Your one answer

Diagnosis to Treatment for Rare Disease Patients

3billion

Global Innovator in Rare Disease Diagnosis

Founded in	2016
Countries	60+
Physicians and Researchers	700+
Diagnosed Patients	45,000+
Institutions	400+
Diagnostic Rate	28%

Mission

Diagnosis to treatment for Rare Disease Patients

3billion entered the genetic testing market in 2016 to provide answers for patients with rare disease.

We are committed to helping patients and their families on their journey, starting with genetic testing and diagnosis.

We strive towards a world where rare disease patients are not neglected in diagnosis and treatment.

Company Timeline

Continuous growth in the last 8 years

2016
- Oct. Founded 3billion

2017
- Mar. Launched the beta version of Direct-to-Consumer (DTC) rare disease diagnostic service

2018
- Apr. Participated in national project (NIPA) to establish an AI-driven diagnostic system for pediatric rare diseases
- Jun. Raised Series A funding

2019
- Feb. Launched 3B-EXOME, a WES-based rare disease diagnostic test
- Oct. Raised Series B funding

2020
- Feb. Established facilities for next-generation sequencing analysis

2021
- Mar. Raised Series C funding
- Apr. Participated in the national Bio Big Data project
- Dec. Obtained CAP certification

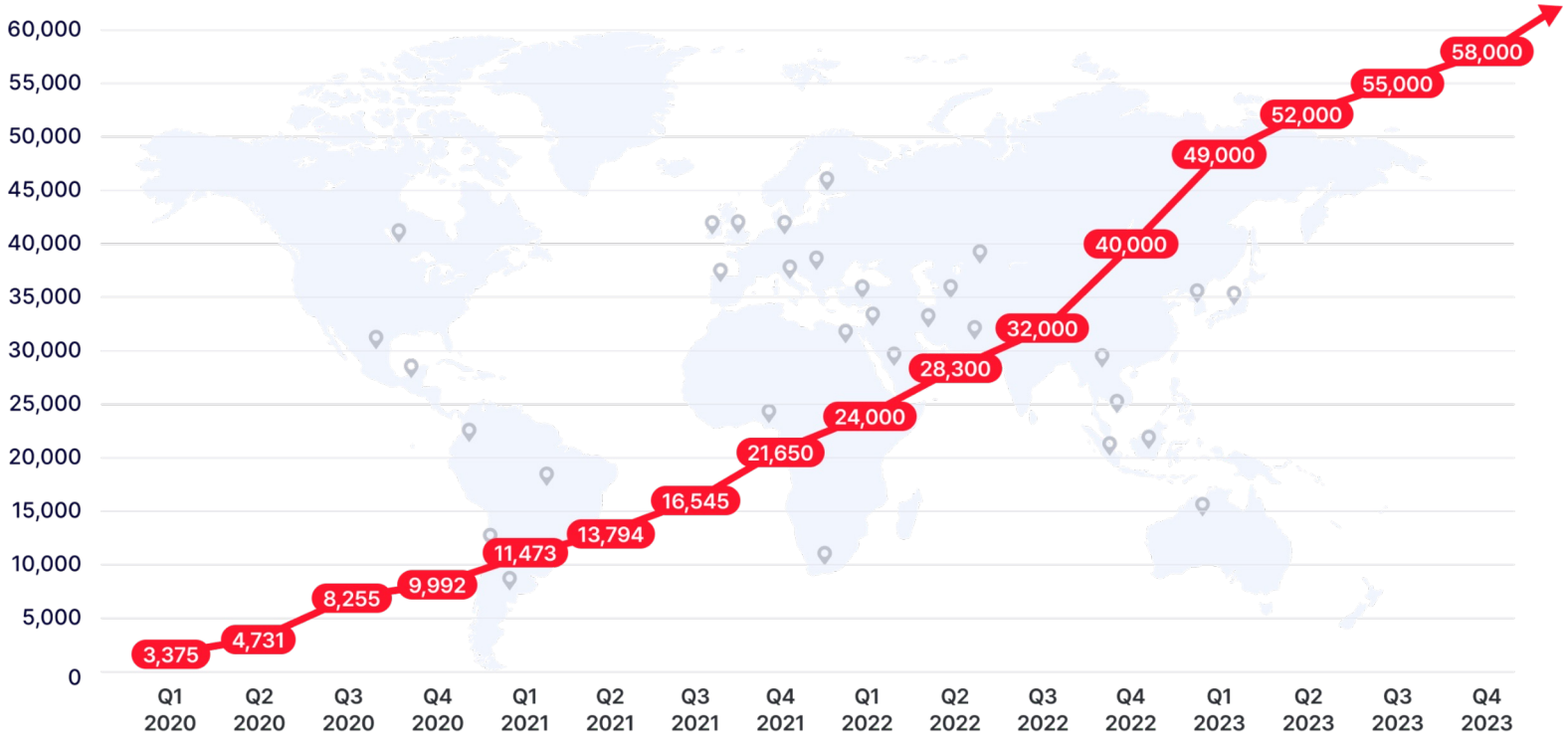
2022
- Apr. Raised Pre-IPO funding
- Jun. Launched 3B-GENOME, a WGS-based rare disease diagnostic test
- Dec. Obtained CLIA certification

