The Sentinel

The Newsletter for the Association of North Carolina Cancer Registrars

Winter 2020

Message from the President:
Paige Tedder, RHIT, CTR

Hello Everyone,
I hope everyone had a Merry Christmas and a Happy New Year's. As usual, the new year brings lots of changes to our profession. This year the Commission on Cancer released Optimal Resources for Cancer Care (2020 Standards). Dr. Rick Greene will be hosting the CAnswer Forum LIVE on February 12. He will be available to answer any questions you may have regarding how to implement these new standards. Question submission closes on January 28 at 3:00 pm (CST).

I hope everyone is taking advantage of the NAACCR webinars that ANCCR sponsors each year. If you're unable to view the webinar live these recorded webinars are available on the ANCCR website in the members section. These webinars date back to 2013 and are a great resource for registrars.

National Cancer Registrars Week is April 6-10 this year. I hope everyone takes the time to do something special that week. For our registrars at Atrium Health we're planning a staff meeting with breakfast and fun craft activities which are always a huge hit. It's nice to take a break from the regular educational staff meetings and just do something fun. Whatever you plan I hope everyone has a great week.

The 2020 NCRA annual education meeting will be May 31-June 3 in Orlando, FL at Disney's Coronado Springs Resort. The agenda looks packed with topics to help cancer registrars keep up with current changes. I will be unable to attend this year as we await the birth of our second grandchild but ANCCR's VP Angela Rodriguez will be attending in my place. I hope a lot of other NC registrars will be able to attend as well.

Thanks to Carol Brown at UNC-Pardee Hospital for agreeing to host this year's ANCCR State Meeting. The meeting will take place Sept 23-25 at The Mountain Lodge and Conference Center in Flat Rock, NC. Dr. Rick Greene has agreed to host another

round of Registrar Jeopardy and Travis Poston will be back as our meeting facilitator. Registration information will soon be available on the ANCCR website. I hope to see you all there.

As you read the reports from the various committees in this issue of the Sentinel, please know that ANCCR welcomes your participation as well as your comments and suggestions. Please contact any of the officers or board members to volunteer or to share your thoughts.

Thanks for all you do,

Paige Tedder, RHIT, CTR

Paige.Tedder@atriumhealth.org
(704)355-7051

ANCCR's Executive Board 2020

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	Karen Knight, CTR	karen.knight@duke.edu
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Web Site Coordinator	Cathy Rimmer, BA, MDiv, CTR	ccrimmer@novanthealth.org
Ways & Means	Kisha Raynor, CTR	kisha.raynor@carolinashealthcare.org
	Kim Maloney Bobbitt, BS, CTR	kmaloney-bobbitt@novanthealth.org
Liaisons	**Name**	**Email**
A4C Liaison	Kathleen Foote, CTR	kathleen.foote@unchealth.unc.edu
NCRA Liaison	Angela Rodriguez, CTR	angela.rodriguez@mercy.net
NC CCR Liaison	Melissa Pearson, CTR	melissa.pearson@dhhs.nc.gov

Upcoming Annual Educational Conferences

ANCCR Educational Fall Meeting

2020 – September 23-25, Flat Rock, NC
The Lodge at Flat Rock

NCRA Educational Conference

2020 - May 31-June 3, Orlando, FL
2021 - April 14-17, Indianapolis, IN
2022 - April 6-9, Washington, DC

TREASURER REPORT
Christine Smith, CTR

ANCCR 2019 Third Quarter Treasurer Report		
Beginning Balance 07/01/2019:		
	Checking :	22,681.06
	Money Market:	21,594.24
	Total	44,275.30
Deposits:		
	July	4,975.43
	August	13,035.00
	September	26,094.50
	Membership dues income July-Sept	765.00
	Fall Meeting Registration Online	19,350.00
	Fall Meeting Registration Mail	22,630.43
	Ways and Means 2019 Fall Meeting	1,359.50
Expenses:		
NAACCR 2020 Educational Series		1,740.00
	Mileage for C Hunt NC scholarship	141.52
Refund for NC SC Registration		875.00
	NC SC State Meeting misc (receipts in hand)	
	25 giftcard giveaway / $100: 50/50 raffle /bags/tissue candy & bowls	683.48
	Speaker Gifts	120.00
	ANCCR Banner	116.10
Bank Statement Charges		15.00
Total Deposits		44,104.93
Total Expenses		3,691.10
	(Diff)	40,413.83
Ending Balance 09/30/19:		
	Checking:	63,486.41
	Money Market:	21,602.35

MEMBERSHIP
Jenean Burris, RHIT, CTR

There are 111 ANCCR members as of 1/21/2020.

WAYS AND MEANS
Kisha Raynor, CTR
Kim Maloney Bobbitt, BS, CTR

The Ways and Means Committee would like for you to think of what we can do for the ANCCR Fall Meeting in Flat Rock, NC! The jewelry sale did well last year so that may be done again.

WEB SITE REPORT
Cathy Rimmer, BA, CTR

- NAACCR Webinars are being posted as soon as all the files are available.
- Contact Us - Inquiries continue to be received from potential registrars or students in CIM programs looking for locations for practicums. Students in AHIMA program tend to struggle the most. Novant will no longer take anyone from a program that does not provide liability insurance. ANCCR will post the following information on the website from the Monkey Survey recently sent to members:
    - Hospital Registries that will take students
    - Which CIM programs that can work with (DCCC, Scott Hill, AHIMA, etc…)
    - Main Registry Contact

EDUCATION REPORT
Kimberly Swing, CTR and
Karen Knight, CTR

Educational Opportunities:

NCRA Center for Cancer Registry Education - http://www.cancerregistryeducation.org/
Access to high-quality educational programming to support both seasoned professionals and those new to the field, included are programs related to AJCC 8th Edition. Most are fee based.

NCRA Registry Resources - http://www.cancerregistryeducation.org/rr
A series of informational abstracts and presentations that show registrars how to use these important resources, these site-specific abstracts provide an outline to follow when determining what text to include. FREE

SEER Educate - https://educate.fredhutch.org/LandingPage.aspx
Improve technical skills through applied testing on the latest coding guidelines and concepts. Complete practice abstracts and earn up to 20 CE credits per cycle. FREE, Casefinding and Grade exercises are now available as well.

NCRA's Mini-Learning Shorts- Great guide for new registrars-
http://www.cancerregistryeducation.org/best-practices?fbclid=IwAR1bfhzNf844uTRZKbhelHvK0G2MSBumIlQH0o4K1hYqe46BmmmxPrnIVfY and
http://www.cancerregistryeducation.org/introduction-to-the-cancer-registry

https://education.naaccr.org/freewebinars - NAACCR Talks are free webinars on topics of concern to the NAACCR membership. View recordings of the live webinars for no charge.

Tumor Talk- sign up to receive webinar invitations presented by Himagine Solutions at https://himaginesolutions.com/himagine-tumor-talk-webinar/ view previously recorded webinars at https://himaginesolutions.com/previous-webinars/

Register today for February 12 CAnswer Forum LIVE Webinar
Registration is now open for the next CAnswer Forum LIVE webinar from 12:00 noon to 1:00 pm CST on Wednesday, February 12, 2020. In this webinar we will address the new 2020 Commission on Cancer (CoC) Standards and answer questions from cancer programs throughout the United States. Please submit your questions for this free webinar by 3:00 PM CST on Tuesday, January 28, 2020.

