

**2019 EOD/SS/SSDI Reliability Study
Protocol and Appendices
December 2018**

2019 EOD/SS/SSDI Reliability Study

Contents

I.	Background	3
II.	Study Objectives	3
III.	Study Design	3
IV.	Case Assignment	4
V.	Study Process	4
VI.	Study Participants	5
VII.	Case Preparation	5
VIII.	Data Preparation and Analysis	7
IX.	Study Timetable	8
X.	Appendices	8

2019 EOD/SS/SSDI Reliability Study

I. Background

In 2018, the registry community changed from directly assigning T, N, M, and Stage Group to using Extent of Disease (EOD) stage data collection system for collecting the input data elements necessary to derive an AJCC 8th edition-based EOD T, EOD N, EOD M, EOD Stage Group and the Summary Stage (SS) 2018.

II. Study Objectives

This field study will

- Assess how well registrars can code the EOD data elements, Grade, SS2018 and relevant site-specific data items (SSDIs) from information in the medical record
- Provide information on training needs
- Provide a baseline to evaluate the effectiveness of training materials that are developed
- Test the feasibility of collecting new prognostic factors

III. Study Design

A. Study Mechanism

1. The 2019 EOD/SS/SSDI Reliability Study will be a web-based activity
2. Participants must use a computer with access to the Internet
3. The cases will be placed on the SEER Reliability website
4. Participants will complete the study online

B. Number of Cases

1. Participants will be asked to assign EOD Primary Tumor, EOD Regional Nodes, EOD Mets, SS2018, Grade, and relevant SSDIs to a total of 12 cases, including 2 optional practice cases and 10 regular cases. The study will cover the following 10 cancer sites: Brain, Breast, Colon and Rectum, Lung, Lymphoma-CLL/SLL, Melanoma Skin, Ovary, Prostate, Soft Tissue Abdomen and Thoracic, Tongue Anterior.
2. A total of 50 cases (5/site) will be included in this study. These will be divided into 5 sets of 10 cases each. Each set will have 1 case from each EOD schema. Two additional practice cases will be also available.
3. The target is to accrue at least 500 participants so that each set of cases is completed approximately 100 times.

C. Invitation to Participate

1. This study will be open to all tumor registrars in the United States and Canada
Invitation to Participate and Tweets are in **APPENDIX A**

D. Account Creation

1. Account creation will take place via the Web
2. Participants who have not participated in a study since 2011 will need to create new accounts since the software is new
3. The SEER Reliability website will open for account creation on February 15, 2019.

IV. Case Assignment

- A. Completion of practice cases is optional
- B. Completion of 1 set (10 cases) is required
- C. Registrars may complete an additional 4 sets of cases

V. Study Process

- A. The study will be conducted by having participants assign EOD data elements, SS2018, Grade, and SSDIs for at least 10 cases (one per schema) that will cover the following EOD schemas
 - Brain (Malignant)
 - Breast
 - Colon and Rectum
 - Lung
 - Lymphoma-CLL/SLL
 - Melanoma Skin
 - Ovary
 - Prostate
 - Soft Tissue Abdomen and Thoracic
 - Tongue Anterior
- B. Participants will have all available case documents for review.
- C. Data items to be assigned and allowable values:
Allowable codes are in Functional Requirement Document; see **Appendix B** for detailed list of allowable codes for data items. Allowable codes have been restricted to decrease the number of data entry errors.
Data items to be collected are:
 - Primary Site (NAACCR Item # 400)
 - Histology (NAACCR Item # 522)
 - Behavior (NAACCR Item # 523)
 - Tumor Size Clinical (NAACCR Item # 752)
 - Tumor Size Pathological (NAACCR Item # 754)
 - EOD Primary Tumor (NAACCR Item # 772)
 - EOD Regional Nodes (NAACCR Item # 774)
 - Regional Nodes Positive (NAACCR Item # 820)
 - Sentinel Lymph Nodes Examined (NAACCR Item # 834) (Breast and Melanoma only)
 - Sentinel Lymph Nodes Positive (NAACCR Item # 835) (Breast and Melanoma only)
 - EOD Mets (NAACCR Item # 776)
 - SS2018 (NAACCR Item # 764)
 - Grade Clinical (NAACCR # 3843)
 - Grade Pathological (NAACCR # 3844)

2019 EOD/SS/SSDI Reliability Study

- Grade Post-Therapy (NAACCR # 3845)
- SSDIs (EOD schema specific)

D. Online references available to study participants are

- SEER Program Coding Manual 2018
- Hematopoietic and Lymphoid Neoplasm Coding Manual 2018
- Extent of Disease 2018 General Instructions
- Summary Staging 2018 Manual
- SEER*RSA
- SSDI Manual
- Grade Manual

VI. Study Participants

- A. Eligibility: The assessment is open to all tumor registrars in the United States and Canada
- B. Requirements for Participation
- Study participants must use a computer with Internet access
 - The assessment will be web-based and located on the SEER Reliability website
 - All test cases should be completed by April 15, 2019
 - NCI SEER will request that the NCRA grant continuing education (CE) credits to the participants. Certificates showing the event number and the number of CE's will be made available to participants following the study.
 - NCRA granted 10 cases per case for a maximum of 50 credits
 - The NCRA title is 2019 EOD/SS/SSDI Reliability Study (2019-012)

VII. Case Selection and Preparation

- A. A call for cases will be conducted July 23-September 1, 2018. The call will cover 16 SEER registries (CT, GA, Greater Bay, Los Angeles, Greater CA, HI, IA, ID, KY, LA, MA, NM, NY, UT, Seattle, WI). See **Appendix C** for call for cases instructions.
- B. Each registry will be asked to submit a total of 20 cases (2 cases per site/schema). This will result in a total of approximately 320 submitted cases (16 registries x 20 cases = 320 total).
- For the study, the cases will include all the information that was provided by the registry.
- C. Westat will assign a case number for each patient medical record received following the call for cases.
- i. For each patient medical record, Westat will develop a database that includes
 1. The central registry identifier of the registry transmitting the case
 2. Cancer site (type)

2019 EOD/SS/SSDI Reliability Study

- ii. Once a patient medical record is received, Westat (Carmela Groves) and NCI (Jennifer Ruhl) will review and come up with 52 cases for the study (5 cases per schema and 2 practice cases)
- iii. For the chosen 52 cases, Westat will prepare the case as follows
 1. Redact personal identifiers
 2. Redact facility identifiers
 3. Redaction will occur on a rolling basis as cases are submitted from registries
 4. Add header with case identification to each record
 5. Save the file using a standard naming convention
 6. Track and periodically update NCI SEER (Jennifer Ruhl) on the registries progress on sending cases
 7. Carmela and Jennifer will code all 52 cases (including preferred answers and rationale)
 8. Carmela and Jennifer will reconcile the cases prior to sending to the expert panel
 9. Distribute sets of test cases to expert panel members
- D. The preferred answers from Carmela and Jennifer will be entered into an Excel spreadsheet or Access database and provided to IMS. These will be placed in the Call for Data Portal so that the registry experts may review and record any disagreements. If there is a disagreement, the rationale must be provided.
 - i. Each participant on the expert panel (Jennifer Ruhl and Carmela Groves) will have all case documents and the preferred answers spreadsheet in a folder on the Call for Data Portal.
 - ii. They will code their assigned cases and provide preferred answers and rationale
 - iii. The registry experts/reviewers are comprised of SEER registry members. See **Appendix D** for Request for the Expert Panel. Registry experts will be assigned a subset of cases to review the preferred answers.
 - iv. Disagreements in the preferred answers between the expert panel and registry reviewers will be assigned to adjudicator(s) for the final answer.
 - v. Once the preferred answers are reconciled, they will be sent to NCI SEER and IMS in an Excel spreadsheet and/or a SAS data set so that
 10. They can be included in the software so that participants can see the preferred answers
 11. IMS can create flags for correct/incorrect answers as part of the analytic file
- E. The final dataset of patient medical records selected for the study will include the following data elements: see **Appendix E**

2019 EOD/SS/SSDI Reliability Study

- F. The preferred answers will be made available online to participants at the time a case is completed. Participants will be asked to comment on the answers and on the quality of EOD and SSDI manuals abstraction and coding instructions. Note that IMS will need the preferred answers and rationale by February 1, 2019.
 - G. Westat will keep electronic versions of the files and shred any paper copies after the study closes
 - H. IMS will delete any files on the Call for Data Portal after the study closes
- VIII. Data Preparation and Analysis**
- A. Representatives from IMS will use the SEER*RSA API to calculate the derived EOD T, N, M and Stage Group values based on preferred answers.
 - B. Stage calculations
 - i. Representatives from IMS will use the preferred answers to calculate the "preferred" Derived EOD T, N, M and Stage group
 - ii. Representatives from IMS will calculate the Derived EOD T, N, M and Stage group using the coded EOD data items and additional data items, SSDIs or Grade from the participants' responses
 - C. Calculate the coefficient of variation and/or other measures of agreement.
 - D. Calculate distributions of demographic characteristics as frequencies or means as appropriate.
 - E. Calculate percent agreement between abstractor assigned values with expert panel – assigned "preferred value." Percent agreement will be measured by the number of cases where values matches the gold standard divided by the total number of cases and also using the kappa statistic. Frequency tables will be created to show where the mismatches are occurring.
 - i. The analysis will be performed for the EOD data items, plus any stage related SSDIs separately in the most detailed assignment and by a schema-specific clinically meaningful categorization
 - ii. The analysis will also be performed on the derived stage grouping
 - F. Calculate the minor and major errors compared to the preferred value.
 - G. Summarized the comments received from study participants.

