<table>
<thead>
<tr>
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<tr>
<td>September 2, 2015</td>
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<td>February 1, 2016</td>
<td>4.1.5 Replaced ‘Canceling a Case’ with current instructions and screen shots</td>
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| February 25, 2016 | 4.3 Upload Data File  
4.4 Web-based Data Transmission  
Appendix 1 LCSR Data Upload File Specifications v1                                                                                                           |
| March 9, 2016    | Appendix 1 How to Change Your Computer Settings  
Appendix 2 LCSR Data Upload File Specifications v1                                                                                                               |
| March 28, 2016   | 4.4 Removed IT document hypertext links                                                                                                                                                                                  |
| April 18, 2016   | Appendix 2 LCSR Data Upload File Specifications v1.2  
Appendix 3 NRDR LCSR Data Mapping and Business Rules for Data Upload                                                                                           |
| May 26, 2016     | Appendix 2 Other comorbidities, other specify if Patient_Other_Comorbidities includes 8, then Patient_Other_Comorbidities_Spec is required (removed ‘is 2’)  
Appendix 1 Added corrections to number 1, 6, 10 and 11. Replaced pic at number 11.                                                                                 |
| July 25, 2016    | Data Entry Convention. First and Last Names now require a minimum of 1 character instead of 2.  
4.3.1 Data fields such as “Other, specify” can now accept up to 255 characters rather than the previous 45.  
| August 9, 2016   | Date of follow-up; Required when submitting Follow-Up for a case; cannot be a future date (updated)                                                                                                                   |
| September 20, 2016 | 4.2.2 Register New Case for Returning Patients – added as a new section  
’Added “Of Note” comments to Patient SSN, Medicare Beneficiary ID, Register New Case for Returning Patients, Registration, Appendix 1, Editing an ‘In-Progress’ or ‘Completed’ Form, Section A ‘General’, and Radiologist (reading) sections  
4.5.3 LCSR File Upload Status - updated  
’Patient ID has been removed from New Case Registration Search filter, Registration form, Exam form, Case Status Report forms, and all Registration & Cancellation form email notifications  
’6.1.1 Adding or Removing Participating Physicians - updated  
’LCSR Introduction Webinar – link to PPT has been added to Section 1, Introduction                                                                 |
| November 15, 2016 | 4.4 Web-based Data Transmission & Vendor Certification Process (added)                                                                                                                                                 |
| December 19, 2016 | Appendix 3, Number_Of_Packs_Year_Smoking, Unknown = 999  
Appendix 3, Number_Of_Years_Since_Quit, Unknown = 99                                                                                                                                                                  |
| March 24, 2017   | Appendix 3, Patient Height and Weight, Unknown = 0                                                                                                                                                                      |
| April 24, 2017   | M_Status, added M1c                                                                                                                                                                                                    |
| May 22, 2017     | Appendix 3, Overall Stage, Mappings/Definitions, N3 has been removed. ‘Unknown’ has been added.                                                                                                                           |
| June 6, 2017     | Appendix 3, Overall Stage, Valid Values/format, N3 has been removed. Unknown’ has been added.                                                                                                                            |
| June 29, 2017    | Appendix 3, Added column ‘A’ to display row number  
Appendix 3, changed the order of ‘Ordering practitioner NPI’ to appear after ‘Radiologist Reading NPI’                                                                 |
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1. INTRODUCTION

The American College of Radiology’s Lung Cancer Screening Registry (LCSR) is part of the National Radiology Data Registry (NRDR), a web-based collection of registries related to various radiological procedures. The LCSR allows facilities to collect data about lung cancer screening procedures, including patients’ demographic information, medical history and risk factors, procedure indications, and follow-up information. Data from each procedure are entered on the following forms:

1. Case Registration Form
2. Exam Form

The LCSR also provides online reports summarizing case status information.

The LCSR shares patient, physician and user dictionaries with the other registries included in NRDR. Consequently, information entered in the dictionaries/Manage Patient/Manage Physician lists, need only be entered once, regardless of the number of registries/databases in which a facility participates. Certain fields on the LCSR forms are automatically populated using data from these dictionaries/lists, whenever you enter a patient, physician or user ID.

*Before you begin the process of LCSR Registration, Data Collection and Submission, Report Review or adding reading radiologists, we highly recommend that you watch the audio version 30-minute PowerPoint presentation located on our LCSR webpage. Its speed can be adjusted to your learning requirements and needs.

After launching the LCSR Introduction Webinar, go to the Tool Bar and locate and click on the 'Slide Show' tab, and then click on ‘From Beginning’. The slide deck will begin with audio at the first slide.

You can access the LCSR through the NRDR website at http://nrdr.acr.org. If you have any questions or difficulties using the website, please contact the NRDR Help Desk, at nrdr@acr.org or 1-800-227-5463, extension 3535.

For more information on NRDR, refer to the NRDR User Guide, available on the NRDR website.

2. USER INTERFACE

2.1. User Interface Overview

You must have a user type, user name and password to log in to the LCSR. Once logged in, you will have access to data from your facility only. The person who registers your facility in NRDR is known as the Facility Administrator, and is assigned a user type, user name and password during the NRDR registration process. Other users at your site are assigned a user type, user name and password when he or she is added to the NRDR user dictionary. For information about the registration process, refer to Section 2, “Getting Started”, in the NRDR User Guide. For information about adding users to the user dictionary, refer to Section 6.3.1, “Adding Users”, in the NRDR User Guide.
2.2. Login

To log in to the LCSR, access the NRDR home page at https://nrdr.acr.org/Portal/Nrdr/Main/page.aspx and click “LCSR” on the left side.

Select your user type from the drop-down list and pause while the page is refreshed. Fill in your user name, facility ID and password and click the “Log In” button.

If this is the first time you have logged in using a temporary password, that is, a password generated for you by the NRDR system, you will be asked to change it (refer to Section 4.5, “Changing Passwords”, in the NRDR User Guide).

2.3. Navigation

The top part of each page is a status bar showing your user type, user name, and facility ID. A “Logout” button also appears. Click this button to terminate your session. If you have not yet logged in, these fields will be blank, and a “Log In” button appears. Enter your login information and click the “Log In” button to begin your session. A link to the online help pages appears in the upper right corner of some pages.

The left part of each page in the LCSR contains the LCSR menu. The menu is comprised of a list of links giving you access to various registry functions. LCSR pages are distinguished from other pages in the NRDR system by the LCSR banner at the top of the page. Click the ‣ button to expand a menu item, or the ‡ button to collapse it.

Filters are available on most data entry pages. You can use these filters to search for a form from a specific case. A case is a set of forms related to one exam. A case includes a Case Registration form and an Exam Form.

Throughout this document, “Submit” refers to the action you take when you have completed data entry for a form, and you want the entries to be recorded in the registry. “Save” refers to the action you take when you have partially completed a form and you want to continue data entry at a later date. The entries you made prior to the “Save” action will appear on the form when you continue data entry, but they will not be recorded in the registry until you perform the “Submit” action. You also perform the “Save” action when you want to make changes to a previously submitted form.

If you have entered invalid data or performed an incorrect action, the system will display a red error message next to the invalid item, if applicable, and at the bottom of the page.

‼ Note: Do not use the “Back” button on your browser to navigate to a form; doing so will prevent your data from being stored in the registry. Always use the “Data Collection” menu items to navigate to a form.
3. FORMS AND DATA DICTIONARY

Click a form title under “Forms and Data Dictionary” to view or print a paper copy of the form.

3.1. Entire Form Package

You can view and print all LCSR forms at once by clicking “Entire Form Package” under “Forms and Data Dictionary” in the LCSR menu.

Note: The use of these printable LCSR forms is optional and is for the facility’s workflow only. All data recorded on the printed forms will need to be provided to the NRDR via submission to your registered facility, according to the requirements as indicated in this User Guide. Do not mail these forms to the ACR.

3.2. Case Registration Form

The Case Registration form is the first form to be completed when recording a lung cancer screening exam. A new form is required for each exam, even if you have previously recorded a different lung cancer screening exam for this patient. You can view and print the Case Registration form by clicking “Case Registration Form” under “Forms and Data Dictionary” in the LCSR menu. Refer to Section 1, “Register New Case”, below, for instructions on completing the form.

Note: The use of these printable LCSR forms is optional and is for the facility’s workflow only. All data recorded on the printed forms will need to be provided to the NRDR via submission to your registered facility, according to the requirements as indicated in this User Guide. Do not mail these forms to the ACR.

3.3. Exam Form

Complete the Exam Form during or after the lung cancer screening exam. You can view and print the Exam Form by clicking “Exam Form” under “Forms and Data Dictionary” in the LCSR menu. Refer to Section 4.2.4, “Exam”, below, for instructions on completing the form.

Note: The use of these printable LCSR forms is optional and is for the facility’s workflow only. All data recorded on the printed forms will need to be provided to the NRDR via submission to your registered facility, according to the requirements as indicated in this User Guide. Do not mail these forms to the ACR.

3.4. Data Dictionary

You can view and print a list of data element definitions by clicking “Data Dictionary” under “Forms and Data Dictionary” in the LCSR menu.

