EXAMPLE REPORT

TruSight™ Oncology Comprehensive (EU)

Clinical report example

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Clinically actionable report

TruSight Oncology Comprehensive (EU) (TSO Comprehensive (EU)) makes comprehensive genomic profiling (CGP) accessible to laboratories and health care professionals, enabling simultaneous analysis of biomarkers (DNA and RNA variants and complex genomic signatures) with known cancer associations in less time than conventional, iterative testing methods. Integral to the solution is the TSO Comprehensive (EU) clinical report. This report is automatically generated on the NextSeq™ 550Dx System during the TSO Comprehensive (EU) workflow. The resulting streamlined clinical report:

- Is easy to read, clearly indicating patient sample information and genomic findings
- Identifies variants with evidence of clinical significance (therapeutic, prognostic, or diagnostic) based on information in EMA-approved drug labels, FDA-approved drug labels, society guidelines, or ASCO Clinical Practice Guidelines for the patient's tumor type, as specified by the Knowledge Base[1] and supporting rules engine
- Provides companion diagnostics (CDx) indications for current CDx claims
- Provides clinically actionable data that can help inform therapy decisions according to clinical guidelines

Important facts and benefits of the expertly curated Knowledge Base[1] supporting the TSO Comprehensive (EU) clinical report

Content evaluated and approved by expert oncologists and pathologists

ISO 13485–compliant evidence curation workflow produces IVD-compliant Knowledge Base

Inclusive data scope and maintenance provide comprehensive coverage

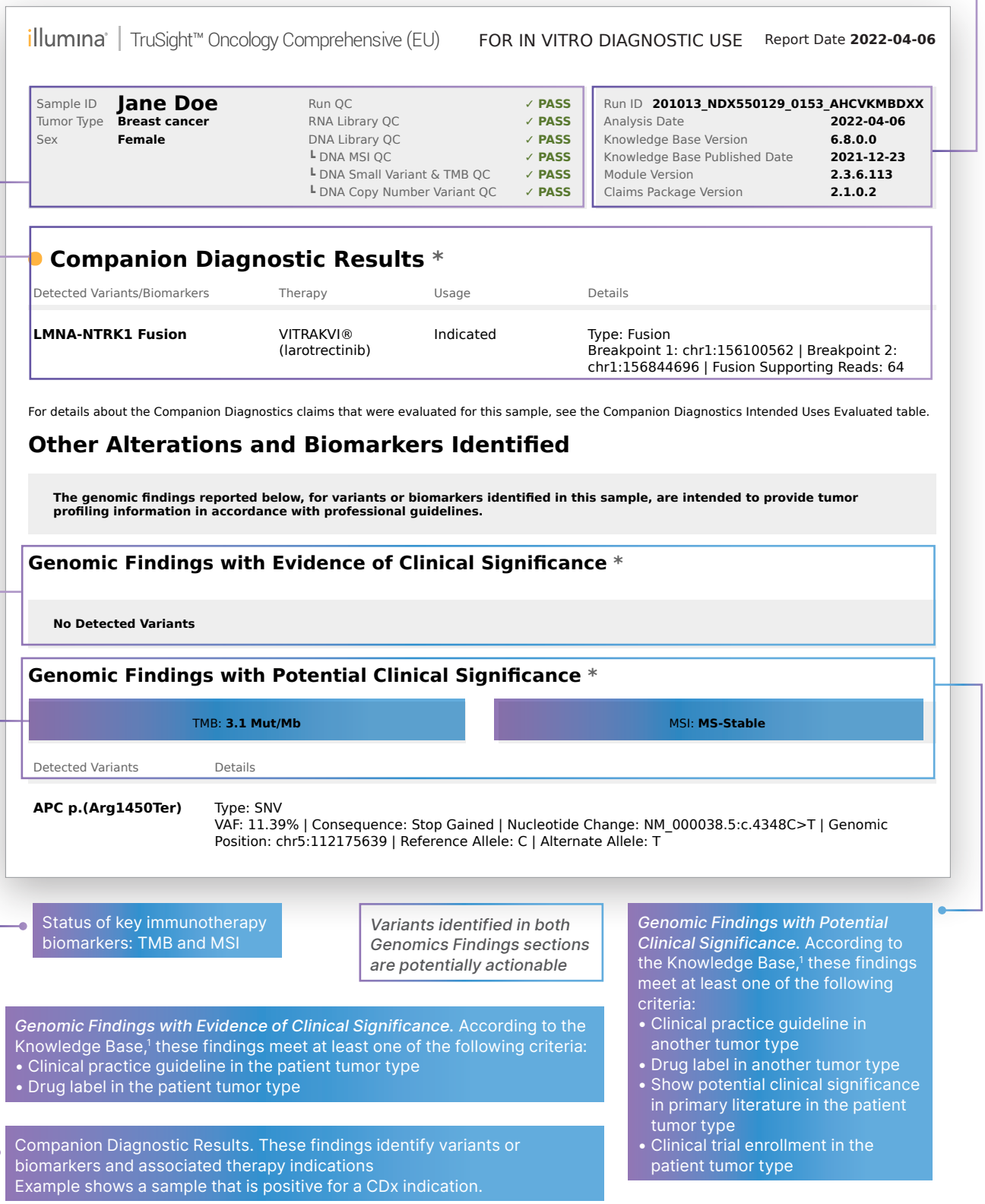
Expertly curated Knowledge Base, with rules engine, accurately identifies and tiers variants in report

