Our Commitment to Responsible Data Sharing

PRECISE and the SG100K investigators have jointly created the PRECISE-SG100K resource (dataset).

As joint stewards of this national resource, PRECISE and the SG100K PIs strive to maximise the public good from the PRECISE-SG100K dataset while ensuring respect for participant consent, privacy, scientific rigour and alignment with national priorities, while at the same time fulfilling commitments to funders and existing collaborators.

About the PRECISE-SG100K Resource

SG100K research teams reached the milestone of 100,000 participants in Apr 2025; whole genome sequencing of these participants was completed in Jun 2025. All data components are currently undergoing extensive quality checks and curation both before *and* after linkage to electronic health records on the TRUST platform.

The PRECISE-SG100K resource is a unique multi-ancestry Asian population cohort dataset of ~100,000 Singaporean residents. The first release of the integrated dataset for 100,000 participants is projected to be in the 1st half of 2026.

The PRECISE-SG100K integrated dataset includes:

- Research phenotype data from four longitudinal population health cohorts ("SG100K Institutions") supported by the SG100K OF-LCG award:
 - Health for Life in Singapore (HELIOS), NTU
 - Singapore Population Health Studies (SPHS), NUS
 - Singapore Epidemiology of Eye Diseases (SEED), SERI
 - SingHeart, NHCS
- Whole genome sequencing (short read sequencing; 30X coverage) generated with the Genome Institute of Singapore (A*STAR) under Phase II of Singapore's National Precision Medicine Programme.

With participant consent, and approval from the relevant MOH data guardians, the PRECISE-SG100K dataset is also linked to **Electronic Health Records (EHRs)**, including routinely collected clinical data and other health-related information. This integrated research dataset can only be accessed through the TRUST platform, and with the additional approval of the TRUST Data Access Committee.

Note: SG100K Institutions, GIS and PRECISE are collectively referred to as "PRECISE-SG100K".

Principles Governing Access to PRECISE-SG100K Resource

The guiding principles for accessing the PRECISE-SG100K resource is anchored on Singapore's Research, Innovation, Enterprise master plan. Our overarching goal is to advance precision medicine and related health research and innovation to improve health outcomes, in Singapore, Asia and the world. We are committed to the responsible and ethical sharing of data, grounded in principles of public benefit, participant trust, and scientific transparency.

To achieve these, we will avail de-identified data and research results through controlled data releases to qualified institutional researchers and suitable research projects, in a manner that preserves participant privacy and brings benefit to Singapore, while respecting our ethical obligations, requirements of o data guardians, and commitments to funders and existing academic and industry collaborators.

Short-term

While the PRECISE-SG100K resource is being generated and curated, we are facilitating early data access for:

- Investigator Initiated Studies. The SG100K Cohort is an Investigator-Initiated Study, funded by an NMRC OF-LCG grant focussed on determinants and prediction of <u>cardiovascular disease and diabetes</u> in Asian populations. Based on this grant award, the researchers from SG100K Institutions who have created the SG100K Cohort have an initial period of priority to pursue research on these chronic conditions.
- Call for Proposals. To enable research across a wide range of use cases beyond cardiovascular disease and diabetes, early access to the intermediate release of 50,000 participants dataset by Singapore public academic and clinical researchers was enabled through an open Call for Proposals (application closed in January 2024). The PRECISE-SG100K Scientific Committee selected 36 projects, comprising eight Flagship Projects and another 28 Driver Projects. Please refer to URL for more details.
- **Strategic Industry Partnerships**. Coordinated by PRECISE Business Development Team, strategic industry collaborations are being established to strengthen precision medicine research capacity and capability in Singapore.

Mid-term

We anticipate that the PRECISE-SG100K resource of 100,000 participants will become broadly open to Singapore public academic and clinical researchers directly through the TRUST platform from 2027.

Guiding Principles for Accessing to the PRECISE-SG100K Resource

- Access by overseas researchers or industry partners will remain contingent on the application being led by a Singapore research team.
- All applications that request use of linked electronic health records will be subject to additional review by TRUST.

Early Access Mechanisms (2024 – 2026)

- Access by public researchers in Singapore: PRECISE-SG100K will launch
 a 2nd Call for Proposals in 1H2026 providing early access to the PRECISESG100K resource of 100,000 participants dataset. This 2nd Call for Proposals
 is open only to Singapore public academic and clinical researchers.
- Please check the <u>PRECISE website</u> and newsletters regularly for updates on the 2nd Call for Proposals. Until then, PRECISE-SG100K is not actively accepting new research proposals.
- <u>Requests from strategic national programmes</u>: PRECISE-SG100K recognises that research proposals and data access requests from strategic national programmes will arise periodically. We welcome these requests for review.

