Q&A

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

Reminder:

• If you have participants watching this webinar at your site, please collect their names and emails.
• We will be distributing a Q&A document in about one week. This document will fully answer questions asked during the webinar and will contain any corrections that we may discover after the webinar.

FABULOUS PRIZES
AGENDA
- Casefinding
- MP/H
- Quiz
- Anatomy
- Stage
- Treatment
- Quiz
- Case Scenarios

CASEFINDING
- Disease Index
- Pathology Reports
- Radiation Completion Summaries
- Cytology Reports

CASE ELIGIBILITY
- Includes malignant & non-malignant tumors diagnosed on or after 1/1/2004 of the following sites:
  - Meninges (C70._)
  - Brain (C71._)
  - Spinal cord, cranial nerves, & other CNS (C72._)
  - Pituitary gland (C75.1)
  - Craniohypophyseal duct (C75.2)
  - Pineal gland (C75.3)
QUESTION FOR JIM

What is one exception to these case eligibility rules?

TODAY WE WILL BE TOUCHING ON:

• Gliomas
• [PNET] Primitive Neuroectodermal tumors
• Meningiomas
• Primary Spinal Cord Tumors

TIP OF THE DAY!

Don't confuse these two acronyms….

Ppnet's are not the same as PNET's!

Ppnet's or (Peripheral Primitive Neuroectodermal Tumor’s): usually occur in the soft tissues of the chest, pelvis, and retroperitoneum and are rarely intracranial.
REPORTABLE TERMS
FORDS Case Eligibility & Overview of Coding Principles
Section 1 page 3

Ambiguous Terms List Constituting a Reportable Diagnosis
- Tumor (Beginning with 2004 diagnosis and only for Sites C70.0-C72.9, C75.1-C75.3)
- Neoplasm Tumor (Beginning with 2004 diagnosis and only for Sites C70.0-C72.9, C75.1-C75.3)

EQUIVALENT OR EQUAL TERMS LIST
Only Equivalent when determining the number of primaries or histology NOT REPORTABILITY:
- Tumor
- Mass
- Lesion
- Neoplasm

QUESTION FOR JIM
Is "Lhermitte-Duclos disease" reportable?
BENIGN & BORDERLINE
• Benign & Borderline Intracranial & CNS neoplasms are reportable if and only if
  • The neoplasm meets 2 criteria
    1. The Histology is reportable AND
    2. The Primary Site is reportable

CRANIAL TUMORS
• Report neoplasms described as intradural or intracranial
• Do not report cranial neoplasms described as extradural

QUESTION FOR JIM
Pop quiz
What site should a Tuberculum sellae meningioma be coded to?
MULTIPLE PRIMARY & HISTOLOGY RULES

- Based on the behavior of the tumor

- Malignant Meninges, Brain, Spinal Cord, Cranial Nerves, Pituitary gland, Craniopharyngeal duct and Pineal gland

- Benign and Borderline Intracranial and CNS Tumors

MULTIPLE PRIMARY & HISTOLOGY RULES

**Malignant**

Meninges, Brain, Spinal Cord, Cranial Nerves, Pituitary gland, Craniopharyngeal duct and Pineal gland

MULTIPLE TUMORS

Multiple tumors may be a single primary or multiple primaries.

<table>
<thead>
<tr>
<th>M4</th>
<th>Is there an invasive tumor (1) and either a benign (4) or an uncertain/borderline tumor (0)?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>YES</strong> MULTIPLE Primaries</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>M6</th>
<th>Are there tumors in sites with ICD-O-3 topography codes that are different at the second (Cxx) and/or third character (Cyyyy)?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>YES</strong> MULTIPLE Primaries</td>
</tr>
<tr>
<td></td>
<td><strong>NO</strong></td>
</tr>
</tbody>
</table>
Does Timing &/or laterality play a role in determining multiple primaries for malignant intracranial and CNS tumors

MULTIPLE PRIMARY & HISTOLOGY RULES

Benign and Borderline Intracranial and CNS Tumors

Table 1 - Paired Sites

<table>
<thead>
<tr>
<th>Column 1: Code</th>
<th>Column 2: Paired Sites</th>
</tr>
</thead>
<tbody>
<tr>
<td>C106</td>
<td>C10</td>
</tr>
<tr>
<td>C110</td>
<td>C12</td>
</tr>
<tr>
<td>C112</td>
<td>C132</td>
</tr>
<tr>
<td>C123</td>
<td>C124</td>
</tr>
<tr>
<td>C134</td>
<td>Optic nerve</td>
</tr>
<tr>
<td></td>
<td>Acoustic nerve</td>
</tr>
<tr>
<td></td>
<td>Cranial nerve</td>
</tr>
</tbody>
</table>

