



Below is a synopsis of important, recently published research supporting adoption of comprehensive biomarker testing in non-small cell lung cancer (NSCLC). LUNGEvity maintains a website that collates the most high-impact papers and provides brief synopses for busy providers and hospital administrators.

[View more research on the LUNGEvity Clinical Value of Biomarker Testing webpage](#)

Who Gets Left Out of Precision Oncology? Real-World Driver Mutation Expression Patterns and Therapeutic Eligibility in a Diverse Single-Center Early-Stage Lung Adenocarcinoma Cohort (PAID ARTICLE)

Ha, et al. *Racial and Ethnic Health Disparities*. 2026

Many people with lung cancer have a biomarker, a change in a gene in their tumor, that can be treated with a targeted therapy. The clinical trials that led to approval of these therapies enrolled mostly White and Asian patients, and most included only patients with the most common types of each biomarker. This study asked whether Black and Hispanic patients are more likely to have less common biomarker types that those trials did not include.

Researchers reviewed the records of 292 patients who had surgery for early-stage lung adenocarcinoma (the most common type of non-small cell lung cancer) at one hospital in the Bronx, New York, between 2021 and 2025. All patients had comprehensive biomarker testing of their tumor, and about 70% were Black or Hispanic, a much larger share than in most earlier studies. About 1 in 4 patients had an EGFR mutation, and Hispanic patients were nearly 4 times more likely than White patients to have one.

- **Black and Hispanic patients with EGFR mutations more often had a less common type that the key trials did not study.** The trials behind today's standard EGFR-targeted treatment, such as osimertinib, enrolled only patients with the two



most common EGFR types. About 1 in 4 EGFR mutations in this study were less common types: 37% in Black patients and 27% in Hispanic patients, compared with 14% in White patients. Some of these types respond less well to the standard EGFR-targeted drugs, and others, such as exon 20 insertions, need different drugs.

Because each group was small, these differences were not statistically significant and need to be confirmed in larger studies.

- **Most KRAS mutations were a type with no approved targeted therapy.** KRAS was the most common mutation, found in 38% of patients. The two approved KRAS-targeted drugs, sotorasib and adagrasib, work only against one type, KRAS G12C. More than half of KRAS mutations in this study (58%) were other types, so these patients had no matching approved targeted drug. This was true across all racial and ethnic groups.

Taken together, the findings suggest that the patients least represented in clinical trials may also be more likely to have biomarker types those trials did not study, leaving less evidence to guide their treatment.

Comprehensive biomarker testing is needed to find these less common EGFR and KRAS types, some of which can be missed by smaller panels that test for only a few biomarkers. Clinical trials should also enroll patients with less common biomarker types, set goals for enrolling diverse patients, and report results by biomarker type and by race and ethnicity.

Read the full research study: [Who Gets Left Out of Precision Oncology? Real-World Driver Mutation Expression Patterns and Therapeutic Eligibility in a Diverse Single-Center Early-Stage Lung Adenocarcinoma Cohort](#)

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