



Dermoscopy



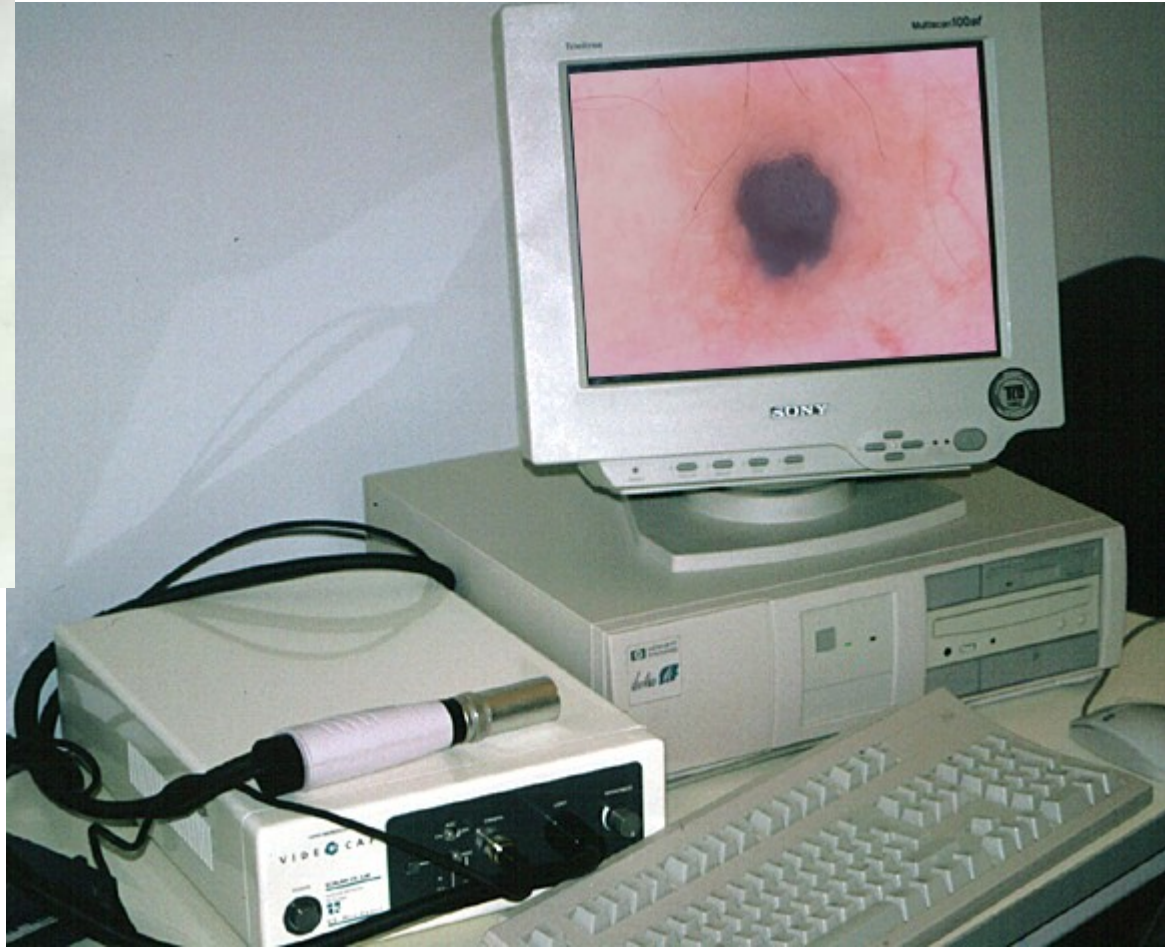
- Cheap
- Fast for screening
- Great quality



Digital Dermoscopy



- Expensive
- Fast documentation
- Sufficient quality





Instruments for Image Capture

- Standard dermoscopy:
 - best quality and price for diagnosis and photography
 - (about € 1.000)
- Digital dermoscopy:
 - faster and more reliable for follow-up
 - (about € 10.000)





Indications for Dermoscopy

▶ Classic dermoscopy – pigmented and non-pigmented skin lesions

▶ Inflammatory dermoscopy – scabies & psoriasis/lichen planus

▶ Trichoscopy – classification of hair diseases



Dermoscopy in General Dermatology

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Key Words

Dermoscopy · Diagnosis · Vessels · Nonpigmented skin lesions

Introduction

Dermoscopy is a noninvasive diagnostic technique that permits the visualization of morphologic features



