Overview of Assay Workflow

1. Acquire Background
2. Stain Slide
3. Acquire Immunofluorescence

MultiOmyx Multiplexed IF Assay

Table 1: Phenotyping by MultiOmyx 13-plexed panel. Cell surface markers associated with cell subsets analyzed in the study.

<table>
<thead>
<tr>
<th>Subset</th>
<th>Phenotypic Markers</th>
</tr>
</thead>
<tbody>
<tr>
<td>CD11b+CD15-HLA-DR-</td>
<td>M-MDSC</td>
</tr>
<tr>
<td>CD11b+CD14+CD15-HLA-DR-</td>
<td>M2 TAM</td>
</tr>
<tr>
<td>CD11b+CD14-CD15+CD33-HLA-DR</td>
<td>M-MDSC</td>
</tr>
<tr>
<td>CD11b+CD14-CD15+CD33+</td>
<td>G-MDSC</td>
</tr>
<tr>
<td>CD11b+CD14-CD15+CD33+</td>
<td>Arginase 1+</td>
</tr>
</tbody>
</table>

Representative Images from Hodgkin Lymphoma Patients

Characterization of Myeloid-Derived Suppressor Cells and Tumor Associated Macrophages Using MultiOmyx Hyperplexed Immunofluorescence Assay in Hodgkin Lymphoma

Qingyan Au • Jun Fang • Arezoo Hanifi • Anna Juncker-Jensen • Judy Kuo • Eric Leones • Flora Sahafi • RaghavKrishna Padmanabhan • Nicholas Hoo • Josette William

Neogenomics Laboratories, Aliso Viejo, CA

#4135

Characterizations of MDSCs and TAMs in HL, AML and DLBCL Using MultiOmyx IF Assay

Quantification and Nearest Neighbor Spatial Analysis of the Immunosuppressive Cells in HL

Representative Images from Acute Myeloid Leukemia Patients

Representative Images from Diffuse Large B-cell Lymphoma Patients

Conclusions

In this study, MultiOmyx 13-plexed panel was utilized to characterize different subtypes of myeloid cells in HL, AML and DLBCL samples. MultiOmyx proprietary algorithm was used to perform cell classification and spatial analysis in HL samples.

- M2 TAM, G-MDSC and M-MDSC in different types of hematological malignancies were characterized by 13-plexed MultiOmyx assay.
- Pearson correlation was used to study positive and negative correlations between different subtypes of tumor-resident myeloid cells.
- Nearest neighbor analysis indicates that Tregs are in closer proximity to M2 TAMs than MDSCs.
- There is a significant positive correlation between T cytotoxic cells to M-MDSCs (p<0.05) in the 9 HL patients in the study.