
The American College of Radiology

Lung Cancer Screening Registry (LCSR)

User Guide

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American College of Radiology
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LCSR User Guide

Revisions

Date	Description of Revisions
September 2, 2015	Original issue
February 1, 2016	4.1.5 Replaced 'Canceling a Case' with current instructions and screen shots
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. Modified Appendix 1. Deleted Excel document language. Inserted additional .csv and .txt language.
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:

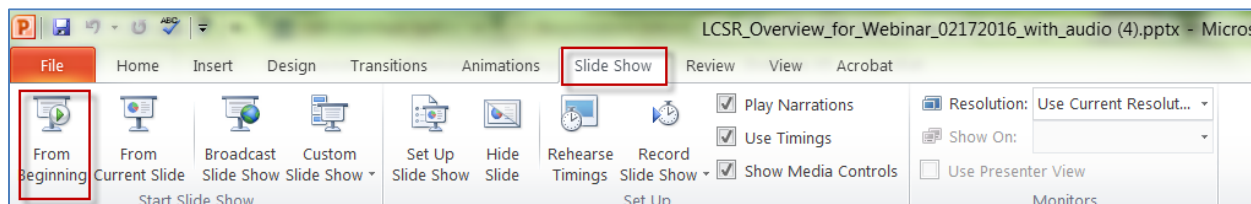
1. Case Registration Form
2. Exam Form

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.





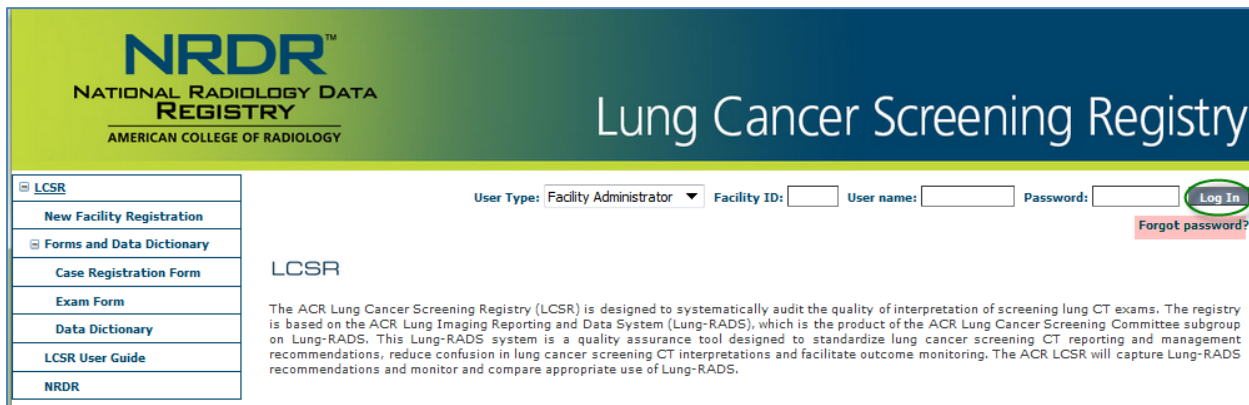
Login

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.



LCSR Banner and Menu

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.

*Patient SSN ?

None/Refused to answer:
☒ Refused to provide SSN
☐ SSN available

-**-*

*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.



The screenshot shows a form field labeled "*Medicare Beneficiary ID" with a question mark icon. To the right of the field is a section titled "None/Refused to answer:" containing two radio buttons: "Yes" (which is selected) and "No". A red arrow points from the "Yes" radio button back to the Medicare Beneficiary ID field. Below the radio buttons is an empty text input box.

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.

LCSR Case Registration Form			
Facility ID Number 	100853	Registry Case Number 	
Case Registration Date 	<input type="text"/>  (mm/dd/yyyy)		
1. Patient Information			
<div>  Search for existing patient </div>			

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.

<div>  Search for existing patient </div>	
<input type="radio"/> SSN#	<input type="text"/> ***-**-****
<input type="radio"/> Medicare Beneficiary ID	<input type="text"/>
<input type="radio"/> Other Identification 	<input type="text"/>
<div> <div>Find</div> <div>Reset</div> </div>	

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.

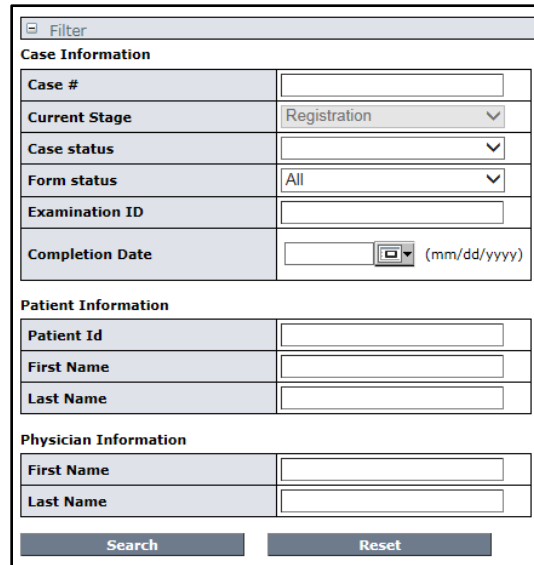
To edit a case Registration form, you must select the Registration link on the side menu. To access the Exam form, you must select the Exam link on the side menu. Follow the remaining instructions to edit the existing form.







To edit a registration form:

1. Click the “Registration” link in the LCSR menu.

- Click the  button on the search bar, next to “Filter”. The following box appears:



The form is titled "Filter" and contains three sections: Case Information, Patient Information, and Physician Information. Each section has several input fields and dropdown menus. At the bottom are "Search" and "Reset" buttons.

Case Information	
Case #	<input type="text"/>
Current Stage	Registration 
Case status	
Form status	All 
Examination ID	<input type="text"/>
Completion Date	<input type="text"/>  (mm/dd/yyyy)

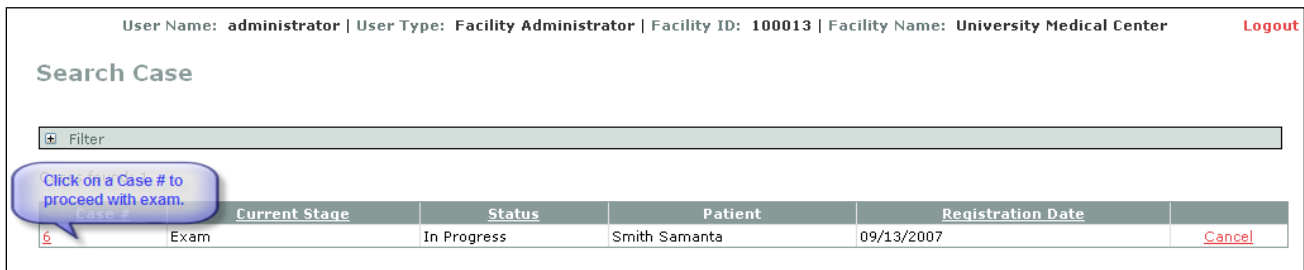
Patient Information	
Patient Id	<input type="text"/>
First Name	<input type="text"/>
Last Name	<input type="text"/>

Physician Information	
First Name	<input type="text"/>
Last Name	<input type="text"/>

Search Reset

Case Registration Search Filter

- 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.
- 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.



The page shows the user's login information at the top: User Name: administrator | User Type: Facility Administrator | Facility ID: 100013 | Facility Name: University Medical Center. A "Logout" link is on the right. Below the header is a "Search Case" section with a "Filter" button. A table displays the search results with columns: Case #, Current Stage, Status, Patient, Registration Date, and a "Cancel" link. A callout bubble points to the "Case #" column header with the text "Click on a Case # to proceed with exam."

Case #	Current Stage	Status	Patient	Registration Date	
6	Exam	In Progress	Smith Samanta	09/13/2007	Cancel

Case Registration Search Results

- 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.

