News and updates

- **2022-10-04**: New content: 2022 Q3 CT packages, with a new DDF terminology package; access to informative content as beta feature
- **2022-06-28**: New content: 2022 Q2 CT packages, SENDIG-DART v1.2 as draft content, 6 new QRS Supplements with response metadata
- **2022-03-29**: New content: 2022 Q1 CT packages, enhancements for ADaMIG
- **2022-01-04**: New content: 2021 Q4 CT packages

  - 2021-11-28: New contents
  - 2021-09-29: Added notes about a hot fix
  - 2021-09-28: New contents
  - 2021-06-28: New contents, new endpoints, new features
  - 2021-05-04: Added diff functionality
  - 2021-03-30: New contents, editorial updates
  - 2020-11-11: Next Generation CDISC Library
  - 2020-07-07: New contents, new endpoint, metadata adjustments for ADaM
  - 2020-02-14: New contents, new endpoints, editorial updates
  - 2019-09-13: Data standards browser as a new functionality
  - 2019-07-18: Search API, CSV & Excel exports, new and updated contents, and documentation updates
  - 2019-04-10: New contents, XML media type (beta functionality), and document revision with new and updated information
  - 2019-02-15: Initial version

The CDISC Library API generally follows HTTP/1.1's guidelines for status code. Details are here: [HTTP Status Codes](https://httpstatuses.com).
The REST API uses API key authentication.

Note, support for Basic Auth is deprecated as of the 2020-11-11 release. For an interactive walk-through, refer to the video posted on [https://www.cdisc.org/cdisclibrary/getting-started](https://www.cdisc.org/cdisclibrary/getting-started), starting at 00:44:38.

Content for CDISC Controlled Terminology P43 is available as a patch release dated 2020-11-06. It consists of contents published on 2020-09-25 plus transactional updates from the version dated 2020-11-06.


The following standards have been loaded:

- CDISC Controlled Terminology P19 (2014-09-26) to P51 (2022-09-30)*, a total of 32 quarters with 141 parts
- CDASH v1.1, CDASHUG v1.0, CDASH Model v1.0 to v1.2, CDASHIG v2.0 to v2.2
- SDTM v1.2 to v2.0, SDTMIG v3.1.2 to v3.4, SDTMIG-AP v1.0, SDTMIG-MD v1.0, SDTMIG-MD v1.1
- SENDIG v3.0, SENDIG v3.1.1, SENDIG-DART v1.1, SENDIG-AR v1.0
- ADaM v2.1, ADaM v1.0 to v1.3, ADaM ADAE v1.0, ADaM TTE for BDS v1.0, ADaM OCCDS v1.0 to v1.1, ADaMIG MD v1.0, ADaMIG NCA v1.0
- QRS Supplements to SDTMIG: AIMS, APACHE II, ATLAS, HAM-A, KFSS, KPS SCALE, SIX MINUTE WALK, CGI, PGI
- Draft content: SENDIG-DART v1.2

* denotes new contents added as of the 2022-10-04 release

**Enhancements**

**Feature**

- N/A for this release.

**Contents**

- 2022 Q3 CT packages (P51, dated 2022-09-30): CDASH CT, DDF CT, Define-XML CT, Protocol CT, SDTM CT, SEND CT
  - Note: DDF CT is a new terminology package type. For information about the DDF CT is intended to be used along with other DDF deliverables, visit: [Digital Data Flow Release Information](https://www.cdisc.org/cdisclibrary/getting-started).
- SENDIG-DART v1.2: Draft content snapshot updated with selected informative content loaded
Data Standards Browser

- Added support to display informative content from an Implementation Guide. See SENDIG-DART v1.2 under Draft Content. Note that this is a beta feature.

Corrections & Patches

- N/A for this release.

Deprecations

- N/A for this release.

Enhancements

Feature

- N/A for this release.

