General Commons logo # General Commons API last updated: 27 June 2025 schema version: 3.1.0

data model version: 8.0.1 ## Introduction The General Commons GraphQL API includes a corresponding query for each of the data types in the General Commons data model. This document will refer to this set of queries as the **Data Type Queries**. The Data Type Queries allow users to access untransformed data directly from the General Commons Memgraph database. The other queries accessible through the General Commons GraphQL API involve data transformations and are designed to retrieve data for the General Commons user interface, they will not be included in this document. ## General Commons GraphQL API The General Commons GraphQL API can be accessed at this URL: https://general.datacommons.cancer.gov/v1/graphql/. A GET request to this endpoint will return a GraphQL schema for the Data Type Queries. GraphQL requests can be executed by sending a POST request to this endpoint. ## Pagination Pagination is required for the Data Type Queries. There are two pagination variables: **offset** and **first**.

The **offset** variable controls how many data records are skipped before starting the result set. If the **offset** variable is not included in the request then it will default to 0.

The **first** variable controls how many data records will be returned, starting from the offset with a maximum of 10000. If the **first** is not included in the request then it will default to 10. ## Node Count Queries

The Node Count Queries return the total number of nodes for each data type in the General Commons database. With the exception of the `Program`, `Study`, and `Version` count queries, these require a `phs_accession` parameter to specify the associated study.

Programs Count Query

Description: Returns the total number of Program nodes Query Name: `programsCount`
Return Type: `Int`
Parameters: *None*

Studies Count Query

Description: Returns the total number of Study nodes Query Name: `studiesCount`
Return Type: `Int`
Parameters: *None*

Participants Count Query

Description: Returns the total number of Participant nodes for a given study
Query Name: `participantsCount`
Return Type: `Int`
Parameters:

Name	Type	Required	Description
phs_accession	String	True	The phs_accession of the associated Study

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Samples Count Query

Description: Returns the total number of Sample nodes for a given study
Query Name: `samplesCount`
Return Type: `Int`
Parameters:

Name	Type	Required	Description
phs_accession	String	True	The phs_accession of the associated Study

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Files Count Query

Description: Returns the total number of File nodes for a given study
Query Name: `filesCount`
Return Type: `Int`
Parameters:

Name	Type	Required	Description
phs_accession	String	True	The phs_accession of the associated Study

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Diagnoses Count Query

Description: Returns the total number of Diagnosis nodes for a given study
Query Name: `diagnosesCount`
Return Type: `Int`
Parameters:

Name	Type	Required	Description
phs_accession	String	True	The phs_accession of the associated Study

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Treatments Count Query

Description: Returns the total number of Treatment nodes for a given study
Query Name: `treatmentsCount`
Return Type: `Int`
Parameters:

Name	Type	Required	Description
phs_accession	String	True	The phs_accession of the associated Study

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Images Count Query

Description: Returns the total number of Image nodes for a given study
Query Name: `imagesCount`
Return Type: `Int`
Parameters:

Name	Type	Required	Description
phs_accession	String	True	The phs_accession of the associated Study

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Genomic Info Count Query

Description: Returns the total number of Genomic Info nodes for a given study
Query Name: `genomicInfoCount`
Return Type: `Int`
Parameters:

Name	Type	Required	Description
phs_accession	String	True	The phs_accession of the associated Study

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Proteomics Count Query

Description: Returns the total number of Proteomic nodes for a given study
Query Name: `proteomicsCount`
Return Type: `Int`
Parameters:

Name	Type	Required	Description
phs_accession	String	True	The phs_accession of the associated Study

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PDX Count Query

Description: Returns the total number of PDX nodes for a given study
Query Name: `pdxCount`
Return Type: `Int`
Parameters:

Name	Type	Required	Description
phs_accession	String	True	The phs_accession of the associated Study

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Multiplex Microscopies Count Query

Description: Returns the total number of Multiplex Microscopies nodes for a given study
Query Name: `multiplexMicroscopiesCount`
Return Type: `Int`
Parameters:

Name	Type	Required	Description
phs_accession	String	True	The phs_accession of the associated Study

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Non-DICOMCT Images Count Query

Description: Returns the total number of Non-DICOMCT Images nodes for a given study
Query Name: `nonDICOMCTimagesCount`
Return Type: `Int`
Parameters:

Name	Type	Required	Description
phs_accession	String	True	The phs_accession of the associated Study

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Non-DICOMMR Images Count Query

Description: Returns the total number of Non-DICOMMR Images nodes for a given study
Query Name: `nonDICOMMRimagesCount`
Return Type: `Int`
Parameters:

Name	Type	Required	Description
phs_accession	String	True	The phs_accession of the associated Study

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Non-DICOMPET Images Count Query

Description: Returns the total number of Non-DICOMPET Images nodes for a given study
Query Name: `nonDICOMPETimagesCount`
Return Type: `Int`
Parameters:

