# Manual for the Completion of CDISC Aligned NCI Standard Case Report Form (CRF) Modules

## Introduction

In 2006, members of the National Cancer Institute’s Center for Biomedical Informatics and Information Technology (NCI CBIIT) in conjunction with the cancer Data Standards Registry and Repository (caDSR) user community initiated a Case Report Form (CRF) harmonization activity. CRFs submitted from the community were reviewed and inventoried. The Harmonization group then reviewed all questions on the CRF and partitioned them into four categories:

* Mandatory – A data collection variable that must be on the CRF (e.g., a regulatory requirement (if applicable)).
* Conditional – A data collection variable that must be collected on the CRF for specific cases that may be dictated by local or sponsor defined business rules.
* Optional – A data collection variable that is available for use if needed. There is no regulatory or business requirement for inclusion of this element on the CRF; if the design and scientific questions posed in the study dictate the need to collect this type of data; this is the element to include on the CRF.
* Non-harmonized – A data collection variable that is, by consensus, to primarily belong to a different CRF module or is not belonging to any defined module.

A template form with modules that contain questions or variables representing data to be collected and a companion electronic CRF instruction manual was developed. These CRF modules were vetted and adopted by the caDSR stakeholder community as metadata standards.

Since the original CRFs and manuals were adopted, the Food & Drug Administration (FDA) published guidelines for submission of clinical trial study data using the Clinical Data Interchange Standards Consortium (CDISC) Study Data Tabulation Model (SDTM) for Investigational New Drug (IND) trials starting after December 2017. In response, NCI CBIIT has aligned the NCI Standard CRF modules with the CDISC data collection standard, Clinical Data Acquisition Standards Harmonization (CDASH) where data is expected to be submitted to FDA in SDTM format.

The instruction manual is a set of directions to guide data collection in each module template. Specific implementation instructions are not present; various groups may wish to implement the contents of a module in a variety of software applications.

The instructions include the field name, description or definition of each field, and any special formatting notes that apply to entries – such as the inclusion of full dates, use of values from a choice list only, etc. Finally, each question (or data item) is noted as Mandatory (m), Conditional (c), or Optional (o).

## Laboratory Test/Results CDISC Aligned NCI Standard Template Module Definitions

**Mapping to the CDASH:**

This NCI Standard Template Form maps to the following domains in the CDASHIG v2.0 metadata table:

* LB – Laboratory Test Results (v2.0)
* CO – Comments (v2.0)

**Mapping to the SDTM:**

This NCI Standard Template Form maps to the following domains in the SDTMIG v3.3 metadata table:

* LB – Laboratory Test Results (v3.3)
* CO – Comments (v3.3)

