Data Sheet

Agilent
Trusted Answers

NGS Data Analysis Made Easy

Key Benefits

- Optimized Agilent SureSelect pipelines, now including support for SureSelect Cancer CPG panels
- Built-in quality control dashboard
- Fully integrated genome browser
- Intuitive and automated software
- Increased data analysis speed

Streamlined NGS data analysis for the modern lab

The Agilent Alissa Reporter platform is an intuitive and streamlined cloud-based NGS secondary analysis software-as-a-service (SaaS) solution that delivers high performance variant detection with integrated genome browsing and a built-in quality control (QC) dashboard. Alissa Reporter completely automates data upload, analysis, and export, including direct export from your Amazon Web Services account.

High-performance variant detection for germline and somatic samples

From a single genomic sample, quickly get more valuable information than ever before using Alissa Reporter. Analyze a germline exome sample in less than 60 minutes and a somatic exome sample in less than 120 minutes. Alissa Reporter supports parallel variant detection from DNA specimens improving analysis efficiencies. With Alissa Reporter's secondary analysis capabilities, detect single nucleotide variants (SNVs), insertions and deletions (indels), copy number variants (CNVs), and translocations (TLs). Using Agilent SureSelect Cancer CGP assay, Alissa Reporter also identifies RNA gene fusions. Obtain information about cancer research biomarkers such as tumor mutational burden (TMB), microsatellite instability (MSI), and internal tandem duplication (IDT) mutations for more precise and comprehensive data.

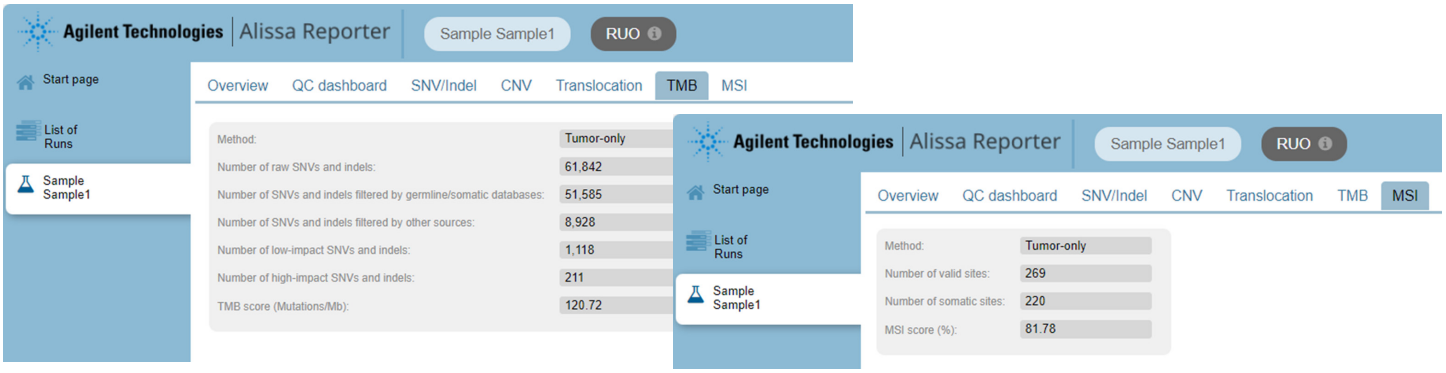

Figure 1. Alissa Reporter detects variants from DNA giving users high confidence in their results. SNVs and indels and IDTs (i.e. FLT3) are reported in the SNV/indel module, CNV detection module identifies both amplifications and deletions, translocations are listed in the Translocation module and biomarker results for TMB and MSI can be viewed in their respective modules.

Integrated genome browser

Users can easily look further into the raw read pileups for a given variant by navigating to the genome browser clicking **Show pileup** while hovering over a variant.