Abbreviations: ASCO, American Society of Clinical Oncology; EMA, European Medicines Agency; ESMO, European Society for Medical Oncology; FDA, Federal Drug Administration; ISO, International Organization for Standardization; IVD, *in vitro* diagnostic

The TSO Comprehensive (EU) clinical report

Patient sample information: sample ID, tumor type, gender, QC analysis

Assay information: run ID, Knowledge Base, and software details



illumina | TruSight™ Oncology Comprehensive (EU) FOR IN VITRO DIAGNOSTIC USE Report Date **2022-04-06**

Sample ID	**Jane Doe**	Run QC	✓ **PASS**
Tumor Type	**Breast cancer**	RNA Library QC	✓ **PASS**
Sex	**Female**	DNA Library QC	✓ **PASS**
		└ DNA MSI QC	✓ **PASS**
		└ DNA Small Variant & TMB QC	✓ **PASS**
		└ DNA Copy Number Variant QC	✓ **PASS**

Run ID	**201013_NDX550129_0153_AHCVKMBDXX**
Analysis Date	**2022-04-06**
Knowledge Base Version	**6.8.0.0**
Knowledge Base Published Date	**2021-12-23**
Module Version	**2.3.6.113**
Claims Package Version	**2.1.0.2**

Companion Diagnostic Results *

Detected Variants/Biomarkers	Therapy	Usage	Details
LMNA-NTRK1 Fusion	VITRAKVI® (larotrectinib)	Indicated	Type: Fusion Breakpoint 1: chr1:156100562 | Breakpoint 2: chr1:156844696 | Fusion Supporting Reads: 64

For details about the Companion Diagnostics claims that were evaluated for this sample, see the Companion Diagnostics Intended Uses Evaluated table.

Other Alterations and Biomarkers Identified

The genomic findings reported below, for variants or biomarkers identified in this sample, are intended to provide tumor profiling information in accordance with professional guidelines.