7A12. *CT scanner:	Manufacturer	GE	GE - Lightspeed
	Model	Lightspeed	

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'

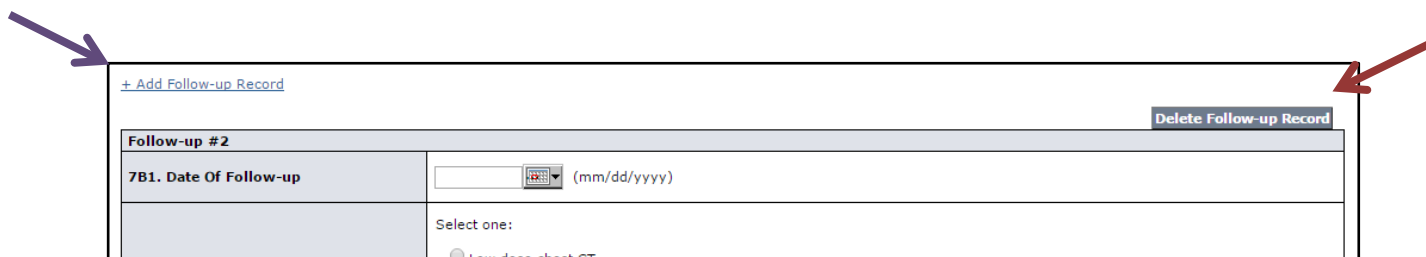
A follow-up record may be added for an exam at any time during the year between screening exams. If more than one exam form exists for a patient, enter the follow-up record on the most recent exam form whose exam date is less than or equal to the date of follow-up.

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":

7. LCSCPR Exam	
	A. General
	B. Follow-up within 1 year
	C. Additional Risk Factors

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.



The screenshot shows a form titled "Follow-up #2". At the top left is a blue link "+ Add Follow-up Record" with a purple arrow pointing to it. At the top right is a grey button "Delete Follow-up Record" with a red arrow pointing to it. Below the title bar, there is a section labeled "7B1. Date Of Follow-up" with a date input field and a calendar icon, followed by the text "(mm/dd/yyyy)". Below this is a "Select one:" dropdown menu. At the bottom left, there is a small link "Low dose chest CT".

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 characters 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.

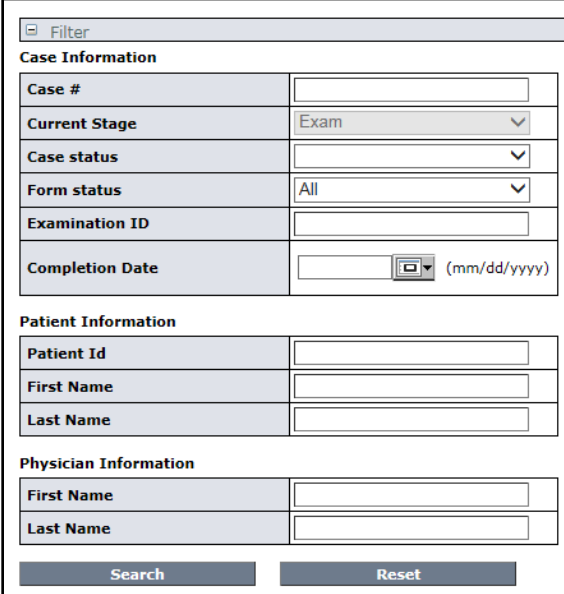
If you end your session without clicking the “Save” button, or without correcting errors after clicking the “Submit” button, your entries will be lost.

!! 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:



The image shows a 'Filter' dialog box with a title bar containing a close button and the text 'Filter'. The dialog is divided into three sections: 'Case Information', 'Patient Information', and 'Physician Information'. Each section contains several input fields. 'Case Information' includes 'Case #', 'Current Stage' (a dropdown menu showing 'Exam'), 'Case status' (a dropdown menu), 'Form status' (a dropdown menu showing 'All'), 'Examination ID', and 'Completion Date' (a date picker showing 'mm/dd/yyyy'). 'Patient Information' includes 'Patient Id', 'First Name', and 'Last Name'. 'Physician Information' includes 'First Name' and 'Last Name'. At the bottom of the dialog are two buttons: 'Search' and 'Reset'.

Case Information	
Case #	<input type="text"/>
Current Stage	Exam
Case status	
Form status	All
Examination ID	<input type="text"/>
Completion Date	<input type="text"/> (mm/dd/yyyy)

Patient Information	
Patient Id	<input type="text"/>
First Name	<input type="text"/>
Last Name	<input type="text"/>

Physician Information	
First Name	<input type="text"/>
Last Name	<input type="text"/>

Search Reset

Form Search Filter

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”.

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

User Name: firstlastname | User Type: Facility Administrator | Facility ID: 108313 | Facility Name: My Facility Name Logout

Search Case

Filter

Cases found: 1

Case #	Current Stage	Status	Patient	Registration Date
27	Exam	Completed	Jones Sally	07/14/2015

Click on a Case # to proceed with exam.

Search Results

- 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.

LCSR

Forms and Data Dictionary

Case Registration Form

Exam Form

Data Dictionary

Data Collection

Data File Process Status

Registration

Exam

Registry Management

Registration Information

Reports

Accrual

Case Status

Case Detail

LCSR Data Export

Transaction Status

LCSR User Guide

NRDR

Search Case

Filter

Cases found: 1

Case #	Current Stage	Status
28419	Registration	In Progress

LCSR Case List Table

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.

LCSR User Guide

Of Note: Additional edits that have been made to a form between reporting cycles will be reflected in the next report.

LCSR Case Registration Form	
Facility ID Number	<input type="text"/> Registry Case Number
Case Registration Date	<input type="text"/> (mm/dd/yyyy)
1. Patient Information	
Patient ID	<input type="text"/> (auto filled)
*Patient SSN	None/Refused to answer: <input type="radio"/> Refused to provide SSN <input checked="" type="radio"/> SSN available

LCSR Case Registration Form

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.

Please enter a comment giving a reason for the change:
<input type="text"/>
<input type="button" value="History"/> <input type="button" value="Save"/> <input type="button" value="Submit"/>

Field for Entering Change Description

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

<input type="text"/>

Save and Submit Options

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.

*Patient SSN ⓘ	None/Refused to answer: <input checked="" type="radio"/> Refused to provide SSN <input type="radio"/> SSN available <input type="text" value="***-**-****"/>
*Medicare Beneficiary ID ⓘ	None/Refused to answer: <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="text"/>
Other Identification ⓘ	<input type="text"/>

Patient SSN, MBI and Other ID

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.

Lung Exam Form History		
Date Modified	Modified By	Comment
7/14/2015 11:39:31 AM	Last First	Initial submission
7/14/2015 11:42:01 AM	Last First	Updated patient history from initial indication.
7/14/2015 11:45:58 AM	Last First	Follow up on Patient
Back		

History Display

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.

- LCSR
 - Forms and Data Dictionary
 - Case Registration Form
 - Exam Form
 - Data Dictionary
 - Data Collection
 - Register New Case
 - Registration
 - Exam

LCSR Menu Options

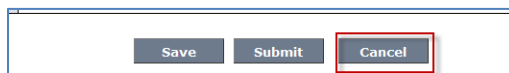
LCSR User Guide

- 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.*

Case #	Current Stage	Status	Patient	Registration Date
17695	Registration	In Progress	Forest Enchanted	01/28/2016
5541	Exam	Completed	OBrien Victoria	12/08/2015

Registration: Case Record List

Click 'Cancel' to change the 'In Progress' status to 'Canceled' status.



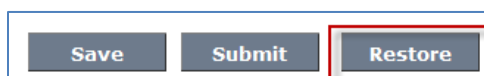
Registration Form 'In Progress' Showing "Cancel" Button

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'.

Case #	Current Stage	Status	Patient	Registration Date
17695	Registration	Cancelled	Forest Enchanted	01/28/2016
5541	Exam	Completed	OBrien Victoria	12/08/2015

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

Case #	Current Stage	Status	Patient	Registration Date
17725	Exam	In Progress	Case Test	02/02/2015
17695	Registration	Cancelled	Forest Enchanted	01/28/2016
5541	Exam	In Progress	OBrien Victoria	12/08/2015

Exam: Case Record List with In-Progress Status Record

- 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:



LCSR Menu Options

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

- Click **Choose File** to select your data file
- Click **Upload**

LCSR Upload Data page

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

- 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'.

