Collecting Cancer Data: Melanoma

NAACCR 2016-2017 Webinar Series

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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**

- Overview
- Epi Moment
- Treatment
- Quiz 1
- Staging
- Quiz 2
- Case Scenarios

**Agenda**
Melanoma

Overview

Layer of Skin

• Epidermis
• Dermis
• Subcutaneous

**Skin Cells**

- **Squamous**
  - Flat cells
  - Outer part of epidermis
- **Basal**
  - Divide to replace squamous cells that shed
  - Lower part of epidermis
- **Melanocytes**
  - Melanin
  - Protects deeper layers of skin
  - Exposed to sun make more pigment

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**Melanoma Skin Cancers**

- Less common than basal and squamous cell cancer
- More dangerous because can spread
- Men: Trunk; Women: Legs
- Less common areas: eyes, mouth, genitals and anal area
- Palms of hands, soles of feet, under nails: African Americans, Asians, Hispanics
### Types of Melanoma

- Superficial Spreading Melanoma (8743)
- Nodular Melanoma (8721)
- Lentigo Maligna Melanoma (8742)
- Acral Lentiginous Melanoma (8744)
- Malignant melanoma, NOS (8720)

### Possible Signs of Melanoma - ABCDE

- Asymmetry
- Border
- Color
- Diameter
- Evolving
Possible Signs of Melanoma – Other Signs

- Sore doesn’t heal
- Spread of pigment
- Redness or new swelling beyond border of the mole
- Change in sensation, itchiness, tenderness or pain
- Change in surface of mole

Laterality

- Draw a line from mid forehead to mid pelvis and from mid skull to mid buttocks – divides body into right and left half
  - Right
  - Left
  - midline
Multiple Primary and Histology Rules

• M3 – Topography codes different at second (Cxx.x), third (Cxx.x) or Fourth character (Cxx.x) are multiple primaries
• Example
  – Patient has invasive melanoma on right leg (C44.7) and an invasive melanoma on right arm (C44.6)

Multiple Primary and Histology Rules

• M4 – Different laterality are multiple primaries
• Example
  – Patient has invasive melanoma on right trunk (C44.5) and an invasive melanoma on midline trunk (C44.5)
Multiple Primary and Histology Rules

- M5 – Histology codes different at first (xxxx), second (xxxx) or third number(xxxx) are multiple primaries
- Example
  - Patient has invasive melanoma (8720/3) on right leg (C44.7) and another invasive superficial spreading melanoma (8743/3) on right leg (C44.7)

- M6 – Invasive melanoma more than 60 days after an insitu melanoma is a multiple primary

- M7 – melanomas more than 60 days apart multiple primaries
Multiple Primary and Histology Rules

- H5 – Code histologic type when diagnosis is regressing melanoma and a histologic type

- H6 – Code 8723 (malignant melanoma, regressing) when diagnosis is regressing melanoma

Multiple Primary and Histology Rules

- H7 – Code histologic type when diagnosis is lentigo maligna melanoma and a histologic type

- H8 – Code 8742 (lentigo maligna melanoma) when the diagnosis is lentigo maligna melanoma
Multiple Primary and Histology Rules

• H9 – Code most specific histology term: melanoma, NOS with a single specific type
  • In situ lesions
    » Pattern, architecture, type, subtype, predominantly, with features of, major or with ___ differentiation
  • Invasive lesions
    » Type, subtype, predominantly, with features of, major or with ___ differentiation

Epi Moment
Melanoma
Theme song: Theme from Endless Summer
**Epidemiology of Malignant Melanoma**

- Increasing worldwide
  - 3-7% annually for whites
  - Highest in Australia/New Zealand
    - 2x NA (climate, demographics, & location/ozone)
    - Influenced by geography (UV exposure)
- Higher among men than women
  - 25.7 versus 16.0 incidence
  - 4.1 versus 1.7 mortality
- Higher among whites
  - 22.9 versus 4.8 AI/ANs; 1.3 APIs, 1.0 blacks incidence
  - 3.1 versus <1 mortality
- Higher among non-Hispanics
  - 25.6 versus 4.5 incidence
  - 2.9 versus <1 mortality

