

## Collecting Cancer Data: Central Nervous System

NAACCR 2008-2009 Webinar Series  
April 2, 2009



---

---

---

---

---

---

---

## Prizes!

### Question of the Month!

- The participant that submits the best question of the session will receive a fabulous Prize!
- Shannon and Jim will announce the winner at end of the session.

### Tip of the Month!

- The participant that sends in the best tip related to the topic will win a spectacular prize!
- Shannon and Jim will announce the winner at the end of the session.



---

---

---

---

---

---

---

## Q&A

Please submit all questions concerning webinar content through the Q&A panel



---

---

---

---

---

---

---

## Overview

Central Nervous System (CNS)




---

---

---

---

---

---

---

---

## Case Eligibility for CNS Tumors

- Include ICD-O-3 malignant (behavior code 2, 3) and ICD-O-3 nonmalignant (behavior code 0, 1) diagnosed on or after 1/1/2004 tumors of the following sites:
  - Meninges (C70.\_)
  - Brain (C71.\_)
  - Spinal cord, cranial nerves, and other parts of CNS (C72.\_)
  - Pituitary gland (C75.1)
  - Craniopharyngeal duct (C75.2)
  - Pineal gland (C75.3)




---

---

---

---

---

---

---

---

## Case Eligibility for CNS Tumors Questions

- Are nonmalignant blood vessel tumors occurring in the CNS sites reportable?
  - Yes, they are. These tumors include:
    - 9120/0 Hemangioma, NOS
    - 9121/0 Cavernous hemangioma
    - 9150/0 Hemangiopericytoma, benign
    - 9150/1 Hemangiopericytoma, NOS
    - 9161/1 Hemangioblastoma
- Should blood vessel tumors occurring in CNS sites be coded to blood vessel or CNS?
  - Code to CNS site in which they occur.

Source: Collection & coding clarifications for CNS tumors – CDC/NPCR




---

---

---

---

---

---

---

---

### Case Eligibility for CNS Tumors Questions

- Is angiocentric glioma, WHO grade 1, of the right frontal lobe reportable? If so, how is the histology coded?
  - Yes, it is reportable. The best histology code currently available is 9380/1 (glioma, NOS; uncertain behavior).

Source: ^SINQ Question #20081123



---

---

---

---

---

---

---

---

### Case Eligibility for CNS Tumors Questions

- Is sphenoid meningioma reportable?
  - No. Meningiomas may arise from any location where meninges exist including paranasal sinuses. Sphenoid meningioma would arise in the sphenoid sinus(C31.3). Nonmalignant tumors arising in the sinus are not reportable.

Source: SINQ Question #20071121



---

---

---

---

---

---

---

---

### Case Eligibility for CNS Tumors Questions

- Is hygroma reportable?
  - \*Hygromas are not reportable. This instruction will be added to the next revision of the benign brain rules.
- Is a cavernoma reportable as a benign brain tumor?
  - \*\*Cavernoma is a reportable benign brain tumor. According to our pathologist consultant, cavernoma is synonymous with cavernous hemangioma.

Source: \*SINQ Question # 20081114; \*\*SINQ Question # 20081113



---

---

---

---

---

---

---

---

### Case Eligibility for CNS Tumors Questions

- Is chondroma, NOS, or chondroblastoma, NOS, occurring in an intracranial site or along the spinal cord reportable?
  - No. Chondroma, NOS, and chondroblastoma, NOS, are benign tumors of the bone itself, not the intracranial contents.