Upload Status								
<ul style="list-style-type: none"> Successful – The file was successfully uploaded. Valid records, if any, have been added to the database. Pending – The file was successfully uploaded, but records from the file have not yet been added to the database. Rejected – The file could not be uploaded. Cancelled by user – The upload was cancelled by the user. Load failure – The file was successfully uploaded, but valid records from the file could not be added to the database. 								
Filename	File Received	File Loaded	Status	# of records in file	# of records rejected	# of records added	# of records updated	Message
100853_lcsr_exam_20160721-153104.txt	07/21/2016 16:03:24		Rejected	2	2	0	0	All records were invalid. Download Log File
100853_lcsr_exam_20160721-153103.txt	07/21/2016 15:47:40	07/22/2016 03:50:28	Successful	2	1	1	0	Delete Data File Download Log File Show Log File

- 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.

```

100853_lcsr_exam_20160721-153103_log.txt - Notepad
File Edit Format View Help
# Records: 2
# Valid: 1
# Invalid: 1
Record|Status|ExamUniqueID|PatientFName|PatientMName|PatientLName|OtherID|RefusedToAnswerSSN|PatientSSN|RefusedMedicareID|MedicareID|DateOfBirth|DateOfDeath|HowCauseWasDetermined|OtherID
1|Valid||Victoria||Obrien|12345|Y|||||||L3008:Warning. Date_Of_Birth is required for completing an exam record (Registration stage)|
1|Valid||Victoria||Obrien|12345|Y|||||||L3008:Warning. Date_Of_Birth is required for completing an exam record (Exam stage)|
2|Invalid|Invalid Record - 84 entries expected, 1 read.|||
2|Invalid|Invalid Record - 84 entries expected, 1 read.|||

```

Download Log File - Sample

LCSR File Validation Log - Google Chrome

The American College of Radiology [US] | https://ndr.acr.org/Portal/Parts/LungParts/ShowLungFileValidationLog.aspx?FileName=100853_lcsr_exam_20160721-153103.txt

File Name: 100853_lcsr_exam_20160721-153103.txt
 # Records: 2
 # Valid: 1
 # Invalid: 1

Zoom: 125%
Reset to default

Record	Status	ExamUniqueID	PatientFName	PatientMName	PatientLName	OtherID	RefusedToAnswerSSN	PatientSSN	RefusedMedicareID	MedicareID	DateOfBirth	DateOfDeath	HowCauseWasDetermined	OtherID
1	Valid		Victoria		Obrien	12345	Y							
1	Valid		Victoria		Obrien	12345	Y							
2	Invalid	Invalid Record - 84 entries expected, 1 read.												
2	Invalid	Invalid Record - 84 entries expected, 1 read.												

Show Log File - sample

- 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.

The screenshot displays the LCSR Search Case interface. On the left is a navigation sidebar with the following items: LCSR, Forms and Data Dictionary (Case Registration Form, Exam Form, Data Dictionary), Data Collection (Upload Data, Data File Process Status, Register New Case, Registration, Exam), Registry Management (Registration Information), Reports (Accrual, Case Status, Case Detail, Aggregate Reports), and LCSR Data Export. The main content area is titled 'Search Case' and includes a 'User Name: Vol' indicator. It features a 'Filter' button (highlighted with a red arrow) and three sections: Case Information (with fields for Case #, Current Stage, Case status, Form status, Examination ID, and Completion Date), Patient Information (with fields for Patient Id, First Name, and Last Name), and Physician Information (with fields for First Name and Last Name). The 'Case status' dropdown menu is open, showing options: Registered, In Progress, Completed, and Cancelled (highlighted with a blue arrow). At the bottom are 'Search' and 'Reset' buttons.

LCSR Registration/Exam Search Case

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 nrd@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 nrd@acr.org requesting clarification.
3. When you are ready to begin testing, send an e-mail to nrd@acr.org to request credentials to our testing environment.

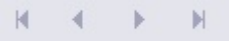

5. REPORTS

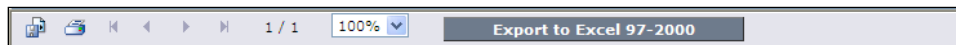
5.1. Reports Overview

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

 Reports
Accrual
Case Status
Case Detail
Aggregate Reports
LCSR Data Export
Transaction Status
LCSR User Guide
NRDR

- 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.

<div> 1 / 1 100% Export to Excel 97-2000 </div>						
ACR LCSR Accrual Report 7/23/2015						
NRDR Facility ID Number	Facility Name	Case Status				Facility Status
		Total # of cases Registered	Total # of cases Cancelled	Total # of cases In Progress	Total # of cases Completed	
108313	My Facility Name	2	0	1	1	
Total:		1	2	0	1	1

LCSR Accrual 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:

Case Status Report

LCSR Facility Number	100853
LCSR Facility Name	Public Facility
LCSR Facility Medicare Provider Number	All
Time Period	<input type="text"/> (mm/dd/yyyy) to <input type="text"/> (mm/dd/yyyy)
Case Number	<input type="text"/>
Patient SSN	***-**-****
Patient Name	<input type="text"/>
Case Status	All
Case Stage	All

Submit

Case Status Report Filter

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.

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Clipboard		Font		Alignment		Number		Styles											
A1																			
A		B		C		D		E		F		G		H		I			
1		ACR-LCSR Case Status Report																9/20/2016	
2		Facility Id		Facility Name		Case #		Patient ID		SSN or Other ID		Case		Date Case		Date Exam Form		Facility	
3		100853		Public Facility		46018		5770564		*****6789		C		05/05/16					
4		100853		Public Facility		94711		6523938		1226589		P		08/23/16					
5		100853		Public Facility		50711		5010909		123456789		P		05/18/16					
6		100853		Public Facility		94632		6523994				C		08/23/16					
7		100853		Public Facility		25091		5773007				C		02/26/16					
8		100853		Public Facility		50713		5010909		123456789		P		05/18/16					
9		100853		Public Facility		17725		5370939		1234		C		01/29/16					
10		100853		Public Facility		22605		5770526		12345678		P		02/19/16					
11		100853		Public Facility		22646		5770564		*****6789		C		02/19/16					
12		100853		Public Facility		5541		5010909		123456789		P		12/09/15					
13		100853		Public Facility		94568		6523938		1226589		C		08/23/16					
14		100853		Public Facility		80657		6285884		12345		P		07/21/16					
15		100853		Public Facility		46021		5770526		12345678		P		05/05/16					
16		100853		Public Facility		94578		6523948		1226589-2		C		08/23/16					
17		100853		Public Facility		107411		6581056		*****9999		P		09/19/16					
18		100853		Public Facility		17695		5368649		987654321		X							
19		100853		Public Facility		94549		6523921				C		08/23/16					

LCSR User Guide

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Date of	NRDR	Other	Ge	Dem	Ag	Date of	Date of	How	Caus	Invasiv	Hea	Sm	Num	Nu	Did	Is
12/07/2015	5010909	1234567	F	W	48	08/22/1967					PI	NS	U	U	0	0
01/02/2015	5370939	1234	F	U	54	03/04/1960					U	CS	30	U	U	1
01/01/2015	5770564		F	U	1	01/01/2014					U	FS	30	1	Y	Y
02/15/2016	5773007		M	U	49	07/14/1966					U	CS	35	Y	Y	1
05/04/2016	5770564		F	U	2	01/01/2014					CS	31	N	Y	75	##
08/25/2015	5010909	1234567	F	W	48	06/22/1967					PI					
01/01/2016	6523921		M	W	65	11/01/1950					MD	CS	35	Y	Y	66
01/01/2016																
01/01/2016																
01/15/2015	6523938	1226589	F	B	65	06/07/1949					PI	FS	44	2	N	67
01/20/2016	6523948	1226589	F	B	66	06/07/1949					FS	44	16	Y	Y	67
02/01/2016	6523994		O	NR	64	06/06/1951	08/21/2016	P	LC	Y	MD	CS	55	Y	Y	64

Case Detail Report Result- Sample

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.