4. DATA COLLECTION

4.1. Data Collection Overview

Throughout this document, “Submit” refers to the action you take when you have completed data entry for a form, and you want the entries to be recorded in the registry. “Save” refers to the action you take when you have partially completed a form and you want to continue data entry at a later date. The entries you made prior to the “Save” action will appear on the form when you continue data entry, but they will not be recorded in the registry until you perform the “Submit” action. You also perform the “Save” action when you want to make changes to a previously submitted form.
Note: for security purposes, your session will terminate automatically after 20 minutes of inactivity. Any entries you may have made since clicking the “Save” button will be lost.

4.2. Manual Data Entry

In general the procedure for data collection is as follows:

1. Print paper copies of the data collection forms by selecting links under “Forms and Data Dictionary” from the LCSR menu. *If you have a Master – Child registration for a multi-center facility, all exam data for the LCSR should be entered at the Child facility level* (avoid entering data directly into the Master facility).

   **Note:** The use of these printable LCSR forms is optional and is for the facility’s workflow only. All data recorded on the printed forms will need to be provided to the NRDR via submission to your registered facility, according to the requirements as indicated in this User Guide. Do not mail these forms to the ACR.

2. The following forms are required for each facility contributing LCSR data:
   - Case Registration Form
   - Exam Form

   Alternately, you may log in to NRDR and enter data directly for a patient. Any individual with a facility user account can log in and enter data.

3. Select “Entire Form Package” to print all forms at once.

4. Record the information requested on the paper forms.

5. If this is the first time a procedure has been recorded in NRDR for the patient, the information you enter in the “Patient Information” section of the Case Registration Form will automatically create a patient record in the ‘Manage Patient’ list.

6. Enter data from each of the required forms, starting with the Case Registration form, by selecting the corresponding link under “Data Collection” from the LCSR menu. After completing each form, click the “Submit” button at the bottom of the page. Forms must be entered in the following order:
   - Case Registration Form
   - Exam Form

7. If errors are detected when you click the “Submit” button, they will be flagged in messages that appear in red next to the appropriate field and at the bottom of the page. You must correct these errors and click the “Submit” button again before you can proceed to the next form. If no errors are detected, a confirmation message will appear. In the case of the Case Registration Form, the message will include a link to the next data collection form, that is, the Exam Form. You may either continue with data entry, or log in at a later time to resume the process.

Use the button to view data element definitions.

Use the and buttons to show or hide form sections.

Note: Do not use the “Back” button on your browser to navigate to a form; doing so will prevent your data from being stored in the registry. Always use the “Data Collection” menu items to navigate to a form.
4.2.1 Register New Case

Every new case should be a low dose lung screening CT (baseline or annual screening).

For example, if a patient had a baseline (or annual screening) LDCT lung screening and has another one greater than 12 months later, the LDCT at >12 months should be submitted to the data registry as a new case. However, if a patient returns less than 12 months from the baseline (or annual screening) then that exam must be included in Section B of the LDCT case that preceded it.

You register a new case by clicking “Register New Case” under “Data Collection” in the LCSR menu. Complete the form as follows:

**Facility ID Number**
This field is populated automatically.

**Case Registration Date**
Enter the date that the paper form was completed. If paper forms were not used, then the date can be the same as the day you began the new case.

**Patient Information**
Enter the patient information requested in Section 1, “Patient Information”, of the Case Registration form. Fields marked with an asterisk (*) are required. Specific instructions for each field are as follows:

*Patient SSN*
Patient SSN (Social Security Number) must have the following format: NNN-NN-NNNN, where N is a digit; all digits are required.

Of note: If the patient refused to provide a SSN or you are not in possession of the SSN for any reason, the response to ‘None/Refused to Answer’ is to click inside the radio button next to the ‘Refused to provide SSN’. This will prevent the appearance of an error message at the bottom of the form when you click on the Submit button.

*If you do have the SSN, then click ‘SSN Available’ and provide such in the data field beneath.

*Medicare Beneficiary ID*
The Medicare Beneficiary ID is required for Medicare reimbursement. This ID is also known as the Medicare Health Insurance Claim Number. Enter this field without any special characters. For example, if a beneficiary ID is 123-34-5678A, enter it as 123345678A.

Of note: If the patient refused to provide a Medicare Beneficiary ID or you are not in possession of the Medicare Beneficiary ID for any reason, the response to ‘None/Refused to Answer’ is to click inside the radio button next to the word ‘Yes’. This will prevent the appearance of an error message at the bottom of the form when you click on the Submit button.

*If you are in possession of the Medicare Beneficiary ID, please click “No” and provide the ID in the data field beneath.
Other Identification
If neither the Patient SSN nor Medicare Beneficiary ID is provided, then the Other Identification field must be filled in. It must be a code that uniquely identifies the patient within your practice, such as a medical record number.

Last Name
First Name
Refer to Section 4.3, “Data Entry Conventions”, above.

Middle Name
Middle Name is optional. If entered, it must start with a letter. The remaining characters can be letters, or the characters "", ",", or ".".

*Date of Birth
Date of Birth must be at least 3 weeks prior to the current date.

Race
Select the patient’s race(s) as identified by the patient. More than one race may be selected.

Patient ethnicity
Select whether the patient is of Hispanic origin, as identified by the patient.

Health insurance
Select all that apply.

Date of Death
Enter the patient’s date of death in mm/dd/yyyy format, if applicable.

*Examination date
Enter the date the exam was completed in mm/dd/yyyy format. The date must not be greater than the current date.

Name of person who completed the paper form
This is the name of the person who performed the data collection for the exam. If this person’s name was not previously entered in a case record, then type the person’s first and last name in the corresponding data fields. In the future, the name will appear in the drop-down list. If the name was previously entered, simply click the arrow and select it from the drop-down list.

Note: If the paper forms were not used, please populate this field nonetheless. It can contain the name of the person completing the on-line data submission.

Name of person submitting this form
Submission Date
These fields are filled in automatically.

Click the “Submit” button. You must correct any errors before proceeding to the Exam form. If no errors are detected, a confirmation message and a link to the Exam form will appear. The case will be assigned an “In Progress” status until the Exam form is completed and submitted as well.
4.2.2 Register New Case for Returning Patients

For all returning patients, go to LCSR Data Collection on the LCSR Menu, click on Register New Case, and click the button to expand the purple Search bar.

![Search Bar]

Use one of the three key identifiers (the SSN, the Medicare Beneficiary ID, or Other Identification) to locate your returning patient and then click Find.

![Patient Search Filter]

The LCSR software will locate the returning patient and auto-populate all data fields in Section 1 of the Case Registration form with the data stored in the ‘Manage Patient’ list. The ‘Manage Patient’ list would have been auto-populated with the patient’s profile information during the first New Case registration. In order to prevent duplicating a patient profile, we heavily suggest careful data entry while providing one or more of the three key patient identifiers.

Please do NOT populate any of the data fields in the new case until after the patient’s profile has been imported into your current Register New Case form. You may then scroll down the remaining registration form and populating such with current data, new exam date, etc.

You may click the Submit button if all the required data fields have been completed, if they have not, an error message will appear across the bottom of the form indicating the data fields that need completion. Once you have completed the form, click
Submit to advance to the Exam form. If you do not have the data in order to complete the registration form, you can click the Save button to return to it later, to edit, and then click Submit to advance to the Exam form.

Of note: the LCSR software cannot advance any user to the Exam form until the required data fields, marked with an asterisk, and are populated.

### 4.2.3 Registration

The “Registration” link located on the LCSR menu is used for editing Case Registration forms that have already been saved or submitted. The Registration form and the Exam form cannot be edited from the same link on the LCSR menu.

To edit a case Registration form, you must select the Registration link on the side menu. To access the Exam form, you must select the Exam link on the side menu. Follow the remaining instructions to edit the existing form.

To edit a registration form:

1. Click the “Registration” link in the LCSR menu.
2. Click the button on the search bar, next to “Filter”. The following box appears:

![Case Registration Search Filter](image)

3. Narrow the list of forms in the search results by entering values in one or more of the other fields that appear in the box.

4. Click “Search”. A list of Case Registration forms matching the search criteria appears. You can also click “Reset” to clear the search fields and start again.

![Case Registration Search Results](image)

5. Click the case number of the form you want to edit.

Of note: If you are editing a form that has been submitted (by clicking on the Submit button) then you cannot Submit the form again, however, you will be able to save the form by first adding comments in the comment box, and then by clicking the Save button. Any new data that has been saved will be incorporated in the next reporting cycle.

Please keep in mind, if you want to register a new case, click the “Register New Case” link under “Data Collection” in the LCSR menu and follow the instructions as detailed in Register New Case section of this document.

4.2.4 Exam

After you submit the registration form, a link to the Exam form will appear. You can also access the Exam form by clicking “Exam” under “Data Collection” in the LCSR menu. Complete the form by selecting from among the options presented on the
form, and filling in the blank fields. All fields are required unless otherwise indicated below. Specific instructions for each field are as follows:

- **Facility ID Number**
- **Registry Case Number**
- **Patient First Name**
- **Patient Last Name**
- **Examination Date**

These fields are auto-populated with data that was provided in the case registration form.

---

**4.2.5 Section A ‘General’**

### Smoking Status
For current or former smokers, estimate the number of pack-years. One pack-year is the equivalent of smoking one pack of cigarettes per day for one year. For example, 10 pack-years is the equivalent of smoking one pack of cigarettes per day for ten years, or two packs of cigarettes per day for five years.

### Did physician provide smoking cessation guidance to patient?
Indicate “yes” if guidance was provided by either the imaging or ordering physician.