2019 EOD/SS/SSDI Reliability Study

IX. Study Timetable

Call for Cases	July 23, 2018
Cases due to NCI SEER from registries	September 1, 2018
Cases redaction and review	September 1, 2018-November 15, 2018
Final study case selection	November 15, 2018
Develop preferred answers and rationales (experts)	September 1, 2018-October 31, 2018
Review of preferred answers and rationales (registries)	November 7, 2018-December 15, 2018
Adjudication of preferred answers	December 15, 2018-January 15, 2019
Selection of preferred answers after adjudication	January 15, 2019
Preferred answers, rationale and cases due to IMS	February 1, 2019
Case files loaded into study software	February 15, 2019
Study opens to participants	March 1, 2019-April 15, 2019
Data processing and analysis	April 16, 2019-May 15, 2019

X. Appendices

- A. Invitation to Participate:** Letter to registries to inform them about the study.
- B. Functional Requirements Document:** Specifications for set-up of reliability software including study questions and data field restrictions.
- C. Call for Cases:** Letter to registries with specifications on which cases we would like them to send and data transfer instructions.
- D. Expert Panel for 2019 EOD/SS/SSDI Reliability Study:** Emails sent out requesting reviewers, asking reviewers to start review and email to the adjudication panel.
- E. Data Items to be Redacted from Case Files**

2019 EOD/SS/SSDI Reliability Study

APPENDIX A Invitation to Participate 2019 EOD/SS/SSDI Reliability Study



Hello,

The 2019 EOD/SS/SSDI Reliability Study is a study that aims to:

- Assess how well registrars can assign EOD Primary Tumor, EOD Regional Nodes, EOD Mets, SS2018, Grade, SSDIs, Regional Nodes Positive and Tumor Size using information available in the medical record
- Provide information on training needs
- Provide a baseline to evaluate the effectiveness of training materials that are developed

This study will take place from 8 a.m. EDT, **March 1, 2019** to 12:00 a.m. EDT, **April 15, 2019**. Participants must have access to the SEER reliability studies site (<https://reliability.seer.cancer.gov>) during this period.

Completion of the study will require the review and coding of EOD 2018 Data Items (Primary Tumor, Regional Nodes, Mets), SS2018, Grade, SSDIs (schema specific), Regional Nodes Positive and Tumor Size. Registrars will complete 1 randomly selected set of cases (10 cases) with an option to complete as many as 4 additional sets (up to 40 additional cases). In addition to Continuing Education credits, participants in this activity will have an opportunity to view the preferred answers as given by an expert panel. You will be notified when the study results become available online.

Note that since the objectives of this study are to determine training needs and not designed as a test for accuracy of EOD code assignment, **individual study results will remain confidential** and not released to NCI SEER staff or registry managers. Study results will be de-identified before analysis.

Now is the time to recruit facility reporters and your registry staff to participate. All participants will be using the SEER Reliability software. If you have participated in a previous reliability study (2014 or later), use your same login. If you have not participated in a previous reliability study, you will need to create an account. To create a new account please follow the Create an Account link on the sign-in page (<https://reliability.seer.cancer.gov>).

Please email reliability@imsweb.com for technical questions and Jennifer Ruhl (ruhlj@mail.nih.gov) for study related questions.

Your participation is important for helping us assess the training needs for EOD 2018, Summary Stage 2018, Grade and SSDIs and therefore, while participation is voluntary, we strongly encourage you to participate in this study.

Thank you,
Jennifer Ruhl

APPENDIX B

Functional Requirements Document

Section A- Elements required for set up of a study

1. Name of study: 2019 EOD/SS/SSDI Reliability Study
2. Study Dates
 - a. Start showing dates on SEER website: January 1, 2019
 - b. Open date: March 1, 2019
 - c. Close date: April 15, 2019
3. Text for Study Overview Page: 2/15/19
4. Demographics questions (in addition automatic fields which are: Primary region, Primary state, Registry type, Hospital accreditation, Organization, Institute)

Label of question (as you would like it to appear on website)	Data Type	Is this a required field?	Constraints/limits you would like the web site to impose on the answer
Are you a CTR?	Drop down list	Yes	Yes No
How many years of experience do you have in coding?	Free text	Yes	Numeric between 0 and 99
Have you attended an EOD/SS2018 training?	Yes/No	No	
Do you have experience in coding Collaborative Stage (CS)	Yes/No	No	
How many cases per year do you abstract personally	Drop down list	Yes	1 – 250 251 – 500 501 - 1000 1001 – 2000 2001 or more Unknown (values to potentially change)

5. How many practice cases: 2
6. How many regular cases?
A total of 50 cases, with the 50 cases being divided into 5 sets, each set having 10 cases. Each set of 10 cases will have 1 per cancer site (brain, breast, colon and rectum, lung, lymphoma-CLL/SLL, melanoma skin, ovary, prostate, soft tissue abdomen and thoracic, and tongue anterior).
7. Medical records for all cases – these will be delivered from registries to IMS in PDF image format, in rolling deliveries, with the last case to be delivered by September 1, 2018.

2019 EOD/SS/SSDI Reliability Study

8. Data items for each case: These will all be required and drop-down menus (no blanks allowed except for Grade Post-therapy). **The data items and valid values for each data item are site specific** and are specified in the Table below.

(Based on Valid Values for EOD, SS2018, Grade, and SSDIs for 10 Sites.xls)

Label of Data Item	Data Type	Data Item Required	EOD Schema	Allowable Value
Behavior	Drop down	Yes	All	0,1,2,3
Tumor Size Clinical		Yes	All	000-990, 998, 999
Tumor Size Pathological		Yes	All	000-990, 998, 999
Regional Nodes Positive		Yes	All	00-90, 95, 97, 98, 99
Primary Site	Drop Down	Yes	Brain	C700, C710-C719
Histology	Drop Down	Yes	Brain	8000-8700, 8720-8790, 8802, 8810, 8815, 8850, 8890, 8900, 9064, 9070-9071, 9080, 9084-9085, 9100-9105, 9120, 9133, 9140, 9180, 9220, 9362, 9364, 9382, 9385-9401, 9411, 9424-9430, 9440-9442, 9445, 9450-9451, 9470-9471, 9473-9478, 9490, 9500-9501, 9505, 9508, 9530, 9538, 9540, 9680, 9699, 9700-9714, 9751-9759
Schema ID	Derived	No	Brain	00721
EOD Primary Tumor	Drop down	Yes	Brain	050, 100, 500, 700, 800, 999
EOD Regional Nodes	Drop down	Yes	Brain	888
EOD Mets	Drop down	Yes	Brain	00, 10, 70, 99
SS2018	Drop down	Yes	Brain	1, 2, 7, 8, 9
Grade Clinical, Grade Pathological, Grade Post Therapy (3843-3845)	Drop down	Yes	Brain	1, 2, 3, 4, L, H, A, B, C, D, 9 (also blank for 3845 only)

2019 EOD/SS/SSDI Reliability Study

Label of Data Item	Data Type	Data Item Required	EOD Schema	Allowable Value
Brain Molecular Markers (3816)	Drop Down	Yes	Brain	01, 02, 03, 04, 05, 06, 07, 08, 09, 85, 86, 87, 88, 99
Chromosome 1p Status (3801)	Drop Down	Yes	Brain	0, 1, 6, 7, 8, 9
Chromosome 19q Status (3802)	Drop Down	Yes	Brain	0, 1, 6, 7, 8, 9
MGMT (3889)	Drop Down	Yes	Brain	0, 1, 2, 3, 6, 7, 8, 9
Primary Site	Drop Down	Yes	Breast	C500-C506, C508-C509
Histology	Drop Down	Yes	Breast	8000-8700, 8982-8983, 9700-9701
Schema ID	Derived	No	Breast	00480
EOD Primary Tumor	Drop down	Yes	Breast	000, 050, 070, 100, 200, 300, 400, 450, 500, 600, 700, 800, 999
EOD Regional Nodes	Drop down	Yes	Breast	000, 030, 050, 070, 100, 150, 200, 250, 300, 350, 400, 500, 600, 700, 800, 999
Sentinel Lymph Nodes Examined	Drop down	Yes	Breast	00-90, 95, 98-99
Sentinel Lymph Nodes Positive	Drop down	Yes	Breast	00-90, 95, 97-99
EOD Mets	Drop down	Yes	Breast	00, 05, 10, 70, 99
SS2018	Drop down	Yes	Breast	0, 1, 2, 3, 4, 7, 9
Grade Clinical, Grade Pathological, Grade Post Therapy (3843-3845)	Drop down	Yes	Breast	1, 2, 3, L, M, H, A, B, C, D, 9 (also blank for 3845 only)
ER Percent Positive (3826)		Yes	Breast	000-100, R10, R20, R30, R40, R50, R60, R70, R80, R90, R99, XX7, XX8, XX9
ER Summary (3827)	Drop Down	Yes	Breast	0, 1, 7, 9

