**Table S1**. Comparison of data in the discovery and evaluation datasets for lung adenocarcinoma (LUAD) and melanoma.

|  |  |  |
| --- | --- | --- |
|  | Lung adenocarcinoma | Melanoma |
|  | Discovery | Evaluation | Discovery | Evaluation |
| Dataset name | LUAD | TCGA\_LUAD | Melanoma | TCGA\_SKCM |
| Reference | Imielinski et al. 2012 | Unpublished | Hodis et al. 2012 | Unpublished |
| # samples | 182 | 518 (as of 7/18/2013) | 121 | 264 (as of 8/19/2013) |
| # MutGenes | 11,306 | 15,328 | 11,030 | 15,028 |
| # genes in the mutation network | 367 | 218 | 331 | 117 |
| # overlap genes | 1161 (31.6%) | 116 (53.21%) | 86 (25.98%) | 86 (73.50%) |