## Laboratory Test/Results CDISC Aligned NCI Standard Template Module TemplateInstructions

### Field Descriptions and Instructions

| **Field Name**  **(Partition Status)**  **CDE ID #**  **Short Name** | **Definition**  **CDISC Mapping and Instruction** | **Format** |
| --- | --- | --- |
| Date of Specimen Collection  (m)  6401821  LBDAT | The date of specimen collection represented in an unambiguous date format (e.g., DD-MON-YYYY).  CDASH: LBDAT (6401821); SDTM: LBDTC (No CDE) | DATE |
| Laboratory Test Name  (c)  7275579  LBTESTNM | The name of the lab test or examination used to obtain the measurement or finding. Any test normally performed by a clinical laboratory is considered a lab test.  CDASH: LBTEST (6343328); SDTM: LBTEST (No CDE); Conditionality Rule: Using a single CDE with a set of lab test names is recommended as a best practice. A set of individual test names may be substituted, especially if a single lab test is needed on a CRF. | CHARACTER. Use choice list. |
| Lab Result Unit  (c)  6409054  LBORRESU | The unit of the result as originally received or collected.  CDASH: LBORRESU (6409054); SDTM: LBORRESU (No CDE); Conditionality Rule: Element needed if the Unit of Measure (UOM) is not part of the lab test name. | CHARACTER. Use choice list. |
| Lab Result  (c)  6421484  LBORRES | Result of the measurement or finding as originally received or collected.  CDASH: LBORRES (6421484); SDTM: LBORRES (No CDE); Conditionality Rule: Conditional based on type of lab results gathered (numeric vs. text descriptions). | CHARACTER |
| Laboratory Test Original Result Value  (c)  6974972  LBORRESN | The description of the result of the measurement or finding as originally received or collected.  CDASH: LBORRES (6421484); SDTM: LBORRES (No CDE); Conditionality Rule: Conditional based on type of lab results gathered (numeric vs. text descriptions). | NUMBER |
| Lab Performed  (o)  6401829  LBPERF | An indication whether or not a planned laboratory measurement, test, observation or specimen was performed/collected.  CDASH: No Match; SDTM: No Match | CHARACTER. Use choice list. |
| Time of Specimen Collection (o)  6402020  LBTIM | Time of specimen collection represented in an unambiguous time format (e.g., hh:mm:ss).  CDASH: LBTIM (6402020); SDTM: LBDTC (No CDE) | CHARACTER |
| Abnormal Reference Range Indicator  (o)  6974973  LBABRRNY | The indication of whether or not the laboratory test result fell outside of the normal reference range.  CDASH: LBNRIND (6401931); SDTM: If Yes, LBNRIND (No CDE) = ‘ABNORMAL’ | CHARACTER. Use choice list. |
| Vendor Name  (o)  6411556  LBNAM | The name or identifier of the vendor (e.g., laboratory) that provided the test results.  CDASH: LBNAM (6411556); SDTM: LBNAM (No CDE) | CHARACTER |
| Lab Reference ID  (o)  6401975  LBREFID | An internal or external identifier such as specimen identifier.  CDASH: LBREFID (6401975); SDTM: LBREFID (No CDE) | CHARACTER |
| Test Specimen Condition Type  (o)  6974976  LBSPCNTP | The type of specimen condition submitted for laboratory tests.  CDASH: LBSPCCND (6401918); SDTM: LBSPCCND (No CDE) | CHARACTER. Use choice list. |
| Lab Result Unit  (o)  6409054  LBORRESU | The unit of the result as originally received or collected.  CDASH: LBORRESU (6409054); SDTM: LBORRESU (No CDE) | CHARACTER. Use choice list. |
| Lab Normal Range Lower Limit- Original Unit  (o)  6421482  LBORNRLO | The lower end of normal range or reference range for continuous results stored in LBORRES.  CDASH: LBORNRLO (6421482); SDTM: LBORNRLO (No CDE) | CHARACTER |
| Lab Normal Range Upper Limit- Original Unit  (o)  6421483  LBORNRHI | The upper end of normal range or reference range for continuous results stored in LBORRES.  CDASH: LBORNHI (6421483); SDTM: LBORNHI (No CDE) | CHARACTER |
| Laboratory Test Comment Value Text  (o)  7147758  LBCOVAL | A free text comment to describe laboratory test results.  CDASH: COVAL (6355806); SDTM: COVAL (No CDE) | CHARACTER |

## Annotated CRF: Laboratory Test/Results CDISC Aligned NCI Standard Template

This annotated CRF is ONLY used to show CDISC mapping without consideration of the CRF layout. CDASH mapping is in **Blue**, and SDTM mapping is in **Red**.

