Reportable Skin Cancers

2014/2015 FCDS Educational Webcast Series

November 20, 2014
Steven Peace, CTR

Anatomy and Physiology of the Integumentary System
WHO Classification of Neoplasms of the Skin
Signs & Symptoms, Prognostic Factors and Tumor Markers
CSV02.05 and SSFs, AJCC TNM 7th ed, SS2000
Plus...NCCN Treatment Guidelines

Sponsorship

The Florida Cancer Data System sincerely thanks the Florida Department of Health, the Centers for Disease Control and Prevention National Program of Cancer Registries, and the University of Miami Miller School of Medicine for their support.
Presentation Outline

- Anatomy and Physiology of the Integumentary System
- Skin or Not Skin - Genital and Non-Genital “Skin” Sites
- Skin Cancer Facts and Figures
- Risk Factors – Signs and Symptoms
- Types of Skin Cancers
- Overview of Melanoma of Skin
- Staging Criteria for Melanoma of Skin
- Overview of Merkel Cell Carcinoma of Skin
- Staging Criteria for Merkel Cell Carcinoma of Skin
- Overview of Other Reportable Skin Neoplasms
- Staging Criteria for Other Reportable Skin Neoplasms

THE INTEGUMENTARY SYSTEM

UNDERSTANDING THE SKIN YOU’RE IN

Source: http://www.healthandbeautyace.com
Physiology

- **Defensive Barrier**
  - protection from sun
  - protection from injury
  - protection from pathogens
  - protection from environment

- **Thermoregulation**
  - controls blood flow
  - regulates evaporation
  - controls release of sweat

- **Vitamin D Production**

- **Absorption and Secretion**

- **Maintain Body Fluids Balance**

- **Excrete Waste Products in Sweat**

- **Synthesis of Epidermal Lipids (fats and oils)**

- **Sensory Perception and Sensation**
  - Touch/Feel/Hot/Cold/Pressure/Vibration/Wind

---

Anatomy

Anatomy

- Eye
  - Eyelid
  - Cornea
  - Choroid
  - Canthus
  - Tear Duct
  - Conjunctiva
  - Ciliary Body
- Neoplasms of Eye Sites
  - Malignant Melanoma
  - Merkel Cell Carcinoma
  - Squamous Cell CA
  - Adenocarcinoma
  - Basal Cell CA
  - Lymphoma
  - Other


Skin or Not Skin?

- Eye - Skin or Not Skin?
  - Eyelid
  - Cornea
  - Choroid
  - Canthus
  - Tear Duct
  - Conjunctiva
  - Ciliary Body

Source: http://bascompalmereyeinstitute/images2014_1
Skin or Not Skin?

- **Genital Skin Sites**
  - C60.0 – Prepuce
  - C60.0 – Foreskin
  - C60.9 – Penis, NOS
  - C63.2 – Scrotum

- **Genital Skin Sites**
  - C51.0 – Labia Majora
  - C51.1 – Labia Minora
  - C51.2 – Clitoris
  - C51.8 – Vulva
  - C51.9 – Fourchette
  - C51.9 – Vulva, NOS
  - C52.9 – Vagina, NOS

Skin or Not Skin?

- Fingernail - subungual
- Palms of Hands - palmar
- Toenail - subungual
- Bottom of Feet - plantar

Known ICD Coding Limitations for Various Skin Sites

ICD-O Skin Sites
C44.0 - Lip
C44.1 - Eyelid
C44.2 - External Ear
C44.3 - Face
C44.4 - Scalp/Neck
C44.5 - Trunk
C44.6 - Upper Limb
C44.7 - Lower Limb
C44.8 - Overlapping
C44.9 - Skin, NOS

Laterality
0 - Not Paired
1 - Right
2 - Left
5 - Midline

M Rules - Melanoma Skin

MULTIPLE MELANOMAS

Multiple Melanomas may be a single primary or multiple primaries.

Decision

Notes:
1. Melanoma not described as metastases
2. Includes combinations of in situ and invasive

Example 1: Melanoma on the right side of the chest and a melanoma at midline on the chest are different laterality, multiple primaries.

Example 2: A melanoma on the right side of the chest and a melanoma on the left side of the chest are multiple primaries.
M Rules – Melanoma Skin

H Rules – Melanoma Skin
MPH Rules – Other Skin

1. Is the diagnosis Kaposi sarcoma [any site or sites]?
   - If yes, go to M2.
   - If no, go to M6.

2. Are there tumors in both the left and right sides of a paired site (Table T)?
   - If yes, go to M8.
   - If no, go to M10.

3. Are there tumors diagnosed more than one (1) year apart?
   - If yes, go to M10.
   - If no, go to M12.

M6

M8

M10

M12

Skin Cancer – Facts and Figures

Global irradiance worldwide

http://www.gpiliisolar.com
Skin Cancer - Facts and Figures

http://globalcancer2008

Skin Cancer - Facts and Figures

NEW SKIN CANCER CASES IN THE U.S. THIS YEAR

- SKIN CANCER (non-melanoma): 3,500,000
- PROSTATE CANCER: 238,590
- BREAST CANCER: 234,580
- LUNG CANCER: 228,190
- COLORECTAL CANCER: 142,820

http://cancer.org/acspc-039130
Skin Cancer – Facts and Figures

Figure 3. Age-Adjusted Melanoma Incidence Rates, Actual and Projected, by Sex, 1975–2020

Note: Data after vertical dotted line are projected rates.