2023
- Apr. Licensed California Clinical Laboratory
- Dec. Launched 3B-INTERPRETER, a Data-driven genetic test

Rapid Growth of Genomic Database

The speed of patient genomic data accumulation has increased four-fold since its inception

Cumulative number of data



National Project

Contributing to the public by participating in national projects

Dr Answer

Development of intelligent S/W that connects and integrates medical data on 8 major disease areas

- Development of web-based variant diagnostic S/W for patients with hereditary hearing loss and developmental delay
- Selected as Top 12 out of 70,000 national projects in 2020

AI for Children

AI solution for the diagnosis, treatment, and management of pediatric rare disease patients

- Selected as the developer for AI S/W solution for pediatric rare disease patients
- Currently in the development and certification process for diagnostic S/W

국가 통합 바이오 빅데이터 구축 사업 The National Project of Bio Big Data

Establishing a National Genomic Database to predict and diagnose population-specific diseases

- Analysis of 10,000 patients' genomic data (WGS) to produce diagnostic reference reports

Research Performance

Advancing knowledge of rare disease through continuous research

Publications **75+**


Genome analysis

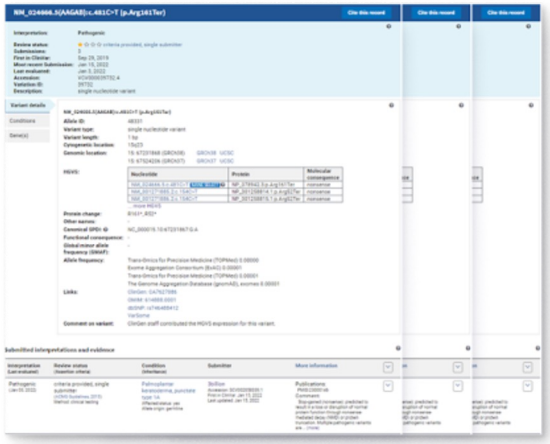
3Cnet: pathogenicity prediction of human variants using multitask learning with evolutionary constraints

Patents for Filing **35+**


특허증

CERTIFICATE OF PATENT

Variants Registered **5,200+**



Recognition

Establishing diagnostic capabilities through global competitions

2017

Nov.
Selected as finalist for Fx2017 Startup Award

Jul.
Selected as finalist for Roche's Future X Healthcare 2017 Startup Award
Won the Korean representative selection for the 1776 Challenge Cup global startup competition

Jan.
Won first place at IPMC Precision Medicine Startup Competition

2020

Sep.
Won the Next Unicorn award at ASEAN-Korea Scale Up Competition

2021

Dec.
Selected as tech innovator by Novartis' 2nd Health X-Challenge Seoulion

2022

Nov.
Selected as Korean Society of Medical Genetics and Genomics Autumn Conference (Individual) Best Research Award: Excellent Poster Award

Oct.
ASHG Poster selected for Reviewers' Choice

Aug.
Selected as a Top Tech Company of 2022 by Global Data Analysis Company Tracxn (2 consecutive years)

May.
Won in CAGI6, a global AI genomics analysis competition

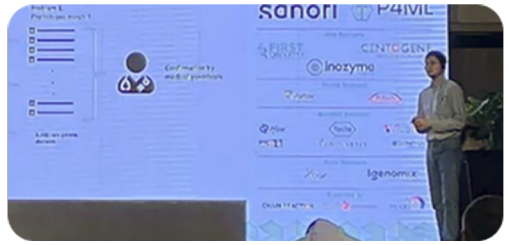
2023

Nov.
ASHG Poster selected for Reviewers' Choice

Sep.
Selected as a Korea AI startup 100 for 3 years.

Sep.
Won the Xcelerate RARE

Mar.
Won first place in oral presentation at MENA rare disease conference



Global Partnerships

Working with over 400 institutions in over 60 countries worldwide

Business Area

We collaborate throughout the entire journey, from the diagnosis of rare diseases to the development of drugs.

