

Underutilization of Genomic Sequencing in Oncology

Verana Health partnered with **Guardant Health** to identify, curate, and analyze RWD cohorts of NSCLC and CRC patients, highlighting low rates of genotyping, securing CMS funding, and earning **ASCO** recognition. Presented at 2020 American Society of Clinical Oncology (ASCO) Annual Meeting (Keynote) 2020.

The Problem

Despite advances in liquid biopsies, standard-of-care remains tissue-based genotyping, which is relatively invasive, slow, and expensive. Patients face major logistical barriers to receiving guideline-recommended genotyping tests.

Guardant and Verana Health jointly initiated an effort to identify gaps in current genotyping patterns and highlight opportunities for new technology.

Our Approach

1. Clinical Attribute Architecture:

Oncologists and data scientists jointly engineered the RWD study parameters: defining biomarker-specific clinical elements, genotyping endpoint logic, and cohort eligibility rules aligned to guideline standards.

2. Tech-Enabled Expert Abstraction:

Verana's proprietary NLP-assisted, clinician-led abstraction engine extracted structured data from unstructured EHR notes across multi-site US oncology networks, with rigorous multi-layer QA validation at every step.

3. Peer-Reviewed Co-Analysis:

Verana and Guardant biostatisticians co-developed the analytical framework, producing two peer-reviewed publications with findings that directly informed national coverage policy.

Results

NSCLC Study (Nov 2017):

814 non-squamous NSCLC patients; ~1/3 not tested for EGFR/ALK; only 8% received comprehensive genotyping across all 4 major alterations.

CRC Study (Nov 2019):

Similar underutilization: RAS, BRAF, and MSI/MMR testing rates were 41%, 43%, and 51%.

Conclusion

Verana Health's real-world oncology data helped demonstrate critical genotyping gaps, directly supporting CMS coverage decisions for Guardant360 and earning recognition at largest global conference for oncology.

About Verana Health

Verana Health, Inc.® is a digital health company revolutionizing patient care and clinical research by utilizing physician expertise and artificial intelligence to unlock the true potential of real-world data. With exclusive access to the world's largest patient data sources in oncology, ophthalmology, neurology, and urology. Verana Health is powering real-world evidence generation. Clinicians utilize these insights to improve the quality of care and quality of life for patients, and life sciences companies rely on the insights to accelerate the development of new therapies.

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