Evaluating Pigmented Lesions

Basic Dermatology Curriculum

Last updated November 2015
Goals and Objectives

- The purpose of this module is to help medical students develop a clinical approach to the evaluation and initial management of patients with pigmented lesions.
- By completing this module, the learner will be able to:
  - Identify morphologic features of different types of nevi
  - Apply concepts of “signature nevus” and “ugly duckling” sign to evaluation of pigmented lesions
  - Provide patient education on sun protection and skin self-examinations
  - Recognize when to refer patients with pigmented lesions to dermatologists
Evaluating Pigmented Lesions

Identifying pigmented lesions that are potentially melanoma is one of the most important and difficult tasks within dermatology.
Pigmented Lesions

- This module will review the following:
  - Congenital melanocytic nevi
  - Acquired melanocytic nevi
  - Atypical melanocytic nevi
    - Also referred to as dysplastic nevi
  - Special nevi in pediatric patients

- We will discuss how to:
  - Evaluate individual pigmented lesions in the context of the whole patient
  - Identify patients at higher risk for melanoma who need follow-up with a dermatologist
What is a pigmented lesion?

• A flat or raised growth that has brown, blue, gray, or black color
• We’re going to focus on melanocytic nevi (moles)
• Some benign growths have color in them but are not nevi
  – Review the Benign Skin Lesions Module to identify these
Evaluating Pigmented Lesions

The following questions can be used in the evaluation of a concerning pigmented lesion:

1. For adult patients, has it remained about the same for the last year or so?
2. Is it basically symmetric, with distinct borders and primarily one color?*
3. Is it relatively similar to other moles on the patient?

If “yes” to all 3, the lesion is likely to be benign

* Dark black lesions require special evaluation
Case One

C. L.
Case One: History

- **HPI:** Mr. L is a 28-year-old man who asks about a mole on his face that’s been there as long as he can remember.
- **PMH:** no major illnesses or hospitalizations
- **Allergies:** no known medication allergies
- **Medications:** none
- **Family history:** mother with diabetes; no one with skin cancer in the family
- **Social history:** accountant
- **ROS:** negative
Case One, Question 1

- How would you describe his skin exam?
Case One, Question 1

- Dome-shaped, symmetric, sharply bordered, 4 mm, brown papule with sharp borders on the face.
Based on the history and skin exam, what is the most likely diagnosis?

a. Benign acquired nevus
b. Benign congenital nevus
c. Dermatofibroma
d. Melanoma
e. Seborrheic keratosis
Case One, Question 2

Answer: b

Based on the history and skin exam, what is the most likely diagnosis?

a. Benign acquired nevus
b. Benign congenital nevus
c. Dermatofibroma
d. Melanoma
e. Seborrheic keratosis
Evaluating Pigmented Lesions

1. For adult patients, has it remained about the same for the last year or so?
2. Is it basically symmetric, with even borders and primarily one color?
3. Is it relatively similar to other moles on the patient?

- This first part of the evaluation takes into consideration any changes in a given lesion. If it’s small (< 1.5 cm), been there since early childhood, it’s not likely to be a melanoma.
Diagnosis: Congenital Nevus

- Small congenital nevi can be dome-shaped, especially when on the face. Sometimes they are mammillated (with small protuberances), and have hypertrichosis (increase in density and coarseness of hairs).
Case One, Question 3

Mr. L asks about whether to remove the nevus. You recommend the following:

a. Annual follow-up with a dermatologist
b. Excision of all small congenital nevi because they carry a high risk of becoming melanoma
c. Freeze the nevus with liquid nitrogen
d. Reassure him that the nevus is benign, and removal is not necessary
Case One, Question 3

Answer: d

Mr. L asks about whether to remove the nevus. You recommend the following:

a. Annual follow-up with a dermatologist (does not have risk factors to justify this)

b. Excision of all small congenital nevi because they carry a high risk of becoming melanoma (no increased risk for small nevi)

c. Freeze the nevus with liquid nitrogen (do not freeze moles)

d. Reassure him that the nevus is benign, and removal is not necessary
Benign Congenital Nevi

- Reassure patients with small congenital nevi that they are benign
- If patients seek removal of nevi on the face, refer them to a dermatologist
- Removal of benign nevi is cosmetic, and the patient may have to pay “out-of-pocket” if there is no medical indication for removal
Case Two