Note: See Table 10 in slide 4 for Paired Sites.
**QUESTION FOR JIM**

- When a patient has two Benign and Borderline Intracranial and CNS Tumors that have two or more histologic types on the same branch of Chart 1, is the case a single or multiple primary?
SEQUENCING

- Records sequence of malignant and nonmalignant neoplasms over patient's lifetime.
  - 00-59 and 99 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

AND NOW A BRIEF PAUSE FOR...
AN EPI MOMENT

(insert the Bonanza theme song here)

REPORTING: BRAIN & CNS TUMORS

- First primary, clusters
- Malignant and non-malignant (2004+)
- Non-malignant causes disruption of normal function similar to malignant
- Location impacts survival
- Benign Brain Tumors Cancer Registries Amendment Act, Public Law 107-260
  - 2002
- CBTRUS
**Epidemiology: Brain & CNS Tumors**
- Non-malignant rates higher (11.0 per 100,000 versus 6.6)
- Rates higher in women (13.8 per 100,000 versus 7.9)
- Malignant rates higher in developed countries
  - Rates higher in men (7.8 per 100,000 versus 5.6)
  - Survival varies significantly by age, behavior, & histology
    - Pediatric survival a success story
      - 0-19 73% 5-year survival; 20-44 59%; 45-54 31%; 55-64 18%; 65-74 11%; 75+ 6% (malignant)
    - Non-malignant survival higher in US than Europe
      - 96% US vs 77% Europe (adults)
    - Glioblastoma lowest survival rates
      - 4-17% 5-year survival dependent upon age
- Non-malignant survival higher in US than Europe
  - 96% US vs 69-77% Europe (adults)

**Incidence, Mortality, Trends**
- Analyzed as Brain & CNS; malignant
  - Incidence 14th men, 2008-2012
    - 7.8 per 100,000
    - ↓ 1.4% annually
  - Incidence 15th women, 2008-2012
    - 5.6 per 100,000
    - ↓ 1.8% annually
  - Mortality 11th men, 2008-2012
    - 5.3 per 100,000
    - Stable
  - Mortality 10th women, 2008-2012
    - 3.5 per 100,000
    - Stable

**Etiology/Risk Factors**
- Established risks
  - Radiation exposure (Radiation therapy)
  - Genetic disorders: Neurofibromatosis type 1 & 2, tuberous sclerosis, Von Hippel-Lindau disease, Li-Fraumeni
- Suspected risks
  - Cell phone use (radiofrequency rays not ionizing radiation)
  - Occupation exposures (vinyl chloride, petroleum products)
- Popular myths
  - Sugar substitutes (aspartame)
  - EMF
  - Some viruses
CINA RESEARCH

- CBTRUS
- Descriptive epidemiology
- Documented under reporting
- Annual Report to the Nation 2010
- Pediatric
- Appalachian versus non-Appalachian
- Potential genetic component
- Pilot project to develop hypotheses about why risk in Appalachian children is higher

VARIABILITY OF BENIGN/BORDERLINE BRAIN TUMORS, 2009-2012; RANGE 5.1, 24.2

UNDERREPORTING

- Benign/Borderline brain tumors historically have high degree of inter-registry variability in rates
- Does the variability have public health importance or is it spurious?
- Prior investigation indicates benign/borderline brain tumors variability driven by case completeness differences
PILOT PROJECT OBJECTIVES

- Prior work indicates specific patient & tumor characteristics associated with underreporting for brain
- Non-microscopically confirmed, non-surgery
- Younger age, Specific subsites
- Assess benign/borderline brain tumors variability by registry
- Survey high and low incidence registries
- Mutable differences in case ascertainment
- Training, operations
- Assess correlations with rates
  - Registry capacity, reporting facilities capacity, demographics, geography

SURVEY

- Questions
  - 15 general
  - 18 brain/cns specific
  - Qualitative & quantitative
- Incidence ranked by US registry
  - Ranked sum
    - Incidence of benign/borderline brain tumors & % benign/borderline of total brain tumors
- Benign/Borderline/Uncertain defined by CBTRUS
  - Site/histology specific
  - Updated 2012, expands SEER recode

