

## LUNG CANCER FACTS

- NSCLC is the most common type of lung cancer, accounting for approximately 80-85% of all lung cancer cases.
- Smoking is the leading risk factor for NSCLC, contributing to about 80% of cases.
- Early detection is crucial for improved prognosis.
- Several biomarkers are used in NSCLC diagnosis and treatment decisions, including EGFR mutations, ALK rearrangements, and ROS1 mutations.
- Identifying specific mutations allows for targeted therapies, which often have fewer side effects and better outcomes compared to traditional chemotherapy.

[Sources: 1, 2, 3, 4, 5]

## RESOURCES

- [Conquer](#)
- [Journal of the National Comprehensive Cancer Network](#)
- [American Cancer Society](#)
- [MyLungCancerTeam](#)
- [GO2 for Lung Cancer](#)
- [CancerCare](#)

Last updated: May 2024

## PATIENT & CARE PARTNER TIPS

**[ACT]IVATION TIP:** "Molecular or mutational biomarkers are the mutations or abnormalities that led to the cancer. One [type] is a germline mutation, which is inherited from mom and dad. These are uncommon in lung cancer. The second type is called a somatic mutation. And these are mutations that are acquired from the environment, from smoking, for example, from pollution, from radon. Ask your doctor, 'What is my mutation?' Because we can then match people to targeted therapies." - Dr. Joshua K. Sabari

**[ACT]IVATION TIP:** "The second biomarker that is really important is something called PD-L1 or programmed death-ligand 1...that's a biomarker that helps us guide how likely immunotherapy will work in your cancer. If the PD-L1 expression is high, greater than 50%, immunotherapy may be a very good option. If the PD-L1 expression is low, immunotherapy may sometimes be used, but more commonly in combination with chemotherapy." - Dr. Joshua K. Sabari

**[ACT]IVATION TIP:** "Know what type of cancer you have, the histology. Whether it be adenocarcinoma or squamous cancer. And equally as important, know your biomarker, what mutation is driving your cancer and what PD-L1 expression your tumor harbors." - Dr. Joshua K. Sabari

**[ACT]IVATION TIP:** "After treatment, you may see acquired resistance or secondary mutations that will prevent the therapies from being effective. The most common example in lung cancer is the EGFR (epidermal growth factor receptor) mutation. We know that this mutation occurs in 20-25% of people diagnosed with non-small cell lung cancer. If you're matched to a targeted therapy and don't unfortunately have progression of disease, it may be very helpful to re-biopsy or re-sequence using both tissue and plasma to help us guide subsequent therapy." - Dr. Joshua K. Sabari

**[ACT]IVATION TIP:** "We still see a 20 to 30% gap between white when compared to Black Americans with broad panel next generation sequencing. No matter what your status is clinically, talk to your physician and demand next-generation sequencing. If you have lung cancer, whether you've smoked or never smoked, it should be done to identify your genomic alteration." - Dr. Joshua K. Sabari

**[ACT]IVATION TIP:** "One thing we know is that Black patients often are diagnosed earlier at earlier ages with more advanced diseases. They often aren't offered biomarker testing, clinical trials or therapeutics. Advocate for biomarker testing and try to advocate getting the full panel of at least 10 or 11 biomarkers. Because most often when you're Black or underserved, you may get only one or three max, but there are about 11 biomarkers now." - Dr. Eugene Manley Jr.

**[ACT]IVATION TIP:** "We just did a review of all the lung cancer cell lines. Of over 800 cell lines, majority were European-based. Only 31 cell lines in total were from Black African American populations. None were from Hispanic, none were from Native American, Pacific Islander, none from Alaska Native. So just think about this. If that is our starting material for all of our biomarker testing and TCGA and databases, then everything we're developing is on a population that already has great access and outcomes. So then you're getting through doing all these trials and then you have biomarkers and you have immunotherapies coming out and then you're seeing adverse events in these diverse populations at the end because you don't have the starting material." - Dr. Eugene Manley Jr.

**[ACT]IVATION TIP:** "A lot of our trials have inclusion rates as low as 2% to 3%. And we know that our Black patient populations make up 13% to 15% of our practices. The FDA has really made a forceful statement here to pharmaceutical companies that if your data is not inclusive of a U.S. patient population, this will have ramifications for approvals in the future. So a lot needs to be done in the sense of education both from the healthcare provider and from the patient and to really motivate patients to enroll in trials." - Dr. Joshua K. Sabari

## LUNG CANCER [ACT]IVATED CHECKLIST

1. **Initial Appointment:** Discuss diagnosis, stage, and treatment options.
2. **Understand Biomarkers:** Request biomarker testing if it hasn't been done already
3. **Treatment Team:** Research and find information to choose an oncologist and treatment center.
4. **Clinical Trials:** Explore options for clinical trials with your care team.
5. **Open Communication:** Discuss fears and concerns openly. Do not hesitate to seek 2nd or 3rd opinions.
6. **Financial Support:** Explore financial assistance options.
7. **Community Support:** Seek support from community organizations.
8. **Rural Considerations:** If you're in a rural area, explore telemedicine options for consultations and follow-ups.
9. **Emotional Support:** Talk to loved ones, consider therapy, and connect with lung cancer support groups.
10. **Healthy Lifestyle:** Eat balanced, exercise appropriately, and manage stress.
11. **Stay Informed:** Learn about lung cancer biomarkers through reputable sources and patient education programs.

[Sources: 1, 2]