### Is there documentation of shared decision making?
Select the appropriate response.

### Patient’s Height
Enter patient’s height in inches.

*Of note:* If you do not know the patient’s height, please enter the number 0 in the data field. However, moving forward, we expect you to provide the correct data. The expectation of complete and correct data is specified in the participation agreement signed by all participating facilities.

### Patient’s Weight
Enter patient’s weight in pounds.

*Of note:* If you do not know the patient’s weight, please enter the number 0 in the data field. However, moving forward, we expect you to provide the correct data. The expectation of complete and correct data is specified in the participation agreement signed by all participating facilities.

### Other comorbidities listed on patient record that limit life expectancy
Select all that apply.

### Cancer related history
Select all that apply.

### Radiologist (reading)
*Of Note:* The physician’s name must be selected from the drop-down list. In order for a physician to be listed as the reading radiologist, he or she must be listed in the ‘Manage Physician’ list and on the ‘LCSR Registration Information’ page. See Registration Information, below, for data entry instructions to add reading radiologists on both physician lists. The Physician NPI is filled in automatically from the ‘Manage Physician’ list.

### Ordering Practitioner
Enter the first and last name and NPI of the ordering practitioner.

### Indication for Exam
Select the appropriate response.
Modality
Select the appropriate modality.

CT scanner
Enter the manufacturer and model of the CT scanner used to perform the exam.

If the scanner has already been entered on a previous record, you can use the drop down box to select the scanner.

Screening CT Radiation Exposure
Enter the exam parameters. Tube current-time, tube voltage, scanning time, scanning volume and pitch are optional.

CT Exam Results by Lung-RADS Category
Select the appropriate response.

Other clinically significant or potentially significant abnormalities – CT exam result modifier S
Select the appropriate response.

Prior history of lung cancer – CT exam result modifier C
Select the appropriate response.

Years since prior diagnosis of lung cancer
Enter number of years as whole number.

4.2.6 Section B ‘Follow-up within 1 year’
A follow-up record may be added for an exam at any time during the year between screening exams. If more than one exam form exists for a patient, enter the follow-up record on the most recent exam form whose exam date is less than or equal to the date of follow-up.

4.2.6.1 Adding Follow-up to a Case
You may add follow-up data to a submitted case by clicking “Exam” under Data Collection for the LCSR menu. Click the corresponding Case # for the patient for whom you want to add follow-up data. The submitted Exam form will display previously saved information. Click ⬇ to expand “B. Follow-up within 1 year”: 
Then click “Add Follow-up Record”. You may enter all required and/or applicable information for the follow-up record. Remember to click “Save” to add the follow-up data to the Exam form. Every follow-up procedure should have a record on the Exam form. If you need to remove the record, you may use the “Delete Follow-up Record” button to remove the follow-up information from the Exam form.

Date of Follow-up
Please enter date in mm/dd/yyyy format.

Follow-up diagnostic
Select appropriate the response.

(The following apply for procedures that resulted in a tissue diagnosis. Not applicable for imaging follow-up.)

Tissue Diagnosis
Select the appropriate response.

Tissue Diagnosis Method
Select the appropriate response.

Location from which sample was obtained
Select all responses that apply.

Histology
Select the appropriate response.

Stage- Clinical or pathologic
Select the appropriate response.

Overall stage
Select the appropriate response.

T Status
Select the appropriate response.

N Status
Select the appropriate response.

M Status
Select the appropriate response.

Period of follow-up for incidence (in months)
Enter number of months as a whole number.
4.2.7 Section C ‘Additional Risk Factors’ Additional risk factors are optional

Education level
Select patient’s highest level of education

Radiation exposure - documented high exposure levels
Select the appropriate response.

Occupational exposures to agents that are identified specifically as carcinogens targeting the lungs
Select all responses that apply.

History of cancers that is associated with an increased risk of developing a new primary lung cancer
Select all responses that apply.

Lung cancer in first-degree relative
Select the appropriate response.

Family history of lung cancer, other than first-degree relative
Select the appropriate response.

COPD (chronic obstructive pulmonary disease)
Select the appropriate response.

Pulmonary Fibrosis
Select the appropriate response.

Second hand smoke exposure
Select the appropriate response.

Name of Person Who Completed the Paper Form
This is the name of the person who performed the data collection for the exam. If this person’s name was not previously entered in a case record, then type the person’s first and last name in the corresponding data fields. In the future, the name will appear in the drop-down list. If the name was previously entered, simply click the arrow and select it from the drop-down list.

Note: If the paper forms were not used, please populate this field nonetheless. It can contain the name of the person completing the on-line data submission.

Name of Person Submitting This Form
Submission Date
These fields are filled in automatically.

Click the “Submit” button when the form is complete. The case will be assigned “Completed” status.

4.3.1.1 Data Entry Conventions

Please note the following when entering data:

- Dates must be entered in mm/dd/yyyy format.
- First and last names must be 45 characters long or less. At least 1 character must be from the characters from "A" to "Z", "a" to "z", or "'". Additional characters can include a hyphen ("-").
Data elements defined as alphanumeric, other than first and last names, must include the characters “A-Z”, “a-z”, “0-9” or “_” (underlining) only.

Entries must not contain leading or trailing blanks.

Sections 1 and 4.2.4 contain information regarding the format used for entries on specific forms. Clicking the button that appears next to some entries will also display format information in many cases.

Many items on the LCSR forms provide a list of possible values, as well as a field labeled “other, specify” where an alternative value may be provided. Unless otherwise specified, entries in these fields must be 255 characters long or less.

4.3.2 Saving a Partially Completed Form

If you want to save a partially completed form, click the “Save” button at the bottom of the form. You will be able to continue entering data on the form at a later time. You will not be able to start entering data on an Exam form until the corresponding Case Registration form is complete.

If you end your session without clicking the “Save” button, or without correcting errors after clicking the “Submit” button, your entries will be lost.

‼ Note: for security purposes, your session will terminate automatically after 20 minutes of inactivity. Any entries you may have made since clicking the “Save” button will be lost.

4.3.3 Finding a Form

To find a form that has already been saved or submitted, do the following:

1. Click “Registration” or “Exam” under “Data Collection” in the LCSR menu.
2. Click the button on the search bar, next to “Filter”. The following box appears:

3. To find all forms, leave the “Form Status” field unchanged as “All”. To find only forms that have already been submitted, change “Form Status” from “All” to “Submitted” using the drop-down list. To find forms that have been saved but not submitted, change “Form Status” to “Available”. To find forms that have been cancelled, change “Form
Status” to “Cancelled”. You can narrow the list of forms in the search results by entering values in one or more of the other search fields, such as “First Name” or “Last Name”.

4. Click “Search”. A list of forms matching your search criteria appears. You can also click “Reset” to clear the search fields and start again.

5. Click the ‘Case ID’ to launch the form.

### 4.3.4 Editing an ‘In-Progress’ or ‘Completed’ Form

To complete an In-Progress case record, or to make changes to a previously submitted case record, go to LCSR menu on the left-hand side, and click on Registration to view the case list. Click on the ‘Case ID’ within the case list to launch the case record.

Once the case registration record is open; you may complete or edit the desired data fields, scroll to the bottom and click ‘Submit’ to complete a form. After you have submitted a form, you cannot submit it again, however you can save any edits you have made to the form.
Of Note: Additional edits that have been made to a form between reporting cycles will be reflected in the next report.

If you have made edits to a previously submitted form, then you must enter a comment in the field at the bottom of the page, to explaining the changes made to the form. Comments cannot exceed 250 characters. Afterwards, you may click the “Save” button.

If any errors appear in red, scroll up the form and make the corrections.

Of note:
1. -if you receive an error that requires an SSN and you do not have one, scroll to the top to locate the SSN data field, and click inside the ‘Refused to provide SSN’ to remove the error message.
2. -If you receive an error that requires a Medicare Beneficiary ID but your patient is not enrolled in Medicare, scroll to the top of the form, and click inside the ‘Yes’ circle for ‘None/Refused to Answer’ to remove the error message.
3. -If the SSN and Medicare Beneficiary ID have not been provided, you must provide some other form of identification, eg., medical record number, in the ‘Other Identification’ field.

It is imperative to provide one of the three key patient identification methods above in order to proceed to the Exam form.
Once the errors have been corrected, go to the bottom, complete the comment section, and click ‘Submit’. The page will refresh with a message to advance to the Exam form where you can continue with data entry.

‼ Note: The system does not save historical data. Once you save a form with changes, the values that were previously in the edited fields are lost.

When you make a change to a form that has previously been submitted, the system saves your name, the date the change was made, and the corresponding comment. You can click the “History” button at the bottom of the page to view information about previous changes.

4.3.5 Cancelling a Case

To cancel a case, click ‘Registration’ under “Data Collection” on the LCSR menu. Click ‘Registration’ and allow the page to refresh (note: It is not possible to delete a record permanently). The status for the list of cases may vary. For ‘In Progress’ and ‘Completed’ status case records, please review the procedures as indicated below.
A. ‘In Progress’ status when both the Registration and Exam Forms Have Been ‘Saved’: Locate the case record you want to cancel from the list of cases. Click on the ‘Case #’ to open the case record. Scroll to the bottom of the case to locate the ‘Cancel’ button.

