DEVELOPING A V21 REGISTRY SPECIFIC EDITS METAFILE

NAACCR WORKSHOP

9/10/20

SPEAKERS

- Jim Hofferkamp
- Elaine Collins
- Michelle Esterly

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AGENDA

- Session 1
  - Overview
  - Metafile Administrator Documentation
  - Software Tools Demonstration
- Session 2 Follow-up

- A recording of the session, slides, and Q&A will be posted to the NAACCR website
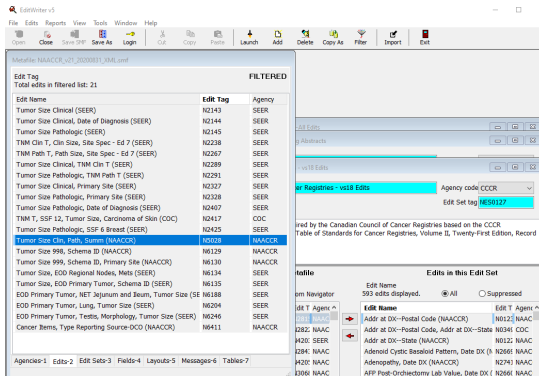
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NAACCR EDITS METAFILE

- NAACCR publishes a new or major version of the standard edits metafile corresponding to each new version of the NAACCR Data Dictionary
  - Edits within the NAACCR edits metafile have been reviewed and tested by the NAACCR Edits Work Group
  - The Edits WG consists of standard setter representatives, central registry staff, software vendors, and NCRA representation.
- The NAACCR Edits Metafile, supporting documentation, and training materials are posted on the NAACCR Edits Page
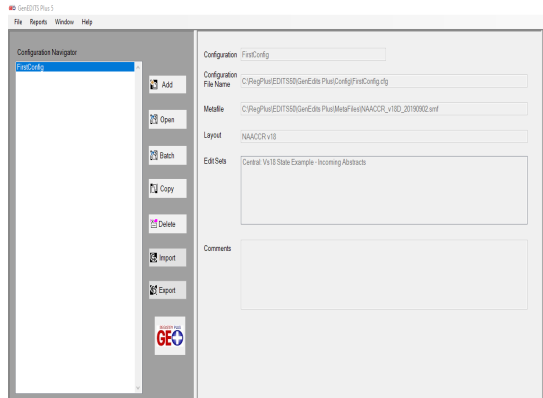 - https://www.naaccr.org/standard-data-edits/

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EDIT TOOLS AND TRAINING RESOURCES

Edit Writer 5

GenEDITS 5

https://www.cdc.gov/cancer/npcr/tools/edits/edits50.htm
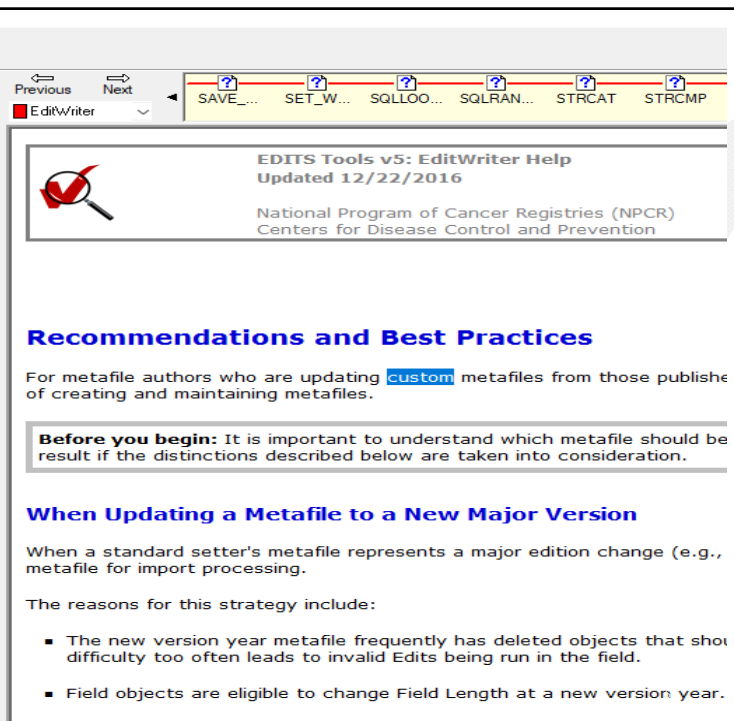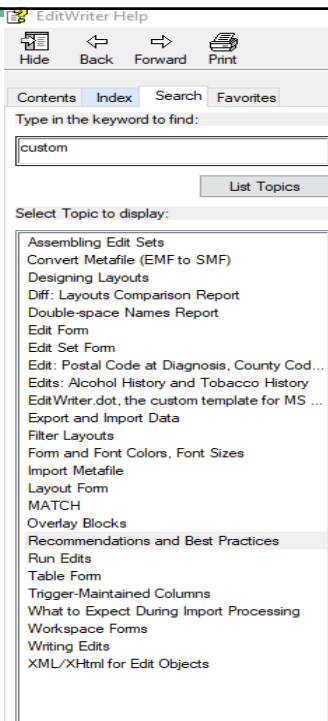
EDIT WRITER HELP