Source: SINQ Question #20071092




---

---

---

---

---

---

---

---

### Meninges C70.0 – C70.9

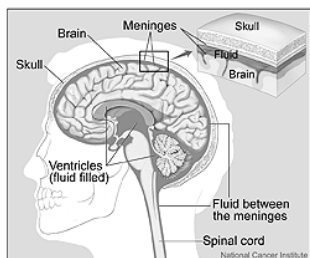


Image source: NCI VisualOnline; Artist – Alan Hoofting




---

---

---

---

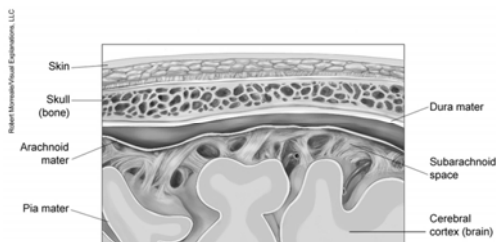
---

---

---

---

### Cerebral Meninges



Cross-section of skull and the Meninges

© 2004 American Society of Clinical Oncology




---

---

---

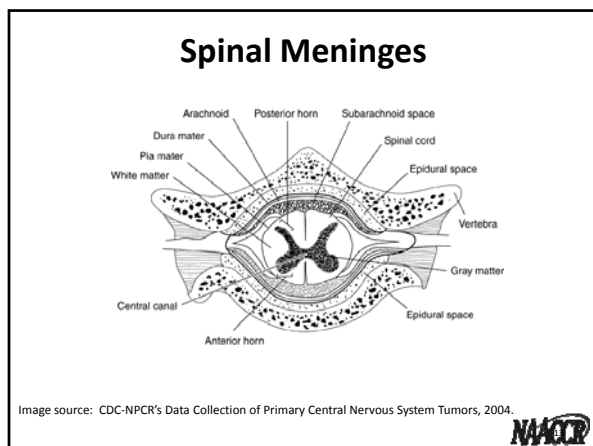
---

---

---

---

---




---

---

---

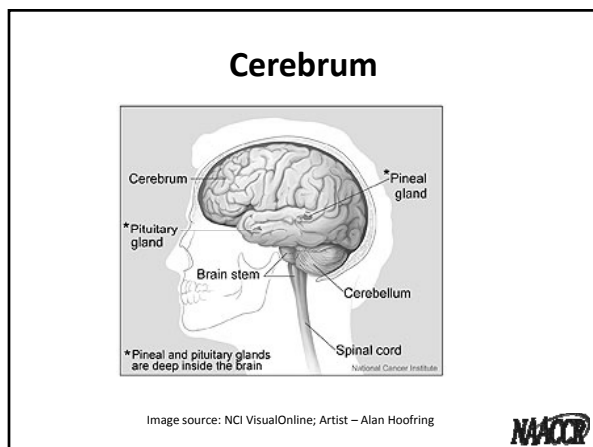
---

---

---

---

---




---

---

---

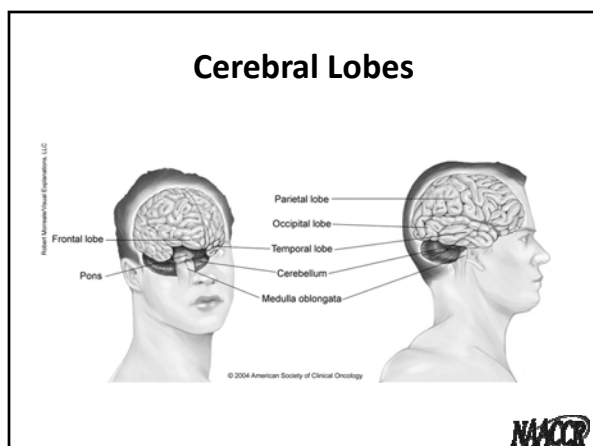
---

---

---

---

---




---

---

---

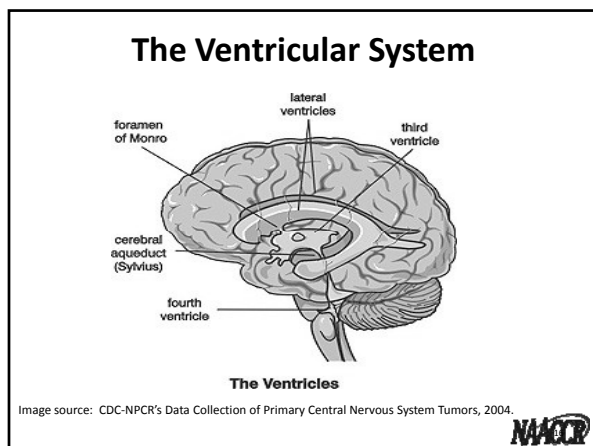
---

---

---

---

---




---

---

---

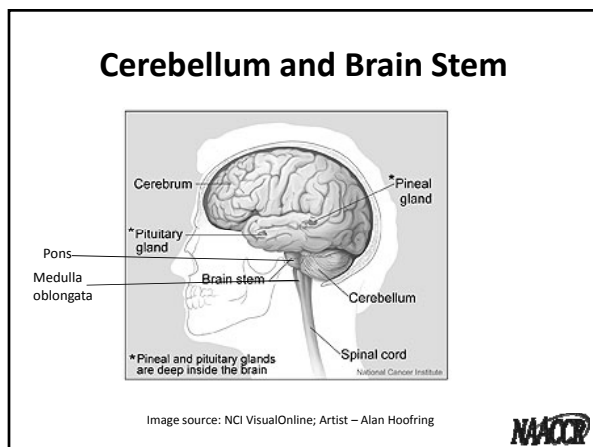
---

---

---

---

---




---

---

---

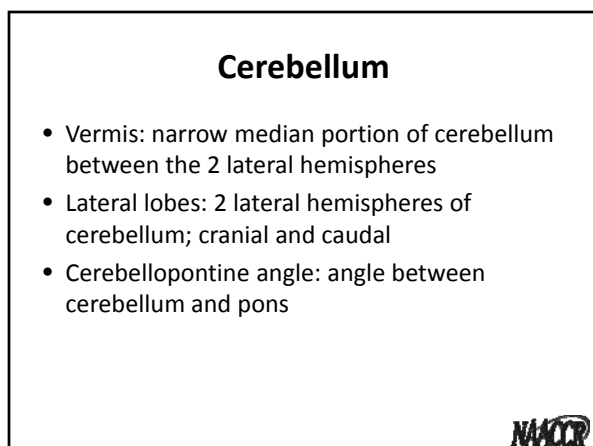
---

---

---

---

---




---

---

---

---

---

---

---

---

## Brain Stem

- Pons: portion of brain stem superior to medulla oblongata
- Medulla oblongata: lower portion of brain stem
  - Olive: pair of oval structures in medulla oblongata
  - Pyramid: anterior or ventral portion of medulla oblongata
- Midbrain: mesencephalon; front of brain stem
  - Cerebral peduncle: ventral portion of midbrain




---

---

---

---

---

---

---

---

## Spinal Cord

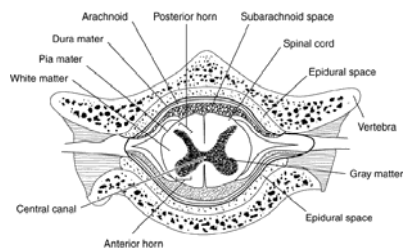


Image source: CDC-NPCR's Data Collection of Primary Central Nervous System Tumors, 2004.




---

---

---

---

---

---

---

---

## Cranial Nerves

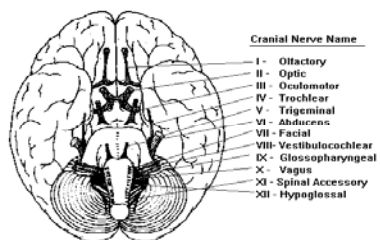


Image source: CDC-NPCR's Data Collection of Primary Central Nervous System Tumors, 2004.




---

---

---

---

---

---

---

---

## Intracranial Endocrine Glands and Related Structures

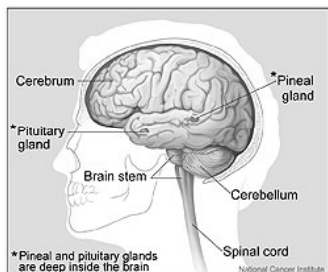


Image source: NCI VisualOnline; Artist – Alan Hoofring




---

---

---

---

---

---

---

---

## Location of Intracranial Tissues

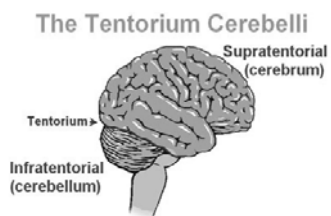


Image source: SEER Training Website




---

---

---

---

---

---

---

---

## Location of Intracranial Tissues

- Supratentorial sites
  - Cerebrum
    - Frontal, temporal, parietal, and occipital lobes
  - Meninges of cerebrum
  - Ventricle, NOS
    - Lateral & 3rd
  - Corpus callosum
  - Tapetum
  - Anterior cranial fossa
  - Middle cranial fossa
  - Suprasellar
- Infratentorial sites
  - Cerebral subsites
    - Hypothalamus
    - Pallium
    - Thalamus
  - Cerebellum
  - Meninges of cerebellum
  - Brain Stem
    - 4<sup>th</sup> ventricle
  - Posterior cranial fossa




