

# Imaging Mass Cytometry Publications

April 2020

This bibliography contains references to more than 45 peer-reviewed publications featuring Imaging Mass Cytometry™ through April 30, along with a few non-peer-reviewed *bioRxiv* articles that are likely to be of interest. You can also browse through these articles by category online at [fluidigm.com/publications/hyperion-imaging-system](https://fluidigm.com/publications/hyperion-imaging-system).

## 2020

- 1 Ali, H.R. et al. “Imaging Mass Cytometry™ and multiplatform genomics define the phenogenomic landscape of breast cancer.” *Nature Cancer* 1 (2020): 163–175.
- 2 Aoki, T. et al. “Single-cell transcriptome analysis reveals disease-defining T-cell subsets in the tumor microenvironment of classic Hodgkin lymphoma.” *Cancer Discovery* 10 (2020):406–421.
- 3 Chen, P.Y. et al. “Smooth muscle cell reprogramming in aortic aneurysms.” *Cell Stem Cell* 26 (2020): 542–557.
- 4 Jackson, H.W. et al. “The single-cell pathology landscape of breast cancer.” *Nature* 578 (2020): 615–620.
- 5 Xiang, H. et al. “Cancer-associated fibroblasts promote immunosuppression by inducing ROS-generating monocytic MDSCs in lung squamous cell carcinoma.” *Cancer Immunology Research* 8 (2020): 436–450.
- 6 Yu, Y. et al. “Metal-labeled aptamers as novel nanoprobe for Imaging Mass Cytometry.™” *Analytical Chemistry* (2020): [doi.org/10.1021/acs.analchem.9b05159](https://doi.org/10.1021/acs.analchem.9b05159).
- 7 Zhang, Y. et al. “Inflammatory response cells during acute respiratory distress syndrome in patients with coronavirus disease 2019 (COVID-19).” *Annals of Internal Medicine* (2020): [doi:10.7326/L20-0227](https://doi.org/10.7326/L20-0227).

## 2019

- 1 Arnol, D. et al. “Modeling cell-cell interactions from spatial molecular data with spatial variance component analysis.” *Cell Reports* 29 (2019): 202–211.e6.
- 2 Bassan, J. et al. “TePhe, a tellurium-containing phenylalanine mimic, allows monitoring of protein synthesis *in vivo* with mass cytometry.” *Proceedings of the National Academy of Sciences of the United States of America* 116 (2019): 8,155–8,160.
- 3 Bouzekri, A. et al. “Multidimensional profiling of drug-treated cells by Imaging Mass Cytometry™.” *FEBS Open Bio* (2019): 1,652–1,669.
- 4 Carvajal-Hausdorf, D.E. et al. “Multiplexed (18-plex) measurement of signaling targets and cytotoxic T cells in trastuzumab-treated patients using Imaging Mass Cytometry™.” *Clinical Cancer Research* 25 (2019): 3,054–3,062.
- 5 Damond, N. et al. “A map of human type 1 diabetes progression by Imaging Mass Cytometry™.” *Cell Metabolism* 29 (2019): 755–768.
- 6 Datar, I. et al. “Expression analysis and significance of PD-1, LAG-3, and TIM-3 in human non-small cell lung cancer using spatially resolved and multiparametric single-cell analysis.” *Clinical Cancer Research* (2019): 4,663–4,673.
- 7 Durand, M. et al. “Human lymphoid organ cDC2 and macrophages play complementary roles in T follicular helper responses.” *Journal of Experimental Medicine* 216 (2019): 1,561–1,581.
- 8 Elyada, E. et al. “Cross-species single-cell analysis of pancreatic ductal adenocarcinoma reveals antigen-presenting antigen-associated fibroblasts.” *Cancer Discovery* (2019): 1,102–1,123.
- 9 Guo, R. et al. “Lymphocyte mass cytometry identifies a CD3–CD4<sup>+</sup> cell subset with a potential role in psoriasis.” *JCI Insight* 4 (2019): 125306.
- 10 Ijsselsteijn, M.E et. al. “A 40-marker panel for high dimensional characterization of cancer immune microenvironments by Imaging Mass Cytometry™.” *Frontiers in Immunology* 10 (2019): 2534.
- 11 Li, N. et al. “Memory CD4<sup>+</sup> T cells are generated in the human fetal intestine.” *Nature Immunology* 20 (2019): 301–312.
- 12 Li, N. et al. “Early-life compartmentalization of immune cells in human fetal tissues revealed by high-dimensional mass cytometry.” *Frontiers in Immunology* 10 (2019): 1932.
- 13 Park, C. et al. “The landscape of myeloid and astrocyte phenotypes in acute multiple sclerosis lesions.” *Acta Neuropathologica Communications* 7 (2019): 130.

