## 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).

## Diagnosis Microscopic Pathology 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:

- MI Microscopic Findings (v2.0)
- MH Medical History (v2.0)

#### Mapping to the SDTM:

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

- MI Microscopic Findings (v3.3)
- MH Medical History (v3.3)

## Diagnosis Microscopic Pathology CDISC Aligned NCI Standard Template Module Template Instructions

Field Name (Partition Status) CDE ID # Short Name	Definition CDISC Mapping and Instruction	Format
Invasive Breast Carcinoma Diagnosis Type (c) 7038770 MHIBDXTP	The description of the type of invasive breast disease present. CDASH: MHTERM (6421489); SDTM: MHTERM (No CDE); Conditionality Rule: This CDE is to be included only for breast cancer trials.	CHARACTER. Use choice list.
Invasive Breast Carcinoma Diagnosis Text (c) 7038771 MHVSCOPX	The description of the type of invasive breast disease present not previously listed. CDASH: MHTERM (6421489); SDTM: MHTERM (No CDE); Conditionality Rule: This CDE is to be included only for breast cancer trials.	CHARACTER

Field Descriptions and Instructions

Field Name (Partition Status) CDE ID # Short Name	Definition CDISC Mapping and Instruction	Format
Biospecimen Prostatic Intraepithelial Neoplasia Status (c) 7038772 PIN	The description of the degree of differentiation of epithelial cells of the prostate. CDASH: MIORRES (6421502); SDTM: MIORRES (No CDE) where MITESTCD (6620591) = "PIN", MITSTDTL (6421501) = "Prostatic intraepithelial neoplasia grade"; Conditionality Rule: This is to be included only for prostate cancer patients.	CHARACTER. Use choice list.
Invasive Breast Carcinoma Glandular (Acinar)/Tubular Differentiation Outcome (c) 7038773 MIGLTBDF	The description of the percent of glandular/tubular structures in breast tissue represented using the Nottingham histologic score. CDASH: MIORRES (6421502); SDTM: MIORRES (No CDE) where MITESTCD (6620591) = "GLDTBF", MITSTDTL (6421501) = "Glandular tubular differentiation score"; Conditionality Rule: This CDE is to be included only for breast cancer trials.	CHARACTER. Use choice list.
Invasive Breast Carcinoma Pleomorphism Score Outcome (c) 7038774 MINCPLPH	The description of the nuclei size and shape in breast tissue represented using the Nottingham histologic score. CDASH: MIORRES (6421502); SDTM: MIORRES (No CDE) where MITESTCD (6620591) = "MINCPLPH", MITSTDTL (6421501) = "Nuclear pleomorphism score"; Conditionality Rule: This CDE is to be included only for breast cancer trials.	CHARACTER. Use choice list.

Field Name (Partition Status) CDE ID # Short Name	Definition CDISC Mapping and Instruction	Format
Invasive Breast Carcinoma Mitotic Rate Score Outcome (c) 7038775 MITORT	The description of the mitotic rate of breast tissue represented using the Nottinham histologic score.	CHARACTER. Use choice list.
	CDASH: MIORRES (6421502); SDTM: MIORRES (No CDE) where MITESTCD (6620591) = "MITORT", MITSTDTL (6421501) = "Mitotic rate"; Conditionality Rule: This CDE is to be included only for breast cancer trials.	
Invasive Breast Carcinoma Per 10 High Powered Fields Mitotic Count Value (c)	The amount of mitoses per 10 high power fields in breast tissue represented using the Nottingham scoring system.	NUMBER
7038776 MITOHPF	CDASH: MIORRES (6421502); SDTM: MIORRES (No CDE) where MITESTCD (6620591) = "MITOHPF", MITSTDTL (6421501) = "Number of mitoses per 10 high-power fields"; Conditionality Rule: This CDE is to be included only for breast cancer trials.	
Microscope Device Field of View Diameter Value (c) 7038777	The diameter of the microscope field, represented as a numeric value using millimeters (mm) as the unit of measure.	NUMBER
MICFD	CDASH: MIORRES (6421502); SDTM: MIORRES (No CDE) where MITESTCD (6620591) = "MICFD", MITSTDTL (6421501) = "Diameter of microscope field"; Conditionality Rule: This CDE is to be included only for breast cancer trials.	
Microscopic Findings Result Unit (c)	The unit of the result as originally received or collected.	CHARACTER. Use choice list.
6410966 MIORRESU	CDASH: MIORRESU (6410966); SDTM: MIORRESU (No CDE); Conditionality Rule: This CDE is to be included only for breast cancer trials.	

