Know your enemy…

It is warm work, And this day may be the last to any of us at a moment. But mark you!
I would not be elsewhere for thousands. Horatio Nelson…

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The most valuable clinical sign of all…

The break in the pattern…
CHAOS?

CHAOS: Structure; Colour; Border
Sections show dysplastic compound naevus with moderate melanocytic atypia and focal regression. There is no evidence of malignancy. The margins appear well clear.
Clinical factors
Dermatoscopic analysis
Patterns
Colours
Clues
Build mental image of histology slide
Predict histological diagnosis

"deeper levels"
Sections show dysplastic compound naevus with moderate melanocytic atypia and focal regression. There is no evidence of malignancy. The margins appear well clear.

Multiple deeper levels have been examined in an attempt to better correlate the histology with the dermatoscopy. These show a focus of early level 2 superficial spreading malignant melanoma...
Five previous melanomas
Father died of cerebral metastasis of melanoma aged 55
Why does the term “dysplastic” naevus persist?

• A stepwise progression model is *plausible and appealing*. 
Why does the term “dysplastic” naevus persist?

• A stepwise progression model is plausible and appealing
• For the pathologist it camouflages uncertainty

For the clinician it sanctifies an unnecessary excision

For the patient it makes the unnecessary excision acceptable
To find one melanoma you have to excise up to 10,000 naevi

For a 20-year-old individual, the lifetime risk of any selected mole transforming into melanoma by age 80 years is approximately 0.003% (1 in 3164) for men and 0.0009% (1 in 10800) for women.

CHAOS: Structure; Colour; Border
CHAOS: Structure; Colour; Border

1. Structure
   - Asymmetry
   - Border
   - Colour
   - Diameter

2. Colour
   - Variegated, mixed, or patchy

3. Border
   - Irregular, indistinct, or scalloped

4. Diameter
   - Greater than 6 mm
Viagra and melanoma risk…

Sildenafil Use and Increased Risk of Incident Melanoma in US Men
A Prospective Cohort Study

RESULTS: We identified 142 melanomas, 3805 SCC, and 3033 BCC cases during follow-up (2000-2010). Recent sildenafil use at baseline was significantly associated with an increased risk of subsequent melanomas, with a multivariate-adjusted hazard ratio of 1.84 (95% CI, 1.04-3.23). In contrast, we did not observe an increased risk of SCC, BCC, or IN SCLC. 0.65-1.25 (BCC 0.68; 0.93-1.35) associated with sildenafil use. Moreover, erectile function itself was not associated with an elevated risk of melanoma. Ever use of sildenafil was also associated with a higher risk of melanomas (HR 1.80, 95% CI, 1.41-2.32). A secondary analysis excluding those reporting major chronic diseases at baseline did not appreciably change the findings. The risk of melanoma was 1.92 (95% CI, 1.05-3.51) for sildenafil use at baseline and 2.77 (95% CI, 1.31-5.85) for ever use.

CONCLUSIONS AND RELEVANCE: Sildenafil use may be associated with an increased risk of developing melanoma. Although this study is insufficient to alter clinical recommendations, we support a need for continued investigation of this association.

Ever use: Increased risk 1.92 Recent use: Increased risk 1.84

Viagra and melanoma risk…

Importance: The RAS/BRAF/mitogen-activated protein kinase and extracellular signal-regulated kinase (ERK) kinase/ERK cascade plays a crucial role in melanoma cell proliferation and survival. Sildenafil citrate (Viagra) is a phosphodiesterase 5 (PDE5) inhibitor commonly used for erectile dysfunction. Recent studies have shown that sildenafil inhibits the PDE5A enzyme, down-regulates PDE5A levels, and increases BRAF expression. Sildenafil use may increase the invasiveness of melanoma cells, which could have possible adverse effects of sildenafil use on melanoma risk.

Viagra may increase the invasiveness of melanoma cells
CHAOS: Structure; Colour; Border
Why does acral skin have ridges and furrows?

