OKLAHOMA
State Department
of Health

OCCR QUARTERLY

New Education and Training Specialist

I am thrilled to announce that the Oklahoma Central Cancer Registry is finally operating with a full team! Our new Education and Training Specialist, Sandra Steen, started at the end of June and will oversee all reporter trainings, liaison with our (future) quality assurance contractors, assist with reporting compliance, and other core registry functions. Please help us welcome her to the Oklahoma team! –Meagan Carter | OCCR Program Manager.

Hello everyone! I am Sandra James Steen and I am the Education and Training Specialist here at the Oklahoma Central Cancer Registry.

I grew up in New Jersey and Delaware. My husband and I have been together nearly 36 years and we have a 33-year-old son, Justice.

I have 30 years of experience as a Cancer Registrar, starting my career at Beebe Medical Center in Lewes, Delaware. We moved to Arizona in 1998 so that I could work for Mayo Clinic Arizona. In 2009, after 10 years of being an abstractor, I became their QA Specialist and Trainer. Both Beebe Medical Center and Mayo Clinic Arizona are CoC Accredited facilities; however, I have also worked for non-accredited facilities over the years. I have also been lucky enough to be a speaker for several NCRA webinars and was very active with the state associations. I retired from Mayo Clinic Arizona in May of 2022 and moved to northern West Virginia earlier this year. However, I soon found myself bored, despite having a “fixer upper” and decided to return to work to keep myself out of trouble.

In addition to my passion for cancer registry, I am a voracious reader and enjoy gardening, cooking (I make a KILLER lasagna!) and video games. I have three dogs, who are the joy of my life. Two are Chihuahuas and one is a “brattie rattie” (rat terrier), all of whom are rescues.

I look forward to my work with the Oklahoma Central Cancer Registry and working with you!

Sandra James Steen, CTR | OCCR Education & Training Specialist

Rocky Mountain Cancer Data System (RMCDS) Corner

ROCKY MOUNTAIN CANCER DATA SYSTEMS

NAACCR v23 Upgrade

The RMCDS upgrade to NAACCR version 23 is now available. If you have not done so already, please upgrade your software as soon as possible. There is no need to wait to upgrade if you are behind in reporting. 2023 and all previous years will be able to be abstracted and submitted. Specific instructions for completing the upgrade were emailed by the OCCR on June 1, 2023. There were no changes to screen set 18 for version 23. Therefore, no vlr.18 file was sent with the upgrade instructions. You will continue to use the same vlr.18 file that was sent with the v22 instructions last year.

If you have not yet converted to NAACCR v22 you will be required to run this upgrade prior to upgrading to version 23. You will need a different set of instructions for v22. If you do not have these instructions from last year, please contact me at christyd@health.ok.gov.

Data Item Changes for v23

Beginning with NAACCR v23, all date flag data items have been retired for all cases and all years. This means you will no longer be required to code a date flag for a date item that is blank. In RMCDS you will no longer see the “F” button next to date data items and you will no longer see the hyphen within the date field.

Primary site surgery codes have been updated to four character alphanumeric codes for cases diagnosed 2023 and forward. 2022 and prior cases will continue to use the two-digit codes. Although these are now two distinctly different NAACCR data items in the data dictionary, in RMCDS, you will continue to only see one primary site surgery code data item. The software will generate the appropriate surgery codes based on the year of diagnosis of the case.

Monthly Software Maintenance

This is a friendly reminder to please keep your software updated to stay current. RMCDS pushes out updates almost daily. The OCCR recommends updating RMCDS at least monthly to stay current with minor bug fixes throughout each month. Keep an eye on the version date and confirm that it advances forward when an update is complete.

It’s also a good idea to rebuild the master indexes after an update. This keeps things in order and prevents issues like accession numbers being out of sequence. See the winter article for specific instructions.

Christy Dabbs, AA, CTR | OCCR Data Manager

Submission Schedule, Contact Year 2023

Date of First Contact:	Required to be Reported to OCCR in:
January 2023	July 2023
February 2023	August 2023
March 2023	September 2023
April 2023	October 2023
May 2023	November 2023
June 2023	December 2023
July 2023	January 2024
August 2023	February 2024
September 2023	March 2024
October 2023	April 2024
November 2023	May 2024
December 2023	June 2024

Web Plus

Web Plus Abstractors
The OCCR is now accepting diagnosis year 2023 cases. All Web Plus displays have been updated and are in compliance with reporting changes for 2023. If you began abstracting 2023 cases prior to 05/31/2023, those cases are incomplete. You will need to go to Find/Open abstracts on the blue bar and search by status *incomplete* to find these cases. Open each case, review for accuracy then click save to run the v23 edits.