3billion provides NGS-based diagnostic services and provides custom diagnostics to pharmaceutical companies to increase patients' access to treatment.

3billion also develops and provides an AI platform for the development of new rare disease therapies.

Rare Disease Diagnostics

Genetic Testing Support Programs with Pharma

AI-Driven Drug Discovery

Business Area

Rare Disease Diagnostics

Identify the causative variants of a patient's symptoms with 3billion, using next generation sequencing (NGS)

3billion continues to improve the accuracy of diagnosis by leveraging its diagnostic and AI technology.

3billion also provides lifetime reanalysis at no additional costs to reflect the latest research.

Services

Various coverage options, all for rare disease diagnoses

3B-GENOME

Diagnosis based on
Whole Genome Sequencing

Search for disease-causing variants in the entire human genome

3B-EXOME

Diagnosis based on
Whole Exome Sequencing

Identify disease-causing variants in exon regions of over 20,000 genes and adjacent regions

3B-VARIANT

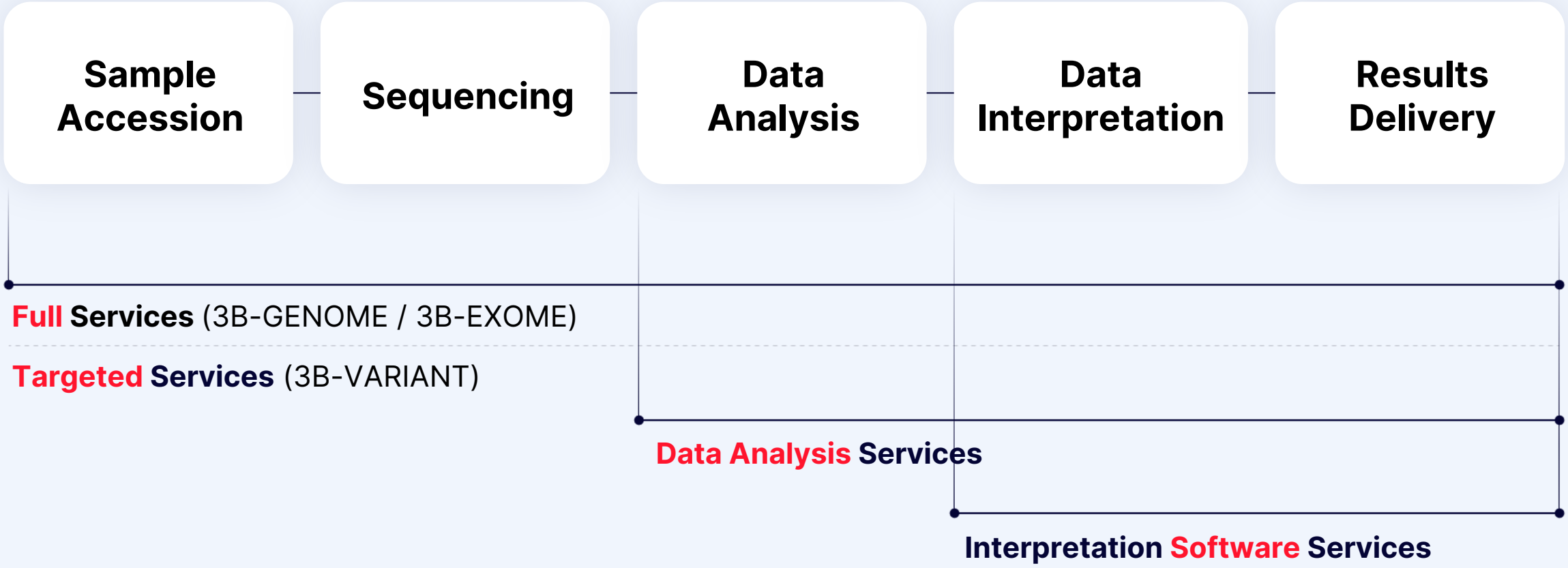
Diagnosis based on
Sanger sequencing

Confirm specific variants found in 3B-EXOME / 3B-GENOME testing and for family testing

*Excluded from reanalysis

A Wide Range of Services

End-to-end services for rare disease diagnosis



Advanced Diagnostic Technology

Proprietary data analysis technology for diagnosis using AI and big data

EVIDENCE

Examines vast amounts of variant data to prioritize variants of interest

EVIDENCE reduces potential diagnostic biases and the time needed for analysis.