EDITS DETAIL REPORT

NAACCR_v18D_20190828.smf   Edits Detail Report

Lymphovascular Invasion (SEER)

Lymphovascular Invasion (SEER)

Agency: SEER   **Last changed: 08/20/2018 10:29:18**

Edit Tag N4909

Edit Sets

Edit Set Name	Edit Set Tag	Agency Code
SEER: Vs 18 Transmit Edits	NES0334	SEER

Fields

Order	Field Name	Field #	Agency Code
1	Lymphovascular Invasion	1182	AJCC

Default Error Message

[3311] %F1: %V1 is invalid (NAACCR)
Lymphovascular Invasion: "value of Lymphovascular Invasion" is invalid

Description

Must be a valid Lymphovascular Invasion code or blank:

```
0:      Lymphovascular Invasion stated as Not Present
1:      Lymphovascular Invasion present/identified
2:      Lymphatic and small vessel invasion only (L)
3:      Venous (large vessel) invasion only (V)
4:      BOTH lymphatic and small vessel AND venous (large vessel) invasion
8:      Not applicable
9:      Unknown
    Indeterminate
Not mentioned in pathology report
```

Administrative Notes

New edit - NAACCR v18 metafile.

1/23/2020

Developing a Central Registry Edits Metafile

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Edits Metafile

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NAACCR METAFILE STRUCTURE

- Agencies
  - NPCR
  - CoC
  - SEER
  - CCCR
  - NAACCR
- Edits
- Edit Sets
  - Reflect collection requirements of standard setters
- Fields

- Layout
- Messages
- Tables

Metafile: NAACCR_v21_20200831_XML.smf		
Edit Tag Total edits: 2617		
Edit Name	Edit Tag	Agency
Age, Primary Site, Morphology ICDO2 (SEER IF15)	N0001	SEER
Birthplace (SEER POB)	N0002	SEER
Diagnostic Confirmation (SEER DXCONF)	N0003	SEER
Diagnostic Confirmation, Histology ICDO2 (SEER IF48)	N0004	SEER
Laterality (SEER LATERAL)	N0005	SEER
Primary Site (SEER SITE)	N0007	SEER
Primary Site, Behavior Code ICDO2 (SEER IF39)	N0008	SEER
Primary Site, Morphology-Imposs ICDO2 (SEER IF38)	N0009	SEER
Primary Site, Morphology-Type ICDO2 (SEER IF25)	N0010	SEER
Race 1 (SEER RACE)	N0011	SEER
Sex (SEER Sex)	N0012	SEER
Sex, Primary Site (SEER IF17)	N0013	SEER
Spanish/Hispanic Origin (SEER SPANORIG)	N0014	SEER
Tumor Marker 1 (SEER TUMMARK1)	N0015	SEER
Tumor Marker 2 (SEER TUMMARK2)	N0016	SEER
Type of Report Srce (AO), Date of Dx (SEER IF02)	N0017	SEER
Type of Report Srce(DC/AO), Diag Conf (SEER IF05)	N0018	SEER
Type of Reporting Source (SEER RPRTSRC)	N0019	SEER
Date of Diagnosis (NAACCR DATEEDIT)	N0021	NAACCR
Date of Last Contact (NAACCR DATEEDIT)	N0022	NAACCR
Date of Last Contact, Date of Diag (NAACCR IF19)	N0024	NAACCR
Age, Birth Date, of Diagnosis (NAACCR IF13)	N0025	NAACCR

Agencies-1 | Edits-2 | Edit Sets-3 | Fields-4 | Layouts-5 | Messages-6 | Tables-7

EDIT SETS

- NPCR
  - Central: Vs21 State Example - Incoming Abstracts
  - Central: Vs21 NPCR Required - Consol-All Edits
- SEER
  - SEER: Vs 21 Transmit Edits
- CCCR
  - Canadian Council of Cancer Registries
- CoC
  - Hosp: Vs21 COC Required - All