Skin Cancer – Facts and Figures

http://www.cdc.gov/cancer/skin/statistics/state.htm
Skin Cancer Awareness

May is SKIN CANCER AWARENESS MONTH

SPOT SKIN CANCER

Protect yourself in five ways from skin cancer

MELANOMA MONDAY

Slip, Slop, Slap, Seek, Slide

DONT FRY DAY

Skin Cancer Prevention

Causes and Risk Factors

- Family History of Melanoma
- Personal History of Melanoma
- History of Excessive Sun Exposure
- Live in Hot Climate or High Altitude

- History of Excessive Sun Exposure
- Suntan Booth or Suntan Bed Use
- Immune System Disorder
- Outdoor Workers
- Atypical Moles
- Skin Type

http://cancer.org/acspc-039130
**Signs and Symptoms**

**The ABCDEs of Detecting Melanoma**

- **A**: Asymmetry
  - Normal: Symmetrical
  - Melanoma: Asymmetrical
- **B**: Border
  - Normal: Even
  - Melanoma: Uneven
- **C**: Color
  - Normal: One Color
  - Melanoma: Multiple Colors
- **D**: Diameter
  - Normal: Smaller Than 1/4 Inch
  - Melanoma: Larger Than 1/4 Inch
- **E**: Evolving
  - Normal: Ordinary Mole
  - Melanoma: Changing in Size, Shape, and Color

Source: National Cancer Institute

---

**HOT OFF THE PRESS !!!**


Gery P. Guy, Jr, PhD, MPH, Steven R. Miichlin, MS, Donatue U. Ekwueme, PhD, MS, K. Robin Yabroff, PhD, MBA

**Background**: Skin cancer, the most common cancer in the U.S., is a major public health problem. The incidence of nonmelanoma and melanoma skin cancer is increasing; however, little is known about the economic burden of these cancers.

**Objectives**: To examine trends in the treated prevalence and treatment costs of nonmelanoma and melanoma skin cancers.

**Methods**: This study used data on adults from the 2002–2006 Medical Expenditure Panel Survey full-year consolidated file and information from corresponding medical conditions and medical event files to estimate the treated prevalence and treatment cost of nonmelanoma skin cancer, melanoma skin cancer, and all other cancer sites. Analyses were conducted in January 2014.

**Results**: The age-adjusted number of adults treated for skin cancer increased from 2.4 million in 2002–2006 to 3.9 million in 2007–2011 (p < 0.001). During this period, the average annual total cost for skin cancer increased from $5.4 billion to $8.1 billion (p < 0.001), representing an average increase of 40.2% while the average annual total cost for all other cancers increased by 25.1%. During 2007–2011, nearly 5 million adults were treated for skin cancer annually, with average treatment costs of $1,611 per person.

**Conclusions**: These findings demonstrate that the health and economic burden of skin cancer treatment is substantial and increasing. Such findings highlight the importance of skin cancer prevention efforts, which may result in future savings in the healthcare system.

*Am J Prev Med 2014.08.036. Published by Elsevier Inc. on behalf of American Journal of Preventive Medicine*
HOT OFF THE PRESS !!!

U.S. SKIN CANCER CASES AND COSTS ON THE RISE FROM 2002-2011

Skin cancer is the most commonly diagnosed cancer in the United States, yet most cases are preventable.

Skin Cancer is a serious public health concern. Use sun protection strategies that work.

FOR MORE INFORMATION: HTTP://WWW.CDC.GOV/CANCER/SKIN/

HOT OFF THE PRESS !!!

THE SURGEON GENERAL'S CALL TO ACTION TO PREVENT SKIN CANCER

Focus on Prevention

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

Prevention

Amazingly Smart Ways To PREVENT SKIN CANCER

1. Apply Sunscreen
2. Seek Shade
3. Understand the Clouds
4. Use Protective Clothing
5. Avoid Tanning Beds
6. Protect Your Eyes
7. Spot Check Moles and Freckles
8. Wear a Hat
9. Notice Reflective Surfaces
10. Beware of Sun Sensitive Medications

Protect yourself in five ways from skin cancer

Source: http://sterlingmedicaladvice.com and sunsmart.com

Screening

Examine head and face, using one or both mirrors. Use blow-dryer to inspect scalp.

Check hands, including nails, in full-length mirror, examine elbows, arms and underarms.

Focus on neck, chest and torso. Women: check under breasts.

Use mirror to inspect back of neck, shoulders, upper arms, back, buttocks and legs.

Check legs and feet, including soles, heels, and nails. Use hand mirror to examine genitals.

Source: http://www.melanoma.org
SCREENING FOR SKIN CANCER
CLINICAL SUMMARY OF U.S. PREVENTIVE SERVICES TASK FORCE RECOMMENDATION

<table>
<thead>
<tr>
<th>Population</th>
<th>Adult General Population*</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;I&quot; Statement: Insufficient Evidence</td>
<td>No recommendation due to insufficient evidence</td>
</tr>
</tbody>
</table>

Risk Assessment

Skin cancer risks: family history of skin cancer, considerable history of sun exposure and sunburn

- Groups at increased risk for melanoma:
  - fair-skinned men and women older than 65 years
  - patients with atypical moles
  - patients with more than 50 moles

Screening Tests

There is insufficient evidence to assess the balance of benefits and harms of whole-body skin examination by a cancer or patient skin self-examination for the early detection of skin cancer.

Screening and self-screening

- Patients should remain alert for skin lesions with malignant features that are noted while performing physical examinations for other purposes. Features associated with increased risk for malignancy include asymmetry, border irregularity, color variation, diameter greater than 6 mm, evolution or persistence of a lesion, or any lesion that does not clear after treatment.

Source: U.S. Preventive Services Task Force Recommendation - 2014

9 STEPS TO OFFERING A PUBLIC SKIN CANCER SCREENING

1. Plan and promote screening.
2. Identify sites for screening.
3. Select screening tool and train staff.
4. Screen everyone by self-examination or by
5. Offer screening by a healthcare provider.
6. Train staff using the Spot Skin Cancer tool.
7. Provide education to patients and families.
8. Communicate screening results to all
9. Follow up on all individuals with skin cancer.