Field Name (Partition Status) CDE ID # Short Name	Definition CDISC Mapping and Instruction	Format
Invasive Breast Carcinoma Total Nottingham Score Outcome (c) 7038778	The grade of invasive breast cancer determined by the summation of three Nottingham histologic scores.	CHARACTER. Use choice list.
MIOVLGRD	CDASH: MIORRES (6421502); SDTM: MIORRES (No CDE) where MITESTCD (6620591) = "OVLGRD", MITSTDTL (6421501) = "Overall grade"; Conditionality Rule: This CDE is to be included only for breast cancer trials.	
Lymphatic Invasion Present Indicator (o)	The indication of whether or not malignant cells are present within lymphatic vessels.	CHARACTER. Use choice list.
7038779	CDASH: MIORRES (6421502); SDTM: MIORRES (No CDE) where MITESTCD (6620591) = "LYMPHINV"	
External Venous Invasion Present Indicator (o) 7038780	The indication of whether or not there has been extramural invasion of the veins by malignant cells.	CHARACTER. Use choice list.
MIEXVNIN	CDASH: MIORRES (6421502); SDTM: MIORRES (No CDE) where MITESTCD (6620591) = "EXVNIN"	
Perineural Invasion Present Indicator (o) 7038781	The indication of whether or not there is a presence of malignant cells surrounding a nerve.	CHARACTER. Use choice list.
MIPNLINV	CDASH: MIORRES (6421502); SDTM: MIORRES (No CDE) where MITESTCD (6620591) = "PNLINV"	
Pelvic Lymphadenectomy Finding Category (o) 7038782	The indication of whether or not there is a presence of malignant cells in pelvic lymph nodes that were removed.	CHARACTER. Use choice list.
MIPLND	CDASH: MIORRES (6421502); SDTM: MIORRES (No CDE) where MITESTCD (6620591) = "PLND"	

Field Name (Partition Status) CDE ID # Short Name	Definition CDISC Mapping and Instruction	Format
Biospecimen Malignant Neoplasm Percentage Value (o) 7038783 MICANPCT	The percentage of malignant cells contained in a biospecimen, represented as a numeric value. CDASH: MIORRES (6421502); SDTM: MIORRES (No CDE) where MITESTCD (6620591) = "CANPCT"	NUMBER
Microscopic Findings Result Unit (o) 6410966 MIORRESU	The unit of the result as originally received or collected. CDASH: MIORRESU (6410966); SDTM: MIORRESU (No CDE); Conditionality Rule: This CDE is to be included only for breast cancer trials.	CHARACTER. Use choice list.
Biospecimen Premalignant Change Indicator (o) 7038761 MINTPMHT	The indication of whether or not there are there are changes in cells that may become cancer and are considered premalignant or precancerous. CDASH: MIORRES (6421502); SDTM: MIORRES (No CDE) where MITESTCD (6620591) = "NTPMHT"	CHARACTER. Use choice list.
Biospecimen Premalignant Change Type (o) 7038762 MIASPMHT	The histologic changes in a biospecimen that are associated with pre-malignant conditions. CDASH: MIORRES (6421502); SDTM: MIORRES (No CDE) where MITESTCD (6620591) = "ASPMHT"	CHARACTER. Use choice list.
Biospecimen Premalignant Change Text (o) 7038763 MIASPMHX	The histologic changes in a biospecimen that are associated with pre-malignant conditions not previously listed. CDASH: MIORRES (6421502); SDTM: MIORRES (No CDE) where MITESTCD (6620591) = "ASPMHT"	CHARACTER

