# Fusion/Rearrangement Detection with FoundationOne®Liquid CDx

Although clinical literature has reported poor fusion detection with other liquid biopsy assays, FoundationOne Liquid CDx fusion detection is robust across solid tumors, with ~90% concordance with FoundationOne®CDx when ctDNA tumor fraction is high.

### Non-Small Cell Lung Cancer

## FoundationOne Liquid CDx Detects Diverse Fusions<sup>1</sup>

In the Foundation Medicine database, samples analyzed with FoundationOne Liquid CDx and FoundationOne CDx showed similar partner gene diversity.





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### FoundationOne Liquid CDx and FoundationOne CDx Tissue Fusion Detection Concordance is High<sup>1</sup>

For patients with paired FoundationOne CDx and FoundationOne Liquid CDx results, concordance (positive percentage agreement, PPA) for ALK/RET/ROS1 fusion detection was ~90% when ctDNA tumor fraction (ctDNA TF)  $\geq$ 1%.



#### Cholangiocarcinoma

# FoundationOne Liquid CDx Detects Diverse FGFR2 Fusions

FoundationOne Liquid CDx analysis recapitulated the diversity of partner genes shown with FoundationOne CDx tissue CGP.<sup>1</sup>

An alternate assay detected fewer diverse partner genes, indicating **potential bias towards common partner detection.**<sup>2</sup>



#### Alternate Liquid CGP Assay<sup>2</sup>



# FoundationOne Liquid CDx and FoundationOne CDx Tissue Rearrangement Concordance is High

In the Foundation Medicine database, *FGFR2* rearrangement (RE) frequency in liquid samples with ctDNA TF  $\geq$ 1% is similar to that of tissue biopsy.<sup>1</sup>

An alternate assay reported lower frequencies of FGFR2 REs in liquid vs. tissue biopsy.<sup>2</sup>

	Foundation Medicine <sup>1</sup>	Alternate Assay <sup>2</sup>
Liquid biopsy	5.3% (overall) 8.4% (ctDNA TF ≥1%)	1.4%
Tissue biopsy	7.6%	4.3%

#### Fusion/rearrangement detection capabilities vary among assays. Want to learn more? Contact Medical Affairs at <u>med.info@foundationmedicine.com</u>.

#### References

1. Kasi PM, et al. *Clin Cancer Res* 2024;30(4):836-848. 2. Berchuck JE, et al. *Ann Oncol.* 2022;33(12):1269-1283. Abbreviations

CGP = comprehensive genomic profiling, ctDNA = circulating tumor DNA

FoundationOne®CDx and FoundationOne®Liquid CDx are qualitative next-generation sequencing based *in vitro* diagnostic tests for advanced cancer patients with solid tumors and are for prescription use only. FoundationOne CDx utilizes FFPE tissue and analyzes 324 genes as well as genomic signatures. FoundationOne Liquid CDx analyzes 324 genes utilizing circulating cell-free DNA and is FDA-approved to report short variants in 311 genes. The tests are companion diagnostics to identify patients who may benefit from treatment with specific therapies in accordance with the therapeutic product labeling. Additional genomic findings may be reported and are not prescriptive or conclusive for labeled use of any specific therapeutic product. Use of the tests does not guarantee a patient will be matched to a treatment. A negative result does not rule out the presence of an alteration. Some patients may require a biopsy for testing with FoundationOne CDx when archival tissue is not available which may pose a risk. Patients being considered for eligibility for therapy based on detection of *NTRK1/2/3* and *ROS1* fusions should only be tested if tissue is unavailable. Patients who are tested with FoundationOne Liquid CDx and are negative for other companion diagnostic mutations should be reflexed to tumor tissue testing and mutation status confirmed using an FDA-approved tumor tissue test, if feasible. For the complete label, including companion diagnostic indications and important risk information, please visit www.F1CDxLabel.com and www.F1LCDxLabel.com.