Z. W.
Case 2: History

• HPI: Z.W. is 2 year-old male who is brought in by his mother for evaluation of a mark that has been on his leg since birth and is growing with him
• PMH: history of inguinal hernia s/p repair
• Allergies: no known medication allergies
• Medications: none
• Family history: mother with a history of a moderately dysplastic nevus s/p removal
• Social history: attends daycare
• ROS: negative
Case 2, Question 1

- How would you describe his skin exam?
Case 2, Question 1

- Thin, velvety medium-to dark brown symmetric plaque with irregular borders
Case 2, Question 2

Based on the history and skin exam, what is the most likely diagnosis?

a. Medium congenital nevus, benign
b. Medium congenital nevus, atypical
c. Melanoma, superficial-spreading type
d. Small congenital nevus, benign
e. Small congenital nevus, atypical
Case 2, Question 2

Answer: a

Based on the history and skin exam, what is the most likely diagnosis?

a. Medium congenital nevus, benign
b. Medium congenital nevus, atypical
c. Melanoma, superficial-spreading type
d. Small congenital nevus, benign
e. Small congenital nevus, atypical
Congenital Nevi

- Size criteria of congenital nevi depends on the size in adulthood

Small: <1.5 cm  
Medium: >1.5-19.9 cm  
Large/Giant: >20 cm
Case 2, Question 3

The child’s mother asks if it should be removed. What should you recommend?

a. Complete excision to prevent melanoma in this high-risk lesion
b. Complete excision because of irregular borders
c. Observation
d. Punch biopsy to rule out atypical features
Answer: c

What next step should you recommend?

a. Complete excision to prevent melanoma in this high-risk lesion
b. Complete excision because of irregular borders
c. Observation
d. Punch biopsy to rule out atypical features
Congenital Nevi

• For small and medium-sized congenital nevi, the risk of developing melanoma is likely <1%
  – Excision of medium-sized lesions to prevent malignancy is no longer the standard approach
  – Nonetheless, a change within these nevi should be evaluated

• For large/giant congenital nevi, the risk of developing melanoma is higher (but likely <5%)
  – When melanoma does occur, it often occurs in the first decade
  – Patients should be referred to a dermatologist early in life for evaluation
Case Three
R. W.
Case Three: History

- **HPI:** Ms. W is a 26-year-old woman who asks about moles on her back. Some of them are raised and get irritated by her bra and waistband.
- **PMH:** no major illnesses or hospitalizations
- **Allergies:** none
- **Medications:** multivitamin
- **Family history:** grandfather had a basal cell carcinoma
- **Social history:** works as a radiology technician
- **ROS:** negative
Case Three: Skin Exam
How would you describe her skin exam?
Case Three, Question 1

- Multiple small, brown symmetric macules and papules on the back
- The two lesions of concern are 4-5 mm brown papules
Skin Exam

- Patients who present for evaluation of pigmented lesions should be offered a total body skin exam (TBSE)
- Click here to view a video on how to perform a TBSE
Inexpensive magnifying glasses may help detect fine details
  • Avoid LED lights, which cast a blue hue

A dermatoscope helps to evaluate patterns in pigmented lesions
  • Requires additional training to become proficient
Case Three, Question 2

Based on the history and skin exam, what is the most likely diagnosis?

a. Acquired melanocytic nevi
b. Atypical melanocytic nevi
c. Congenital melanocytic nevi
d. Melanoma
e. Seborrheic keratoses
Case Three, Question 2

Answer: a

Based on the history and skin exam, what is the most likely diagnosis?

a. **Acquired melanocytic nevi**
   b. Atypical melanocytic nevi
   c. Congenital melanocytic nevi
   d. Melanoma
   e. Seborrheic keratoses
Common Acquired Nevi

- Most common acquired nevi begin to appear in early childhood
  - When new lesions appear after age 50, they should be evaluated for possible biopsy
- Most common acquired nevi appear in areas of sun exposure
- The total number of nevi is associated with the amount of sun exposure (e.g. compare the outside of an arm with its inside aspect)
Common Acquired Nevi

- The appearance of nevi differs by the age of the lesion
  - Early childhood: brown macules and papules
  - Later childhood: brown papules
  - Older adults: skin-colored soft papules

