 | BM |
| ADAM10 | BM |
| ADAM17 | BM |
| CD44 | BM |
| CD151 | BM |
| CSPG4 | BM |
| COL13A1 | BM |
| DAG1 | BM |
| DCC | BM |
| DDR1 | BM |

| | |
|--------|----|
| DDR2 | BM |
| EVA1A | BM |
| EVA1B | BM |
| EVA1C | BM |
| GPC1 | BM |
| GPC2 | BM |
| GPC3 | BM |
| GPC4 | BM |
| GPC5 | BM |
| GPC6 | BM |
| ITGA1 | BM |
| ITGA2 | BM |
| ITGA2B | BM |
| ITGA3 | BM |
| ITGA4 | BM |
| ITGA5 | BM |
| ITGA6 | BM |
| ITGA7 | BM |
| ITGA8 | BM |
| ITGA9 | BM |
| ITGA10 | BM |
| ITGAM | BM |
| ITGAV | BM |
| ITGAX | BM |
| ITGB1 | BM |
| ITGB2 | BM |
| ITGB3 | BM |
| ITGB4 | BM |
| ITGB5 | BM |
| ITGB6 | BM |
| ITGB7 | BM |
| ITGB8 | BM |
| MEGF9 | BM |
| MMP14 | BM |
| MPZL2 | BM |
| MUSK | BM |
| PTPRF | BM |
| RPSA | BM |
| ROBO1 | BM |
| ROBO2 | BM |
| ROBO3 | BM |
| ROBO4 | BM |
| SDC1 | BM |

| | |
|-------|----|
| SDC4 | BM |
| TENM1 | BM |
| TENM2 | BM |
| TENM3 | BM |
| TENM4 | BM |
| UNC5A | BM |
| UNC5B | BM |
| UNC5C | BM |
| UNC5D | BM |

Supplementary Table S2 The coefficient of 3 BMGs after multivariate Cox regression analysis.

| | coef | exp(coef) | se(coef) | z | Pr(> z) |
|---|----------|-----------|----------|--------|---------------|
| ITGA4 | -0.36235 | 0.69604 | 0.13555 | -2.673 | 0.00751 ** |
| ROBO4 | 0.18048 | 1.1978 | 0.08667 | 2.082 | 0.03730 * |
| MMP7 | 0.17077 | 1.18622 | 0.06912 | 2.471 | 0.01349 * |
| Signif. codes: '***' 0.001, '**' 0.01, '*' 0.05 | | | | | |