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CENTRAL REGISTRY EDITS METAFILE

- A central registry edits metafile is developed to meet the specific needs of a central registry.
  - The central registry metafile should be based on the NAACCR Edits metafile
  - Standardized edits should be used whenever possible
  - Central registries may choose to develop customized edits and add customized data fields to meet their needs

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CENTRAL REGISTRY EDIT SET EXAMPLES

Reporting Facilities

- Hospitals
- Radiation Center
- Physician Reporting
- Path lab reporting

Central Registry Use

- Consolidation
- QC
- Field staff
- *Data Exchange*

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UPDATES

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EDIT METAFILE UPDATES

- Major Metafile Version
  - Release of a new version of the NAACCR Data Standards and Data Dictionary usually requires a major metafile version release.
    - Changes to the layout
    - New data items
    - New reporting requirements
- Minor Metafile Version
  - A minor metafile version is typically released to correct problems identified after a major metafile release.
    - Edits logic corrections
    - Reporting requirement updates
    - Tables or messages corrected

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CENTRAL REGISTRY METAFILE UPDATES

- When a new NAACCR Edits Metafile is released, a central registry metafile administrator must review the changes to the metafile to determine if changes to central registry metafile are required.
  - A major release will almost always require changes to the central registry metafile
  - A minor release may not require a change to the central registry metafile, but will require review of changes

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CUSTOMIZING CENTRAL REGISTRY METAFILE

- State specific edits
- State specific data items
- State specific edit sets
- State specific tables

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RELEASING AN UPDATED METAFILE

- Releasing a new metafile is disruptive and efforts should be made to limit updates to 2-3 times per year
- Updates are important and should not be skipped
- **Software vendors** and reporting facilities should be notified any time a new central registry metafile is released.

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CAVEAT

- Maintaining state specific edits and edits metafiles is a lot of work!
  - Maintenance
  - Documentation
    - Separate documentation outside of EditWriter?
  - Review of changes
    - Strong understanding of state requirements and how they may differ from standard setter requirements.

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SUGGESTING NEW EDITS/PROBLEM EDITS

- Suggestions for new edits and questions concerning current edits
  - Jim Hofferkamp jhofferkamp@naaccr.org
  - https://www.naaccr.org/forums/forum/edits-support/vendors-and-central-registry-metafile-administrators/
- Questions on Edit Software or for help with a central registry edits metafile cancerinformatics@cdc.gov
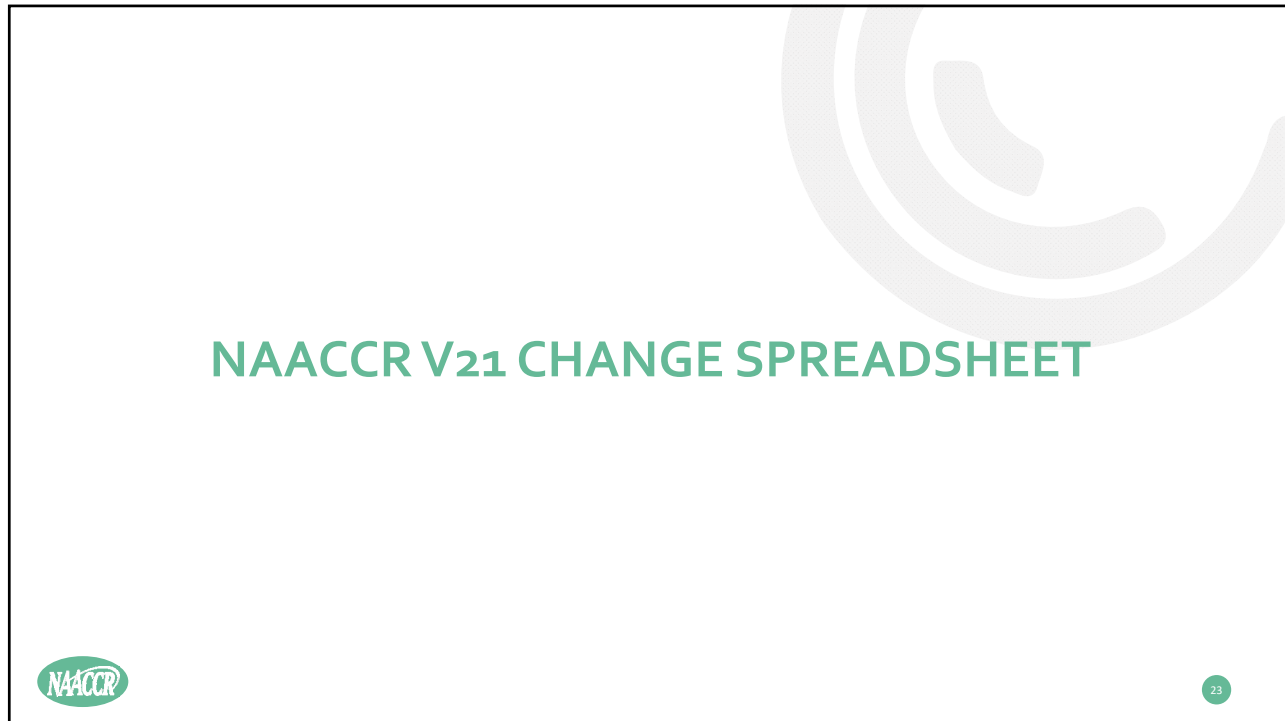
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QUESTIONS