The American College of Surgeons (ACS) Cancer Programs is applying for continuing education credits from the National Cancer Registrars Association (NCRA) for all upcoming 2020 CAnswer Forum LIVE webinars. Mark your calendars for these upcoming events:

- CAnswer Forum LIVE—May 6, 2020
- CAnswer Forum LIVE—June 10, 2020
- CAnswer Forum LIVE—August 5, 2020
- CAnswer Forum LIVE—October 14, 2020
- CAnswer Forum LIVE—December 9, 2020

AJCC:
View recordings of the live webinars for no charge.

7th Edition Webinars - https://cancerstaging.org/CSE/Registrar/Pages/Seventh-Edition-Webinars.aspx
8th Edition Webinars- https://cancerstaging.org/CSE/Registrar/Pages/8thEditionWebinars.aspx
Disease Site Webinars - https://cancerstaging.org/CSE/Registrar/Pages/Disease-Site-Webinars.aspx
AJCC Curriculum - https://cancerstaging.org/CSE/Registrar/Pages/AJCC-Curriculum.aspx
Registrar's Guide to Chapter - https://cancerstaging.org/CSE/Registrar/Pages/Presentations.aspx
AJCC TNM Category Options - https://cancerstaging.org/CSE/Registrar/Pages/Presentations.aspx

ANCCR Association of NC Cancer Registrars

http://www.ncregistrars.com/

ANCCR purchased subscriptions to the NAACCR Cancer Registry & Surveillance Webinar Series.

Each webinar is three hours (3 CE's) and will be presented on the first Thursday of each month. After the LIVE version, a link to the webinar will be available to ANCCR members on the ANCCR website, as soon as it is available each month. The sessions are 9:00 am – 12:00 pm.

Host sites:

- Wake Forest Baptist Medical Center, Winston-Salem, NC
  Contact: Jenean Burris: jburris@wakehealth.edu
- Atrium Health, Charlotte, NC
  Contact: Paige Tedder paige.tedder@atriumhealth.org
- UNC Rex Hospital, Raleigh, NC
  Contact: Kathleen Foote Kathleen.foote@unchealth.unc.edu
- Vidant Medical Center, Greenville, NC
  Contact: Merrill Bright Merrill.bright@vidanthealth.com

NAACCR webinar schedule:

2/6/20	SSDI's: An In-Depth Look
3/5/20	Abstracting and Coding Boot Camp
4/2/20	Melanoma
5/7/20	Central Nervous System
6/11/20	Esophagus
7/9/20	Navigating the 2020 Survey Application Record (SAR)
8/6/20	Corpus Uteri
9/3/20	Coding Pitfalls

Coding, Staging and Abstracting Resources:

*Online version of IDC-O-3 http://www.iacr.com.fr/index.php?option=com_content&view=category&layout=blog&id=100&Itemid=577 the new version, ICD-O-3.2, is recommended for use from 2020.
*SEER 2018 updated case finding list- https://seer.cancer.gov/tools/casefinding/
*IDD-O-3 coding table for new terms- updated 8/22/18- https://www.naaccr.org/wp-content/uploads/2018/08/Updated-8-22-18-ICD-O-3-alpha-table.pdf
*SEER RX- https://seer.cancer.gov/seertools/seerrx/
*SEER*RSA- https://staging.seer.cancer.gov/
* EOD 2018 General Coding Instructions- https://seer.cancer.gov/tools/staging/2018-EOD-General-Instructions.pdf
*Ask a SEER Registrar- https://seer.cancer.gov/registrars/contact.html
*CAncer Forum- http://cancerbulletin.facs.org/forums/help
*Hematopoietic and Lymphoid Neoplasm Database- https://seer.cancer.gov/seertools/hemelymph/
*Solid Tumor Rules- https://seer.cancer.gov/tools/solidtumor/
*NAACCR- Site specific data items (SSDI/GRADE)- https://apps.naaccr.org/ssdi/list/
*STORE- https://www.facs.org/~/media/files/quality%20programs/cancer/ncdb/store_manual_2018.ashx
*AJCC- Errata for 8th edition AJCC https://cancerstaging.org/references-tools/deskreferences/Pages/default.aspx
*Informational Abstracts- http://www.cancerregistryeducation.org/rr
*NCI Cancer Types- https://www.cancer.gov/types
* RQRS User Guide- https://www.facs.org/~/media/files/quality%20programs/cancer/ncdb/rqrs_userguide.ashx
*CTR Guide to Coding XRT- https://www.facs.org/~/media/files/quality%20programs/cancer/ncdb/case_studies_coding_radiation_treatment.ashx
*NCDB- The Corner Store- https://www.facs.org/quality-programs/cancer/news

*American College of Surgeons- Subscribe to the newsletter *The Brief* at http://multibriefs.com/optin.php?ACSORG or view articles at http://multibriefs.com/briefs/ACSORG/index.php

Coding Tips:

Helpful CAnswer forum posts: From NAACCR prostate webinar, presented on 1/9/20

Treatment

- Active Surveillance
  - http://cancerbulletin.facs.org/forums/forum/fords-national-cancer-data-base/fords/first-course-of-treatment/surgery/5832-1st-course-tx-vs-subsequent-prostate-ca-watchful-waiting-followed-by-surgery-or-xrt

AJCC Staging

- DRE
  - http://cancerbulletin.facs.org/forums/forum/ajcc-tnm-staging-8th-edition/male-genital-organs-chapters-57-59/prostate-chapter-58/82825-clinical-staging-incidental-findings-and-no-dre
  - http://cancerbulletin.facs.org/forums/forum/ajcc-tnm-staging-8th-edition/male-genital-organs-chapters-57-59/prostate-chapter-58/88326-clinical-t-prostate-overall-firm
  - http://cancerbulletin.facs.org/forums/forum/ajcc-tnm-staging-8th-edition/male-genital-organs-chapters-57-59/prostate-chapter-58/85679-psa-and-biopsy-but-no-dre-info
  - http://cancerbulletin.facs.org/forums/forum/ajcc-tnm-staging-8th-edition/male-genital-organs-chapters-57-59/prostate-chapter-58/93447-dre-deferred-vs-unknown
  - http://cancerbulletin.facs.org/forums/forum/ajcc-tnm-staging-8th-edition/male-genital-organs-chapters-57-59/prostate-chapter-58/94206-dre-unable-to-be-performed
  - http://cancerbulletin.facs.org/forums/forum/ajcc-tnm-staging-8th-edition/male-genital-organs-chapters-57-59/prostate-chapter-58/91221-dre-bx-differ
  - http://cancerbulletin.facs.org/forums/forum/ajcc-tnm-staging-8th-edition/male-genital-organs-chapters-57-59/prostate-chapter-58/89697-dre-neg-but-seminal-vesical-positive-on-bx
  - http://cancerbulletin.facs.org/forums/forum/ajcc-tnm-staging-8th-edition/male-genital-organs-chapters-57-59/prostate-chapter-58/89252-clinical-t-staging-for-prostate
- General
  - http://cancerbulletin.facs.org/forums/forum/ajcc-tnm-staging-8th-edition/male-genital-organs-chapters-57-59/prostate-chapter-58/98087-clinical-stage-assignment-w-no-or-unk-psa-and-gleason-grade-group-5
  - http://cancerbulletin.facs.org/forums/forum/ajcc-tnm-staging-8th-edition/male-genital-organs-chapters-57-59/prostate-chapter-58/96248-prostate-pn0-vs-pnx