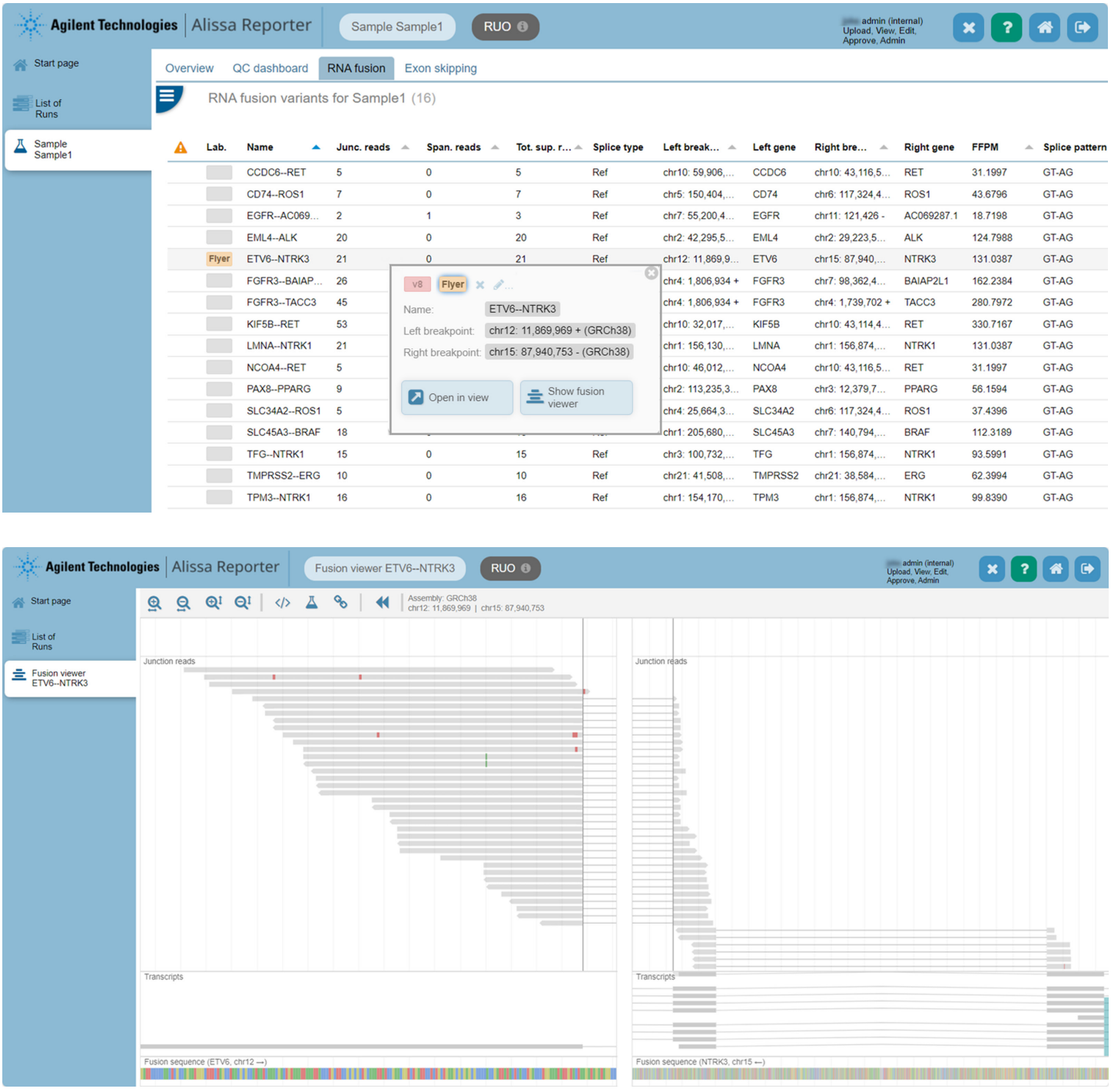

Figure 2. All called DNA and RNA variants can be visualized in Alissa Reporter's genome browser. While hovering over an RNA gene fusion, click **Show pileup** to jump to the integrated genome browser.

Alissa Reporter automatically links users to the genome browser for manual inspection of raw reads.

Figure 3. Inspect read pileups, coverage and variant information in the pileup view.

Users can also visualize CNVs and TLs with Alissa Reporter's **CNV and Translocation Viewer** function.