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"The idea evolved that lesions have lives, just as human beings have; that lesions look very different at different times in their lives just as human beings do; and that stages in the lives of lesions can be described and depicted roughly as early, fully developed, and late, just as human beings can be described and depicted as infantile, mature, and old."

A. Bernard Ackerman, M.D.
From The Lives of Lesions, page vi (Ardor Scribendi, Ltd, 1983)
CHAOS: Structure; Colour; Border
### Clues to Melanoma

<table>
<thead>
<tr>
<th>Clue</th>
<th>RR</th>
<th>PPV%</th>
<th>NPV%</th>
<th>Sensitivity%</th>
<th>Specificity%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pigmented circles</td>
<td>3.7</td>
<td>25</td>
<td>95.93</td>
<td>70.83</td>
<td>76.39</td>
</tr>
<tr>
<td>Grey circles</td>
<td>4.6</td>
<td>26.5</td>
<td>94.2</td>
<td>54.2</td>
<td>83.3</td>
</tr>
<tr>
<td>Incomplete circles</td>
<td>3.0</td>
<td>18.4</td>
<td>93.9</td>
<td>58.3</td>
<td>71.3</td>
</tr>
<tr>
<td>Grey colour</td>
<td>8.9</td>
<td>13.3</td>
<td>98.5</td>
<td>95.8</td>
<td>30.6</td>
</tr>
<tr>
<td>Dot vessels</td>
<td>3.5</td>
<td>33.3</td>
<td>90.6</td>
<td>8.3</td>
<td>98.1</td>
</tr>
</tbody>
</table>

### Clues against Melanoma

<table>
<thead>
<tr>
<th>Clue</th>
<th>Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sharply demarcated border</td>
<td>0.1</td>
</tr>
<tr>
<td>White circles</td>
<td>N/A (Never)</td>
</tr>
</tbody>
</table>

### Decision Algorithm

#### Clues

1. Grey or blue structures
2. Eccrine structure/area
3. Thick lines, wrinkle, or knobby
4. Black dots or dials, purples
5. Linear radial or pseudopods, segmental
6. Lines white
7. Lines parallel, pigmentation (early) or chaotic (bulk)
8. Polymorphous vessels
9. Polypenes

#### Exceptions

1. Changing lesions on adults
2. Multiple or small lesions with any clue
3. Many black, pigmented lesions on areas like upper/lower arms, legs
4. Acral: Perihelion pigmentation pattern

### Melanoma Insitu

#### Precursor?

2008

2009
CHAOS: Structure; Colour; Border

DECISION ALGORITHM
CLUES
1. Grey or blue structures
2. Cosmically structured area
3. Thick lines, neticular or branching
4. White dots or globules, peripherally
5. Lines radial or pseudopods, segmental
6. Lines white
7. Lines parallel, notches (acral)
   or chaotic (bulk)
8. Polymorphous vessels
9. Polymorphs

EXCEPTIONS
1. Changing lesion on adult
2. Multiple sebaceous lesions with any clue
3. Inflamed/edematous (acral or
elements close to grey)
4. Acal: Notched ridge pattern
Naevoid lentigo maligna

Melanoma in situ

Decision Algorithm
Clues
1. Gray or blue discoloration
2. Cosmetic abnormalities
3. Thick lines, reticular or branched
4. Dark lines or shiny, perifollicular
5. Linear radial or pseudopods, segmental
6. Linear white
7. Unusual size, pigmented (acral)
8. Plaque-like, nodular (nodular)
9. Polymorphous vessels
10. Focal

Exceptions
1. Changing lesions on adults
2. Visible or small lesion with any clue
3. History of neoplasia
4. Acral: Keratotic ridge pattern
BRIEF REPORT

Dermatoscopy of a minute melanoma

Chi Ho Kwok,1 Alan Carson,2 Agius Babcock,3 Bolumental Wijeratna4 and Harold Attard1

1Department of Medicine, The University of Queensland and St. Luke's Skin Cancer Pathology, Brisbane, Queensland, Australia, and 2Department of Dermatology and Venereology, McGill University, Montreal, Canada.