    - http://cancerbulletin.facs.org/forums/forum/ajcc-tnm-staging-8th-edition/male-genital-organs-chapters-57-59/prostate-chapter-58/86022-clinical-staging-with-pm1
- Neoadjuvant
    - http://cancerbulletin.facs.org/forums/forum/ajcc-tnm-staging-8th-edition/male-genital-organs-chapters-57-59/prostate-chapter-58/88043-y-stage-after-hormones
    - http://cancerbulletin.facs.org/forums/forum/ajcc-tnm-staging-8th-edition/male-genital-organs-chapters-57-59/prostate-chapter-58/84885-hormones-prior-to-complete-clinical-staging

Resources offered for implementation of CoC operative standards for accreditation

The Commission on Cancer (CoC) is developing resources to assist programs with implementation of the six operative standards that were included in the 2020 CoC Standards (Standards 5.3 through 5.8). These materials are posted on a new website specifically focused on operative standards implementation. Current resources include a video detailing the background on the operative standards, materials from the operative standards discussion at the 2019 CoC Plenary Session, and PDFs of the relevant chapters from the Operative Standards for Cancer Surgery publications. A list of frequently asked questions related to the operative standards, compiled from feedback received during the CoC Plenary, CAnswer Forum and recent CoC Educational Summit, will be posted on the operative standards website in the next one to two months.

In addition, the CoC is developing and will be providing synoptic reporting templates and smart-phrases for use, including EMR integration. Additional tools and resources will be developed over the coming months and posted to the website as they are made available. CoC-accredited programs are encouraged to wait for the synoptic operative report templates and EMR solutions in development and not create their own. More information will be released in the coming months in *The Brief* and on the CoC and operative standards websites.

Quality of Care Measures update

The Commission on Cancer (CoC) Quality of Care Measures Expected Performance Rates for 2020 Survey are based on the 2016 Standards 4.4 and 4.5 and are posted to the CoC Quality of Care web page

Cracking the code to clinical trial enrollment: How to start and who can help

Are you a surgeon interested in participating in clinical trials but are unsure how to get started? A new webinar and resource deck developed through the American College of Surgeons Clinical Research Program (ACS CRP) was designed to help guide surgeons through the administrative and regulatory requirements needed to participate in clinical trials. This webinar will detail how to obtain a Cancer Therapy Evaluation Program (CTEP) Identity and Access Management (IAM) ID, how to register with the National Cancer Institute (NCI)'s Registration and Credential Repository (RCR), and how to complete enhanced training requirements such as Good Clinical Practice (GCP). The webinar will also and provide information about the NCI Biosketch, Financial Disclosure Form and Agent Shipment Form.

EDUCATIONAL SCHOLARSHIP
Inez Inman, BS, RHIT, CTR

ANCCR has designated funding for an educational scholarship for an ANCCR member to attend the ANCCR annual educational meeting in September 2020 in Flat Rock, NC.

The purpose of the scholarship is to provide financial assistance to a member who may not otherwise have the opportunity to attend ANCCR's annual meeting. The scholarship covers the full conference registration fee, mileage and hotel room for three nights at the conference hotel. ANCCR members wishing to apply for the scholarship must complete an application and submit at least a 500 word essay on the 2020 topic.

2020 Education Scholarship Essay Topic:
"How has the 2018 changes affected your cancer registry – the workflow, staffing, cancer committee discussions?"

Please send the essay with your completed application (see below) to:
Inez Inman, BS, RHIT, CTR
Cancer Registry, CCC, 2nd floor
Wake Forest Baptist Medical Center
Medical Center Blvd.
Winston-Salem, NC 27157

Deadline is Friday, August 28, 2020. The winning essay may be reprinted in The Sentinel following the ANCCR annual educational meeting.

2020 Education Scholarship Essay
"How has the 2018 changes affected your cancer registry – the workflow, staffing, cancer committee discussions?"

APPLICATION

Your name:

_____

Your title/department:

_____

Facility's name:

_____

Facility's address:

_____

Phone number:

_____

Email address:

_____

STATEMENT:
I sign this statement in good faith that I would not be able to attend the ANCCR annual educational meeting in Flat Rock, NC without this funding.

Signature:

_____

Your manager, supervisor, director's printed name:

_____

Manager, supervisor, director's signature:

_____

REPORT FROM THE NC CENTRAL CANCER REGISTRY
Melissa Pearson, CTR

With great sadness…

Eleanor Elizabeth Howell
July 12, 1972 - October 20, 2019
http://www.cremnc.com/obituary/eleanor-howell

It is so hard to believe that we are sharing the devastating loss of another staff member. Eleanor worked for the State Center for Health Statistics for over 20 years and was the Director (to which the CCR reported) since 2014. She was Chandrika's direct supervisor and a mentor, friend and leader to all of us. Eleanor passed away unexpectedly in her sleep on October 20, 2019 at the young age of 47. She was a fascinating woman with so many talents and interests. We appreciate her family sharing some of this with us through her obituary which you can read at the link above.

Eleanor was a dedicated advocate, not just for the central cancer registry, but for all cancer registries and registrars in NC. She supported our efforts with enthusiasm and perseverance. She was very knowledgeable of our work (down to the data items we collect and 2018 changes!) and the struggles we face. She understood the unique skill set of cancer registrars and supported our efforts to promote the profession. We have greatly benefited from her leadership and support and she will be greatly missed.

In the interim, Delton Atkinson, who was the director of the State Center in the 1990's and helped the CCR get off the ground and running, has stepped out of retirement to help serve in the Director's role until a new director can be named.

Rapid Case Ascertainment (RCA) Updates:

Staff:
- Heather Tipaldos RCA Facility Director
- JoElla Marting RCA Coordinator (Primary contact for cancer registry staff)
- Indu Tirupatur RCA Data Assistant
- Adam Gardner is no longer in an RCA role but continues in a research coordinator role with UNC to focus on specific studies

Current Studies:
- Carolina Mammography Registry: 1993 - 2022
- Medullary Thyroid Carcinoma Surveillance Study: 2012 - 2025
- Prostate Study: Jan 2018 – Summer 2020
- Carolina Head and Neck Cancer Epidemiology Study (CHANCE-2): June 2018 – May 2022
- 2018 Stage IV Lung Cancer & Biomarker Testing Study: Jan 2018 – Dec 2018
- Primary Liver/HCC Study: July 2019 – July 2021
- Endometrial Cancer Study: Estimated start March 2020

NPCR and NAACCR Submission:
The NC CCR submitted 65,468 cases diagnosed in 2017 and 52,402 cases diagnoses in 2018 to NPCR and NAACCR. The data exceeded all requirements *except* for the overall case count for 2018. 90% of the expected case count for 2018 was required. The target number to meet that goal was 58,000. We barely missed that goal, which is harder to accept when you are so close!