10 min max

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METAFILE ADMINISTRATOR DOCUMENTATION
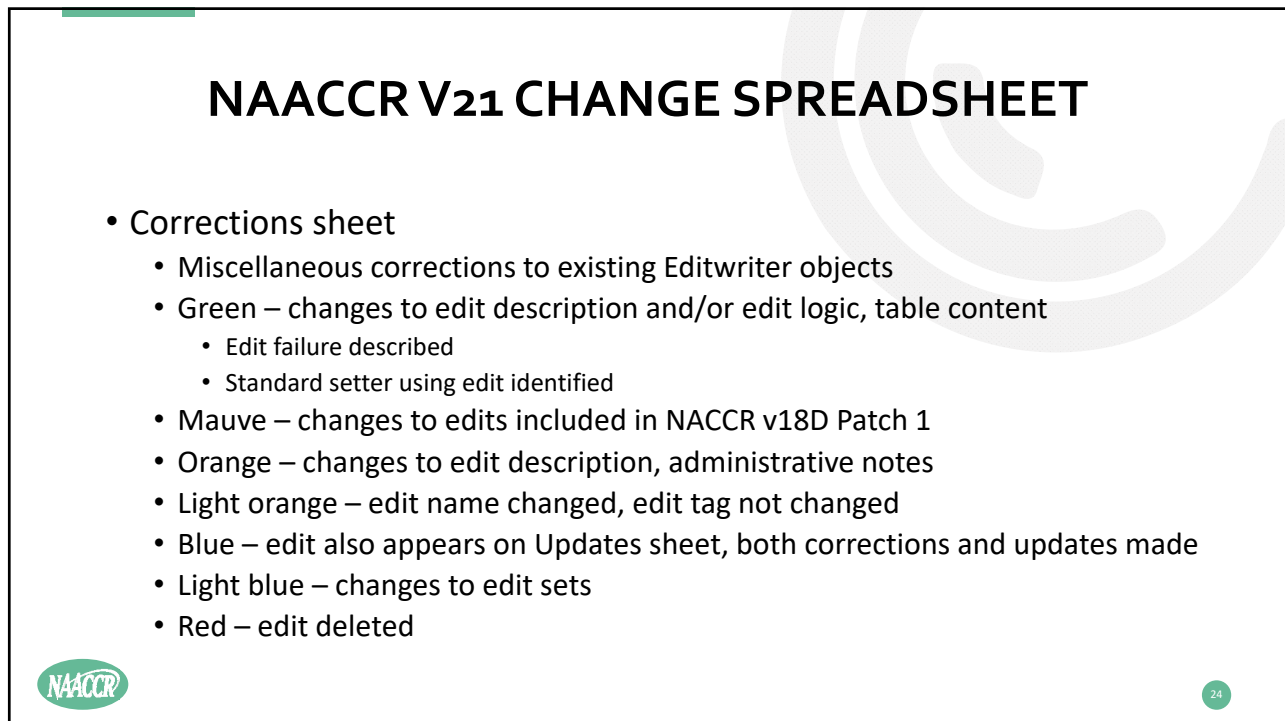
Upgrading to NAACCR v21, 2021 Diagnosis Year
Elaine Collins

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NAACCR V21 CHANGE SPREADSHEET

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NAACCR V21 CHANGE SPREADSHEET