2019 EOD/SS/SSDI Reliability Study

Label of Data Item	Data Type	Data Item Required	EOD Schema	Allowable Value
ER Allred Score (3828)	Drop Down	Yes	Breast	00, 01, 02, 03, 04, 05, 06, 07, 08, X8, X9
HER2 IHC Summary (3850)	Drop Down	Yes	Breast	0, 1, 2, 3, 4, 7, 8, 9
HER2 ISH DP Copy No (3851)		Yes	Breast	0.0-99.9, XX.1, XX.7, XX.8, XX.9
HER2 ISH DP Ratio (3852)		Yes	Breast	0.0-99.9, XX.2, XX.3, XX.7, XX.8, XX.9
HER2 ISH SP Copy No (3853)		Yes	Breast	0.0-99.9, XX.1, XX.7, XX.8, XX.9
HER2 ISH Summary (3854)	Drop Down	Yes	Breast	0, 2, 3, 7, 8, 9
HER2 Overall Summary (3855)	Drop Down	Yes	Breast	0, 1, 7, 9
Ki-67 (MIB-1) (3863)			Breast	0.0-100.0, XXX.7, XXX.8, XXX.9
Lymph Nodes Positive Axillary Level I-II (3882)		Yes	Breast	00-99, X1, X5, X6, X8, X9
Multigene Signature Method (3894)	Drop Down	Yes	Breast	1, 2, 3, 4, 5, 6, 7, 8, 9
Multigene Signature Result (3895)		Yes	Breast	00-99, X1, X2, X3, X4, X7, X8, X9
Oncotype DX Recur Score - DCIS (3903)		Yes	Breast	000-100, XX6, XX7, XX8, XX9
Oncotype DX Recur Score (3904)		Yes	Breast	000-100, XX4, XX5, XX6, XX7, XX9
Oncotype Dx Risk Level - DCIS (3905)	Drop Down	Yes	Breast	0, 1, 2, 6, 7, 8, 9
Oncotype Dx Risk Level Invasive (3906)	Drop Down	Yes	Breast	0, 1, 2, 6, 7, 8, 9
PR Percent Positive (3914)		Yes	Breast	000-100, R10, R20, R30, R40, R50, R60, R70, R80, R90, R99, XX7, XX8, XX9
PR Summary (3915)	Drop Down	Yes	Breast	0, 1, 7, 9

2019 EOD/SS/SSDI Reliability Study

Label of Data Item	Data Type	Data Item Required	EOD Schema	Allowable Value
PR Allred Score (3916)	Drop Down	Yes	Breast	00, 01, 02, 03, 04, 05, 06, 07, 08, X8, X9
Response Neoadjuv Therapy (3922)	Drop Down	Yes	Breast	0, 1, 2, 3, 4, 8, 9
Primary Site	Drop Down	Yes	Colon and Rectum	C180, C182-C189, C199, C209
Histology	Drop Down	Yes	Colon and Rectum	8000-8149, 8154, 8157, 8160-8231, 8243-8248, 8250-8682, 8690-8700, 8720-8790, 9700-9701
Schema ID	Derived	No	Colon and Rectum	00200
EOD Primary Tumor	Drop down	Yes	Colon and Rectum	000, 050, 100, 200, 300, 400, 500, 600, 700, 800, 999
EOD Regional Nodes	Drop down	Yes	Colon and Rectum	000, 200, 300, 800, 999
EOD Mets	Drop down	Yes	Colon and Rectum	00, 10, 20, 30, 40, 50, 70, 99
SS2018	Drop down	Yes	Colon and Rectum	0, 1, 2, 3, 4, 7, 9
Grade Clinical, Grade Pathological, Grade Post Therapy (3843-3845)	Drop down	Yes	Colon and Rectum	1, 2, 3, 4, 9 (also blank for 3845 only)
CEA PreTX Interpretation (3819)	Drop Down	Yes	Colon and Rectum	0, 1, 2, 3, 7, 8, 9
CEA PreTX Lab Value (3820)		Yes	Colon and Rectum	0.0-9999.9, XXXX.1, XXXX.7, XXXX.8, XXXX.9
Circumferential Resection Margin (3823)		Yes	Colon and Rectum	0.0-99.9, XX.0-XX.9
KRAS (3866)	Drop Down	Yes	Colon and Rectum	0, 1, 2, 3, 4, 7, 8, 9
Microsatellite Instability (3890)	Drop Down	Yes	Colon and Rectum	0, 1, 2, 8, 9
Perineural Invasion (3909)	Drop Down	Yes	Colon and Rectum	0, 1, 8, 9

2019 EOD/SS/SSDI Reliability Study

Label of Data Item	Data Type	Data Item Required	EOD Schema	Allowable Value
Tumor Deposits (3934)		Yes	Colon and Rectum	00-99, X1, X2, X8, X9
Primary Site	Drop Down	Yes	Lung	C340-C343, C348-C349
Histology	Drop Down	Yes	Lung	8000-8700, 8720-8790, 8972, 8980, 9700-9701
Schema ID	Derived	No	Lung	00360
EOD Primary Tumor	Drop down	Yes	Lung	000, 100, 200, 300, 400, 450, 500, 550, 600, 650, 700, 800, 980, 999
EOD Regional Nodes	Drop down	Yes	Lung	000, 300, 400, 600, 700, 800, 999
EOD Mets	Drop down	Yes	Lung	00, 10, 20, 30, 50, 70, 99
SS2018	Drop down	Yes	Lung	0, 1, 2, 3, 4, 7, 9
Grade Clinical, Grade Pathological, Grade Post Therapy (3843-3845)	Drop down	Yes	Lung	1, 2, 3, 4, 9 (also blank for 3845 only)
Separate Tumor Nodules (3929)	Drop down	Yes	Lung	0, 1, 2, 3, 4, 7, 8, 9
Visceral and Parietal Pleural Invasion (3937)	Drop down	Yes	Lung	0, 1, 2, 3, 4, 6, 8, 9
Primary Site	Drop Down	Yes	Lymphoma-CLL/SLL	C000-C440, C442-C689, C691-C694, C698-C699, C739-C750, C754-C809
Histology	Drop Down	Yes	Lymphoma-CLL/SLL	9823/3
Schema ID	Derived	No	Lymphoma-CLL/SLL	00795
EOD Primary Tumor	Drop down	Yes	Lymphoma-CLL/SLL	100, 200, 300, 400, 500, 600, 700, 800, 999
EOD Regional Nodes	Drop down	Yes	Lymphoma-CLL/SLL	888
EOD Mets	Drop down	Yes	Lymphoma-CLL/SLL	88

2019 EOD/SS/SSDI Reliability Study

Label of Data Item	Data Type	Data Item Required	EOD Schema	Allowable Value
SS2018	Drop down	Yes	Lymphoma- CLL/SLL	1, 2, 7, 9
Grade Clinical, Grade Pathological, Grade Post Therapy (3843- 3845)	Drop down	Yes	Lymphoma- CLL/SLL	8 (also blank for 3845 only)
Adenopathy (3804)	Drop down	Yes	Lymphoma- CLL/SLL	0, 1, 9
Anemia (3811)	Drop down	Yes	Lymphoma- CLL/SLL	0, 1, 6, 7, 9
B symptoms (3812)	Drop down	Yes	Lymphoma- CLL/SLL	0, 1, 8, 9
HIV Status (3859)	Drop down	Yes	Lymphoma- CLL/SLL	0, 1, 7, 8, 9
Lymphocytosis (3885)	Drop down	Yes	Lymphoma- CLL/SLL	0, 1, 6, 7, 9
NCCN International Prognostic Index (IPI) (3896)	Drop down	Yes	Lymphoma- CLL/SLL	00, 01, 02, 03, 04, 05, 06, 07, 08, X1, X2, X3, X4, X8, X9
Organomegaly (3907)	Drop down	Yes	Lymphoma- CLL/SLL	0, 1, 9
Thrombocytopenia (3933)	Drop down	Yes	Lymphoma- CLL/SLL	0, 1, 6, 7, 9
Primary Site	Drop Down	Yes	Melanoma Skin	C000-C002, C006, C210, C440-C449, C500, C510-C512, C518-C519, C600- C602, C608-C609, C632
Histology	Drop Down	Yes	Melanoma Skin	8720/3-8790/3
Schema ID	Derived	No	Melanoma Skin	00470
EOD Primary Tumor	Drop down	Yes	Melanoma Skin	000, 100, 200, 300, 400, 500, 700, 800, 999
EOD Regional Nodes	Drop down	Yes	Melanoma Skin	000, 100, 200, 300, 350, 400, 450, 500, 550, 600, 650, 700, 750, 800, 999
Sentinel Lymph Nodes Examined	Drop down	Yes	Melanoma Skin	00-90, 95, 98-99

