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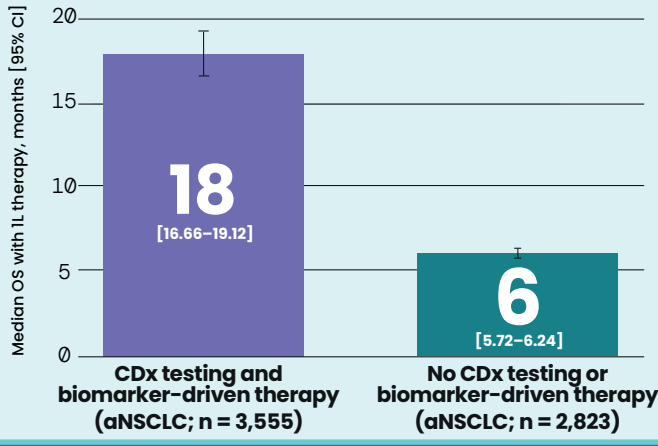
See the complete picture of NSCLC

25+

FDA approved targeted therapies or immunotherapies in metastatic NSCLC[1]

Patients receiving biomarker testing and biomarker-driven therapy live longer[2]



Test eligible patients with mNSCLC for key biomarkers[3]:

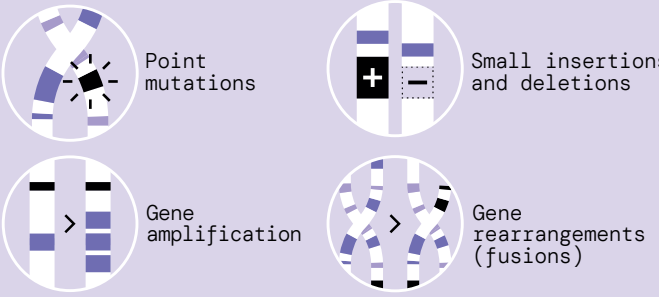
- ALK rearrangements(fusions) ~7%[4]
- BRAF V600E mutation ~1-2%[5,6]
- EGFR mutations ~21%[4]
- HER2 (ERBB2) mutations ~2-4%[7]
- KRAS G12C mutation ~13%[8]
- MET exon 14 skipping mutations ~3-4%[9]
- High-level MET amplification ~2-4%[10,11]
- NTRK1/2/3 fusions <1%[12]
- PD-L1 expression†[13-15]
- RET gene rearrangements (fusions) ~2%[4]
- ROS1 gene rearrangements (fusions) ~2%[4]

Actionable[3] | Emerging[3]

% = Biomarker Prevalence in NSCLC

The NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®) recommend broad molecular profiling, typically with NGS, for eligible patients with metastatic NSCLC[3]*

Analyzes multiple biomarkers at once[16]:



Note: PD-L1 expression level is determined by IHC, not NGS

With NGS you can test:

Tumor tissue

- ⊕ Direct assessment of tumor[17]
- ⊕ Provides histologic diagnosis[17]
- ⊖ Invasive[18]
- ⊖ May not capture heterogeneity[19]

Blood (liquid biopsy)

- ⊕ Non-invasive[20]
- ⊕ May capture heterogeneity[19]
- ⊖ Negative result not informative[18]

When should you test?

- **At time of diagnosis[21]**
- **At progression on targeted therapy[21]**

Biomarker testing is critical for clinical treatment decisions[22]

ALK, anaplastic lymphoma receptor tyrosine kinase; aNSCLC, advanced non-small cell lung cancer; BRAF, B-raf proto-oncogene, serine/threonine kinase; CDx, companion diagnostic testing; CI, confidence interval; EGFR; epidermal growth factor receptor; ERBB2, erb-b2 receptor tyrosine kinase 2; FDA, US Food and Drug Administration; HER2, human epidermal growth factor receptor 2; IHC, immunohistochemistry; KRAS, kirsten rat sarcoma viral oncogene homolog; MET, mNSCLC, metastatic non-small cell lung cancer; NCCN, National Comprehensive Cancer Network; NGS, next generation sequencing; NSCLC, non-small cell lung cancer; neurotrophic tyrosine kinase receptor; OS, overall survival; RET, ret proto-oncogene; ROS1, ROS proto-oncogene 1, receptor tyrosine kinase; TPS, tumor proportion score; PD-L1, programmed death-ligand 1.