For detailed information about planning a skin cancer screening, download the Academy’s Plan an Event Toolkit at www.SpotSkinCancer.org

Source: http://www.aad.org
Digital Dermoscopy

The Latest Tools

The 3-in-1 spectroscopy probe (pictured above on left) is about the size of a pen. Supporting it are spectroscopic and computer equipment that fit on a portable cart. Each reading takes about 4.5 seconds. The graphic on right shows the probe’s assembly with optical elements such as filters, fibers and front lens. (Photo copyright University of Texas.)

Source: University of Texas and http://www.aimatmelanoma.org
...there’s an app for that...

Source: Mole Detective Phone App and Detective Mole Series

Neoplasms of Skin

- Benign
- Atypical
- Malignant
- Metastatic

- Congenital
- Acquired
  - UV Radiation
  - Viral Exposure(s)
  - Toxic Exposure(s)
  - Vitamin Deficiency
  - Mineral Deficiency

Source: http://stophavingaboringlife.com
Neoplasms of Skin

- **Keratinocytic Tumors**
  - Verruca
  - Acanthoma
  - Actinic Keratosis
  - Basal Cell Carcinoma
  - Squamous Cell Carcinoma

- **Melanocytic Tumors**
  - Lentigo Maligna
  - Malignant Melanoma
  - Congenital Melanocytic Nevus
  - Bleu Nevi
  - Spitz Nevus
  - Simple Lentigo
  - Dysplastic nevus

- **Neural Tumors**
  - Neuroma
  - Merkel Cell Carcinoma
  - PNET/Extraskeletal Ewing Sarcoma

- **Appendageal Tumors**
  - Eccrine Tumors
  - Apocrine Tumors
  - Follicular Tumors
  - Sebaceous Tumors

- **Soft Tissue Tumors**
  - Fibroma
  - Leimyosarcoma
  - Dermatofibrosarcoma Protuberans
  - Vascular Tumors (hemangioma, Kaposi sarcoma)

Source: [www.pathologyatlas](http://www.pathologyatlas) and [http://www.nih.gov/images](http://www.nih.gov/images)

Neoplasms of Skin

- Hematolymphoid Tumors
  - Mastocytosis
  - Parapsoriasis
  - Sezary Syndrome
  - Mycosis Fungoides
  - Hodgkin Lymphoma
  - Cutaneous T-cell Lymphoma
  - Cutaneous B-cell Lymphoma
  - Diffuse Large B-cell Lymphoma
  - Langerhans Cell Histiocytosis
  - CD30+ T-cell Lymphoproliferative Disorder
  - Subcutaneous Panniculitis-like T-cell Lymphoma
  - Hydroa Vacciniforme-like Cutaneous T-cell Lymphoma
  - Cutaneous Aggressive Epidermotropic CD8+ Cytotoxic T-cell Lymphoma


MELANOMA OF THE SKIN
Radial or Horizontal Growth Phase - The early pattern of growth of cutaneous malignant melanoma in which tumor cells spread laterally into the epidermis. During its horizontal phase of growth, a melanoma is normally flat.

Vertical Growth Phase - The late pattern of growth of cutaneous malignant melanoma in which tumor cells spread from the epidermis into the dermis. As the vertical phase develops, the melanoma becomes thickened and raised.

Precancerous Terminology

- Pigmented nevi
- Atypical melanosis
- Melanocytic dysplasia
- Benign juvenile melanoma
- Dysplastic melanocytic nevi
- Atypical melanocytic hyperplasia
- Atypical melanocytic proliferation
- Intraepithelial melanocytic neoplasia
- Intraepithelial melanocytic proliferation
- Circumscribed precancerous melanosis
- Intraepithelial atypical melanocytic hyperplasia

Unless Pathologist States “melanoma in-situ”
Types of Melanoma

- Lentigo maligna
- Melanoma in situ
- Nodular melanoma
- Amelanotic melanoma
- Lentigo maligna melanoma
- Superficial spreading melanoma
- Acral lentiginous melanoma
- Malignant melanoma, NOS
- Desmoplastic melanoma
- Spindle cell melanoma
- Epithelioid melanoma
- Melanoma in nevus

Prognostic Factors

Clark's Level (1-5)

Tumor thickness or Breslow Depth

Measure vertical growth (mm)

Source: http://www.med-ars.it/various/livelli4.jpg
Breslow Tumor Thickness

- **Breslow Depth or Tumor Thickness** measures in millimeters the distance between the upper layer of the epidermis and the deepest point of tumor penetration.

- The thinner the melanoma, the better the chance of cure.

- 1 mm equals 0.04 inch
- Replaced AJCC Depth
- Replaced Clarks Level (except for thin tumors)

<table>
<thead>
<tr>
<th>Breslow Depth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>Stage I</td>
</tr>
<tr>
<td>Stage II</td>
</tr>
<tr>
<td>Stage III</td>
</tr>
<tr>
<td>Stage IV</td>
</tr>
<tr>
<td>Stage V</td>
</tr>
</tbody>
</table>
Presence of primary tumor ulceration remains an adverse predictor of survival and is included along with mitotic rate as a primary criterion for defining melanomas.

Primary tumor mitotic rate or the # of mitoses/mm² is an important independent adverse predictor of survival.

Source: http://skincancer.org/publications

In–Transit and Satellite Lesions

Source: Steven Peace Archives
Although satellite nodules/in-transit metastasis are coded under CS lymph nodes DO NOT INCLUDE the number of satellite nodules as regional LN positive in this field or in the number of nodes examined/positive.

AJCC “there is no lower threshold of tumor burden defining the presence of regional node metastasis. Specifically, nodal tumor deposits <0.2 mm in diameter (previously used as the threshold for defining nodal metastasis) ARE INCLUDED in staging of nodal disease as a result of the consensus that smaller volumes of metastatic tumor are still clinically significant”.