Field Name (Partition Status) CDE ID # Short Name	Definition CDISC Mapping and Instruction	Format
Tumor Margin Configuration Present Type (o) 7038764 MITUMRBD	The tumor margin cell configuration observed at a pathologic assessment. CDASH: MIORRES (6421502); SDTM: MIORRES (No CDE) where MITESTCD (6620591)= "TUMRBD"	CHARACTER. Use choice list.
Tumor Margin Configuration Present Text (o) 7038765 MITMRBDX	The tumor margin cell configuration observed at a pathologic assessment not previously listed. CDASH: MIORRES (6421502); SDTM: MIORRES (No CDE) where MITESTCD (6620591) = "TUMRBD"	CHARACTER

## Annotated CRF: Diagnosis Microscopic Pathology 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: Diagnosis Microscopic Pathology CDISC Aligned NCI Standard Template

#### **Conditional Questions**

CRF Question	Value Domain
Invasive component, breast (7038770) CDE Short Name: MHIBDXTP	CHARACTER – Maximum Length = 100
	List of 84 PVs
CDASH: MHTERM (6421489)	
SDTM: MHTERM (No CDE)	
Invasive component, other (7038771) CDE Short Name: MHVSCOPX	CHARACTER – Maximum Length = 200
CDASH: MHTERM (6421489)	
SDTM: MHTERM (No CDE)	
Prostatic intraepithelial neoplasia (PIN) (7038772)	CHARACTER – Maximum Length = 20
CDE Short Name: PIN	High Grade – High Grade Prostatic Intraepithelial Neoplasia
CDASH: MIORRES (6421502)	Low Grade – Low Grade Prostatic Intraepithelial Neoplasia
SDTM: MIORRES (No CDE) where	□ None – None at all
MITESTCD (6620591) = "PIN",	Not Assessed – Not Tested
MITSTDTL (6421501) = "Prostatic intraepithelial neoplasia grade"	Present NOS – Not Otherwise Specified Present

CRF Question	Value Domain
Glandular tubular differentiation (7038773) CDE Short Name: MIGLTBDF	CHARACTER – Maximum Length = 50
CDASH: MIORRES (6421502) SDTM: MIORRES (No CDE) where MITESTCD (6620591) = "GLDTBF", MITSTDTL (6421501) = "Glandular tubular differentiation score"	<ul> <li>No residual invasive carcinoma – Negation Residual Invasive Carcinoma</li> <li>Only microinvasion present not graded – Microinvasive Breast Carcinoma Present Negation Histologic Grade</li> <li>Score 1 – Glandular (Acinar)/Tubular Differentiation Score 1</li> <li>Score 2 – Glandular (Acinar)/Tubular Differentiation Score 2</li> <li>Score 3 – Glandular (Acinar)/Tubular Differentiation Score 3</li> <li>Score cannot be determined – Score Indeterminate</li> </ul>
Nuclear pleomorphism (7038774) CDE Short Name: MINCPLPH CDASH: MIORRES (6421502) SDTM: MIORRES (No CDE) where MITESTCD (6620591) = "MINCPLPH", MITSTDTL (6421501) = "Nuclear pleomorphism score	<ul> <li>CHARACTER – Maximum Length = 50</li> <li>No residual invasive carcinoma – Negation Residual Invasive Carcinoma</li> <li>Only microinvasion present not graded – Microinvasive Breast Carcinoma Present Negation Histologic Grade</li> <li>Score 1 – Nuclear Pleomorphism Score 1</li> <li>Score 2 – Nuclear Pleomorphism Score 2</li> <li>Score 3 – Nuclear Pleomorphism Score 3</li> <li>Score cannot be determined – Score Indeterminate</li> </ul>
Mitotic rate (7038775) CDE Short Name: MITORT CDASH: MIORRES (6421502) SDTM: MIORRES (No CDE) where MITESTCD (6620591) = "MITORT", MITSTDTL (6421501) = "Mitotic rate"	<ul> <li>CHARACTER – Maximum Length = 50</li> <li>No residual invasive carcinoma – Negation Residual Invasive Carcinoma</li> <li>Only microinvasion present not graded – Microinvasive Breast Carcinoma Present Negation Histologic Grade</li> <li>Score 1 – Mitotic Rate Score 1</li> <li>Score 2 – Mitotic Rate Score 2</li> <li>Score 3 – Mitotic Rate Score 3</li> <li>Score cannot be determined – Score Indeterminate</li> </ul>