- 14 Popescu, D-M. et al. “Decoding the development of the blood and immune systems during human fetal liver haematopoiesis.” *Nature* 574 (2019): 365-371 .
- 15 Raj, D. et al. “Switchable CAR-T cells mediate remission in metastatic pancreatic ductal adenocarcinoma.” *Gut* 68 (2019): 1,052–1,064.
- 16 Ramaglia, V. et al. “Multiplexed imaging of immune cells in staged multiple sclerosis lesions by mass cytometry.” *eLife* 8 (2019): e48051.
- 17 Singh, N. et al. “Development of a 2-dimensional atlas of the human kidney with Imaging Mass Cytometry™.” *JCI Insight* 4 (2019): 129477.
- 18 Somarakis, A. et al. “ImaCytE: visual exploration of cellular microenvironments for Imaging Mass Cytometry™ data.” *IEEE Transactions on Visualization and Computer Graphics* (2019): doi:10.1109/TVCG.2019.2931299.
- 19 Theil, D. et al. “Imaging Mass Cytometry™ and single-cell genomics reveal differential depletion and repletion of B-cell populations following ofatumumab treatment in cynomolgus monkeys.” *Frontiers in Immunology* (2019): 1340.
- 20 Umemoto, K. et al. “The potential application of PD-1 blockade therapy for early-stage biliary tract cancer.” *International Immunology* (2019): 273–281.
- 21 Uraki, R. et al. “*Aedes aegypti* AgBR1 antibodies modulate early Zika virus infection of mice.” *Nature Microbiology* 4 (2019): 948–955.
- 22 Wang, Y.J. et al. “Multiplexed *in situ* Imaging Mass Cytometry™ analysis of the human endocrine pancreas and immune system in type 1 diabetes.” *Cell Metabolism* 29 (2019): 769–783.
- 23 Zhang, T. et al. “Immunocyte profiling using single-cell mass cytometry reveals EpCAM+ CD4+ T cells abnormal in colon cancer.” *Frontiers in Immunology* 10 (2019): 1571.

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- 4 Cao, Y. et al. “Tumor platinum concentrations and pathological responses following cisplatin-containing chemotherapy in gastric cancer patients.” *Journal of Gastrointestinal Cancer* (2018): 801–807.
- 5 Chevrier, S. et al. “Compensation of signal spillover in suspension and Imaging Mass Cytometry™.” *Cell Systems* 6 (2018): 612–620.
- 6 Gerdtsson, E. et al. “Multiplex protein detection on circulating tumor cells from liquid biopsies using Imaging Mass Cytometry™.” *Convergent Science Physical Oncology* 4 (2018): 015002.
- 7 Malihi, P.D. et al. “Clonal diversity revealed by morphoproteomic and copy number profiles of single prostate cancer cells at diagnosis.” *Convergent Science Physical Oncology* 4 (2018): 015003.
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- 9 Strobl, M. et al. “Connecting the microenvironmental niche to treatment response in ovarian cancer.” *bioRxiv* (2018): doi.org/10.1101/452052.
- 10 Zhao, Y. et al. “Spatiotemporal segregation of human marginal zone and memory B cell populations in lymphoid tissue.” *Nature Communications* 9 (2018): 3857.

## 2017

- 1 Chang, Q. et al. “Imaging Mass Cytometry™.” *Cytometry Part A* 91 (2017): 160–169.
- 2 Chang, Q. et al. “Staining of frozen and formalin-fixed, paraffin-embedded tissues with metal-labeled antibodies for Imaging Mass Cytometry™ analysis.” *Current Protocols in Cytometry* 82 (2017): 12.47.1–12.47.8.
- 3 Mavropoulos, A. et al. “Simultaneous detection of protein and mRNA in Jurkat and KG-1a cells by mass cytometry.” *Cytometry Part A* 91 (2017): 1,200–1,208.
- 4 Schapiro, D. et al. “histoCAT™: analysis of cell phenotypes and interactions in multiplex image cytometry data.” *Nature Methods* 14 (2017): 873–876.
- 5 Singh, M. et al. “Highly multiplexed Imaging Mass Cytometry™ allows visualization of tumor and immune cell interactions of the tumor microenvironment in FFPE tissue sections.” *Blood* 130 (2017): 2,751.
- 6 Sivakamasundari, V. et al. “Comprehensive cell type specific transcriptomics of the human kidney.” *bioRxiv* (2017): doi.org/10.1101/238063.

- 7 Straus, R.N. et al. “Analytical figures of merit for a novel tissue imaging system.” *Journal of Analytical Atomic Spectrometry* 32 (2017): 1,044–1,051.

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- 1 Chang, Q. et al. “Biodistribution of cisplatin revealed by Imaging Mass Cytometry™ identifies extensive collagen binding in tumor and normal tissues.” *Scientific Reports* 6 (2016): 36,641.
- 2 Edgar, L.J. et al. “Isotopologous organotellurium probes reveal dynamic hypoxia *in vivo* with cellular resolution.” *Angewandte Chemie International Edition* 55 (2016): 13,159–13,163.

## 2015

- 1 Schüffler, P.J. et al. “Automatic single cell segmentation on highly multiplexed tissue images.” *Cytometry Part A* 87 (2015): 936–942.

## 2014

- 1 Giesen, C. et al. “Highly multiplexed imaging of tumor tissues with subcellular resolution by mass cytometry.” *Nature Methods* 11 (2014): 417–422.

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