<table>
<thead>
<tr>
<th>Case #</th>
<th>Current Stage</th>
<th>Status</th>
<th>Patient</th>
<th>Registration Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>17695</td>
<td>Registration</td>
<td>In Progress</td>
<td>Forest Enchanted</td>
<td>01/28/2016</td>
</tr>
<tr>
<td>5541</td>
<td>Exam</td>
<td>Completed</td>
<td>Obrien Victoria</td>
<td>12/08/2015</td>
</tr>
</tbody>
</table>

Registration: Case Record List

Click ‘Cancel’ to change the ‘In Progress’ status to ‘Canceled’ status.

Registration Form ‘In Progress’ Showing “Cancel” Button

To review the change in status, click ‘Registration’ from the menu, and reopen the list of cases. The revised case list will show the change in status as ‘Cancelled’.

Registration: Case Record List with Cancelled Status Record

If you canceled a case record in error, go to the case list from the ‘Registration’ link (to open the list of cases), select the record using the ‘Case #’, scroll to the bottom and click ‘Restore.’

Restoring a Case Previously Canceled

B. ‘In Progress’ status when only the Registration Form Has Been ‘Saved’: If there is only a submitted case registration form (and no exam form) then the registration record status will be ‘In Progress’ and cannot be accessed using the ‘Registration’ link on the menu. You must use the ‘Exam’ link to open and access the case list. Select the case record from the list by using the ‘Case #’, allow the form to open and scroll to the end of the form. Click ‘Cancel’.

LCSR Menu Options
C. ‘Completed’ status: Cancelling a ‘Completed’ case record is a two-step process if both the Registration and the Exam form have both been ‘Submitted’. Make sure to cancel the exam form first by doing the following:

1. Go to the ‘Exam’ link on the menu (green arrow), click on it to open the list of cases. Click on the case record using the ‘Case #’ to open it, then scroll to the bottom and click on the ‘Cancel’ button.

2. Once the ‘exam’ form is canceled, click on the ‘Registration’ link (blue arrow) on the menu to view the list of case records. You will notice that your Registration form is now in the ‘In Progress’ status; select the case record using the ‘Case #’, when the case opens, scroll to the bottom and click the ‘Cancel’ button.

To review the change in status, click ‘Registration’ from the menu, and reopen the list of cases. The revised case list will show the change in status as ‘Cancelled’.

4.5. Flat File Upload

Rather than entering one case at a time according to the manual entry data process, you can upload many case records at a time using the specifications and instructions provided below.

4.5.1 Populate and Configure the LCSR Data File

Before using the file specifications to create your data file, you may need to change the settings on your PC first (See Appendix 1 for change settings instruction). Afterward, use the information in Appendix 2 to configure the data file itself. All data mapping definitions and business rules have been provided in Appendix 3 for a flat file upload and must be adhered to in order to facilitate a successful upload.

4.5.2 Upload LCSR Data File Instructions

1. Log in to NRDR portal using your log-in credentials and password
2. Click the LCSR link located on the menu on the left-hand side of the page
3. Click the Upload Data link
4. Click **Choose File** to select your data file

5. Click **Upload**

![LCSR Upload Data page](image)

**Note:** The NRDR does not load the data files right away; they are placed in a queue and will be loaded by a scheduled job.

### 4.5.3 LCSR File Upload Status

The data file upload status can be checked using **Data File Process Status** located on the LCSR menu. If you have many data file uploads to review consider using a query by date, otherwise, leave the date range blank to view all your data file uploads.

![LCSR Data File Process Status](image)

1. The ‘Status’ column displays the file upload status. The **Upload File Status table** also lists the ‘# of records in the file’, ‘# of records rejected’, ‘# of records added’, and the ‘# of records updated’.

2. The log files (far right column) will display error messages/warnings for invalid/rejected cases and can be downloaded and opened in Excel. You may select from the ‘Download Log File’ to view the data in .txt, or, you may select ‘Show Log File’ which displays messages in a cleaner format. We recommend ‘Show Log File’ for users who are not familiar with .txt documents.
3. For files that are successfully uploaded, the cases will be uploaded to the database. However, the case status (whether Completed or In-Progress) cannot be determined from the Upload File Status table. Users will have to navigate to ‘Registration’ or ‘Exam’ located on the LCSR menu. Click on ‘Filter’ to open the filter window (red arrow), and choose from ‘Case Status’ (blue arrow) to review any In-progress case records which will be in need of completion.

To complete a case record, please review instructions for “Editing an In-Progress or Completed Form” in the sections above.
4.6. Web-based Data Transmission & Vendor Certification Process

Thank you for your interest in submitting data electronically to the LCSR. Software vendors and interested facilities are required to be authenticated by the ACR Connect service in order to submit data to the LCSR registry. Our ACR Connect Authentication Service document is available upon request and describes the necessary steps for data submission.

1. Request the following documents below via email to nrdr@acr.org.
   - ACR Connect Authentication Service
   - ACR LCSR JSON Mapping
   - NRDR LCSR Exam Data Exchange

2. Once received, please review the documents. If you have any questions, send an e-mail to nrdr@acr.org requesting clarification.

3. When you are ready to begin testing, send an e-mail to nrdr@acr.org to request credentials to our testing environment.
5. REPORTS

5.1. Reports Overview

You can view the following reports from the LCSR website. Make your report type selection directly from the LCSR menu.

- Accrual Report (available to Facility Administrators and Registry Administrators only)
- Case Status Report
- Case Detail Report
- Aggregate Reports (provided by ACR on a quarterly reporting cycle)
- LCSR Data Export
  - Case Report
  - Exam Report

You can only view data from your own facility. Reports are displayed in new browser windows. To navigate report pages shown as HTML documents, use the navigation buttons: To print a report shown as an HTML document, click the button. To zoom in on or out of a report shown as an HTML document, select a scale percent from the drop-down list. To export a report shown as an HTML document, in Excel format, click the “Export to Excel 97-2000” button in the toolbar at the top of the page:

5.2. Accrual

The Accrual Report shows the number of cases that have been registered, cancelled and completed at your facility, as well as the number of cases in progress. To view the report, click “Accrual” under “Reports” in the LCSR menu. The report appears as an HTML document. Only Facility Administrators and Registry Administrators can view this report.
5.3. Case Status

The Case Status Report shows patient ID, patient SSN, physician, case status, and form submission dates for each case. All users can view this report.

To view the report, click “Case Status” under “Reports” in the LCSR menu. The Case Status Report filter appears:

The LCSR Facility Number, LCSR Facility Name and LCSR Facility Medicare Provider Number are automatically filled in and cannot be changed. You can narrow the cases that will appear in the report by entering search criteria in any of the other fields shown. If you leave all fields blank, the report will include all cases for your facility.

To run the report, click the “Submit” button. The report will appear in a new window as an Excel spreadsheet.
5.4. Case Detail

The Case Detail Report shows most data elements from each case, with one row per case. All users can view this report.

To view the report, click “Case Detail” under “Reports” in the LCSR menu. The Case Detail Report filter appears:

The LCSR Facility Number and LCSR Facility Name are automatically filled in and cannot be changed. You can narrow the cases that will appear in the report by entering search criteria in any of the other fields shown. If you leave all fields blank, the report will include all cases for your facility.

To run the report, click the “Submit” button. The report will appear in a new window as an Excel spreadsheet.
5.5. Aggregate Reports

At the end of each reporting period, your facility will be provided with a report comparing your data with aggregate data from other LCSR facilities. You can view a list of these reports by clicking “Download Reports” in the LCSR menu.

List of reports available for downloading

You can download a report by clicking the “Download” link on this page.

5.6. LCSR Data Export

Clicking “LCSR Data Export” in the LCSR Menu generates three tables: the Lung Case Report, the Lung Exam Report and the Lung Follow-Up Report. These reports show your facility’s data as provided in the registration and exam forms. Each table opens in a new window as an Excel spreadsheet and may appear as a zip file. Click on the zip file to allow the reports to populate to your PC.

There is no filter to restrict the data displayed; data from all forms submitted by your facility will be included.

Each file can then be opened as an Excel document from your PC.
6. REGISTRY MANAGEMENT

6.1. Registration Information

You can view information about your facility's LCSR registration by clicking "Registration Information" under "Registry Management" in the LCSR menu.
If your facility is not an LCSR participant, and you are the Facility Administrator, you can register for the LCSR by entering the number of participating radiologists in the first field and clicking the “Registration” button. Refer to Section 2.3.4, “Lung Cancer Screening Registration”, in the NRDR User Guide for more information.

6.1.1. Adding or Removing Participating Physicians

In order for a physician to be listed as the reading radiologist on a LCSR Exam Form, he or she must be listed as a LCSR participant in the ‘Manage Physician’ list. You can indicate that a physician is a LCSR participant by clicking the “Add Physician” button on the “Registration Information” page.

Of Note: An adding reading radiologist to the NRDR and LCSR data pages is a two-step process. First add the radiologists’ information to “Manage Physicians” list on the NRDR Homepage for your facility’s registration as specified below in Step 1, then import the radiologists’ names to the LCSR Registration Information page by following the instructions below in Step 2. Once the reading radiologists’ names appear in both places their names and NPI numbers will populate in the Exam forms’ drop-down list.

For security reasons, we ask that facilities maintain control of who has access to their accounts. Towards that end, I have provided instructions below to help you manage your facility’s Physicians’ users.

Step 1 - How to Add Physicians to the ‘Manage Physician’ List

You must be either the Facility Administrator or a Registry Administrator to complete this task.

