HematoLogics

3161 Elliott Avenue, Suite 200, Seattle, WA 98121 Phone (800) 860-0934 Fax: (206) 223-5550 [www.hematologics.com](http://www.hematologics.com/)

**Pioneer in Monitoring Response to Therapy (MRD) using ∆N:**™(Difference from Normal) **Flow Cytometry**

* **Hematologics validated ∆N:**™ **offers superior sensitivity and specificity. As low as 0.02% detection within a 24-hour turn-around time.**
* **HematoLogics ∆N:**™ **has been adopted by the Children’s Oncology Group (COG) for MRD detection in AML replacing morphology as the gold standard**

Eidenschink Brodersen L, Gerbing RB, Alonzo TA, Pardo L, Alonzo TA, Paine D, et al. “Morphologic remission status is limited compared to ΔN flow cytometry: A Children’s Oncology Group AAML0531 report. Blood Advances 2020 Oct; 4(20):5050-5061.

* **∆N:**™ **detects phenotypic evolution that can be missed by the widely used Leukemia Associated Immunophenotype (LAIP) approach**

Zeijlemaker W. et al. “Tumor heterogeneity makes AML a ‘moving target’ for detection of residual disease.” Cytometry B Clin Cytom 2014 Jan; 86(1):3-14.

[Loken M.R. “Residual Disease in AML, a target that can move in more than one direction.” Cytometry B Clin Cytom. 2014 Jan;](http://www.hematologics.com/wp-content/uploads/2017/06/Loken-2014-Cytometry._Part_B_Clinical_cytometry_EDITORIAL.pdf) [86(1):15-17.](http://www.hematologics.com/wp-content/uploads/2017/06/Loken-2014-Cytometry._Part_B_Clinical_cytometry_EDITORIAL.pdf)

[Grimwade D. et al. “Defining Minimal Residual Disease in acute myeloid leukemia: which platforms are ready for ‘prime time’?” Blood.](http://www.hematologics.com/wp-content/uploads/2017/06/Grimwade-et-al-2014.pdf) [2014 Nov 27; 124(23):3345-3355.](http://www.hematologics.com/wp-content/uploads/2017/06/Grimwade-et-al-2014.pdf)

Eidenschink Brodersen L, Gerbing RB, Alonzo TA, Pardo L, Alonzo TA, Paine D, et al. “Morphologic remission status is limited compared to ΔN flow cytometry: A Children’s Oncology Group AAML0531 report. Blood Advances 2020 Oct; 4(20):5050-5061.

* **∆N:**™ **has been validated in four clinical trials spanning over 15 years and greater than 2,500 patients**

[Loken M.R. et al. “Residual Disease detected by multidimensional flow cytometry signifies high relapse risk in patients with de novo](http://www.hematologics.com/wp-content/uploads/2017/07/Loken-2012-MRD-flow-COG.pdf) [acute myeloid leukemia: a report from the Children’s Oncology Group.” Blood. 2012 Aug 23; 120(8):1581-1588.](http://www.hematologics.com/wp-content/uploads/2017/07/Loken-2012-MRD-flow-COG.pdf)

* **∆N:**™ **has been validated in Pediatric and Adult Specimens**

[Loken M.R. et al. “Consistent Quantitative Gene Product Expression: #3. Invariance with Age.” Cytometry A. 2016 Nov; 89(11):997-](http://www.hematologics.com/wp-content/uploads/2017/06/Invariance-with-age.pdf) [1000.](http://www.hematologics.com/wp-content/uploads/2017/06/Invariance-with-age.pdf)

[Loken M.R. et al. “Consistent Quantitative Gene Product Expression: #2. Antigen intensities on bone marrow cells are invariant](http://www.hematologics.com/wp-content/uploads/2017/06/Invariant-antigen-expression.pdf) [between individuals.” Cytometry A. 2016 Nov; 89(11):987-996.](http://www.hematologics.com/wp-content/uploads/2017/06/Invariant-antigen-expression.pdf)

* **HematoLogics is the only commercial laboratory using Clinical Cell Sorting for**

**molecular confirmation of neoplastic populations**

Zehentner B.K. et al. “Minimal Disease Detection and Confirmation in Hematologic Malignancies: Combining Cell sorting with Clonality Profiling” 2006 Clin Chem 52(3):430-437.

**Best for Your Patient - Best for You**

**The same poor outcome is seen when abnormal blasts are >25% as when residual disease levels are as low as 0.1%. (See Below)**



A portion of this work was presented in poster format, at the 54th Annual Meeting of the American Society of Hematology, Atlanta, GA, December 8-11, 2012.

# On the other hand, patients may present with >15% normal blasts while recovering from chemotherapy. Only HematoLogics can confidently distinguish residual disease leukemia from regenerating marrows by ∆N:™ *Flow Cytometry*.

**HematoLogics offers a complete test menu including ∆N:™ *Flow Cytometry*\*, *Molecular Genetics\** (most complete RT-PCR menu for quantitative monitoring), *Cytogenetics\*, FISH\*, Next Generation Sequencing, SNP/CGH microarray, Morphology, Integrated Testing* and *Reporting.***

# \*COG Certified