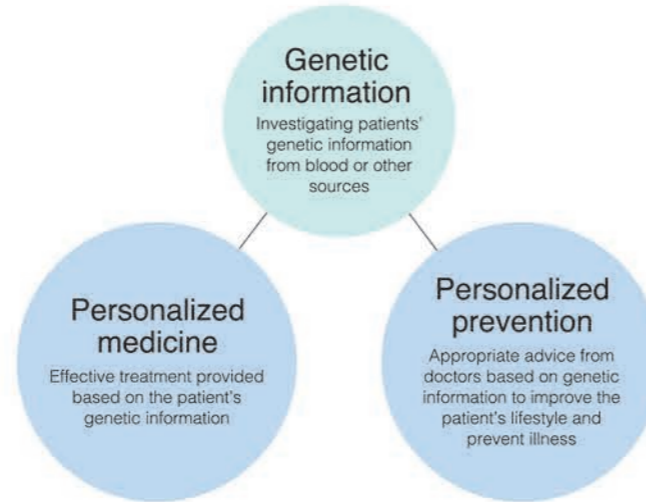




What is the BBJ's goal in genomic medicine?

Each person has a unique constitution. Just as people have different body shapes, everyone has individual differences in their susceptibility to certain diseases or worsening symptoms. In addition, there are some people who are more likely, or less likely, to respond to the same medication or to experience side effects. The BBJ's goal in genomic medicine is to provide more effective and safer medical treatment based on individual genetic information so that each person can live a longer and healthier life.







The BBJ's History Since 2003

Phase	Details	First cohort	Second cohort
1st phase (FY 2003-07)	Start of one of the world's largest disease biobank projects The BBJ was established by collecting biological samples (DNA/serum) and clinical information from collaborating patients through cooperative medical institutions nationwide, forming the first cohort. The genetic analysis of DNA samples was conducted.	Call for collaborators Collection of DNA/serum/clinical information from 200,000 patients with 47 diseases (300,000 cases)	
2nd phase (FY 2008-12)	Expansion with more samples and information Further information was collected toward utilization of the first cohort's biological samples and clinical information. Serum samples were collected once a year from the collaborating patients visiting cooperative medical institutions.	Collection of serum/clinical information Follow-up survey Collection of prognostic information	
3rd phase (FY 2013-17)	Growing scale with the cooperation of 67,000 new collaborators We continued to collect clinical and prognostic information, conduct genomic analysis, and disclose data of the first cohort to promote its utilization. Furthermore, we established a second cohort by collecting blood (DNA) and clinical information from new collaborators. In 2014 we built an additional serum/plasma storage facility and a new tissue bank. In 2015 we started storing samples provided by cancer clinical research groups in Japan.	Follow-up survey Collection of prognostic information	Call for collaborators Collection of DNA/clinical information from 67,000 patients with 38 diseases (100,000 cases)
4th phase (FY 2018-22)	Growth to 267,000 collaborators and 51 diseases; converting samples into data We promoted utilization of the DNA, serum, and clinical information of a total of 267,000 collaborators from 51 diseases (440,000 cases) in the first and second cohorts, as well as the conversion of biological samples into data to entrench the BBJ as a much-used biobank.	Addition of genomic data (SNP for all cases, WGS) Addition of clinical information	Addition of genomic data (SNP for all cases, WGS) Addition of clinical information
5th phase (FY 2023-)	Toward the further utilization of samples and data We are promoting the use of samples, clinical information, and genomic data, building a system enabling interaction with collaborators, and advancing transformation through digital technology. By collecting additional samples and clinical information, and by establishing infrastructure for genomic and other omics analysis, we are developing into a much-used biobank.	Addition of omics data (WGS/Metabolome/Proteome) Addition of clinical information	Addition of genomic data (WGS) Addition of clinical information

Welcome to BioBank Japan!

Aiming for the realization of genomic medicine

BioBank Japan (BBJ) is one of the world's largest disease biobanks, storing biological samples and clinical information donated by collaborating patients nationwide. The BBJ provides these samples and data to researchers in academic research institutions and private companies who are aiming to advance genomic medicine and develop new clinical and therapeutic approaches.

Collaborating Patients  270,000 patients 51 diseases	DNA  800,000 tubes (270,000 patients)	Serum  1,700,000 tubes (200,000 patients)	Genomic Data / Information etc.  WGS: 14,000 patients SNP: 270,000 patients Clinical Information: 270,000 patients
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BBJ Official Website

<https://biobankjp.org/en/>



BBJ Official X

https://twitter.com/BBJ_IMSUT_UT



Office of BioBank Japan c/o The Institute of Medical Science, The University of Tokyo
4-6-1 Shirokanedai, Minato-ku, Tokyo 106-8639, Japan

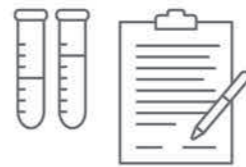
Tel: +81-3-5449-5122 Fax: +81-3-6409-2060 Published date: 2024.08

This is what the BBJ does

A biobank is a repository/entity where human biological samples and their relevant information/data are systematically managed. The BBJ stores and manages DNA and serum samples donated by collaborating patients in robust storage facilities under proper temperature control and with strict security. These invaluable research resources are supplied to research projects aimed at advancing genomic medicine and developing new clinical and therapeutic approaches in accordance with laws, regulations, and guidelines.



