

# High Clinical Longitudinality and Multi-Modal Real-world Data Solution

## An Industry-leading Partnership for Hematologic Malignancies

NeoGenomics and ConcertAI are pleased to announce a transformation collaboration for Precision Hematology. Combining ConcertAI's longitudinal clinical data with NeoGenomics comprehensive biomarkers derived from 100's of hematological tests provides a defining solution to investigate real-world clinical practice and outcomes in hematological malignancies. The combination allows for real-world insights on more than 1M+ patient lives with hematologic malignancies, across 1,000+ oncology clinics, with high coverage of key biomarkers over the course of the entire patient treatment journey, and across multiple lines of therapy.

## The Most Powerful Biomarker Data for Hematologic Malignancies Available

Linked to clinical records are cytogenetic and molecular biomarker data, presented with key dates and standardized, longitudinal laboratory test results across bone marrow and blood tests critical to hematologic malignancies (CBCs, Proteins, etc.). The largest and cleanest data available globally from an industry-leading team of bio-informaticists.

Directly analyze the raw data images and graphs (Morphology, Cytogenetics, Flow) and dive into the sequencer files (FASQ, VCF, BAM), especially created for researchers. Track the entire patient journey across multiple lines of therapy to derive unparalleled insights.

## PRODUCTS

### RWD360™

**Harmonized native structured EMR data with AI insights at a broad population level**

200+ variables including:

- Lab results (for diagnosis, stage, response)
- Integrated Line of Therapy (Claims + EMR)
- Diagnosis from EMR
- Real-world overall survival
- Procedures (Transplants, Transfusions, CAR-T)
- ECOG
- Confirmatory curation available

*...plus Claims and SDOH data*

### Patient360™

**Expertly abstracted EHR data, via a patient level registry**

100+ curated variables including:

- Progression and response (incl. relapse, refractory) directly captured
- Adverse events/toxicities (800+) linked to sentinel events
- Risk Stratification Score
- Longitudinal and genomic information from other labs

*...plus all structured, native EMR, claims, and SDOH data*

### Compass360™

**Comprehensive assessment for sample-to-diagnosis in a single report; with multi-modal testing:**

- NGS
- Cytogenetics/Karyotyping
- FISH
- Flow
- PCR
- Morphology
- MRD

for Bone Marrow & Blood Samples

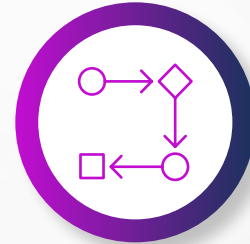
## End User / Differentiated Use Case Examples



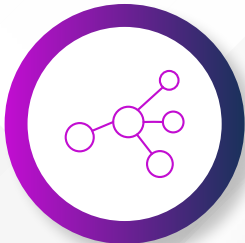
**CDx Launch Planning**  
Treatment uptake with Companion Dx



**Translational Discovery**  
New precision medicine biomarker targets



**External Control Arms**  
Biomarker driven regulatory studies



**Epidemiology/HEOR**  
Prevalence, disease burden, outcomes



**BD, New Product Planning**  
Forecasting by biomarker sub-cohort



**Market Access**  
Value-driven studies with HTAs, payers

### Rigorous Standards for Real-World Evidence

Our companies' data are featured in hundreds of peer-reviewed publications and have been used as part of regulatory drug approvals. A wide variety of publications (page 3-4) span real-world endpoints like effectiveness, patient outcomes and quality of life, SDOH, adverse effects, healthcare resource utilization, mortality, and so much more.

ConcertAI has developed a highly validated approach to hematologic response information (PFS, relapse/refractory) via its Hem/Onc Center of Excellence. Real-world endpoints like Overall Survival leverage multi-modal composite mortality data from the EMR and third-party Obituary, SSDI, and Commercial Claims to ensure the highest levels of completeness critical for research. Ongoing FDA and FOCR real-world data collaborations generate foundational research and methodologies to advance RWE's potential uses.<sup>2,3</sup>

ConcertAI and NeoGenomics research are driving progress in hematologic cancer treatments and improving patient outcomes with data that is guideline-driven and has provenance to the clinic bedside (ConcertAI) and the laboratory (NeoGenomics).