### Form Name: Laboratory Test/Results CDISC Aligned NCI Standard Template

#### Mandatory Questions

| **CRF Question** | **Value Domain** |
| --- | --- |
| **Sample Collection Date (6401821)**  **CDE Short Name:** LBDAT  CDASH: LBDAT (6401821)  SDTM: LBDTC (No CDE) | DATE – Maximum Length = 11 |

#### Conditional Questions

| **CRF Question** | **Value Domain** |
| --- | --- |
| **Lab Test (7275579)**  **CDE Short Name:** LBTESTNM  CDASH: LBTEST (6343328)  SDTM: LBTEST (No CDE) | CHARACTER – Maximum Length = 200  List of 861 PVs |
| **Unit (6409054)**  **CDE Short Name:** LBORRESU  CDASH: LBORRESU (6409054)  SDTM: LBORRESU (No CDE) | CHARACTER – Maximum Length = 100  List of 750 PVs |
| **Lab Value (6421484)**  **CDE Short Name:** LBORRES  CDASH: LBORRES (6421484)  SDTM: LBORRES (No CDE) | CHARACTER – Maximum Length = 100 |
| **Lab Value (6974972)**  **CDE Short Name:** LBORRESN  CDASH: LBORRES (6421484)  SDTM: LBORRES (No CDE) | NUMBER – Maximum Length = 5 |

#### Optional Questions

| **CRF Question** | **Value Domain** |
| --- | --- |
| **Was lab specimen collected? (6401829)**  **CDE Short Name:** LBPERF  CDASH: No Match  SDTM: No Match | CHARACTER – Maximum Length = 2   * N – No * NA – Not Applicable * U – Unknown * Y – Yes |
| **Time (6402020)**  **CDE Short Name:** LBTIM  CDASH: LBTIM (6402020)  SDTM: LBDTC (No CDE) | CHARACTER – Maximum Length = 8 |
| **Abnormal Flag (6974973)**  **CDE Short Name:** LBABRRNY  CDASH: LBNRIND (6401931)  SDTM: If Yes, LBNRIND (No CDE) = ‘ABNORMAL’ | CHARACTER – Maximum Length = 2   * N – No * NA – Not Applicable * U – Unknown * Y – Yes |
| **Performing Laboratory Name (6411556)**  **CDE Short Name:** LBNAM  CDASH: LBNAM (6411556)  SDTM: LBNAM (No CDE) | CHARACTER – Maximum Length = 200 |
| **Specimen Accession # (6401975)**  **CDE Short Name:** LBREFID  CDASH: LBREFID (6401975)  SDTM: LBREFID (No CDE) | CHARACTER – Maximum Length = 40 |
| **Lab Specimen Condition Type (6974976)**  **CDE Short Name:** LBSPCNTP  CDASH: LBSPCCND (6401918)  SDTM: LBSPCCND (No CDE) | CHARACTER – Maximum Length = 30   * Acceptable – Acceptable * Cauterized – Cauterize * Clotted – Clotted Specimen * Damaged – Damage * Frozen – Frozen Specimen * Hemolyzed – Hemolyzed * Hemorrhagic – Hemorrhagic Change * Lipemic – Lipemic * Not Specified – Unspecified * Quantity Not Sufficient – Not Sufficient Quantity * Thawed – Thaw * Unacceptable, Not Specified – Unacceptable |
| **Unit (6409054)**  **CDE Short Name:** LBORRESU  CDASH: LBORRESU (6409054)  SDTM: LBORRESU (No CDE) | CHARACTER – Maximum Length = 100  List of 750 PVs |
| **What was the lower limit of the reference range for this lab test? (6421482)**  **CDE Short Name:** LBORNRLO  CDASH: LBORNRLO (6421482)  SDTM: LBORNRLO (No CDE) | CHARACTER – Maximum Length = 200 |
| **What was the high limit of the reference range for this lab test? (6421483)**  **CDE Short Name:** LBORNRHI  CDASH: LBORNHI (6421483)  SDTM: LBORNHI (No CDE) | CHARACTER – Maximum Length = 200 |
| **Comments (7147758)**  **CDE Short Name:** LBCOVAL  CDASH: COVAL (6355806)  SDTM: COVAL (No CDE) | CHARACTER – Maximum Length = 200 |