NCCN Guidelines – Melanoma – Version 1.2015
**Workup**

**PRINCIPLES OF BIOPSY**
- Excisional biopsy (elliptical, punch, or saucervation) with 1-3 mm margins preferred. Avoid wider margins to permit accurate subsequent lymphatic mapping.
- The orientation of the biopsy should be planned with definitive wide excision in mind (e.g., parallel to lymphatics).
- Full-thickness incisional or punch biopsies of clinically thickest portion of lesion acceptable, in certain anatomic areas (e.g., palm/sole, digit, face, ear) or for very large lesions.
- Shave biopsy may compromise pathologic diagnosis and complete assessment of Breslow thickness, but is acceptable when the index of suspicion is low.

**PRINCIPLES OF PATHOLOGY**
- Biopsy to be read by a pathologist experienced in pigmented lesions.
- Minimal elements to be reported should include Breslow thickness (mm), histologic ulceration (present or absent), dermal mitotic rate per mm.
- Clark level (encouraged for lesions ≥ 1 mm, optional for lesions > 1 mm), and peripheral and deep margin status of biopsy (positive or negative).
- Microsatellite (present or absent)
- Encourage consistent reporting of these additional factors (compatible with American Academy of Dermatology recommendations):
  - Location
  - Regression
  - Tumor-infiltrating lymphocytes (TIL)
  - Vertical growth phase (VGP)
  - Angiotrophic invasion
  - Neurotropism
  - Hemaglobin subtype
  - Pure desmoplasia, if present, or specify pure vs. mixed desmoplastic with spindle cell and/or epithelioid cells.
  - Consider use of comparative genomic hybridization (CGH) or fluorescence in situ hybridization (FISH) for histologically equivocal lesions.

**Skin Melanoma SSFs**

- **FCDS Required** = White / **CoC Req’d = Yellow + White**
  - SSF1 – Measured Thickness (Depth)
  - SSF2 – Ulceration
  - SSF3 – Clinical Status of Lymph Nodes
  - SSF4 – LDH
  - SSF5 – CoC Only – LDH Value
  - SSF6 – CoC Only – LDH Upper Limit of Normal
  - SSF7 – Mitotic Count/Rate
**MelanomaSkin**

**CS Site-Specific Factor 1**

**Measured Thickness (Depth), Breslow Measurement**

- **Note 1**: Code MEASURED THICKNESS (Depth) of tumor (Breslow measurement), not size. Record actual measurement in hundreds of millimeters from the pathology report.
- **Note 2**: Code the greatest measured thickness from any procedure performed on the lesion, whether it is described as a biopsy or an excision. For example, if a punch biopsy with a thickness of 0.50 mm is followed by a re-excision with a thickness of residual tumor of 0.29 mm, code 050. Do not add measurements together from different procedures.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>000</td>
<td>No mass/tumor found</td>
</tr>
<tr>
<td>001-9/9</td>
<td>0.01 - 0.99 millimeters (Code exact measurement in HUNDREDTHS of millimeter)</td>
</tr>
<tr>
<td></td>
<td>Examples:</td>
</tr>
<tr>
<td></td>
<td>001 0.01 millimeter</td>
</tr>
<tr>
<td></td>
<td>002 0.02 millimeters</td>
</tr>
<tr>
<td></td>
<td>005 0.1 millimeters</td>
</tr>
<tr>
<td></td>
<td>014 0.74 millimeters</td>
</tr>
<tr>
<td></td>
<td>105 1.05 millimeters</td>
</tr>
<tr>
<td></td>
<td>597 9.75 millimeters</td>
</tr>
<tr>
<td>050</td>
<td>9.85 millimeters or larger</td>
</tr>
</tbody>
</table>

(Includes cases converted from codes 981-999 during conversion to VS200)

---

**Clark’s Level Staging** takes precedence over Measured Tumor Thickness Only for Thin Melanoma or Melanoma < 1mm

**ALL CASES** of Melanoma should have a Measured Thickness. Most will also include Clark’s Level.

http://i5.photobucket.com/albums/y168/ziwo/melanoma.jpg
## SSF2 - Ulceration

Collaborative Stage Data Set - Revised 05/20/2013 FINAL

### MelanomaSkin

CS Site-Specific Factor 2

**Ulcration**

- **Note 1:** Melanoma ulceration is the absence of an intact epidermis overlying the primary melanoma based upon histopathological examination.
- **Note 2:** If there is no documentation or no mention of ulceration in the pathology report, assume ulceration is not present and code 000.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>000</td>
<td>No ulceration present</td>
</tr>
<tr>
<td>001</td>
<td>OBSOLETE DATA CONVERTED TO 010</td>
</tr>
<tr>
<td></td>
<td>See code 010</td>
</tr>
<tr>
<td></td>
<td>Ulceration present</td>
</tr>
<tr>
<td>010</td>
<td>Ulceration present</td>
</tr>
<tr>
<td>988</td>
<td>Not applicable: information not collected for this case</td>
</tr>
<tr>
<td></td>
<td>(If this item is required by your standard setter, use of code 988 will result in an edit error.)</td>
</tr>
<tr>
<td>999</td>
<td>Unknown or no information</td>
</tr>
<tr>
<td></td>
<td>Not documented in patient record</td>
</tr>
</tbody>
</table>

[http://lombardi.georgetown.edu/patient/diseases/skin/melanoma/general.html](http://lombardi.georgetown.edu/patient/diseases/skin/melanoma/general.html)
### SSF3 - Clinical Status Lymph Nodes

