Melanocytic Structures and Patterns: Benign and Malignant

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F088 - Dermoscopy for the Non-Dermoscopist
Saturday, 02/03/2017, 3:30-5:30 Ballroom 20A
Pattern Recognition:
Why is an elephant an elephant

- It has a trunk
- It has tusks
- It’s gray
- It is big
- It has 4 legs
- It has a tail

BECAUSE IT LOOKS LIKE AN ELEPHANT!

http://animals.nationalgeographic.com

Grob - Int J Cancer 2006 May 1; 118(9): 2276-80
Why is a melanoma a melanoma

It looks like a melanoma

You have to look at lots of melanomas so that you can recognize them when you see them

And recognize the benign lesions that aren’t melanomas

Many thanks to Dr. Al Kopf for images
Basic 2-Step Dermoscopy Algorithm

Step 1

LESION OF CONCERN
- MELANOCYTIC
- NON-MELANOCYTIC
- NOT SURE

Step 2

MALIGNANT
- BENIGN
Basic 2-Step Dermoscopy Algorithm

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MALIGNANT

- MALIGNANT
- BENIGN
Some Basic Vocabulary for Melanocytic Lesions

Network

Globules

Structureless Areas
Pigment Network

Reticular Pattern
Looks like a spider web
Junctional Nevus
Nests at the DEJ - alternating light and dark network
Globules

Large circular structures

Small globules are called dots

Cobblestoning = big squished globules

Nests in the dermis
Structureless Areas

Large areas without network, globules or another structure

Can be any color

Blotch, homogenous

May represent a variety of histologic structures
If you see **Network, Globules, Structureless Areas** – Think Melanocytic

Next, you have to decide if it’s **benign** or **malignant** based on the overall **pattern**
If you can learn common benign patterns, you can save biopsies

If you can learn distinctive malignant patterns, you can catch early melanomas
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- MALIGNANT
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<table>
<thead>
<tr>
<th>Malvehy et al. <em>Handbook of Dermoscopy</em> 2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reticular diffuse</td>
</tr>
<tr>
<td>Reticular patchy</td>
</tr>
<tr>
<td>Reticular central</td>
</tr>
<tr>
<td>Reticular hypopigmented</td>
</tr>
<tr>
<td>Reticular central</td>
</tr>
<tr>
<td>Reticular hyperpigmented</td>
</tr>
<tr>
<td>Reticular central</td>
</tr>
<tr>
<td>Reticular globular</td>
</tr>
<tr>
<td>Globular regular</td>
</tr>
<tr>
<td>Globular peripheral</td>
</tr>
<tr>
<td>Homogeneous</td>
</tr>
<tr>
<td>Multi-component symmetrical</td>
</tr>
</tbody>
</table>

Marghoob et al *Dermatol Surg* 2007
Compound Nevi
“Fried Eggs”
“Shoulder sign”
Compound center
Junctional periphery
Basic 2-Step Dermoscopy Algorithm

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Basic Vocabulary for Bad Things in a Melanoma

Watch out for the following!
Basic Vocabulary for Bad Things in a Melanoma
Watch out for the following!

Streaks
Blue white veil
Peppering
Angulated lines
White shiny perpendicular lines
Streaks

Lines sticking out of the side of a lesion
Blue White Veil

Hazy blue-white structureless area

Portion of lesion

Represents heavily pigmented cells in the dermis with overlying orthokeratosis
Peppering

Blue, grey, or black tiny dots
next to a structureless area

Represents regression

Very subjective
Shiny White Lines

White perpendicular lines

Chrysalis / chrystalline pattern

Represent increased collagen

Can also be seen in other completely unrelated lesions (DF, scars, BCC, spitz nevi)
Angulated Lines

Extrafacial lentigo maligna

Often in older patients on chronically sun damaged skin

Often in the middle of what otherwise looks like a solar lentigo
Watch out for thicker, darker peripheral areas and asymmetric streaks
Features that should catch your eye in melanocytic neoplasms

Focal peripheral areas that are different from the rest of the lesion

- Atypical network, dots
- Structureless areas

Focal blue-grey

- Eccentrically placed
- Granular
- Next to a scar-like area

Anything you can’t name!
Take home points

Blue is not always bad

If it’s uniform throughout the lesion, like in a blue nevus, it can be OK
Take Home Point

Peripheral darker areas are worrisome
Take Home Points

Focal dark should catch your eye

Eccentric darker pigment may be less worrisome when confined within the borders of the mole rather than sticking out

Don’t be a hero – if you’re not sure, BX – this one was!
Take Home Points

Beware a scar-like area, especially if the pigment is extending beyond the scar

Even if you get a history of trauma or prior bx
Spitz Nevi

Pigmented spindle cell nevus of Reed:  
**Starburst pattern**  
Radial Streaming = symmetric streaks all around
Spitz nevus – 3 typical patterns

Starburst

Globular pattern with reticular depigmentation (negative network)

Regularly distributed dotted vessels

Can have white shiny lines

Lallas et al BJD 2017
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NOT SURE
June 6th and 7th, 2019
NYU Langone Health, Farkas Auditorium
550 First Avenue, New York, NY 10016
http://www.med.nyu.edu/dermatology/education/events-conferences/advances-dermatology
Thank You!

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