Log into your facility as you normally would.

1. Go to the link for ‘Manage Physicians’ which appears in the menu on the left-hand side of your page. Click on Manage Physicians to open the page.
2. Two options will appear on screen: the Physician Upload option or the on-line Questionnaire. Both options have been described below.

   a. Physician Upload Option: If you have many radiologists that need to be added to the Manage Physician dictionaries for several registered facilities, you may want to consider the Physician Excel Upload option. In stead of completing the online questionnaire multiple times, go to the upload option which appears above the questionnaire. Click the ‘here’ link to launch the Excel spreadsheet, add all of your physician information, save the document to your PC, and then browse to select it & upload to the dictionary. The document can be used for any facility so long as you change the Facility ID number on the spreadsheet to match the facility ID you are working with.

   b. On-line Questionnaire Option: If you have only a few radiologists in your group that you want to add to the Manage Physician list, then this option is the better tool to work with. The instructions for such have been provided below in detail.

      i. Complete the questionnaire by completing all the required responses (see questionnaire below).
      ii. If the physician you are adding is going to participate in the PQRS, click the ‘Yes’ radio button (see green highlight) and then create a User Name for the physician so that access the PQRS Physician Portal becomes available.
         a. Example of a User Name convention: use the first letter of the first name and the entire last name;
         b. My name is Victoria Obrien, using the convention above, my User Name would be VObrien.
i. If the physician is NOT going to participate in the PQRS option then this step can be skipped.

ii. For the purposes of LCSR, this step is not needed and can be skipped.

iii. The fields within the red box do not apply to LCSR reading radiologists and can be skipped.

iii. Once the fields have been completed, click Submit. Then follow directions in Step 2.
Step 2: Importing Radiologists Names and NPI Numbers

Go to the link for ‘LCSR’ which appears in the menu on the left-hand side of your page. Click on ‘LCSR’ to launch the LCSR menu. Once on the LCSR menu, look for ‘Registration Information’ and click to launch the page.

When the Registration Information page opens, it will display several questions, go to Question 2 ‘Participating Physicians’ and click on the ‘Add Physician’ button.

After you have made entries in the ‘Manage Physician’ list, the list of physicians will appear in a pop-up box. checkboxes will be located to the right-hand side of the physician names that were added during the Manage Physician process. Click inside the checkbox for all physicians you would like to be displayed in the Exam form drop-down box option, and then click ‘Add’.

Adding a Physician as a LCSR Participant
All physician names that you selected will also appear beneath Question 2, ‘Participating Physicians’ on the LCSR’s Registration Information page.

![Participating Physicians](image)

You can remove a physician’s association with LCSR by clicking the Remove link next to his or her name on the “Participating Physicians” list. The physician will remain in the NRDR ‘Manage Physician’ list, however, and LCSR forms previously entered for the physician will not be affected.

The ability to add and remove physicians is not available to Facility Users.

### 6.1.2. Adding or Removing Facility Users

You can add Facility Users who are authorized to perform data entry in LCSR by clicking the “Add Facility User” button.

!["Add Facility User" Button on the “Registration Information” Page](image)

Facility Users must exist in the user dictionary before you can add them as LCSR users. Refer to Section 6.3.1, “Adding Users”, in the NRDR User Guide for instructions on how to add users to the User Dictionary.

You can remove a Facility User’s association with LCSR by clicking the Remove link next to his or her name on the “Staff” list. The user will remain in the NRDR User Dictionary, however, and LCSR forms previously entered by the user will not be affected.

The ability to add and remove Facility Users is available to Facility Administrators and Registry Administrators only.

If you want to add or remove Facility Administrators or Registry Administrators, you must do so in the NRDR User Dictionary. Refer to the NRDR User Guide, Section 6.3, “User Dictionary”, for additional information.

### 7. GLOSSARY

**ACR** American College of Radiology

**Case** A set of forms related to one exam. A case includes a Case Registration form and Exam form.
CT  Computed Tomography

Facility Administrator
The person performing the NRDR registration process. The Facility Administrator has access to certain administrative functions that are unavailable to other staff members. Only one staff member at a facility may act as Facility Administrator. Refer to Section 4.2, “Facility Administrators”, in the NRDR User Guide, for additional information.

Facility User
A person designated by a Facility Administrator or Registry Administrator as having data entry functions for a specific registry. Refer to Section 4.4, “Facility Users”, in the NRDR User Guide, for additional information.

LCSR menu
A list of links that appears on the left side of the LCSR home page and other LCSR pages. LCSR pages are distinguished from pages belonging to other registries by the LCSR banner at the top of the page.

NPI  National Provider Identifier

NRDR  National Radiology Data Registry

Registry Administrator
A person designated by the Facility Administrator as having certain administrative functions for a specific registry. Refer to Section 4.3, “Registry Administrators”, in the NRDR User Guide, for additional information.

SSN  Social Security Number
APPENDIX 1

HOW TO CONVERT THE LCSR UPLOAD TEMPLATE TO A .TXT FILE

The NRDR LCSR has provided an ‘Upload Template for LCSR Record Layout’ as a suggested method for populating the required and optional data fields as described in Appendix 2 and 3 below. It is not required that you use this formatting tool. It is your responsibility to verify that the data contained in the resulting txt file are correct.

In order to convert an Upload Template file to the specifications required for a successful data flat file upload, detailed instructions have been provided here.

1. Click the Windows button on the bottom left of your screen. These steps will change your PC settings to insure that leading zeros in the Upload Template will be retained and that it will produce a pipe delimited .txt file.

2. Click Control panel
3. **Click Region and language**

![Region and language settings]

4. Click the drop down arrow for **Short Date** and change your setting to **MM/dd/yyyy** and click **Apply**. This new setting will insure that leading zeros will be retained in the Upload Template.

![Regional and Language date format settings]

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**June 29, 2017**
5. Next, go to **Additional settings**

6. In the **List separator** field, replace (comma) with | (vertical bar). *Do not use the drop down arrow.* Place your cursor in the field, delete the comma and insert the vertical bar Using the Shift + vertical bar key (see pic of key board for location of the vertical bar key)
7. **Click Apply, then OK**

![Image of Apply button]

8. **Open the Upload Template for LCSR Record Layout**, and save to your PC. In the example below, the downloaded template is named LCSR Upload Template and the file extension is `.csv`.

9. **Enter Data**: Complete each data field with patient exam data according to the Business Rules in Appendix 3. Make sure the first row of the Upload Template has a column header for each of the 84 columns, regardless of whether they are populated or not. Before entering data in the “Other ID” and “Medicare Beneficiary ID” columns, change the cell formats to “Text”.

10. When you have completed the data entry, save the file.

11. Find the file you just saved (ending with `.csv`) and right click over the file name (do not open the document) and manually delete the `.csv` letters which appear on the right-hand side of the dot (.) in the file name and replace it with `.txt`.
   a. File as `.csv`  
   ![LSR Upload Template.csv]
   b. File after converting to `.txt`  
   ![LSR Upload Template.txt]

12. If you cannot locate the file you just saved and you cannot see the file extension ending with `.csv`, the following instructions will display the file extension inorder to select the correct document. **Note:** Each version of Windows has a different set of steps to follow for showing the file extension. It would help to know the version of Windows your computer is using.
   **Below are instructions for Windows 7:**
   a) **Start Windows Explorer**
      ![Start Windows Explorer]
   b) **Click Organize.**
   c) **Click Folder and search options.**
d) Click the **View** tab.
e) Scroll down until you notice **Hide extensions for known file types**, un-check this by clicking the check box (To hide file name extensions, you will have to check this box).
f) Click **OK**

13. During the course of changing a file extension from `.csv` to `.txt`, you might receive a warning message like the one below. Please click YES to proceed. Once your document is in the `.txt` format, it can be uploaded to the LCSR.

If you have any difficulty performing the settings above, please contact your IT department to assist you with this process.

*Once your settings have been established, proceed to the file specifications in Appendix 2 and Business Rules for populating the template with content in Appendix 3.*

**Of note: the most common errors that occur during a flat file upload are:**

1. Incorrect document file name as specified in Appendix 2
2. Content within the template did not follow the Business Rules in Appendix 3

*Make certain each cell in the template has the correct permissible response:*
For example, the word ‘No’ does not meet the Business Rule requirements. All ‘No’ entries must be replaced with a capital letter ‘N’. All ‘Yes’ responses should be ‘Y’ and so on.
NRDR - LCSR Data File Specifications for Manual Upload (v1.2)

The LCSR allows you to upload lung cancer screen exam data in bulk using the manual upload function in the NRDR portal. You may use the pre-formatted Upload Template document to begin populating the fields discussed here and in Appendix 3. It is not required that you use the "Upload Template for LCSR Record Layout" however it is available for your use.