2019 EOD/SS/SSDI Reliability Study

Label of Data Item	Data Type	Data Item Required	EOD Schema	Allowable Value
Sentinel Lymph Nodes Positive	Drop down	Yes	Melanoma Skin	00-90, 95, 97-99
EOD Mets	Drop down	Yes	Melanoma Skin	00, 10, 20, 30, 50, 60, 70, 90
SS2018	Drop down	Yes	Melanoma Skin	0, 1, 2, 3, 4, 7, 9
Grade Clinical, Grade Pathological, Grade Post Therapy (3843-3845)	Drop down	Yes	Melanoma Skin	A, B, C, D, 9 (also blank for 3845 only)
Breslow Thickness (3817)		Yes	Melanoma Skin	0.0-99.9, XX.1, A0.1-A9.9, AX.0, XX.8, XX.9
LDH (Lactate Dehydrogenase) Pretreatment Level (3869)	Drop down	Yes	Melanoma Skin	0, 1, 7, 9
LDH Upper Limits of Normal (3870)		Yes	Melanoma Skin	001-999, XX8, XX9
Mitotic Rate Melanoma (3893)		Yes	Melanoma Skin	00-99, X1, X2, X3, X4, X7, X8, X9
LDH (Lactate Dehydrogenase) Pretreatment Lab Value (3932)		Yes	Melanoma Skin	0.0-99999.9, XXXXX.1, XXXXX.7, XXXXX.8, XXXXX.9
Ulceration (3936)	Drop down	Yes	Melanoma Skin	0, 1, 8, 9
Primary Site	Drop Down	Yes	Ovary	C569
Histology	Drop Down	Yes	Ovary	8000-8700, 8720-8790, 8806, 8810, 8815, 8822, 8825, 8890, 8930-8931, 8933, 8935-8936, 8950, 8960, 8980, 9000, 9050, 9052, 9060, 9070-9071, 9073, 9080, 9085, 9090-9091, 9100, 9110, 9700-9701
Schema ID	Derived	No	Ovary	00551

2019 EOD/SS/SSDI Reliability Study

Label of Data Item	Data Type	Data Item Required	EOD Schema	Allowable Value
EOD Primary Tumor	Drop down	Yes	Ovary	000, 100, 150, 200, 250, 300, 350, 400, 450, 500, 600, 650, 700, 750, 800, 999
EOD Regional Nodes	Drop down	Yes	Ovary	000, 050, 300, 400, 500, 800, 999
EOD Mets	Drop down	Yes	Ovary	00, 10, 30, 50, 70, 99
SS2018	Drop down	Yes	Ovary	0, 1, 2, 3, 4, 7, 9
Grade Clinical, Grade Pathological, Grade Post Therapy (3843-3845)	Drop down	Yes	Ovary	1, 2, 3, B, L, H, 9 (also blank for 3845 only)
CA-125 PreTX Lab Value (3818)	Drop down	Yes	Ovary	0, 1, 2, 7, 8, 9
FIGO Stage (3936)	Drop down	Yes	Ovary	01, 02, 05, 08, 09, 10, 11, 20, 21, 24, 30, 31, 32, 33, 34, 35, 36, 37, 40, 41, 42, 97, 98, 99
Residual Tumor Volume Post Cytoreduction (3921)	Drop down	Yes	Ovary	00, 10, 20, 30, 40, 90, 91, 92, 93, 97, 98, 99
Primary Site	Drop Down	Yes	Prostate	C619
Histology	Drop Down	Yes	Prostate	8000-8700, 8720-8790, 9700-9701
Schema ID	Derived	No	Prostate	00580
EOD Primary Tumor	Drop down	Yes	Prostate	000, 100, 110, 120, 150, 200, 210, 220, 250, 300, 350, 400, 500, 600, 700, 800, 999
Prostate Path Exten (3919)	Drop down	Yes	Prostate	000, 250, 300, 350, 400, 500, 600, 700, 800, 900, 950, 999
EOD Regional Nodes	Drop down	Yes	Prostate	000, 300, 800, 999

2019 EOD/SS/SSDI Reliability Study

Label of Data Item	Data Type	Data Item Required	EOD Schema	Allowable Value
EOD Mets	Drop down	Yes	Prostate	00, 10, 30, 50, 70, 99
SS2018	Drop down	Yes	Prostate	0, 1, 2, 3, 4, 7, 9
Grade Clinical, Grade Pathological, Grade Post Therapy (3843-3845)	Drop down	Yes	Prostate	1, 2, 3, 4, 5, A, B, C, D, E, 9 (also blank for 3845 only)
Gleason Patterns Clinical (3838)	Drop down	Yes	Prostate	11, 12, 13, 14, 15, 19, 21, 22, 23, 24, 25, 29, 31, 32, 33, 34, 35, 39, 41, 42, 43, 44, 45, 49, 51, 52, 53, 54, 55, 59, X6, X7, X8, X9
Gleason Patterns Pathological (3839)	Drop down	Yes	Prostate	11, 12, 13, 14, 15, 19, 21, 22, 23, 24, 25, 29, 31, 32, 33, 34, 35, 39, 41, 42, 43, 44, 45, 49, 51, 52, 53, 54, 55, 59, X6, X7, X8, X9
Gleason Score Clinical (3840)	Drop down	Yes	Prostate	02, 03, 04, 05, 06, 07, 08, 09, 10, X7, X8, X9
Gleason Score Pathological (3841)	Drop down	Yes	Prostate	02, 03, 04, 05, 06, 07, 08, 09, 10, X7, X8, X9
Gleason Tertiary Pattern (3842)	Drop down	Yes	Prostate	10, 20, 30, 40, 50, X7, X8, X9
Number of Cores Examined (3897)		Yes	Prostate	01-99, X1, X6, X7, X8, X9
Number of Cores Positive (3898)		Yes	Prostate	01-99, X1, X6, X7, X8, X9
PSA Lab Value (3920)		Yes	Prostate	0.1-999.9, XXX.1, XXX.7, XXX.9
Primary Site	Drop Down	Yes	Soft Tissue Abd/Thor	See schema in SEER*RSA
Histology	Drop Down	Yes	Soft Tissue Abd/Thor	See schema in SEER*RSA
Schema ID	Derived	No	Soft Tissue Abd/Thor	00421

2019 EOD/SS/SSDI Reliability Study

Label of Data Item	Data Type	Data Item Required	EOD Schema	Allowable Value
EOD Primary Tumor	Drop down	Yes	Soft Tissue Abd/Thor	100, 200, 300, 400, 500, 550, 600, 650, 700, 750, 800, 999
EOD Regional Nodes	Drop down	Yes	Soft Tissue Abd/Thor	000, 800, 999
EOD Mets	Drop down	Yes	Soft Tissue Abd/Thor	00, 10, 70, 99
SS2018	Drop down	Yes	Soft Tissue Abd/Thor	1, 2, 3, 4, 7, 9
Grade Clinical, Grade Pathological, Grade Post Therapy (3843-3845)	Drop down	Yes	Soft Tissue Abd/Thor	1, 2, 3, A, B, C, D, 9 (also blank for 3845 only)
Bone Invasion (3815)	Drop down	Yes	Soft Tissue Abd/Thor	0, 1, 8, 9
Primary Site	Drop Down	Yes	Tongue Anterior	C020-C023, C028-C029
Histology	Drop Down	Yes	Tongue Anterior	8000-8700, 8982, 9700-9701
Schema ID	Derived	No	Tongue Anterior	00072
EOD Primary Tumor	Drop down	Yes	Tongue Anterior	000, 100, 150, 200, 300, 400, 500, 600, 650, 700, 999
EOD Regional Nodes	Drop down	Yes	Tongue Anterior	000, 100, 150, 200, 250, 300, 400, 450, 500, 600, 700, 800, 999
EOD Mets	Drop down	Yes	Tongue Anterior	00, 10, 70, 99
SS2018	Drop down	Yes	Tongue Anterior	0, 1, 2, 3, 4, 7, 9
Grade Clinical, Grade Pathological, Grade Post Therapy (3843-3845)	Drop down	Yes	Tongue Anterior	1, 2, 3, 9 (also blank for 3845 only)
Extranodal Exten H&N Clin (3831)	Drop down	Yes	Tongue Anterior	0, 1, 2, 7, 8, 9
Extranodal Exten H&N Path (3832)		Yes	Tongue Anterior	0.0-9.9, X.1-X.4, X.7-X.9

2019 EOD/SS/SSDI Reliability Study

Label of Data Item	Data Type	Data Item Required	EOD Schema	Allowable Value
Human Papilloma Virus (HPV) Status (3700)	Drop down	Yes	Tongue Anterior	0, 1, 2, 3, 4, 5, 6, 7, 8, 9
LN Size (3883)		Yes	Tongue Anterior	0.0-99.9, XX.1-XX.9