*Lifetime risk of melanoma 1 in 63 (invasive)*
*Median age at dx 52; 25% < 45*

**Malignant Melanoma Trends, 1995-2013**

- Increasing, 2.2% annually
- Stable, 2.7 per 100,000

**Malignant Melanoma Over Time**

- Mortality
- Incidence
**Cutaneous Melanoma**

- Treatment similar for all types
- Superficial spreading melanoma
  - 70% of all cases, common in young people
  - Common on upper back & trunk in men, legs in women
  - Flat or slightly raised discolored path with irregular borders; often in moles, Spreads superficially
- Nodular melanoma
  - 10-15% of all cases, common in elderly
  - Generally invasive at dx, aggressive
  - Black or other discoloration, bump on trunk, legs & arms
- Lentigo maligna
  - 10% of all cases, In situ, common in elderly (Hawai‘i)
  - Flat or slightly elevated tan or brown discoloration, Spreads superficially & slow
  - Sun-exposed, damaged skin on face, ears, arms & upper trunk
  - Invasive = lentigo maligna melanoma
- Acral lentiginous melanoma
  - <5% of all cases, common in blacks, Asians (not whites)
  - Spreads superficially but quickly
  - Black or brown discoloration under the nails (subungal) or on the soles of the feet or palms of the hands
- Amelolonic melanoma
  - <5% of all cases, “without melanin”, can be difficult to diagnosis due to lack of color

**Extra- or Non-cutaneous Melanoma**

- Do not develop in skin cells; 4-5% of all melanomas; poor prognosis
- Mucosal melanoma <2% of all cases
  - Generally advanced stage at dx (location not easily seen)
  - Located in mucosal membranes lining respiratory, gastrointestinal and urogenital tract
  - Surgery main tx; movement away from radical surgery, Radiation does not improve survival
- Ocular melanoma
  - Most common extracutaneous type
  - Uveal (choroidal—most common, iris, ciliary body) & and conjunctival
  - Surgery or Radiation or both
- Leptomeningeal
  - Worst prognosis—median survival 6-8 weeks
  - Not usually a primary cancer, a metastatic
- Internal organs
  - Rare, also often metastatic
Risk Factors for Melanoma

- Age, Moles (nevus)
- Fair skin, freckles, light hair
- Family history
  - Shared exposures; skin tone
  - No genetic testing currently recommended
  - Xeroderma pigmentosum (rare, inherited, can’t repair DNA damage to skin cells)
- Previous melanoma, Weakened immune system

- UV exposure (sunlight, tanning beds)
  - UV small % of sun's rays but damages DNA, causes cancer when DNA of genes controlling skin cell growth are damaged
  - Frequent sunburns, esp childhood (intermittent not occupational)
  - Risk for cutaneous and ocular; not a risk for other types
  - 2009: more tanning salons than coffee shops
    - Newer devices modified to decrease sun burn; still classed as carcinogen
- Occupational exposures

Melanoma Survival

- 90%, 5 year relative
- Survival rates ↑
- Lower
  - Blacks
  - Older age
- Type, stage
**Issues with melanoma screening**

- Incidence increasing
  - Better detection or more sun exposure?
- Survival rates increasing but mortality no change
  - No true progress against disease
- Self-examination, clinical skin exams
  - Common at community health fairs
  - Regular exams (self & clinical) promoted by ACS and other advocacy groups
- 7/22/16 USPSTF
  - Insufficient evidence to assess benefits versus harms of visual skin exams to screen for melanoma
  - Visual skin examination modest sensitivity and specificity for detecting melanoma
- Harms: misdiagnosis, over-diagnosis
  - More limited than other cancers (i.e. removal of mole) but can lead to adverse effects, both cosmetic & occasionally functional

**Issues with melanoma reporting**

- Underreported
  - Due to decentralization of diagnosis
  - Outside hospital system
- BUT rates ↑, over-diagnosis!
  - Increasing screening
    - % early stable since 1995, likely a factor prior
    - Increasing risk
  - Increasing ascertainment
    - % path & % phys reporting ↑ since 1995
    - 6 → 11% path; 8 → 19% phys
    - Rates very highly correlated with % path/phys
- Reporting inconsistent by geography
- Caution when comparing rates over time or between geographies
  - Large differences unlikely to represent large changes in risk
**Melanoma Research**

- Focus on sun protection, indoor tanning
  - Healthy behaviors; impact of health campaigns
  - Impact of regulation
  - Targeting minorities (Hispanics)
- Additional risk factors
  - SES, diet
- CiNA
  *Solar ultraviolet-B exposure and cancer incidence and mortality in the United States, 1993-2002*
  Boscoe FP, Schymura MJ., BMC Cancer, 2006
  *The relationship between area poverty rate and site-specific cancer incidence in the United States*
- Melanoma Monograph
  - J Am Acad Dermatolo 2011
- Rad Tech
  - NOT RISK FACTORS: height, weight, BMI, age at menarche, menopausal status, HRT, parity, or contraceptive use
  - **BUT** BRCA2 is a risk
  - Modest increase of risk prior to 1950 or if not using lead aprons/shields
### Standard Scenario