At the time the final data was pulled for submission preparation in October, 8 facilities had not reported any cases for 2018 and another 8 had reported less than 50% of their 2018 cases. Considering we were

not able to accept and start processing 2018 cases until April and had received and processed over 52,000 cases by October (only 6 months later), this was quite a feat for all of us! It will be interesting to see the overall effect that the 2018 changes have had in reporting across the U.S.

Breakdown of the number of cases submitted by year of diagnosis:
Note: The Death Clearance Only cases for 2017 was an all-time low of 0.75%. Thank you for reporting those cases!

Dx Year	# of Cases	% inc./dec.		Dx Year	# of Cases	% inc./dec.
1995	33210	--		**2005**	48368	6%
1996	32398	-2%		**2006**	49973	3%
1997	34089	5%		**2007**	52354	5%
1998	34953	3%		**2008**	53973	3%
1999	36630	5%		**2009**	56397	4%
2000	38769	6%		**2010**	56257	0%
2001	40077	3%		**2011**	57370	2%
2002	40748	2%		**2012**	57207	0%
2003	41782	3%		**2013**	59513	4%
2004	45572	9%		**2014**	60889	2%
				2015	63495	4%
				2016	64481	2%
				2017	65468	2%
				2018	52402	-20%
				Total	**1,176,375**	

Revised Quarterly Call for Data/Minimum Reporting Schedule for 2019 Data: Required Edits Metafile: v18D

Cases Diagnosed/1st Seen in the:	Standard Schedule	Revised Schedule for 2019 Data - Cases are due by:
2018 (all remaining cases)	July 1	November 1 Requests for Extensions are now required for delinquent 2018 cases
First quarter of 2019 (January – March)	October 1	January 1 Requests for Extensions are now required for delinquent 2019 Q1
Second quarter of 2019 (April – June)	January 1	March 1
Third quarter of 2019 (July – September)	April 1	May 1
Fourth quarter of 2019 (October – December)	July 1	July 1

NO DATA COLLECTION CHANGES FOR 2020 DIAGNOSES!

The CCARM 2018 will apply to 2018-2020 cases. Standard setters are hoping to have 2021 changes finalized in July/August. While a delay in being able to abstract 2021 cases is not planned, this is a tight deadline! We will see…

Ruth Maranda, LPN, CTR
NC CCR Education and Training Coordinator

Below is a summary on a few different topics gathered over the past few months. Much of this information is from the American College of Surgeons newsletter, The Brief. You may subscribe to the newsletter at this link: http://multibriefs.com/optin.php?ACSORG. The NAACCR Webinars are also one of the most useful resources for the latest information. Making every effort to attend these webinars is highly recommended!

Oropharyngeal Cancers: When to apply p16+ results AJCC versus SEER Solid Tumor Rules

Bottom line:

- There is similar terminology in the AJCC manual for assigning stage and in the SEER Solid Tumor Rules (STR) manual in assigning the ICD-O histology code.
- There are also conflicting instructions in the AJCC manual versus the SEER STR manual.
- Information in one manual doesn't determine decisions for the other manual. E.g. Just because you are using Chapter 10 in AJCC doesn't automatically correlate to a 8085 (HPV+ SCC) histology code.
- ISH, PCR, or RT-PCR to detect viral DNA or RNA is required for ICD-O.
- p16 test is required for AJCC.

Use the rules in AJCC to determine which AJCC chapter to use.
Use the rules in the STR manual to determine the histology code.

Background of High-risk Human Papillomavirus (HR-HPV):

- It is a virus that can cause cells to change causing a unique biological behavior
- Comes in many types: HPV 16, 18, 31, 33, 45, 52, 58 and others
- Common in tongue and tonsil cancers
- Better survival than tobacco-associated cancers. Therefore, a separate chapter in AJCC.

Testing to identify HPV:

Test	Method	Comments	Allowed for AJCC	Allowed for ICD-O
p16	IHC (Immunohisto-chemistry)	- "p16" is a test used to help confirm HPV associated oropharyngeal cancers. -Biomarker is produced (overexpressed) when HPV is present. -Cheaper and more available than viral DNA testing. -Synonymous terms for positive p16 findings: p16+, p16 overexpressed, HPV mediated	Yes - Required	No
Viral detection (DNA or RNA)	ISH, PCR, RT-PCR technologies	-Method for direct detection of HPV virus type. -Digging a little deeper, and checking back in the EMR later, may be required as it is usually a separate test and may come in later as an addendum. -May not be run on all specimens.	Yes – if done as an alternative to the p16 IHC test	Yes - Required

Do not confuse p16 with HPV 16.
p16 is a specific biomarker test.
HPV 16 is a type of the HPV virus… and there are many types of HPV.

AJCC: When to use Chapter 10 versus Chapter 11

Chapter 10 (HPV-mediated p16+ Oropharynx squamous cell cancers (OPSCC)):

- Applies to Oropharynx only
- All other head and neck sites (regardless of p16 status use other chapters)
- p16 test MUST BE DONE
- p16 test MUST BE POSITIVE (p16+, p16 overexpressed, HPV-mediated)
- Detection of HPV by ISH can be used if done as an alternative to the p16 IHC test
- p16 test results have priority over all other tests

Example: Path report states: p16 positive. HPV negative on ISH for HPV 16/18.
Use Chapter 10 because the p16 test was done and it was positive.
"HPV 16/18" is referring to a type of HPV, not to the p16 test.

- Use Chapter 10 for cervical mets of an unknown primary site that is HPV positive. EBV should be done to rule out nasopharyngeal origin. If EBV is not done, use Chapter 10.
- There is no "exact" histopathology term to describe HPV-mediated p16+ OPSCC. Use the rules in the SEER STR to determine the histology code.
- Do not use the histology term stated in the path report as a deciding factor on which chapter to use. Look for the p16 test (it is a mandatory requirement) and results (p16+) to use Chapter 10.

Example: Non-keratinizing OPSCC. p16 test is negative.
Use Chapter 11. p16 was done and was negative. The reference to "non-keratinizing OPSCC" is not used to decide the chapter. Look for the p16 test.

Chapter 11 (Oropharynx and Hypopharynx):

- p16 test is mandatory for oropharynx only, not for hypopharynx.
- For oropharynx, use Chapter 11 if the p16 test is negative, not done, or unknown if it was done.

Chapter 10 is for p16+ Oropharynx only.
p16 (by IHC or HPV ISH) must be done and must be positive to use Chapter 10.

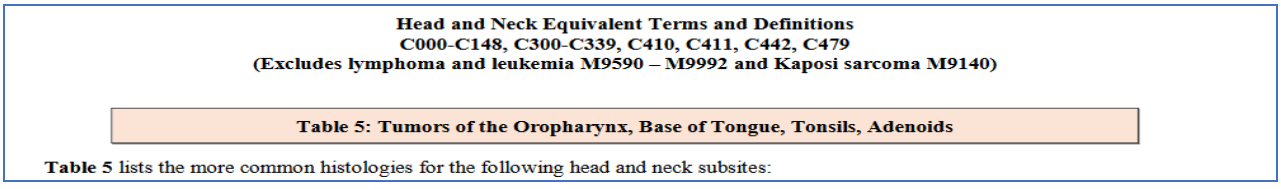
ICD-O Histology: When to use code 8085 & 8086

Instructions related to p16/HPV was included in the July 2019 update to the STR manual in Table 5 for tumors of the Oropharynx (C100-C109), Base of Tongue (C01.9) and Tonsils (C090-C099 and C111).

