

Laboratory Medicine Program University Health Network

Biomarker testing for tumor samples arriving on or after June 1, 2021:

1. Cutaneous melanoma

- NGS testing will be used to test for variants in the *BRAF*, *NRAS*, *KIT*, *GNAQ* and *GNA11* genes
- The former single gene *BRAF* V600 hotspot test will no longer be run prior to NGS testing

2. Uveal melanoma

- NGS testing will be used to test for variants in the *GNAQ*, *GNA11*, *BRAF*, *NRAS*, *KIT*, *BAP1*, *EIF1AX*, *SF3B1*, *CDKN2A*, *CDK4*, *CDK6* and *HRAS* genes
- The former single gene *BRAF* V600 hotspot test will no longer be run prior to NGS testing

3. Non-small cell lung cancer

- NGS testing will be used, to test for variants in the *EGFR*, *BRAF*, *MET*, *ALK*, *RET*, *ROS1*, *FGFR1*, *ERBB2 (Her2)*, *CTNNB1*, *KRAS*, *PIK3CA*, *RB1*, *SMARCA4*, *STK11*, *TP53*, *NTRK1*, *NTRK2*, *NTRK3* and *NRG1* genes
- *PD-L1* testing by IHC will also continue to be used for all cases
- The former single gene *EGFR* tests (Entrogen, RFLP), *ALK* IHC/FISH, and *ROS1* IHC/FISH will no longer be routinely used, as these genes and variants are detectable from the NGS panel

4. Colorectal and small bowel cancer

- NGS testing will be used to test for variants in *BRAF*, *KRAS*, *NRAS*, *PIK3CA*
- For colorectal cancer *MLH1* methylation will continue to be available upon request, when abnormal *MLH1*, *PMS2* MMR results are observed

****Please note for all of the above, the turnaround time for the NGS panel is 14 days from sample receipt in the genetic lab to sign-out.**