**Cleveland Clinic**

**Center for Immunotherapy and Precision Immuno-Oncology**

**Immunomonitoring Laboratory (IML) Services**

**Sample Procurement, Processing and Banking**

Blood

Processing of whole blood for PBMC, Plasma (or Serum) and freezing

Serum/Plasma collection and freezing (no PBMC)

PBMC retrieval, thawing and counting

Fresh Tissue

Procure specimen

Dissociate to single cell suspension and freeze

Formalin-fixed, paraffin embedded tissue (PLMI prices)

Pull and re-file slides, per case Pull and re-file blocks, per case

Block selection per case

Cut piece of tissue from block, re-embed case (Daughter block)

Cassette, process, and embed tissue block

Unstained paraffin recut, Initial Slide

(Unstained paraffin recut, additional slides) per slide

Unstained paraffin section in Eppendorf tube

Frozen Tissue

Frozen tissue, retrieve, transfer, re-file, initial specimen

Retrieve, OCT embed, transfer, re-file, each specimen

Frozen section, unstained (2 sections/slide), each slide

Frozen section + HE/Dif Quick stain, each side

Frozen Shaving in Tube w*l* Pre & Post HE stains, each tube

Frozen Shaving in Tube, each tube

**Immune Analysis**

Flow Cytometry

Multicolor flow cytometry standard panelswhole blood Multicolor flow cytometry standard panelsPBMCs

High parameter flow cytometry myeloid panel

High parameter flow cytometry T cell panel

High parameter flow cytometry T cell exhaustion panel

Custom panel design and optimization

Staining and FACS cell sorting

Cytokine/Serology Assays

Multiple cytokine analysis (56 analytes)

Proteomics Olink platform(Price per sample per panel 92 analytes)6

Tumor Antigen ELISA

Functional Assays

T cell proliferation assay ELISPOT

T cell proliferation assay intracellular cytokine

T cell suppression assay

Nucleic acid isolation and analysis

RNA isolation from fresh tissue/PBMC

DNA isolation from fresh tissue/PBMC

RNA isolation from frozen tissue

DNA isolation from frozen tissue

RNA isolation from FFPE tissue

DNA isolation from FFPE tissue

Nanostring analysis

**Immune Phenoptics**

H&E paraffin recut, per slide

Enzyme histochemistry, per slide

Conventional special stain

Tumor circling and purity quantification

Multispectral Imaging