- Corrections sheet
  - Miscellaneous corrections to existing Editwriter objects
  - Green – changes to edit description and/or edit logic, table content
    - Edit failure described
    - Standard setter using edit identified
  - Mauve – changes to edits included in NACCR v18D Patch 1
  - Orange – changes to edit description, administrative notes
  - Light orange – edit name changed, edit tag not changed
  - Blue – edit also appears on Updates sheet, both corrections and updates made
  - Light blue – changes to edit sets
  - Red – edit deleted

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NAACCR V21 CHANGE SPREADSHEET

- Updates sheet
  - Updates to existing Editwriter objects to meet v21 requirements
  - Green – changes to edit description and/or edit logic, table contents
  - Orange – changes to edit description, administrative notes
  - Light orange – edit name changed, edit tag not changed
  - Yellow – edit also involves data item new in 2021
  - Light blue – changes to edit sets
  - Red – edit deleted

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NAACCR V21 CHANGE SPREADSHEET

- New Edits sheet
  - New EditWriter objects for 2021
  - Yellow – new data item, edit including new data item
  - Orange – content of previous CoC edit given new edit tag, name, agency
  - v21 layout
  - v21 data items
  - v21 edits organized by standard setter: NPCR, AJCC/CoC/ SEER/NAACCR

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EXAMPLE – CORRECTION FOR CUSTOMIZED EDIT

N6091 Extranodal Extension Head and Neck Clin/Path, Summary Stage 2018 (NAACCR)

Edit skipped before 2019

3. If Extranodal Extension Head and Neck Clinical = 0, 1 or 2 (clinical nodal involvement), or Extranodal Extension Head and Neck Pathological = 0.0-9.9, X.1-X.4 (nodal involvement),

Summary Stage 2018 must not = 0, 1, or 2 (in situ, local, or regional by extension only)

If customized edit, skipped before 2018

Change to:

3. If Extranodal Extension Head and Neck Clinical = 0, 1 or 2 (clinical nodal involvement), **and** Extranodal Extension Head and Neck Pathological = 0.0-9.9, X.1-X.4 (nodal involvement),

Summary Stage 2018 must not = 0, 1, or 2 (in situ, local, or regional by extension only)

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```
v18D

If (AT(#S"Extranodal Extension Head and Neck
Clinical","0124",1)!=0 or
    INLIST(ENE,"00-99, X1-X4"))
    if (AT(#S"Summary Stage 2018","012",1)!=0)
    return FAIL;


v21

If (AT(#S"Extranodal Extension Head and Neck
Clinical","0124",1)!=0 and
    INLIST(ENE,"00-99, X1-X4"))
    if (AT(#S"Summary Stage 2018","012",1)!=0)
    return FAIL;
```

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EXAMPLE:
CORRECTION FOR CUSTOMIZED EDIT

N5053 LN Head and Neck Summary Stage 2018 (NAACCR)

Edit skipped before 2019

```
[Edit is skipped if] b. Schema ID is not 00060, 00140
3. If LN Head and Neck Levels I-III = 0 or 9 (no lymph nodes involved or unknown if involved) and
     LN Head and Neck Levels IV-V = 0 or 9 (no lymph nodes involved or unknown if involved) and
     LN Head and Neck Levels VI-VII = 0 or 9 (no lymph nodes involved or unknown if nodes involved) and
     LN Head and Neck Other = 0 or 9 (no lymph nodes involved or unknown if involved)
   Summary Stage 2018 must not = 3 or 4 (nodes involved)
```

If customized edit, skipped before 2018

Change to:

N5053 LN Head and Neck Levels, Melanoma Head/Neck, Summary Stage 2018 (NAACCR)

```
[Edit is skipped if] b. Schema ID is not 00140
Statement 3 removed
```

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```
v18D

char ID[12];
char code[6];

/*list of schema IDs for SSDI with added blank for clarity in edit display*/
/* add blank to coded Schema ID to match edit string*/

strcpy(ID, "00060 00140 ");

/* add blank to coded Schema ID to match edit string*/

strcpy(code, #S"Schema ID");
strcat(code, " ");

if (AT(code, ID, 6)==0)
        return PASS;


if (AT(#S"LN Head and Neck Levels I-III","09",1)!=0 and
    AT(#S"LN Head and Neck levels IV-V","09",1) !=0 and
    AT(#S"LN Head and Neck Levels VI-VII","09",1) !=0 and
    AT(#S"LN Head and Neck Other", "09",1) !=0)

    if (AT(#S"Summary Stage 2018", "34",1) !=0)
    return FAIL;


V21

if (AT(#S"Schema ID", "00140")==0)
        return PASS;
```

