

COTA

CASE STUDY

UNDERUTILIZATION OF GENOMIC SEQUENCING IN ONCOLOGY

CASE IN BRIEF

COTA partnered with Guardant to identify, curate, and analyze RWD cohorts of NSCLC and CRC patients in order to highlight low rates of genotyping, ultimately helping secure CMS funding for Guardant's product and obtaining ASCO recognition in 2020



Partner Profile

Guardant Health is a pioneer in precision oncology solutions, with a focus on developing non-invasive blood tests that enable timely therapy selection, recurrence detection, and early cancer detection.



THE PROBLEM

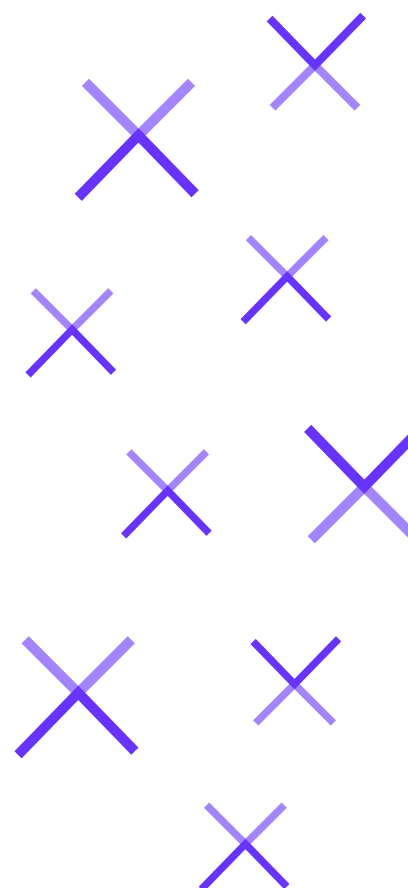
Despite advances in liquid biopsies, standard-of-care remains tissue-based genotyping, an approach that is relatively invasive, inconvenient, slow, and expensive, furthermore introducing major logistical barriers for patients to receive the guideline-recommended genotyping tests.

To better understand this issue, Guardant and COTA initiated a joint effort to identify gaps in current genotyping patterns and highlight the opportunity for new technology to close these gaps.

OUR APPROACH

To conduct retrospective reviews of genomic testing patterns in NSCLC and CRC patients, COTA collaborated with Guardant using the following approach:

- 1. Attribute Identification:** COTA and Guardant jointly defined the parameters and specific clinical elements needed to construct RWD cohorts
- 2. Curation & QA:** COTA leveraged our proprietary tech-enabled human data abstraction process to curate both patient cohorts across multiple clinician sites in the US, guided by our multistep quality assurance processes
- 3. Analysis & Paper:** COTA and Guardant co-analyzed COTA data to derive insights and drafted research paper for successful submissions



THE RESULTS

NOVEMBER
2017

NSCLC study shows low rates of recommended genotyping

- Study published using 814 total non-squamous NSCLC patients
- Among patients captured, ~1/3 not tested for EGFR or ALK
- Only 8% underwent comprehensive genotyping for all 4 major alterations*

JULY
2018

Medicare covers Guardant360 liquid biopsy for NSCLC

"In a recent study of over 100 community-based oncologists, nearly one-third of NSCLC patients were not tested for EGFR or ALK"



NOVEMBER
2019

CRC study shows similar patterns of low genetic testing

- Similar patterns found of underutilization in genotyping in CRC cohort
- Guideline-aligned biomarker testing rates for RAS, BRAF, and MSI/MMR deficiency were 41%, 43%, and 51%, respectively

DECEMBER
2019

Medicare expands Guardant360 across a dozen solid tumors, including colorectal cancer

JANUARY
2020

ASCO Keynote cites COTA + Guardant study

- Yousuf Zafar, MD, MHS, FASCO delivered the keynote at ASCO GI, entitled "What's Next after Precision Oncology? From Biomarker to Better Care."



COTA

A leading provider of oncology real-world data and analytics.

Founded in 2011 by doctors, engineers, and data scientists with the goal of bringing clarity to cancer care, COTA today produces research-grade real-world data (RWD) and is driving innovation alongside some of the world's most renowned oncology organizations.

To learn more, reach out to us at lifesciences@cotahealthcare.com

Source: Martin E. Gutierrez et al., Clinical Lung Cancer, 2017; Martin E. Gutierrez et al., JCO Precis Oncol., 2019
*Point mutations, indels, fusions, and copy number amplifications