Name	Type	Required	Description
phs_accession	String	True	The phs_accession of the associated Study

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Non-DICOM Pathology Images Count Query

Description: Returns the total number of Non-DICOM Pathology Images nodes for a given study
Query Name: `nonDICOMpathologyImagesCount`
Return Type: `Int`
Parameters:

Name	Type	Required	Description
phs_accession	String	True	The phs_accession of the associated Study

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Non-DICOM Radiology All-Modalities Count Query

Description: Returns the total number of Non-DICOM Radiology All-Modalities nodes for a given study
Query Name: `nonDICOMradiologyAllModalitiesCount`
Return Type: `Int`
Parameters:

Name	Type	Required	Description
phs_accession	String	True	The phs_accession of the associated Study

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Versions Count Query

Description: Returns the total number of Version nodes
Query Name: `versionsCount`
Return Type: `Int`
Parameters: *None*

Data Type Queries

Please refer to the GraphQL schema for a list of properties that can be included in these requests. ### Programs Query ### Description: Returns a list of program data records
Query Name: `programs`
Data Type: `Program`
Parameters:

Name	Type	Required	Description
program_names[String]	False	Filters the results set by the program_name
first	Int	False	Controls the results pagination size
offset	Int	False	Controls the results pagination offset

Studies Query

Description: Returns a list of study data records
Query Name: `studies`
Data Type: `Study`
Parameters:

Name	Type	Required	Description
phs_accessions	[String]	False	Filters the results by phs_accession
study_names	[String]	False	Filters the results by study_name
study_acronyms	[String]	False	Filters the results by study_acronym
first	Int	False	Controls the results pagination size
offset	Int	False	Controls the results pagination offset

Participants Query

Description: Returns a list of participant data records
Query Name: `participants`
Data Type: `Participant`
Parameters:

Name	Type	Required	Description
participant_ids	[String]	False	Filters the results by participant_id
phs_accession	String	True	Filters the results by phs_accession of the associated Study
first	Int	False	Controls the results pagination size
offset	Int	False	Controls the results pagination offset

Diagnoses Query

Description: Returns a list of diagnosis data records
Query Name: `diagnoses`
Data Type: `Diagnosis`
Parameters:

Name	Type	Required	Description
diagnosis_ids	[String]	False	Filters the results by diagnosis_id
phs_accession	String	True	Filters the results by phs_accession of the associated Study
participant_ids	[String]	False	Filters the results by participant_id of the associated Participant
first	Int	False	Controls the results pagination size
offset	Int	False	Controls the results pagination offset

Treatments Query

Description: Returns a list of treatment data records
Query Name: `treatments`
Data Type: `Treatment`
Parameters:

Name	Type	Required	Description
treatment_ids	[String]	False	Filters the results by treatment_id
phs_accession	String	True	Filters the results by phs_accession of the associated Study
participant_id	[String]	False	Filters the results by participant_id of the associated Participant
first	Int	False	Controls the results pagination size
offset	Int	False	Controls the results pagination offset

Samples Query

Description: Returns a list of sample data records
Query Name: `samples`
Data Type: `Sample`
Parameters:

Name	Type	Required	Description
sample_ids	[String]	False	Filters the results by sample_id
phs_accession	String	True	Filters the results by phs_accession of the associated Study
participant_id	[String]	False	Filters the results by participant_id of the associated Participant
first	Int	False	Controls the results pagination size
offset	Int	False	Controls the results pagination offset

Files Query

Description: Returns a list of file data records
Query Name: `files`
Data Type: `File`
Parameters:

Name	Type	Required	Description
file_ids	[String]	False	Filters the results by file_id
file_names	[String]	False	Filters the results by file_name
file_types	[String]	False	Filters the results by file_type
released_range_start	String	False	Filters the results by files released on or after the provided date (accepted format is YYYY-MM-DD)
released_range_end	String	False	Filters the results by files released on or before the provided date (accepted format is YYYY-MM-DD)

Name	Type	Required	Description
phs_accession	String	True	Filters the results by phs_accession of the associated Study
participant_ids	[String]	False	Filters the results by participant_id of the associated Participants
first	Int	False	Controls the results pagination size
offset	Int	False	Controls the results pagination offset

Genomic Info Query

Description: Returns a list of genomic info data records
Query Name: `genomic_info`
Data Type: `Genomic_Info`
Parameters:

Name	Type	Required	Description
genomic_info_ids	[String]	False	Filters the results by genomic_info_id
phs_accession	String	True	Filters the results by phs_accession of the associated Study
file_ids	[String]	False	Filters the results by file_id of the associated File
first	Int	False	Controls the results pagination size
offset	Int	False	Controls the results pagination offset

Images Query

Description: Returns a list of image data records
Query Name: `images`
Data Type: `Image`
Parameters:

Name	Type	Required	Description
study_link_ids	[String]	False	Filters the results by study_link_id
phs_accession	String	True	Filters the results by phs_accession of the associated Study
file_ids	[String]	False	Filters the results by file_id of the associated File
first	Int	False	Controls the results pagination size
offset	Int	False	Controls the results pagination offset