The LCSR Exam data file specifications are listed as follows:

1. The data file is a delimited text file.
2. The maximum recommended file size is 40 M.
3. The filename extension is ‘.txt’.
4. The file naming convention is lcsr_exam_yyyyMMdd-hrmiss;  yyyymmdd-hrmiss is the time stamp at the time the file is created, where
   - yyyy is the 4 digit year,
   - mm is the 2 digit month,
   - dd is the 2 digit day,
   - hr is the 2 digit hour in military time format,
   - mi is the 2 digit minute, and
   - ss is the 2 digit second

   Example: lcsr_exam_20160306-181224.txt

5. The data file must contain at least one record.
6. Each line must contain one and only one record; record delimiter is the CARRIAGE RETURN character followed by the LINE FEED character.
7. No header row (if you are using the template, the header row will display as a rejected record however the remaining patient data will be retained)
8. Each record must begin at the first position of a line.
9. Each record has 84 data elements.
10. Each data element must be positioned in the order specified below:

<table>
<thead>
<tr>
<th>Data element position</th>
<th>Data Element</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Exam Unique ID</td>
</tr>
<tr>
<td>2</td>
<td>Patient First Name</td>
</tr>
<tr>
<td>3</td>
<td>Patient Middle Name</td>
</tr>
<tr>
<td>4</td>
<td>Patient Last Name</td>
</tr>
<tr>
<td>5</td>
<td>Other ID</td>
</tr>
<tr>
<td>6</td>
<td>Refused To Answer SSN</td>
</tr>
<tr>
<td>7</td>
<td>Patient SSN</td>
</tr>
<tr>
<td>8</td>
<td>Refused Medicare ID</td>
</tr>
<tr>
<td>9</td>
<td>Medicare Beneficiary ID</td>
</tr>
<tr>
<td>10</td>
<td>Date Of Birth</td>
</tr>
<tr>
<td>11</td>
<td>Date Of Death</td>
</tr>
<tr>
<td>12</td>
<td>How Cause Was Determined</td>
</tr>
</tbody>
</table>

June 29, 2017
<table>
<thead>
<tr>
<th></th>
<th>Other Method Of Determining</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>Cause Of Death</td>
</tr>
<tr>
<td>14</td>
<td>Non Lung Cancer Cause</td>
</tr>
<tr>
<td>15</td>
<td>Death Within 30 Days</td>
</tr>
<tr>
<td>16</td>
<td>Patient Sex</td>
</tr>
<tr>
<td>17</td>
<td>Patient Race</td>
</tr>
<tr>
<td>18</td>
<td>Patient Ethnicity</td>
</tr>
<tr>
<td>19</td>
<td>Health Insurance</td>
</tr>
<tr>
<td>20</td>
<td>Smoking Status</td>
</tr>
<tr>
<td>21</td>
<td>Number Of Packs Year Smoking</td>
</tr>
<tr>
<td>22</td>
<td>Number Of Years Since Quit</td>
</tr>
<tr>
<td>23</td>
<td>Did Physician Provide Guidance</td>
</tr>
<tr>
<td>24</td>
<td>Doc Of Shared Dec Making</td>
</tr>
<tr>
<td>25</td>
<td>Patient Height</td>
</tr>
<tr>
<td>26</td>
<td>Patient Weight</td>
</tr>
<tr>
<td>27</td>
<td>Patient Other Comorbidities</td>
</tr>
<tr>
<td>28</td>
<td>Patient Other Comorbidities Spec</td>
</tr>
<tr>
<td>29</td>
<td>Cancer Related History</td>
</tr>
<tr>
<td>30</td>
<td>Cancer Related History Other Spec</td>
</tr>
<tr>
<td>31</td>
<td>Radiologist Reading NPI</td>
</tr>
<tr>
<td>32</td>
<td>Ordering Practitioner NPI</td>
</tr>
<tr>
<td>33</td>
<td>Ordering Practitioner First Name</td>
</tr>
<tr>
<td>34</td>
<td>Ordering Practitioner Last Name</td>
</tr>
<tr>
<td>35</td>
<td>Exam Date</td>
</tr>
<tr>
<td>36</td>
<td>Signs Or Symptoms Of Lung Cancer</td>
</tr>
<tr>
<td>37</td>
<td>Indication Of Exam</td>
</tr>
<tr>
<td>38</td>
<td>Modality</td>
</tr>
<tr>
<td>39</td>
<td>CT Scanner Manufacturer</td>
</tr>
<tr>
<td>40</td>
<td>CT Scanner Model</td>
</tr>
<tr>
<td>41</td>
<td>CTDIvol</td>
</tr>
<tr>
<td>42</td>
<td>DLP</td>
</tr>
<tr>
<td>43</td>
<td>Tube Current Time</td>
</tr>
<tr>
<td>44</td>
<td>Tube Voltage</td>
</tr>
<tr>
<td>45</td>
<td>Scanning Time</td>
</tr>
<tr>
<td>46</td>
<td>Scanning Volume</td>
</tr>
<tr>
<td>47</td>
<td>Pitch</td>
</tr>
<tr>
<td>48</td>
<td>Reconstructed Image Width</td>
</tr>
<tr>
<td>49</td>
<td>CT Exam Result Lung RADS</td>
</tr>
<tr>
<td>50</td>
<td>Reason For Recall</td>
</tr>
<tr>
<td>51</td>
<td>CT Exam Result Modifier S</td>
</tr>
<tr>
<td>52</td>
<td>What Were The Other Findings</td>
</tr>
<tr>
<td>54</td>
<td>Mass Spec</td>
</tr>
<tr>
<td>----</td>
<td>-----------</td>
</tr>
<tr>
<td>55</td>
<td>Other Int Lung Disease</td>
</tr>
<tr>
<td>56</td>
<td>Other Int Lung Disease Spec</td>
</tr>
<tr>
<td>57</td>
<td>CT Exam Result Modifier C</td>
</tr>
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<td>58</td>
<td>Years Since Prior Diagnosis</td>
</tr>
<tr>
<td>59</td>
<td>Education Level</td>
</tr>
<tr>
<td>60</td>
<td>Education Level Other Spec</td>
</tr>
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<td>Radon Exposure</td>
</tr>
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<td>62</td>
<td>Occupational Exposures</td>
</tr>
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<td>63</td>
<td>History Of Cancers</td>
</tr>
<tr>
<td>64</td>
<td>Other_Smoking Cancers Spec</td>
</tr>
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<td>65</td>
<td>Lung Cancer In First Deg Rel</td>
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<tr>
<td>66</td>
<td>Lung Cancer Other First Deg Rel</td>
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<td>68</td>
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<td>69</td>
<td>Second Hand Smoke Exposure</td>
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<td>70</td>
<td>Date Of Follow-Up</td>
</tr>
<tr>
<td>71</td>
<td>Follow-Up Diagnostic</td>
</tr>
<tr>
<td>72</td>
<td>Follow-Up Diagnostic Other Spec</td>
</tr>
<tr>
<td>73</td>
<td>Tissue Diagnosis</td>
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<td>74</td>
<td>Tissue Diagnosis Method</td>
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<td>75</td>
<td>Location From Sample Obtained</td>
</tr>
<tr>
<td>76</td>
<td>Location Other Spec</td>
</tr>
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<td>77</td>
<td>Histology</td>
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<td>Histology Non-Small Cell LC</td>
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<td>79</td>
<td>Other Non-Small Cell LC Histology Spec</td>
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<td>Stage Clinical Or Pathologic</td>
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<tr>
<td>81</td>
<td>Overall Stage</td>
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<td>82</td>
<td>T Status</td>
</tr>
<tr>
<td>83</td>
<td>N Status</td>
</tr>
<tr>
<td>84</td>
<td>M Status</td>
</tr>
</tbody>
</table>

11. Each data element is separated by the vertical bar character ‘|’; if there is no answer for a data element you should write the ‘|’ character immediately after the previous ‘|’. Do not use the SPACE character to substitute for no data value.

Example: Let’s use the first nine data elements as an example. Suppose we only have data for Patient first name, Patient last name, Patient Medicare id, and we refuse to provide patient SSN, then the data should be written as:

|John|Doe|Y|N|A-123456|

12. The data mapping and business rules are outlined in Exam and Follow-up sections of the ACR-LCSR-Data-Mapping Appendix 3. The Transaction Header section does not apply to the data file used by the Data File Upload process; it is used by the Web Services interface.
Explanations on the Valid values/format, Mappings/definitions and Business rules columns:

a. **Acceptable values and data format.** For most data elements the LCSR validates their values and/or formats. Refer to the **Valid values/format** column on [ACR-LCSR-Data-Mapping](#) for the acceptable values and data formats.

   Examples:
   i. The element “Refused to provide patient’s social security number” accepts ‘Y’ or ‘N’ as a valid value. Any other value provided will result in an error and the file upload will not be successful.
   ii. “Patient Social Security Number” accepts only 9 digits in the nnn-nn-nnnn format.
   iii. “How cause of death was determined” accepts one value, the valid values are 1,2,3,4,5,6,or 8. The **Mappings/definitions** column on [ACR-LCSR-Data-Mapping](#) lists the options/text for each value.
   iv. “Number of packs-per year of smoking” accepts only whole numbers between 1 and 999.
   v. “Number of years since quit” accepts only whole numbers between 1 and 99.
   vi. All dates have to be in mm/dd/yyyy format.

b. **Data elements that accept more than one value.** If a data element accepts multiple answers, each value must be separated by the comma character ‘,’ in the data file. These data elements are indicated as “Select all that apply” under the **Mapping/definitions** column.

   Example:
   i. “Patient race” accepts multiple values. If a patient has the “American Indian” and “Alaska native” race, it should be written as:
      
      |1,2|

c. **Data dependency.** Some data elements need to be populated depending on a) whether another element is populated or b) the value of another element. These conditions are listed under **Business Rules** column on the [ACR-LCSR-Data-Mapping](#) Excel file.