<sup>2</sup><https://www.concertai.com/news/2021/06/concertai-strikes-five-year-collaboration-with-fda-as-part-of-real-world-evidence-push/>

<sup>3</sup>[https://friendsofcancerresearch.org/wp-content/uploads/Considerations\\_Leveraging\\_Real-World\\_Endpoints\\_Oncology.pdf](https://friendsofcancerresearch.org/wp-content/uploads/Considerations_Leveraging_Real-World_Endpoints_Oncology.pdf)

## Highly Published: Select Real-World Data Publications from 2022-2023

### AML:

- McNeill AM, et. al; Real-world management and outcomes for newly diagnosed AML patients initiating Venetoclax and hypomethylating agents in US community practice. In: ICPE, 2023 August 23-27. **Poster**
- Zeidan AM, et. al; STREAMLINE - Retrospective cohort study of FLT3-mutated acute myeloid leukemia (AML): Real-world treatment patterns and clinical outcomes after first relapse or refractory (R/R) diagnosis. In: ASH Annual Meeting, 2022 December 10-13. **Abstract**

### CLL:

- Zakeri M, et. al; CO210 Real-World Effectiveness and Treatment Patterns of Venetoclax-Based Regimens Among Patients with Chronic Lymphocytic Leukemia (CLL) Treated in Community Settings. In: ISPOR, 2023 May 7-10. <https://doi.org/10.1016/j.jval.2023.03.2435>. **Poster**
- Mato AR, et. al; Outcomes for patients with chronic lymphocytic leukemia (CLL) previously treated with both a covalent BTK and BCL2 inhibitor in the United States: A real-world database study. *Clin Lymphoma Myeloma Leuk* 2022;23(1):57-67. <https://doi.org/10.1016/j.clml.2022.09.007>. **Manuscript**

### Hodgkin Lymphoma:

- Gautam S, et. al; Unfavorable early-stage Hodgkin lymphoma: assessment of patient characteristics in a real-world setting. *Future Oncology* 2023; 19(18): 1249-1259. <https://doi.org/10.2217/fon-2022-0963>. **Manuscript**
- Nisbett AR, et. al; Treatment patterns and clinical outcomes among patients with relapsed/refractory classical Hodgkin's lymphoma. *Future Oncol* 2022; 18(32):3563-3675. <https://doi.org/10.2217/fon-2022-0465>. **Manuscript**

### MCL:

- Hess LM, et. al; Outcomes among patients with mantle cell lymphoma post-covalent BTK inhibitor therapy in the United States: a real-world electronic medical records study. *Adv Hematol* 2022; 8262787. <https://doi.org/10.1155/2022/8262787>. **Manuscript**

### MDS:

- Shah R, et. al; Real-world analysis of a large electronic medical record database of patients with higher-risk myelodysplastic syndromes (HR MDS): Treatment profiles, clinical effectiveness, and key adverse events. In: EHA2023, 2023 June 8-11. <https://doi.org/10.1097%2F01.HS9.0000969888.53136.4a>.
- Vaidya V, et. al; A machine learning model to facilitate patient-level risk screening in myelodysplastic syndromes (MDS) patients in routine clinical practice. In: ISPOR Europe, 2023 November 12-15.