9. Any validation that needs to happen for each data item: Every data item, except for Grade Post Therapy, is required and it must be non-blank. User must pick a value from each drop-down list.
10. Number of cases needed for completion: 1 set (10 cases) with an option to complete up to 4 additional sets (40 cases)
11. Cases done in order? No
12. Preferred answers? Yes – the preferred answers will be delivered to IMS in MS Excel format and will be delivered 1 month prior to the date when we want our users to see the preferred answers on the website. Rationale will also be provided in the same Excel sheet. The Excel spreadsheet of preferred answers will contain values as specified in “Valid Values for EOD.SS2018.Grade. SSDIs for 10 Sites.xls”
13. Which institutions/registries involved? All institutions/registries may participate.
14. Expert version of the study? No
15. Certificate
 - a. Study name: 2019 EOD/SS/SSDI Reliability Study
 - b. CEUs: Maximum of 50. 10 CEUs per each group completed
 - c. NCRA event number: 2019-012
 - d. Name for signature: Jennifer Ruhl, MS, RHIT, CCS, CTR
16. Case groups – Westat will be responsible for creating the groups. IMS will receive the 50 cases clearly marked with which case goes with which group. IMS will implement set by keeping track of which case goes with which set and assigning a new user to the next available set. When a user gets assigned to a set, they must complete the cases in that group in order to earn CEUs. If they wish to complete a second set, the software will just assign them the next available set that is not the one they just completed.
17. Users may code all 5 groups of cases
18. Post-study poll

2019 EOD/SS/SSDI Reliability Study

Label of question (as you would like it to appear on website)	Data Type	Is this a required field?	Constraints/limits you would like the web site to impose on the answer
What tools/manuals/websites did you use to complete this study?	Free text	No	
Did you find the SEER software easy to use?	Yes/No	No	If they answer No, add a free text box labeled "Please tell us why"
What could we do to improve the SEER Reliability software for use in these studies?	Free text	No	

2019 EOD/SS/SSDI Reliability Study

APPENDIX C Call for Cases

FROM: NCI SEER TNM Informatics Team
SUBJECT: 2019 EOD/SS/SSDI Reliability Study
DATE: July 23, 2018

NCI SEER is conducting a study to assess the potential impact of implementation of the revised EOD coding system, along with Summary Stage 2018, Grade, and relevant SSDIs. The study asks registrars to code the EOD data items, Grade, and relevant SSDIs using the original medical records.

This assessment will provide NCI information on training needs. When submitting cases, **PLEASE SUBMIT ALL REQUESTED INFORMATION** you have on each case to ensure that coders can code the cases based on all available records, not just the medical record.

Confidentiality

Cases must be de-identified before submitting to NCI SEER. Remove/delete all personal identifying information to protect privacy and assure confidentiality.

Personal identifiers include:

- Patient name
- Physician names
- Healthcare facility name
- Any address and/or geographic information (street, city, state, zip code)
- Telephone numbers
- Date of birth
- Social security number
- Medical record number
- Any other identifying information

Remove or delete all personal identifiers from each page of the medical record.

I. Description of Cases Requested

1. **Neoplasm type:** Submit 2 cases per EOD schema. This will result in a total submission of 20 cases. The cases should be SEER reportable cases that are **single primaries only**
 - a. Brain (Malignant) (please submit cases, if possible, with the following histologies: 9400/3, 9401/3, 9440/3, 9450/3, 9451/3, 9471/3, 9478/3)
 - b. Breast
 - c. Colon and Rectum (Colon cases only)
 - d. Lung
 - e. Lymphoma-CLL/SLL (Histology 9823/3)
 - f. Melanoma Skin
 - g. Ovary
 - h. Prostate

2019 EOD/SS/SSDI Reliability Study

- i. Soft Tissue Abdomen and Thoracic (see SEER*RSA for list of primary sites: https://staging.seer.cancer.gov/eod_public/list/1.3/)
 - j. Tongue Anterior (Cases where primary tumor is based on tumor size and depth of invasion [T1-T3]) and positive nodes)
2. **Difficulty Level:** Most of the cases should be among the common, not rare or difficult. These cases should be typical cases registries can expect in their overall caseload.
 3. **Diagnosis Date:** Please send 2018 cases if possible. If enough 2018 cases cannot be found, it is acceptable to send 2017 cases.
 4. **Required Parts of Medical Record:** Please include all records that would be available to an abstractor collecting the case at the facility.

The case files could include information such as the following:

Available?	Report
	Discharge Summary(s)
	History and Physical(s)
	Consultation(s)
	Imaging Report(s), in particular chest/abdominal/pelvic CT and PET-CT scans
	Procedure Report(s)
	Operative Report(s)
	Pathology Report(s) (i.e. Special studies, Addendums, etc.)
	Peripheral blood (i.e., PSA, CEA, etc.)
	Immunophenotyping (flow cytometry and/or immunohistochemistry)
	Genetic testing
	Reports on tests frequently occurring outside the hospital (i.e., cytogenetics)

II. Case Preparation

- Electronic submission to the SEER Call for Data Portal is required. If you do not have cases in electronic format, then please scan the records into pdf or OCR format to send electronically.
- Remove all personal identifiers from all reports.
- Number the cases sequentially, beginning with Case 1 (Case 1, Case 2, Case 3, etc.) on electronic file name, not on inside of document.
- Please retain for future uses, the patient ID or medical record number or any other useful information that will help you identify the original source. Please do not transmit these numbers to NCI.

Case Submission: Please **do not hold** cases until the deadline. Send cases as soon as you locate them.

Last Day to Submit Cases: **September 1, 2018**

When to send: Please send cases as they are identified. Multiple submissions are preferred rather than waiting to send them all right before the deadline

2019 EOD/SS/SSDI Reliability Study

How to send:

Who to call:

See below for Instructions for the SEER Call for Data Portal

Jennifer Ruhl

NCI SEER

ruhlj@mail.nih.gov

240-276-6808

Instructions for the SEER Call for Data Portal

A portal has been created for the SEER program to use with Calls for Data. (https://seer.cancer.gov/seer_cfd) This portal will facilitate the exchange of files that may have sensitive information included. Please do not wait until the deadline to set up your account on this portal, as there is some processing time involved.

For the person(s) in your registry that will need access to this portal, please send the following information to Nicki Schussler at IMS (schusslern@imsweb.com):

First Name
Last Name
Email Address
Which Registry or Registries the person needs access to

Note that the following combinations of registries are currently in place:

Georgia (Atlanta, Rural GA, Greater GA)
Greater Bay (San Francisco-Oakland, San Jose-Monterey)
New Mexico (New Mexico, Arizona Indians, Cherokee Nation)

Each individual will receive an email titled 'Portal Registration for SEER Call for Data for Reliability Studies Portal' at the address provided. **SAVE THIS EMAIL.**

Please note that the links in the email expire, so you should respond in a timely fashion. There are 2 steps in the email.

If you don't have a portal account:

Step 1. Use the link provided in step 1 to create an IMS Login Services account. You must select a user account, password and security questions.

You will receive an email titled 'Email Confirmation for IMS Login Service'. You must click on the link in this email within 24 hours to verify the email address.

You will receive an additional email titled 'New Account Approved' when your new account is ready.

Once you have verified your account OR if you already have a portal account:

Step 2. On the original email, click the link provided in step 2. This takes you to the portal login system.

Collaborative Portal Login System

You are attempting to access the portal at **<https://seer.cancer.gov>**

The collaborative portal system can accommodate two types of login credentials:

- [IMS Login Service](#) - An account provided by the portal system administrators to users who do not have an NIH account.
- [NIH Network](#) - An account used to log into the National Institutes of Health (NIH) network

Need assistance? Send an email to the [administrator](#).

Click the [IMS Login Service](#) link.

If you already have an account on an IMS hosted portal, please use the same username and password as before. You should get a message that Login Service has been Updated (your account is now linked to this portal. You can proceed to the home page.



Home

[Home](#)

[Contacts](#)

Login Service Updated

Your portal account has been successfully linked with your Login Service account.
[Proceed to the home page.](#)

You will be assigned access to the appropriate registry folders when the account request was received.

