DIGITAL DERMOSCOPY
MONITORING OF MELANOCYTIC LESIONS
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**PRINCIPLES**

- Currently restricted to monitoring over time MELANOCYTIC lesions
- Unchanged melanocytic lesions are benign
- Allows detection of dermoscopy featureless melanoma
- Two approaches
  - Short term monitoring (3 months)
    - Suspicious lesions
  - Long term monitoring (6 months or longer)
    - Multiple nevi in patients with DNS
    - Less suspicious nevi in long term surveillance patients
DON’T MONITOR NODULAR LESIONS
Digital Monitoring of Melanocytic Lesions

SHORT TERM MONITORING
PRINCIPLES OF SHORT-TERM MONITORING

- Suspicious lesions without evidence of melanoma monitored at an earlier interval (3 months) than standard follow-up
- Any change leads to excision
- If no features of melanoma &
  - moderately atypical without Hx change
  - mildly atypical with Hx change

Menzies et al. Arch Dermatol 2001
### Percentage of Dermoscopically Featureless Melanoma Found Monitoring

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Diagnostic accuracy for melanoma short-term monitoring

Altamura et al. Arch Dermatol 2008

- Sensitivity 94% (non-lentigo maligna*)
- Specificity 84%

- Sensitivity 75% lentigo maligna
  - Need second monitor
Long interval monitoring

- 6-12 month interval standard surveillance
- Multiple nevi in higher risk cohorts
- Need to define “significant” changes
Previous Studies

- **Significant change (4% total) defined as:**
  - enlargement
  - changes in shape
  - regression
  - color
  - appearance (known dermoscopy structures associated with melanoma)
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DIAGNOSTIC ACCURACY FOR MELANOMA:
LONG TERM MONITORING

- Kittler JAAD 2000; Robinson Arch Derm 2004; Haenssle JID 2006
  - Specificity 96% - 95%
  - Sensitivity unknown
CLINICAL IMPACT OF DERMOSCOPY MONITORING

- Detects a large number of melanoma in cohorts
  - 34-61% in mod-high risk patients (Haenssle JID 2006, Moloney JAMADermatol 2014, Salerni JAAD 2012)
  - 12-55% in routine derm practice (Tromme BJD 2012, Salerni Derm Pract. Concept. 2014)
  - 33% in routine primary care (Menzies BJD 2009)
  - 52% in telemedicine (Rademaker J Prim H Care 2010)
CLINICAL IMPACT DERMOSCOPY MONITORING

- LONG-TERM MONITORING of multiple nevi in LOW-RISK cohorts LESS EFFICACIOUS
  - Fewer melanomas detected
  - Cost effective issues (eg. 150 visits to detect 1 melanoma)

CLINICAL IMPACT OF DERMOSCOPY MONITORING

- Reduces the benign:melanoma ratio of excised lesions in both specialists and primary care (Menzies BJD 2009, Tromme BJD 2012)
Belgium dermatologists (short and long term monitoring)

Benign:Melanoma ratio excisions
  - 8.1 vs 2.5 (Dermoscopy monitoring)

€1,600 vs 1,000 (monitoring) per melanoma detected
COST DIFFERENCE: Watts J Clin Oncol 2017

- AUSTRALIAN HIGH RISK COHORT: Dermoscopy monitoring and total body photography vs Standard Care over 10yrs

- A$6800 per patient SAVED
  - Earlier detection
  - Reduced excisions
To assess individual melanocytic lesions of concern, recommend the use of short-term dermoscopy monitoring to detect melanomas that lack dermoscopic features of melanoma

- **Grade B recommendation**: Body of evidence can be trusted to guide practice in most situations
To assess individual or multiple melanocytic lesions in routine surveillance of high risk patients, recommend the use of long-term dermoscopy monitoring to detect melanomas that lack dermoscopic features of melanoma

- **Grade B recommendation**: Body of evidence can be trusted to guide practice in most situations
AUSTRALIAN MELANOMA GUIDELINES