Genomic Findings with Evidence of Clinical Significance *

No Detected Variants

Genomic Findings with Potential Clinical Significance *

TMB: **3.1 Mut/Mb** MSI: **MS-Stable**

Detected Variants	Details
APC p.(Arg1450Ter)	Type: SNV VAF: 11.39% | Consequence: Stop Gained | Nucleotide Change: NM_000038.5:c.4348C>T | Genomic Position: chr5:112175639 | Reference Allele: C | Alternate Allele: T

Status of key immunotherapy biomarkers: TMB and MSI

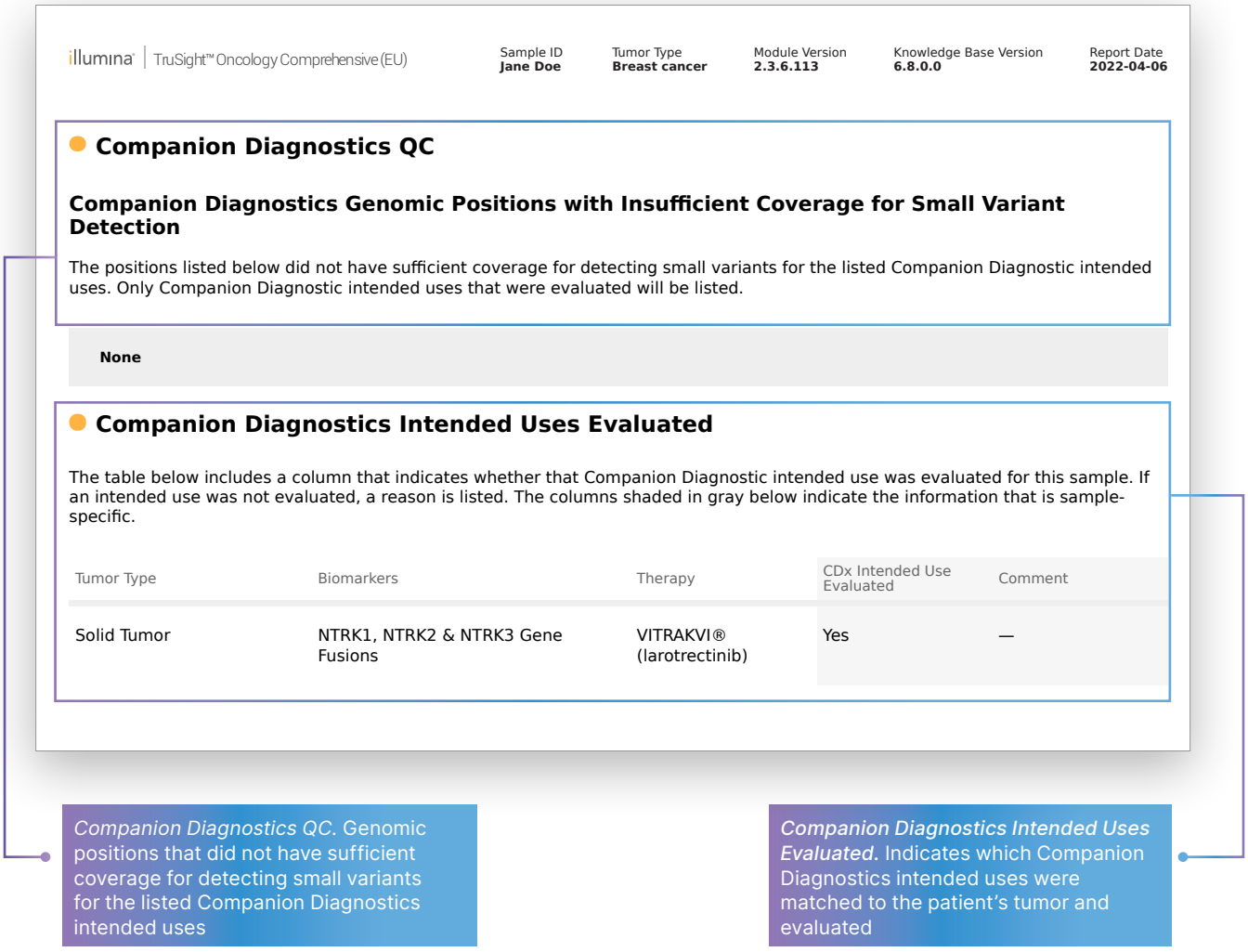
Variants identified in both Genomics Findings sections are potentially actionable

