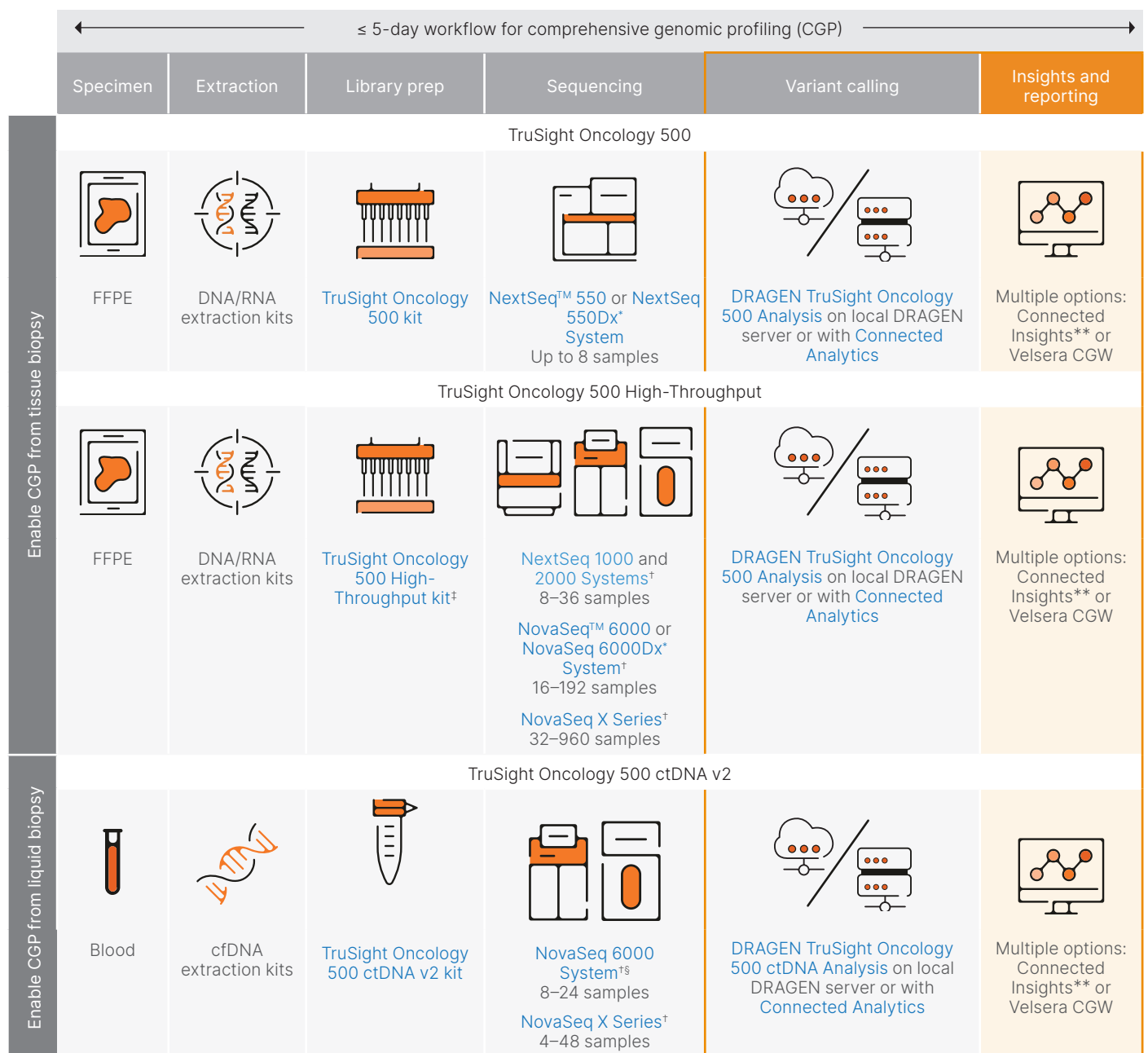


# Data analysis and reporting for the TruSight™ Oncology 500 portfolio

Integrated bioinformatics provide sample-to-insight workflows to enable solid tumor CGP

DRAGEN™ secondary analysis across the entire TruSight Oncology 500 portfolio reduces analysis time by 2-10x. Run DRAGEN TruSight Oncology 500 and DRAGEN TruSight Oncology 500 ctDNA Analysis Software, provided with each kit, locally with an on-premises DRAGEN server or in the cloud via Illumina Connected Analytics. Options for customized reporting and insights include Illumina Connected Insights and Velsera Clinical Genomics Workspace (CGW).



