insight to Inspiration

Samsung SDS
Genomics

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Samsung SDS Genomics
The Future of Medicine

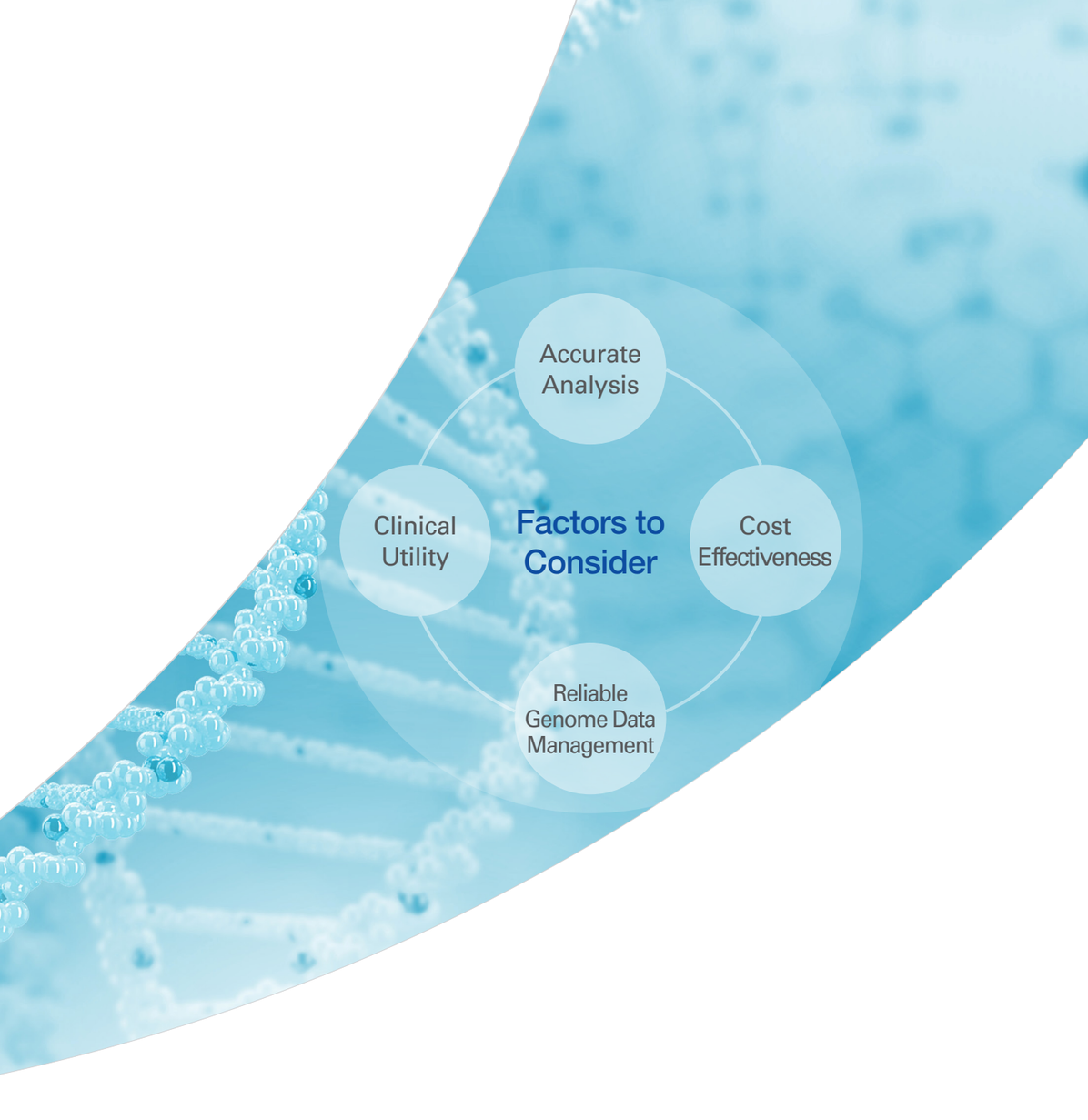
Trends

Healthcare is seeing a paradigm shift towards personalized medicine, enabling the use of patients' genetic profiles to recommend personalized treatment plans.

A growing number of global healthcare companies are providing DNA sequencing and genomic testing services to decode the human genome from tissue or blood samples.

However, personalized medicine is difficult to put into practice due to:
- The high cost of genomic sequencing and analysis
- The complexity of genomic data analysis

Therefore, there are many factors to consider before adopting a genomics solution such as:
- Cost effectiveness
- Reliable analysis of disease-related genetic variations
- Clinical utility
- Reliable genome data management