- Patient or physician identifies a suspicious lesion and excises the tumor.
  - Tries to get close margins.
  - Thorough physical exam is performed.
- Tumor comes back as melanoma.
  - If necessary, imaging is performed.
- Definitive surgery is performed. Usually, some form of wide excision
  - If warranted, sentinel lymph node biopsy is performed.
  - If warranted, lymph node dissection
- Based on stage, patient may have adjuvant treatment.
- Follow-up plan.

### Diagnostic Staging Procedure

- Tumor is very large
- Tumor in a site that is difficult to biopsy
- Margins will be grossly positive on pathology
- Code as a diagnostic staging procedure code 02.
**Biopsies**

- Excisional
- Punch
- Shave

**Wide Excision**

- Follows the excisional biopsy
- Removes a margin of healthy tissue from around the melanoma site.
- If the margin of healthy tissue is 1cm or less, or the margin of healthy tissue is not stated
- code this procedure using codes 30-33.
**Surgery Codes**

- Code 30 – original excisional biopsy or technique was not indicated
- Code 31 – original excisional biopsy was a shave biopsy
- Code 32 – original excisional biopsy was a punch biopsy
- Code 33 – original incisional biopsy and then wide excision was done*

*incisional biopsy coded as diagnostic staging procedure

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**Surgery Codes**

- Code 45 – wide excision with margins more than 1 cm but not documented if more or less than 2 cms

- Code 46 – wide excision with margins more than 1 cm or equal to or less than 2 cms

- Code 47 – wide excision and margins are more than 2 cms
**Standard Scenario**

- Patient or physician identifies a suspicious lesion and excises the tumor.
  - Tries to get close margins.
  - Thorough physical exam is performed.
- Tumor comes back as melanoma.
  - If necessary, imaging is performed.
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Melanoma

Summary Stage

TNM Staging
Summary Stage

• **0 In situ:**
  – Noninvasive; intraepithelial
  – Basement membrane of the epidermis is intact; intraepidermal
  – Clark’s level I

• **1 Localized only**
  – Papillary dermis invaded-Clark’s level II
  – Papillary- reticular dermal interface invaded-Clark’s level III
  – Reticular dermis invaded-Clark’s level IV
  – Skin/dermis, NOS
  – Localized, NOS
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**Summary Stage**

- **2 Regional by direct extension only**
  - Subcutaneous tissue invaded (through entire dermis)
  - Clark’s level V
  - Satellite nodule(s), NOS
  - Satellite nodule(s) < 2 cm from primary tumor
- **3 Regional lymph node(s) involved only**
  - REGIONAL Lymph Nodes by primary site
  - **All sites:**
    - In-transit metastasis (satellite nodules >2 cm from primary tumor)
    - Regional lymph node(s), NOS

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**Summary Stage**

- **4 Regional by BOTH direct extension AND regional lymph node(s) involved**
- **5 Regional, NOS**
- **7 Distant site(s)/lymph node(s) involved**
- **9 Unknown if extension or metastasis**
Summary Stage: Notes

• Note 1: For melanoma of sites other than those above, use site-specific schemes.
• Note 2: If there is a discrepancy between the Clark’s level and the pathologic description of extent, use the higher Summary Stage code.
• Note 3: Skin ulceration does not alter the classification. Skin ulceration was considered regional in Historic Stage.
• Note 4: In-transit metastasis was considered regional by direct extension in Historic Stage and Summary Stage 1977
**Rules for Classification**

- **Clinical**
  - Complete excision of the primary tumor
  - Clinical assessment (*physical exam and imaging only*) of the regional lymph nodes and intralymphatic metastasis.

- **Pathologic**
  - Wide-excision/re-excision is considered definitive treatment
  - Pathologic assessment of regional nodes after sentinel lymph node biopsy and/or complete regional lymphadenopathy.
  - Pathologic confirmation of intralymphatic (satellite or in-transit metastasis).
    - Would be highly unusual to have pathologically confirmed intralymphatic metastasis and no lymph nodes removed.