2019 EOD/SS/SSDI Reliability Study

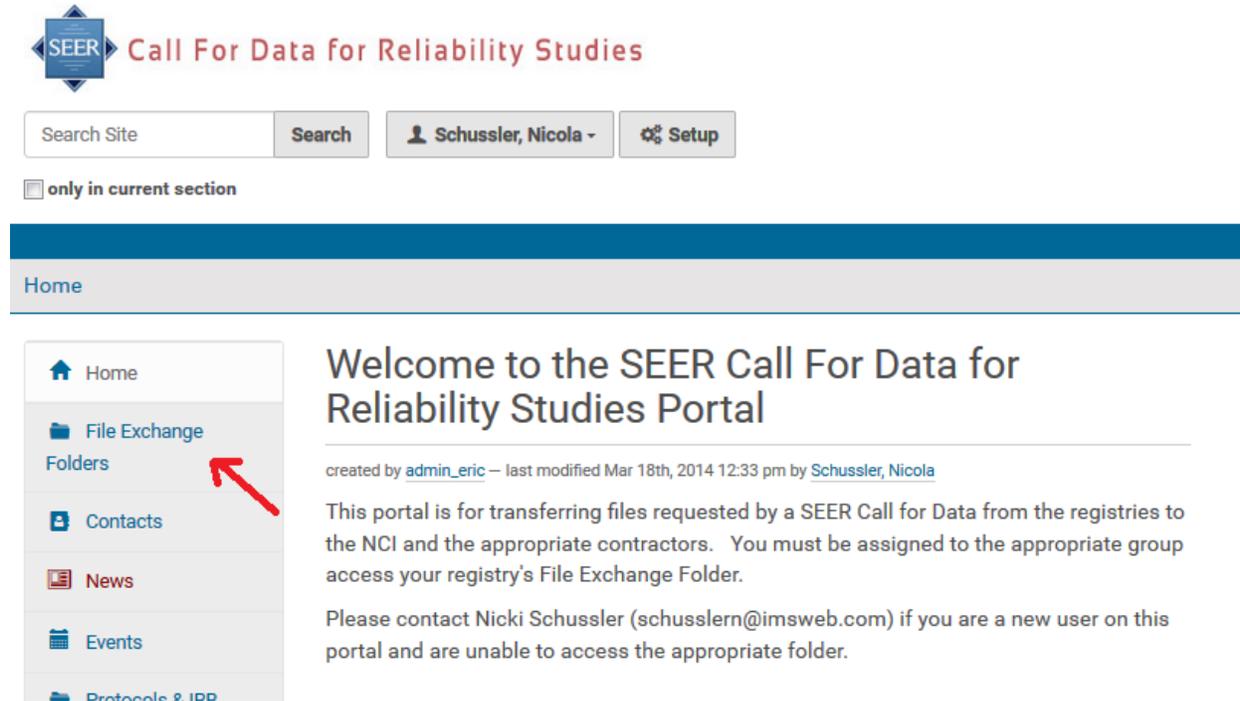
Once all the set up has been complete for your account, you will be able to transfer files.

1. Use the link to access the portal.

https://seer.cancer.gov/seer_cfd

2. Use the [IMS Login Service](#) link to log in.

3. Navigate to your registry's File Exchange Folder. (File Exchange Folders/<registry>)



SEER Call For Data for Reliability Studies

Search Site Search Schussler, Nicola Setup

only in current section

Home

Home
File Exchange Folders
Contacts
News
Events
Protocols & IRR

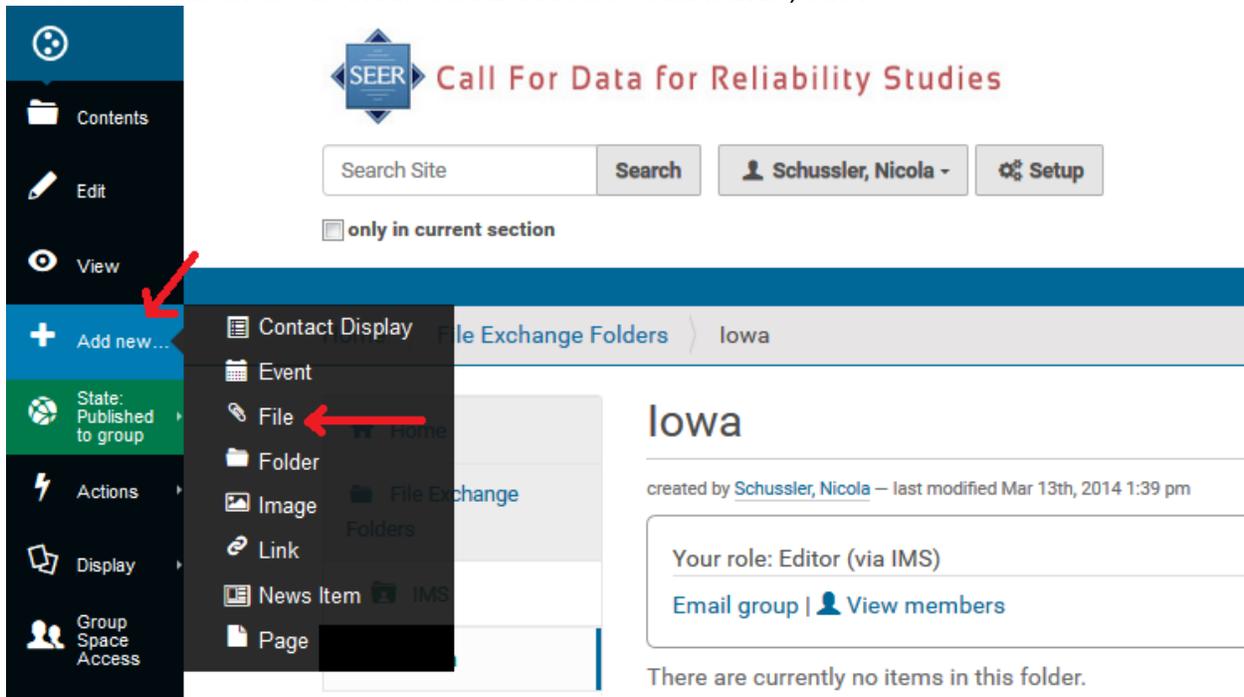
Welcome to the SEER Call For Data for Reliability Studies Portal

created by [admin_eric](#) – last modified Mar 18th, 2014 12:33 pm by [Schussler, Nicola](#)

This portal is for transferring files requested by a SEER Call for Data from the registries to the NCI and the appropriate contractors. You must be assigned to the appropriate group access your registry's File Exchange Folder.

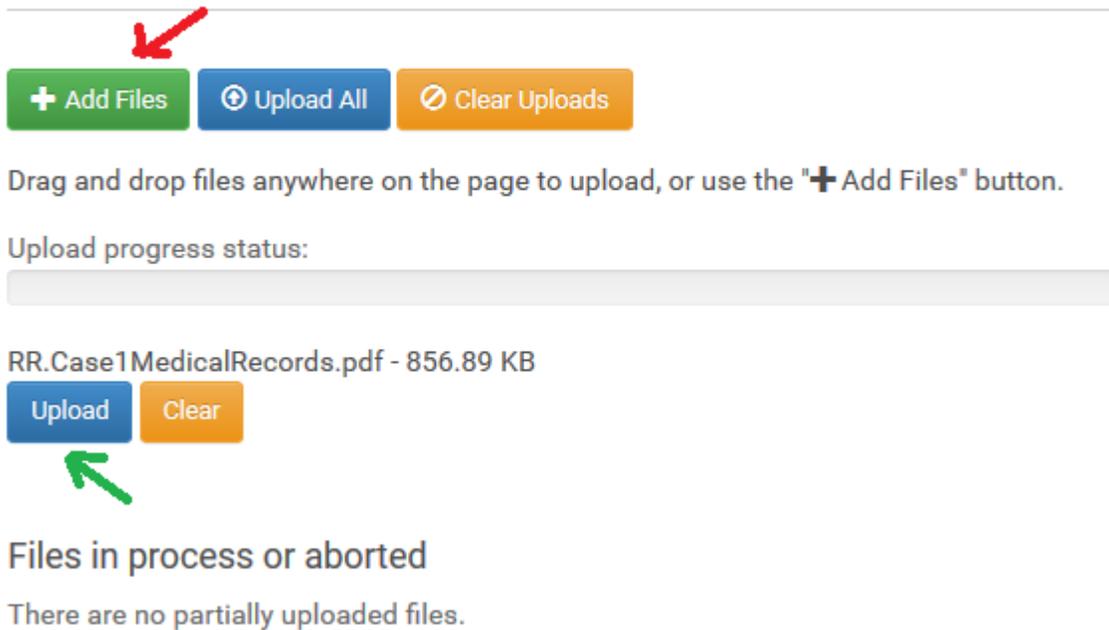
Please contact Nicki Schussler (schusslern@imsweb.com) if you are a new user on this portal and are unable to access the appropriate folder.

4. Use the menus on the left black tool bar add select 'Add new...' ; 'File'.



5. Drag and drop the file onto the page OR use the + Add Files button. When ready, click Upload.

Upload Files to iowa



All content initially starts in a **private** state. When you are happy with the uploaded files and associated titles and descriptions, you need to make the content **group_published**.