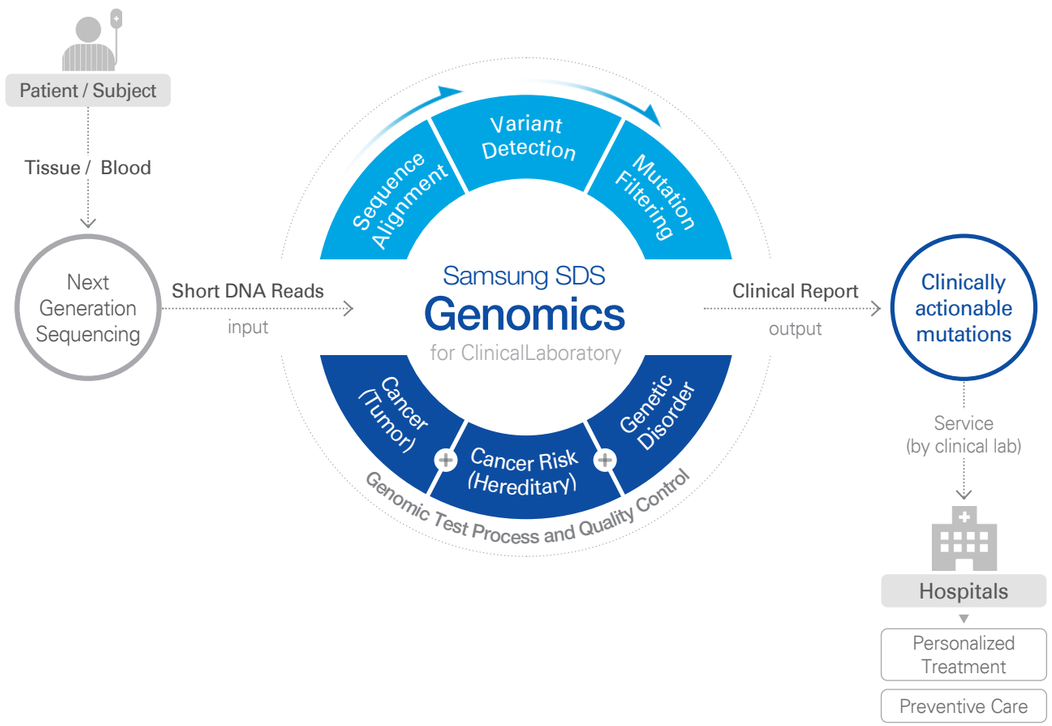
Samsung SDS Genomics accelerates the promise of personalized medicine based on:

Analytically validated capabilities in genomic analysis
A comprehensive understanding of clinical processes
And our strengths in bioinformatics and ICT

What is Samsung SDS **Genomics**

Samsung SDS Genomics is a clinical bioinformatics solution that can be used by clinical laboratories to analyze DNA sequence data and manage laboratory workflow.

The solution identifies clinically-actionable mutations to help physicians make appropriate treatment decisions.



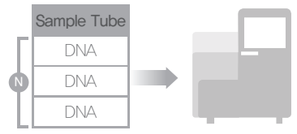
Key Solution **Differentiators**

Proprietary genomic analysis engine

Samsung SDS has developed proprietary gene panels and data analysis engines in collaboration with leading clinical laboratories.

DNA sample pooling

Samsung SDS Genomics delivers cost effective analyses by screening pooled DNA samples.



Genome analysis reports tailored for clinical use

Samsung SDS Genomics delivers clinical reports for personalized cancer treatments, hereditary cancer risk assessment, and genetic disorder carrier screening.

Specifically, our reports highlight clinically-actionable variants, including relevant disease information and, when applicable, a list of clinically-approved drugs that target the detected variants.

SOP and QC customization

Samsung SDS Genomics supports customization of SOPs for clinical laboratories designing genomic tests in-house. Labs can easily create or customize quality control criteria and develop a genomic analysis engine using built-in or applying user-generated analysis modules.

Interoperability with hospital and laboratory information systems

Samsung SDS Genomics is compatible with HL7[1] standards to allow interoperation with the EHR[2] as well as the LIS[3], and to efficiently manage and share genomic information.

[1] Health Level 7
[2] Electronic Health Record (EHR)
[3] Laboratory Information System (LIS)

Samsung SDS Genomics
Value Proposition

01 Clinically Oriented Solution

02 Cost Effectiveness

03 Security

End-to-end solution to translate genetic information into clinical recommendations

Unlike other genomics solutions which focus on gene variant detection and analysis, Samsung SDS Genomics offers a full solution including gene variant detection, clinical reports, and interoperability with HL7-compatible client-side systems, helping translate large amounts of genomic data into successful clinical practice.

Cost-saving technology and analysis

Conventional testing is costly as DNA samples must be analyzed individually.
Samsung SDS's PoolXeq™ technology achieves up to 50% reduction in sequencing costs for hereditary cancer and genetic disorder tests by enabling DNA sample pooling

Security

Samsung SDS Genomics secures analysis data by providing features such as secure data storage, user authorization, role management, and electronic signature.

Why Samsung SDS **Genomics**?

Analytically validated genomic analysis capabilities

Samsung SDS Genomics provides an accurate analysis of various types of DNA variants, such as Single Nucleotide Variants (SNV), Insertions and Deletions (InDel), Copy Number Variants (CNV), and Translocations.
Developed in collaboration with medical teams from major hospitals, our solution supports the successful translation of genomic information into personalized treatment or prevention plans.

Experts with experience in medical IT

Our life scientists and bioinformatics engineers have an average of 20 years of experience and knowhow in the field of genomics and application development. Since 2009, they have been applying their bioinformatics expertise to develop Samsung SDS Genomics.
Our experts are committed to providing continued support to make sure our solution meets your needs.

A committed and reliable partner

Samsung SDS is continuously improving the quality of the solution through the partnerships with clinical laboratories and hospitals.
We actively incorporate partners' feedback and insights into solution revisions and future solution development. We are always looking for ways to provide a best in class solution based on the latest science and technology advances.

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