

**Supplementary Table 6: Summary of IPA Analyses**

| Histology | Compartment | Change | # loci | # Genes | # Genes associated with Cancer | B-H adj p-value of enriched canonical pathway | DM Loci forming hubs/nodes in cancer-related network           |
|-----------|-------------|--------|--------|---------|--------------------------------|---|--|
| ALL       | PR          | DM     | 1300   | 1079    | 313                            | >0.05   | NA   |
| ALL       | GB          | DM     | 42109  | 4968    | 1480                           | 0.000000149*                                  | DNMT1, DNMT3A, CDKN2B, CDH1 (Hypermethylated)                  |
| ADENO     | PR          | DM     | 1670   | 1150    | 324                            | >0.05   | NA   |
| ADENO     | GB          | DM     | 40136  | 4163    | 1179                           | 0.0152*                                       | LRRK2, SVIL, AR, (Hypomethylated) CAST, MCM2 (Hypermethylated) |
| ALL       | PR          | DM+DE  | 51     | 37      | 20                             | >0.05   | NA   |
| ALL       | GB          | DM+DE  | 2244   | 220     | 104                            | >0.05   | NA   |
| ADENO     | PR          | DM+DE  | 118    | 71      | 34                             | 0.000157**                                    | NQO1 (Hypomethylated) VWF, HBEGF, DACH1, (Hypermethylated)     |
| ADENO     | GB          | DM+DE  | 3598   | 302     | 128                            | >0.05   | NA   |

\* Molecular Mechanisms of Cancer

\*\* Axonal Guidance Signaling