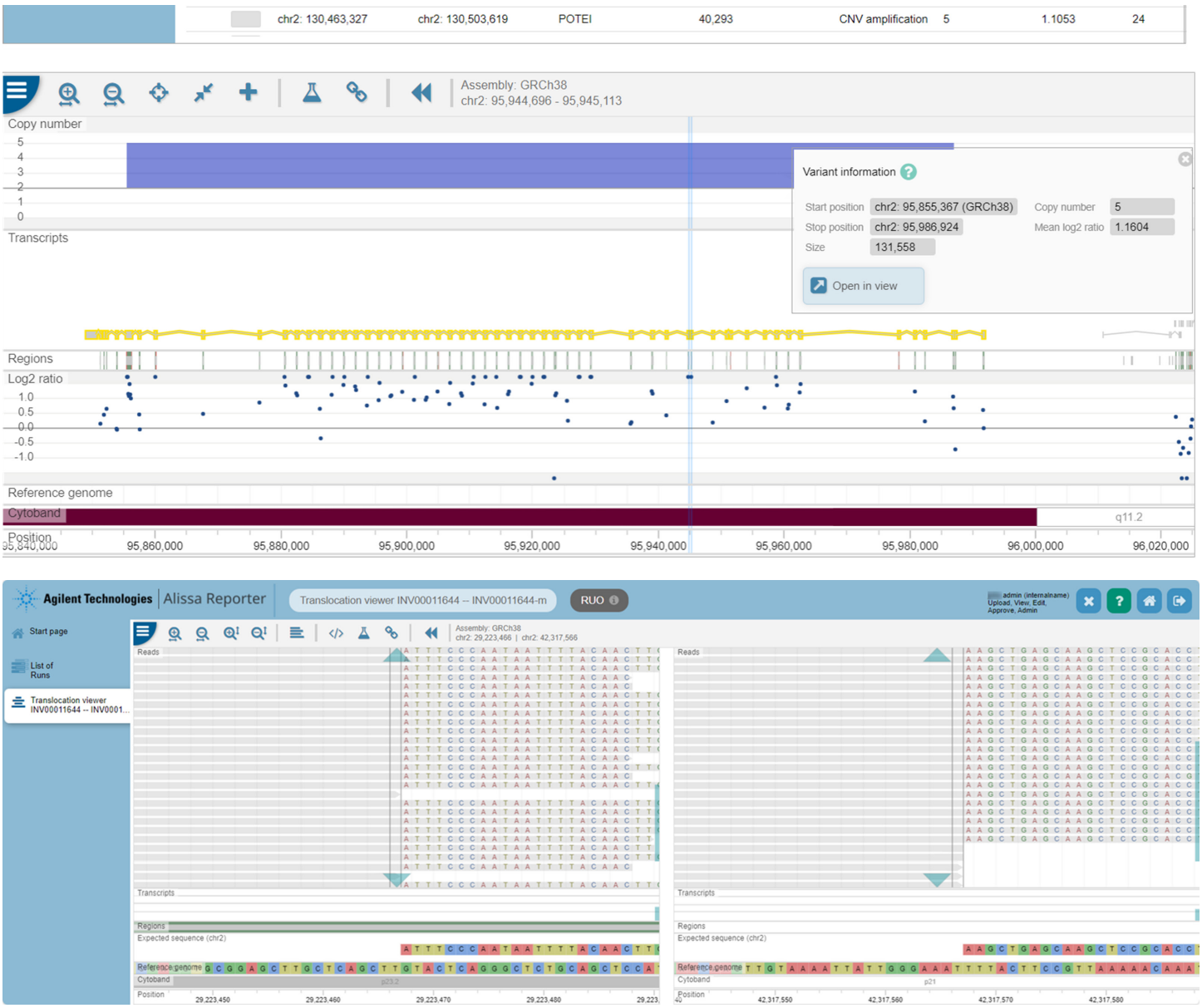

Figure 4. Visualize CNV calls and their log2 ratios in Alissa Reporter's CNV viewer (upper pic) and view read pileups of DNA translocation in the translocation viewer.

Built-in QC dashboard for operational excellence

Alissa Reporter helps users quickly verify that an NGS assay is performing as planned. With the built-in QC dashboard, users can immediately assess whether key quality control metrics of individual samples (or the entire run) are within the expected range. Alissa Reporter flags problematic samples and shows users where the QC metric has deviated from recommended values.

Alissa Reporter can track and display QC metrics longitudinally. By analyzing quality control data across runs, users can easily spot trends and deviations from expected performance parameters over time.