SURVEY RESULTS: LOWER INCIDENCE

- < % state funding
- 100% Federal
- < % electronic sources
  - Paper abstracting
    - Physician office, pathology labs, stand-alone radiation facilities
- > % reporting from local hospitals
  - versus cancer centers
SURVEY RESULTS: HIGHER INCIDENCE

- History of collection prior to 2004
- History of brain specific ascertainment training
  - 1 low registry had recent training
- History of issue
- Active case finding
- Radiation facilities
- Site-specific
  - AIM software/synoptic software
  - Hospital discharge
- Documented fewer case deletions during editing over time
- Knowledge of issues; prior self assessment
- Open ended questions—lists of potential barriers

SURVEY RESULTS: QUALITATIVE

- Open ended questions: extensive lists of barriers
- High
  - Follow-back because brains are missed at facilities; delay-reporting (high)
  - Radiology only cases
  - Local hospitals; out of state centers
- Low
  - “We don’t get credit for those cases”
  - “We have a back-log. We try to abstract all cases but if I have a malignant brain I will abstract that first.”

CORRELATIONS RESULTS

- No correlation
  - # CoC hospitals; # NCI centers; # Pedi Oncology Groups
  - Population size, Geographic area, Poverty, Rural
- Weak correlation
  - % non-Hispanic black +
- Moderate correlation
  - SEER registries +; Population Density +
- Strong correlation
  - NAACCR Certification +
CONCLUSIONS

- Active case finding
  - Linkage, use electronic sources
    - Site specific, code specific, patient discharge
  - Non-Hospital sources
    - Radiology
  - Brain
    - Active radiology case finding/hospital discharge
    - Site specific
    - AIM software

PUBLIC HEALTH RELEVANCE

- Collection ever more complex for all registries irrespective of funding level
- Important to determine specific methods that result in high levels of case ascertainment
- To effectively inform public health practice and research, we need to define and promulgate effective methods that can be adopted by all registries

ANATOMY
CEREBRAL LOBES

- 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
- Cranial nerve, NOS C72.5

Assign laterality as '0' for all other CNS sites.

THE VENTRICULAR SYSTEM

CEREBELLUM

- Vermis: narrow median portion of cerebellum between the 2 lateral hemispheres
- Lateral lobes: 2 lateral hemispheres of cerebellum; cranial and caudal
- Cerebellopontine angle: angle between cerebellum and pons

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

INTRACRANIAL ENDOCRINE GLANDS AND RELATED STRUCTURES

- Endocrine glands
- Pituitary gland
- Pineal gland
- Craniopharyngeal duct

What histology code do we use for an adenoma of the pituitary gland?
8272/0

NEURONS AND GLIAL CELLS

NEURONS
- Neurons are the conducting cells of the nervous system.

GLIAL CELLS
- Do not conduct nerve impulses
- Support, nourish, and protect the neurons
- Glial cells are far more numerous than neurons and, unlike neurons, are capable of mitosis.

http://training.seer.cancer.gov/training/tumor/anatomy/neurons.html
CNS tumor histologies are based on WHO grade as well as standard nomenclature.

See page 596 of the AJCC Staging manual.

**WHO GRADE**

- CNS tumor histologies are based on WHO grade as well as standard nomenclature.
- See page 596 of the AJCC Staging manual.

**QUESTION FOR KENDRA**

How do we code histologic grade for a malignant brain tumor case where all we have is a WHO grade?

What about Anaplastic Astrocytoma, WHO grade III?

http://seer.cancer.gov/tools/grade/

What if the case is a benign tumor?

Where do we code the WHO Grade?
STAGING
AJCC
Summary Stage
Collaborative Stage

AJCC STAGE
• Chapter 56 page 593
  • No stage grouping
  • Excellent background information
  • Table 56.2 WHO classification of tumors of the central nervous system
  • Table 56.3 WHO grades of CNS Tumors
  • Brain Tumor Survival Data

AJCC STAGE
• Clinical Stage T88 N88 M88 Stage 88
• Pathologic Stage T88 N88 M88 Stage 88
• Clinical Staged by 8
• Pathologic Staged by 8
• TNM Edition 88
**AJCC STAGE-88**
- 88 is not an AJCC code
- Defined by FORDS as “Not Applicable”
- Defined by SEER as “Not applicable, no code assigned for this case in the current AJCC Staging Manual”
- The primary site and histology are not included in the chapter
- Leukemia, CNS, malignancy of the medulla of the adrenal gland
- Lymphoma
- T88 N88 M88 Stage I, II, III, IV

