TEST CHOLANGIO Know the Next Step

Learn about the vital importance of NGS testing in cholangiocarcinoma¹

Cholangiocarcinoma, or CCA, is a rare cancer of the bile ducts.² The bile ducts carry bile, which helps digest fats, from the liver and gallbladder to the small intestine.³

Next-generation sequencing, commonly known as NGS testing, is a type of biomarker testing that identifies a broad range of genetic alterations in your tumor cells.⁴

NGS belongs to a category of biomarker testing known as molecular profiling, which doctors can use to personalize a treatment plan to your specific cancer.^{1,2,5} NGS testing helps doctors identify alterations better than traditional testing methods.^{1,6}



FGFR2 fusions are one of the most commonly identified types of gene alterations in this type of cancer⁷

Your **FGFR2 fusion status** (whether your tumor is positive or negative) can help inform which treatment you receive.^{7,8}

FGFR, fibroblast growth factor receptor.

Make sure to talk to your doctor about NGS testing as soon as possible after your cholangiocarcinoma diagnosis



Comprehensive biomarker testing is recommended for patients with unresectable or metastatic cholangiocarcinoma who are candidates for systemic therapy⁹

Cholangiocarcinoma may not cause symptoms in its early stages.² As it grows, the tumor may metastasize, or spread, to other organs.¹⁰ Once the tumor has spread, there are few treatment options.^{11,12}

FGFR2 fusions can cause your cancer to grow, so knowing your FGFR2 fusion status is important.^{8,13,14}

Know what to expect with NGS testing



A tumor sample is taken by a doctor. Individual patient experiences may vary.^{4,15}



DNA or RNA is extracted from the tumor sample and then **scanned by an NGS machine.**⁴



This scan generates a large amount of data, which are then analyzed by a computer.^{4,15}



NGS testing identifies genetic alterations and other biomarkers. This information can help your healthcare team create your treatment plan.^{1,2,5}

FGFR, fibroblast growth factor receptor; NGS, next-generation sequencing.

The results of NGS testing may make it possible for you to receive a personalized treatment option⁵



NGS testing has helped many patients determine their treatment plan, including the potential for targeted treatment



"The information from molecular profiling has been an important part in helping to determine my care plan moving forward."

Robin Patient



"Through molecular testing of my cholangiocarcinoma, my doctor was able to identify several biomarkers of interest, including one that may help direct my care in the future."

Marisa





"Through the Cholangiocarcinoma Foundation and the group members, we learned about the importance of molecular profiling."

libby Patient



"Biomarker testing is crucial in this process. It made a huge difference in the management plan that Pedro has received."

Pedro's caregiver

NGS testing has helped many patients with cholangiocarcinoma.

TEST My CHOLANGIO

Scan below to learn about their experiences and get other resources:



NGS, next-generation sequencing.

These questions may be helpful as you talk to your doctor about NGS testing

TEST my CHOLAN



NGS testing gives you a more comprehensive picture of your cancer.^{1,2,5} Talk with your doctor about it today.

References: 1. Lowery MA, Ptashkin R, Jordan E, et al. Comprehensive molecular profiling of intrahepatic and extrahepatic cholangiocarcinomas: potential targets for intervention. Clin Cancer Res. 2018;24(17):4154-4161. 2. Ross JS, Wang K, Gay L, et al. New routes to targeted therapy of intrahepatic cholangiocarcinomas revealed by next-generation sequencing. Oncologist. 2014;19(3):235-242. 3. Hundt M, Basit H, John S. Physiology, bile secretion. StatPearls Publishing; 2023. https://www.ncbi.nlm.nih.gov/books/NBK470209/. Updated September 26, 2022. Accessed January 17, 2024. 4. Jennings LJ, Arcila ME, Corless C, et al. Guidelines for validation of next-generation sequencing-based oncology panels: a joint consensus recommendation of the Association for Molecular Pathology and College of American Pathologists. J Mol Diagn. 2017;19(3):341-365. 5. Sicklick JK, Kato S, Okamura R, et al. Molecular profiling of cancer patients enables personalized combination therapy: the I-PREDICT study. Nat Med. 2019;25(5):744-750. 6. Dudley JC, Zheng Z, McDonald T, et al. Next-generation sequencing and fluorescence in situ hybridization have comparable performance characteristics in the analysis of pancreaticobiliary brushings for malignancy. J Mol Diagn. 2016;18(1):124-130. 7. Sia D, Losic B, Moeini A, et al. Massive parallel sequencing uncovers actionable FGFR2-PPHLN1 fusion and ARAF mutations in intrahepatic cholangiocarcinoma. Nat Commun. 2015;6:6087. 8. Goyal L, Kongpetch S, Crolley VE, et al. Targeting FGFR inhibition in cholangiocarcinoma. Cancer Treat Rev. 2021;95:102170. 9. Referenced with permission from the NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®) for Biliary Tract Cancers V.3.2023. © National Comprehensive Cancer Network, Inc. 2023. All rights reserved. Accessed February 22, 2024. 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. 10. Cheng R, Du Q, Ye J, et al. Prognostic value of site-specific metastases for patients with advanced intrahepatic cholangiocarcinoma: a SEER database analysis. Medicine (Baltimore). 2019;98(49):e18191. 11. Cho MT, Gholami S, Gui D, et al. Optimizing the diagnosis and biomarker testing for patients with intrahepatic cholangiocarcinoma: a multidisciplinary approach. Cancers (Basel). 2022;14(2):392. 12. Valle JW, Lamarca A, Goyal L, et al. New horizons for precision medicine in biliary tract cancers. Cancer Discov. 2017;7(9):943-962. 13. Arai Y, Totoki Y, Hosoda F, et al. Fibroblast growth factor receptor 2 tyrosine kinase fusions define a unique molecular subtype of cholangiocarcinoma. Hepatology. 2014;59(4):1427-1434. 14. Borad MJ, Gores GJ, Roberts LR. Fibroblast growth factor receptor 2 fusions as a target for treating cholangiocarcinoma. Curr Opin Gastroenterol. 2015;31(3):264-268. 15. Singhi AD, Nikiforova MN, Chennat J, et al. Integrating next-generation sequencing to endoscopic retrograde cholangiopancreatography (ERCP)-obtained biliary specimens improves the detection and management of patients with malignant bile duct strictures. Gut. 2020;69(1):52-61.



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