Contents

- 2022 Q1 CT packages (P50, dated 2022-06-24): ADaM CT, CDASH CT, Protocol CT, SDTM CT, SEND CT
- QRS Supplements to SDTMIG:
  - Abnormal Involuntary Movement Scale Supplement v2.0 (AIMS)
  - Acute Physiology and Chronic Health Evaluation II Supplement v1.0 (APACHE II)
  - Age, treatment with systemic antibiotics, leukocyte count, serum albumin, and serum creatinine as a measure of renal function Supplement v1.0 (ATLAS)
  - Hamilton Anxiety Rating Scale Supplement v2.1 (HAM-A)
  - Kurtzke Functional Systems Scores Supplement v2.0 (KFSS)
  - Karnofsky Performance Scale Supplement v2.0 (KPS SCALE)
- SENDIG-DART v1.2 (draft)

For system maintenance status, use this endpoint to obtain a flag indicating whether CDISC Library is under maintenance and a related system message:

/mdr/maintenance

For example,

```json
{
  "maintenanceMode": true,
  "maintenanceMessage": "CDISC Library is currently under a scheduled maintenance."
}
```

For a machine-readable method to obtain a full listing of products loaded into the metadata repository use:

/mdr/products

Or, by product group:

/mdr/products/{product-group}

where product-group is one of these values:
Included in the 2020-02-14 release are two new endpoints, designed to provide high-level information about CDISC Library. These endpoints support both JSON and XML media types.

First, /mdr/about returns the URL for on-line API Documentation and Release Notes. It also includes a hypermedia link to a list of the product groups with their most recent update dates, as described below.

```
/mdr/about
```

/mdr/lastupdated returns dates of last updated, organized by CDISC product group.

```
/mdr/lastupdated
```

For example:

```
/mdr/about example output
{
  "_links": {
    "self": {
      "href": "/mdr/about",
      "title": "Information About CDISC Library",
      "type": "About CDISC Library"
    },
    "lastupdated": {
      "href": "/mdr/lastupdated",
      "title": "Last Update Date of CDISC Library Products",
      "type": "About CDISC Library"
    }
  },
  "release-notes": "https://wiki.cdisc.org/display/LIBSUPRT/Release+Notes",
  "api-documentation": "https://www.cdisc.org/cdisc-library/api-documentation"
}
```

```
/mdr/lastupdated example output
{
  "_links": {
    "self": {
      "href": "/mdr/lastupdated",
      "title": "Last Update Date of CDISC Library Products",
      "type": "About CDISC Library"
    }
  },
  "overall": "2020-02-14",
  "data-analysis": "2020-02-14",
  "data-collection": "2020-02-14",
  "data-tabulation": "2019-11-18",
  "terminology": "2020-02-14"
}
```

Media Type

Added to the 2021-06-28 release is the support for ODM-XML, as a **beta functionality**. The media type for ODM-XML is application/odm+xml. For CDASHIG, users will receive an ODM v1.3.2 document as the response payload. For ADaMIG, SDTMIG, and SENDIG, users will receive a Define-XML v2.1 document.
For example, a cURL snippet to obtain ADaM OCCDS v1.0 (lines #1-3), SDTMIG v3.3 (lines #5-7) in ODM format. The outputs are in Define-XML v2.1:

```bash
curl -X GET https://library.cdisc.org/api/mdr/sdtmig/3-3 -H 'Accept: application/odm+xml'
```

Another cURL snippet to obtain CDASHIG v2.1 in ODM format. The output is in ODM v1.3.2:

```bash
curl -X GET https://library.cdisc.org/api/mdr/cdashig/2-1 -H 'Accept: application/odm+xml'
```

Below is a cURL snippet to obtain ADaM OCCDS v1.0 (lines #1-3), SDTMIG v3.3 (lines #5-7), and Controlled Terminology P38 (lines #9-11) in CSV format:

```bash
curl -X GET https://library.cdisc.org/api/mdr/sdtmig/3-3 -H 'Accept: text/csv'
```

Similarly, a cURL snippet to obtain ADaM OCCDS v1.0 (lines #1-3), SDTMIG v3.3 (lines #5-7), and Controlled Terminology P38 (lines #9-11) in Excel Workbook format:

```bash
curl -X GET https://library.cdisc.org/api/mdr/sdtmig/3-3 -H 'Accept: application/vnd.ms-excel'
```

**Draft Contents**
Starting 2021-03-30, users can access draft contents through CDISC Library. Draft contents are point-in-time snapshots, before they become official publication. Although may not be suitable for production use, draft contents are helpful toward evaluation and public reviews.