Data Item Changes for v23
Beginning with NAACCR v23, all date flag data items have been retired for all cases and all years. This means you will no longer be required to code a date flag for a date item that is blank. These data items have been removed from all Web Plus displays.

Primary site surgery codes have been updated to four character alphanumeric codes for cases diagnosed 2023 and forward. 2022 and prior cases will continue to use the two-digit codes. These are now two distinctly different NAACCR data items in the data dictionary. In Web Plus, if you report for a facility that is required to code primary site surgery, you will now see two different data items. The program will notify you if you try to enter a surgery code in the incorrect primary site surgery data item, e.g. case diagnosed in 2023 with surgery in 2023 and entering surgery in the 2003-2022 data item.

Surgery Primary Site 2003-2022
Surgery Primary Site 2023

Web Plus Uploaders
The OCCR is now accepting NAACCR v23 XML file uploads. If you have upgraded your software to NAACCR v23, when you upload a file the NAACCR v23B edits will automatically run on each case in the file. If you have not yet upgraded to NAACCR v23, the OCCR continues to accept NAACCR v22 XML files. Edits will not automatically run on the file. The data manager is notified when each file is uploaded and will manually run the NAACCR v22B edits on the file. If there are errors in the file, the uploader will be contacted by email. If there are no errors, no email will be sent. When edits have been run on the file, the results and report will be available for viewing in Web Plus. The data manager will run manual edits daily Monday-Friday. The OCCR is no longer accepting NAACCR v21 XML files as of 06/01/2023.

Web Plus Accounts
As a reminder each Web Plus user should have their own account. If you need a Web Plus account or if someone with a Web Plus account is no longer at your facility, please contact your facility consultant or me at christyd@health.ok.gov.

Christy Dabbs, AA, CTR | OCCR Data Manager

NAACCR CTR Prep Series & Exam

The OCCR will once again this year be providing four scholarships for interested Oklahoma reporters to complete the NAACCR CTR Exam Prep and Review Webinar courses. Exams occur in March, June, and October of every year and there is one prep series opportunity per exam window. The good news is that if you do not pass your first time you can retake the course and exam at no additional cost! The interactive online courses with live instructors include:

- eight weekly lectures
- study materials
- weekly online quizzes
- one timed practice test
- Q&A sessions

These scholarships are made possible through our CDC NPCR funding, and we must be good stewards of the funding that we are provided. Starting this year, we will observe the following guidelines should you receive one of the four scholarships.

- If you sign up with us to be considered for a scholarship, you are acknowledging that you are expected to take this endeavor seriously and complete the coursework and take the CTR Exam.
- Should you not be able to complete the course, we must know before the first webinar begins so that we can give the spot to someone on the waitlist.
- We will work with the NAACCR team to monitor course attendance and completion leading up to the exam.
- If prep coursework and exam are not completed, you will not be eligible for another scholarship from OCCR and will be responsible for all future registration fees.

If you are interested in signing up to complete the CTR Exam Prep & Review Series, please click here to complete the interest form and a member of the OCCR team will contact you.

Meagan Carter, MS | OCCR Program Manager

Dates to Save

CTR Exam Testing Dates: October 13 - November 4, 2023
Application deadline is October 6, 2023

NAACCR Webinar: Melanoma…….August 3, 2023
NAACCR Webinar: Coding Pitfalls…..September 7, 2023

OCRA Fall Education Conference…November 16-17, 2023 at the Oklahoma City Campus of Oklahoma State University. Watch for details at https://ocra-ok.org/

Coding Race Fields

"Race is a critical variable for assessing health inequalities & identifying cancer control and prevention intervention priorities[1]."