\* NextSeq 550Dx or NovaSeq 6000Dx Instruments in research mode only. † Requires separate, standalone DRAGEN server if local secondary analysis is desired. ‡ TruSight Oncology 500 High-Throughput is also compatible with the NextSeq 550 System and NextSeq 550Dx Instrument in research mode for up to eight samples. § NovaSeq 6000Dx Instrument in research mode has not been extensively tested, but is considered technically compatible. \*\* Not available in all countries. Illumina Connected Insights supports user-defined tertiary analysis through API calls to third-party knowledge sources.

# Better variant calling with DRAGEN analysis



## Accurate

- DRAGEN secondary analysis brings award-winning accuracy to TruSight Oncology 500
- 99.83% accuracy score with the precisionFDA Truth Challenge V2<sup>1,2</sup>



## Comprehensive

- Comprehensive coverage of all variant classes: SNVs, indels, CNVs, MNVs, SVs; immuno-oncology and other gene signatures: TMB, MSI, and HRD (GIS)\*
- New beta features<sup>†</sup> available with TruSight Oncology 500 HRD assay enable reporting of tumor fraction, ploidy, absolute copy numbers, and gene-level LOH



## Fast

- DRAGEN secondary analysis completes 2-10× faster than other pipelines

Assay	No. of samples <sup>b</sup>	Third-party server <sup>a</sup>	DRAGEN Server v4
		Analysis time <sup>c</sup>	
TruSight Oncology 500 or TruSight Oncology 500 High-Throughput	8 tissue biopsy	5.5 hrs	2 hrs
	16 tissue biopsy	12 hrs	3 hrs
	32 tissue biopsy	18 hrs	7 hrs
TruSight Oncology 500 ctDNA v2	72 tissue biopsy	24 hrs	16 hrs
	24 liquid biopsy	216 hrs (9 days)	20 hrs (< 1 day)

a. Third-party server: c5.9xlarge instance (36 vCPU, 72 GiB memory).  
 b. Number of samples processed in a single batch per week.  
 c. Approximate analysis times are based on actual runs, analysis times will vary.



## Flexible

- Local and cloud-based analysis allow labs to choose an option that best suits their needs
- User interface designed for general users as well as bioinformatics professionals



## Easy to use

- User-friendly interface to set up and configure analysis
- No manual touchpoints available with automated data transfer and analysis kickoff



## Scalable

- Cloud-based analysis enables scaling without additional hardware investment
- Reducing manual touchpoints with automation allows scalability without adding headcount

Drive more genomic insights with the TruSight Oncology 500 portfolio and DRAGEN analysis:

- ✓ TruSight Oncology 500 with DRAGEN analysis
- ✓ DRAGEN secondary analysis

\* HRD (GIS) is for tissue workflows only (not available with TruSight Oncology 500 ctDNA).

† Beta features have not been verified by Illumina. See customer release notes for v2.5+ for more details.

SNV, single nucleotide variant; indel, insertions and deletions; CNV, copy number variant; MNV, multinucleotide variant; SV, structural variant; TMB, tumor mutational burden; MSI, microsatellite instability; GIS, genomic instability; LOH, loss of heterozygosity

## References

1. Food and Drug Administration. Truth Challenge V2: Calling Variants from Short and Long Reads in Difficult-to-Map Regions. [precision.fda.gov/challenges/10](https://precision.fda.gov/challenges/10). Accessed March 14, 2022.
2. Illumina. DRAGEN Sets New Standard for Data Accuracy in PrecisionFDA Benchmark Data. Optimizing Variant Calling Performance with Illumina Machine Learning and DRAGEN Graph. [illumina.com/science/genomics-research/articles/dragen-shines-again-precisionfda-truth-challenge-v2.html](https://illumina.com/science/genomics-research/articles/dragen-shines-again-precisionfda-truth-challenge-v2.html). Accessed March 14, 2022.