CRF Question	Value Domain
Number of mitoses per 10 high-power fields (7038776) CDE Short Name: MITOHPF	NUMBER – Maximum Length = 5
CDASH: MIORRES (6421502) SDTM: MIORRES (No CDE) where MITESTCD (6620591) = "MITOHPF", MITSTDTL (6421501) = "Number of mitoses per 10 high-power fields"	
Diameter of microscope field (7038777) CDE Short Name: MICFD	NUMBER – Maximum Length = 5
CDASH: MIORRES (6421502) SDTM: MIORRES (No CDE) where MITESTCD (6620591) = "MICFD", MITSTDTL (6421501) = "Diameter of microscope field"	
Unit (6410966) CDE Short Name: MIORRESU	CHARACTER – Maximum Length = 100
CDASH: MIORRESU (6410966)	mm – Millimeter
SDTM: MIORRESU (No CDE)         Overall grade (7038778)         CDE Short Name: MIOVLGRD	CHARACTER – Maximum Length = 50
CDASH: MIORRES (6421502) SDTM: MIORRES (No CDE) where MITESTCD (6620591) = "OVLGRD", MITSTDTL (6421501) = "Overall	<ul> <li>Grade 1 – Nottingham Grade 1</li> <li>Grade 2 – Nottingham Grade 2</li> <li>Grade 3 – Nottingham Grade 3</li> <li>No residual invasive carcinoma – Negation Residual Invasive Carcinoma</li> </ul>
grade"	<ul> <li>Only microinvasion present not graded – Microinvasive Breast Carcinoma Present Negation Histologic Grade</li> <li>Score cannot be determined – Score Indeterminate</li> </ul>

**Optional Questions** 

CRF Question	Value Domain
Lymphovascular invasion (7038779) CDE Short Name: MILYMINV	CHARACTER – Maximum Length = 14
CDASH: MIORRES (6421502); SDTM: MIORRES (No CDE) where MITESTCD (6620591) = "LYMPHINV"	<ul> <li>Indeterminate – Indeterminate</li> <li>No – No</li> <li>No Surgery – No Surgical Procedure</li> <li>Not Applicable – Not Applicable</li> <li>Unavailable – No Information Available</li> </ul>
Extramural venous invasion (7038780) CDE Short Name: MIEXVNIN	<ul> <li>Yes – Yes</li> <li>CHARACTER – Maximum Length = 14</li> </ul>
CDASH: MIORRES (6421502) SDTM: MIORRES (No CDE) where	<ul> <li>Indeterminate – Indeterminate</li> <li>No – No</li> <li>No Surgery – No Surgical Procedure</li> </ul>
MITESTCD (6620591) = "EXVNIN"	<ul> <li>Not Applicable – Not Applicable</li> <li>Unavailable – No Information Available</li> <li>Yes – Yes</li> </ul>
Perineural invasion (7038781) CDE Short Name: MIPNLINV	CHARACTER – Maximum Length = 14
CDASH: MIORRES (6421502); SDTM: MIORRES (No CDE) where MITESTCD (6620591) = "PNLINV"	<ul> <li>No – No</li> <li>No Surgery – No Surgical Procedure</li> <li>Not Applicable – Not Applicable</li> <li>Unavailable – No Information Available</li> </ul>
Pelvic lymph node dissection (PLND)	<ul> <li>Yes – Yes</li> <li>CHARACTER – Maximum Length = 10</li> </ul>
(7038782) CDE Short Name: MIPLND CDASH: MIORRES (6421502)	<ul> <li>Negative – Negative Finding</li> <li>Not Done – Not Done</li> <li>Positive – Positive Finding</li> </ul>
SDTM: MIORRES (No CDE) where MITESTCD (6620591) = "PLND"	

