***Molecular Testing on Formalin Fixed Paraffin Embedded Tissue Blocks***

***General Guidelines for Block Selection***

* Any specimen to be tested by molecular techniques must meet quantitative and qualitative requirements.
* DO NOT submit decalcified tissue for molecular testing. DNA in decalcified tissue is severely degraded and cannot be amplified.
* Quantitative requirements include both a sufficient tumor percentage (see specific requirements below) and a sufficient absolute number of tumor cells (several hundred cells at a minimum). For specimens near the lower limit for tumor percentage, a higher number of tumor cells is required.
* When assessing tumor percentages, the ***PERCENTAGE OF NUCLEI*** must be assessed. DO NOT consider tumor volume when assessing percentages.
* Keep in mind that infiltrating inflammatory cells will decrease the percentage of tumor cells.
* Macrodissection can be employed to enrich for tumor cells. However, this technique requires the ability of discern an area for dissection with the naked eye based on the contour of tissue on an unstained slide. The area must also be large enough that it can be separated from surrounding tissue with manual techniques. Please note: *CELL BLOCKS ARE NOT APPROPRIATE FOR MACRODISSECTION.*
* Specimens are assessed for adequacy in the Molecular Diagnostics Laboratory prior to testing. Areas for macrodissection are selected in the Molecular Diagnostics Laboratory.

***Specific Requirements***

* Sequencing assays including KRAS, KIT, IDH, CEBPA, PDGFRA require ≥ 40% tumor nuclei.
* Microsatellite Instability testing requires an area with ≥ 20% tumor nuclei AND an area of normal tissue. Separate slides may be used.
* Most other assays require ≥ 10% tumor nuclei.

For questions, contact Bryan Betz, Technical Director of the Molecular Diagnostics Laboratory (bbetz@med.umich.edu, 734-764-0569).