

Appendix B: Data Modality Quick Reference

Data Modality	Description	Typical Deliverables	Repository Considerations
Clinical & Phenotypic	Participant- and sample-level clinical information, including diagnosis, treatment, outcomes, and study descriptors linked to biospecimens and assays.	Clinical metadata, data dictionary/codebook, participant/sample linkage, study documentation	May be integrated within CBTN and/or other appropriate repositories, depending on the project.
Genomic	DNA sequencing data generated through whole genome, whole exome, targeted sequencing, or related assays.	Raw: FASTQ or BAM Processed: BAM/CRAM, gVCF, VCFQC summaries and metadata	Individual-level genomic data are typically deposited into NIH-controlled repositories such as dbGaP . Harmonized datasets may also be integrated within CBTN, as appropriate.
Transcriptomic	RNA sequencing and gene expression analyses, including fusion detection and alternative splicing.	Raw: FASTQ or BAM Processed: Expression matrices, fusion results, splicing outputs QC summaries	Repository strategy depends on the project and applicable data-sharing requirements.
Epigenomic	DNA methylation and other epigenomic assays.	Raw: IDAT files Processed: Beta/M-value matrices QC metrics	Repository strategy depends on the project and applicable data-sharing requirements.
Imaging	Radiology images and associated metadata supporting interpretation and reuse.	DICOM and/or NIfTI, acquisition metadata, de-identification documentation, QC	May be integrated within CBTN and/or other appropriate repositories.
Digital Pathology	Whole-slide pathology images and associated annotations.	Whole-slide images, annotations, metadata	Repository strategy depends on project requirements.
Proteomic & Metabolomic	Protein and metabolite profiling generated through laboratory assays.	Raw spectral files (e.g., mzML), processed expression matrices, methods documentation, QC	Repository strategy depends on the project and data type.
Biospecimens & Preclinical Models	Patient-derived specimens, organoids, cell lines, and patient-derived xenografts supporting translational research.	Sample metadata, specimen documentation, and model characterization	Access and distribution are managed through CBTN resource request processes.

Note: The repository strategy for a given project depends on the type of data generated, participant consent, funding requirements, and applicable repository policies. Applicants should describe their proposed repository strategy in the Data Contribution & Deposit Plan. PBTf and CBTN will work with investigators, where appropriate, to support data integration and identify the most appropriate repository strategy.

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