Real-world data (RWD) has reached a tipping point in its value to health care and life sciences companies. RWD is now used across a spectrum of analyses from biomarker and risk factor discovery, to long-term effectiveness and safety studies, to benchmarking physician performance.

Still, procuring data that has the patient sample sizes across cancers, contains the clinical specificity unique to oncology, and contains encounters that reflects all the diagnostic and care information from the patient’s entire journey is a challenge.

But Optum-enriched oncology EHR data solves these challenges offering breadth, depth and quality that researchers need to conduct high-quality research.

**Breadth**

Optum oncology EHR data includes substantial patient populations across cancers, including hundreds of thousands of breast, lung and prostate cancer patients. Our data has tens of thousands of patients with colorectal, bladder, kidney and ovarian cancers, as well as hematologic malignancies. These include acute myeloid leukemia, acute lymphocytic leukemia, chronic lymphocytic leukemia and chronic myeloid leukemia.

We bring the breadth of these patients’ clinical encounters across all specialties and across inpatient and outpatient settings. In many cancers, other specialties outside oncology play a critical role in testing, diagnosing and treating cancer. Researchers need data that reflects all the care decisions that could affect a patient’s outcome.

Patient encounters prior to a cancer diagnosis are also part of this data so that companies interested in cancer etiology, risk factor identification or new biomarker identification can conduct their studies.

**Depth**

Optum data comes with vital signs, symptoms, problem statements, clinical assessments, labs, procedures, diagnoses, surgery and treatments. To further improve data relevance to oncology, we are engaging in a multi-phase oncology enrichment program to add key data elements including cancer stage, grade, histology, genetic mutations, other blood biomarkers, lines of therapy and measures of disease progression and drug response. Much of this program relies on natural language processing (NLP) of more than 4.5 billion notes and engaging with external partners to add improved mortality data, lab data and other capabilities.
Quality
Optum applies many approaches to standardizing and cultivating data from a host of provider groups and electronic medical records. For structured data fields, we created a provenance and data definition system to record the definition of every variable and how each one is mapped to a standard code and value across provider groups. With every data extraction, quality checks are performed across incoming labs, tests and other variables to ensure quality.

For NLP of clinical notes, Optum applies quality assurance approaches throughout the process, from annotation to model design and development, to output review. Throughout the process, we employ oncology clinicians and domain experts to design the training, evaluate the model accuracy and review the model output to ensure that we achieve the highest possible accuracy that technology extraction methods can achieve.

We also offer chart abstraction services and clinical curation services to create publication-ready data on demand.

Linked claims data
Optum sits in a unique position at the intersection of care and reimbursement. Through our care analytics, we access 100 million patients’ electronic health record (EHR) data. We also gain access to 80 million eligibility controlled medical and pharmacy claims data.

Our Optum® Market Clarity Data includes 60 million patients with overlapping EHR data from large health systems linked to medical and pharmacy claims across payers. These cost related data, along with the enriched EHR data, will support life sciences companies’ health economics analyses across more cancers than ever.

Oncology EHR data
Optum oncology EHR data enables life sciences companies to gain deeper insight into the natural history of disease, comorbidities, cancer diagnosis and treatment with a full view of patient care and reimbursement. Teams are empowered to conduct the analyses needed — from discovery to commercialization — using a single dataset to demonstrate the value of their product.