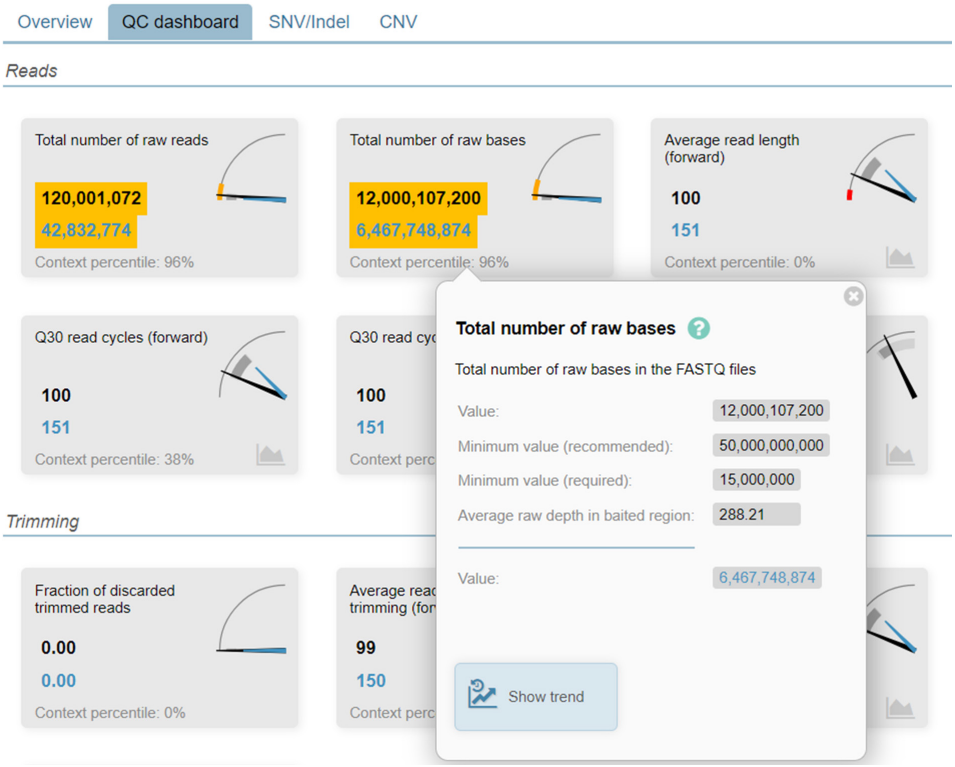

Figure 5. Alissa Reporter's QC dashboard helps you quickly find the metrics that matter most.

Virtual gene and/or regions panels

If users are only interested in analyzing a subset of genes or regions, Alissa Reporter's in silico filter enables the creation of virtual gene panels.

Create targeted panels in advance based on your subpanels of interest or edit your selected panel on the fly. It is easy to manage in silico filters with Alissa Reporter's intuitive filtering functions. Simply select or upload the gene(s) and/or region(s) to be included, and Alissa Reporter will automatically filter the dataset based on this selection.

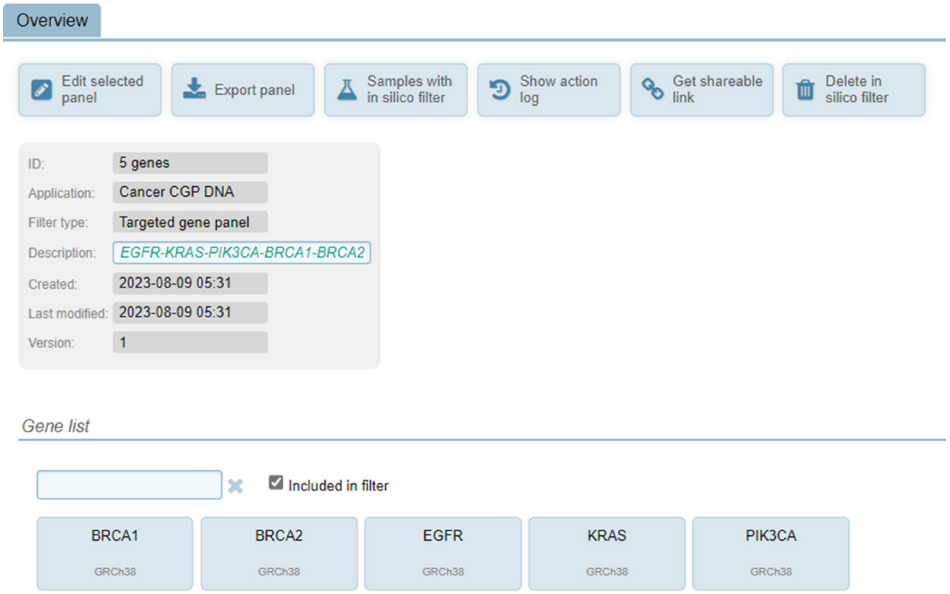

Figure 6. Filter based on your genes and/or regions of interest.

Predefined analysis pipelines

Through optimized analysis pipelines for Agilent SureSelect Human All Exon V7 and V8, SureSelect Cancer CGP DNA and RNA assays, and SureSelect custom panels, users can assess their results with confidence.

