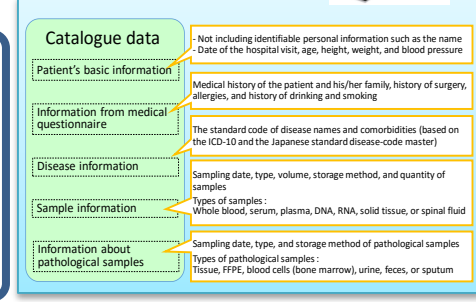
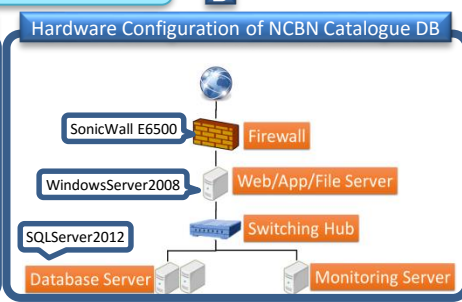
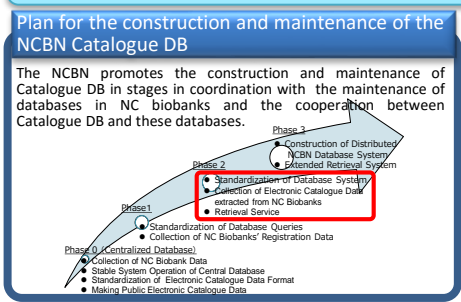
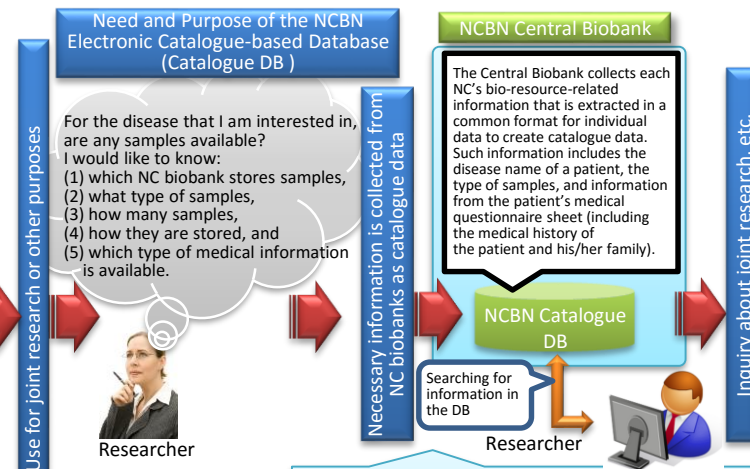
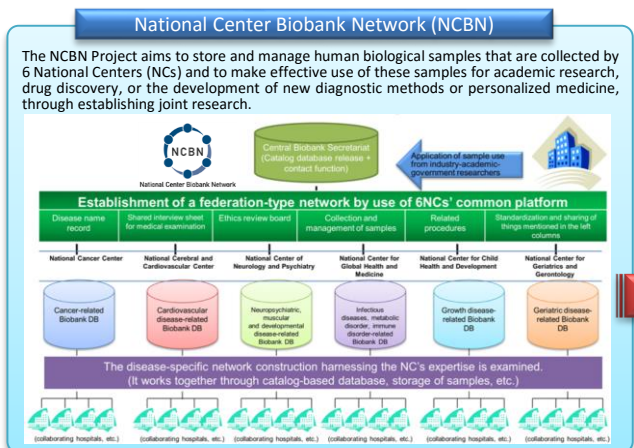


Electronic Catalogue-based Database of National Center Biobank Network

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Catalogue DB Infrastructure System

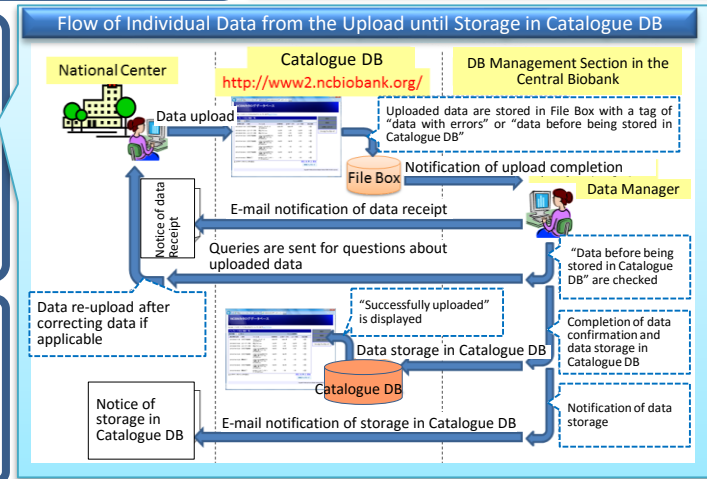
This system is responsible for a series of processes to store catalogue data (i.e., extracted individual data in a NC biobank) in the NCBN Catalogue DB.

Function	Details
1 Collection of catalogue data	The system registers information related to bio-resources that are collected and stored by each NC biobank (i.e., the disease name, the type of samples, additional medical information) as catalogue data in the Central Biobank.
2 Data management	The system performs a logical check to examine whether the registered and listed data are created in accordance with the formatting rules for individual data.
3 Data storage in Catalogue DB	The system stores verified catalogue data in Catalogue DB.

Catalogue DB Retrieval System

Mechanisms

- Each NC biobank is associated with disease-oriented cohort studies; therefore, the main disease name is used as the primary retrieval keyword.
- The disease name is coded based on the ICD-10 classification that is also used in overseas biobanks. Alternatively, the disease name control number in the Standard Master for Disease Name by MEDIS (MEDIS control number) can be used.
- The retrieval window displays the availability of additional clinical information that warrants the diagnosis of each disease.



NCBNカタログデータベース (Retrieval window in Japanese)

(Japanese) Availability of additional clinical information through the retrieval window

(Japanese) Availability of additional clinical information in a specific NC through the retrieval window

NCBN Electronic-Catalogue-based Database (Retrieval window in English)

(English) Availability of additional clinical information through the retrieval window

Results and Discussion

1. We constructed the Catalogue DB infrastructure system to collect catalogue data in the Central Biobank via internet in a common format for individual data among 6 NCs. This system is functioning without any problems.
2. This DB contains data from 25,886 registrants (patients) as of Mar. 25, '16 and has ~ 700 accesses to the retrieval page per month.
3. The ICD-10 code is used as the standard code of disease name, resulting in use of the same infrastructure system for the retrieval service in Japanese and English.
4. Because the ICD-10 code is also used in overseas biobanks, we anticipate the possibility of cooperation between our Catalogue DB and their databases.

Future Plans

1. Implementation of a natural language processing function that allows us to enter a disease name for search.
2. Real-time data update by networking of in-house databases in each NC and by introducing a distributed database control system.
3. Enhancement of the flexibility for the registration of medical information associated with samples or the additional clinical information about multiple tissues or sites in a patient.