2019 EOD/SS/SSDI Reliability Study

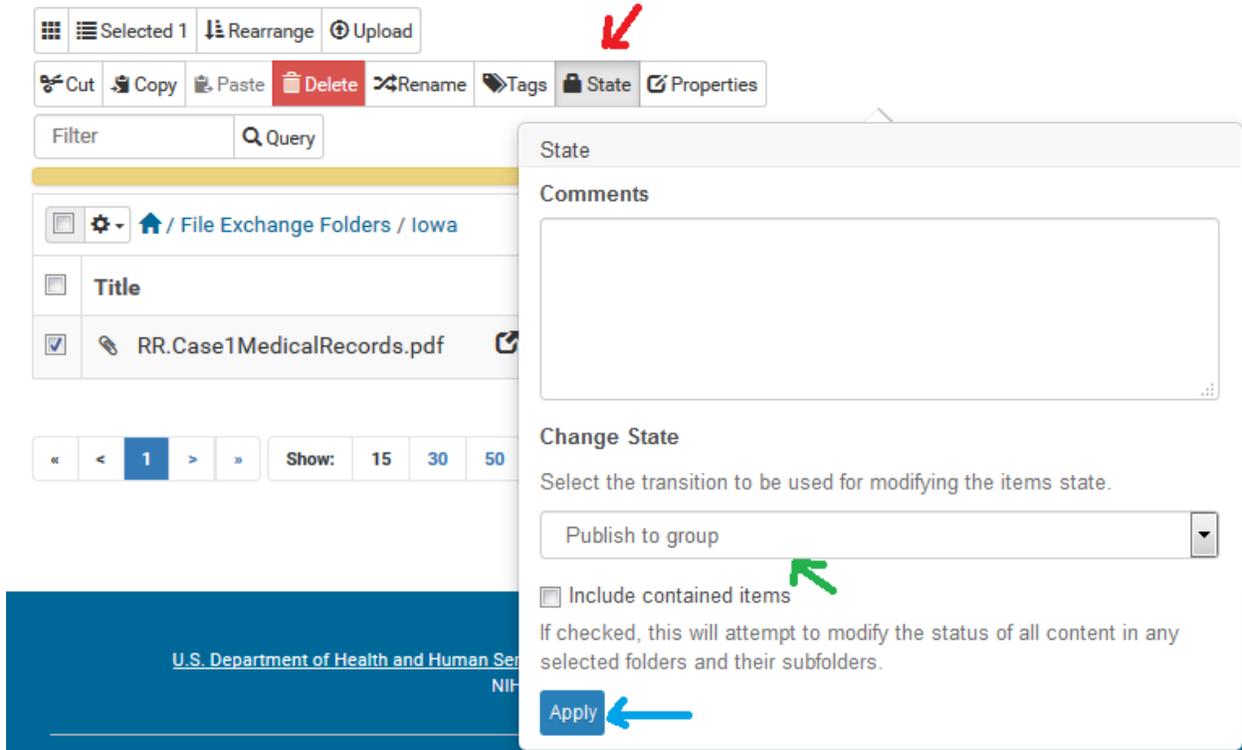
6. Click on Content in left black tool bar and check all the boxes next to the files you wish to change. Clicking the top box will select all files.

The screenshot shows the SEER interface for a folder named 'Iowa'. On the left, a dark navigation bar contains several menu items: 'Contents' (highlighted with a red arrow), 'Edit', 'View', 'Add new...', 'State: Published to group', 'Actions', 'Display', 'Group Space Access', 'Upload', and 'History'. The main content area displays the 'Iowa' folder details, including the user's role as 'Editor (via IMS)', a search bar, and a toolbar with options like 'Selected 0', 'Rearrange', 'Upload', 'Cut', 'Copy', 'Paste', 'Delete', 'Rename', 'Tags', 'State', and 'Properties'. Below the toolbar is a table with the following data:

	Title	Last modified	Publication date	Review state
<input type="checkbox"/>	RR.Case1MedicalRecords.pdf	3 minutes ago	None	group_private

A green double-headed arrow points to the first row of the table, indicating the selection of the file.

7. Click State button above the file list Change State at the bottom to Publish to group and click the Apply button.



8. Email Nicki Schussler (schusslern@imsweb.com) that the content is available in your File Exchange folder.

The following links provide additional information about how portals work:

http://portals.imsweb.com/portal_help/understanding-the-site-interface

http://portals.imsweb.com/portal_help/managing-content

2019 EOD/SS/SSDI Reliability Study

Appendix D Expert Panel for 2019 EOD/SS/SSDI Reliability Study

Email sent to Reviewers

FROM: NCI SEER TNM Informatics Team
SUBJECT: Registry Reviewer Panel for 2019 EOD/SS/SSDI Reliability Study
DATE: October 1, 2018

Thank you for participating as a registry reviewer for the SEER Expert Panel for the 2019 EOD/SS/SSDI Reliability Study

The purpose of the registry review panel is to help determine preferred answers for study cases. When final, the preferred answers and rationales will be made available to study participants after the study closes. The preferred answers will be compared to participant answers to identify training needs as we move to coding EOD, SS2018, SSDIs and Grade.

You have a folder labeled with your name on the SEER Call for Data Portal that contains the material you will use for your review. The redacted medical records assigned to you and an Access database with the code assignments according to the first reviewer (instructions below) are inside your folder. Please review the medical records and the recorded responses. **You only need to fill in your response and rationale if you disagree with the first reviewer.**

Please complete your set of 10 cases by **December 15, 2018**. Also note that the study will open March 1, 2019.

Important: Do not share your responses or discuss cases with anyone to protect the integrity of this study.

Your help with this important study is very much appreciated.
Contact Jennifer Ruhl with any questions (ruhlj@mail.nih.gov).

Thank you,
Jennifer Ruhl

Instructions:

Access your study files and database on the Call for Data Portal. Your study files are located in a folder with your name.

To access the Call for Data Portal (https://seer.cancer.gov/seer_cfd), see attachment "Instructions for the SEER Call for Data Portal Reviewers.doc"

For instructions on how to download the database, enter and upload your responses see attachment "Procedure for the Registry Review Panel.pdf"

Once you are finished with your review, please upload the Access database back to the Portal and notify Carmela Groves (CarmelaGroves@westat.com).

2019 EOD/SS/SSDI Reliability Study

Email sent to Selected Reviewers for Adjudication Panel

FROM: NCI SEER TNM Informatics Team
SUBJECT: Adjudicator Panel for the 2019 EOD/SS/SSDI Reliability Study
DATE: November 1, 2018

Thank you for participating as an adjudicator for the 2019 EOD/SS/SSDI Reliability Study. The purpose of the adjudicator panel is to help determine preferred answers for study cases. When final, the preferred answers and rationales will be made available to study participants after the study closes. The preferred answers will be compared to participant answers to identify training needs as we move to coding EOD, SSDIs and Grade.

You have been selected to adjudicate cases. You will review cases for which two sets of reviewers could not reach a consensus and determine the correct answer.

The second set of reviewers will be conducting their reviews from December 15, 2018-January 15, 2019. As soon as cases become available for your review, we will contact you with instructions on how to access the cases.

Your help with this important study is very much appreciated.
Contact Jennifer Ruhl with any questions (ruhjl@mail.nih.gov).

Thank you,
Jennifer Ruhl

2019 EOD/SS/SSDI Reliability Study Protocol (July 2018)

APPENDIX E

Data Items to be captured from Case Files

These data items shall be stored in a database to be merged back to the original case.

Variable number	Variable name	Definition
01	caseidm	Case identification number of the case/medical record receive following the August 2018 call for cases; standard format CXXZZN CXX is the primary site; ZZ registry identifier; N – case count.
02	caseidh	Same as the file name
03	registryid	Same as the NAACCR data element
04	schema_id	NAACCR data element
05	set	5 “sets”, sets of 10 cases presented to study participants, 01-05
06	pref_p_site	NAACCR data element
07	pref_histology	NAACCR data element
08	pref_behavior	NAACCR data element
09	pref_tumor_size_clinical	Preferred value, see list of valid values
10	pref_tumor_size_pathological	Preferred value, see list of valid values
11	pref_eod_primary_tumor	Preferred value, see list of valid values
12	pref_eod_regional_nodes	Preferred value, see list of valid values
13	pref_regional_nodes_positive	Preferred value, see list of valid values
14	pref_sentinel_node_examined	Preferred value, see list of valid values
15	pref_sentinel_node_positive	Preferred value, see list of valid values
16	pref_eod_mets	Preferred value, see list of valid values
17	pref_summary_stage_2018	Preferred value, see list of valid values
18	pref_grade_clinical	Preferred value, see list of valid values
19	pref_grade_pathological	Preferred value, see list of valid values
20	pref_grade_post_therapy	Preferred value, see list of valid values
21	pref_brain_molecular_markers	Preferred value, see list of valid values
22	pref_chromosome_1p_status	Preferred value, see list of valid values
23	pref_chromosome_19q_status	Preferred value, see list of valid values
24	pref_mgmt	Preferred value, see list of valid values
25	pref_lymph_node_positive_axillary_level_i_ii	Preferred value, see list of valid values
26	pref_er_summary	Preferred value, see list of valid values
27	pref_er_percent_positive	Preferred value, see list of valid values
28	pref_er_allred_score	Preferred value, see list of valid values
29	pref_pr_summary	Preferred value, see list of valid values
30	pref_pr_percent_positive	Preferred value, see list of valid values
31	pref_pr_allred_score	Preferred value, see list of valid values
32	pref_her2_overall_summary	Preferred value, see list of valid values
33	pref_her2_ihc_summary	Preferred value, see list of valid values
34	pref_her2_ish_summary	Preferred value, see list of valid values
35	pref_her2_ish_dp_ratio	Preferred value, see list of valid values