The Agilent SureDesign import module in Alissa Reporter enables users to easily access their SureSelect custom panels.

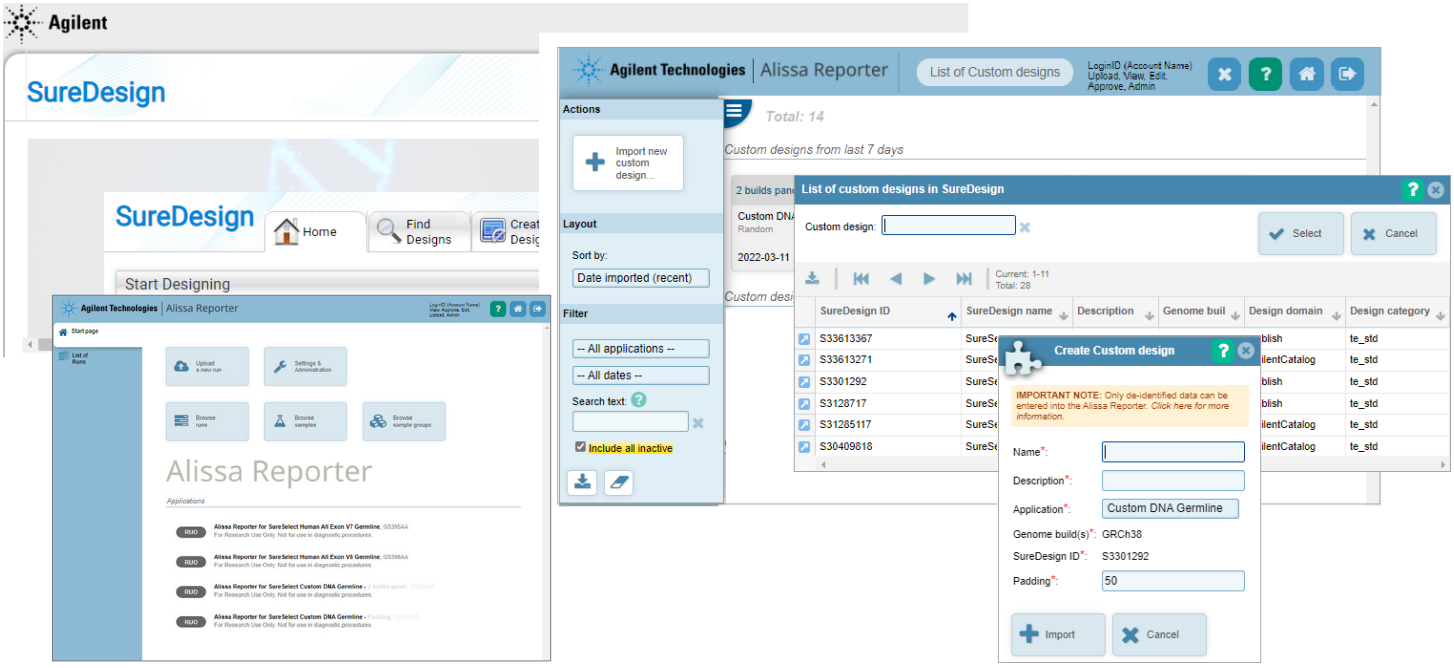

Figure 7. Use optimized analysis pipelines to run your SureSelect Human All Exon V7, V8, SureSelect Cancer CGP DNA and RNA assays, and custom panels. Import your SureSelect custom design into Alissa Reporter.

A FASTQ-to-result, fully automated NGS software workflow

Alissa Reporter turns raw NGS FASTQ files into variant call format (VCF) files for SureSelect Human All Exon V7 and V8 germline, SureSelect Cancer CGP, and custom germline and somatic applications.