#### MelanomaSkin

**CS Site-Specific Factor 3**

**Clinical Status of Lymph Node Mets**

- **Note 1:** AJCC defines microscopic lymph node metastases or “micrometastases” as those which are clinically inapparent by palpation and/or imaging but are pathologically positive. Micrometastases are diagnosed after sentinel or other node biopsy or elective lymphadenectomy. Micrometastases are clinically detectable nodal metastases confirmed by therapeutic lymphadenectomy or when nodal metastases exhibit gross extracapsular extension.
- **Note 2:** Use code 005 if nodes are described as clinically negative and are also negative on pathologic examination, or no pathologic examination is performed. Use code 010 if nodes are described as clinically negative but are positive on pathologic examination.
- **Note 3:** Use codes 043,050 if nodes are described as clinically positive.
- **Note 4:** Use code 100 to code information about clinically apparent in transit metastasis with or without occult nodal metastases. Information about clinically inapparent in transit metastasis (“occult” metastasis found only on pathologic examination) is not collected in this site-specific factor.
- **Note 5:** Use code 150 to code information about nodal involvement with in transit satellite metastases that are both clinically apparent.
- **Note 6:** Use code 990 if information about in transit metastasis with or without occult lymph node metastases is not available or is known to be positive before treatment.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>005</td>
<td>Clinically negative lymph node metastases AND No pathologic examination performed OR unknown if pathologic examination performed OR nodes negative on pathologic examination</td>
</tr>
<tr>
<td>010</td>
<td>Clinically occult (microscopic) lymph node metastases only (nodes negative on clinical examination, positive on pathologic examination)</td>
</tr>
<tr>
<td>020</td>
<td>OBSCURE DATA RETAINED VSD04 Clinically apparent (macroscopic) lymph node metastasis</td>
</tr>
<tr>
<td>043</td>
<td>Clinically apparent nodal metastases in 1 regional node</td>
</tr>
<tr>
<td>045</td>
<td>Clinically apparent nodal metastases in 2-3 regional nodes</td>
</tr>
<tr>
<td>046</td>
<td>Clinically apparent nodal metastases in 4+ regional nodes</td>
</tr>
<tr>
<td>050</td>
<td>Clinically apparent nodal metastases in regional node(s) but number not specified</td>
</tr>
<tr>
<td>100</td>
<td>Clinically apparent in transit metastasis WITH or WITHOUT occult lymph node metastases</td>
</tr>
</tbody>
</table>

---

### SSF4 - LDH

- **Range 1:** Less than 1.5 x upper limit of normal for lactate dehydrogenase (LDH) assay
  - Stated as elevated, NOS
- **Range 2:** 1.5 - 10 x upper limit of normal for LDH assay
- **Range 3:** More than 10 x upper limit of normal for LDH assay
- **988:** Not applicable: Information not collected for this case (if this item is required by your standard setter, use of code 988 will result in an edit error)
- **997:** Test ordered, results not in chart
- **996:** Test not done (test not ordered and not performed)
- **999:** Unknown or no information Not documented in patient record
Tumor Depth | 5 year survival
---|---
<1 mm | 95-100%
1 - 2 mm | 80-96%
2.1 - 4 mm | 60-75%
>4 mm | 50%

*Note 1. According to AJCC, p. 329. “Data from the AJCC Melanoma Staging Databases demonstrated a highly significant correlation between increased mitotic rate and declining survival rates, especially within thin melanoma subgroups.”

*Note 2. Mitotic rate/count is assessed on primary melanoma, based on the number of mitotic figures in one square millimeter (mm) surrounding either a “hot spot” with the most mitotic figures or a field with a representative mitotic rate.

*Note 3. Record the mitotic rate/count as documented in the pathology report. If there is more than one pathology report for the same melanoma at initial diagnosis and different mitotic counts are documented, code the highest mitotic count from any of the pathology reports. Use code 099 if there is no documentation or no mention of mitotic rate in any pathology report for the same melanoma.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>000</td>
<td>0 mitoses per square millimeter (mm) Mitosis absent No mitoses present</td>
</tr>
<tr>
<td>001</td>
<td>1 - 10 mitoses/square mm (Exact measurement in mitoses/square mm)</td>
</tr>
<tr>
<td>011</td>
<td>11 or more mitoses per square mm</td>
</tr>
<tr>
<td>088</td>
<td>Not applicable. Information not collected for this case. (If this information is required by your standard order, use code 088 may result in an edit error.)</td>
</tr>
</tbody>
</table>
AJCC TNM Stage

Summary Stage 2000
Treatment

NCCN Guidelines – Melanoma – Version 1.2015

67

NCCN Guidelines – Melanoma – Version 1.2015

68
AJCC TNM Stage

Source: www.cancer.gov

Treatment

NCCN Guidelines – Melanoma – Version 1.2015
Treatment

SYSTEMIC THERAPY OPTIONS FOR ADVANCED OR METASTATIC MELANOMA

Preferred Regimens
- Ipilimumab (category 1B,1)4,5
- Dabrafenib + trametinib (category 1B,6,7)
- Clinical trial

Other Active Regimens
- Pembrolizumab3,6,8
- Vemurafenib (category 1B,1)3,6,9
- Dabrafenib (category 1B,6,9)
- Trametinib (category 1B,6,11)
- Inotuzumab for C-KIT mutated tumors
- Dacarbazine
- Temozolomide
- Albumin-bound paclitaxel
- High-dose IL-2 (category 2B),12,13
- Cetuximab- or temozolomide-based combination chemotherapy (including cisplatin and vinblastine with or without IL-2, interferon alfa) (category 2B),13
- Paclitaxel (category 2B)
- Paclitaxel/carboplatin (category 2B)