Providing biological samples/information, etc.

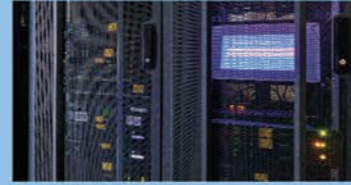


Information dissemination by the BBJ

BioBank Japan

Integrated Clinical Database

Clinical information (lifestyle, disease, clinical examination, medication, etc.) and other sample-related information (number of tubes, volume of sample solution, quality, etc.) are carefully stored and ready to be swiftly provided to researchers.



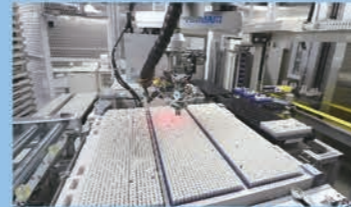
Integrated Clinical Database System



Server

DNA Storage

Capable of holding 2 million tubes at a temperature of 4°C; equipped with a fully automatic conveying system.



Tube to be picked up is searched.



Tubes are stored in special storage racks.



Robot arm precisely picks a single tube.

Serum Storage

Houses 58 liquid nitrogen tanks with a capacity of 57,600 tubes per container; maintained at -150°C.



Racks of tubes stored in 10-tiered tray containers



Tanks filled with liquid nitrogen



When shipping, each tube is taken out manually one by one.

Strict security management

Biological samples and clinical information number to each collaborator after removing. Each storage facility for samples and specific persons to enter. In addition, the biometric authentication device. The BBJ thus

Since 2014 the BBJ has engaged in collaboration and material transfer agreements with clinical research groups and others. We store and manage entrusted biological samples and information with the utmost care.

donated by collaborators are managed by assigning an ID such information as name, address, and date of birth. information is equipped with a security device that permits only operation of each storage unit is strictly controlled with constantly ensures the security of samples and information.

Data Control Bank

Manages receiving and shipping requests for samples and data; the ID information within the BBJ is collectively managed here.

Examination by the BBJ Sample and Data Access Committee



Reviews research plans approved by an ethical review committee to ensure that samples and data are used appropriately.

Public databases



NBDC Human Database, etc.

Users



Academic research institutions, private companies

Research outcomes

Realization of genomic medicine



Features from BBJ's Official Website

The BBJ's Online Biological Sample Search System

<https://searchweb.svc.biobankjp.org/>



Specifically created for researchers using the BBJ's samples (DNA/serum) for research purposes, this system allows them to search for samples by specifying conditional items.

List of BBJ Publications

<https://biobankjp.org/publication>



As of April 2024, more than 400 papers resulting from research conducted using BBJ samples and data have been published in renowned international scientific journals and other publications. On the List of Publications page of the BBJ's official website, all publications involving the BBJ can be searched by year and disease category.

"Minna no BBJ" Website (Japanese only)



This website provides an interactive link between collaborating patients and the BBJ. A "My Page" for collaborators will enable detailed information dissemination from the BBJ. (Scheduled for release in autumn 2024.)

Target diseases covered by the BBJ's biological samples and information: 51 diseases; 267,307 collaborating patients; 441,549 cases (as of July 1, 2024)

Lung cancer	Esophageal cancer	Gastric cancer	Colorectal cancer	Liver cancer	Pancreatic cancer
Gallbladder/Bile duct cancer	Prostate cancer	Breast cancer	Cervical cancer	Endometrial cancer	Ovarian cancer
Hematopoietic malignancy	Renal cancer	Cerebral infarction	Cerebral aneurysm	Cerebral hemorrhage	Bronchial asthma
Epilepsy	Pulmonary tuberculosis	COPD	Pulmonary fibrosis	Myocardial infarction	Stable angina
Unstable angina	Arrhythmia	Heart failure	ASO	Nephrotic syndrome	Chronic hepatitis B
Chronic hepatitis C	Liver cirrhosis	Urolithiasis	Osteoporosis	Diabetes mellitus	Dyslipidemia
Graves' disease	Rheumatoid arthritis	Drug eruption	Pollinosis	Atopic dermatitis	Keloid
Uterine fibroid	Endometriosis	Febrile seizure	Glaucoma	Cataract	Periodontitis
ALS	Depressive disorder	Dementia			