CHILDHOOD CANCER DATA INITIATIVE (CCDI) PARTICIPANT INDEX (CPI) API

1.3.0 Release Notes

Release Notes: CCDI Participant Index (CPI) API V1.3

The Childhood Cancer Data Initiative (CCDI) is excited to announce the release of Version 1.3 of the CCDI Participant Index (CPI) API. For more information, visit https://participantindex-docs.ccdi.cancer.gov/.

This update provides updates to the CPI Service to:

- Modify search behavior, enabling case insensitive search across participant IDs
- Validate Participant IDs Before Returning Associated Participant IDs
- Support the implementation of the CPI for the CCDI Data Federation ((https://ccdi.cancer.gov/data-federation-resource) to specifically correlate the query input participants in the Federation with the CPI mappings to identify unique participants/persons in the query results set

Search Behavior

Participant ID and domain searches in the CPI are case-insensitive. This means that searches for identifiers will return matching results regardless of whether letters are typed in upper or lower case (e.g., phs000720, PHS000720, and Phs000720 will all yield the same results).

The following table details the domain names, domain descriptions, domain types, and participant counts currently included in the CPI:

Domain Name	Domain Description	Domain Type	Count
CCSS	St. Jude Childhood Cancer Survivor Study	Study	2,910
ClinicalGenomics	St. Jude Clinical Genomics	Study	2,851
dbgap_subject_id	dbGaP Subject Sample Telemetry Report (SSTR)	Organizational Identifier	16,160
GENIE	AACR Project GENIE	Organizational Identifier	176
GMKF	Kids First IDs	Organizational Identifier	5,301
PanALL	St. Jude Pan-Acute Lymphoblastic Leukemia	Study	624
PCDC	Pediatric Cancer Data Commons	Organizational Identifier	23,341
PCGP	St. Jude Pediatric Cancer Genome Project	Study	1,901
phs000463	TARGET: Acute Lymphoblastic Leukemia (ALL) Pilot Phase 1	Dataset	233
phs000464	TARGET: Acute Lymphoblastic Leukemia (ALL) Expansion Phase 2	Dataset	1,701
phs000465	TARGET: Acute Myeloid Leukemia (AML)	Dataset	2,146
phs000466	TARGET: Kidney, Clear Cell Sarcoma of the Kidney (CCSK)	Dataset	13

Domain Name	Domain Description	Domain Type	Count
phs000467	TARGET: Neuroblastoma (NBL)	Dataset	1,119
phs000468	TARGET: Osteosarcoma (OS)	Dataset	282
phs000469	TARGET: Cancer Model Systems (MDLS): Cell Lines and Xenografts (including PPTP)	Dataset	95
phs000470	TARGET: Kidney, Rhabdoid Tumor (RT)	Dataset	69
phs000471	TARGET: Kidney, Wilms Tumor (WT)	Dataset	652
phs000720	dbGaP accession: Genomic sequencing of Pediatric Rhabdomyosarcoma	Dataset	403
phs001228	dbGaP accession: Gabriella Miller Kids First (GMKF) Pediatric Research Program in Susceptibility to Ewing Sarcoma Based on Germline Risk and Familial	Dataset	276
phs001436	dbGaP accession: Discovering the Genetic Basis of Human Neuroblastoma: A Gabriella Miller Kids First Pediatric Research Program (Kids First) Project	Dataset	614
phs001437	dbGaP accession: Pediatric Preclinical Testing Consortium (PPTC)	Dataset	267
phs001714	dbGaP accession: Gabriella Miller Kids First Pediatric Research Program: An Integrated Clinical and Genomic Analysis of Treatment Failure in Pediatric	Dataset	5
phs002187	dbGaP accession: Gabriella Miller Kids First Pediatric Research Program in Germline and Somatic Variants in Myeloid Malignancies in Children	Dataset	1,290
phs002276	dbGaP accession: Gabriella Miller Kids First Pediatric Research Program in Pediatric T-Cell Acute Lymphoblastic Leukemia	Dataset	1,358
phs002330	dbGaP accession: Kids First and INCLUDE: Down Syndrome and Heart Defects and Acute Lymphoblastic Leukemia	Dataset	517
phs002371	dbGaP accession: Human Tumor Atlas Network (HTAN)	Dataset	30
phs002430	dbGaP accession: Childhood Cancer Data Initiative (CCDI): Genomic Analysis inPediatric Malignancies	Dataset	231
phs002431	dbGaP accession: CCDI U Michigan Study	Dataset	611