---

---

---

---

---

---

---

---



### Sequence Number

- Records sequence of malignant and nonmalignant neoplasms over patient's lifetime
  - 00-59 for malignant and in situ behavior
    - 00 = solitary malignant neoplasm
    - 01 = first of multiple malignant neoplasms
  - 60-88 for non-malignant behavior
    - 60 = solitary non-malignant neoplasm
    - 61 = first of multiple non-malignant neoplasms




---

---

---

---

---

---

---

---

### Laterality

Code	Definition
0	Not a paired site
1	Right: origin of primary
2	Left: origin of primary
3	Only one side involved, right or left origin unspecified
4	Bilateral involvement, lateral origin unknown; stated to be a single primary
9	Paired site but no information concerning laterality; midline tumor




---

---

---

---

---

---

---

---

### Laterality

- CNS sites defined as paired for cases diagnosed 1/1/2004 and after
  - Cerebral meninges C70.0
  - Cerebrum C71.0
  - Frontal lobe C71.1
  - Temporal lobe C71.2
  - Parietal lobe C71.3
  - Occipital lobe C71.4
  - Olfactory nerve C72.2
  - Optic nerve C72.3
  - Acoustic nerve C72.4
  - Cranial nerve, NOS C72.5
- Assign laterality as '0' for all other CNS sites




---

---

---

---

---

---

---

---

### WHO Grade for Tumors of Brain and Meninges

- WHO Grade I
  - Slow growing and nonmalignant
- WHO Grade II
  - Relatively slow growing; sometimes recur as higher grade; nonmalignant or malignant
- WHO Grade III
  - Malignant by definition; tend to recur as a higher grade
- WHO Grade IV
  - Rapidly reproducing and most malignant; very aggressive




---

---

---

---

---

---

---

---

### 2007 Multiple Primary and Histology Rules




---

---

---

---

---

---

---

---

### Benign and Borderline/Malignant

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>• Benign                             <ul style="list-style-type: none"> <li>– ICD-O-3 behavior code of /0</li> </ul> </li> <li>• Borderline                             <ul style="list-style-type: none"> <li>– ICD-O-3 behavior code of /1</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>• Invasive                             <ul style="list-style-type: none"> <li>– ICD-O-3 behavior code of /3</li> </ul> </li> </ul> |
|--|---|

\*If both benign and malignant tumors, use the module for malignant brain tumors.




---

---

---

---

---

---

---

---

## Benign and Borderline CNS Tumors




---

---

---

---

---

---

---

---

## Paired Sites

- |                          |      |
|--------------------------|------|
| • Cerebral meninges, NOS | C700 |
| • Cerebrum               | C710 |
| • Frontal lobe           | C711 |
| • Temporal lobe          | C712 |
| • Parietal lobe          | C713 |
| • Occipital lobe         | C714 |
| • Olfactory nerve        | C722 |
| • Optic nerve            | C723 |
| • Acoustic nerve         | C724 |
| • Cranial nerve          | C725 |




---

---

---

---

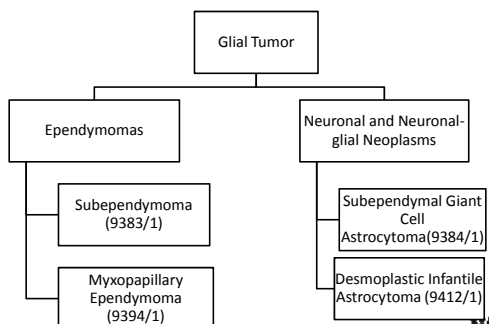
---

---

---

---

## Chart 1: Benign and Borderline Intracranial and CNS Tumors Chart




---

---

---

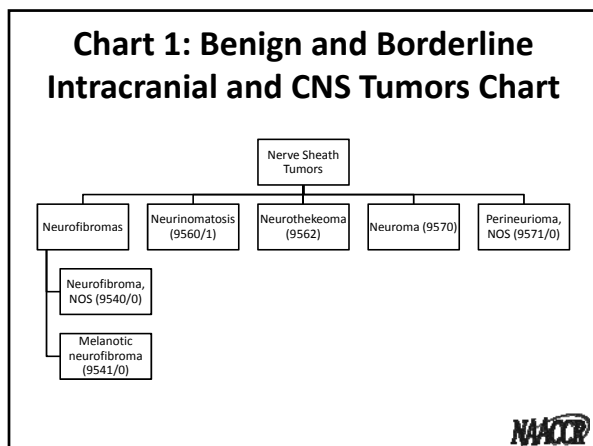
---

---

---

---

---




---

---

---

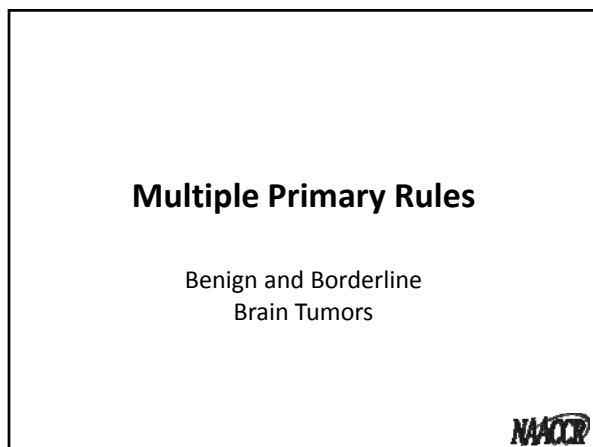
---

---

---

---

---




---

---

---

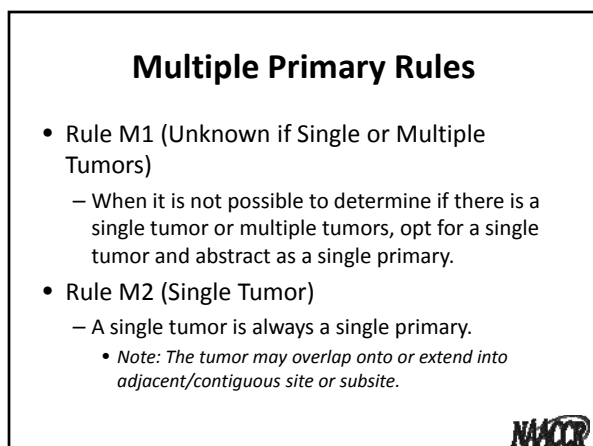
---

---

---

---

---




---

---

---

---

---

---

---

---

### Multiple Tumors

- Rule M3
  - An invasive brain tumor (/3) and either a benign brain tumor (/0) or an uncertain/borderline brain tumor (/1) are always multiple primaries.