2019 EOD/SS/SSDI Reliability Study Protocol (July 2018)

Variable number	Variable name	Definition
36	pref_her2_ish_dp_copy_no	Preferred value, see list of valid values
37	pref_her2_ish_sp_copy_no	Preferred value, see list of valid values
38	pref_ki67	Preferred value, see list of valid values
39	pref_oncotype_dx_recur_score	Preferred value, see list of valid values
40	pref_oncotype_dx_risk_level_invasive	Preferred value, see list of valid values
41	pref_oncotype_dx_recur_score_dcis	Preferred value, see list of valid values
42	pref_oncotype_dx_risk_level_dcis	Preferred value, see list of valid values
43	pref_multigene_signature_method	Preferred value, see list of valid values
44	pref_multigene_signature_result	Preferred value, see list of valid values
45	pref_response_neoadjuv_therapy	Preferred value, see list of valid values
46	pref_cea_pretx_interpretation	Preferred value, see list of valid values
47	pref_cea_pretx_lab_value	Preferred value, see list of valid values
48	pref_circumferential_resection_margin	Preferred value, see list of valid values
49	pref_kras	Preferred value, see list of valid values
50	pref_microsatellite_instability	Preferred value, see list of valid values
51	pref_perineural_invasion	Preferred value, see list of valid values
52	pref_tumor_deposits	Preferred value, see list of valid values
53	pref_extranodal_exten_hn_clin	Preferred value, see list of valid values
54	pref_extranodal_exten_hn_path	Preferred value, see list of valid values
55	pref_human_papilloma_virus_status	Preferred value, see list of valid values
56	pref_ln_size	Preferred value, see list of valid values
57	pref_separate_tumor_nodules	Preferred value, see list of valid values
58	pref_visceral_parietal_pleural_invasion	Preferred value, see list of valid values
59	pref_b_symptoms	Preferred value, see list of valid values
60	pref_hiv_status	Preferred value, see list of valid values
61	pref_nccn_ipi	Preferred value, see list of valid values
62	pref_adenopathy	Preferred value, see list of valid values
63	pref_anemia	Preferred value, see list of valid values
64	pref_lymphocytosis	Preferred value, see list of valid values
65	pref_organomegaly	Preferred value, see list of valid values
66	pref_thrombocytopenia	Preferred value, see list of valid values
67	pref_breslow_thickness	Preferred value, see list of valid values
68	pref_ulceration	Preferred value, see list of valid values
69	pref_mitotic_rate_melanoma	Preferred value, see list of valid values
70	pref_ldh_pretreatment_lab_value	Preferred value, see list of valid values
71	pref_ldh_upper_limits_of_normal	Preferred value, see list of valid values
72	pref_ldh_pretreatment_level	Preferred value, see list of valid values
73	pref_fig0_stage	Preferred value, see list of valid values
74	pref_ca125_pretx_lab_value	Preferred value, see list of valid values
75	pref_residual_tumor_volume_post_cytoreduction	Preferred value, see list of valid values
76	pref_prostate-path-extension	Preferred value, see list of valid values
77	pref_psa_lab_value	Preferred value, see list of valid values
78	pref_gleason_patterns_clinical	Preferred value, see list of valid values

2019 EOD/SS/SSDI Reliability Study Protocol (July 2018)

Variable number	Variable name	Definition
79	pref_gleason_score_clinical	Preferred value, see list of valid values
80	pref_gleason_patterns_pathological	Preferred value, see list of valid values
81	pref_gleason_score_pathological	Preferred value, see list of valid values
82	pref_gleason_tertiary_pattern	Preferred value, see list of valid values
83	pref_number_of_cores_positive	Preferred value, see list of valid values
84	pref_number_of_cores_examined	Preferred value, see list of valid values
85	pref_bone_invasion	Preferred value, see list of valid values
86	rsn_p_site	NAACCR data element
87	rsn_histology	NAACCR data element
88	rsn_behavior	NAACCR data element
89	rsn_tumor_size_clinical	Reasons for preferred value
90	rsn_tumor_size_pathological	Reasons for preferred value
91	rsn_tumor_size_summary	Reasons for preferred value
92	rsn_eod_primary_tumor	Reasons for preferred value
93	rsn_eod_regional_nodes	Reasons for preferred value
94	rsn_regional_nodes_positive	Reasons for preferred value
95	rsn_sentinel_node_examined	Reasons for preferred value
96	rsn_sentinel_node_positive	Reasons for preferred value
97	rsn_eod_mets	Reasons for preferred value
98	rsn_summary_stage_2018	Reasons for preferred value
99	rsn_grade_clinical	Reasons for preferred value
100	rsn_grade_pathological	Reasons for preferred value
101	rsn_grade_post_therapy	Reasons for preferred value
102	rsn_Brain_molecular_markers	Reasons for preferred value
103	rsn_Chromosome_1p_status	Reasons for preferred value
104	rsn_Chromosome_19q_status	Reasons for preferred value
105	rsn_Mgmt	Reasons for preferred value
106	rsn_Lymph_node_positive_axillary_level_i_ii	Reasons for preferred value
107	rsn_Er_summary	Reasons for preferred value
108	rsn_Er_percent_positive	Reasons for preferred value
109	rsn_Er_allred_score	Reasons for preferred value
110	rsn_Pr_summary	Reasons for preferred value
111	rsn_Pr_percent_positive	Reasons for preferred value
112	rsn_Pr_allred_score	Reasons for preferred value
113	rsn_her2_overall_summary	Reasons for preferred value
114	rsn_her2_ihc_summary	Reasons for preferred value
115	rsn_her2_ish_summary	Reasons for preferred value
116	rsn_her2_ish_dp_ratio	Reasons for preferred value
117	rsn_her2_ish_dp_copy_no	Reasons for preferred value
118	rsn_her2_ish_sp_copy_no	Reasons for preferred value
119	rsn_ki67	Reasons for preferred value
120	rsn_oncotype_dx_recur_score	Reasons for preferred value
121	rsn_oncotype_dx_risk_level_invasive	Reasons for preferred value
122	rsn_oncotype_dx_recur_score_dcis	Reasons for preferred value

2019 EOD/SS/SSDI Reliability Study Protocol (July 2018)

Variable number	Variable name	Definition
123	rsn_oncotype_dx_risk_level_dcis	Reasons for preferred value
124	rsn_multigene_signature_method	Reasons for preferred value
125	rsn_multigene_signature_result	Reasons for preferred value
126	rsn_response_neoadjuv_therapy	Reasons for preferred value
127	rsn_cea_pretx_interpretation	Reasons for preferred value
128	rsn_cea_pretx_lab_value	Reasons for preferred value
129	rsn_circumferential_resection_margin	Reasons for preferred value
130	rsn_kras	Reasons for preferred value
131	rsn_microsatellite_instability	Reasons for preferred value
132	rsn_perineural_invasion	Reasons for preferred value
133	rsn_tumor_deposits	Reasons for preferred value
134	rsn_extranodal_exten_hn_clin	Reasons for preferred value
135	rsn_extranodal_exten_hn_path	Reasons for preferred value
136	rsn_human_papilloma_virus_status	Reasons for preferred value
137	rsn_ln_size	Reasons for preferred value
138	rsn_separate_tumor_nodules	Reasons for preferred value
139	rsn_visceral_parietal_pleural_invasion	Reasons for preferred value
140	rsn_b_symptoms	Reasons for preferred value
141	rsn_hiv_status	Reasons for preferred value
142	rsn_nccn_ipi	Reasons for preferred value
143	rsn_adenopathy	Reasons for preferred value
144	rsn_anemia	Reasons for preferred value
145	rsn_lymphocytosis	Reasons for preferred value
146	rsn_organomegaly	Reasons for preferred value
147	rsn_thrombocytopenia	Reasons for preferred value
148	rsn_breslow_thickness	Reasons for preferred value
149	rsn_ulceration	Reasons for preferred value
150	rsn_mitotic_rate_melanoma	Reasons for preferred value
151	rsn_ldh_pretreatment_lab_value	Reasons for preferred value
152	rsn_ldh_upper_limits_of_normal	Reasons for preferred value
153	rsn_ldh_pretreatment_level	Reasons for preferred value
154	rsn_figo_stage	Reasons for preferred value
155	rsn_ca125_pretx_lab_value	Reasons for preferred value
156	rsn_residual_tumor_volume_post_cytoreduction	Reasons for preferred value
157	rsn_prostate-path-extension	Reasons for preferred value
158	rsn_psa_lab_value	Reasons for preferred value
159	rsn_gleason_patterns_clinical	Reasons for preferred value
160	rsn_gleason_score_clinical	Reasons for preferred value
161	rsn_gleason_patterns_pathological	Reasons for preferred value
162	rsn_gleason_score_pathological	Reasons for preferred value
163	rsn_gleason_tertiary_pattern	Reasons for preferred value
164	rsn_number_of_cores_positive	Reasons for preferred value
165	rsn_number_of_cores_examined	Reasons for preferred value

2019 EOD/SS/SSDI Reliability Study Protocol (July 2018)

Variable number	Variable name	Definition
166	rsn_bone_invasion	Reasons for preferred value