**Primary Tumor**

- “T” value is based on ....
  - Breslow’s depth
  - Ulceration (*cannot assume no ulceration if not mention of ulceration*)
  - Mitotic rate (sometimes)

- Excision of the primary tumor is part of the clinical evaluation.
- Wide excision or re-excision are a definitive surgeries that meet the criteria for pathologic stage

(see page 335)
**Pop Quiz 1**

- A patient present for annual screening by a dermatologist and is found to have a 6mm suspicious lesion on her calf. The lesion is removed. No additional abnormalities were seen during the physical exam.
- Pathology revealed a malignant melanoma.
  - Breslow’s depth: 1.3 mm.
  - No ulceration was identified.
- The patient did not return for any additional work-up or treatment.

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**Pop Quiz 2**

- A patient presented for an annual screening and was found to have a 6mm suspicious lesion on her calf. The lesion was removed. No additional abnormalities were seen during the physical exam.
- Pathology revealed a malignant melanoma.
  - Breslow’s depth: 1.3 mm.
  - No ulceration was identified.
- The patient returned for a wide excision that was negative for residual carcinoma. No additional surgery was performed.

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Pop Quiz 3

• A patient has a suspicious mole removed at her physician's office.
• Pathology confirmed a melanoma with Breslow's depth of 1.2mm.
• Physical exam did not show enlarged lymph nodes.
• A sentinel lymph node biopsy showed no metastasis in 3 lymph nodes.
• A wide excision did not reveal an residual disease.
• She then had a lymphadenectomy with removal of 12 lymph nodes that were all negative for malignancy.
• No further treatment was done.

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Pop Quiz 3 cont

• Same scenario, path report documented no ulceration.
  – What is the cT and pT?
  – What are the cStage and pStage?
• Same scenario, path report documented ulceration was present.
  – What is the cT and pT?
  – What are the cStage and pStage?

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**cN Regional Lymph Nodes**

- Based on imaging and physical done prior to definitive surgery (wide excision).
  - cNX - Cannot be assessed
  - cN0 - No evidence of regional node metastasis
  - cN1 - 1 or more clinically apparent metastasis
  - cN2 - 2-3 clinically apparent lymph nodes
  - cN2c - In-transit or satellite metastasis (no positive lymph nodes)
  - cN3
    - 1 or more clinically apparent nodes and in-transit or satellite metastasis or
    - More than 3 positive lymph nodes

**Intralymphatic Metastasis**

- Satellites (microsatellite)
  - Nodules occurring in the lymphatic channels within 2cm of the primary lesion
- In-transit metastasis
  - Metastasis in the lymph lymphatic channel occurring between the primary and the lymphatic basin
### Intralymphatic Metastasis

- **cN2c**
  - Satellite or In-transit mets identified prior to definitive surgery.
- **pN2c**
  - Pathologically confirmed.

### pN Regional Lymph Nodes

- Surgically removed regional lymph nodes
  - **pN1** – 1 node with positive lymph nodes
    - pN1a micrometastasis
    - pN1b macrometastasis
  - **pN2** – 2-3 positive lymph nodes
    - pN2a micrometastasis
    - pN2b macrometastasis
    - pN2c in-transit/satellite metastasis *without* lymph node metastasis
  - **pN3** – 4 or more metastatic nodes *or* matted nodes *or* in-transit metastasis/satellite metastasis *with* metastatic nodes

A and B categories only
For pN
Micrometastasis vs Macrometastasis

- Comparing cN with pN
- Micrometastasis
  - cN0
    - Not enough tumor in a lymph node to be felt during physical exam or seen on imaging.
    - Lymph nodes positive for malignancy on surgical exam.
    - Clinically occult
- Macrometastasis
  - Clinically apparent lymph node metastasis
    - Enough tumor is present in the lymph nodes to make them palpable or to appear malignant on imaging

Sentinel Node Biopsy

- Usually done on cN0 patients with cT1b or higher.
- Radioactive die is injected around the site of the melanoma
- Die is traced to nodes that the tumor drains to.
- May be multiple nodes in multiple basins
Metastasis from an Unknown Primary

- If a patient presents with a positive lymph node and an adequate work-up fails to reveal a primary tumor, code the lymph node as regional.

Pop Quiz 4

- A patient presents with an enlarged cervical lymph node.
- An excisional biopsy is done and confirms metastatic melanoma.
- A thorough physical exam is conducted and no primary tumor is identified. Imaging does not show any additional abnormalities.

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Page 335 and 336
Pop Quiz 5

A patient presents for annual screening and is found to have a suspicious mole. The mole is excised and found to be malignant melanoma (cT1b). No palpable lymph nodes were present.