---

---

---

---

---

---

---

---

### Multiple Tumors

- Rule M4
  - Tumors with ICD-O-3 topography codes that are different at the second (Cxxx) and/or third characters (Cxxx), or fourth (Cxxx) are multiple primaries.
- Rule M5
  - Tumors on both sides (left and right) of a paired site (Table 1) are multiple primaries.




---

---

---

---

---

---

---

---

### Multiple Tumors

- Rule M6
  - An atypical choroid plexus papilloma (9390/1) following a choroid plexus papilloma, NOS (9390/0) is a single primary.
    - *Note: Do not code progression of disease as multiple primaries.*
- Rule M7
  - A neurofibromatosis, NOS (9540/1) following a neurofibroma, NOS (9540/0) is a single primary.
    - *Note: Do not code progression of disease as multiple primaries.*




---

---

---

---

---

---

---

---

### Multiple Tumors

- Rule M8
  - Tumors with two or more histologic types on the same branch in Chart 1 are a single primary.
- Rule M9
  - Tumors with multiple histologic types on different branches in Chart 1 are multiple primaries.
- Rule M10
  - Tumors with two or more histologic types and at least one of the histologies is not listed in Chart 1 are multiple primaries.




---

---

---

---

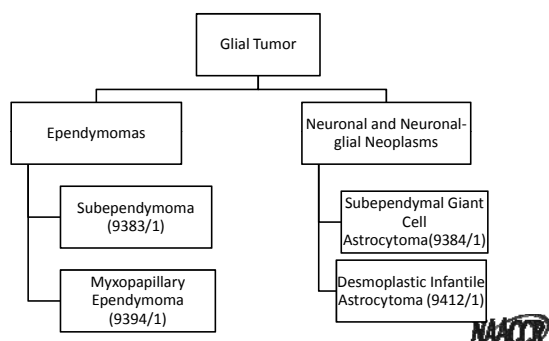
---

---

---

---

### Chart 1: Benign and Borderline Intracranial and CNS Tumors Chart




---

---

---

---

---

---

---

---

### Multiple Tumors

- Rule M11
  - Tumors with ICD-O-3 histology codes that are different at the first (xxxx), second (xxxx) or third (xxxx) number are multiple primaries.
    - Note: Use this rule when none of the histology codes are listed in Chart 1.




---

---

---

---

---

---

---

---

### Multiple Tumors

- Rule M12 Tumors that do not meet any of the above criteria are a single primary.
  - *Note: Timing is not used to determine multiple primaries for benign and borderline intracranial and CNS tumors.*
- Example:
  - Tumors in the same site and same laterality with histology codes not listed in Chart 1 that have the same first three numbers are a single primary.




---

---

---

---

---

---

---

---

### Non-Malignant CNS Histology Tumors




---

---

---

---

---

---

---

---

### Histology Rules Single Tumor

- Rule H1
  - Code the histology documented by the physician when there is no pathology/cytology specimen or the pathology/cytology report is not available.
    - *Documentation in the medical record that refers to pathologic or cytologic findings*
    - *Physician's reference to type of tumor (histology) in the medical record*
    - *PET, CT or MRI scans*




---

---

---

---

---

---

---

---

### Histology Rules Single Tumor

- Rule H2
  - Code the histology when only one histologic type is identified.
- Rule H3
  - When there are multiple histologies and all histologies are in the same branch on Chart 1, code the more specific histology.
- Rule H4
  - Code the histology with the numerically higher ICD-O-3 code.




---

---

---

---

---

---

---

---

### Histology Rules Multiple Tumors

- Rule H5
  - Code the histology documented by the physician when there is no pathology/cytology specimen or the pathology/cytology report is not available.




---

---

---

---

---

---

---

---

### Histology Rules

- Rule H6
  - Code multiple meningiomas of uncertain behavior to 9530/1.
- Rule H7
  - Code the histology when only one histologic type is identified.
- Rule H8
  - Code the histology from the original diagnosis.  
*Note: Do not change the behavior code when a later tumor(s) shows progression of disease.*




---

---

---

---

---

---

---

---



## Histology Rules

- Rule H9
  - When there are multiple histologies and all histologies are in the same branch on Chart 1, code the more specific histology.
- Rule H10
  - Code the histology with the numerically higher ICD-O-3 code.