- Nevi change over time
  - In children and adolescents change in nevi is common and it does not necessarily indicate malignancy
  - Nevi, in particular those that are elevated can become traumatized (e.g., by bra or waistband)
Nevi Change with Age

1a & 1b) Late childhood, early adolescence
1c) Young adult
1d) Adult
1e) > 40 yrs of age
Common Acquired Nevi

- Patients < 50 years of age with only a few acquired nevi are at low risk for cutaneous melanoma
  - These patients should be counseled on sun protection and how to perform skin self-examinations
- Patients with an increased risk for melanoma include:
  - Personal history of melanoma (~ 5-8% chance of getting a second melanoma)
  - Family history of melanoma (two or more 1st-degree relatives)
  - More than 100 common acquired nevi
- Patients with an increased risk for melanoma should be evaluated by a dermatologist
What to look for on the skin exam

The ABCDE mnemonic is a useful tool for remembering what features to pay attention to in evaluating pigmented lesions.
The ABCDEs

A
Asymmetry
One half of the lesion is unlike the other half.

B
Border
An irregular, scalloped or poorly defined border.

C
Color
Varies from one area to another; has multiple shades usually tan, brown or black; but also pink and sometimes white, red or blue.

D
Diameter
Melanomas usually are greater than 6 mm (the size of a pencil eraser) when diagnosed, but they can be smaller.

E
Evolving
A mole or skin lesion that looks different from the rest or is changing in size, shape or color.

Patients can download the AAD's body mole map to document their self-examinations

American Academy of Dermatology
Measuring Nevi

- Measure oval nevi along the longest axis, then measure the perpendicular axis.
- Description: 1.3 x 1.0 cm oval, brown, symmetrical, uniformly pigmented thin plaque on the right thigh.
Following a Lesion Clinically

- The ABCDE mnemonic is a good reminder of the features to document.

- This is a 5 mm, round symmetric, evenly pigmented brown papule with well-defined borders, present on the mid back.
Evaluating Pigmented Lesions

1. For adult patients, has it remained about the same for the last year or so?

2. Is it symmetric, with even borders and primarily one color?

3. Is it relatively similar to other moles on the patient?

- This second part of the evaluation takes the ABCDE criteria into consideration for a given lesion. If it is symmetric, smaller than 6 mm, has even borders, and is mostly one color, it’s likely benign.
There are multiple resources to help educate patients about sun safety and skin cancer prevention, including:

- American Academy of Dermatology: Skin Cancer Prevention
- American Cancer Society: Skin Cancer Prevention and Early Detection

The following slides are adapted from the AAD Be Sun Smart® program
Patient Education: Be Sun Smart®

- **Generously apply a broad-spectrum, water-resistant sunscreen** with a Sun Protection Factor (SPF) of 30 or more to all exposed skin.
  - “Broad-spectrum” provides protection from both UVA and UVB rays.
  - Reapply approximately every two hours, even on cloudy days, and after swimming or sweating.

- **Wear protective clothing**, such as a long-sleeved shirt, pants, a wide-brimmed hat, and sunglasses.

- **Seek shade**.
  - Remember that the sun's rays are strongest between 10 AM – 4PM.
  - If your shadow appears to be shorter than you are, seek shade.
Patient Education: Be Sun Smart®

- **Use extra caution near water, snow, and sand** because they reflect and intensify the damaging rays of the sun, which can increase your chances of a sunburn.

- **Get vitamin D safely** through a healthy diet that may include vitamin supplements. Don't seek the sun.

- **Avoid tanning beds**. Ultraviolet light from the sun and tanning beds can cause skin cancer and wrinkling. If you want to look tan, consider using a self-tanning product, but continue to use sunscreen with it.

- **Check your birthday suit on your birthday**. If you notice anything changing, growing, or bleeding on your skin, see a dermatologist.
How to perform a skin self-examination

Examine your body front and back in the mirror, then look at the right and left sides with your arms raised.

Look at the backs of your legs and feet, the spaces between your toes, and the soles of your feet.

Bend elbows and look carefully at forearms, upper underarms, and palms.