Psoriasis vulgaris or lichen planus

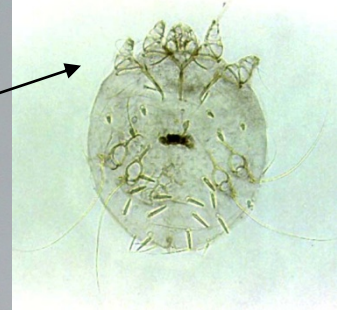




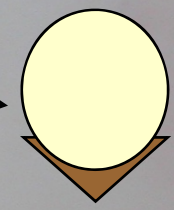
Psoriasis vulgaris or lichen planus



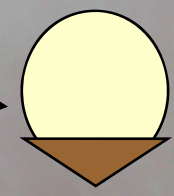
Psoriasis vulgaris



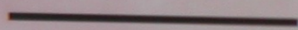
dorsal



ventral



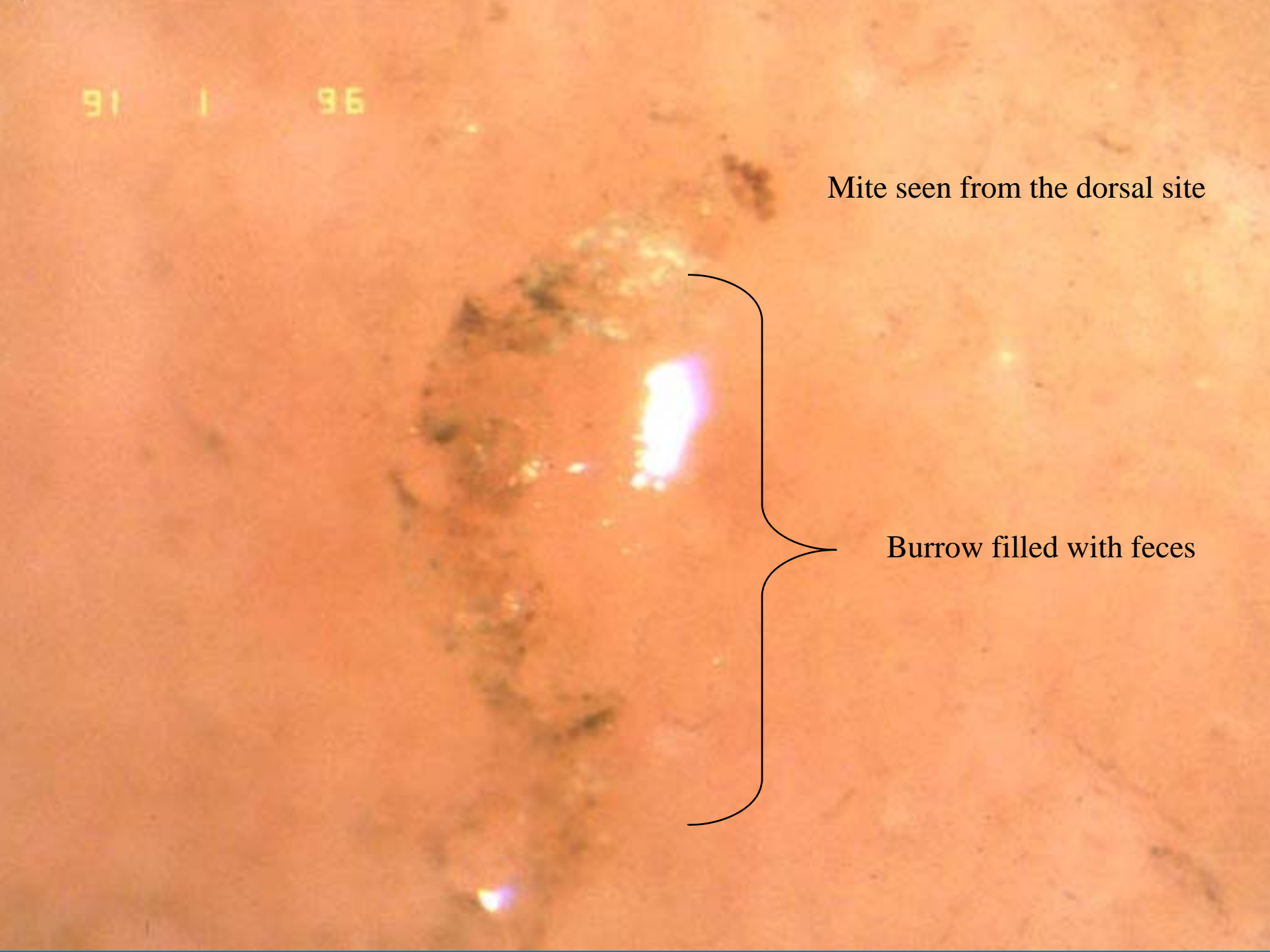
5



91 1 96

Mite seen from the dorsal site

Burrow filled with feces





Morphologic Dimension

What is your diagnosis?