Alissa Reporter Workflow

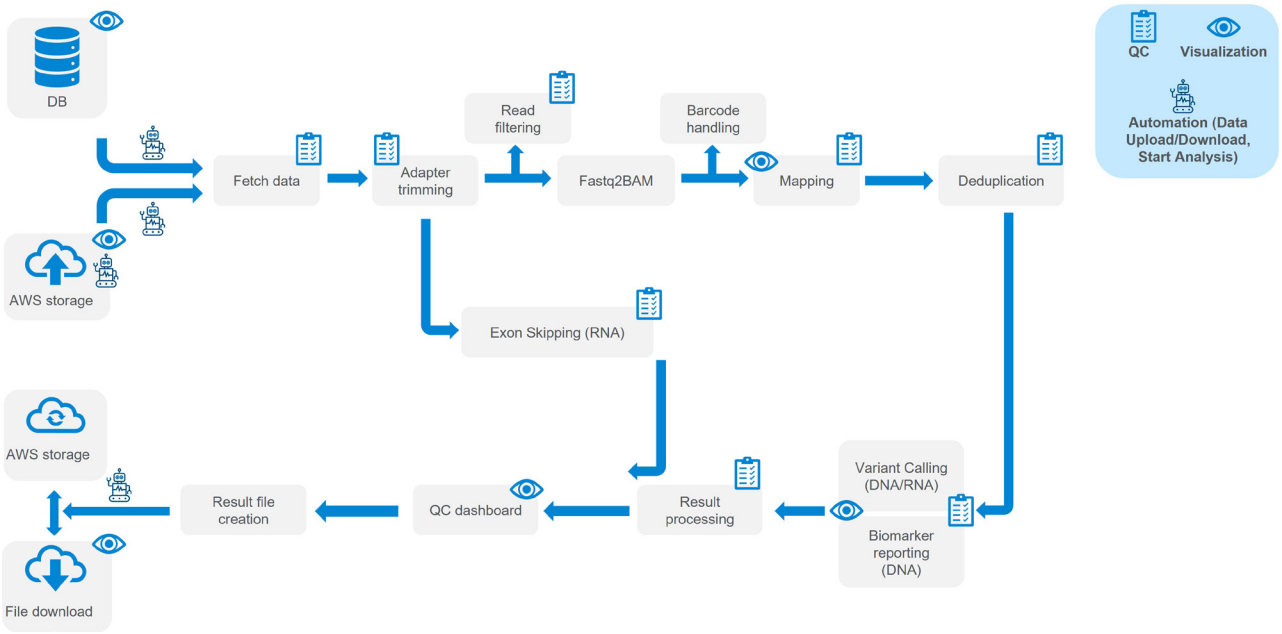

Figure 8. Germline and somatic workflow using Alissa Reporter.

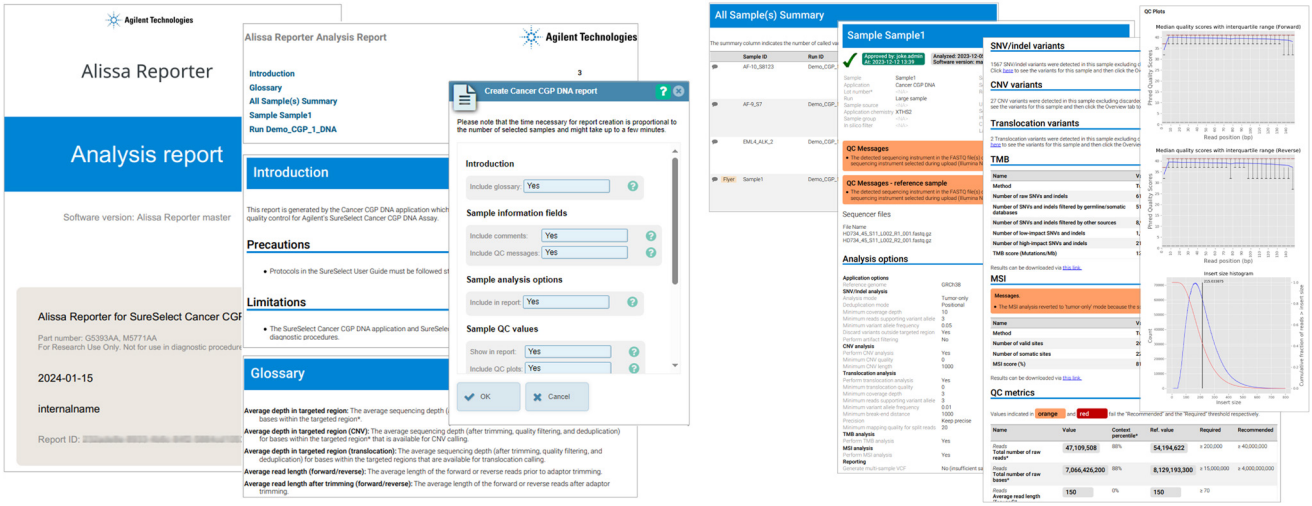

Figure 9. Download a PDF report of the secondary analysis results from Alissa Reporter.

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