We wanted to share some helpful tips and reminders when coding race data items. Racial origin captures information used in research and cancer control activities comparing stage at diagnosis and treatment by race. The full coding system should be used to allow for an accurate regional and national comparison. A common coding error that we have been seeing is code 98 "Other" race being used in the Race 1 Field. Code 98 "Other" in the Race 1 Field should rarely be used. A recent NAACCR data quality assessment of the Race 1 Field found that most of the Code 98 "Other" should actually be coded to Code 99 "Unknown" [1]. Some SEER examples of when to use Code 99 over 98 include Aruba Islander or Bermudan.

Another friendly reminder to reporters is for the Spanish/Hispanic Origin Field. If there is a statement that the patient is Hispanic or Latino and no further information available, code Race 1 as White and Race 2-5 as 88, regardless of the place of birth. Per SEER, when there is no information other than "Hispanic" or "Latino(a)", assign race as 01 "White" as a last resort instead of coding unknown. Do NOT code a patient stated to be Hispanic or Latino as 98 "Other Race" in Race 1 and 88 in Race 2-5. The SEER manual also states that a person of Spanish or Hispanic origin may be of any race, although persons of Mexican, Central American, South American, Puerto Rican or Cuban origin are often 01 "White".

Race Coding Guideline Reminders

- Code all five Race data items (Race 1-Race 5): Order is important
- Code 98 or 99 cannot occur before a more specific race
- Code 07 (Native Hawaiian) has priority over all other race codes
- Code 02-32 have priority over 01

The SEER Coding and Staging Manual 2023, page 67 provides more guidance and specific examples of how to accurately code race. The STORE Manual 2023 and OCCR Cancer Reporting Manual also provide race coding guidance and examples. If you have questions that arise and cannot be answered by manual guidance, please reach out to your facility consultant here at the Oklahoma Central Cancer Registry. A big thanks to all of the cancer reporters out there for all the work that you do!

Sources

1. Sherman, Recinda. (April 13, 2023). *The Data Quality of Race 1 Field: Issues and Implications* [PowerPoint slides]. Data Use & Research, North American Association of Central Cancer Registries (NAACCR).

Alexandra Cousins, BS, CTR & Randi Spicer, AA, OCCR Consultants

OCCR Reporting Compliance FAQ

Q. Is reporting cancer data to the Oklahoma Central Cancer Registry (OCCR) required by law?

A. Yes, reporting cancer data is required by Oklahoma administrative code 310, chapter 567 State Central Cancer Registry, subchapter 3.

Q. Is there a fine for not reporting cancer data to the OCCR?

A. Yes, Oklahoma statute §63-1-1701.1A allows for a penalty of up to $10,000 per day for noncompliance.

Q. Is there a schedule for when cases should be reported?

A. Yes, the OCCR provides a submission schedule on our website and in our reporting manuals and is emailed to reporters annually. The schedule coincides with Oklahoma administrative code 310, chapter 567 State Central Cancer Registry, subchapter 3-3 which states "All hospitals, clinics, laboratories, pathologists, physicians or dentists, or all facilities providing diagnostic or treatment services in relation to cancer diseases or precancerous conditions, shall report:

1. all cancer within 180 days of diagnosis or treatment."

Q. When is the last day that cases can be reported to be included on each quarterly compliance letter?

A. For case submissions to be included in each compliance letter, they must be submitted to the OCCR by the last day of each month, according to the submission schedule, but no later than the last day of each quarter.

Q. What is a compliance letter from the OCCR?

A. This is a quarterly letter providing the reporting compliance status of the reporting facility for a two year period, the previous reporting year and the current reporting year.

Q. What does reporting compliance measure?

A. Compliance compares the facility's submitted number of cases for a given period, the numerator, to the facility's expected number of cases for the same period, the denominator, then multiplied by 100 to result in a percentage. E.g. quarter one is expected to be at 25% of the expected number, quarter two 50% and so on. The previous year is expected to be at 100% of the expected number of cases.

Q. How is the expected number of cases calculated?

A. The expected number of cases is an average from the number of cases previously reported in past years from the reporting facility.

Q. How is compliance calculated?

A. Compliance is calculated using the date of first contact for the case and the date the case was submitted to the central cancer registry. This measures compliance with reporting within 180 days according to the state statute and the submission schedule.

Q. Can the reporting facility be given their expected number of cases?

A. No, the OCCR does not give this number to our reporting facilities. A facility should report all reportable cases regardless of the expected number so that the OCCR has complete case ascertainment for a given year. Facilities can run a report in their cancer registry software to determine how many cases they are submitting annually.