   Examples:
   i. One of the patient identifiers must be provided: Other ID, Patient SSN, and Medicare Beneficiary ID.
   ii. “Patient Social Security Number” is required only if “Refused to provide patient’s social security number” has a value of ‘N’. This field has to be left blank if ”Refused to provide patient’s social security number” is ‘Y’.
   iii. If “Smoking status” is 1, 2 or 4, then “Number of packs-year of smoking” is required; otherwise “Number of packs-year of smoking” should be left blank.
   iv. If “Smoking status” is 2 , then “Number of years since quit” is required; otherwise “Number of years since quit” should be left blank.
   v. If “Follow-up diagnostic” is 4, 5 or 6, then “Tissue Diagnosis” is required. If Follow-up diagnostic value is 7, then “Tissue Diagnosis” is optional. Otherwise, “Tissue diagnosis” is not required.
   vi. If “How cause of death was determined” has a value 8 (Other), then “Other method of determining cause of death, specify” is required; otherwise, this element should be left blank.

d. **Optional data elements.** The data elements that are marked as “Optional” under the **Business Rules** column are not required for submission, that is, a record will not be rejected if an optional field is missing. However, if you do know them, we expect you to provide them. This expectation of complete data is specified in the participation agreement signed by all participating facilities.
13. The key identifier for an exam record is the exam date and patient Id (Other ID, Patient SSN or Medicare Beneficiary Id). If you want to update an already uploaded record you can submit subsequent record(s) with the same key identifier. The system will ignore data elements with no values in the subsequent records and will not clear the values uploaded earlier. To clear any values you will have to use the LCSR web form on the NRDR portal to manually remove them.

14. When an exam record is uploaded with data missing for one or more required or conditionally required data elements, warning messages are generated in the log file, the exam will still be created with an “In progress” status. You will have to use the LCSR web form on the NRDR portal to manually populate the missing data and then submit the exam.

In order to have a “complete” status on an exam record, you must submit the data elements marked as “Required” or conditionally required as indicated under the Business Rules column.

15. The relationship of Exam and Follow-up records is one-to-many. If you are submitting multiple follow-up records for an exam in the same data file, each follow-up record must occupy one row with the same key identifier on the exam record.
# APPENDIX 3

## NRDR - LCSR Data Mapping and Business Rules for Flat File Upload

<table>
<thead>
<tr>
<th>LCSR Data Element</th>
<th>Attribute</th>
<th>Format</th>
<th>Valid Values/format</th>
<th>Mappings/ Definitions</th>
<th>Business Rules</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Note: the data elements indicated as Required in this column are required to create a complete exam/follow-up record in LCSR. If you do not have values for the required elements you will receive warning messages but the exam record will still be created.</td>
</tr>
<tr>
<td>Exam Data (Required)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Exam_Unique_ID</td>
<td>Exam_unique_ID</td>
<td>string</td>
<td>N</td>
<td>max length is 50 characters</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Patient's first name</td>
<td>Patient_first_Name</td>
<td>string</td>
<td>N</td>
<td>max length is 45 characters</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Patient's middle name</td>
<td>Patient_middle_Name</td>
<td>string</td>
<td>N</td>
<td>max length is 45 characters</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Patient's last name</td>
<td>Patient_last_Name</td>
<td>string</td>
<td>N</td>
<td>max length is 45 characters</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Patient ID</td>
<td>Other_ID</td>
<td>string</td>
<td>We require a patient identifier; you can provide either the Other_ID, Patient_SSN or Medicare_Beneficiary_ID. see Business Rule</td>
<td>max length is 50 characters</td>
</tr>
<tr>
<td>6</td>
<td>Refused to provide patient's social security number</td>
<td>Refused_To_Answer_SSN</td>
<td>string</td>
<td>N</td>
<td>Y, N</td>
</tr>
</tbody>
</table>
### LCSR User Guide

