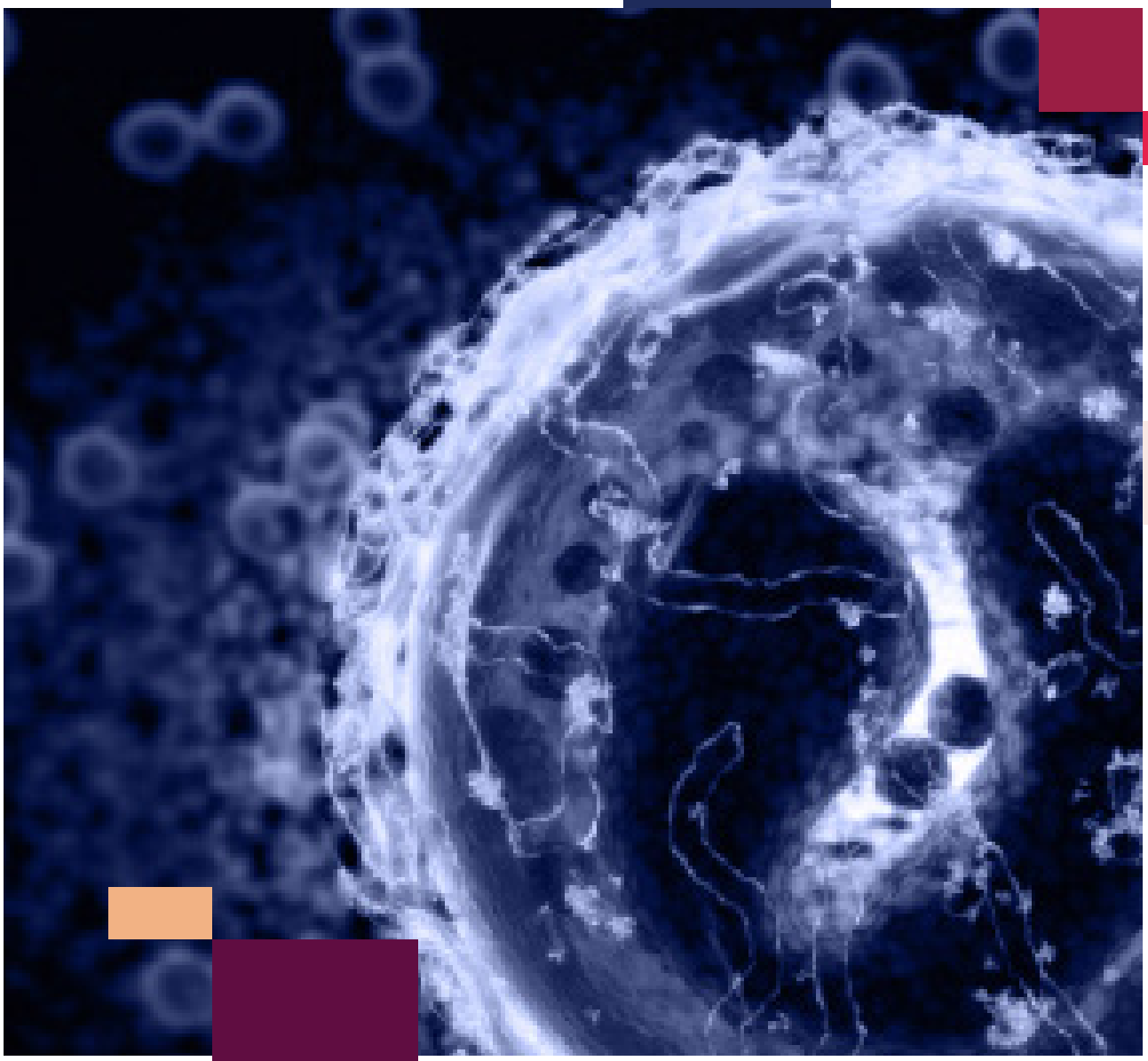
MDSC ASSAYS

CellCarta

formerly
Caprion-HistoGeneX

Predict responses to immune checkpoint inhibitors and improve patient stratification

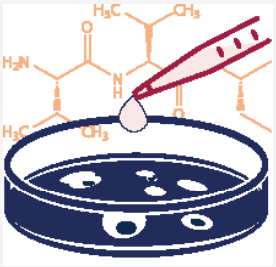


WHY MONITORING MDSC?