*The NCCN Guidelines for NSCLC provide recommendations for certain individual biomarkers that should be tested and recommend testing techniques but do not endorse any specific commercially available biomarker assays or commercial laboratories. †Prevalence of PD-L1 TPS ≥1%: ~47–68%; prevalence of PD-L1 TPS ≥50%: ~21–24%.

REFERENCES : 1. National Cancer Institute. Drugs Approved for Lung Cancer. Available at: https://www.cancer.gov/about-cancer/treatment/drugs/lung. Accessed May 2022. 2. John A et al. Oncoolgist. 2020; 25(11): e1743-e1752. 3. Referenced with permission from the NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®) for Non-Small Cell Lung Cancer V.5.2022. © National Comprehensive Cancer Network, Inc. 2022. All rights reserved. Accessed September 26th, 2022. To view the most recent and complete version of the guideline, go online to NCCN.org. NCCN makes no warranties of any kind whatsoever regarding their content, use or application and disclaims any responsibility for their application or use in any way. 4. Tsao A et al. J Thorac Oncol. 2016; 11(5): 613–638. 5. Baik CS. PER® Winter Lung Cancer Conference. 2018. Available at: https://www.onclive.com/view/braf-v600e-testing-necessary-in-lung-cancer-but-physicians-unsure-of-optimal-setting-with-brafmek-combo Accessed: February 2022. 6. Alvarez J and Otterson G. Drugs Context 2019; 8: 212566. 7. Zhao J and Xia Y. JCO Precis Oncol. 2020; 4: 411–425. 8. Palma G et al. NPJ Precis Oncol. 2021; 5(1): 98. 9. Hong L et al. Ther Adv Med Oncol 2021; 13: 1758835921992976. 10. Skoulidis F and Heymach JV. Nat Rev Cancer 2019; 19(9): 495–509. 11. Schubart C et al. Cancers 2021; 13: 5023. 12. Farago A et al. JCO Precis Oncol 2018; PO.18.00037. 13. Dietel M et al. Lung Cancer2 019; 134: 174–179. 14. Aggarwal C et al. Ann Oncol 2016; 27(Supplement 6): vi363. 15. Garon E et al. N Engl J Med 2015; 372(21): 2018–28. 16 Vnencak-Jones C et al. Types of Molecular Tumor Testing. Available at: https://www.mycancergenome.org/content/molecular-medicine/types-of-molecular-tumor-testing/. Accessed: February 2022. 17. Natoinal Cancer Institute. Pathology Reports. Available at: https://www.cancer.gov/about-cancer/diagnosis-staging/diagnosis/pathology-reports-fact-sheet#what-information-does-a-pathology-report-usually-include. Accessed June 2022. 18. Duffy MJ and Crown J. J Pers Med 2022; 12(1): 99. 19. Rolfo C et al. J Thorac Oncol 2019; 13(9): 1248–1268. 20. Marrugo-Ramírez J et al. Int J Mol Sci 2018; 19(10): 2877. 21. Gregg J et al. Transl Lung Cance rRes 2019; 8(3): 286–301. 22. Chevallier M et al. World J ClinO ncol 2021; 12(4): 217–237.

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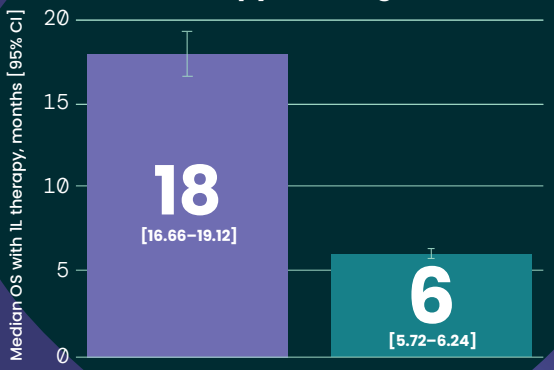

Biomarker testing is critical for clinical treatment decisions[3]

The NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®) recommend broad molecular profiling, typically with NGS, for eligible patients with metastatic NSCLC[4]*

Analyzes multiple biomarkers at once[17]:

- Point mutations
- Small insertions & deletions
- Gene amplification
- Gene rearrangements (fusions)

Note: PD-L1 expression level is determined by IHC, not NGS

With NGS you can test:

Tumor tissue

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