Please direct enquiries to research@precise.cris.sg.

Requests involving overseas collaborators or industry partners: During
the early access period (2024 – 2026), research proposals and data access
requests involving overseas collaborators or industry partners are reviewed by
PRECISE-SG100K on a case-by-case basis, with the expectation that the
overseas collaborator or industry partner must demonstrate return of tangible
benefits to Singapore.

Please direct enquiries to research@precise.cris.sg.

Data Access Governance

• The <u>PRECISE Management Team</u>, which includes both the ED of PRECISE and the Lead PI of the SG100K study, carry out an initial evaluation of research proposals and data access requests from: i) strategic national programmes and ii) strategic overseas academic collaborations. Where necessary, the Management Team consults relevant ecosystem stakeholders, before recommending proposals for review by the PRECISE-SG100K Scientific Committee and PRECISE-SG100K Data Access Committee.

Guiding Principles for Accessing to the PRECISE-SG100K Resource

- The <u>PRECISE-SG100K Scientific Committee</u> reviews and endorses research proposals based on strategic and/or scientific merit. The Scientific Committee may inform applicants of any competing or overlapping research interest with existing approved projects; these may include overlaps with SG100K Cohort's research on cardiovascular disease and diabetes.
- The <u>PRECISE-SG100K Data Access Committee (DAC)</u> reviews and approves data access requests for PRECISE-SG100K resource that <u>do not</u> require linkage to electronic health records (EHR)* to ensure they are in line with the permitted use of the dataset and are intended for public good.

*Access to linked clinical data on TRUST will require additional approval by the TRUST DAC.

- The <u>PRECISE Business Development Team</u> reviews research proposals and data access requests with industry involvement or collaboration, in consultation with relevant ecosystem stakeholders if needed, before they are submitted for review by the PRECISE-SG100K Scientific Committee and PRECISE-SG100K Data Access Committee.
- The <u>PRECISE Chief Scientific Officer's Office</u> (CSOO) serves as secretariat for data access, and is the initial primary point of contact for data availability and collaboration enquiries. Please contact <u>research@precise.cris.sg</u>.

Matters Pertaining to Publication Policy and Intellectual Property

All publications arising from the current early access route must be reviewed by the PRECISE-SG100K Data Access Committee and PRECISE-SG100K Scientific Committee prior to submission to confirm that the data use and publication objectives are within the scope of the approved data request.

Researchers shall follow the authorship and acknowledgement instructions listed in the Data Access Agreement.

PRECISE-SG100K will not claim rights to inventions and associated Intellectual Property Rights (IPRs) developed by researchers using the PRECISE-SG100K resource, unless such IPRs are used in a way that unreasonably restrict health-related research and/or access to healthcare

Exclusions

Guiding Principles for Accessing to the PRECISE-SG100K Resource

Biological samples collected from SG100K are under the custodianship of the respective population health studies. Access to biological samples require approval from either SG100K Cohort or the relevant population health study within the SG100K Cohort. Given that samples are a finite resource, SG100K prioritises:

- Assays conducted on all participants or a large subset of randomly selected participants
- Validated assay methodologies with minimal depletion and maximal output.

Newly generated data must be returned in full to the SG100K cohort(s) contributing the samples, along with a sublicensable, non-exclusive license for the SG100K cohort(s) to use the data in future research. Any additional requirements around sample access must be negotiated and agreed with the SG100K cohort(s) prior to sample release. PRECISE is pleased to facilitate introductions and discussions - applicants can approach the SG100K cohorts directly for sample access.

Similarly, access to other SG100K cohort resources, including various additional datasets, generation of new phenotypic information and participant recontact, is under the purview of the SG100K cohorts.

Please direct enquiries to research@precise.cris.sg

While PRECISE-SG100K does not currently support linkages to other cohorts or datasets, we welcome suggestions for future data linkage opportunities.

Additional research phenotype or molecular data will be generated with various (new) funding sources. These data will be made accessible to the broader research community after fulfilling exclusivity (priority) periods or access requirements jointly established by the funders and PRECISE-SG100K.

Disclaimer

PRECISE-SG100K recognises that it is impossible for these guiding principles to cover all scenarios and reserves the right to update them from-time-to-time.

These guiding principles are not intended to be cover all details related to data access. For questions or more information, please email the Secretariat for data access policy and operations at research@precise.cris.sg.