---

---

---

---

---

---

---

---

## Malignant CNS Tumors




---

---

---

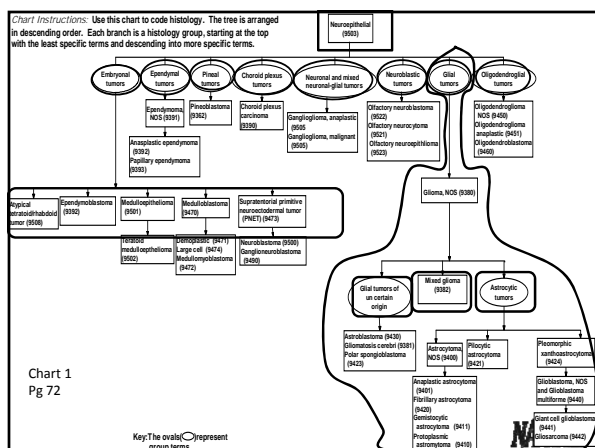
---

---

---

---

---




---

---

---

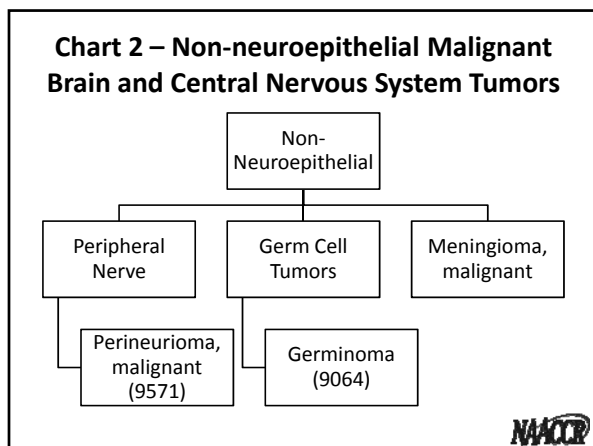
---

---

---

---

---




---

---

---

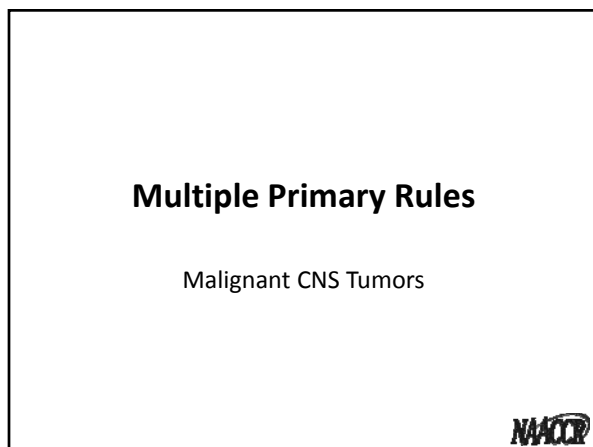
---

---

---

---

---




---

---

---

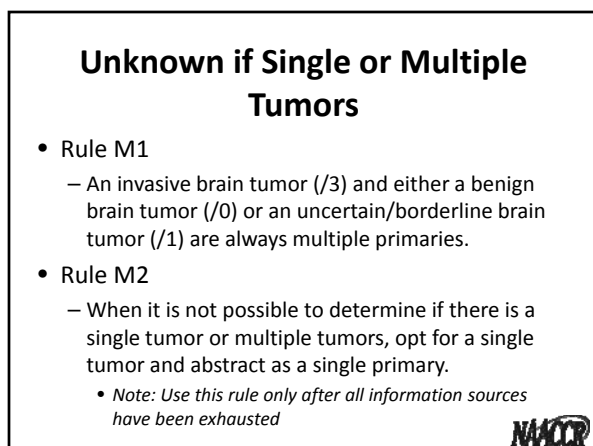
---

---

---

---

---




---

---

---

---

---

---

---

---

### Single Tumor

- Rule M3
  - A single tumor is always a single primary.
    - *Note: The tumor may overlap onto or extend into adjacent/contiguous site or subsite.*



---

---

---

---

---

---

---

---

### Multiple Tumors

- Rule M4
  - An invasive brain tumor (/3) and either a benign brain tumor (/0) or an uncertain/borderline brain tumor (/1) are always multiple primaries.
- Rule M5
  - Tumors in sites with ICD-O-3 topography codes with different second (Cxxx) and/or third characters (Cxxx) are multiple primaries.



---

---

---

---

---

---

---

---

### Multiple Tumors

- Rule M6
  - A glioblastoma or glioblastoma multiforme (9440) following a glial tumor is a single primary (See Chart 1).



---

---

---

---

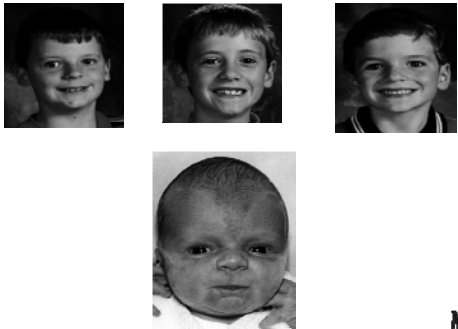
---


---

---

---

### Differentiation





---

---

---

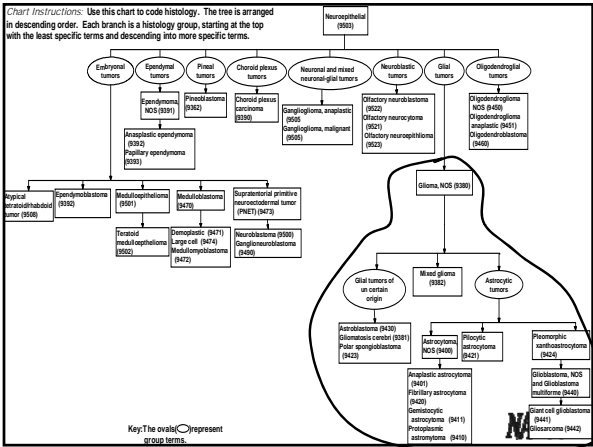
---

---

---

---

---



---

---

---

---

---


---

---

---

### Multiple Tumors

- Rule M7
  - Tumors with ICD-O-3 histology codes on the same branch in Chart 1 or Chart 2 are a single primary.
- Rule M8
  - Tumors with ICD-O-3 histology codes on different branches in Chart 1 or Chart 2 are multiple primaries.



---

---

---

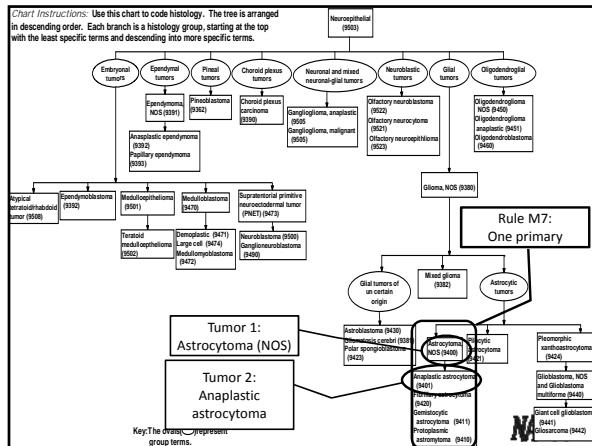
---

---

---

---

---



---

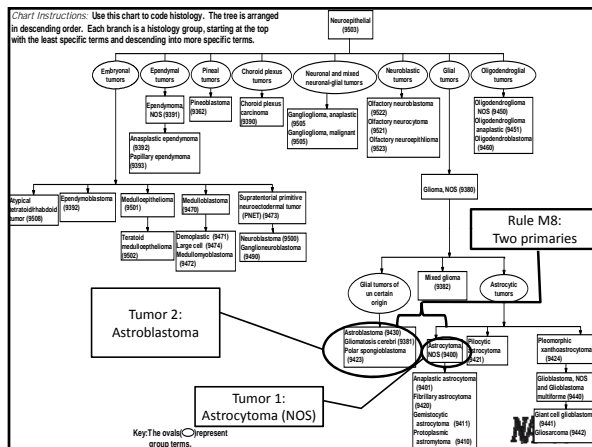
---

---

---

---

---



---

---

---

---

---

---

## Multiple Tumors

- Rule M9
  - Tumors with ICD-O-3 histology codes that are different at the first (xxxx), second (xxxx) or third (xxx) number are multiple primaries.
- Rule M10
  - Tumors that do not meet any of the above criteria are a single primary.