The specific HPV testing specified in the highlighted note below is required to code the histology to either the 8085 or 8086. This includes ISH, PCR and RT-PCR technologies that detect viral DNA or RNA. IHC, which looks for overexpression of the p16 marker cannot be used to code 8085 or 8086.

BE AWARE!

The pathology report final diagnosis may state it is HPV positive. But, upon closer review, it was the p16 test that was positive. And if this is the case, you cannot code the histology to 8085 or 8086 since the required ISH, PCR or RT-PCR testing was not done.



Head and Neck Equivalent Terms and Definitions
C000-C148, C300-C339, C410, C411, C442, C479
(Excludes lymphoma and leukemia M9590 – M9992 and Kaposi sarcoma M9140)

Table 5: Tumors of the Oropharynx, Base of Tongue, Tonsils, Adenoids

Table 5 lists the more common histologies for the following head and neck subsites:

Specific or NOS Term and Code	Synonyms	Subtypes/Variants
Adenoid cystic carcinoma 8200		
Polymorphous adenocarcinoma 8525	Cribriform adenocarcinoma Polymorphous low-grade adenocarcinoma Terminal duct carcinoma	
Squamous cell carcinoma 8070		Keratinizing squamous cell carcinoma **8071** Non-keratinizing squamous cell carcinoma **8072** Squamous cell carcinoma HPV-negative **8086*** Squamous cell carcinoma HPV-positive **8085*** *Note:* HPV-positive is not equivalent to HPV-mediated (p16+). According to the 2018 SEER Manual, HPV-type 16 refers to virus type and is different from p16 overexpression (p16+). HPV status is determined by tests designed to detect viral DNA or RNA. Tests based on ISH, PCR, RT-PCR technologies detect the viral DNA or RNA; whereas, the test for p16 expression, a surrogate marker for HPV, is IHC. HPV testing must be positive by viral detection tests in order to code histology as 8085.

*** These new codes were approved by the IARC/WHO Committee for ICD-O**

PRACTICE CASES:
You may be asking yourself… how do I identify these tests in a path report? Below are 3 sample pathology reports. Test your knowledge. See if you can correctly assign the histology code and determine the AJCC Chapter. We have even highlighted key words in yellow. Then check your answers (located at the end of the CCR article).

Case Example 1:

7/1/2019 FINAL PATHOLOGIC DIAGNOSIS, MICROSCOPIC EXAMINATION AND DIAGNOSIS
A. TONSIL, LEFT LINGUAL, BIOPSY:
PROCEDURE: Tonsillectomy and bilateral neck dissection
TUMOR SITE: Oropharynx, base of tongue
TUMOR LATERALITY: Left
TUMOR FOCALITY: Unifocal
TUMOR SIZE: GREATEST DIMENSION: 1.3 cm
HISTOLOGIC TYPE: Human papillomavirus (HPV)-mediated (positive) squamous cell carcinoma
HISTOLOGIC GRADE: Not graded
TUMOR EXTENSION: Soft tissue of tonsil
MARGINS: Involved by invasive tumor
LYMPHOVASCULAR INVASION: Not identified

ANCILLARY STUDIES: p16 positive by immunohistochemistry.
Immunohistochemistry is performed on blocks A3 and FI. The controls are adequate and representative tissue is present for evaluation.
p16: Diffusely positive in the tumor in block A3; highlights foci of epithelium in block F1.
"These tests were developed and their performance characteristics determined by Molecular Diagnostics Laboratory. They have not been cleared or approved by the U.S. Food and Drug Administration."

No further testing found in chart.

ICD-O Histology Code: _____ **AJCC Chapter:** _____

Case Example 2:

7/1/2019 FINAL PATHOLOGIC DIAGNOSIS, MICROSCOPIC EXAMINATION AND DIAGNOSIS
A. TONSIL, RIGHT, RADICAL TONSILLECTOMY:
Invasive squamous cell carcinoma, HPV mediated, 1.2 cm.
Margins close but negative, 1 mm to the superior and deep margins.
No lymphovascular or perineural invasion identified.

Immunohistochemistry is performed on block A7 and D5. The controls were adequate and representative tissue was present for evaluation.
p16 (A7 and D5): Positive in the tonsillar carcinoma; negative in the lymph node carcinoma.
P40 (D5): Highlights rare tumor cells in the lymph node. CK 5/6 (D5): Highlights a minor subset of tumor cells in the lymph node. Pancytokeratin AE1/AE3 (D5): Highlights tumor cells in the lymph node. EBV ISH (D5): Negative. TTF-1 (D5): Negative. CK 7 (D5): Negative. CK 20 (D5): Negative. CDX-2 (D5): Negative. GATA-3 (DS): Negative. Synaptophysin (DS): Negative. Chromogranin A (D5): Negative. PSA (D5): Negative.

PROCEDURES/ADDENDA
PCR RESULTS
Reported: Interpretation Date Ordered:
HPV testing is performed on block 319-17991 A7 (right tonsil; -50% tumor).

Test	Results	Reference Values
HPV HR type 16, PCR	Negative	Negative
HPV HR type 18, PCR	Negative	Negative
HPV other HR types, PCR	POSITIVE	Negative

(POSITIVE for one of the other High-Risk HPV types: 31, 33, 35, 39, 45, 51, 52, 56, 58, 59, 66 and 68)

ICD-O Histology Code: _____ **AJCC Chapter:** _____

Case Example 3:

Final Diagnosis: LEFT CERVICAL LYMPH NODE, NEEDLE BIOPSY: METASTATIC p16 POSITIVE SQUAMOUS CELL CARCINOMA. SEE COMMENT.

Comment: Morphologically, the tumor in the lymph node is suggestive of a nonkeratinizing squamous cell carcinoma, Immunostains demonstrate that the tumor is strongly positive for p63, CK5/6 and p16. The controls are satisfactory. These results are consistent with an HPV positive squamous cell carcinoma of oropharyngeal origin. No other information.

ICD-O Histology Code: _____ **AJCC Chapter:** _____

Data Quality Audits

The QC Staff had the opportunity to perform several audits. Below are summaries from 2 of these audits.

Audit of Summary Stage 2018 for Insitu Tumors and Benign Brain/CNS Tumors

Dianna Stucky, CTR

The 2018 changes set forth many challenges for cancer registrars last year! In addition to the collection of new data items and new rules, there were also several revisions of the NC edits metafile. Between the vs18b and vs18c edit metafile releases, NAACCR added a new edit: *Summary Stage 2018, Behavior Code ICD03 (NAACCR).* This edit checks that:

- Summary Stage 2018 is coded 8 for all benign brain tumors (with behavior codes of 0 or 1) and
- Summary Stage 2018 is coded 0 for insitu tumors.