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NAACCR V21 CHANGE SPREADSHEET

New for 2021

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NAACCR V21 EDIT UPDATES FOR 2021

- Updates and New Edits
  - Some corrected edits included
  - Organized by registry abstract content sections
  - Organized within sections by "new", "changed", "removed"
  - Light blue – includes update for AJCC 9th Edition for Cervix Uteri

- Layout
  - New for v21, organized by NAACCR data item number to support editing of XML data files

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NAACCR V21 EDIT UPDATES FOR 2021

- Source for Change
  - ICD-O-3.2
    - New histology coding standard
  - NPCR
    - Reporting requirement for Gleason SSDIs added
    - Date requirements for treatment items reviewed
    - Reporting requirements for TNM items removed
  - AJCC
    - New AJCC TNM Post Therapy Clin (yc) T, N, M data items
    - 9th Edition staging for Cervix Uteri
    - Staging changes for Soft Tissue Sarcoma requiring new Schema Discriminator 2
  - COC
    - STORE Reduction Project, removal of data items for collection
    - COVID-19 data items
  - SEER
    - New Schema ID for 9th Edition Cervix
    - EOD Consolidation Project, review of EOD data item code relationships
    - New neoadjuvant therapy data items
  - SEER/COC
    - Reconciliation of coding instructions for common data elements
  - SSDI Committee Review
    - New biomarker data items

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NAACCR V21 EDIT UPDATES FOR 2021

- Demographics
  - New data item – Name—Birth Surname
    - Table name, edit set name changed
  - Data item format changed – GeolocationID
    - Concatenated item – state, county, census tract, block group
    - Blanks allowed for unknown parts
  - COC data items removed from STORE
    - Address, Medical Record Number, Name, Race, Social Security Number, Telephone
    - All related edits removed from COC edit sets
    - Some edits reassigned to new agency, some edits assigned to COC/Removed
    - Confidential, Non-Confidential edit sets no longer needed
  - SEER
    - Edits removed from SEER edit set

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NAACCR V21 EDIT UPDATES FOR 2021

- Cancer
  - New edits
    - Existing DCO edit split into 3 – Cancer items, AJCC items, EOD items
  - ICD-O-3.2 updates
    - Morphology; Primary Site, Heme Morph; Obsolete Histology
  - AJCC ID, Schema ID
    - New histology codes, 9th Edition for Cervix Uteri, Schema Discriminator 2 for Soft Tissue Sarcomas – C473, C475, C493-C495
    - New Schema ID for SEER
  - SEER edit changes
    - Reporting requirements for specific registries
  - SEER/COC Reconciliation
    - Mets at DX, Regional Nodes, Tumor Size
  - COC data items removed from STORE
    - Over-rides, all related edits removed from COC edit sets
    - Edits may remain in NPCR

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NAACCR V21 EDIT UPDATES FOR 2021

- Grade
  - New data item – Grade Post Therapy Clin (yc)
  - Renamed data item – Grade Post Therapy Path (yp)
  - Edits updated with new item, changed item name, or both
  - New reference table for 9th Edition, existing table updated
  - New edits – from SEER EOD Consolidation

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NAACCR V21 EDIT UPDATES FOR 2021

- AJCC TNM
  - New data items – AJCC TNM Post Therapy Clin (yc) T, N, M, Stage Group
  - Renamed data items – AJCC TNM Post Therapy Path (yp) T, N, M Stage Group
  - Edits updated with new items, changed item names, or both
  - New reference tables for 9th Edition
  - TNM Edition edits updated for 9th Edition
  - NPCR removed requirements for TNM data items

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NAACCR V21 EDIT UPDATES FOR 2021

- EOD Coding
  - Data item renamed
    - EOD Prostate Pathologic Extension, name changed in edits
  - New Schema ID
    - Updates to existing edits, tables
  - EOD Consolidation Project
    - Changes in EOD codes, instructions
    - Update of existing tables
    - New edits for EOD Primary Tumor, EOD Regional Nodes, EOD Mets

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NAACCR V21 EDIT UPDATES FOR 2021

- Summary Stage 2018/Derived Summary Stage 2018
  - New Edits
  - Changes to codes, table for Plasma Cell Disorders
  - COC – STORE Reduction Project
    - Summary Stage 2018 removed
    - Summary Stage 2018 edits removed form COC edit sets

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NAACCR V21 EDIT UPDATES FOR 2021

