strand

Scan and Explore!

Transforming Real-World Data into Clinical Insights

Real-world data (RWD) consists of clinical and genomic information captured outside traditional trials, such as patient records and treatment histories. It supports drug development, regulatory submissions, post-market surveillance, and health economics by enabling evaluation of therapeutic effectiveness in real-world settings.

Challenges with RWD

The primary challenges with RWD include fragmentation, inconsistency, and lack of standardization across sources. These issues necessitate harmonization and standardization to ensure reliability, comparability, and meaningful clinical insights.

Multiple RWD datasets with varied data elements - eg EHR, Claims, PRO etc.

Unstructured, fragmented, and non-standardized

Manual analysis is time- and resource intensive

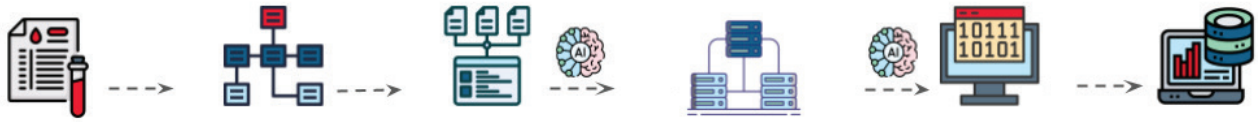
Our Solution

Our integrated solutions address challenges in generating robust, clinically relevant insights from fragmented real-world data (RWD) by enabling:

- Rapid harmonization of disparate datasets into standardized, validated, analysis-ready outputs.
- Transparent and scalable analytics that support biomarker discovery, patient stratification, and therapeutic outcome evaluation.

RWD Harmonization

- Tailored dataset alignment using recognized models (e.g., OMOP).
- Source-specific ETL templates for seamless data integration.
- Standardized vocabulary mapping across diverse sources.
- Automated data quality checks to ensure consistency.



Raw Clinical Data

Define Schema

Define the destination data model: a set of required fields + standard ontologies (e.g., NCI, SNOMED, CPT, ICD, LOINC, UCUM).

Parse

Split raw text or semi-structured input into discrete fields

Normalize

Clean and standardize data formats. Map standardized terms to controlled vocabularies. Resolve inconsistencies.

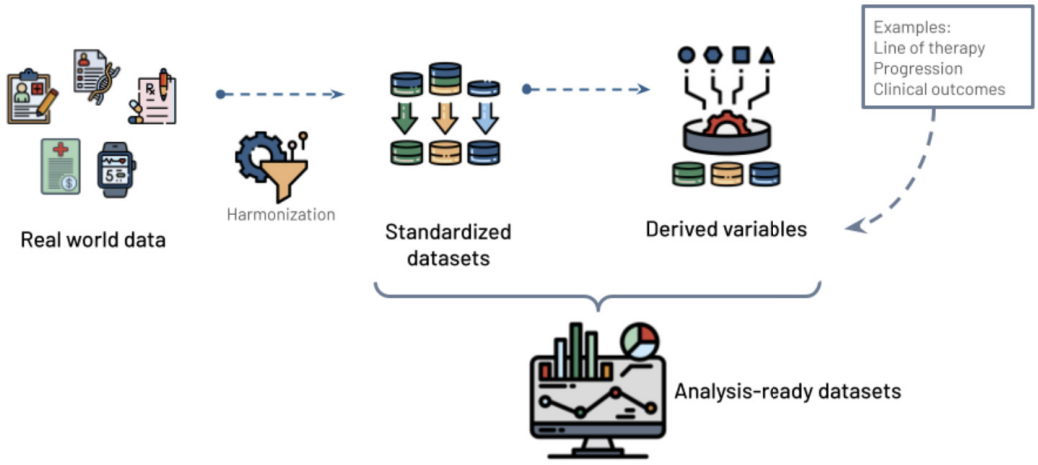
Codify

Use reference dictionaries (e.g., NCI Thesaurus, LOINC) for assigning codes.

Standardized Dataset

Harmonized to Analytics-Ready Datasets

- Harmonized and standardized datasets combined with derived variables (e.g., Line of Therapy, Progression, Comorbidity Indices, etc) give rise to analysis-ready datasets that can be used to obtain novel insights
- Variable derivation supported by centralized libraries and embedded clinical review



RWD Analytics Capabilities

Domain expertise: **25+ years** in bioinformatics; **12+ years** in diagnostics; oncology, autoimmune, and digestive disease focus. Integrated team: Clinical scientists, bioinformaticians, biostatisticians, data scientists, data analysts, AI engineers, therapeutic area experts, and a panel of consulting physicians.

Data scientists skilled at standardizing a nd harmonizing disparate RWD datasets

Data Analysts and AI Engineers with expertise in extracting and structuring RWD data

Bioinformaticians and data scientists skilled in AI implementation who can automate and streamline RWD analysis

Transparent workflows: Collaborative study design, open to sharing code, explainable/ reproducible methodologies.

Efficient execution: End-to-end bioinformatics support with scalable delivery and expedited timelines.

Proven Impact

In two recent case studies, Strand leveraged the AACR Project GENIE non-small cell lung cancer (NSCLC) dataset to demonstrate the value of curated RWD in oncology research.

Case Study 1: EGFR Mutations and TKI Therapy

Using the AACR Project GENIE dataset, the team at Strand compared survival outcomes in NSCLC patients with adenocarcinoma diagnosed at stage IV.

The findings confirmed that ***EGFR*-mutant patients** treated with **tyrosine kinase inhibitors** achieved **significantly longer survival** than others. This validated the utility of harmonized real-world clinicogenomic data for supporting targeted therapy effectiveness and clinical hypothesis validation.

Case Study 2: KRAS and TP53 Co-Mutations

Strand analyzed the prognostic role of ***KRAS*** and ***TP53*** **co-mutations** in NSCLC. Results showed **poorer survival in early-stage co-mutant cases**, while immunotherapy **improved outcomes in advanced stages** regardless of mutation status.

These insights highlight the importance of real-world evidence for refining patient stratification and optimizing treatment strategies

Why Partner With Strand?

Strand unifies diverse real-world data into standardized datasets through ontology mapping and harmonization, leveraging AI-driven automation. These harmonized datasets enable biomarker discovery, improved patient stratification, and robust cohort analyses, delivering actionable insights for clinical research and development.

Our strengths:

Bioinformatics and clinical expertise

Integrated harmonization and analytics pipelines

Transparent, version-controlled workflows that ensure reproducibility.

Proven scalability across multiple therapeutic domains

25+ YEARS OF EXPERIENCE

80,000+ Genetic Tests Reported

500+ Projects Executed for Genomics Majors Globally

Presence in **20+** Countries

illumina
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