Domain Name	Domain Description	Domain Type	Count
phs002504	dbGaP accession: UCSF Database for the Advancement of JMML - Integration of Metadata with "Omic" Data	Dataset	188
phs002517	dbGaP accession: Childhood Cancer Data Initiative (CCDI): Molecular Characterization across Pediatric Brain Tumors and Other Solid and Hematologic Mal	Dataset	1,229
phs002518	dbGaP accession: Childhood Cancer Data Initiative (CCDI): OncoKids - NGS Panel for Pediatric Malignancies	Dataset	1,039
phs002529	dbGaP accession: Childhood Cancer Data Initiative (CCDI): Comprehensive Genomic Sequencing of Pediatric Cancer Cases (CMRI/KUCC)	Dataset	200
phs002599	dbGaP accession: NCI CCSG CCDI Supplement Additional Genomic Submission	Dataset	104
phs002677	dbGap accession: Integrating Longitudinal Clinical, Sociodemographic and Genomic Data into the NCCR	Dataset	788
phs002790	dbGaP accession: Childhood Cancer Data Initiative (CCDI): Molecular Characterization Initiative	Dataset	2,807
phs003164	dbGaP accession: Childhood Cancer Data Initiative (CCDI): CCDI Pediatric In Vivo Testing Program - Leukemia	Dataset	40
phs003432	dbGaP accession: Childhood Cancer Data Initiative (CCDI): Identification and Targeting of Treatment Resistant Progenitor Populations in T-cell Acute Lymphoblastic Leukemia	Dataset	40
phs003519	dbGap accession: Childhood Cancer Data Initiative (CCDI): Single-Cell Atlas of NF1 Nerve Sheath Tumors	Dataset	29
SD_AQ9KVN5P	Kids First: T Cell ALL (KF-TALL)	Study	1,358
SD_DYPMEHHF	Kids First: Neuroblastoma (KF-NBL)	Study	614
SD_PET7Q6F2	Kids First: Myeloid Malignancies (KF-MMC)	Study	1,290
SD_YGVA0E1C	Kids First: Ewing Sarcoma - Genetic Risk (KF-ESGR)	Study	276
SD_Z6MWD3H0	Kids First: Leukemia & Heart Defects in Down Syndrome (KF-CHDALL)	Study	517
SD_ZXJFFMEF	Kids First: Osteosarcoma (KF-OS)	Study	5
SJLIFE	St. Jude Sickle Cell Genome Project	Study	4,675
SPG	St. Jude Lifetime Cohort Study	Study	807

Domain Name	Domain Description	Domain Type	Count
StJude	St. Jude Cloud	Organizational Identifier	13,956
TARGET	Therapeutically Applicable Research to Generate Effective Treatments	Study	6,292
Treehouse	Treehouse Childhood Cancer Initiative	Organizational Identifier	13,613
USI	Children's Oncology Group (COG) Unique Patient Identifier	Organizational Identifier	375,108
		Total	**490,151**

Access and Support

- The CPI API will be made available to applications and services authorized by NCI. API Documentation is available at https://participantindex-docs.ccdi.cancer.gov/. Integration of the CPI service within the Hub is currently under design, with implementation planned for early next year.
- Other interested system owners may initiate a request for access by emailing NCIChildhoodCancerDataInitiative@mail.nih.gov.

Appendix – Definitions and API Methods

Identifiers and Domains

Participant ID: Public identifier that appears in a research dataset accessible to researchers (e.g., Kids First ID or AACR-GENIE ID). This also includes global identifiers used more broadly (e.g., COG USI).

Domain: Groups of unique participant IDs. Domains can be categorized as:

- **Organizational Identifier**. Typically refers to a larger project/network namespace of unique participant identifiers. Current institutional identifiers include dbgap_subject_id (dbGaP Subject Sample Telemetry Report (SSTR)), GENIE (AACR Project GENIE), GMKF (Gabriella Miller Kids First), PCDC (Pediatric Cancer Data Commons), StJude (St. Jude Cloud), Treehouse (Treehouse Childhood Cancer Initiative), and USI (COG USI).
- **Dataset.** Refers to a single dataset for a particular study where data files for the participants can be found. This is typically a dbGaP phs accession number – for example phs000720 (dbGaP accession: Genomic sequencing of Pediatric Rhabdomyosarcoma).
- **Study.** Represents programmatic references to research initiatives, such as TARGET, or an institution's internal study synonyms for dataset domains, such as SD_AQ9KVN5P, equivalent to phs002276.

API Methods

The API provides mappings of IDs and domains to public identifiers and exposes the following methods:

Method	Description
Get Status for Participant	This method validates the participant IDs for the given domains. It checks if the provided participant IDs are valid within their respective domains and returns the validation status for each.
Get Associated Participant IDs	This method retrieves a list of associated participant IDs based on input participant IDs and their respective domains. For each input participant, the method returns associated participant IDs across various domains, helping to link and track participants across different datasets and studies.
Get Domain Details	This method retrieves detailed information about various domains within a dataset. Each domain is described by its name, a brief description, its status, category, and a URL pointing to more detailed data. This information can be used to understand the purpose and current status of each domain, along with accessing additional resources.
Get Associated Domains for Participant	This method retrieves a list of domains associated with a given participant ID. Each associated domain includes details such as the domain name, description, status, and category. This helps in understanding the various domains in which a participant's data is present and provides additional context for each domain.
Get Participant Counts by Domain (statistics)	This method retrieves the counts of participants mapped to various domains within a dataset. It provides a breakdown of the number of participants associated with each domain name, along with the total counts of mapped and unique participants.