Genomic Findings with Evidence of Clinical Significance. According to the Knowledge Base,[1] these findings meet at least one of the following criteria:
- Clinical practice guideline in the patient tumor type
- Drug label in the patient tumor type

Genomic Findings with Potential Clinical Significance. According to the Knowledge Base,[1] these findings meet at least one of the following criteria:
- Clinical practice guideline in another tumor type
- Drug label in another tumor type
- Show potential clinical significance in primary literature in the patient tumor type
- Clinical trial enrollment in the patient tumor type

Companion Diagnostic Results. These findings identify variants or biomarkers and associated therapy indications
Example shows a sample that is positive for a CDx indication.

The TSO Comprehensive (EU) clinical report



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Sample ID	Tumor Type	Module Version	Knowledge Base Version	Report Date
Jane Doe	**Breast cancer**	**2.3.6.113**	**6.8.0.0**	**2022-04-06**

Companion Diagnostics QC

Companion Diagnostics Genomic Positions with Insufficient Coverage for Small Variant Detection

The positions listed below did not have sufficient coverage for detecting small variants for the listed Companion Diagnostic intended uses. Only Companion Diagnostic intended uses that were evaluated will be listed.

None

Companion Diagnostics Intended Uses Evaluated

The table below includes a column that indicates whether that Companion Diagnostic intended use was evaluated for this sample. If an intended use was not evaluated, a reason is listed. The columns shaded in gray below indicate the information that is sample-specific.

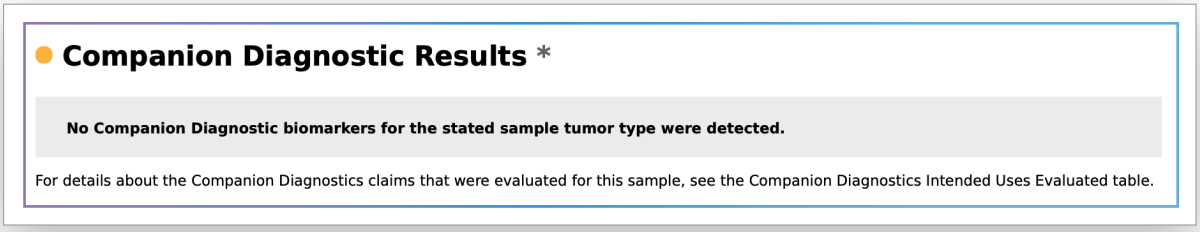
Tumor Type	Biomarkers	Therapy	CDx Intended Use Evaluated	Comment
Solid Tumor	NTRK1, NTRK2 & NTRK3 Gene Fusions	VITRAKVI® (larotrectinib)	Yes	—

Companion Diagnostics QC. Genomic positions that did not have sufficient coverage for detecting small variants for the listed Companion Diagnostics intended uses

Companion Diagnostics Intended Uses Evaluated. Indicates which Companion Diagnostics intended uses were matched to the patient's tumor and evaluated