Examine the back of your neck and scalp with a hand mirror. Part hair for a closer look.
Case Four

A. G.
HPI: Dr. G is a 55-year-old man who asks for a check of the moles on his back because he can’t see them well.

PMH: seasonal allergic rhinitis

Allergies: none

Medications: Loratadine

Family history: father had squamous cell carcinoma

Social history: dentist; lives with wife in Seattle; grew up in Florida and spent a lot of time at the beach

ROS: negative
Case Four: Skin Exam
Dr. G’s exam shows many small (< 6 mm), round, brown macules and papules scattered across his upper back and shoulders. He has similar lesions on his upper chest and abdomen, and a few on his arms.

You also notice obvious tan lines and a sunburn.

Five nevi on his back are magnified on the next slide.
Case Four: Skin Exam
Case Four, Question 1

If you could only biopsy one lesion, which one would it be?

a. A
b. B
c. C
d. D
e. E
Case Four, Question 1

Answer: c

- A, B, D, and E are all similar and show a net-like (reticular) pattern, with hypopigmentation around hair follicles (signature nevus)
- C is asymmetric, with two islands of pigmentation, with a reticular pattern and small globules. It sticks out as the “ugly duckling”
Signature Nevus

- Nevi in an individual tend to share a similar pattern, called a “signature nevus”
- These patterns include solid brown, solid pink, eclipse (tan or pink with brown rim), targetoid, “fried egg” with an elevated center, as well as others
- Melanoma, when it arises, usually has a different pattern than the patient’s other nevi
“Ugly Duckling” Sign

- Melanocytic nevi in the same patient tend to resemble one another
- Melanoma often has a different pattern than the other nevi
- This has been called the “ugly duckling” sign
Nevi must be evaluated in the context of the individual patient.

All of a patient’s nevi may be atypical in some way, because that is the type of nevi they make; it is their “signature nevus.”

If there is one nevus that stands out to you, it is the “ugly duckling.”
Evaluating Pigmented Lesions

1. For adult patients, has it remained about the same for the last year or so?
2. Is it symmetric, with even borders and primarily one color?
3. Is it relatively similar to other moles on the patient?

- This third part of the evaluation takes the “signature nevus” and “ugly duckling” concepts into consideration for a given patient.
Case Four Continued

- Based on the clinical appearance of the nevus, you recommend Dr. G have lesion C biopsied.
- The dermatopathologist reading the biopsy diagnoses a “compound atypical nevus”.*

What makes a nevus “atypical”?

Note: there are differences between clinical and histopathologic definitions of “atypical nevi”; we will focus on clinically “atypical nevi” rather than histopathologic criteria
Atypical Nevi

- 3 of 5 of these criteria:
  - Poorly defined borders
  - Irregular border
  - Irregular pigment
  - Background erythema
  - Larger than 5 mm
Atypical Nevi

- Variegated color with tan, brown, black and pink macules
- May have “fried egg” appearance
  - Peripheral macular component
  - Central papular component
What can you tell Dr. G about atypical nevi and the risk for melanoma?
Atypical Nevi

- Atypical nevi are sometimes difficult to differentiate clinically and histologically from melanoma
- Patients with many (> 5) atypical nevi are at increased risk for developing melanoma over their lifetime
  - Melanomas can develop within an existing pigmented lesion or in normal skin; the latter is more common
- Patients with atypical nevi should see a dermatologist and perform regular skin self-examinations
Atypical Mole Syndrome

The patient on the right has developed a nodular melanoma.
Atypical Mole Syndrome

- > 50 nevi and may exceed 100
- Usually appear around puberty
- Nevi continue to develop beyond age 40 years
- Significantly increased risk of developing melanoma
- Melanoma can arise in an atypical mole or in normal skin (de novo)
  - Biopsy of an atypical nevus is performed when it is suspicious for melanoma
  - Removal of all atypical nevi is not recommended as a strategy to reduce melanoma risk
- Refer patients with atypical (dysplastic) nevi to a dermatologist for periodic evaluations
Let’s compare the different type of nevi we’ve discussed
<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Common Acquired Nevi</th>
<th>Atypical Nevi</th>
<th>Cutaneous Melanoma</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>&lt;5–6 mm</td>
<td>3–15 mm</td>
<td>Any size, but tend to be 6 mm or larger</td>
</tr>
<tr>
<td>Border</td>
<td>Regular, well-defined</td>
<td>Irregular, ill-defined</td>
<td>More irregular, ill-defined</td>
</tr>
<tr>
<td>Symmetry</td>
<td>Symmetric</td>
<td>Some asymmetry</td>
<td>Greater asymmetry</td>
</tr>
<tr>
<td>Coloration</td>
<td>Homogeneous, uniform</td>
<td>Somewhat haphazard</td>
<td>Haphazard (more complexity)</td>
</tr>
<tr>
<td>Colors</td>
<td>Tan to dark brown, skin-colored</td>
<td>Tan to dark brown, black, pink; occasionally gray, blue, white</td>
<td>Tan to dark brown, black, pink, red, gray, blue, white</td>
</tr>
<tr>
<td>Signature pattern</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Ugly duckling</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Case Five