CRF Question	Value Domain
Percent of cancer in specimen (7038783) CDE Short Name: MICANPCT	NUMBER – Maximum Length = 5
CDASH: MIORRES (6421502)	
SDTM: MIORRES (No CDE) where MITESTCD (6620591) = "CANPCT"	
Unit (6410966) CDE Short Name: MIORRESU	CHARACTER – Maximum Length = 100
CDASH: MIORRESU (6410966)	% – Percentage
SDTM: MIORRESU (No CDE)	
Non-tumor premalignant histology (7038761) CDE Short Name: MINTPMHT	
CDASH: MIORRES (6421502)	<ul> <li>N – No</li> <li>NA – Not Applicable</li> <li>U – Unknown</li> </ul>
SDTM: MIORRES (No CDE) where MITESTCD (6620591) = "NTPMHT"	□ Y – Yes

CRF Question	Value Domain
Associated pre-malignant histologic changes (7038762)	CHARACTER – Maximum Length = 100
CDE Short Name: MIASPMHT	<ul> <li>Basal cell hyperplasia – Basal Cell Hyperplasia</li> </ul>
CDASH: MIORRES (6421502)	<ul> <li>Basal cell hyperplasia with angiogenic squamous dysplasia changes – Basal Cell Hyperplasia with Angiogenic Squamous Dysplasia changes</li> </ul>
MITESTCD (6620591) = "ASPMHT"	Carcinoma in situ – Carcinoma in Situ
	Mild dysplasia – Mild Dysplasia
	<ul> <li>Mild dysplasia with angiogenic squamous dysplasia changes – Mild Dysplasia with Angiogenic Squamous Dysplasia changes</li> </ul>
	Moderate dysplasia – Moderate Dysplasia
	<ul> <li>Moderate dysplasia with angiogenic squamous dysplasia changes – Moderate Dysplasia with Angiogenic Squamous Dysplasia changes</li> </ul>
	None – None at all
	□ Other, specify – Other, specify
	Severe dysplasia – Severe Dysplasia
	<ul> <li>Severe dysplasia with angiogenic squamous dysplasia changes – Severe Dysplasia with Angiogenic Squamous Dysplasia changes</li> </ul>
	<ul> <li>Squamous metaplasia – Squamous Metaplasia</li> </ul>
	<ul> <li>Squamous metaplasia with angiogenic squamous dysplasia changes – Squamous Metaplasia with Angiogenic Squamous Dysplasia changes</li> </ul>
Associated pre-malignant histologic changes, other (7038763)	CHARACTER – Maximum Length = 200
CDE Short Name: MIASPMHX	
CDASH: MIORRES (6421502)	
SDTM: MIORRES (No CDE) where	
MITESTCD (6620591) = "ASPMHT"	

CRF Question	Value Domain
Description of tumor border configuration (7038764) CDE Short Name: MITUMRBD CDASH: MIORRES (6421502)	CHARACTER – Maximum Length = 100 Indeterminate – Indeterminate Infiltrating – Infiltrative Tumor Margin
SDTM: MIORRES (No CDE) where MITESTCD (6620591)= "TUMRBD"	<ul> <li>Other – Other</li> <li>Pushing – Pushing Tumor Margin</li> </ul>
Description of tumor border configuration, other (7038765) CDE Short Name: MITMRBDX	CHARACTER – Maximum Length = 200
CDASH: MIORRES (6421502)	
SDTM: MIORRES (No CDE) where MITESTCD (6620591) = "TUMRBD"	