Description	Upload date	
LCSR Report Fall 2015	07/27/2015	Download

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.

Name	Type	Compressed size	Passw
LungCaseReport.xls	Microsoft Excel 97-2003 ...	6 KB	No
LungExamReport.xls	Microsoft Excel 97-2003 ...	6 KB	No
LungFollowUpReport.xls	Microsoft Excel 97-2003 ...	4 KB	No

LCSR Data Export

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

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ACR LCSR Case Report 9/20/2016												
Refused to	Medical ID	Date of	Date of	How cause of	Cause of death	Invasive	Gender	Race	Hispanic Origin	Health Insurance	EducationLevel	Radon
Yes		06/22/1967					Female	White	Not Hispanic or	Private insurance,		
Yes		01/01/2016	01/10/2016	Relative or Friend	Cannot determine	Unknown	Other	Unknown	Unknown	Unknown		
Yes		03/04/1960					Female	Unknown	Unknown	Unknown		
Yes	987654321	01/04/2013	02/01/2014	Autopsy Report	Lung cancer	Unknown	Male	Unknown	Unknown	Unknown		
Yes		01/01/2014					Female	Unknown	Unknown	Unknown		
No	12345678	07/14/1966					Male	Unknown	Unknown	Unknown		
Yes		01/01/2014					Female	Unknown	Unknown	Unknown		
No	987654321	01/04/2013					Male	Unknown	Unknown	Unknown		
Yes		06/22/1967					Female	White	Not Hispanic or	Private insurance,		
Yes		06/22/1967					Female	White	Not Hispanic or	Private insurance,		

Lung Case Report - Result (Detail) Sample

ACR LCSR Exam Report 9/20/2016												
Cancer related history	Radiologist	Ordering	Signs or	Indication of	Modality	Scanner manufacturer	Scanner model	CTDIvol	DLP	Tube	Tube	Scanning Scannin
Pulmonary fibrosis,		99999999	No	Baseline	Low dose	Siemens	somatom volume	35.00	250.00			3.00
		12341234	No	Baseline	Low dose	Siemens	Definition AS +	35.00	500.00	2	2	60.00 22.00 22.000 9.00
Lymphoma,	17807660	12345678	Yes		Low dose	GE	Brightspeed	35.00	503.00			1.00
	17807660	99999999	No	Baseline	Low dose	Siemens	Somatom	35.00	350.00			2.50
	17807660	12345678	No	Annual	Low dose	Siemens	Somatom	35.01	350.00			1.50
	17807660	12345678	No	Baseline	Low dose	GE	Lightspeed	1.25	123.00			1.06
	17807660	12345678	No	Baseline	Low dose	GE	LightSpeedVCT	1.25	221.00			3.12
Bladder cancer,	34343434	12345678	No	Annual	Low dose	GE	Light Speed VCT	1.25	222.00			2.12
Bladder cancer,	17807660	66615487	No	Baseline	Low dose	GE	Light Speed VCT	2.25	122.00			1.22

Lung Exam Report - Result (Detail) Sample

ACR LCSR Exam Report 9/20/2016						
Follow-up diagnostic	Tissue diagnosis	Tissue diagnosis	Location from which sample was obtained	Histology	Histology - Non small cell Stage -	
Other: needle biopsy						
Routine chest CT						
Other: bronchoscopy no tissue sampling	Benign	Percutaneous				
Non-surgical biopsy	Benign	Bronchoscopic	Right Middle and Right Lower Lobes of			
Low dose chest CT						
PET/CT						
Bronchoscopy	Malignant - NON-lung cancer	Bronchoscopic	Left Lower Lobe of Lung	Non-small cell lung	Squamous cell	Clinical
Resection	Malignant - invasive lung cancer	Surgical	Left Lower Lobe of Lung	Non-small cell lung	Squamous cell	Pathologic
Routine chest CT						
Non-surgical biopsy	Malignant - adenocarcinoma in situ	Percutaneous	Right Upper Lobe of Lung,	High grade		Pathologic
Resection	Malignant - adenocarcinoma in situ	Surgical	Left Upper Lobe of Lung	Non-small cell lung	Invasive	Clinical

Lung Follow-up - Result (Detail) Sample

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 mutiple 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.

Download and upload link for physician list

If you have large number of physician list for your facility please download the excel template from [here](#) and **upload** it back using the upload button below.

Path to a file Browse...

- 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.

LCSR User Guide

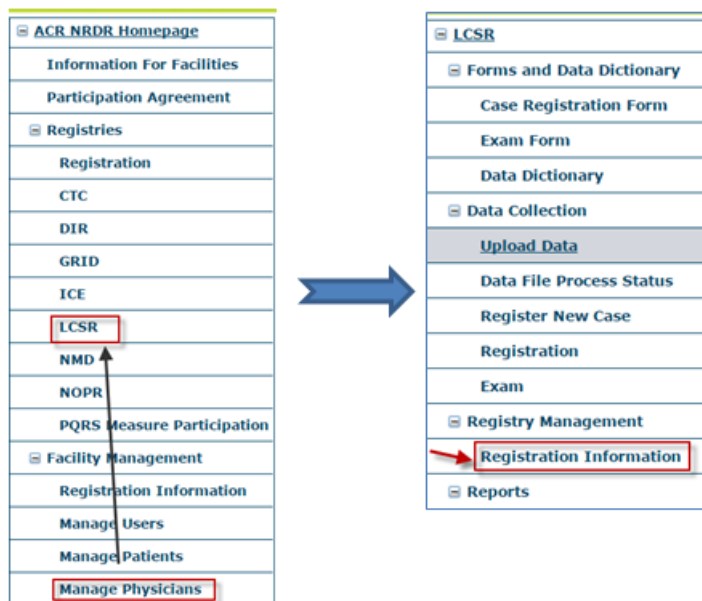
- i. *If the physician is NOT going to participate in the PQRS option then this step can be skipped.*
 - ii. *For the purposes of LCSR, this step is not needed and can be skipped.*
 - iii. *The fields within the red box do not apply to LCSR reading radiologists and can be skipped.*
- iii. Once the fields have been completed, click Submit. Then follow directions in Step 2.

Active	Pull down to select ▼
User Name	VObrien x (Valid characters: "A-Z", "a-z", "0-9")
First Name	
Last Name	
E-mail	
Confirm E-mail	
NPI	
Office Phone	
Office Fax	
Enroll physician for PQRS Portal?	<input checked="" type="radio"/> Yes <input type="radio"/> No
Is this physician a member of ACR?	<input type="radio"/> Yes <input checked="" type="radio"/> No
<input checked="" type="radio"/> Send PQRS Reporting invoice to Physician? <input type="radio"/> Send PQRS Reporting invoice to Facility Administrator?	
NMD-specific data	
Does the physician routinely read digital images (DR)?	N/A ▼
Approximate DR start date	<input type="text"/> <input type="button" value="x"/> ... (mm/dd/yyyy)
ABR PQI data	
Date of Birth	<input type="text"/> <input type="button" value="x"/> ... (mm/dd/yyyy)

Add physician

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.

Registration Information

Facility Id: 100853

1. NUMBER OF PARTICIPATING RADIOLOGISTS:

2. PARTICIPATING PHYSICIANS (who will perform LCSR procedures):

Add Physician

"Add Physician" Button on the LCSR "Registration Information" Page

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'.

Add physicians to registry

Last Name	First Name	UPIN	NPI	E-mail	
Cheng	Viola		1780766014	kslo@acr.org	<input checked="" type="checkbox"/>
Siebert	Derrick			derrick.siebert@aspirus.org	<input type="checkbox"/>
One	Test1		1234567890	one@test.com	<input checked="" type="checkbox"/>
Two	Test2		3434343434	two@test.com	<input type="checkbox"/>
Three	Test3		9999999999	three@test.com	<input type="checkbox"/>

Add

Adding a Physician as a LCSR Participant

LCSR User Guide

All physician names that you selected will also appear beneath Question 2, 'Participating Physicians' on the LCSR's Registration Information page.