**SUMMARY STAGE 2000**
- 1 Local
  - Confined to: one hemisphere in one part of brain (intra/supratentorial), meninges, invading/encroaching on ventricular system
- 5 Regional
  - Crossing midline or tentorium invades bone, blood vessel, nerves, spinal cord
- 7 Distant
  - Circulating cells in CSF; extension to nasal cavity, nasopharynx, posterio pharynx; outside CNS
- 8 Benign
  - Codes 0, 2, 3, 4 are not applicable

**QUESTION FOR KENDRA**
What Summary Stage should we assign a benign tumor of the brain?
COLLABORATIVE STAGE DATA COLLECTION SYSTEM (CSV02.05)

CNS SCHEMAS

<table>
<thead>
<tr>
<th>Schema Name</th>
<th>Site Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brain</td>
<td>C70.0, C71.0-C71.9</td>
</tr>
<tr>
<td>CNSOther</td>
<td>C70.1, C70.9, C72.0-C72.5, C72.8-C72.9</td>
</tr>
<tr>
<td>IntracranialGland</td>
<td>C75.1, C75.2, C75.3</td>
</tr>
</tbody>
</table>

OTHER CS DATA ITEMS FOR CNS SCHEMAS

- CS Tumor Size/Ext Eval = 9
- CS Lymph Nodes = 988
- CS Lymph Nodes Eval = 9
- Regional Nodes Positive = 99
- Regional Nodes Examined = 99
- CS Mets Eval = 9
CS EXTENSION: BRAIN
- Code 050
  - Benign or borderline
- Codes 100-510
  - Confined to brain or cerebral meninges
    - Supratentorial tumor
    - Infratentorial tumor
    - Crosses midline
    - Crosses tentorium cerebelli
- Codes 600-800
  - Extension beyond brain or cerebral meninges
    - 710: Circulating cells in CSF

CS METS AT DX: BRAIN
- 00: No distant metastasis
- 20: Drop metastasis
- 30: Metastasis outside the CNS (extra-neural)
  - 50: 20 + 30
  - 99: Unknown

SSF1: WHO GRADE CLASSIFICATION
- Histologic grading classification for CNS tumors by the WHO
- Important prognostic factor for response to treatment & outcomes for CNS tumors
- Not the same as ICD-O-3 grade/differentiation
- Coded in the SSF1
SSF1: WHO GRADE CLASSIFICATION

- Code WHO grade as documented in health record
- If WHO grade is not documented see Table 56.3 in AJCC 7th Ed. (page 596) for specific histologies with assigned WHO grade
- Examples:
  - Anaplastic astrocytoma – grade III
  - Glioblastoma – grade IV
  - Meningioma – grade I

SSF1: WHO GRADE CLASSIFICATION

- Grade I: Code 010
  - Slow-growing, nonmalignant
- Grade II: Code 020
  - Slow-growing; can be nonmalignant or malignant
- Grade III: Code 030
  - Malignant
- Grade IV: Code 040
  - Very aggressive malignant tumors

SSF2: Ki-67/MIB-1 LABELING INDEX (LI)

- Ki-67 is a nuclear protein
- Labeling index (LI)
  - Record percentage of carcinoma cells in the tissue sample with positive IHC staining for Ki-67 protein
  - Staining may be done with MIB-1 monoclonal antibody
  - May correlate with patient’s clinical course
  - This can typically be found in the path report as the testing will be completed on tumor tissue.
SSF3: FUNCTIONAL NEUROLOGIC STATUS - KARNOFSKY PERFORMANCE SCALE (KPS)

- Record the KPS as documented by physician in patient’s record
- Do NOT infer KPS from information in record
- Used to compare treatment effectiveness and to assess prognosis

0: Dead
10: Moribund
20: Very sick
30: Severely disabled
40: Disabled
50: Requires considerable assistance
60: Requires occasional assistance
70: Cares for self but unable to carry on normal activity
80: Normal activity with effort
90: Normal activity with minor signs disease
100: Normal with no evidence of disease

SSF4: METHYLATION OF O6-METHYLGUANINE-METHYLTRANSFERASE (MGMT)

- MGMT is DNA repair enzyme
- Methylation shuts down DNA repair
- Increased methylation may allow specific drugs to be effective on CNS tumors

Typically listed on an addendum to a pathology report.