**Controlled Terminology**
Whenever mid-cycle revision to CDISC Controlled Terminology publication is necessary, only the latest corrected information will appear in the metadata repository.
The earliest CDISC Controlled Terminology publication loaded into the metadata repository is P19 (2014-09-26). With that, _links/priorVersion will not be part of the API response when querying P19 packages. CDISC will evaluate loading prior publications based on demand and requests.
For CDISC Controlled Terminology, NCI EVS publishes synonyms in a semi-colon separated list. In the metadata repository, they are decoded into individual entries. In rare cases where synonyms are non-unique for any given term, only distinct synonyms will appear in the metadata repository.

When querying using the API, lexicographic order is applied to synonyms listing in the response. For example, this is a response excerpt when querying the term Left Ventricular Maximum Positive dP/dt (C120916):
In the CDISC Controlled Terminology Protocol package, where the Codelist Extensible (Yes/No) attribute reads "NA", they are treated as null in the metadata repository.

**CDASH**

All instances of "N/A" in CDASH publications are treated as null in the metadata repository.

An exception is the "Controlled Terminology Codelist Name" column exported in the CSV and Excel formats to preserve original sequence of codelist values as shown in the published document.

In the CDASH Model v1.0 and the CDASHIG v2.0, the CDASH team applied the class concept to all domains. Identifier and timing variables were assigned class Identifier and Timing respectively as an attribute. In order to offer one common API design for all CDASH products, it was necessary to apply this class concept to CDASHIG v1.1 domains. In consequence, "Common variables" (identifier and visit timing variables in Sections 5.1, 5.2) were also instantiated to all CDASHIG v1.1 domains.

These changes were presented to and approved by the CDISC Global Governance Committee. For these changes, a new version indicator, 1.1.1, is given in the metadata repository.

The CDASH products include different types of mappings:

- CDASH model class variables to SDTM class variables
- CDASH model class variables to SDTM dataset variables
- CDASH model domain variables to SDTM dataset variables
- CDASH model domain variables to SDTMIG dataset variables
- CDASHIG domain fields to SDTMIG dataset variables
- CDASHIG domain fields to SDTM class variables
- CDASHIG scenario fields to SDTMIG dataset variables

To accommodate the different types of mapping targets, three JSON array attributes had to be defined:

- `sdtmClassMappingTargets`
- `sdtmDatasetMappingTargets`
- `sdtmigDatasetMappingTargets`

For CDASH Model v1.2 and CDASHIG v2.2, where applicable:

- Class description is added using definitions from CDISC CT.
- Domain description is added using definitions from CDISC CT.
- Class name is adjusted from "Findings About" to "Findings about Events and Interventions" to match source content, i.e., CDISC Wiki space.

**SDTM**

Variables in the SDTM occasionally have expanded text to describe a variable's role. This text is stored in "roleDescription" in the metadata repository. Otherwise, "roleDescription" matches "role", where "role" has a set of controlled values. Below is an example for the SDTM v1.5 variable SVUPDES:

```json
{
  "ordinal": "11",
  "name": "SVUPDES",
  "label": "Description of Unplanned Visit",
  "description": "Description of what happened to the subject during an unplanned visit. Null for protocol-defined visits.",
  "role": "Qualifier",
  "roleDescription": "Optional Qualifier",
  ...
}
```

Some Implementation Guide variables have multiple CDISC Controlled Terminology codelists. Therefore, an array object is used to output codelist metadata in an API response. For example, this is an excerpt when querying the SENDIG v3.1 variable MISTRESC:
To promote consistency, the label "ISO 3166-1 Alpha-3" is used whenever this external country codelist is referenced. Similarly, "ISO 21090 NullFlavor enumeration" is used for null flavors.