Setting Up a National Cancer Tissue and Data Catalogue

Chock Wan Kee^{1,2}, Yue Lai Ling¹, Ei Ei Thit¹, Soh Bee Yong¹, Zoei Ang Zu Er³, Chak Shih Cheah^{1,2}, Kamaliah D/O Chinthamathar^{1,2}, Hira Kashif^{2,3}, Wong Fuh Yong^{2,3}, Kenneth Chang Tou En^{1,2}, Tan Bee Huat lain^{1,2,3}

> ¹ SingHealth Tissue Repository ² Singapore Translational Cancer Consortium ³ National Cancer Centre Singapore



2: Introduction

multiple institutions including universities, public health institutions and research institutions.

To facilitate effective collaboration, SingHealth Tissue Repository work jointly with the tissue repositories and cancer registries of National Cancer Centre Singapore, National University Hospital and National Healthcare Group under the auspices of the Singapore Translational Cancer Consortium to form a national platform of anonymised cancer biospecimen and data -Centralised Catalogue.

Methodology

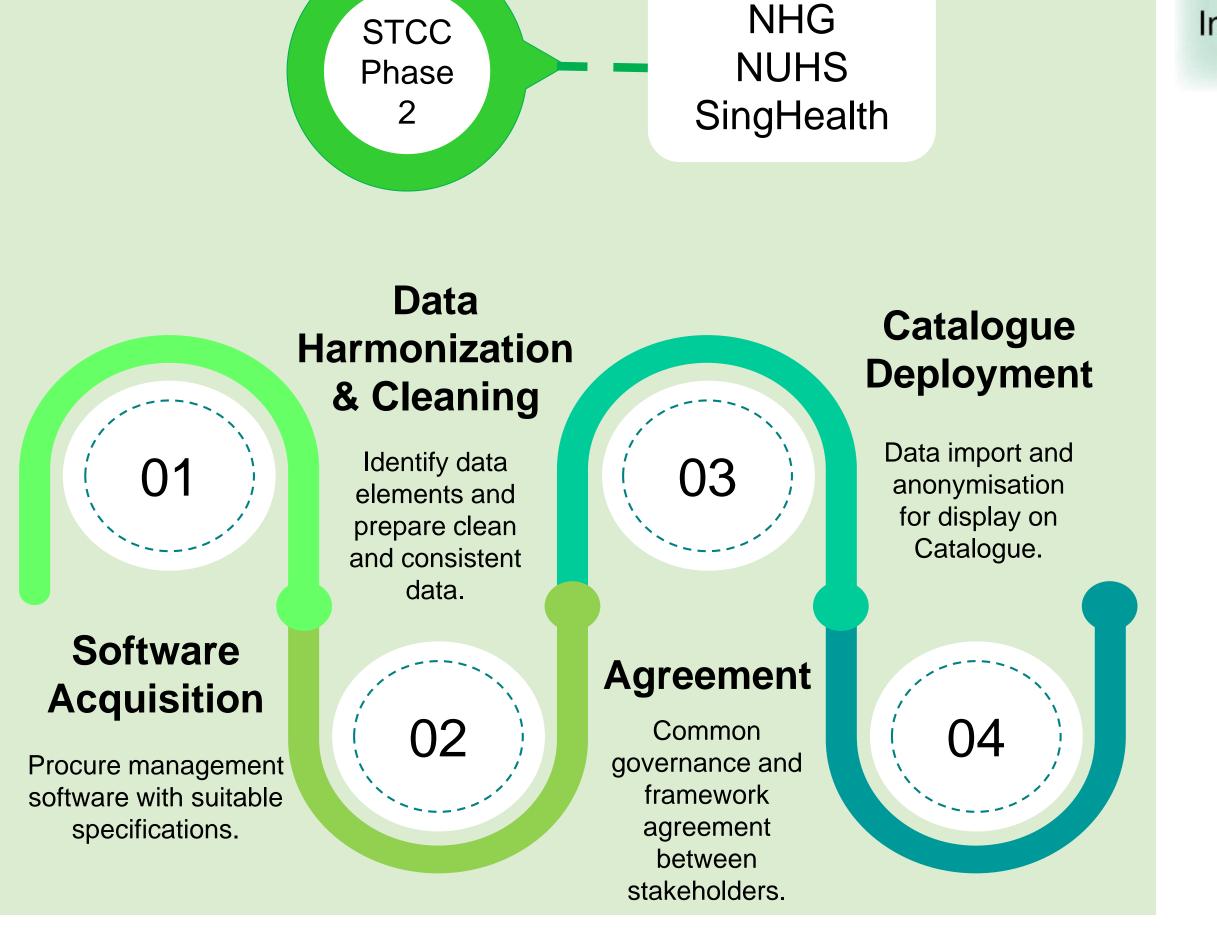
impact basic, translational and clinical With the high quality collection of human biospecimen in cancer research requires collaboration across tissue banks and rich data in cancer registries, we determined and harmonized relevant metadata fields across the healthcare clusters. These fields include:

- (i) specimen-level data with histopathological annotations,
- (ii) patient-level data including clinical information, and
- (iii) research metadata such as molecular profiling, in vitro or in vivo tumour lines.

We also developed a common governance framework for the catalogue to ensure data privacy, security and protection to support access in a safe, efficient and ethical manner.

Implementation

Landscape of Research Warehouse NUHS STCC Phase SingHealth



STCC Cancer Data Cancer Consortium Cancer Ca Workbench Catalogue Business Research Analytics Insights Network **W** 8000 Ai One-stop Quality Data Population Harmonised Longitudinal Federated Elastic Analysis and Machine Shop Interface Biospecimens Linkage Clinical Elements Study Query Compute Visualisation Learning **National** Healthcare NUHS Group SingHealth Adding years of healthy life National University Health System Defining Tomorrow's Medicine Cancer Research Tissue Registry Metadata Cancer Research Repository SingHealth Cancer Research Tissue Informatics Metadata Tissue Registry Metadata Repository NUH Repository NCCS

Result

Investigators will browse the catalogue of anonymised cancer biospecimen linked with clinical and research metadata from multiple institutions, and identify specimens for collaborative research.

In addition, existing workflows will be streamlined to increase overall efficiency for investigators to apply and retrieve desired specimens and/or data.

Edd Conclusion

Centralised Catalogue creates We thank our NUH team led a one-stop platform through synergy to boost accessibility to cancer specimen and data, empower clinical science and foster collaborations in the Khin Zarchi Aung. cancer research community.

റ്റ്റ്റ് Acknowledgement

by Dr Eng Chon Boon for their equal contribution and effort, namely Kiraely Wong, Esteen Kwan, Kalpana Kumari and