### Multiple Myeloma:

- Girvan A, et. al; Real-world treatment patterns and outcomes of daratumumab retreatment in multiple myeloma in the United States. In: ASH Annual Meeting, 2022 December 10-13. **Poster**
- Girvan A, et. al; Treatment patterns and outcomes in patients with relapsed/refractory multiple myeloma receiving  $\geq 3$  lines of therapy: A real-world evaluation in the United States. In: ASH Annual Meeting, 2022 December 10-13. **Poster**
- Bhandari S, et. al; Enhancing diversity in oncology clinical trials: Findings of a case study in improving black patient representation in a multiple myeloma trial. *Blood* 2021; 138 (Supplement 1): 3008. <https://doi.org/10.1182/blood-2021-149564>. **Abstract**

### Pan-Heme:

- Bhandari S, et. al; Racial disparities in newly diagnosed hematological malignancies in the United States during the COVID-19 pandemic, January 2020 to March 2021. *Blood* 2022; 140 (Supplement 1): 13269-13270. <https://doi.org/10.1182/blood-2022-170098>. **Abstract**
- Shao P, et. al; Improving real-world mortality data quality in oncology research: Augmenting electronic medical records with obituary, Social Security Death Index, and commercial claims data. *JCO Clinical Cancer Informatics* 2023; 7:e2300014. <https://doi.org/10.1200/cci.23.00014>. **Manuscript**

## 2023 ASH Publications

### NEOGENOMICS

#### AML

- Scarpa FJ, et. al; Mutation landscape of AML patients with compromised ASXL1-Cohesin interactions. In: ASH 2023, 2023 December 9-12. **Poster**
- Scarpa FJ, et. al; TP53/NPM1-mutated acute myeloid leukemia as a molecularly distinct disease entity. In: ASH 2023, 2023 December 9-12. **Poster**

#### Myeloid

- Scarpa FJ, et. al; Molecular profiling of the RUNX1 RUNT domain in myeloid disorders. In: ASH 2023, 2023 December 9-12. **Poster**
- Krawczyk M, et. al; RNA fusions and their association with DNA alterations in myeloid neoplasia patients identified by a single tube multimodal comprehensive genomic profiling test. In: ASH 2023, 2023 December 9-12. **Abstract**

#### MDS

- Dukenik D, et. al; Distinct SF3B1 Allele HEAT Repeat Location Is Associated with Co-Occurring Mutation Patterns in MDS. In: ASH 2023, 2023 December 9-12. **Abstract**

#### DLBCL

- Young K, et. al; Tumor-Infiltrating Normal B Lymphocytes Have Remarkable Prognostic Effects and Are Crucial for Antitumor Immune Responses in Diffuse Large B-Cell Lymphoma. In: ASH 2023, 2023 December 9-12. **Abstract**
- Zhou C, et. al; Developing Deep Learning Pipeline of Whole-Slide Images for Enhanced Diffuse Large B Cell Lymphoma (DLBCL) Subtyping and Outcome Prediction: Leveraging Self-Attention Transformer for Training and Inference. In: ASH 2023, 2023 December 9-12. **Abstract**

### CONCERTAI

#### CLL

- Shadman M, et. al; Impact of ibrutinib dose reduction on duration of therapy in patients with chronic lymphocytic leukemia/small lymphocytic lymphoma. In: ASH 2023, 2023 December 9-12. **Oral**
- Chanan-Khan AA, et. al; Impact of real-world treatment sequencing patterns on time to next treatment among patients with chronic lymphocytic leukemia in the United States. In: ASH 2023, 2023 December 9-12. **Poster**

#### MM

- Radwanski K, et. al; Real-world evaluation of outcomes in relapsed/refractory multiple myeloma patients that are triple-class exposed after receiving 2 or more prior lines of therapy. In: ASH 2023, 2023 December 9-12. **Poster**

#### MDS

- Priya V, et. al; Machine learning approach to understand real-world treatment in patients with higher-risk myelodysplastic syndromes. In: ASH 2023, 2023 December 9-12. **Poster**

Contact us at *ConcertAI* or *NeoGenomics* to learn more

ConcertAI: [info@concertai.com](mailto:info@concertai.com)  
NeoGenomics: [informatics@neogenomics.com](mailto:informatics@neogenomics.com)