Registration Information

Facility Id: 100853

1. NUMBER OF PARTICIPATING RADIOLOGISTS:

2. PARTICIPATING PHYSICIANS (who will perform LCSR procedures):

Last Name	First Name	UPIN	NPI	E-mail	Remove physician from registry
One	Test1		1234567890	one@test.com	Remove

[Add Physician](#)

Participating Physicians

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.

3. STAFF - who are allowed to enter data into the database. A username and password will be emailed to the staff person.

Last Name	First Name	E-mail	User Type	Remove staff from registry
Jones	Arnold	jonesa@facility.o	Facility Administrator	
User	Facility	user@facility.org	Facility User	Remove
Administrator	Registry	admin@facility.or	Registry Administrator	

[Add Facility User](#)

"Add Facility User" Button on the "Registration Information" Page

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

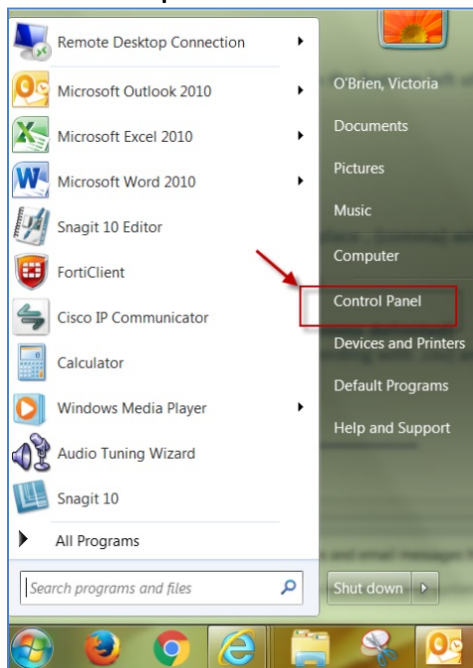
APPENDIX 1

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

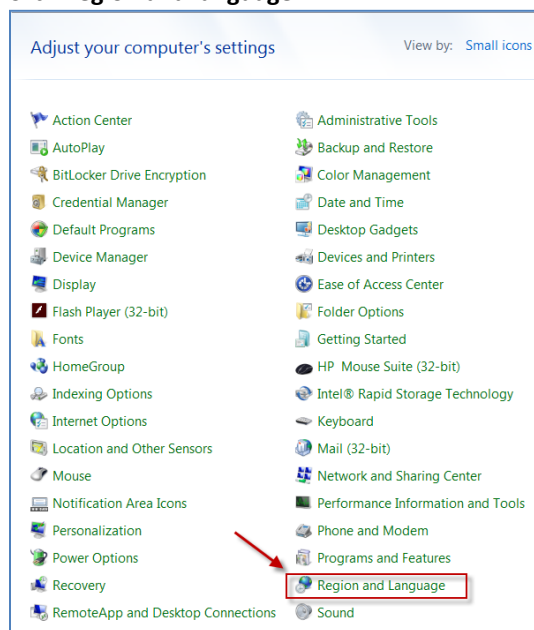
The NRDR LCSR has provided an '[Upload Template for LCSR Record Layout](#)' as a suggested method for populating the required and optional data fields as described in Appendix 2 and 3 below. It is not required that you use this formatting tool. **It is your responsibility to verify that the data contained 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.

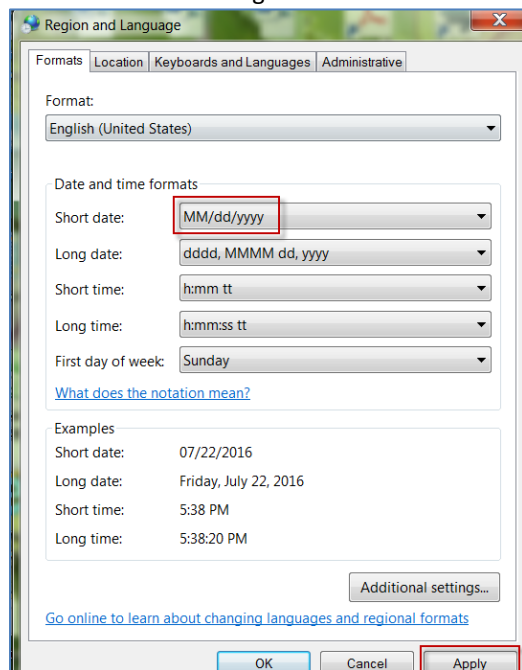
1. Click the Windows button on the bottom left of your screen. These steps will change your PC settings to insure that leading zeros in the Upload Template will be retained and that it will produce a pipe delimited .txt file.
2. Click **Control panel**



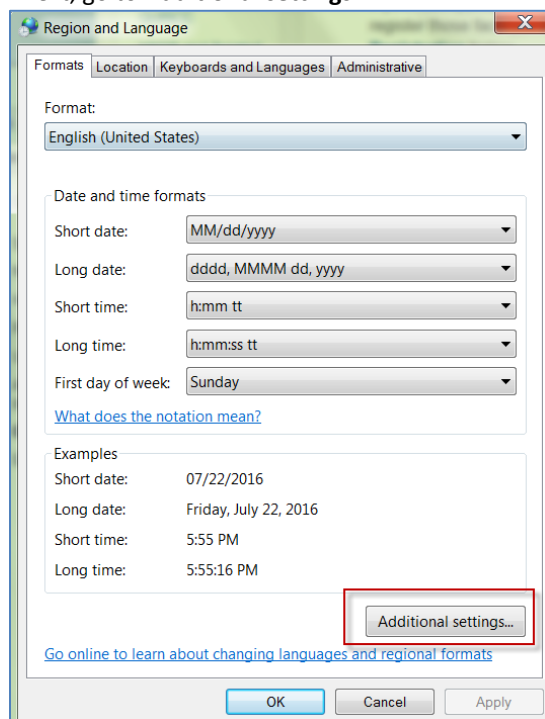
3. Click **Region and language**



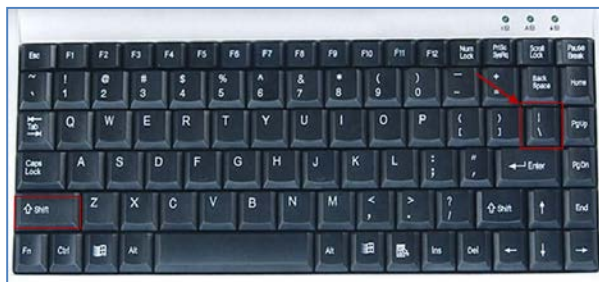
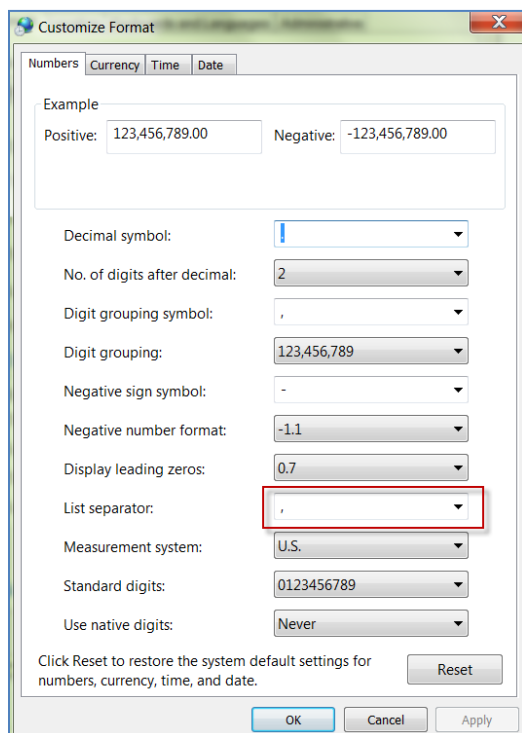
4. Click the drop down arrow for **Short Date** and change your setting to **MM/dd/yyyy** and click **Apply**. This new setting will insure that leading zeros will be retained in the Upload Template.



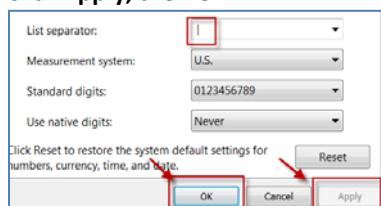
5. Next, go to **Additional settings**



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**



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.