- Site-Specific Data Items
  - New data items – biomarkers, valid value, "required", DCO edits
    - ALK, BRAF, CA19-9, EGFR, NRAS
  - Data item name changes - valid value, "required", DCO edits
    - LDH Lab Value, LDH Level
  - Data length and code format change, edit logic and table change
    - FIGO Stage
  - NPCR Requirements change – new "required" edits
    - Gleason Score, Patterns Clinical, Pathological
  - SEER EOD Consolidation Project
    - New edits, new edits for EOD
  - SSDI Review
    - Description, logic changes; description changes
    - Changes to requirements – assigned to new schemas
  - SEER/COC edits removed
    - HER2 IHC, HER2 ISH, HER2 Overall Summary – "required" edits

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NAACCR V21 EDIT UPDATES FOR 2021

- Treatment
  - New data items – Neoadjuvant Therapy, new edits
  - SEER/COC reconciliation, coding instructions for common surgery items
    - New edits for 2021, changes to existing edits carried forward to 2021
  - Radiation – new code 98 for PhI Radiation Treatment Modality
  - NPCR – updated of required data fields by diagnosis date
  - COC STORE Reduction Project - date flags removed from STORE
    - Edits modified to exclude flag, kept in COC edit sets
    - Edits removed from COC edit sets – some reassigned to other agency, assigned to COC/REMOVED
    - New and updated edits for NPCR/SEER based on COC flag changes
  - SEER edits removed
    - Edits for surgery 98-02, edits with CoC Flag (analytic from CoC facility)

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NAACCR V21 EDIT UPDATES FOR 2021

- COVID-19
  - New data items
    - NCDB—COVID19--Tx Impact, SARSCoV2--Pos, SARSCov--Pos Date, SARSCoV—Test
  - Changed edits
    - Secondary Diagnosis 1-10, U07.1, Z75.2, Z75.3
    - ICD Revision Number, Cause of Death, U070, U071, U072

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NAACCR V21 EDIT UPDATES FOR 2021

- Follow-up
  - SEER
    - Edit coding requirements changed for survival items
    - Followup edits removed
  - COC STORE Reduction – data items removed
    - NPI Physician Followup, Managing

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NAACCR V21 EDIT UPDATES FOR 2021

- Administration
  - New data items – coding version current and original
    - AJCC API, AJCC Cancer Surveillance API, Schema ID
  - Coding versions updated – Morph, SEER
  - COC STORE Reduction Project – data items removed
    - COC Coding System, Morph Coding System, Site Coding System, RX Coding System,
    - Race Coding System, RQRS NCDB Submission Flag, ICD-O-2 Conversion Flag
    - Edits all removed from COC edit sets, some reassigned to other agencies, some assigned to COC/REMOVED
  - SEER – edits removed
    - SEER Coding System, SEER Record Number

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QUIZ – CHANGE SPREADSHEET

- How many Schemas have changes to EOD Primary Tumor codes?
- How many radiation edits were affected by addition of code 98?
- How many new tables were created for 9th Edition Cervix?
- What are the AJCC ID and Schema ID for 9th Edition Cervix?
- What new ICD10 codes have been added for COVID-19?
- What SSDIs have been extended to additional schemas?
- How many HER2 edits have been removed from the CoC edit sets?
- What changes affected the AJCC TNM Post Therapy fields?

DEVELOPING A CENTRAL REGISTRY METAFILE

https://www.naaccr.org/wp-content/uploads/2020/02/DEVELOPING-A-CENTRAL-REGISTRY-METAFILE.pdf

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DEVELOPING A CENTRAL REGISTRY METAFILE

- XML NOTE
  - Layout - NAACCR v21 SML RP-8 designed to edit an XML data file, organized by NAACCR ID Number for most items, rather than position in flat file
  - Sections in document about layout, adding new fields no longer apply; how to update layout and fields included in demonstration and accompanying document
- Purpose of metafile – Use in house or use at reporting registries
- Purpose of edit set(s) in house
  - Reporting from registry facilities
  - Reporting from pathology laboratories
  - Reporting from other non-registry facilities
  - Incoming versus consolidated data

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DEVELOPING A CENTRAL REGISTRY METAFILE

- Standards Documentation
  - NAACCR Required Status Table, Data Dictionary, Implementation Guide
  - ICD-O-3.2, spreadsheet and tables
  - Communications

- Metafile Documentation
  - Spreadsheet showing sources of 2021 updates and related new and updated edits is new for v21
  - 2 spreadsheets should be reviewed together when considering changes to be made to any customized edits or edit sets in registry metafile
  - Edit Sets Spreadsheet
  - Edits Detailed Report