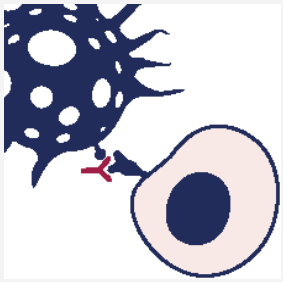
The treatment of cancer has been revolutionized by the development of immunotherapies including PD-1/PD-L1 inhibitors and other checkpoint blockades. However, response rates have been variable and better response rates were seen in patients with lower levels of MDSC (Liu Y *et al. Cancer Immunol Immunother* 2018;67:1181-95). Patients with elevated MDSC may benefit from supplemental drugs and many combination therapies are currently in clinical development. Some of these combinations are thought to work by inhibiting MDSC and thereby creating a permissive environment for activated T cells.

MDSC has shown the potential of becoming a critical biomarker to predict the outcome of checkpoint inhibitors and support personalized medicine.

MDSC MEASUREMENT AT DIFFERENT ENDPOINTS OF CLINICAL TRIALS



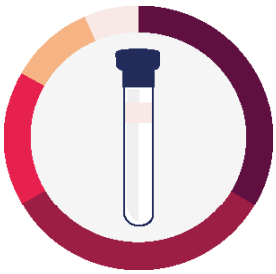
AS AN EXPLORATORY BIOMARKER TO CHARACTERIZE IMMUNE RESPONSES



AS A POTENTIAL PHARMACODYNAMIC (PD) BIOMARKER TO ASSESS EFFICACY OF CHECKPOINT INHIBITOR TREATMENTS

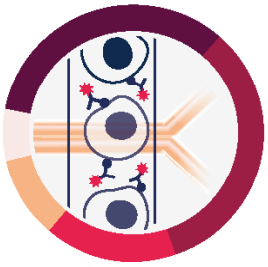
AS A PATIENT STRATIFICATION CLIA-CERTIFIED ASSAY TO ASSESS ANTICIPATED RESPONSE RATES TO CHECKPOINT INHIBITOR TREATMENTS IN CLINICAL TRIALS

OUR MDSC ASSAYS WERE FEATURED IN PEER-REVIEWED SCIENTIFIC PUBLICATIONS



QUALITY SAMPLE HANDLING

STABILIZING MDSC CYTO-CHEX® BCT



FLOW CYTOMETRY ASSAY

SPECIFIC FLOW PANELS FOR M/G MDSC

DATA ANALYSIS

COMPREHENSIVE AND RELIABLE ANALYSIS AND INTERPRETATION

CLIA-CERTIFIED OPTION

- Wan D *et al.* Sequential depletion of myeloid-derived suppressor cells and tumor cells with a dual-pH-sensitive conjugated micelle system for cancer chemoimmunotherapy. *J Control Release* 2020;317:43-56.
- Callahan MK *et al.* Nivolumab plus ipilimumab in patients with advanced melanoma: updated survival, response, and safety data in a phase I dose-escalation study. *J Clin Oncol* 2018;36(4):391-398.
- De Henau O *et al.* Overcoming resistance to checkpoint blockade therapy by targeting PI3Kγ in myeloid cells. *Nature* 2016;539:443-447.
- Kitano S *et al.* Computational algorithm-driven evaluation of monocytic myeloid-derived suppressor cell frequency for prediction of clinical outcomes. *Cancer Immunol Res* 2014;2(8):812–21.
- Wolchok JD *et al.* Nivolumab plus ipilimumab in advanced melanoma. *NEJM* 2013;369(2):122-33.

ACCELERATE YOUR DRUG DEVELOPMENT WITH THE RIGHT ASSAY AND DATA

- **Cyto-Chex® BCT** for whole blood collection to improve sample integrity and ensure optimal MDSC measurement
- Flow panels designed specifically to measure the frequency of **blood monocytic and/or granulocytic MDSC**
- Absolute cell counts can be reported through the use of **BioLegend® Precision Count Beads™**
- Option to use the **CLIA-certified panel** or the exploratory panel with up to 18 markers
- **icScore™** - A proprietary algorithm licensed from Memorial Sloan Kettering Cancer Center, to support non-biased reliable gating for HLA-DR

RELATED SERVICES

- Personalized panels for immunophenotyping assays
- Receptor occupancy (RO) assays
- Intracellular cytokine staining (ICS)
- Phosphoflow
- ELISA

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ABOUT CELLCARTA

Leading provider of specialized precision medicine laboratory services to the biopharmaceutical industry. Leveraging its integrated analytical platforms in immunology, histopathology, proteomics and genomics, as well as related specimen collection and logistics services, CellCarta supports the entire drug development cycle, from discovery to late-stage clinical trials. The company operates globally with over 700 employees in its nine facilities located in Canada, USA, Belgium, Australia, and China.

For more information on how CellCarta can partner with you, please contact us:

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