**Supplementary Table S2: List of genes in customized NGS panels.**

|  |  |  |  |
| --- | --- | --- | --- |
| **gene** | **LUN3** | **LUN4** | **LUN5** |
| ARAF |  | X |  |
| AKT1 | X | X |  |
| ALK | X |  | X |
| BRAF | X | X | X |
| CDKN2A | X |  |  |
| CTNNB1 | X | X | X |
| DDR2 | X | X |  |
| EGFR | X | X | X |
| ERBB2 | X | X | X |
| FGFR1 |  |  | X |
| FGFR2 |  | X | X |
| FGFR3 |  | X | X |
| FGFR4 |  |  | X |
| IDH1 |  |  | X |
| IDH2 |  |  | X |
| KEAP1 |  | X |  |
| KRAS | X | X | X |
| MAP2K1 | X | X | X |
| MET | X | X | X |
| NFE2L2 |  | X |  |
| NRAS | X | X | X |
| PIK3CA | X | X | X |
| PTEN | X | X | X |
| RET |  |  |  |
| ROS1 |  |  | X |
| TP53 | X | X | X |