- Daily update of variant database
- Interpretation and classification of 100,000 variants within 1 minute
- Utilization of proprietary genomic database

3Cnet

An AI-based tool for predicting variant pathogenicity

3Cnet predicts the pathogenicity of detected variants by learning from various types of data.

- High sensitivity with a 99.99% accuracy in predicting pathogenicity of variants
- Algorithm minimizes bias through learning from multiple data sets

3ASC

Assists clinical geneticists in diagnosis

Using the information extracted by EVIDENCE, clinical geneticists select final candidates for causative variants associated with symptoms.

- Determines artifacts (data errors due to equipment)
- Includes causative variants within the top 5 results with a 96% success rate

Reliable Laboratory

Internationally certified laboratory infrastructure, protocols in line with global standards

CAP ACCREDITED
COLLEGE of AMERICAN PATHOLOGISTS

Accreditation by College of American Pathologists
CAP License # 8750906, AU-ID# 2052626

Clinical Laboratory Improvement Amendments

Certification by Clinical Laboratory Improvement Amendments
CLIA ID # 99D2274041

*as of Dec. 2022

Business Area

Genetic Testing Support Programs with Pharma

Identify the most relevant rare disease patient population with 3billion

Since orphan drugs have a small patient population who have difficulties with diagnosis, it can be challenging to recruit patients.

Find the right patients for the right treatment with 3billion.

Service

Helping you find patients who will benefit most from treatment

Ongoing Projects

Offering Customized genetic testing for Certain Rare Diseases

Support Program for Lysosomal Storage Disorders

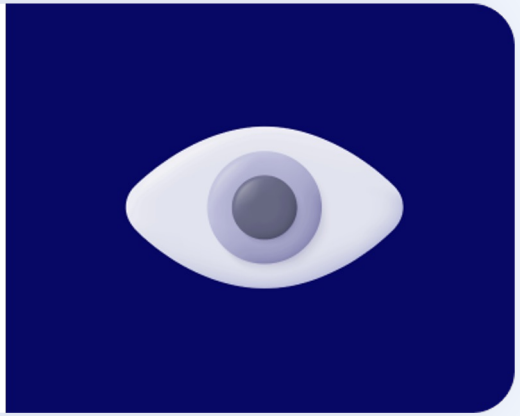
Gene variant diagnostic partnership

3billion is providing accessing to genetic testing to patients suspected with Lysosomal Storage Diseases in collaboration with a global pharmaceutical company.

Support Program for Inherited Retinal Disorders

Gene variant diagnostic partnership

3billion is providing a joint genetic testing program for patients with inherited retinal diseases with a global pharmaceutical company.



Partner Benefits

A cooperative structure that benefits each stakeholder group

Pharmaceutical Company

Expand access to treatment

Healthcare Provider

Propose genetic testing to patients at no additional cost

Patient

Receive financial support for genetic testing and quickly identify the cause of disease

Business Area

AI-Driven Drug Discovery

Support pharma in developing new orphan drugs using MIN-T, an AI-based drug development technology

3billion’s drug discovery technology meets various demands of pharmaceutical companies, such as target identification, target validation, hit-to-lead, and experimental validation, aiding in new drug development.

Service

A customizable service that can support early drug discovery and the preclinical study stage

AI-Driven Target Discovery

Target discovery based on patient genotype and phenotype

Generation of Target-Binding Candidate Molecules

Target-binding molecule generator based on deep learning reinforcement

Evaluation of Candidate Molecules

Drug safety evaluation
Pharmacokinetics evaluation

Ongoing Projects

Flexible scope of cooperation determined according to needs

Case 1

Joint Target Discovery

We are collaborating with a global biotechnology company to identify targets for gene therapy.

Case 2

Full Services

We are collaborating with another global biotechnology company on target identification for small molecule drugs, as well as preclinical development of candidate compounds.

Partner Benefits

A drug discovery structure that benefits all participating groups

Pharmaceutical Company

Significantly reduce time to discovery and costs for drug development

Healthcare Provider

Increase the probability of finding optimal treatment for patients

Patient

Improve chances of accessing treatment more quickly through shorter drug development cycles

We strive to provide end-to-end solution through our Genomic data platform for patients through diagnosis, treatment, prevention

3billion is changing the rare disease diagnostic ecosystem through technology and our passion.

We hope to change the world by applying AI to genomic data to provide the best-in-class diagnostic technology and development of rare disease treatment.

We will create value throughout the patient’s entire journey, including diagnosis, treatment, and prevention, with our genomic platform.

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