Because there were several months of 2018 marathon abstracting by registrars and uploading to the state prior to the release of this new edit in the vs18c metafile, you may find there are cases in your database with incorrectly coded SS2018 for benign brain and/or insitu tumors. The CCR reviewed cases meeting both scenarios in our database. Here is what we found:

SS2018 for Benign/Borderline Brain (behavior of 0 and 1):
Number of cases identified: 2180
Number of cases coded incorrectly: 297 (13% error rate!). Of those:

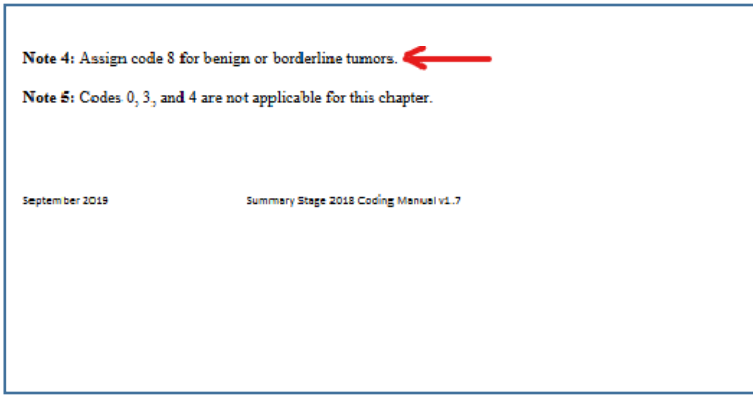
- 200 cases were incorrectly coded to 1 (Localized)
- 65 cases were incorrectly coded to 9 (Unknown)
- 10 cases incorrectly coded to 2 (Regional, NOS)

The reference for this rule can be found in the SS2018 Manual in the Brain chapter under Note 4:

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, 9380-9540, 9680, 9699, 9700-9714, 9751-9759

C700, C710-C719
C700 Cerebral meninges
C710 Cerebrum
C711 Frontal lobe
C712 Temporal lobe
C713 Parietal lobe
C714 Occipital lobe
C715 Ventricle, NOS
C716 Cerebellum, NOS
C717 Brain stem
C718 Overlapping lesion of brain
C719 Brain, NOS



SS2018 for In Situ (behavior of 2):

Cases with a behavior code of 2: 9149
Number of cases with an incorrect SS2018: 125 (1.3% error rate). Of those:

- 90 cases were incorrectly coded to 1 (Localized)
- 22 cases incorrectly coded to 9 (Unknown)
- Remaining cases incorrectly coded to 2, 3, 4 or 7.

Cases with a SS2018 of 0: 9156
Number of cases with an incorrect behavior code: 131. Of those:

- 130 cases were incorrectly coded to 3 (invasive)
- 1 case was incorrectly coded to 0 (benign).

These are two very simple audits I would recommend all facilities run as soon as possible to identify cases that may have been coded incorrectly prior to the edit being made available. This ensures your data is consistent for the entire year which means increased data quality.

And another comment: This is a great example why it is important to always use the most current NC edit metafile so you can catch these types of errors as soon as possible!

Audit of Follicular Lymphoma Histology Code

Farrah Scodius, CTR

We recently did a review on the coding of one of the more common lymphoid neoplasms - follicular lymphoma. Follicular lymphoma is a non-Hodgkin's type of lymphoma, originating in the B lymphocytes, or B-cells, and it is the most common form of slow-growing disease. About 20 percent of all non-Hodgkin's lymphomas are follicular lymphomas. We focused on reviewing cases that reflected a current follicular lymphoma NOS code (9690/3) and cross referenced with the path/lab text to see if we could code the histology to a more specific follicular lymphoma type outlined in the definitive diagnostic method(s) section of the heme database.

To review, the SEER Heme Database states that the 9690 histology code is a generic disease description and should be reserved as a "working diagnosis" code, a DCO case or path only cases.

Follicular lymphoma, NOS (9690/3) histology is a generic disease description. DCO cases or path report only cases usually stay in this classification. The NOS histology may be the working diagnosis. Further review of the medical record should be done to look for the tests listed as definitive diagnosis.

The more specific *follicular lymphoma*s are:
1. *Follicular lymphoma*, grade 1 (9695/3)
2. *Follicular lymphoma*, grade 2 (9691/3)
3. *Follicular lymphoma*, grade 3 [3A, 3B] (9698/3)

When a more specific diagnosis is identified, the histology should be changed to the more specific neoplasm name and code.

It would be most diligent for a registrar to code to the most specific histology if that information was indeed available in the EMR. Additionally, there is a note regarding diffuse large B-cell lymphoma (DLBCL-9680). For reference, the Heme Database states that when any area of DLBCL is present in a follicular lymphoma disease, it should be reported as DLBCL. This is reflected in Module 6, Rule PH11.

Rule PH11 Code the primary site to the **site of origin**, lymph node(s), lymph node region(s), tissue(s) or organ(s) **and histology** to **diffuse large B-cell lymphoma** (DLBCL) (9680/3) when DLBCL and any other B-cell non-Hodgkin lymphoma are present in the same lymph node(s), lymph node region(s), organ(s), tissue(s) or bone marrow. See Rule M4.

Note 1: For the purpose of using the rules, a non-Hodgkin lymphoma is any lymphoma (including the leukemia/lymphomas) not stated to be Hodgkin lymphoma, NOS or a type of Hodgkin lymphoma.

- Hodgkin lymphomas are: 9650/-9653/3, 9655/3, 9659/3, 9663/3

It is particularly important at initial diagnosis to code DLBCL if present, as DLBCL is listed as the sole transformation for follicular lymphomas (any grade). Additionally, 25-35% of patients transform to DLBCL. If this transformation occurs, it should be recorded as a new primary.

Our findings were as follows:
Number of cases coded to follicular lymphoma NOS (9690): 360
Number of cases that could be corrected: 122. Of those:

- 113 were updated to a more specific follicular lymphoma histology code
- 9 were updated to reflect the DLBCL code
    - Note: 2 were transformations to DLBCL and should have been abstracted as a new primary.

Some additional notes from the abstracting perspective:

Appendix B of the Heme manual is very helpful regarding WHO preferred classification. And, the Histology Coding Instructions (p 39) are a valuable read for review!

This is a great and useful audit to run at your facility, particularly with full access to the EMR to confirm the precise histology findings.

Answers to the Case Scenarios

Case Example	ICD-O	Rationale	AJCC Chapter	Rationale
1	8070/3	The required ISH, PCR and RT-PCR that detect viral DNA or RNA was not done. The p16 IHC test was done and was positive, but this is a different test and cannot be used to assign 8085 or 8086.	10	The required p16 IHC test was done and was positive.
2	8085/3	p16 positive by IHC is not sufficient to code 8085. There was, however, a separate addendum with PCR results that show a positive result for the HPV other HR types. HPV has many types. The HPV type that is positive is not a factor, as long as the required test was done and was positive for HPV.	10	The required p16 IHC test was done and was positive.
3	8070/3	Needle biopsy shows the lymph node was p16 positive. There was no further testing (ISH, PCR, or RT-PCR) to test for the HPV virus that is required to code histology.	10	Even though the biopsy was of a lymph node, the site was confirmed to be oropharynx. The required p16 IHC test was done and was positive.

ISH, PCR and RT-PCR that detect viral DNA or RNA must be done to assign 8085 or 8086.
p16 (IHC) test results cannot be used to assign code 8085 or 8086.

TEXT IS IMPORTANT!