---

---

---

---

---

---

## Histology Rules

Malignant CNS Tumors



---

---

---

---

---

---

---

## Single Tumor

- Rule H1
  - Code the histology documented by the physician when there is no pathology/cytology specimen or the pathology/cytology report is not available.
- Rule H2
  - Code the histology from a metastatic site when there is no pathology/cytology specimen from the primary site.



---

---

---

---

---

---

---

## Single Tumor

- Rule H3
  - Code 9382/3 (mixed glioma) when at least two of the following cells and/or differentiation are present:
    - Astrocytic
    - Oligodendroglial
    - Ependymal



---

---

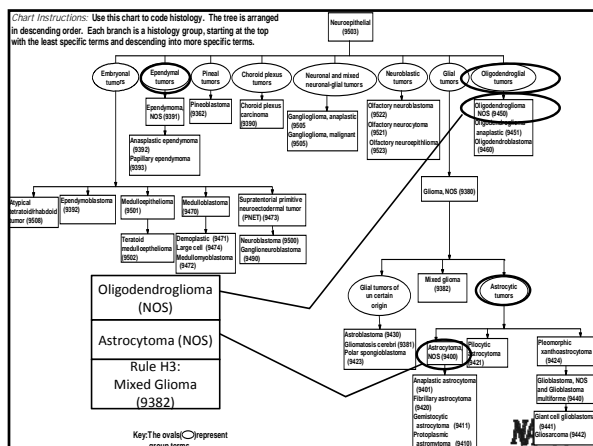
---

---

---

---

---




---

---

---

---

---

---

---

---

---

---

## Single Tumor

- Rule H4
  - Code the histology when only one histologic type is identified.
- Rule H5
  - Code the specific type when the diagnosis includes a non-specific term and a specific term or type on the same branch in Chart 1 or Chart 2.
- Rule H6
  - Code the histology with the numerically higher ICD-O-3 code.




---

---

---

---

---

---

---

---

---

---

## Multiple Tumors

- Rule H7
  - Code the histology documented by the physician when there is no pathology/cytology specimen or the pathology/cytology report is not available.
- Rule H8
  - Code the histology from a metastatic site when there is no pathology/cytology specimen from the primary site.




---

---

---

---

---

---

---

---

---

---

### Multiple Tumors

- Rule H9
  - Code the histology when only one histologic type is identified.
- Rule H10
  - Code the specific type when the diagnosis includes a non-specific term and a specific term or type on the same branch in Chart 1 or Chart 2.
- Rule H11
  - Code the histology with the numerically higher ICD-O-3 code.



---

---

---

---

---

---

---

### Questions?



---

---

---

---

---

---

---

### Collaborative Staging 01.04.00

- I. Brain and Cerebral Meninges
- II. Other Parts of Central Nervous System
- III. Pituitary Gland, Craniopharyngeal Duct, & Pineal Gland



---

---

---

---

---

---

---



### CS Tumor Size

Code	Description
000	No mass found
001-988	Exact size in millimeters (mm)
989	989 mm or larger
990	Microscopic focus or foci only; no size of focus given
991	Less than 1 cm
992	Less than 2 cm OR greater than 1 cm OR between 1 cm and 2 cm
993	Less than 3 cm OR greater than 2 cm OR between 2 cm and 3 cm
994	Less than 4 cm OR greater than 3 cm OR between 3 cm and 4 cm
995	Less than 5 cm OR greater than 4 cm OR between 4 cm and 5 cm
	<b>SITE-SPECIFIC CODES WHERE NEEDED</b>
999	Unknown




---

---

---

---

---

---

---

---

### CS Extension

#### Brain & Cerebral Meninges

- Note
  - C71.0 is **supratentorial**
    - **EXCEPTION:** hypothalamus, pallium, and thalamus are **infratentorial**
  - C71.1 – C71.5 are **supratentorial**
  - C71.6 – C71.7 are **infratentorial**
  - Corpus callosum and tapetum are coded to C71.8 and are **supratentorial**
  - Anterior cranial fossa, middle cranial fossa, and suprasellar are coded to C71.9 and are **supratentorial**
  - Posterior cranial fossa is coded to C71.9 and **infratentorial**




---

---

---

---

---

---

---

---

### CS Extension

#### Brain & Cerebral Meninges

- Code 05
  - Benign or borderline tumor
    - Assign code 05 for nonmalignant tumor even if the tumor is very large
    - Assign code 05 for nonmalignant tumor even if it overlaps site boundaries