ABSTRACT

We present a case report of a 40-year-old female who presented with a 3-mm asymptomatic lesion on her lower leg. The lesion was considered to be a melanoma on clinical and dermoscopic grounds. The lesion was considered to be a melanoma on clinical and dermoscopic grounds. The lesion was excised and the histopathological examination confirmed a melanoma. The lesion was excised and the histopathological examination confirmed a melanoma.

Key words: Dermatoscopy, Skin lesions, Melanoma, Intralesional, occult.

The lesion was excised and the histopathological examination confirmed a melanoma. The lesion was excised and the histopathological examination confirmed a melanoma.
Delusions of Perfection

- I do not miss melanomas (what I don’t see does not exist)…
Delusions of Perfection

- I do not miss melanomas (what I don’t see does not exist)...
- If I missed a melanoma I would hear about it

He can’t even remember who his doctor was...
Delusions of Perfection

- I do not miss melanomas [what I don’t see does not exist]...
- If I missed a melanoma I would hear about it

Every invasive melanoma you diagnose on a patient you have examined before has been previously an insitu melanoma and in almost all cases would have been present when you examined the patient previously...

FACT: 1 in 10 of these patients will die from melanoma

Delusions of Perfection

- I do not miss melanomas [what I don’t see does not exist]...
- If I missed a melanoma I would hear about it

Every invasive melanoma you diagnose on a patient you have examined before has been previously an insitu melanoma and in almost all cases would have been present when you examined the patient previously...

Delusions of Perfection

- I do not miss melanomas [what I don’t see does not exist]...
- If I missed a melanoma I would hear about it
- It wasn’t there when he saw me or it wasn’t a melanoma when I saw it
**Delusions of Perfection**

- I do not miss melanomas (what I don’t see does not exist)...
- If I missed a melanoma I would hear about it
- It wasn’t there when he saw me or it wasn’t a melanoma when I saw it

**FACT:** 1 in 10 of these patients will die from melanoma

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**Delusions of Perfection**

- I do not miss melanomas (what I don’t see does not exist)...
- If I missed a melanoma I would hear about it
- It wasn’t there when he saw me or it wasn’t a melanoma when I saw it

Actually it was...

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**Delusions of Perfection**

- I do not miss melanomas (what I don’t see does not exist)...
- If I missed a melanoma I would hear about it
- It wasn’t there when he saw me or it wasn’t a melanoma when I saw it
Delusions of Perfection

- I do not miss melanomas (what I don’t see does not exist)...
- If I missed a melanoma I would hear about it
- It wasn’t there when he saw me or it wasn’t a melanoma when I saw it
- It is a dermatopathologic over-call...

Don’t generalise!
**Delusions of Perfection**

- I do not miss melanomas (what I don’t see does not exist)...
- If I missed a melanoma I would hear about it
- It wasn’t there when he saw me or it wasn’t a melanoma when I saw it
- It is a dermatopathologic over-call...
- It is probably not biologically significant...
- (Why? Because you missed it?)

A melanoma is terminated at diagnosis....

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**Delusions of Perfection**

- Patient examined by CR. No lesions of concern
- Referred for total body photography and melanographer assessment because high risk (2 previous melanomas)
CHAOS: Structure; Colour; Border
Melanoma insitu

NO Delusions of Perfection

Mea culpa...

...and this day may be the last to any of us at a moment...

Horatio Nelson...
DECISION ALGORITHM

CLUES
1. Grey or blue structures
2. Eccentric structures less area
3. Thick lines, reticular or branched
4. Black dots or clumps, perpendicular or pseudo-polystatic, segmental
5. Urethral
6. Area parallel, edges (area) or clumps (black)
7. Polyepithelial cells

EXCEPTIONS
1. Changing lesions on adult
2. Includes or small lesions with any clue
3. Head/neck, Pigmentum dots or dermatoglyphics grey
4. Area: variant edge pattern
Melanoma insitu

Thank you!

It is warm work, And this day may be the last to any of us at a moment.
But mark you!
I would not be elsewhere for thousands...
Horatio Nelson