SSF5 & SSF6: LOSS OF HETEROZYGOsty (LOH)

- LOH
  - Chromosome damage that results in failure of tumor suppression
- SSF5
  - Record results of test for LOH in chromosome 1p
- SSF6
  - Record results of test for LOH in chromosome 19q

Typically listed on an addendum to a pathology report. Tests may be performed at same time and on single report.
SSF7: SURGICAL RESECTION
- Code extent of surgical resection as described in operative and pathology reports
- Correlated to outcome
- May be determinant in treatment

SSF8: UNIFOCAL VS. MULTIFOCAL TUMOR
- Record whether tumor is solitary or multifocal at time of diagnosis
- Multifocal tumors have a worse prognosis
- Affect treatment decisions

QUESTIONS?
TREATMENT

- Gliomas
- Anaplastic gliomas and glioblastoma multiforme
- Low grade infiltrative astrocytomas
- Oligodendroglioma
- Ependymomas
- (PNET)Primitive Neuroectodermal tumors
- Meningiomas
- Primary Spinal Cord Tumors

TREATMENT OF GLIOMAS

<table>
<thead>
<tr>
<th>Grade</th>
<th>Example Histology &amp; Behavior</th>
<th>Treatment 1</th>
<th>Treatment 2</th>
<th>Treatment 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Grade I, II</td>
<td>Astrocytomas &amp; Oligodendromas</td>
<td>Surgery: Total gross resection or Stereotactic biopsy</td>
<td>Radiation</td>
<td>Watchful Waiting</td>
</tr>
<tr>
<td>High Grade III, IV</td>
<td>Anaplastic Oligodendromas &amp; Glioblastoma</td>
<td>Surgery: Total gross resection or Subtotal resection; Stereotactic or biopsy</td>
<td>Radiation Therapy: Standard adjuvant treatment after surgery</td>
<td>Chemotherapy: Temozolomide or PCV, Carmustine wafers (intraoperative)</td>
</tr>
</tbody>
</table>

TREATMENT OF LOW GRADE GLIOMAS

Low grade defined as WHO grade I or II
Example: Astrocytomas & Oligodendromas

- Surgery
  - Total gross resection
  - Stereotactic biopsy
  - Open biopsy
  - Subtotal resection
  - Radiation
- Watchful Waiting
TREATMENT OF HIGH GRADE GLIOMAS

High grade defined as WHO grade III or IV
Example: Anaplastic Oligodendromas & Glioblastoma

- Surgery
  - Total gross resection of the tumor
  - Subtotal resection
  - Stereotactic or open biopsy
- Radiation Therapy
  - Standard adjuvant treatment after surgery
- Chemotherapy
  - Temozolomide
  - PCV
  - Carmustine wafers (intraoperative)

TREATMENT OF EPENDYMOMAS

<table>
<thead>
<tr>
<th>Grade</th>
<th>Example Histology &amp; Behavior</th>
<th>Treatment 1</th>
<th>Treatment 2</th>
<th>Treatment 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Subependymoma (9383/1)</td>
<td>Observation if asymptomatic and tumor is less than 30mm</td>
<td>Gross total resection</td>
<td>Subtotal resection with radiation if tumor is more than 30mm</td>
</tr>
<tr>
<td></td>
<td>Myxopapillary ependymoma (9394/1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>II</td>
<td>Ependymoma, nst (9391/3)</td>
<td>Observation if asymptomatic and tumor is less than 30mm</td>
<td>Gross total resection with adjuvant radiation</td>
<td>Subtotal resection with adjuvant radiation</td>
</tr>
<tr>
<td>III</td>
<td>Anaplastic ependymoma (9392/3)</td>
<td>Gross total resection followed by radiation</td>
<td>If not a surgical candidate, radiation alone.</td>
<td></td>
</tr>
</tbody>
</table>

TREATMENT OF PRIMITIVE NEUROECTODERMAL TUMORS (PNET)

Most Common Type: Medulloblastoma (Infratentorial) or Supratentorial, WHO Grade IV

- Surgery
  - Gross total resection whenever possible
- Adjuvant radiation
- Adjuvant systemic treatment