The patient returned two weeks later for a sentinel lymph node biopsy and wide excision.

Pathology
- Wide excision: Negative for residual melanoma
- Sentinel node biopsy:
  - 4 lymph nodes removed. Micrometastasis measuring less than 0.1mm in a single lymph node. 3 lymph nodes negative for metastasis.

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Page 335 and 336

pStage III

Stage group 3A
- pT1a, pT2a, pT3a, or pT4a
- pN1a or pN2a
- cM0

Stage group 3B
- pT1b, pT2b, pT3b, or pT4b
- pN1a, pN1b, pN2a, pN2b, or pN2c
- cM0
**Distant Metastasis**

- M1a
  - Metastasis to the skin, subcutaneous tissue, or distant lymph nodes
- M1b
  - Metastasis to the lung
- M1c
  - Metastasis to any other “visceral” sites
  - Distant metastases to any site combined with an elevated LDH

**Serum lactate dehydrogenase (LDH)**

- Blood test
- Elevated LDH can help predict survival for patients with distant metastasis.
- Can be a good indicator of recurrent disease.
- LDH is not an effective test to diagnose melanoma
- LDH is not an effective test to identify regional or distant metastasis
Pop Quiz 6

- A patient was found to have cT3b melanoma.
- Imaging and physical exam did not show any suspicious lymph nodes, but did show a malignant appearing mass in the left lung.
- A bronchoscopy with biopsy was positive for malignant metastatic melanoma.
- The LDH was elevated.
- The patient then had a sentinel node biopsy and wide excision.
  - Sentinel node biopsy showed two positive lymph nodes.
  - Wide excision was negative for residual metastasis.

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Pop Quiz

- A patient presents with a solitary brain metastasis.
- A biopsy confirmed malignant melanoma.
- Work-up revealed no primary site no other disease
- The LDH was normal.

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<td></td>
</tr>
<tr>
<td>Pathologic N</td>
<td></td>
</tr>
<tr>
<td>Pathologic M</td>
<td>pM1c</td>
</tr>
<tr>
<td>Pathologic Stage</td>
<td>4</td>
</tr>
</tbody>
</table>
Questions?

SSF1

- Measured Thickness (Depth), Breslow Measurement
  - Documents depth of invasion of primary melanoma
  - Predicts risk of nodal metastasis
  - Is a factor in determining T category
  - Record to hundredths of mm as documented in path report
  - Record greatest measurement from any procedure whether biopsy or excision
• Ulceration
  – Is the absence of intact epidermis over the melanoma
  – Is an important adverse prognostic factor
  – Record presence or absence of ulceration as documented in path report
    • Code as 000 (no ulceration present) if there is no documentation or mention of ulceration in path report
    • Caution…this is not the same rule we use to assign the a and b subcategories for the T value!

• Clinical Status of Lymph Node Mets
  – Tumor burden in regional nodes is an important prognostic factor
    • Micrometastases
      – Clinically inapparent metastasis histologically diagnosed after sentinel node biopsy and lymphadenectomy (if performed)
    • Macrometastases
      – Clinically detected nodal metastasis confirmed by lymphadenectomy or nodal metastasis with gross extracapsular extension
• Serum Lactate Dehydrogenase (LDH)
  – Is a significant predictor of survival among patients who present with or develop distant metastasis
  – Record range for positive LDH prior to treatment or within 6 weeks of diagnosis
    • First positive test is priority
  – Is a factor in determining M category
  – Use same test to code SSF4, SSF5, and SSF6

• Positive LDH results from 2 lab tests required to code as positive
  – Assign code 000 (within normal limits) if 1st test positive and 2nd test negative
  – Assign code 998 (test not done) if 1st test positive and no 2nd test performed
  – Assign code 999 (unknown) if 1st test positive and no information about 2nd test
  – Assign code 000 if only 1 test performed and it is within normal limits
Primary Tumor Mitotic Count/Rate

- Increasing mitotic rate correlates with decline in survival
- Based on number of mitoses in one square mm surrounding a ‘hot spot’ or a field with representative mitosis
- Is a factor in determining T category
- Record mitotic rate/count as documented in path report
Coming Up…

• Collecting Cancer Data: Hematopoietic and Lymphoid Neoplasm
  – 11/3/2016

• Collecting Cancer Data: Lung
  – 12/1/2016

Fabulous Prizes
CE Certificate Quiz/Survey

- Phrase

- Link

Thank You!

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