

DNA Extraction and Retention Policy

Division of Genome Diagnostics

The Division of Genome Diagnostics at BC Children's and BC Women's Hospitals provides clinical genetic testing services for the province of BC. Extraction and retention policies are based on patient centred care, ensuring that minimal blood volumes are collected, and identified samples are not stored without patient knowledge or consent. The Division *does not* store DNA samples for research purposes and/or for individuals in whom DNA testing is not immediately planned.

DNA retention times are outlined in Table 1. Approach to DNA extraction and sample retention varies based on the clinical scenario:

1. Genetic Test Performed by the Division of Genome Diagnostics and Test Criteria are met:
 - a. Only a sufficient amount of DNA to complete the requested clinical testing is extracted. Residual DNA will *not* generally be available for additional testing or for transfer to other British Columbia laboratories.
 - b. Samples that are slated for disposal may be de-identified and used for QA / QC / validation / verification purposes related to the initial diagnostic test requested, or anonymized and use for test validation or verification¹.
 - c. Upon provision of appropriate Clinical Research Ethics Board approval, samples that are slated for disposal may be de-identified or anonymized and given to research investigators to help further research.
 - d. An individual may request destruction / disposal of their DNA sample at any time prior to slated disposal / de-identification / anonymization; please see the Directive to Destroy Residual DNA form available at www.genebc.ca.
2. Genetic Testing Not Performed by the Division of Genome Diagnostics:
 - a. The individual being tested must be insured by BC MSP. Or, the individual does not have BC MSP (e.g. travelling or in transition between medical plans), but requires medical care while in BC and is being treated by a BC physician.
 - b. *Approval of funding must be obtained prior to sample collection; samples will be rejected if received without documentation of approved funding.*
 - i. Complete paperwork must be provided in advance of sample collection, as per the Protocol for Coordinating Out-of-Province Genetic Testing available at www.genebc.ca.

- c. **Exception to timing of collection will be made only if funding will unquestionably be approved AND the request is discussed in advance with the Division Molecular Geneticist on-service, who approves the exception.** The name of the approving Laboratory Geneticist and the reason for the request must be noted on the requisition. *Samples will be rejected if received without prior approval.*
 - d. The *entire sample* will be transferred to the clinical testing laboratory.
3. No Genetic Test Ordered (DNA extraction only):
- a. The individual being tested must be insured by BC MSP.
 - b. **Prior discussion and approval by the Division Molecular Geneticist on-service is required, except as outlined below.** The name of the approving Laboratory Geneticist and the reason for the request must be noted on the requisition. *Samples will be rejected if received without prior approval.*
 - i. Prior approval is not required when molecular genetic testing of a pregnancy may be indicated pending outcome of other ongoing testing.

References:

1. PHSA Laboratories Quality Manual, QSE 07 Process Management Policies, QM 0705 Use of Patient Samples for Quality Assurance or Quality Control Purposes Policy

Table 1: Retention of Sample/Residual DNA.

MGL = Molecular Genetics Laboratory; CGL = Cytogenetics Laboratory;

Laboratory	Request	Notes	Retention of sample/residual DNA
Division of Genome Diagnostics	Menu test; criteria met at time of request.		Six months from completion of test
	Prenatal samples only: subsequent testing may be indicated pending outcome of ongoing testing	Cell culture stabilized but not extracted	Until resolution of testing to a maximum of 6 months
	DNA extraction only	Prior approval required as per policy	Six months from sample collection
Out of Province Laboratory	Funded out-of-province test		None
	Prenatal samples only: Funded out-of-province test	Back up cell culture stabilized but not extracted	Until resolution of testing to a maximum of 6 months