Name	Date modified	Type	Size
LCSR Upload Template.csv	07/22/2016 6:20 PM	Microsoft Excel Comma Separated Values File	2 KB

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**.

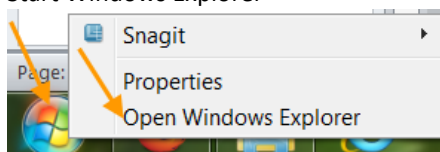
- a. File as .csv
- b. File after converting to .txt

12. If you cannot locate the file you just saved and you cannot see the file extension in order to select the correct document.

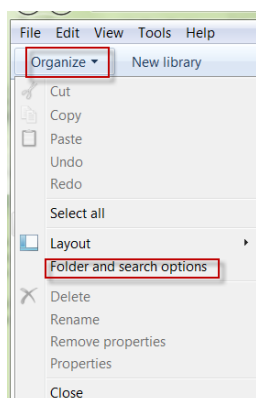
Note: Each version of Windows has a different set of steps to follow for showing the file extension. It would help to know the version of Windows your computer is using.

Below are instructions for Windows 7:

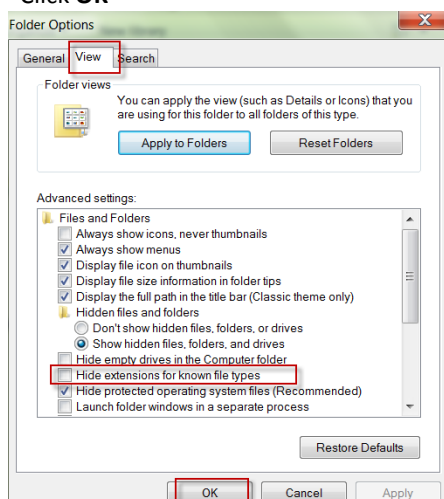
- a) Start Windows Explorer



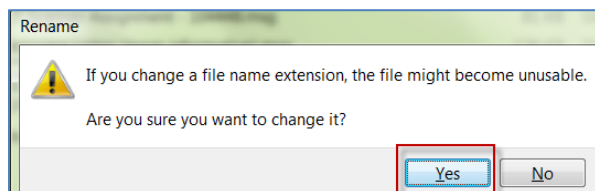
- b) Click **Organize**.
- c) Click **Folder and search options**.



- 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.

APPENDIX 2

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:

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

13	Other Method Of Determining
14	Cause Of Death
15	Non Lung Cancer Cause
16	Death Within 30 Days
17	Patient Sex
18	Patient Race
19	Patient Ethnicity
20	Health Insurance
21	Smoking Status
22	Number Of Packs Year Smoking
23	Number Of Years Since Quit
24	Did Physician Provide Guidance
25	Doc Of Shared Dec Making
26	Patient Height
27	Patient Weight
28	Patient Other Comorbidities
29	Patient Other Comorbidities Spec
30	Cancer Related History
31	Cancer Related History Other Spec
32	Radiologist Reading NPI
33	Ordering Practitioner NPI
34	Ordering Practitioner First Name
35	Ordering Practitioner Last Name
36	Exam Date
37	Signs Or Symptoms Of Lung Cancer
38	Indication Of Exam
39	Modality
40	CT Scanner Manufacturer
41	CT Scanner Model
42	CTDIvol
43	DLP
44	Tube Current Time
45	Tube Voltage
46	Scanning Time
47	Scanning Volume
48	Pitch
49	Reconstructed Image Width
50	CT Exam Result Lung RADS
51	Reason For Recall
52	CT Exam Result Modifier S
53	What Were The Other Findings

54	Mass Spec
55	Other Int Lung Disease
56	Other Int Lung Disease Spec
57	CT Exam Result Modifier C
58	Years Since Prior Diagnosis
59	Education Level
60	Education Level Other Spec
61	Radon Exposure
62	Occupational Exposures
63	History Of Cancers
64	Other_Smoking Cancers Spec
65	Lung Cancer In First Deg Rel
66	Lung Cancer Other First Deg Rel
67	COPD
68	Pulmonary Fibrosis
69	Second Hand Smoke Exposure
70	Date Of Follow-Up
71	Follow-Up Diagnostic
72	Follow-Up Diagnostic Other Spec
73	Tissue Diagnosis
74	Tissue Diagnosis Method
75	Location From Sample Obtained
76	Location Other Spec
77	Histology
78	Histology Non-Small Cell LC
79	Other Non-Small Cell LC Histology Spec
80	Stage Clinical Or Pathologic
81	Overall Stage
82	T Status
83	N Status
84	M Status

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

	LCSR Data Element	Attribute	Format	Note: The required data elements in this column are the minimum data elements required to submit an exam record and create a "skeleton" exam record in the LCSR	Valid Values/format	Mappings/ Definitions	Business Rules 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.
	Exam Data (Required)						
1	Exam_Unique_ID	Exam_Unique_ID	string	N	max length is 50 characters		Optional You may provide an identifier to link back to your internal record. Note that this is not the key identifier of an exam record in LCSR. The exam date and patient ID make up the key identifier.
2	Patient's first name	Patient_First_Name	string	N	max length is 45 characters		Optional If providing first name, at least 1 characters are needed.
3	Patient's middle name	Patient_Middle_Name	string	N	max length is 45 characters		Optional If providing middle name, at least 1 character is needed.
4	Patient's last name	Patient_Last_Name	string	N	max length is 45 characters		Optional If providing last name, at least 2 characters are needed.
5	Patient ID	Other_ID	string	We require a patient identifier; you can provide either the Other_ID, Patient_SSN or Medicare_Beneficiary_ID. see Business Rule	max length is 50 characters		One of the following patient identifiers must be provided: Other_ID, Patient_SSN, Medicare_Beneficiary_ID. You may use the patient's MR# as Other_ID
6	Refused to provide patient's social security number	Refused_To_Answer_SSN	string	N	Y, N	Select one: Y - Yes; N - No	Required

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7	Patient Social Security Number	Patient_SSN	string	We require a patient identifier; you can provide either the Other_ID, Patient_SSN or Medicare_Beneficiary_ID. see Business Rule	9-digits, nnn-nn-nnnn		<p>if Refused_To_Answer_SSN is 'Y' then you must leave this field blank;</p> <p>if Refused_To_Answer_SSN is 'N' then you must provide Patient_SSN;</p> <p>One of the following patient identifiers must be provided: Other_ID, Patient_SSN, Medicare_Beneficiary_ID</p>
8	Refused to provide patient's Medicare beneficiary ID	Refused_Medicare_ID	string	N	Y, N	Select one: Y - Yes; N - No	Required
9	Medicare Beneficiary ID	Medicare_Beneficiary_ID	string	We require to have a patient identifier; you can provide either the Other_ID, Patient_SSN or Medicare_Beneficiary_ID. see Business Rule	max length is 12 characters		<p>You must provide Medicare_Beneficiary_ID if this is for Medicare reimbursement.</p> <p>if Refused_Medicare_ID is 'Y' then you must leave this field blank;</p> <p>if Refused_Medicare_ID is 'N' then you must provide Medicare_Beneficiary_ID;</p> <p>One of the following patient identifiers must be provided: Other_ID, Patient_SSN, Medicare_Beneficiary_ID</p>
10	Patient's date of birth	Date_Of_Birth	string	N	format mm/dd/yyyy		<p>Required</p> <p>Cannot be a future date; must be <= Date_Of_Death</p>
11	Patient's date of death	Date_Of_Death	string	N	format mm/dd/yyyy		<p>Optional</p> <p>Cannot be a future date; must be >= Date_Of_Birth</p>
12	How cause of death was determined	How_Cause_Was_Determined	string	N	1,2,3,4,5,6,8	Select one: 1 - 'Autopsy Report'; 2 - 'Death Certificate'; 3 - 'Medical Record'; 4 - 'Physician'; 5 - 'Relative or Friend'; 6 - 'Social Security Death Index'; 8 - 'Other'	<p>Optional</p> <p>Only applicable if Date_of_Death is provided</p>
13	Other method of determining cause of death, specify	Other_Method_Of_Determining	string	N	max length is 255 characters		<p>Optional</p> <p>If How_Cause_Was_Determined is 8, then Other_Method_Of_Determining is applicable</p> <p>otherwise, this field should be left blank</p>

