## Supplementary Figure 1



Cox proportional hazard ratio

|  | coef | $\exp ($ coef) | se(coef) | $\mathbf{z}$ | $\operatorname{Pr}(\geqslant\|\mathbf{z}\|)$ |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Age | 0.02 | 1.02 | 0.01 | 3.76 | $1.78 \mathrm{E}-04$ |
| Optimal Surgery | -0.64 | 0.52 | 0.25 | -2.54 | $1.18 \mathrm{E}-02$ |
| Optimal Treatment | 0.59 | 1.81 | 0.24 | 2.5 | $1.50 \mathrm{E}-02$ |
| Chemo-Response | 1.24 | 3.47 | 0.15 | 8.19 | $2.22 \mathrm{E}-16$ |

## Supplementary Figure 2

Common differentially expressed genes


## Supplementary Figure 3




## Supplementary Figure 4

A.

CR IR

C.

CR



## B.

| Mutation | mRNA | p-value | estimates | qFDR |
| :---: | :---: | :---: | :---: | :---: |
| TP53 | PLSCR1 | $6.21 \mathrm{E}-05$ | 0.28 | $3.50 \mathrm{E}-05$ |
| TP53 | SERHL2 | 1.72E-04 | 0.27 | $3.50 \mathrm{E}-05$ |
| TP53 | DNAJB14 | 2.14E-04 | -0.26 | $3.50 \mathrm{E}-05$ |
| TP53 | PDLIM5 | $2.34 \mathrm{E}-04$ | -0.26 | $3.50 \mathrm{E}-05$ |
| TP53 | DUSP4 | 2.52E-04 | -0.26 | $3.50 \mathrm{E}-05$ |
| TP53 | MAVS | $2.52 \mathrm{E}-04$ | 0.26 | $3.50 \mathrm{E}-05$ |
| TP53 | PKD2 | $2.67 \mathrm{E}-04$ | -0.26 | $3.50 \mathrm{E}-05$ |
| TP53 | SCHIP1 | $2.99 \mathrm{E}-04$ | -0.26 | $4.19 \mathrm{E}-05$ |
| TP53 | IGFBP4 | $3.82 \mathrm{E}-04$ | -0.25 | $4.19 \mathrm{E}-05$ |
| TP53 | MEIS3P1 | $4.01 \mathrm{E}-04$ | -0.25 | $4.19 \mathrm{E}-05$ |
| TP53 | WTAP | $4.70 \mathrm{E}-04$ | -0.25 | $4.19 \mathrm{E}-05$ |
| TP53 | LIPG | $4.95 \mathrm{E}-04$ | -0.25 | $4.19 \mathrm{E}-05$ |
| TP53 | FASTK | $5.12 \mathrm{E}-04$ | 0.25 | $4.19 \mathrm{E}-05$ |
| TP53 | NARS2 | $5.89 \mathrm{E}-04$ | 0.25 | $4.19 \mathrm{E}-05$ |
| TP53 | PLK2 | $7.32 \mathrm{E}-04$ | -0.24 | 5.12E-05 |
| TP53 | CSNK2A2 | $8.55 \mathrm{E}-04$ | -0.24 | 5.12E-05 |
| TP53 | NQO1 | $9.15 \mathrm{E}-04$ | 0.24 | 5.12E-05 |
| TP53 | BRAF | $9.27 \mathrm{E}-04$ | 0.24 | 5.12E-05 |
| SMARCA4 | ARFGEF2 | $6.57 \mathrm{E}-04$ | 0.24 | 5.12E-05 |
| ODZ1 | SEC62 | $2.92 \mathrm{E}-04$ | -0.26 | $3.50 \mathrm{E}-05$ |
| ODZ1 | MSL1 | $5.41 \mathrm{E}-04$ | -0.25 | $4.19 \mathrm{E}-05$ |
| ODZ1 | SYNGR1 | $6.33 \mathrm{E}-04$ | -0.24 | $4.19 \mathrm{E}-05$ |

D.


## Supplementary Figure 5

GSE9891


GSE23554


GSE28739


## Supplementary Figure 6



## Supplementary Figure 7

## A. GSE9891 (Tothill ${ }^{15}$ ) Kappa: 0.86

|  | TCGA |  |  |
| :--- | :---: | :---: | :---: |
| Tothill | Cluster 1 | Cluster 2 | Total |
| Cluster 1 | 131 | 11 | 142 |
| Cluster 2 | 15 | 265 | 280 |
| Total | 146 | 276 | 422 |

C. GSE26712 (Bonome ${ }^{18}$ ) Kappa: 0.45

|  | TCGA |  |  |
| :--- | :---: | :---: | :---: |
| Bonome | Cluster 1 | Cluster 2 | Total |
| Cluster 1 | $\mathbf{1 0 9}$ | 74 | 183 |
| Cluster 2 | 37 | $\mathbf{2 0 2}$ | 239 |
| Total | $\mathbf{1 4 6}$ | $\mathbf{2 7 6}$ | $\mathbf{4 2 2}$ |

E. GSE17260 (Yoshihara ${ }^{17}$ ) Kappa: 0.60

|  | TCGA |  |  |
| :--- | :---: | :---: | :---: |
| Yoshihara | Cluster 1 | Cluster 2 | Total |
| Cluster 1 | $\mathbf{8 1}$ | $\mathbf{8}$ | $\mathbf{8 9}$ |
| Cluster 2 | 56 | 231 | 287 |
| Total | 137 | 239 | 376 |

B. GSE3149 (Bild ${ }^{14}$ ) Kappa: 0.75

|  | TCGA |  |  |
| :--- | :---: | :---: | :---: |
| Bild | Cluster 1 | Cluster 2 | Total |
| Cluster 1 | 126 | 28 | 154 |
| Cluster 2 | 20 | 248 | 268 |
| Total | 146 | 276 | 422 |

D. GSE23554 (Marchion ${ }^{12}$ ) Kappa: 0.66

|  | TCGA |  |  |
| :--- | :---: | :---: | :---: |
| Marchion | Cluster 1 | Cluster 2 | Total |
| Cluster 1 | 124 | 46 | 170 |
| Cluster 2 | 22 | 230 | 252 |
| Total | 146 | 276 | 422 |

