

NLST CT Image Info Masterfile: Data Dictionary

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Document Summary

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|-------------------|--|
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NLST CT Image Info Masterfile: Data Dictionary

Section 1: Study

| Variable | Label | Description | Format Text |
|--------------------------|---|---|----------------------------|
| dataset_version | Date Stamp for Datasets | | Char, 23 |
| pid | Participant identifier, also called the IMS Global ID | LSS Participants (1xxxxx) ACRIN Participants (2xxxxx) | Numeric |
| seriesinstanceuid | New series instance uid | Uniquely identifies each image series. For each screening round (T0, T1, T2), most participants have multiple image series. | Char |
| study_yr | Study year of screening exam | | 0="T0" 1="T1" 2="T2" |
| studyuid | New study instance uid | Unique identifier for each CT study (i.e. screening round). For all series from a given screening round (T0, T1, or T2), each participant has a single value of studyuid. | Char |

Section 2: Overview

| Variable | Label | Description | Format Text |
|----------------------------|---|---|--|
| all_sct_batch | Full SCT Image Batch | Batch number associated with SCT image series. The full NLST CT image collection is divided into two sets which are, in turn, divided into 10 batches, each. | Numeric |
| all_sct_set | Full SCT Image Set | Set number associated with the SCT image series in the full NLST SCT collection. The NLST SCT Collection was divided into two equally-distributed sets that were intended to be used as training and testing sets. | 1="Set 1" 2="Set 2" |
| imageclass | Image class (0/1 value for localizer/axial images) | | 0="Localizer" 1="Axial" 9="Undetermined" |
| imagesize_kilobytes | Total file size of images in this series (in kilobytes) | | Numeric |
| imagetype | Image type (localizer or axial images) | If the text contains "axial", then this image series is from an axial reconstruction of a detailed full chest CT scan with many slices. If the text contains "localizer", or "top", then the series consists of one or two scout images of the entire chest, performed prior to the detailed CT scan to identify the endpoints for the full scan (just above lung apices, just below costophrenic angles). | Char |
| numberimages | Number of images contained within a series | | Numeric |

| Variable | Label | Description | Format Text |
|------------------------------|--|--|--|
| selected_lc_pop | Image series is included in Lung Cancer Selection? | <p>Is the image series included in the Lung Cancer Selection?</p> <p>The Lung Cancer Selection provides investigators with a set of images and data that are designed to provide the participants with lung cancers (screen-detected and otherwise) and a cross-section of control participants at a size that is manageable for download. The Lung Cancer Selection is divided into two sets which are, in turn, divided into 7 batches, each.</p> | <p>0="No" 1="Yes"</p> |
| selected_lc_pop_batch | SCT Image Batch For Lung Cancer Selection | <p>Batch number associated with SCT image series in the Lung Cancer Selection.</p> <p>The Lung Cancer Selection provides investigators with a set of images and data that are designed to provide the participants with lung cancers (screen-detected and otherwise) and a cross-section of control participants at a size that is manageable for download. The Lung Cancer Selection is divided into two sets which are, in turn, divided into 7 batches, each.</p> | <p>.N="Not Applicable" 1="A. Screen-detected lung cancers" 2="B. Other Lung Cancers" 3="C. Positive Screens" 4="D. Positive Screens" 5="E. Positive Screens" 6="F. Positive Screens" 7="G. Negative Screens"</p> |
| selected_lc_pop_set | Lung Cancer Selection Set | <p>Set number associated with the SCT image series in the Lung Cancer Selection</p> <p>The Lung Cancer Selection was divided into two equally-distributed sets that were intended to be used as training and testing sets.</p> <p>The Lung Cancer Selection provides investigators with a set of images and data that are designed to provide the participants with lung cancers (screen-detected and otherwise) and a cross-section of control participants at a size that is manageable for download. The Lung Cancer Selection is divided into two sets which are, in turn, divided into 7 batches, each.</p> | <p>.N="Not Applicable" 1="Set 1" 2="Set 2"</p> |

| Variable | Label | Description | Format Text |
|--------------------------|---|---|-------------|
| seriesdescription | A description of the series as a list* of values found within or computed from values in the DICOM image headers. | * Series Description: a concatenation of 11 comma-separated values (exact or coded) representing: <ol style="list-style-type: none"> (1) Screening year (2) Image Type (3) Manufacturer (4) Model (5) Convolution Kernel (6) Reconstruction Diameter (7) Slice Thickness (8) kVp (9) mAs (10) Effective mAs (11) Pitch | Char |

Section 3: Reconstruction Info

| Variable | Label | Description | Format Text |
|------------------------------------|---|-------------|-------------------------|
| filtertype | Filter Type | | Char " "="Missing" |
| reconfilter | Name of the reconstruction convolution kernel used by the manufacturer to render the spiral computed tomography (SCT) images. | | Char " "="Missing" |
| reconstruction_diameter | The millimeter diameter of the region from which the data were used in creating the reconstruction of the image. | | Numeric .M="Missing" |
| reconstruction_diameter_raw | Raw character value for reconstruction diameter. | 0 - 1750 | Char " "="Missing" |
| reconthickness | Reconstruction slice thickness | | Numeric .M="Missing" |
| reconthickness_raw | Raw character value for reconstruction slice thickness. | 0.75 - 999 | Char " "="Missing" |

Section 4: Scanner Info

| Variable | Label | Description | Format Text |
|---------------------------------|---|--|--|
| manufacturer | Name of the manufacturer of the spiral computed tomography scanner. | | 1="GE Medical Systems" 2="Phillips" 3="Siemens" 4="Toshiba" |
| manufacturer_raw | Raw character value for SCT scanner manufacturer. | GE Medical Systems, Phillips, Siemens, Toshiba | Char |
| manufacturers_model_name | Model name given to the scanner by the manufacturer. | | Char |
| softwareversion | Scanner software version at the time of the scan. | | Char " "="Missing" |

Section 5: Technical Parameters

| Variable | Label | Description | Format Text |
|------------------------------|--|--------------------------------------|-------------------------|
| effmas | Effective mAs | | Numeric .M="Missing" |
| exposure_time | Exposure Time | | Numeric .M="Missing" |
| exposure_time_raw | Raw character value for exposure time. | | Char " "="Missing" |
| kvp | Kilo Volt peak (kVp) - peak kilo voltage output of the x-ray generator used. | | Numeric .M="Missing" |
| kvp_raw | Raw character value for kilo-volt peak. | 80, 90, 100, 110, 120, 130, 135, 140 | Char |
| mas | Milli-ampere second (mAs) - Exposure expressed as milli-ampere seconds calculated from exposure time and x-ray tube current. | | Numeric .M="Missing" |
| pitch | Pitch is the table travel per rotation divided by the collimation. | | Numeric .M="Missing" |
| pitch_raw | Raw character value for pitch. | 0.75, 0.875, 1.25, 1.375, 1.5, 1.75 | Char " "="Missing" |
| xray_tube_current | X-ray Tube Current | | Numeric .M="Missing" |
| xray_tube_current_raw | Raw character value for x-ray tube current. | | Char " "="Missing" |