F. S.
Case Five: History

- **HPI:** Mr. S is a 42-year-old man who asks for a check of the moles on his back because he can’t see them well. His wife told him to ask about a spot on his mid lower back that she thinks has changed in the last six months.
- **PMH:** none
- **Allergies:** none
- **Medications:** none
- **Family history:** brother had melanoma
- **Social history:** high school physical education teacher and wrestling coach; married
- **ROS:** negative
Case Five: Skin Exam
Case Five: Skin Exam
Case Five: Skin Exam

- Mr. S’s exam shows many reddish-brown papules on his back, chest, and abdomen, consistent with both acquired nevi and atypical nevi
- One papule in particular stands out because it is 7 mm, asymmetric, has two shades of brown and a hypopigmented area within it
- This papule is different from his other nevi
Case Five: Question 1

You are concerned about this 7 mm papule. Which do you recommend next?

a. Freeze with liquid nitrogen
b. Biopsy the darkest area
c. Superficial shave biopsy
d. Urgent referral to a dermatologist for biopsy
You are concerned about this 7 mm papule. Which do you recommend next?

a. Freeze with liquid nitrogen (do not freeze nevi)

b. Biopsy the darkest area (possible false negative result if you biopsy the wrong area)

c. Superficial shave biopsy (non-dermatologists should not perform a superficial shave biopsy of lesions concerning for melanoma)

d. Urgent referral to dermatology for biopsy
Biopsy of a Pigmented Lesion

- Take a photo before biopsy or record landmarks
  - This is helpful if need to refer for excision
- Provide a complete pathology request
  - Click [here](#) to watch a video on completing a pathology request
- Biopsy the **entire** lesion (nearly always possible)*
  - If a portion of a suspicious pigmented lesion is biopsied, the pathologist may not be able to say there is no melanoma in the remaining lesion

* Except when on the face or cosmetically sensitive areas
Biopsy of Suspicious Lesions

- Consider biopsy if there are pigmentary changes, changes in diameter/border, bleeding, persistent pruritus, new lesion if > 50 years of age, or the “ugly duckling”
- If you are unsure of the proper biopsy technique, refer to a dermatologist
A basic rule for nondermatologists to follow is never do a superficial shave biopsy of a pigmented lesion that is a possible melanoma.

- The reason is that the most important determinant of survival in melanoma is the Breslow depth, or tumor thickness, of the initial tumor.
- If a shallow shave biopsy does not contain the entire depth of the lesion, that information is unknown.
Case Five Continued

- You call the local dermatologist and ask if she can see Mr. S in the next few days for an urgent referral.
- She performs a biopsy, and the dermatopathologist diagnoses a melanoma *in situ* arising in a compound atypical (dysplastic) nevus.
- The dermatologist completely removes the lesion with 5 mm margins.
In this lesion, the white area was the area with melanoma *in situ*

The darker brown area was the atypical (dysplastic) nevus

If you had taken a partial biopsy of the darkest area, it would have resulted in a false-negative result (no melanoma)

This is the reason to biopsy the entire lesion
Case Five: Question 2

After this patient has had his melanoma *in situ* excised, what follow-up care do you recommend?

- a. Skin self-exams and sun protection only
- b. Skin self-exams, sun protection, and follow-up with his primary care doctor only
- c. Skin self-exams, sun protection, and follow-up with a dermatologist
Case Five: Question 2

**Answer: c**

After this patient has had his melanoma *in situ* excised, what follow-up care do you recommend?