The TSO Comprehensive (EU) clinical report when a CDx is not detected

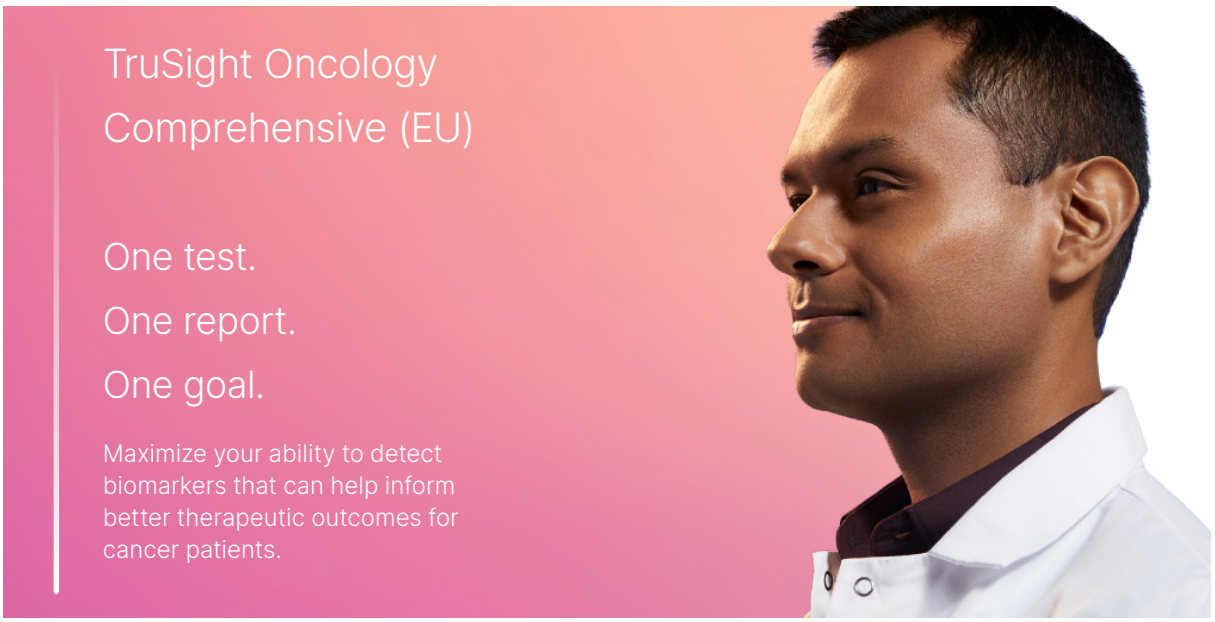
If a clincial diagnostic result is not detected, the TSO Comprehensive (EU) clinical report will contain the same reporting fields as described on pages 3 and 4 of this document. Instead of listing a possible CDx, the section entitled "Companion Diagnostic Results" will indicate that "No Companion Diagnostic biomarkers for the stated sample tumor type were detected."



Companion Diagnostic Results *

No Companion Diagnostic biomarkers for the stated sample tumor type were detected.

For details about the Companion Diagnostics claims that were evaluated for this sample, see the Companion Diagnostics Intended Uses Evaluated table.



Learn more

TruSight Oncology Comprehensive (EU), illumina.com/tsocomprehensive

Reference

1. Analysis provided courtesy of Pierian based on the TSO Comprehensive (EU) Knowledge Base. Current as of July 2021.

Intended use statement

TruSight Oncology Comprehensive (EU) is an *in vitro* diagnostic test that uses targeted next-generation sequencing to detect variants in 517 genes using nucleic acids extracted from formalin-fixed, paraffin-embedded (FFPE) tumor tissue samples from cancer patients with solid malignant neoplasms using the Illumina® NextSeq™ 550Dx instrument. The test can be used to detect single nucleotide variants, multinucleotide variants, insertions, deletions and gene amplifications from DNA, and gene fusions and splice variants from RNA. The test also reports a Tumor Mutational Burden (TMB) score and Microsatellite Instability (MSI) status.

The test is intended as a companion diagnostic to identify cancer patients for treatment with the targeted therapy listed in Table 1, in accordance with the approved therapeutic product labeling. In addition, the test is intended to provide tumor profiling information for use by qualified healthcare professionals in accordance with professional guidelines and is not conclusive or prescriptive for labeled use of any specific therapeutic product.

Table 1: Companion diagnostics indication

Tumor type	Biomarkers	Targeted therapy
Solid tumors	*NTRK1*, *NTRK2*, and *NTRK3* Gene fusions	Vitrakvi (larotrectinib)

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