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OCCR Reporting Compliance FAQ, continued

Q. What happens if a facility is not compliant with reporting?

A. The facility should contact their OCCR consultant so that we may work with the facility to bring them back into compliance. Quarterly compliance letters are sent to try and prevent reporting facilities from falling too far behind.

Q. What if the reporting facility has a valid reason for being noncompliant?

A. The reporting facility should communicate the reason(s) to the OCCR so that we may determine if any adjustments need to be made to the expected number of cases.

Q. Is the OCCR doing anything to adjust the expected number of cases from reporting facilities to account for the class of case 32 reporting change that went into effect January 01, 2021?

A. Yes, beginning with 2022 quarter three compliance letters, compliance percentages will be adjusted based on the facility's reduction in class of case 32 cases. This should help bring previously noncompliant facilities back into compliance for 2021 and 2022 if the reduction in cases was due solely to the reporting change.

Christy Dabbs, AA, CTR | OCCR Data Manager and *Lisa Fulkerson, RMA | OCCR Facility Consultant*

The Buzz Among Researchers

AI Tool Decodes Brain Cancer Genome during Surgery

Real-time tumor profiling can guide surgical, treatment decisions

Date: July 7, 2023

Source: Harvard Medical School

Summary: New AI tool enables in-surgery genomic profiling of gliomas, the most aggressive and most common brain tumors. This information offers critical clues about how aggressive a cancer is, its future behavior, and its likely response to treatment. The tool can provide real-time guidance to surgeons on the optimal surgical approach for removal of cancerous tissue.

Scientists have designed an AI tool that can rapidly decode a brain tumor's DNA to determine its molecular identity during surgery-- critical information that under the current approach can take a few days and up to a few weeks.

Knowing a tumor's molecular type enables neurosurgeons to make decisions such as how much brain tissue to remove and whether to place tumor-killing drugs directly into the brain -- while the patient is still on the operating table.

A report on the work, led by Harvard Medical School researchers, is published July 7 in the journal *Med*.

Accurate molecular diagnosis -- which details DNA alterations in a cell -- during surgery can help a neurosurgeon decide how much brain tissue to remove. Removing too much when the tumor is less aggressive can affect a patient's neurologic and cognitive function. Likewise, removing too little when the tumor is highly aggressive may leave behind malignant tissue that can grow and spread quickly.

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AI Tool Decodes Brain Cancer Genome...continued

"Right now, even state-of-the-art clinical practice cannot profile tumors molecularly during surgery. Our tool overcomes this challenge by extracting thus-far untapped biomedical signals from frozen pathology slides," said study senior author Kun-Hsing Yu, assistant professor of biomedical informatics in the Blavatnik Institute at HMS.
Knowing a tumor's molecular identity during surgery is also valuable because certain tumors benefit from on-the-spot treatment with drug-coated wafers placed directly into the brain at the time of the operation, Yu said.

"The ability to determine intraoperative molecular diagnosis in real time, during surgery, can propel the development of real-time precision oncology," Yu added.

The standard intraoperative diagnostic approach used now involves taking brain tissue, freezing it, and examining it under a microscope. A major drawback is that freezing the tissue tends to alter the appearance of cells under a microscope and can interfere with the accuracy of clinical evaluation. Furthermore, the human eye, even when using potent microscopes, cannot reliably detect subtle genomic variations on a slide.

The new AI approach overcomes these challenges.

The tool, called CHARM (Cryosection Histopathology Assessment and Review Machine), is freely available to other researchers. It still has to be clinically validated through testing in real-world settings and cleared by the FDA before deployment in hospitals, the research team said.

Cracking cancer's molecular code

Recent advances in genomics have allowed pathologists to differentiate the molecular signatures -- and the behaviors that such signatures portend -- across various types of brain cancer as well as within specific types of brain cancer. For example, glioma -- the most aggressive brain tumor and the most common form of brain cancer -- has three main subvariants that carry different molecular markers and have different propensities for growth and spread.

The new tool's ability to expedite molecular diagnosis could be particularly valuable in areas with limited access to technology to perform rapid cancer genetic sequencing.