---

---

---

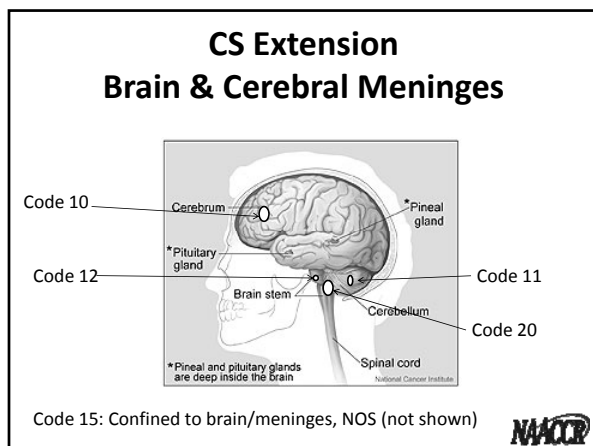
---

---

---

---

---




---

---

---

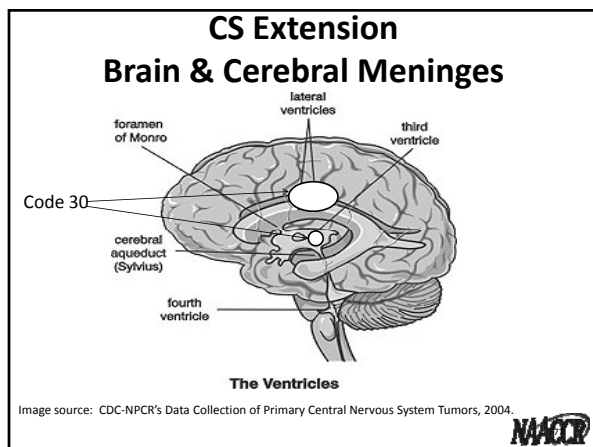
---

---

---

---

---




---

---

---

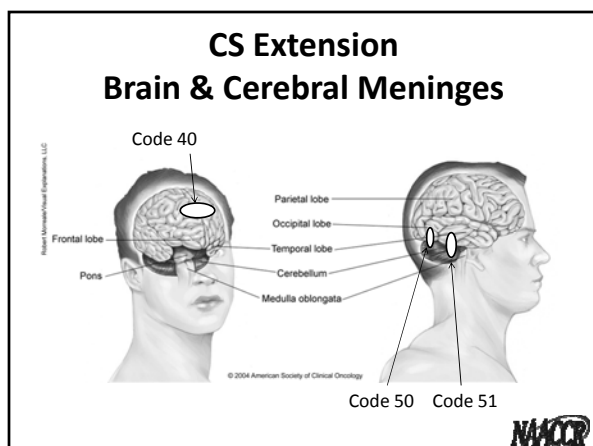
---

---

---

---

---




---

---

---

---

---


---

---

---

**CS Extension**  
**Brain & Cerebral Meninges**

- Code 60
  - Tumor invades: bone; major blood vessels; meninges; nerves, NOS (cranial nerves); spinal cord/canal
- Code 70
  - Circulating cells in cerebral spinal fluid; nasal cavity; nasopharynx; posterior pharynx; outside CNS
- Code 80
  - Further contiguous extension
- Code 95
  - No evidence of primary tumor
- Code 99
  - Unknown



---

---

---

---

---


---

---

---

**CS Extension**  
**Other Parts of CNS**

- Code 05
  - Benign or borderline
- Code 10
  - Tumor confined to tissue or site of origin
- Code 30
  - Localized, NOS
- Code 40
  - Meningeal tumor infiltrates nerve
  - Nerve tumor infiltrates meninges



---

---

---

---

---


---

---

---

**CS Extension**  
**Other Parts of CNS**

- Code 50
  - Adjacent connective/soft tissue
  - Adjacent muscle
- Code 60
  - Brain, for cranial nerve tumors
  - Major blood vessel(s)
  - Sphenoid and frontal sinuses (skull)
- Code 70
  - Brain except for cranial nerve tumors
  - Bone, other than skull
  - Eye



---

---

---

---

---

---

---

---

### CS Extension Other Parts of CNS

- Code 80
  - Further contiguous extension
- Code 95
  - No evidence of primary tumor
- Code 99
  - Unknown




---

---

---

---

---

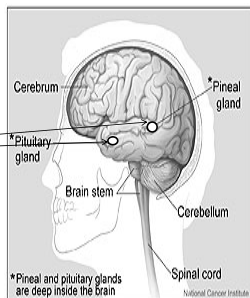
---

---

---

### CS Extension Intracranial Endocrine Glands

- Code 00
  - In situ
- Code 05
  - Benign or borderline
- Code 10
  - Invasive carcinoma confined to gland of origin




---

---

---

---

---

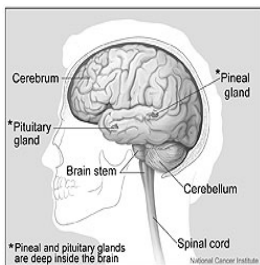
---

---

---

### CS Extension Intracranial Endocrine Glands

- Code 30
  - Localized, NOS
- Code 40
  - Adjacent connective tissue




---

---

---

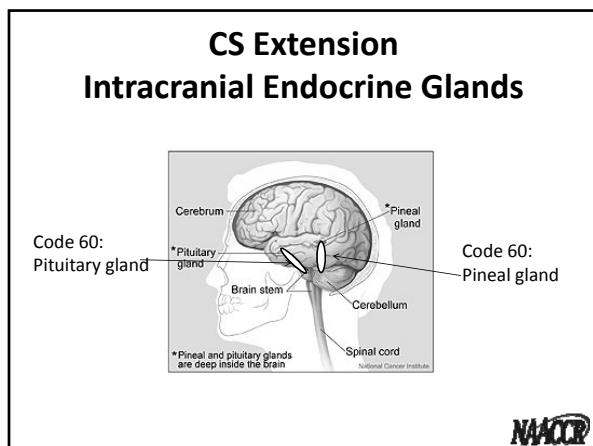
---

---

---

---

---




---

---

---

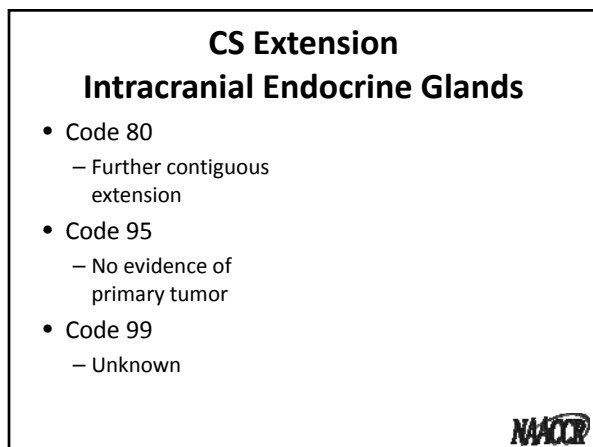
---

---

---

---

---




---

---

---

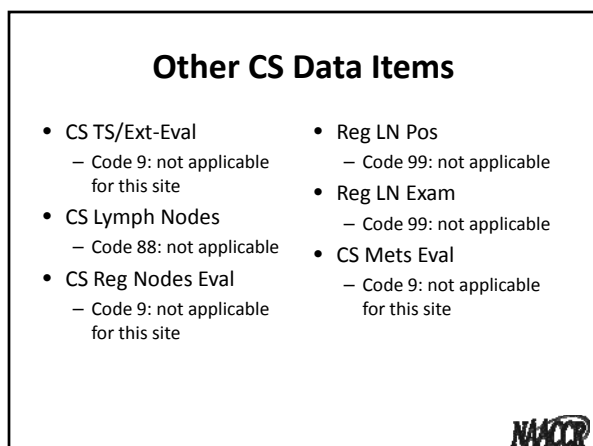
---

---

---

---

---




---

---

---

---

---


---

---

---

**CS Mets at DX**  
**Brain & Cerebral Meninges**

- Code 00
  - None
- Code 10
  - Distant metastases
- Code 85
  - “Drop” metastases
- Code 99
  - Unknown




