

NGS Data validation and quality control

Quality is no accident

omnomicsQ

The **omnomicsQ** software allows for the monitoring of NGS data processes for quality, deviations, cost effectiveness, and efficiency. Ensure your laboratory management and bioinformatics teams deliver timely, accurate, data-driven recommendations to improve operational efficiency and quality. Simplify accreditation by documenting quality according to ISO standards.

omnomicsQ is unique



More comprehensive than free tools

- Validate tests and define quality requirement thresholds to ensure sufficient sensitivity and specificity
- Compare QC metrics from fastq, bam, vcf files easily across different samples, sequencing platforms, kits, SOPs, organisations
- Visualize QC metrics over time or correlated with each other
- Comply with regulations compliance and implement best practice guidelines
- Verify coverage against a list of regions of interest
- Automate all the above without wasting valuable resources



Integrates into in-house built pipelines

- Standardise methods to communicate critical results and findings within and between laboratories and clinics
- Rely upon an enterprise level tool developed around tested, published, and validated algorithms
- Eliminate the risk of running unsupported software and unmaintained resources in a clinical lab
- Feed the coverage analysis into the variant interpretation tool



Complementary capabilities feed into any LIMS

- Calculate and manage quality metrics from DNA/RNA capture and library construction, all the way to NGS bioinformatics pipelines and the validity of the variants
- Alert automatically if any one sample fails QC
- Operate inter-laboratory test validations and quality comparisons
- Share and compare across organisations

Benefits

Quality



- Improve process performance
- Eliminate human errors
- Monitor exceptions through internal and external benchmarking to yourself and to a database of peers

Speed



- Eliminate time spent on concordance or coverage analysis
- Identify bad quality samples before variant interpretation and reporting
- Retrieve historical data quickly for reporting and audits

Simplicity



- Validate and verify using well known reference standards from among other NIST, Horizon, or from your own lab
- Document different test and requirement thresholds for different standard operation procedures (SOP)
- Automate pass, warn, fail for each sample according to defined SOPs
- Identify areas of poor performance and evaluate quality improvements from process changes

Future-Readiness



- Add new tests, change sequencers, widen the scope of the analyses
- Change requirements and protocols, follow best practice guidelines easily
- Stay integrated with evolving IT infrastructures

Confidence



- Manage risk, ensure data privacy.
- Analyse effect of workflow modifications and validate new LDTs
- Secure consistency and predictability, ensure patient safety

Euformatics – Be confident

The Euformatics team consists of specialists in molecular genetics, data mining and software development. We apply validated state of the art analysis and modelling technologies on high-throughput data to produce tools for both health care and clinical research. Integrate **omnomicsNGS**, our clinical variant interpretation tool into your workflows

2021-07