<table>
<thead>
<tr>
<th></th>
<th>Field Name</th>
<th>Type</th>
<th>Description</th>
<th>Rule</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Patient Social Security Number</td>
<td>Patient_SSN</td>
<td>We require a patient identifier; you can provide either the Other_ID, Patient_SSN or Medicare_Beneficiary_ID.</td>
<td>If Refused_To_Answer_SSN is 'Y' then you must leave this field blank; if Refused_To_Answer_SSN is 'N' then you must provide Patient_SSN; One of the following patient identifiers must be provided: Other_ID, Patient_SSN, Medicare_Beneficiary_ID</td>
</tr>
<tr>
<td>8</td>
<td>Refused to provide patient's Medicare beneficiary ID</td>
<td>Refused_Medicare_ID</td>
<td>N, Y, N</td>
<td>Select one: Y - Yes; N - No</td>
</tr>
<tr>
<td>9</td>
<td>Medicare Beneficiary ID</td>
<td>Medicare_Beneficiary_ID</td>
<td>String with a maximum length of 12 characters</td>
<td>You must provide Medicare_Beneficiary_ID if this is for Medicare reimbursement. If Refused_Medicare_ID is 'Y' then you must leave this field blank; if Refused_Medicare_ID is 'N' then you must provide Medicare_Beneficiary_ID; One of the following patient identifiers must be provided: Other_ID, Patient_SSN, Medicare_Beneficiary_ID</td>
</tr>
<tr>
<td>10</td>
<td>Patient's date of birth</td>
<td>Date_Of_Birth</td>
<td>N, Format mm/dd/yyyy</td>
<td>Required; Cannot be a future date; must be =&lt; Date_Of_Death</td>
</tr>
<tr>
<td>11</td>
<td>Patient's date of death</td>
<td>Date_Of_Death</td>
<td>N, Format mm/dd/yyyy</td>
<td>Optional; Cannot be a future date; must be =&gt; Date_Of_Birth</td>
</tr>
<tr>
<td>12</td>
<td>How cause of death was determined</td>
<td>How_Cause_Was_Determined</td>
<td>N, 1,2,3,4,5,6,8</td>
<td>Select one: 1 - 'Autopsy Report'; 2 - 'Death Certificate'; 3 - 'Medical Record'; 4 - 'Physician'; 5 - 'Relative or Friend'; 6 - 'Social Security Death Index'; 8 - 'Other'</td>
</tr>
<tr>
<td>13</td>
<td>Other method of determining cause of death, specify</td>
<td>Other_Method_Of_Determining</td>
<td>N, Max length is 255 characters</td>
<td>Optional; If How_Cause_Was_Determined is 8, then Other_Method_Of_Determining is applicable; otherwise, this field should be left blank</td>
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<tr>
<td></td>
<td>Field Description</td>
<td>Data Type</td>
<td>Length</td>
<td>Valid Values</td>
</tr>
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<td>---</td>
<td>--------------------------------------------------------</td>
<td>------------</td>
<td>--------</td>
<td>--------------</td>
</tr>
<tr>
<td>14</td>
<td>Cause of death</td>
<td>string</td>
<td>N</td>
<td>1,2,9</td>
</tr>
<tr>
<td>15</td>
<td>Non lung-cancer cause, specify</td>
<td>string</td>
<td>N</td>
<td>max length is 255 characters</td>
</tr>
<tr>
<td>16</td>
<td>Invasive procedure within in the 30 days preceding date of death</td>
<td>string</td>
<td>N</td>
<td>N, Y, U</td>
</tr>
<tr>
<td>17</td>
<td>Patient sex</td>
<td>string</td>
<td>N</td>
<td>M,F,O,U</td>
</tr>
<tr>
<td>18</td>
<td>Patient race</td>
<td>array of number</td>
<td>N</td>
<td>1,2,3,4,5,6,9,10</td>
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<tr>
<td>19</td>
<td>Patient ethnicity (Hispanic origin)</td>
<td>string</td>
<td>N</td>
<td>0,1,8,9</td>
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<tr>
<td>20</td>
<td>Health insurance</td>
<td>array of number</td>
<td>N</td>
<td>1,2,3,4,5</td>
</tr>
<tr>
<td>21</td>
<td>Smoking status</td>
<td>string</td>
<td>N</td>
<td>1,2,3,4,9</td>
</tr>
<tr>
<td>22</td>
<td>Number of packs-year of smoking</td>
<td>number</td>
<td>N</td>
<td>between 1 and 999</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>23</td>
<td>Number of years since quit</td>
<td>Number_Of_Years_Since_Quit</td>
<td>number</td>
<td>N</td>
</tr>
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<td></td>
<td></td>
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</tr>
<tr>
<td>24</td>
<td>Did physician provide smoking cessation guidance to patient?</td>
<td>Did_Philosophy_Produce_Guidance</td>
<td>string</td>
<td>N</td>
</tr>
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<td>25</td>
<td>Is there documentation of shared decision making?</td>
<td>Doc_Of_Shared_Dec_Making</td>
<td>string</td>
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<td>Patient height (inches)</td>
<td>Patient_Height</td>
<td>string</td>
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<td>Patient weight (lbs)</td>
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</tr>
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<td>28</td>
<td>Other comorbidities listed on patient record that limit life expectancy</td>
<td>Patient_Other_Comorbidities</td>
<td>array of number</td>
<td>N</td>
</tr>
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<td>Other comorbidities, other specify</td>
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<td>string</td>
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<td></td>
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<td>Cancer related history</td>
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<td>Radiologist_Reading_NPI</td>
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<td>Ordering_Practitioner_NPI</td>
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<td>Ordering practitioner first name</td>
<td>Ordering_Practitioner_First_Name</td>
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</tr>
<tr>
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<td>Ordering practitioner last name</td>
<td>Ordering_Practitioner_Last_Name</td>
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<tr>
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<td>Exam date</td>
<td>Exam_Date</td>
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<td>37</td>
<td>Signs or symptoms of lung cancer</td>
<td>Signs_Or_Symptoms_Of_Lung_Cancer</td>
<td>string</td>
<td>N</td>
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<td>Indication of exam</td>
<td>Indication_Of_Exam</td>
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<td>CT scanner manufacturer</td>
<td>CT_Scanner_Manufacturer</td>
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<td>CT scanner model</td>
<td>CT_Scanner_Model</td>
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<td></td>
<td>Required</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>42</td>
<td>CTDIvol (mGy)</td>
<td>CTDIvol</td>
<td>string</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td>Required</td>
<td></td>
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<td></td>
</tr>
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<td></td>
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</tr>
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<td>43</td>
<td>DLP (mGy*cm)</td>
<td>DLP</td>
<td>string</td>
<td>N</td>
</tr>
<tr>
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<td>Required</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>44</td>
<td>Tube current-time (mAs)</td>
<td>Tube_Current_Time</td>
<td>string</td>
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</tr>
<tr>
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</tr>
<tr>
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<td>Tube voltage (kV)</td>
<td>Tube_Voltage</td>
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</tr>
<tr>
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<td>Optional</td>
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</tr>
<tr>
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<td>Scanning time (s)</td>
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<td>Reconstructed image width (nominal width of reconstructed image along z-axis) (mm)</td>
<td>Reconstructed_Image_Width</td>
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<td>CT exam result by Lung-RADS category</td>
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<td>CT_Exam_Result_Modifier_S</td>
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<td>What were the other findings</td>
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<td>0,1,2,3,4</td>
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<td>Mass, specify</td>
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<td>Other interstitial lung disease</td>
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<td>Other interstitial lung disease, specify</td>
<td>Other_Int_Lung_Disease_Spec</td>
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<td>Prior history of lung cancer - CT exam result modifier C</td>
<td>CT_Exam_Result_Modifier_C</td>
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<td>Year since prior diagnosis of lung cancer</td>
<td>Years_Since_Prior_Diagnosis</td>
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<td>60</td>
<td>Education level, other</td>
<td>Education_Level_Other_Spec</td>
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<td>61</td>
<td>Radon exposure - documented high exposure levels</td>
<td>Radon_Exposure</td>
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<td>Occupational exposures to agents that are identified specifically as carcinogens targeting the lungs</td>
<td>Occupational_Exposures</td>
<td>array of number</td>
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<td>62</td>
<td>History of cancers that are associated with an increased risk of developing a new primary lung cancer</td>
<td>History_Of_Cancers</td>
<td>array of number</td>
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<td>History of cancers that are associated with an increased risk of developing a new primary lung cancer - other smoking-related cancers, specify</td>
<td>Other_Smoking_Cancers_Spec</td>
<td>string</td>
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<td>64</td>
<td>Lung cancer in first-degree relative (mother, father, sister, brother, daughter or son with history of lung cancer)</td>
<td>Lung_Cancer_In_First_Deg_Rel</td>
<td>string</td>
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<td>Family history of lung cancer, other than first-degree relative</td>
<td>Lung_Cancer_Other_First_Deg_Rel</td>
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<td>66</td>
<td>COPD</td>
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<td>string</td>
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<td>67</td>
<td>Pulmonary fibrosis</td>
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<td>68</td>
<td>Second hand smoke exposure</td>
<td>Second_Hand_Smoke_Exposure</td>
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<td>69</td>
<td>Follow-up Data (optional)</td>
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<td>70</td>
<td>Date of follow-up</td>
<td>Date_Of_Follow_Up</td>
<td>string</td>
<td>Y</td>
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| Follow-up diagnostic | Follow_Up_Diagnostic | string | Y | 1,2,3,4,5,6,7 | Select one:  
1 - 'Low dose chest CT';  
2 - 'Routine chest CT';  
3 - 'PET/CT';  
4 - 'Bronchoscopy';  
5 - 'Non-surgical biopsy';  
6 - 'Resection';  
7 - 'Other, specify' | Required |
|----------------------|---------------------|--------|---|----------------|--------------------------------------------------|------------------|
| Follow-up diagnostic other, specify | Follow_Up_Diagnostic_Other_Spec | string | N | max length is 255 characters | Select one:  
1 - 'Benign';  
2 - 'Malignant - invasive lung cancer';  
3 - 'Malignant - Minimally invasive lung cancer';  
4 - 'Malignant - NON-lung cancer';  
5 - 'Malignant - adenocarcinoma in situ';  
6 - 'Premalignancy - atypical adenomatous hyperplasia';  
7 - 'Non-diagnostic' If Follow_Up_Diagnostic is 4, 5 or 6 then Tissue_Diagnosis is required;  
If Follow_Up_Diagnostic is 7 then Tissue_Diagnosis is optional;  
otherwise, this field should be left blank | |
| Tissue diagnosis | Tissue_Diagnosis | string | N | 1,2,3,4,5,6,7 | Select one:  
1 - 'Percutaneous';  
2 - 'Bronchoscopic';  
3 - 'Surgical' If Tissue_Diagnosis is populated, then Tissue_Diagnosis_Method is required;  
otherwise, this field should be blank | |
| Location from which sample was obtained | Location_From_Sample_Obtained | string | N | 0,1,2,3,4,5,6,7,8,9,10,11 | Select one:  
0 - 'Left Hilum';  
1 - 'Lingula of the Lung';  
2 - 'Left Lower Lobe of Lung';  
3 - 'Left Upper Lobe of Lung';  
4 - 'Right Hilum';  
5 - 'Right Lower Lobe of Lung';  
6 - 'Right Middle Lobe of Lung';  
7 - 'Right Middle and Right Lower Lobes of Lung';  
8 - 'Right Upper and Right Middle Lobes of Lung';  
9 - 'Right Upper Lobe of Lung';  
10 - 'Other';  
11 - 'Unknown' If Tissue_Diagnosis is populated, then Location_From_Sample_Obtained is required;  
otherwise, this field should be blank | |
<table>
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<th></th>
<th>Location other, specify</th>
<th>Location_Other_Spec</th>
<th>string</th>
<th>N</th>
<th>max length is 255 characters</th>
<th>If Location_From_Sample_Obtained is 10, then Location_Other_Spec is required; otherwise, this field should be left blank</th>
</tr>
</thead>
<tbody>
<tr>
<td>76</td>
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<td>77</td>
<td>Histology</td>
<td>Histology</td>
<td>string</td>
<td>N</td>
<td>1,2,3,4</td>
<td>Select one: 1 - 'Non-small cell lung cancer'; 2 - 'High grade neuroendocrine tumor (small cell lung cancer)'; 3 - 'Low grade neuroendocrine tumor (carcinoid)'; 4 - 'Intermediate grade neuroendocrine tumor (Atypical carcinoid)'; If Tissue_Diagnosis is 2, 3, or 5 then, Histology is required; If Tissue_Diagnosis is 4 then, Histology is applicable but optional; otherwise, this field should be blank</td>
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<td>78</td>
<td>Histology - Non-small cell lung cancer</td>
<td>Histology Non_Small_Cell_LC</td>
<td>string</td>
<td>N</td>
<td>1,2,3,4,5,6</td>
<td>Select one: 1 - 'Invasive adenocarcinoma'; 2 - 'Squamous cell carcinoma'; 3 - 'Adenosquamous cell carcinoma'; 4 - 'Undifferentiated or poorly differentiated carcinoma'; 5 - 'Large cell carcinoma'; 6 - 'Other, specify'</td>
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<td>79</td>
<td>Other non-small cell lung cancer histology, specify</td>
<td>Other_Non_Small_Cell_LC_Histology_Spec</td>
<td>string</td>
<td>N</td>
<td>max length is 255 characters</td>
<td>If Histology_Non_Small_Cell_LC is 6, then Other_Non_Small_Cell_LC_Histology_Spec is required; otherwise, this field should be left blank</td>
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<td>80</td>
<td>Stage - Clinical or pathologic?</td>
<td>Stage_Clinical_or_Pathologic</td>
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<td>1,2,9</td>
<td>Select one: 1 - 'Clinical'; 2 - 'Pathologic'; 9 - 'Unknown'</td>
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<td>Overall stage</td>
<td>Overall_STAGE</td>
<td>string</td>
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<td>IA,IB,IIA,IIIB,IIIA,IV, Unknown</td>
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<td>82</td>
<td>T status</td>
<td>T_Status</td>
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<td>TX,T1a,T1b,T2a,T2b,T3,T4,99</td>
<td>Select one: Tx, T1a, T1b, T2a, T2b, T3, T4, 99; Optional &amp; Conditional if Tissue_Diagnosis is populated then T_Status is applicable; otherwise, this field should be blank</td>
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<td>N status</td>
<td>N_Status</td>
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<td>Select one: NX, N0, N1, N2, N3; Optional if Tissue_Diagnosis is populated then N_Status is applicable; otherwise, this field should be blank</td>
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<td>84</td>
<td>M status</td>
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<td>MX,M0,M1a,M1b</td>
<td>Select one: MX, M0, M1a, M1b, M1c; Optional if Tissue_Diagnosis is populated then M_Status is applicable; otherwise, this field should be blank</td>
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