---

---

---

---

---


---

---

---

**CS Mets at DX**  
**Other Parts of CNS; Intracranial Endocrine Glands**

- Code 00
  - None
- Code 10
  - Distant lymph nodes
- Code 40
  - Distant metastases except distant lymph nodes
- Code 50
  - Distant lymph nodes plus other distant metastases
- Code 99
  - Unknown




---

---

---

---

---


---

---

---

**CS SSF1**  
**WHO Grade Classification**

Code	Description
010	Grade I
020	Grade II
030	Grade III
040	Grade IV
999	Clinically diagnosed/grade unknown Not documented in record Grade unknown, NOS




---

---

---

---

---

---

---

---

### CS SSF1

#### WHO Grade Classification

- Notes
  - Code WHO grade as documented in medical record
  - Other parts of CNS schema:
    - Code WHO grade as documented in medical record for sites C70.1 and C70.9 only



---

---

---

---

---

---

---

#### Treatment



---

---

---

---

---

---

---

#### Surgical Vocabulary

- Craniectomy
  - Surgery performed on the skull where pieces of bone are removed to gain access to the brain, and the *bone pieces are not replaced*.
- Craniotomy
  - Surgery performed on the skull where a portion of bone is removed to gain access to the brain, and the *bone is put back in its place*.



---

---

---

---

---

---

---

### Surgical Vocabulary

- Craniotomies are often named for the bone being removed.
- Some common craniotomies include:
  - Fronto-temporal
  - Parietal
  - Temporal
  - Sub-occipital.



---

---

---

---

---

---

---

### Surgical Vocabulary

- Retro-sigmoid craniotomy
  - Through an incision behind the ear, a small craniotomy is placed that allows access to the cerebellum, and areas along the side of the cerebellum and brainstem.
- Supra-orbital craniotomy
  - Through an incision within the eyebrow, a small craniotomy is placed above the orbit to access tumors under or within the frontal lobes and around the pituitary gland.



---

---

---

---

---

---

---

### Surgery Codes

- 00
  - None; no surgery of primary site; autopsy ONLY
- 10
  - Tumor destruction, NOS
- 20
  - Local excision (biopsy) of lesion or mass



---

---

---

---

---

---

---



### Code 20

- Code 20 should be used for any procedures that attempt the following:
  - Total removal of the tumor
  - Partial removal of the tumor
  - Debulking



---

---

---

---

---

---

---

### Surgery Codes

- 40 Partial resection
  - Partial lobectomy
- 55 Gross total resection
  - Lobectomy
- 90 Surgery, NOS
- 99 Unknown



---

---

---

---

---

---

---

### Radiation

- External beam radiation
  - Codes 20 – 30: Orthovoltage, cobalt, photons, electrons, or neutrons
  - Code 31: Intensity modulated radiation therapy
    - IMRT
  - Code 32: Conformal radiation
    - 3D conformal radiation



---

---

---

---

---

---

---

### Treatment Modality

- Radiosurgery
  - Code 40: Particle or proton beam
  - Code 41: Stereotactic radiosurgery NOS
  - Code 42: Linac radiosurgery
    - Cyberknife
  - Code 43: Gamma knife




---

---

---

---

---

---

---

---

### Treatment Modality

- Brachytherapy
  - Code 50                      Brachytherapy, NOS
  - Codes 51 – 52            Intracavitary brachytherapy
  - Codes 53 – 54            Interstitial brachytherapy
  - Code 55                    Radium




---

---

---

---

---

---

---

---

### Systemic Treatment

- Be sure to check any drugs that are being given in SEER Rx.
  - <http://seer.cancer.gov/tools/seerrx/>




---

---

---

---

---

---

---

---

## Chemotherapy

- Chemotherapy
  - Carmustine (BCNU)
    - Intravenous
    - Gliadel® wafer (Intra-operative)
  - Temozolomide




---

---

---

---

---

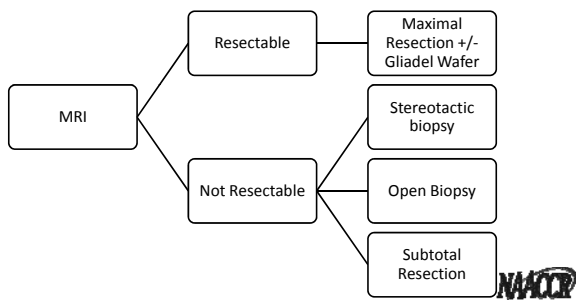
---

---

---

## NCCN Guidelines

- Glioblastoma Multiforme




---

---

---

---

---

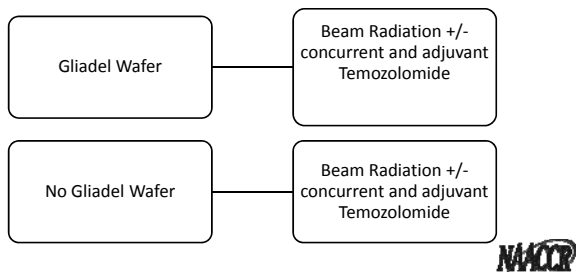
---

---

---

## NCCN Guidelines

- Glioblastoma Multiforme




---

---

---

---

---

---

---

---

## Questions?



## Thank you!

- American Society of Clinical Oncology (ASCO)  
– <http://www.cancer.net/portal/site/patient>

**Permission is granted to:**

Reuse all images in the Cancer.Net gallery for use in a live webinar by J. Hofferkamp and S. Vann to be used for training cancer registrars. The images may be viewed, not downloaded and may not be physically distributed. All future uses for similar purposes are granted with an appropriate citation, link to the images and the following note: "Reprinted with permission. © 2008 American Society of Clinical Oncology. All rights reserved"



## Thank you for participating in today's webinar!

- The next webinar is scheduled for 5/7/09: Using the National Death Index in Registry Mortality Ascertainment Activities
- Forward questions from today's webinar to us. Per request of CoC, we will forward questions to them.
- Contact us at
  - Shannon Vann – [svann@naaccr.org](mailto:svann@naaccr.org); 217-698-0800 X9
  - Jim Hofferkamp – [jhofferkamp@naaccr.org](mailto:jhofferkamp@naaccr.org); 217-698-0800 X5