Other Melanoma Staging

Collaborative Stage Version 2

32 Melanoma Schema
MERKEL CELL CARCINOMA

Merkel Cell Carcinoma

Image courtesy of Paul Nghiem, MD, PhD
Merkel Cell Carcinoma

Source: http://www.cancer.gov/cancertopics/pdq/treatment/merkelcell

Incidence by Age

Image courtesy of Paul Nghiem, MD, PhD
### Casefinding

<table>
<thead>
<tr>
<th>ICD-9 CM</th>
<th>CONDITION DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>209</td>
<td>Neuroendocrine tumors</td>
</tr>
<tr>
<td>209.3</td>
<td>Malignant poorly differentiated neuroendocrine tumors</td>
</tr>
<tr>
<td>209.31</td>
<td>MCC, face, ear, eyelid, including canthus, lip</td>
</tr>
<tr>
<td>209.32</td>
<td>MCC scalp/neck</td>
</tr>
<tr>
<td>209.33</td>
<td>MCC Upper limb</td>
</tr>
<tr>
<td>209.34</td>
<td>MCC lower limb</td>
</tr>
<tr>
<td>209.35</td>
<td>MCC trunk</td>
</tr>
<tr>
<td>209.36</td>
<td>MCC other unspecified sites, MCC genital, buttoc</td>
</tr>
<tr>
<td>209.37</td>
<td>MCC unknown primary site, Nodal presentation, Visceral metastatic</td>
</tr>
</tbody>
</table>

### Prognostic Factors

- Location
- Depth of invasion
- Measured thickness
- Lymph node involvement
- Age and general health (particularly immune status)
- Initial diagnosis or recurrence

Table 1
American Joint Committee on Cancer (AJCC)
TNM Staging Classification for Merkel Cell Carcinoma
(7th ed., 2010)

<table>
<thead>
<tr>
<th>Stage</th>
<th>T</th>
<th>N</th>
<th>M</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Tis</td>
<td>N0</td>
<td>M0</td>
</tr>
<tr>
<td>II</td>
<td>T1</td>
<td>pN0</td>
<td>M0</td>
</tr>
<tr>
<td>III</td>
<td>T1</td>
<td>cN0</td>
<td>M0</td>
</tr>
<tr>
<td>IV</td>
<td>T2/3</td>
<td>pN0</td>
<td>M0</td>
</tr>
<tr>
<td></td>
<td>T2/3</td>
<td>cN0</td>
<td>M0</td>
</tr>
<tr>
<td></td>
<td>T4</td>
<td>N0</td>
<td>M0</td>
</tr>
</tbody>
</table>

**ANATOMIC STAGE/PREDICTIVE GROUPS**

- Stages I and II are further divided into stages IA and IB, respectively, based on the presence or absence of regional lymph node metastases.
- Stage IIA is further divided into subcategories IIAa and IIAb, based on the presence or absence of nodal metastases.
- Stage IIIB is further divided into subcategories IIIBa and IIIBb, based on the presence or absence of nodal metastases.
- Stage IV is divided into subcategories IVa and IVb, based on the presence or absence of nodal metastases.

**TREATMENT**

- Stage I: Local excision
- Stage II: Local excision with nodal dissection
- Stage III: Neoadjuvant chemotherapy followed by surgery
- Stage IV: Chemotherapy and/or immunotherapy

**PROGNOSIS**

- Stage I: Excellent prognosis
- Stage II: Good prognosis
- Stage III: Intermediate prognosis
- Stage IV: Poor prognosis

**REFERENCES**

- National Comprehensive Cancer Network (NCCN) Guidelines for Merkel Cell Carcinoma
- European Organization for Research and Treatment of Cancer (EORTC) Guidelines

**ADDITIONAL RESOURCES**

- NCCN Guidelines for Merkel Cell Carcinoma
- American Society for Clinical Oncology (ASCO) Guidelines
- Society for Surgery of the Alimentary Tract (SSAT) Guidelines

**ACKNOWLEDGMENTS**

- The authors acknowledge the contributions of the NCCN Guidelines Panel members and the expert reviewers for their dedication to the development of these guidelines.
Merkel Cell CA SSFs

- **Required by FCDS**
  - SSF3 – Clinical Status of Lymph Nodes

- **Required by CoC**
  - SSF1 – Measured Thickness (Depth)
  - SSF16 – Size of Metastasis in Lymph Nodes
  - SSF17 – Extra capsular Extension of Regional LN
  - SSF18 – Isolated Tumor Cells (ITCs) in Lymph Nodes
  - SSF22 – Profound Immune Suppression

### SSF3 - Clinical Status Lymph Nodes

#### MerkelCellSkin

**CS Site-Specific Factor 3**

**Clinical Status of Lymph Node Mets**

- **Note 1**: AJCC defines microscopic lymph node metastases or "micrometastases" as those which are clinically inapparent by palpation and/or imaging but are pathologically positive. Micrometastases are diagnosed after sentinel or other node biopsy or elective lymphadenectomy. "Macrometastases" are clinically detectable nodal metastases confirmed by needle biopsy or therapeutic lymphadenectomy.
- **Note 2**: Use code 005 if nodes are described as clinically negative. Use code 010 if nodes are described as clinically negative but are positive on pathologic examination.
- **Note 3**: Use code 020 if nodes are described as clinically positive.
- **Note 4**: Use code 100 to code information about clinically apparent in transit metastasis with or without occult nodal metastasis. Information about clinically inapparent in transit metastasis ("occult" metastasis found only on pathologic examination) is noted.
- **Note 5**: Use code only if both lymph nodes are described as clinically negative.
- **Note 6**: Codes positive before 100.
- **Note 7**: Use code with metastasis.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>005</td>
<td>Clinically negative lymph node metastases AND No pathologic examination performed Or unknown if pathologic examination performed or nodes negative on pathologic examination</td>
</tr>
<tr>
<td>010</td>
<td>Clinically occult lymph node metastases only (micrometastases) Isolated tumor cells (ITCs) only</td>
</tr>
<tr>
<td>020</td>
<td>Clinically apparent lymph node metastases (micrometastases)</td>
</tr>
<tr>
<td>100</td>
<td>Clinically apparent in transit metastasis WITH or WITHOUT occult nodal metastasis</td>
</tr>
<tr>
<td>150</td>
<td>Clinically apparent in transit metastasis and clinically apparent nodal metastasis</td>
</tr>
</tbody>
</table>
Treatment