Beyond the decisions made during surgery, knowledge of a tumor's molecular type provides clues about its aggressiveness, behavior, and likely response to various treatments. Such knowledge can inform post-operative decisions.

Furthermore, the new tool enables during-surgery diagnoses aligned with the World Health Organization's recently updated classification system for diagnosing and grading the severity of gliomas, which calls for such diagnoses to be made based on a tumor's genomic profile.

Training CHARM

CHARM was developed using 2,334 brain tumor samples from 1,524 people with glioma from three different patient populations. When tested on a never-before-seen set of brain samples, the tool distinguished tumors with specific molecular mutations at 93 percent accuracy and successfully classified three major types of gliomas with distinct molecular features that carry different prognoses and respond differently to treatments.

Going a step further, the tool successfully captured visual characteristics of the tissue surrounding the malignant cells. It was capable of spotting telltale areas with greater cellular density and more cell death within samples, both of which signal more aggressive glioma types.

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AI Tool Decodes Brain Cancer Genome...continued

The tool was also able to pinpoint clinically important molecular alterations in a subset of low-grade gliomas, a subtype of glioma that is less aggressive and therefore less likely to invade surrounding tissue. Each of these changes also signals different propensity for growth, spread, and treatment response.

The tool further connected the appearance of the cells -- the shape of their nuclei, the presence of edema around the cells -- with the molecular profile of the tumor. This means that the algorithm can pinpoint how a cell's appearance relates to the molecular type of a tumor.

This ability to assess the broader context around the image renders the model more accurate and closer to how a human pathologist would visually assess a tumor sample, Yu said.

The researchers say that while the model was trained and tested on glioma samples, it could be successfully retrained to identify other brain cancer subtypes.

Scientists have already designed AI models to profile other types of cancer -- colon, lung, breast -- but gliomas have remained particularly challenging due to their molecular complexity and huge variation in tumor cells' shape and appearance.

The CHARM tool would have to be retrained periodically to reflect new disease classifications as they emerge from new knowledge, Yu said.

"Just like human clinicians who must engage in ongoing education and training, AI tools must keep up with the latest knowledge to remain at peak performance."

Authorship, funding, disclosures

Coinvestigators included MacLean P. Nasrallah, Junhan Zhao, Cheng Che Tsai, David Meredith, Eliana Marostica, Keith L. Ligon, and Jeffrey A. Golden.

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Journal Reference:

1. MacLean P. Nasrallah, Junhan Zhao, Cheng Che Tsai, David Meredith, Eliana Marostica, Keith L. Ligon, Jeffrey A. Golden, Kun-Hsing Yu. **Machine learning for cryosection pathology predicts the 2021 WHO classification of glioma**. *Med*, 2023; DOI: 10.1016/j.medj.2023.06.002

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Medical science article submitted for readers by *Judy Hanna, HT (ASCP) | OCCR Path Laboratory Specialist*

OKLAHOMA
State Department
of Health

OCCR STAFF LISTING

Meagan Carter, **OCCR Program Manager**, (405) 426-8742, Meagan.Carter@health.ok.gov

Christy Dabbs, **Data Manager**, (405) 426-8012, ChristyD@health.ok.gov

Judy Hanna, **Pathology Laboratory Specialist**, (405) 426-8013, JudyH@health.ok.gov

Sandra James Steen, **Education & Training Specialist**, (405) 426-8964, Sandra.Steen@health.ok.gov

Leslie Dill, **Facility Consultant - Small Volume Hospitals**, (405) 426-8017, LeslieD@health.ok.gov

Lisa Fulkerson, **Facility Consultant - High Volume Hospitals**, (405) 426-8015, LisaF@health.ok.gov

Randi Spicer, **Facility Consultant - Treatment Centers and Physicians' Offices**, (405) 426-8016, Randi.Spicer@health.ok.gov

Alexandra Cousins, **Facility Consultant - Dermatology and ASCs**, (405) 426-8272, Alexandra.Cousins@health.ok.gov

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OKLAHOMA CENTRAL CANCER REGISTRY

Center for Health Statistics
Oklahoma Central Cancer Registry
Oklahoma State Department of Health
123 Robert S Kerr Ave, Ste 1702
Oklahoma City, OK 73102

Phone: (405) 426-8030
Fax: (405) 900-7604

Website:
Oklahoma Central Cancer Registry (OCCR)