We are hoping these examples help clarify some confusion when it comes to coding 8070 versus 8085/8086. The CCR is at a disadvantage by not having the original path report. You can imagine how hard it would be to validate that the histology is correctly coded without DETAILED TEXT describing the specific test and results! Please remember to include these details in your text!!!

DATA QUALITY IMPROVEMENT OPPORTUNITY

Since this clarification did not come out until July 2019, you may want to run a report on your oropharynx cases and take a closer look at the histology code and staging. Re-review the pathology report and look for the specific testing types.

SEER*Educate is a great resource to practice coding histology. Go to: Training Menu → CTR Prep Tests → Coding Drill-Dx 2018 Histology (Solid Tumors). There are about 30 practice tests on H&N alone! These practice tests provide rationale for answers that are helpful.

Getting Ready for New 2020 CoC Standards

Frederick L. Greene, MD FACS
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Levine Cancer Institute
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"All organizations need to know that virtually no program or activity will perform effectively for a long time without modification and redesign. Eventually every activity becomes obsolete…. "
— ***Peter Drucker***

As a former Chair of the Commission on Cancer (CoC) and a current CoC surveyor, for me the newest iteration of the CoC accreditation standards contains both something old and something new! The concepts incorporated in these new standards carry the same message that all former editions have followed---the Cancer Committee and its leaders should be directing every phase of cancer care at the institution. In addition, the CoC continues to support the concept that cancer care variance will be reduced between and among institutions if core standards are followed and quality is maintained.

For those CoC-accredited institutions that have been assessed previously using the 2016 edition of the standards, it goes without saying that any change is potentially significant and this is particularly true for the registry staff who provide data that are important in meeting many of the standards. Most registrars already have become aware that commendation ratings have disappeared in the new standards and that, significantly, commendation given for attendance at regional and national CME registrar events is no longer applicable in the new standards (Standard 4.3). The initial concern has been that hospitals and the cancer leadership will back away from a commitment to registrar education without having a push from the CoC. While I understand this concern, the overall support of registrar education must continue to be supported by the Cancer Committee as well as the leaders of the cancer program and institution. In my opinion, as institutions need to recruit registrars to satisfy registry standards, our cancer leaders will understand that educational support is an important recruiting tool and that economic support for registrar education must be maintained and championed.

One of the traditional standards that has been dear to my heart has dealt with quality review of the abstracts that are generated as well as the overall quality of the registry. While the new standard (6.1) has expanded the types of professionals

that can work with the supervisory registry staff in overseeing quality, the basic premise of assessing all the important indicators of abstract quality has not changed. In my view, for those CoC programs affiliated with academic training programs, the opportunity to have residents and fellows involved in the quality review effort of the registry is a great move. One of my concerns is that young physicians, especially those heading into oncology careers, have no inkling of the workings of the cancer registry and the importance of cancer data. It will be a boon to have oncology nurses and medical trainees involved in the oversight of registry quality.

There is no doubt that many of the new standards will impact our registrar community and, potentially, increase the workload for our registrars. Providing data on discussion of genetics and supportive care at cancer conferences (Standard 2.5), as well as developing processes showing that rehabilitation (Standard 4.6), nutrition (Standard 4.7), psychosocial distress testing (Standard 5.2) and other programs effect our cancer survivors (Standard 4.8) will have impact on our registry operations. The good news is that these heightened uses of our registries will also increase the importance of registrars in the hierarchy of the hospital cancer program and the need for adequate numbers of registrars to assure quality registry maintenance in our CoC-accredited programs.

For programs having their CoC survey in 2020, the years 2017, 2018 and 2019 will be evaluated using the 2016 edition of the standards. Not all of the new 2020 Edition standards will be required for programs surveyed in 2021 or even 2022. There will be a number of standards that are phased in over the next few years. While the modified standards covering nursing education (Standard 4.2), survivorship (Standard 4.8) and especially those new additions (Standards 5.3-5.8) assessing how surgeons perform select cancer operations will be evaluated fully in the coming years, now, in early 2020, is the time to plan strategies and to especially assess the implication of these standards regarding registry operations.

Over the next several months I will have the unique opportunity to host a series of COC -produced webinars that will further explain all the nuances of the new standards. In addition, I will take part in the future series of the “CAnswer Forum” that will hopefully answer questions related to the standards as well as other important issues affecting the registrar community. I urge you to develop questions and share concerns so that your colleagues may benefit from these webinars.

Although change in any form is always difficult, I truly believe that with the roll-out of the new 2020 Standards, all registrars and the registries that you maintain will have an even greater importance in every facet of hospital inpatient and

outpatient cancer care. The overall significance of the National Cancer Data Base (NCDB) has been maintained and enhanced, therefore, again highlighting the importance of our hospital-based registrars who provide the data supporting the goals of the NCDB.

In this article, I have alluded to the potential of increased work load for registrars as more data is sought to support both modified and new CoC standards. To counter this potential, the CoC staff and volunteer leadership have accepted a goal to reduce unnecessary abstraction data contained in the recently released Standards for Oncology Registry Entry (STORE). As the chair of the working group that created STORE, I promise to diligently represent both the registrar and the clinical communities in achieving this goal. In addition, a concerted effort to introduce synoptic reporting in many clinical areas is ongoing. In my view, this will ease the burden for registrars in finding data in diagnostic radiology, radiation oncology and surgical operative reports.

These are indeed exciting times for the registry community. Each of the new and modified 2020 Standards serves to further validate and heighten the importance of the cancer registrar and the cancer registries that you maintain.

The article below is from the Summer 2019 edition of Journal Registry Management that Dr. Greene wrote with two of Atrium's CTRs: Tammy Macias and Destiny Justice.

Special Feature

Celebrating the 60th Anniversary of the American Joint Committee on Cancer

Tammy A. Macias, MHA, BS, RHIT, CTR[a]; Destiny Justice, CTR[a]; Frederick L. Greene, MD, FACS[a]

In 2019, the American Joint Committee on Cancer (AJCC) celebrates a 60-year milestone of serving as the leading organization having as its sole mission the classification and staging of cancer. The AJCC was organized in 1959 as the American Joint Committee for Cancer Staging and End-Results Reporting (AJC). It is appropriate to commemorate and celebrate the founding of this multidisciplinary organization in the *Journal of Registry Management* in recognition of the strong collaboration that has been forged between the AJCC, the National Cancer Registrars Association (NCRA), cancer registrars working at Commission on Cancer (CoC)–accredited institutions as well as both National Cancer Institute–supported and state registries. The future strides in cancer staging depend on the strong collaboration of the AJCC and dedicated cancer registrars.

The first TNM cancer staging classification, which designated the terms *tumor* (T), *node* (N), and *metastasis* (M), was developed in the 1940s for breast cancer by a French surgeon, Pierre Denoix.[1] This clinical classification of cancer was pioneered before the organization of the AJC, the forerunner of the AJCC. The TNM system was developed as a common international language to facilitate the staging of neoplastic disease and to compare the results of therapy. The World Health Organization (WHO) played an important role in these early days, as did the International College of Radiology and the International Committee for Stage-Grouping in Cancer and for Presentation of the Results of Treatment of Cancer.[2] These organizations had a significant role in promulgating the TNM system, which had as its primary objectives and guiding principles the provision of comparability of stage-grouping and of end results reporting compatible with the WHO rules.