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DEVELOPING A CENTRAL REGISTRY METAFILE

- Review required status table for standard setter requirements

- Review edit set spreadsheet for additions or deletions to edit sets

- Review change spreadsheet for same changes to related customized edits, new edits, deleted edits

- Review edit detail report, edit descriptions, administrative notes
  - Corrections, updates
  - Diagnosis date criteria

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DEVELOPING A CENTRAL REGISTRY METAFILE

- EditWriter 5 Help
  - Valuable tool in working with metafile
  - "Import Metafile" provides an overview of the import process
  - "Import Processing, with dependencies, without dependences" provides information on the decisions that come up during the import process
  - "Recommendations and Best Practices" and "Recommended Import Order" step through the process of updating to a major version of the metafile.
    - NAACCR v21 is a major version
  - "Navigator" links to the different edit objects: agencies, edit sets, edits, fields, layouts, messages, and tables. Within the object "Help", "Form" and "Filter" provide recommendations for working with the objects most efficiently and effectively.
    - NOTE: "Layout" information on working with "Fields" is out-of-date for the XML layout.

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DEVELOPING A CENTRAL REGISTRY METAFILE

- If the registry has no customized edits, edit sets, fields, messages, tables
  - Download and install the standard metafile
  - Determine edit set(s) to use
  - Rename edit set(s) or metafile if desired
    - Edit set(s) must be copied to be renamed
  - Delete unused edit objects (excluding fields) if desired
    - Agencies (except any referenced by other objects kept in Metafile), Edits, Edit Sets, Messages, Table
  - Update "Metafile Version and Comment" in "Tools" menu option with name and date of metafile release

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DEVELOPING A CENTRAL REGISTRY METAFILE

- If the registry has customized edits, edit sets, fields, messages, tables
  - Download and install the standard metafile
  - Identify and import customized edit objects from v18D metafile
    - Agency
    - Fields, Messages, Tables
    - Edits
    - Edit Sets
      - Import existing Edit Sets, or modify new standard Edit Sets depending on volume of changes

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DEVELOPING A CENTRAL REGISTRY METAFILE

- Customizing Edit Objects
  - Agency
    - New Agency ID/Password can be created by Username "None"
    - Review NAACCR document, EW Help – using agency "None" versus registry agency
    - All objects with agency "None" can be modified by any user
    - All objects with specified agency can only be modified by that agency/password
    - All objects used as templates for customized objects must be copied, renamed, given new identifying tag or number – avoid using tags or numbers that might conflict with the standard tags or numbers
  - Fields
    - New requirements for XML for alignment and numbering of user-defined fields, coordinated with User Dictionary

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DEVELOPING A CENTRAL REGISTRY METAFILE

- Messages
  - Changes have been made to some standard messages, detailed on change spreadsheet
  - Standard message number can be used in customized edits
  - Check correspondence of message tokens to data items on "Error Messages" screen in "Edits" object
  - Standard message numbers in range 250 to 9007
- Tables
  - Table content can be copied/pasted from spreadsheet into table form
  - For many updates, export to ASCII file from "Lookup Table" menu item, open in spreadsheet, make changes, zap original table from "Lookup Table" menu item, copy from spreadsheet, paste into empty table form

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DEVELOPING A CENTRAL REGISTRY METAFILE

- Edits
  - Standard edits may be used as templates for new or customized edits
  - Description tells what edit does
  - Use Administrative Notes to tell when edit added to metafile, note changes from similar standard edit if applicable, any corrections to edit over time
  - Standard edit tags have format NXXXX
- Edit Sets
  - Add or subtract from Edit Sets using Edit Set form or "Cross References-1" page of Edit form
  - Problems may be encountered if 2 Edit Set forms open at same time – Use "Reports" menu option if necessary to work from copy of one Edit Set
  - Standard Edit Sets tags have format NESXXXX

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DEVELOPING A CENTRAL REGISTRY METAFILE

- Edit set for reporting registries can be packaged in its own metafile
- Delete unused edit objects (excluding fields) if desired
    - Agencies (except any referenced by other objects kept in Metafile), Edits, Edit Sets, Messages, Table
- Update "Metafile Version and Comment" in "Tools" menu option with name and date of metafile release

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QUESTIONS?

10 Min

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SOFTWARE TOOLS DEMONSTRATION

Michelle Esterly

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QUESTIONS?

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THANK YOU

✉ JHOFFERKAMP@NAACCR.ORG

✳ HTTPS://WWW.NAACCR.ORG/STANDARD-DATA-EDITS/