Multiplex Microscopy Query

Description: Returns a list of multiplex microscopy data records
Query Name: `multiplex_microscopies`

Data Type: `MultiplexMicroscopy`
Parameters:

Name	Type	Required	Description
multiplex_microscopy_ids	[String]	False	Filters the results by multiplex_microscopy_id
phs_accession	String	True	Filters the results by phs_accession of the associated Study
file_ids	[String]	False	Filters the results by file_id of the associated File
first	Int	False	Controls the results pagination size
offset	Int	False	Controls the results pagination offset

Non-DICOMT Images Query

Description: Returns a list of non-DICOMT image data records
Query Name: `non_dicomct_images`
Data Type: `NonDICOMCTimages`
Parameters:

Name	Type	Required	Description
non_dicomct_images_ids	[String]	False	Filters the results by non_dicomct_images_id
phs_accession	String	True	Filters the results by phs_accession of the associated Study
file_ids	[String]	False	Filters the results by file_id of the associated File
first	Int	False	Controls the results pagination size
offset	Int	False	Controls the results pagination offset

Non-DICOMMR Images Query

Description: Returns a list of non-DICOMMR image data records
Query Name: `non_dicommr_images`
Data Type: `NonDICOMMRimages`
Parameters:

Name	Type	Required	Description
non_dicommr_images_ids	[String]	False	Filters the results by non_dicommr_images_id
phs_accession	String	True	Filters the results by phs_accession of the associated Study

Name	Type	Required	Description
file_ids	[String]	False	Filters the results by file_id of the associated File
first	Int	False	Controls the results pagination size
offset	Int	False	Controls the results pagination offset

Non-DICOM Pathology Images Query

Description: Returns a list of non-DICOM pathology images data records
Query Name: `non_dicom_pathology_images`
Data Type: `NonDICOMpathologyImages`
Parameters:

Name	Type	Required	Description
non_dicom_pathology_images_ids	[String]	False	Filters the results by non_dicom_pathology_images_id
phs_accession	String	True	Filters the results by phs_accession of the associated Study
file_ids	[String]	False	Filters the results by file_id of the associated File
first	Int	False	Controls the results pagination size
offset	Int	False	Controls the results pagination offset

Non-DICOMPET Images Query

Description: Returns a list of non-DICOMPET images data records
Query Name: `non_dicompet_images`
Data Type: `NonDICOMPETimages`
Parameters:

Name	Type	Required	Description
non_dicompet_images_ids	[String]	False	Filters the results by non_dicompet_images_id
phs_accession	String	True	Filters the results by phs_accession of the associated Study
file_ids	[String]	False	Filters the results by file_id of the associated File
first	Int	False	Controls the results pagination size
offset	Int	False	Controls the results pagination offset

Non-DICOM Radiology All-Modalities Query

Description: Returns a list of non-DICOM radiology all-modalities data records
Query Name: `non_dicom_radiology_all_modalities`

Data Type: `NonDICOMradiologyAllModalities`
Parameters:

Name	Type	Required	Description
non_dicom_radiology_all_modalities_ids	[String]	False	Filters the results by non_dicom_radiology_all_modalities_id
phs_accession	String	True	Filters the results by phs_accession of the associated Study
file_ids	[String]	False	Filters the results by file_id of the associated File
first	Int	False	Controls the results pagination size
offset	Int	False	Controls the results pagination offset

Proteomics Query

Description: Returns a list of proteomic data records
Query Name: `proteomics`
Data Type: `Proteomic`
Parameters:

Name	Type	Required	Description
proteomic_info_ids	[String]	False	Filters the results by proteomic_info_id
phs_accession	String	True	Filters the results by phs_accession of the associated Study
file_ids	[String]	False	Filters the results by file_id of the associated File
first	Int	False	Controls the results pagination size
offset	Int	False	Controls the results pagination offset

PDX Query

Description: Returns a list of PDX data records
Query Name: `pdx`
Data Type: `PDX`
Parameters:

Name	Type	Required	Description
pdx_ids	[String]	False	Filters the results by pdx_id
phs_accession	String	True	Filters the results by phs_accession of the associated Study
sample_ids	[String]	False	Filters the results by sample_id of the associated Sample

Name	Type	Required	Description
first	Int	False	Controls the results pagination size
offset	Int	False	Controls the results pagination offset

Version Queries

The Version Queries can be used to retrieve version information about the data, the data model, and the GraphQL API. ### Data Version Query Description: Returns the version information for the General Commons data

Query Name: `version`

Data Type: `Version`

Schema Version Query Description: Returns the General Commons GraphQL API schema version

Query Name: `schemaVersion`

Data Type: `String`

Data Model Version Query Description: Returns the General Commons data model version used by the GraphQL API schema

Query Name: `schemaModelVersion`

Data Type: `String`