- **a.** Skin self-exams and sun protection only
- **b.** Skin self-exams, sun protection, and follow-up with his primary care doctor only
- **c.** Skin self-exams, sun protection, and follow-up with a dermatologist
Case Six

J. P.
Case Six: History

- HPI: J. P. is a healthy 4-year old female brought in by her father for a new mark on her cheek. Parent reports that they noticed this lesion appear suddenly about 3 months ago and it grew quickly to today’s size.
- PMH: none
- Allergies: none
- Medications: none
- Family history: maternal grandmother with cutaneous squamous cell carcinoma
- Social history: attends preschool
- ROS: negative
Case 6: Skin Exam

- On J.P.’s left cheek you see a pink, round, 4mm papule. You see an overlying telangiectasia with dermoscopy
Case 6: Question 1

What is the most likely diagnosis and what is the next best step?

a. Pyogenic granuloma, freeze with liquid nitrogen
b. Pyogenic granuloma, superficial shave biopsy
c. Melanoma, urgent referral to a dermatologist
d. Spitz nevus, referral to a dermatologist for evaluation
e. Spitz nevus, superficial shave biopsy
Case 6: Question 1

Answer: d

What is the most likely diagnosis and what is the next best step?

a. Pyogenic granuloma, freeze with liquid nitrogen
b. Pyogenic granuloma, superficial shave biopsy
c. Melanoma, urgent referral to a dermatologist
d. **Spitz nevus, referral to a dermatologist for evaluation**
e. Spitz nevus, superficial shave biopsy
Spitz nevus

- A subtype of melanocytic nevus that occurs primarily in children
  - Commonly located on the face
- May have surface telangiectasia, may be pigmented
  - Differential includes melanoma, pyogenic granuloma and others
- Referral to dermatology recommended to confirm diagnosis
  - Most Spitz nevi have benign clinical behavior
  - Variants include atypical Spitz and Spitzoid melanoma
  - Careful observation appropriate in some cases
  - Don’t partially remove
  - If removed, pathologist should have experience with such lesions
ABDCE in pediatric patients?

- Pediatric melanoma does not always follow the conventional ABCDE criteria.
- It often presents with amelanosis, bleeding, “bumps,” uniform color, variable diameter, and de novo development.
- Additional criteria used along with the traditional ABCDE criteria may facilitate earlier recognition of melanoma in pediatric patients:
  - Amelanotic
  - Bleeding
  - Bump
  - Color uniformity
  - De novo
  - any Diameter
Patients with Pigmented Lesions: Who needs to see a Dermatologist?

- Patients with a large congenital nevus
- Patients with over 100 acquired nevi and/or or >5 atypical nevi, should be followed by a dermatologist
- Patients with two or more 1st degree relatives (sibling, parent, or child) with a history of melanoma
- ALL patients with a personal history of cutaneous melanoma
Take Home Points

- Patients with pigmented lesions need complete skin exams and accurate documentation for comparison at follow-up
- Pay special attention to new moles or recently changing moles
- Evaluate lesions for overall symmetry, borders, color, and size
- Evaluate lesions in the context of the patient in whom they occur. One of the most sensitive ways to detect melanoma is to find the “ugly duckling” among their nevi.
Take Home Points (cont.)

- Never treat a suspicious pigmented lesion with cryotherapy
- If you are unsure what the lesion is: biopsy or refer to a dermatologist
- Take a clearly marked pre-biopsy photo and document landmarks before removing a pigmented lesion
- When performing a biopsy, the goal is to get both the breadth and depth of the lesion you are sampling for histopathologic diagnosis
Acknowledgements

 This module was developed by the American Academy of Dermatology Medical Student Core Curriculum Workgroup from 2008-2012.
 Primary authors: Patrick McCleskey, MD; Heather Woodworth Wickless, MD, MPH.
   Peer reviewers: Timothy G. Berger, MD, Maria L. Wei, MD, PhD, Susana Ortiz-Urda, MD, PhD, Jean L. Bologna, MD.
   Revisions: Sarah D. Cipriano, MD, MPH; Ingrid C. Polcari MD
 Thanks to the Society for Pediatric Dermatology for help with revisions.
 Last revised November 2015.


To take the quiz, click on the following link:

https://www.aad.org/quiz/evaluation-of-pigmented-lesions-learners