REMEMBER THE TIP OF THE DAY!
### Treatment of Meningiomas

<table>
<thead>
<tr>
<th>Grade</th>
<th>Treatment #1</th>
<th>Treatment 2</th>
<th>Treatment #3</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Observation:</td>
<td>Surgery:</td>
<td>Radiation:</td>
</tr>
<tr>
<td></td>
<td>Asymptomatic:</td>
<td>Symptomatic:</td>
<td>Tumor &gt;30mm:</td>
</tr>
<tr>
<td></td>
<td>Tumor &lt;30mm</td>
<td>Surgical candidate:</td>
<td>Non-surgical candidate:</td>
</tr>
<tr>
<td>II</td>
<td>Observation:</td>
<td>Surgery:</td>
<td>Radiation:</td>
</tr>
<tr>
<td></td>
<td>Asymptomatic:</td>
<td>Symptomatic:</td>
<td>Tumor &gt;30mm:</td>
</tr>
<tr>
<td></td>
<td>Tumor &lt;30mm</td>
<td>Surgical candidate:</td>
<td>Non-surgical candidate:</td>
</tr>
<tr>
<td>III</td>
<td>Surgery:</td>
<td>Adjuvant radiation:</td>
<td></td>
</tr>
</tbody>
</table>

### Treatment of Primary Spinal Cord Tumors

<table>
<thead>
<tr>
<th>Grade</th>
<th>Examples</th>
<th>Treatment #1</th>
<th>Treatment 2</th>
<th>Treatment #3</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>meningiomas, peripheral nerve sheath tumors</td>
<td>Observation if asymptomatic</td>
<td>Surgery if symptomatic</td>
<td>Radiation if symptoms persist after treatment</td>
</tr>
<tr>
<td>I</td>
<td>astrocytomas, ependymomas</td>
<td>Gross total resection</td>
<td></td>
<td></td>
</tr>
<tr>
<td>II and higher</td>
<td>Partial resection</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Surgery Codes

<table>
<thead>
<tr>
<th>Code</th>
<th>Procedure</th>
<th>Specifics</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>Local excision of tumor, lesion or mass; excisional biopsy</td>
<td>Used when the surgeon describes the procedure “biopsy,” or “excisional biopsy,” or when there are no details about the procedure, unknown whether total or partial tumor resected.</td>
</tr>
<tr>
<td>21</td>
<td>Subtotal resection of tumor, lesion or mass in brain</td>
<td>Near-total, partial subtotal, debulking, open biopsy (if residual tissue).</td>
</tr>
<tr>
<td>22</td>
<td>Resection of tumor of spinal cord nerves</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>Radical, total, gross resection of tumor, lesion or mass in brain</td>
<td>The resection of the brain tissue surrounding the tumor is limited to ensure clean margins. This code can be used with all cases regardless of diagnosis year.</td>
</tr>
<tr>
<td>40</td>
<td>Partial resection of lobe of brain, when the surgery cannot be coded as 20-30</td>
<td>Less than lobectomy, but more than it would be necessary to ensure clean margins.</td>
</tr>
<tr>
<td>55</td>
<td>Gross total resection</td>
<td>Lobectomy</td>
</tr>
</tbody>
</table>
QUESTION FOR JIM

While abstracting a case you discover documentation stating that the patient underwent NeuroBlate Laser Interstitial Thermal Therapy to treat a glioblastoma of the frontal lobe of the brain. What surgery code you document in the surgery field?

RADIATION CODES

<table>
<thead>
<tr>
<th>Code</th>
<th>Specific Energy</th>
<th>Radiation Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-30</td>
<td>Orthovoltage</td>
<td>External beam radiation</td>
</tr>
<tr>
<td></td>
<td>Cobalt</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Photons</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Eelectrons</td>
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<tr>
<td></td>
<td>Neutrons</td>
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</tr>
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<td>31</td>
<td>IMRT</td>
<td>External beam radiation</td>
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<tr>
<td></td>
<td>Intensity modulated radiation therapy</td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>3D conformal radiation</td>
<td>External beam radiation</td>
</tr>
</tbody>
</table>

TREATMENT MODALITY

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

Hints and Tips

DON’T FORGET

• To document follow-up imaging following a surgical resection.
• You may need to review several due to the fact that post-surgical changes may obscure residual tumor identification.

QUESTIONS?

Quiz
Case Scenarios
COMING UP...
• Coding Pitfalls
  • 9/3/15

• New starts October 1st!
  • Collecting Cancer Data: Unusual Sites and Histologies

AND THE WINNERS ARE....

CE CERTIFICATE QUIZ/SURVEY
• Phrase
  • Glioma
• Link
  • http://www.surveygizmo.com/s3/2260744/CNS