In the 1950s, the Union for International Cancer Control (UICC) chose to formalize the TNM classification as the accepted means for cancer classification worldwide. On January 9, 1959, the AJC was organized as a result of a recommendation by the cancer committee of the American College of Radiology.[2] The American College of Radiology proposed the establishment of an American committee to evolve a system of staging and reporting cancer end results that would be acceptable to American physicians and that would continue the TNM format proposed by Denoix. There was a strong belief among the founding leadership that cancer classification, while embracing the TNM concepts, should also embrace the needs of American physicians and hospitals who were working in "cancer clinics" approved by the American College of Surgeons. This initiative represented the beginning of the accreditation process of the future CoC.[3] It seemed wise, therefore, to develop an official body that could evaluate the recommendations of the UICC TNM committee so as to make suggestions or offer alternate classifications based on the TNM system, but were more suitable for use by North American physicians. In keeping with the concept that the fledgling AJC should be a coalition of organizations having cancer management as primary goals, the initial sponsoring organizations of this seminal organization were the American College of Surgeons, the American College of Radiology, the College of American Pathologists, the American College of Physicians, the American Cancer Society, and the National Cancer Institute.

The AJCC mission is to provide "worldwide leadership in the development, promotion, and maintenance of evidence-based systems for the classifications and management of cancer in collaboration with multidisciplinary organizations dedicated to cancer surveillance and to improving care."[4] The AJCC's efforts are accomplishment by the assistance of many physicians and cancer registrars who volunteer their time to forward the growth of this evolving field. The AJCC's worldwide effort in the development of a dynamic evidence-based classification system for cancer has been paramount in the formation of our only national cancer registry, the National Cancer Data Base (NCDB).[5] Using the AJCC classification systems, cancer registries have collected and submitted data to the CoC and NCDB to be used for development of clinical guidelines, development of clinical trials and many other diverse areas of scientific inquiry.

The factors used in cancer staging have changed significantly over time. As a result, new AJCC manuals have been updated and published every 4 to 8 years (Table 1). According to the Cancer Registries Amendment Act, one of the purposes of cancer registries is to "identify cancer trends, pattern, and variation for directing cancer control intervention".[6] As stated by Dr. Oliver Beahrs, editor of the first AJCC staging manual (entitled *Classification and Staging of Cancer by Site*), "Proper classification and staging of cancer will allow the physician to determine treatment for the patient more appropriately, to evaluate results of management more reliably, and to compare statistics reported from various institutions more confidently."[7]

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Table 1. American Joint Committee on Cancer (AJCC) Cancer Staging Manuals and Effective Dates	
Edition	*Year Published*
1	1978
2	1984
3	1989
4	1993
5	1998
6	2003
7	2010
8	2018

The AJC developed a concept in which multidisciplinary task forces were created for each cancer site. These task forces or expert panels were assigned to review available outcomes data culled from existing rudimentary hospital registries and literature reports. This nascent approach has been the paradigm used by the AJCC expert panels and editorial boards of today. The power of the NCDB created in the late 1980s[5] has proven to be a significant resource for more modern approaches to updating the TNM system and inclusion of newer biological and molecular markers into cancer staging.

The AJCC has recognized that, while specific prognostic factors may not affect staging, they can affect outcomes when given targeted therapies. It is important to note that targeted therapies do not work the same way as standard therapies. Targets are specific genes that play some role in the development and growth of cancer. Targeted therapies attack the programming of abnormal cells while leaving the normal cells. The 8th edition of the *AJCC Cancer Staging Manual* has acknowledged the trend toward this individualized care and the value it adds to treatment outcome.[8]

Throughout the ensuing decades, both the UICC and the modern AJCC have been partners in promoting and educating the international cancer community regarding the taxonomy of cancer staging and the importance of using both clinical and pathological staging to assess cancer outcomes.[9] Through vigorous discussion and the dedicated work by many clinicians involved in cancer care in both organizations, promulgation of a worldwide TNM system was finally realized in 1987.[10,11] Beginning in 1997 with the introduction of the 5th editions of both the UICC and AJCC print monographs, the 2 organizations have worked diligently to assure that each iteration of the TNM system is published in a synchronous fashion worldwide.

Over the last 60 years, the original concepts recognized by the founders of the AJC have metamorphosed into the principles of the AJCC that embrace not only the importance of anatomic staging, but have also now highlighted the critical significance of prognostic and predictive factors into the modern concepts of cancer treatment.[12] Additionally, the critical role of cancer registrars has been recognized and highlighted by the AJCC. These dedicated professionals, especially those working in CoC-accredited institutions, have diligently collected, abstracted and transmitted data on cancer patients to the NCDB, allowing for the information gleaned to be used in all elements of AJCC cancer staging and patient treatment. For this reason, the current 8th edition of the *AJCC Cancer Staging Manual* has been dedicated to our cancer registrars.[8]

Over the last 6 decades, working with cancer registrars, surveillance personnel, and literally hundreds of volunteer clinicians who serve on multiple expert panels, the AJCC has fine-tuned the cancer staging lexicon and has served as the primary promoter of education for the "language of cancer."[13] In recent years, the impact of the AJCC has been elevated by fruitful collaborations with other staging groups such as the International Federation of Gynecology and Obstetrics and the International Association for the Study of Lung Cancer[14] representing gynecologic cancers and lung cancers, respectively.

As the current AJCC begins its 7th decade of work—strengthened by the inclusion of liaison members from the mainstream of cancer-related organizations (Table 2)—the opportunities to transform cancer staging from a purely anatomic basis to the essence of personalized cancer care are both daunting and exhilarating. The NCRA plays a major role in this transformation. The inclusion of artificial neural networks (machine learning), which lead to robust

Table 2. Current Organizational Members of the American Joint Committee on Cancer (AJCC)
American Association of Pathologists' Assistants (AAPA)
American Cancer Society (ACS)
American College of Physicians (ACP)
American College of Radiology (ACR)
American College of Surgeons (ACoS)
American Head and Neck Society (AHNS)
American Society for Radiation Oncology (ASTRO)
American Society of Clinical Oncology (ASCO)
American Society of Colon and Rectal Surgeons (ASCRS)
American Urological Association (AUA)
Canadian Partnership Against Cancer (CPAC)
Centers for Disease Control and Prevention (CDC)
College of American Pathologists (CAP)
International Collaboration on Cancer Reporting (ICCR)
National Cancer Database (NCDB)
National Cancer Institute (NCI)
National Cancer Registrars Association (NCRA)
National Comprehensive Cancer Network (NCCN)
North American Association of Central Cancer Registries (NAACCR)
Society of Gynecologic Oncology (SGO)
Society of Surgical Oncology (SSO)
Society of Urologic Oncology (SUO)

risk assessment tools in cancer care, and technical support systems that can translate the complexities of modern staging into understandable and useful instruments for both patients and clinicians alike are also important agenda items for the AJCC member organizations. There is little doubt that the solid foundation of collaboration developed and championed by the founders of the AJCC 60 years ago, and the partnership of the modern AJCC with the cancer registry community, will prove instrumental in meeting the significant challenges of cancer staging and cancer care going forward.

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