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14	Cause of death	Cause_Of_Death	string	N	1,2,9	Select one: 1 - 'Lung cancer' ; 2- 'Non-lung cancer cause, specify if known' ; 9- 'Cannot determine'	Required if Date_of_Death is provided
15	Non lung-cancer cause, specify	Non_Lung_Cancer_Cause	string	N	max length is 255 characters		Optional If Cause_of_Death is 2 then Non_Lung_Cancer_Cause is applicable; otherwise, this field should be left blank
16	Invasive procedure within in the 30 days preceding date of death	Death_Within_30_Days	string	N	N, Y, U	Select one: N - No; Y - Yes; U - 'Unknown'	If Date_of_Death is provided then Death_Within_30_Days is required. Otherwise, this field should be left blank
17	Patient sex	Patient_Sex	string	N	M,F,O,U	Select one: M - 'Male'; F - 'Female'; O - 'Other'; U - 'Unknown'	Required
18	Patient race	Patient_Race	array of number	N	1,2,3,4,5,6,9,10	Select all that apply: 1 - American Indian 2 - Alaska native 3 - Asian 4 - Black or African American 5 - Native Hawaiian or Pacific Islander 6 - White 9 - Not reported 10 - Unknown	Optional
19	Patient ethnicity (Hispanic origin)	Patient_Ethnicity	string	N	0,1,8,9	Select one: 0 - 'Not Hispanic or Latino'; 1 - 'Hispanic or Latino' ; 8 - 'Not reported' ; 9 - 'Unknown'	Optional
20	Health insurance	Health_Insurance	array of number	N	1,2,3,4,5	Select all that apply: 1 - 'Medicare'; 2 - 'Medicaid'; 3 - 'Private insurance'; 4 - 'Self pay' ; 5 - 'Unknown'	Optional
21	Smoking status	Smoking_Status	string	N	1,2,3,4,9	Select one: 1 - 'Current smoker'; 2 - 'Former smoker' ; 3 - 'Never smoker' ; 4 - 'Smoker, current status unknown'; 9 - 'Unknown if ever smoked'	Required
22	Number of packs-year of smoking	Number_Of_Packs_Year_Smoking	number	N	between 1 and 999		If Smoking_Status is 1, 2 or 4 then Number_Of_Packs_Year_Smoking is required; otherwise, this field should be left blank.

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23	Number of years since quit	Number_Of_Years_Since_Quit	number	N	between 1 and 99		If Smoking_Status is 2 then Number_Of_Years_Since_Quit is required. Otherwise, this field should be left blank.
24	Did physician provide smoking cessation guidance to patient?	Did_Physician_Provide_Guidance	string	N	N,Y,U	Select one: N - No; Y - Yes; U - 'Unknown'	Required
25	Is there documentation of shared decision making?	Doc_Of_Shared_Dec_Making	string	N	N,Y,U	Select one: N - No; Y - Yes; U - 'Unknown'	Required
26	Patient height (inches)	Patient_Height	string	N	0-99	0 - Unknown 99 - Unknown	Required
27	Patient weight (lbs)	Patient_Weight	string	N	0-999	0 - Unknown 999 - Unknown	Required
28	Other comorbidities listed on patient record that limit life expectancy	Patient_Other_Comorbidities	array of number	N	0,1,2,3,4,5,6,7,8	Select all that apply: 0 - 'COPD'; 1 - 'Emphysema'; 2 - 'Pulmonary fibrosis'; 3 - 'Coronary artery disease'; 4 - 'Congestive heart failure'; 5 - 'Peripheral vascular disease'; 6 - 'Lung cancer'; 7 - 'Cancer other than lung cancer'; 8 - 'Other, please specify'	Optional
29	Other comorbidities, other specify	Patient_Other_Comorbidities_Spec	string	N	max length is 255 characters		Optional If Patient_Other_Comorbidities is 8, then Patient_Other_Comorbidities_Spec is applicable; otherwise, this field should be left blank
30	Cancer related history	Cancer_Related_History	array of number	N	0,1,2,3,4,5,6,7	Select all that apply: 0 - Prior history of lung cancer 1 - lymphoma 2 - H&N cancer 3 - bladder cancer 4 - esophageal cancer 5 - Pulmonary fibrosis 6 - Other cancer, please specify 7 - Other	Optional

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31	Cancer related history, other specify	Cancer_Related_History_Other_Spec	string	N	max length is 255 characters		Optional If Cancer_Related_History is 6, then Cancer_Related_History_Other_Spec is required; otherwise, this field should be left blank
32	Radiologist (reading) NPI	Radiologist_Reading_NPI	string	N	10-digits		Required Reading radiologist must exist in the NRDR Physician dictionary.
33	Ordering practitioner NPI	Ordering_Practitioner_NPI	string	N	10-digits		Required
34	Ordering practitioner first name	Ordering_Practitioner_First_Name	string	N	max length is 50 characters		Optional
35	Ordering practitioner last name	Ordering_Practitioner_Last_Name	string	N	max length is 50 characters		Optional
36	Exam date	Exam_Date	string	Y	format mm/dd/yyyy		Required Cannot be a future date
37	Signs or symptoms of lung cancer	Signs_Or_Symptoms_Of_Lung_Cancer	string	N	Y, N	Select one: Y - Yes; N - No	Required
38	Indication of exam	Indication_Of_Exam	string	N	1,2	Select one: 1 - 'Baseline scan' ; 2 - 'Annual screen'	If Signs_Or_Symptoms_Of_Lung_Cancer is 'N', then Indication_Of_Exam is required; otherwise, this field should be left blank
39	Modality	Modality	string	N	1,2	Select one: 1 - 'Low dose chest CT' ; 2 - 'Routine chest CT'	Required
40	CT scanner manufacturer	CT_Scanner_Manufacturer	string	N	max length is 50 characters		Required
41	CT scanner model	CT_Scanner_Model	string	N	max length is 50 characters		Required
42	CTDIvol (mGy)	CTDIvol	string	N	format nnn.nn	0.01<= CTDIvol <= 999.99	Required Whole number is acceptable. Decimal place is optional, if provided limit to 2 digits.
43	DLP (mGy*cm)	DLP	string	N	format nnnn.nn	0.01<= DLP <= 9999.99	Required Whole number is acceptable. Decimal place is optional, if provided limit to 2 digits.
44	Tube current-time (mAs)	Tube_Current_Time	string	N	format nnn	0<= Tube_Current_Time <= 999	Optional
45	Tube voltage (kV)	Tube_Voltage	string	N	format nnn	0<= Tube_Voltage <= 999	Optional
46	Scanning time (s)	Scanning_Time	string	N	format nnn.nn	0.01<= Scanning_Time <= 999.99	Optional Whole number is acceptable. Decimal place is optional, if provided limit to 2 digits.