- Depends on Primary Tumor Location
- Biopsy Primary Tumor
  - Shave Biopsy
  - Punch Biopsy
  - Excisional Biopsy
- Wide excision with 1 to 2.5 cm margins
  - Depending on site
- Sentinel Lymph Node Biopsy
  - If nodes are not palpable
- Palpable Lymph Nodes – Bx/Resection
- Radiation Therapy
  - Primary site
  - Draining lymph node basin

PRINCIPLES OF CHEMOTHERAPY

- Local Disease:
  - Adjuvant chemotherapy not recommended unless clinical judgment dictates otherwise
- Regional Disease:
  - Adjuvant chemotherapy not routinely recommended as adequate trials to evaluate usefulness have not been done, but could be used on a case-by-case basis if clinical judgment dictates
  - Cisplatin ± etoposide
  - Carboplatin ± etoposide
- Disseminated Disease:
  - As clinical judgment indicates:
    - Cisplatin ± etoposide
    - Carboplatin ± etoposide
    - Topotecan
    - Cyclophosphamide, doxorubicin (or epirubicin), and vincristine (CAV)

NCCN Guidelines – Merkel Cell Carcinoma – Version 1.2015
Other Merkel Cell Staging

Other Skin Cancers
Skin

Source: Journal of the American Academy of Dermatology, 2008 Mar;58(3):375-81
Source: http://www.dermis.net/dermisroot/en

BCC and SCC

Source: http://www.skinspecialistcentre.co.nz/assets/image/mohs/mohsproc.jpg
**Dermatofibrosarcoma Protuberans**

**PRINCIPLES OF EXCISION**

**Goal:**
- Every effort should be made to achieve clear surgical margins. Some form of complete histologic surgical margin examination is recommended, whenever possible. Tumor characteristics include long, irregular, subclinical extensions.

See the NCCN Guidelines for Soft Tissue Sarcoma for Principles of Sarcoma Surgery (SARC-C).

**Varied Approaches:**
- Mohs technique
- Modified Mohs = Mohs technique with additional final margin for permanent section assessment.
- CCFOMA= Complete circumferential and peripheral deep margin assessment.
- 2- to 4-cm margins to investing fascia of muscle or peritonum with clear pathologic margins, when clinically feasible.

**Reconstruction:**
- It is recommended that any reconstruction involving extensive undermining be avoided or tissue movement delayed until negative histologic margins are verified to prevent possible tumor seeding if margins are not histologically clear.
- If there is concern that the surgical margins are not completely clear, consider split-thickness skin grafting (STSG) to monitor for recurrence.

---

**Mycosis Fungoides**

http://www.dermis.net/dermisroot/en/
Mycosis Fungoides

Summary Stage
1. Lymphoid only
   ● Ring; papule; or erythematous patch ("praga maga")
     - 30% of the body involved
     - Lesional plaque
     - 2000 x magn., no tumor
     - 4000 x magn., no tumor

   2. Malignant nodules: 5% of the body involved
      - Lesional plaque
      - 2000 x magn., no tumor
      - 4000 x magn., no tumor

   3. Bilateral involvement
      - Tumor stage

Kaposi Sarcoma

Source: http://www.pathguy.com

Source: http://virology-online.com/viruses/HHV-6.htm
Kaposi Sarcoma

SUMMARY/USAGE
1. Etiology
   Single lesion or multiple lesions in 1/3 of the following:
   - Sites (e.g., oral cavity, anus, rectum, vagina, vulva)
   - Sites (e.g., palmar surface, plantar surface, other)

2. Regional or distant metastases
   Multiple lesions in any 1/3 of the following:
   - Sites (e.g., oral cavity, anus, rectum, vagina, vulva)
   - Sites (e.g., palmar surface, plantar surface, other)

3. Enlarged nodes involved
   Tumor: directly involved
   Histologically similar plaques (constituent) or clinically similar
   Biopsy: plaque (constituent) or clinically similar

4. Regional or distant metastases
   Nodes in the draining nodes (e.g., lymph nodes) involved
   Code (5) + (5)

5. Bone (e.g.) involved
   Lesion in all sites of the following:
   - Sites (e.g., oral cavity, anus, rectum, vagina, vulva)
   - Sites (e.g., palmar surface, plantar surface, other)

Other Skin Schema

Skin
Skin (excluding Skin of Eyelid and Malignant Melanoma, Merkel Cell Carcinoma, Kaposi Sarcoma, Mycosis Fungoides, Sezary Disease, and Other Lymphomas)

C44.0, C44.2-C44.9
- DISCONTINUED SITE-SPECIFIC FACTORS: SSV10
  - C44.0 Skin of lip, NOS
  - C44.2 External ear
  - C44.3 Skin of other and unspecified parts of face
  - C44.4 Skin of scalp and neck
  - C44.5 Skin of trunk
  - C44.6 Skin of upper limb and shoulder
  - C44.7 Skin of lower limb and hip
  - C44.8 Overlapping lesion of skin
  - C44.9 Skin, NOS
- Note: Laterality must be coded for C44.2, C44.3 and C44.5-C44.7. For codes C44.3 and C44.5, code 5 (midline) in the laterality field if the tumor is midline (e.g., chin)
1. Go to Training Menu
2. Select Practical Application Tests
   ▪ Scroll to Bottom of Page
3. Select Type of Practical Application
   ▪ Case Coding – CSV0205
   ▪ Heme 2014 Cases
   ▪ TNM 7th Edition
4. Select Cancer Site – 10+ cases/site
5. Select Case
6. Start Test
Melanoma 05 Scenario

Abstracted Text

For the purposes of living this case, assume that the information in the scenario represents the complete information available at the time the case was abstracted.