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47	Scanning volume (cm)	Scanning_Volume	string	N	format nnn.nn	0.01<= Scanning_Volume <= 999.99	Optional Whole number is acceptable. Decimal place is optional, if provided limit to 2 digits.
48	Pitch	Pitch	string	N	format nn.nnn	0.000<= Pitch <= 99.999	Optional
49	Reconstructed image width (nominal width of reconstructed image along z-axis) (mm)	Reconstructed_Image_Width	string	N	format n.nn	0.01<= Reconstructed_Image_Width <= 9.99	Required Whole number is acceptable. Decimal place is optional, if provided limit to 2 digits.
50	CT exam result by Lung-RADS category	CT_Exam_Result_Lung_RADS	string	N	0,1,2,3,4A,4B,4X	Select one: 0 - 'recalls (incomplete screen)'; 1 - 'normal, continue annual screening'; 2 - 'benign appearance or behavior, continue annual screening'; 3 - '6 month CT recommended'; 4A - '3 month CT recommended; may consider PET/CT'; 4B - 'Additional diagnostics and/or tissue sampling recommended'; 4X - 'Additional diagnostics and/or tissue sampling';	Required
51	Reason for recall	Reason_For_Recall	string	N	I,N,M,E,OBa	Select one: I - 'Incomplete coverage'; N - 'Noise'; M - 'Respiratory motion'; E - 'Expiration'; OBa - 'Obscured by acute abnormality'	If CT_Exam_Result_Lung_RADS is 0, then Reason_For_Recall is required; otherwise, this field should be left blank.
52	Other clinically significant or potentially significant abnormalities - CT exam result modifier S	CT_Exam_Result_Modifier_S	string	N	Y, N	Select one: Y - Yes; N - No	Required
53	What were the other findings	What_Were_The_Other_Findings	array of number	N	0,1,2,3,4	Select all that apply: 0 - 'Aortic aneurysm'; 1 - 'Coronary arterial calcification moderate or severe'; 2 - 'Pulmonary fibrosis'; 3 - 'Mass (check neck, mediastinum, liver, kidneys, other)'; 4- 'Other interstitial lung disease';	Optional If CT_Exam_Result_Modifier_S is 'Y', then What_Were_The_Other_Findings is required; otherwise, this field should be left blank

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54	Mass, specify	Mass_Spec	string	N	max length is 255 characters		Optional If What_Were_The_Other_Findings is 3, then Mass_Spec is required; otherwise, this field should be left blank
55	Other interstitial lung disease	Other_Int_Lung_Disease	string	N	1,8,9	Select one: 1 - 'UIP/IPF' ; 8 - 'ILD, other, please specify' ; 9 - 'ILD, unknown';	Optional If What_Were_The_Other_Findings is 4, then Other_Int_Lung_Disease is applicable; otherwise, this field should be left blank
56	Other interstitial lung disease, specify	Other_Int_Lung_Disease_Spec	string	N	max length is 255 characters		If Other_Int_Lung_Disease is 8, then Other_Int_Lung_Disease_Spec is required; otherwise, this field should be left blank
57	Prior history of lung cancer - CT exam result modifier C	CT_Exam_Result_Modifier_C	string	N	other findings	Select one: N - No; Y - Yes; U - 'Unknown'	Required
58	Year since prior diagnosis of lung cancer	Years_Since_Prior_Diagnosis	string	N	format: nn	1 <= Years_Since_Prior_Diagnosis <= 99	Optional
59	Education level	Education_Level	string	N	1,2,3,4,5,6,7,8,99	Select one: 1 - '8th grade or less' ; 2 - '9-11th grade' ; 3 - 'High school graduate or high school equivalency' ; 4 - 'Post high school training, other than college' ; 5 - 'Associate degree / some college' ; 6 - 'Bachelor's degree'; 7 - 'Graduate or Professional school' ; 8 - 'Other, specify'; 99 - 'Unknown / I prefer not to answer'	Optional
60	Education level, other	Education_Level_Other_Spec	string	N	max length is 255 characters		Optional If Education_Level is 8, then Education_Level_Other_Spec is required; otherwise, this field should be left blank
61	Radon exposure - documented high exposure levels	Radon_Exposure	string	N	Y, N	Select one: Y - Yes; N - No	Optional

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62	Occupational exposures to agents that are identified specifically as carcinogens targeting the lungs	Occupational_Exposures	array of number	N	0,1,2,3,4,5,6,7	Select all that apply: 0 - 'Silica'; 1 - 'Cadmium'; 2 - 'Asbestos'; 3 - 'Arsenic'; 4 - 'Beryllium'; 5 - 'Chromium'; 6 - 'Diesel fumes'; 7 - 'Nickel'	Optional
63	History of cancers that are associated with an increased risk of developing a new primary lung cancer	History_Of_Cancers	array of number	N	0,1,2,3,4	Select all that apply: 0 - 'Prior lung cancer'; 1 - 'Lymphoma'; 2 - 'Head and neck'; 3 - 'Bladder cancer'; 4 - 'Other smoking-related cancers, specify'	Optional
64	History of cancers that are associated with an increased risk of developing a new primary lung cancer - other smoking-related cancers, specify	Other_Smoking_Cancers_Spec	string	N	max length is 255 characters		Optional If History_Of_Cancers is 4, then Other_Smoking_Cancers_Spec is required; otherwise, this field should be left blank
65	Lung cancer in first-degree relative (mother, father, sister, brother, daughter or son with history of lung cancer)	Lung_Cancer_In_First_Deg_Rel	string	N	N,Y,U	Select one: N - No; Y - Yes; U - 'Unknown'	Optional
66	Family history of lung cancer, other than first-degree relative	Lung_Cancer_Other_First_Deg_Rel	string	N	N,Y,U	Select one: N - No; Y - Yes; U - 'Unknown'	Optional
67	COPD	COPD	string	N	Y, N	Select one: Y - Yes; N - No	Optional
68	Pulmonary fibrosis	Pulmonary_Fibrosis	string	N	Y, N	Select one: Y - Yes; N - No	Optional
69	Second hand smoke exposure	Second_Hand_Smoke_Exposure	string	N	N,Y,U	Select one: N - No; Y - Yes; U - 'Unknown'	Optional
Follow-up Data (optional)							
70	Date of follow-up	Date_Of_Follow-Up	string	Y	format mm/dd/yyyy		Required when submitting Follow-Up for a case; cannot

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							be a future date
71	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
72	Follow-up diagnostic other, specify	Follow_Up_Diagnostic_Other_Spec	string	N	max length is 255 characters		If Follow_Up_Diagnostic is 7, then Follow_Up_Diagnostic_Other_Spec is required; otherwise, this field should be left blank
73	Tissue diagnosis	Tissue_Diagnosis	string	N	1,2,3,4,5,6,7	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
74	Tissue diagnosis method	Tissue_Diagnosis_Method	string	N	1,2,3	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
75	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

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76	Location other, specify	Location_Other_Spec	string	N	max length is 255 characters		If Location_From_Sample_Obtained is 10, then Location_Other_Spec is required; otherwise, this field should be left blank
77	Histology	Histology	string	N	1,2,3,4	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
78	Histology - Non-small cell lung cancer	Histology_Non_Small_Cell_LC	string	N	1,2,3,4,5,6	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'	Required & Conditional If Histology is 1, then Histology_Non_Small_Cell_LC is required; otherwise, this field should be blank
79	Other non-small cell lung cancer histology, specify	Other_Non_Small_Cell_LC_Histology_Spec	string	N	max length is 255 characters		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
80	Stage - Clinical or pathologic?	Stage_Clinical_Or_Pathologic	number	N	1,2,9	Select one: 1 - 'Clinical' ; 2 - 'Pathologic' ; 9 - 'Unknown'	If Tissue_Diagnosis is 2, 3, or 5 then, Stage_Clinical_Or_Pathologic is required; If Tissue_Diagnosis is 4 then, Stage_Clinical_Or_Pathologic is applicable but optional; otherwise, this field should be blank
81	Overall stage	Overall_Stage	string	N	IA,IB,IIA,IIB,IIIA,IIIB,IV, Unknown	Select one: IA IB IIA IIB IIIA IIIB IV Unknown	If Tissue_Diagnosis is 2, 3, or 5 then, Overall_Stage is required; If Tissue_Diagnosis is 4 or 7 then, Overall_Stage is applicable but optional; otherwise, this field should be blank

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82	T status	T_Status	string	N	TX,T1a,T1b,T2a,T2b,T3,T4,99	Select one: Tx T1a T1b T2a T2b T3 T4 99	Optional & Conditional if Tissue_Diagnosis is populated then T_Status is applicable; otherwise, this field should be blank
83	N status	N_Status	string	N	NX,N0,N1,N2,N3	Select one: NX N0 N1 N2 N3	Optional if Tissue_Diagnosis is populated then N_Status is applicable; otherwise, this field should be blank
84	M status	M_Status	string	N	MX,M0,M1a,M1b	Select one: MX M0 M1a M1b M1c	Optional if Tissue_Diagnosis is populated then M_Status is applicable; otherwise, this field should be blank

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