Social History

Consider male born in Alberta, with history of seizures. Lives with sister and girlfriend, Inc Blue Cross.

Physical Exam

11/18/2014 - Skin examination reveals a NPU in the left upper quadrant showing BCC, cloudy, however showed melanoma. The punch biopsy showed Bowen's of squamous,Clark level 3 or 4, no ulceration, minimal size 0.5mm per square, and evidence of spread beyond. The punch biopsy was 6mm in depth and external hole was 11mm.

Operative Reports

11/18/2014 - Wide of expanse melanoma of the scalp with 3.2 x 3.2 x 3 mm X associated with 1.4 cm margins.

11/18/2014 - Left cheek drainage Level 3, 3.5 mm with 6.8 mm x 3.6 mm.

Treatment Plan

11/18/2014 - Suspicious possible melanoma should be considered due to size and risk of aggression. It has agreed to consider dermal excision and possible mastectomy. NN FY for one month for consideration of it.

11/27/2014 - Oncology had reviewed clinical scenario, but has not decided whether or not he wanted to proceed with this.

Stage

11/27/2014 - T4N1C Stage M0 pre-M2

04/15/2014 - Path Report #1

Clinical Diagnosis/Histology:

BCC

Final Diagnosis:

Squamous cell carcinoma

11/19/2014

1. Sin: right upper, shave biopsy. Real cell carcinoma, superficial multifocal type, with focal squamous differentiation. The initial margins are involved.

2. Sin: right upper, shave biopsy. Real cell carcinoma, superficial type. The initial margins are involving free in the sections examined.

3. Sin: left lateral, shave biopsy. Real cell carcinoma, superficial multifocal type, involving the initial margins.

4. Sin: central area, punch biopsy. Congenital compound melanocytic naevus with architectural disorder and moderate cytologiatical atypia, involving the lateral margins. The deep margin is free.

5. Sin: upper, shave biopsy. Malignant melanoma with the following features:

- Clinical stage: Stage I, T4N1C Stage M0
- Pathological stage: Stage I, T4N1C Stage M0
- Pathological grade: Grade 1, Level 3
- Mitotic count: 0.0, per square

2014;

04/30/2014 - Path Report #2

Clinical Diagnosis/Histology:

Basal Cell

Final Diagnosis:

Squamous cell carcinoma

11/19/2014

Gross Description:

Specimen A: A tissue block submitted labeled "surgical defect 1" were two pieces of basal cell carcinoma in the described area. The margins were not involved. The resection was complete.

Specimen B: A tissue block labeled "surgical defect 2" was a 5.0 x 5.0 x 5.0 mm piece of skin which was described and submitted for histological examination.

Specimen C: A tissue block labeled "surgical defect 3" was a 5.0 x 5.0 x 5.0 mm piece of skin which was described and submitted for histological examination.

Histology:

Specimen A: The specimen demonstrated typical features of basal cell carcinoma. The tumor was composed of basally located, spindled cells with a high nuclear to cytoplasmic ratio. The lesion was well circumscribed and invasion into the surrounding tissue was noted. The specimen was well circumscribed and invasion into the surrounding tissue was not noted.

Specimen B: The specimen demonstrated typical features of basal cell carcinoma. The tumor was composed of basally located, spindled cells with a high nuclear to cytoplasmic ratio. The lesion was well circumscribed and invasion into the surrounding tissue was noted. The specimen was well circumscribed and invasion into the surrounding tissue was not noted.

Specimen C: The specimen demonstrated typical features of basal cell carcinoma. The tumor was composed of basally located, spindled cells with a high nuclear to cytoplasmic ratio. The lesion was well circumscribed and invasion into the surrounding tissue was noted. The specimen was well circumscribed and invasion into the surrounding tissue was not noted.

In summary, the specimen demonstrated features of basal cell carcinoma. The tumor was well circumscribed and invasion into the surrounding tissue was noted. The specimen was well circumscribed and invasion into the surrounding tissue was not noted.
Practice Cases

Coding Form

Help Features

Scores

Rationale:
The Social History Indicates the patient is male. Apply code 1 when the patient is male.

PDF
### Practice Cases

**Correct**

<table>
<thead>
<tr>
<th>Data Item</th>
<th>Response</th>
<th>Correct Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnosis Date</td>
<td>03/15/2014</td>
<td>03/15/2014</td>
</tr>
</tbody>
</table>

**Rationale:**

The date of diagnosis is the date the reportable disease was first diagnosed, clinically or microscopically, by a recognized medical practitioner. In this case, the first reportable statement of malignancy was on the 03/15/2014 scalp biopsy excision.

(2014 SEER Manual, Date of Diagnosis)

**Error**

<table>
<thead>
<tr>
<th>Data Item</th>
<th>Response</th>
<th>Correct Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sequence Number</td>
<td>02</td>
<td>08</td>
</tr>
</tbody>
</table>

**Rationale:**

Sequence is coded to 00 (in situ/malignant primary in the patient’s lifetime) because there is no documentation that the patient has previously been diagnosed with a reportable in situ/malignant primary.

(2014 SEER Manual, Sequence Number-Central)

### Additional Resources

- CDC Information about Skin Cancer and Melanoma
- American Cancer Society and Canadian Cancer Society
- NCI Physician Data Query for Healthcare Professionals
- WHO Classification of Tumors of Skin
- Multiple Primary and Histology Coding Rules, SEER 2007
- Collaborative Stage Data Collection System, AJCC, 2012
- NCCN Evidence Based Treatment Guidelines, NCCN, 2015
- American Society of Clinical Oncology, ASCO, 2015
- NAACCR Cancer Registry Webinar Series
- SEER Training for Cancer Registry Professionals
- SEER Educate for Practice Cases and Other Training
Questions

NCRA CEU # 2014-117