International Dermoscopy Diploma

Medical University Graz

Start

Why
dermoscopy?

Approaches

Recognition
process

What is your
diagnosis?

WHAT IS YOUR DIAGNOSIS?



Click on the correct answer?

- Melanoma
- Benign Nevus
- I don't know!



Morphologic Dimension

What is your diagnosis?



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WHAT IS YOUR DIAGNOSIS?



[Hover over the cities to explore Austria]

This is the AUSTRIAN NEVUS ...



Why Dermoscopy?

▶ Dermoscopy opens up a new dimension of clinical morphology

▶ Dermoscopy „forces“ physicians to dedicate more time and care for individuals with pigmented skin lesions

▶ Dermoscopy is more accurate than clinical examination based on four meta-analyses

▶ Digital dermoscopy allows easy storage & retrieval and opens the door for monitoring, teledermoscopy and automated diagnosis

New Dimension of Clinical Morphology



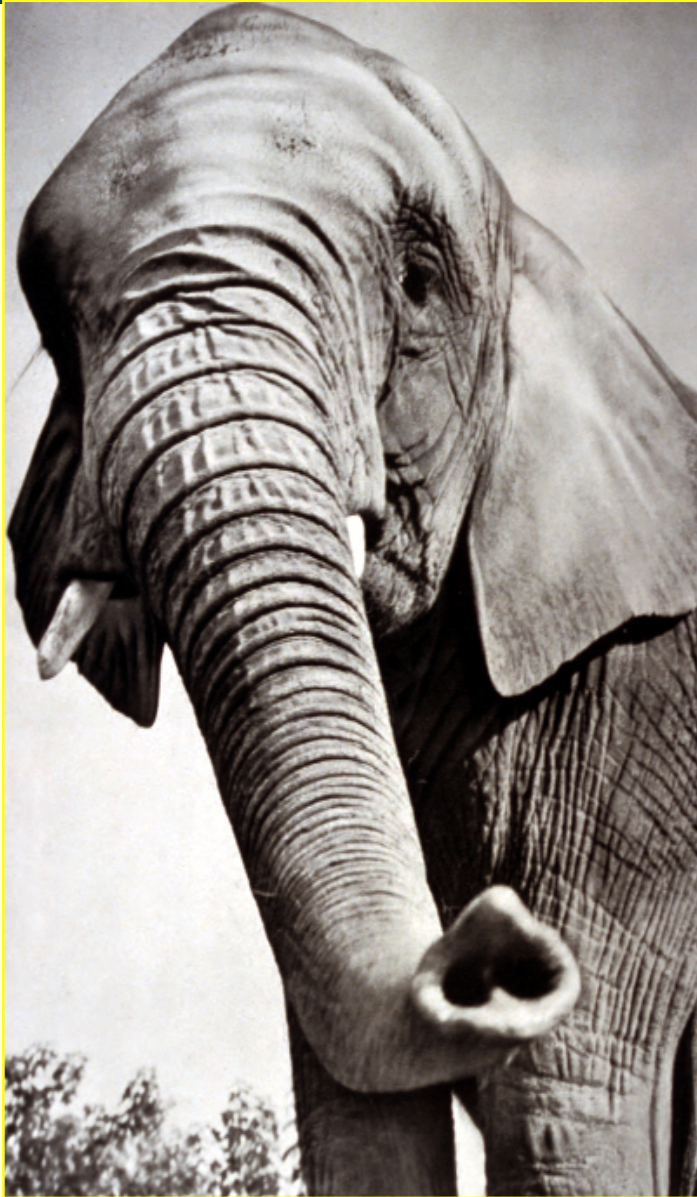


First Prospective Study of the Recognition Process of Melanoma in Dermatological Practice

Julie Gachon et colleagues

Arch Dermatol 141: 434 – 438, 2005

- **Assessment of the overall pattern – cognitive process**
- ‘Ugly duckling sign’ – comparative process
- Knowledge of recent change – interactive process





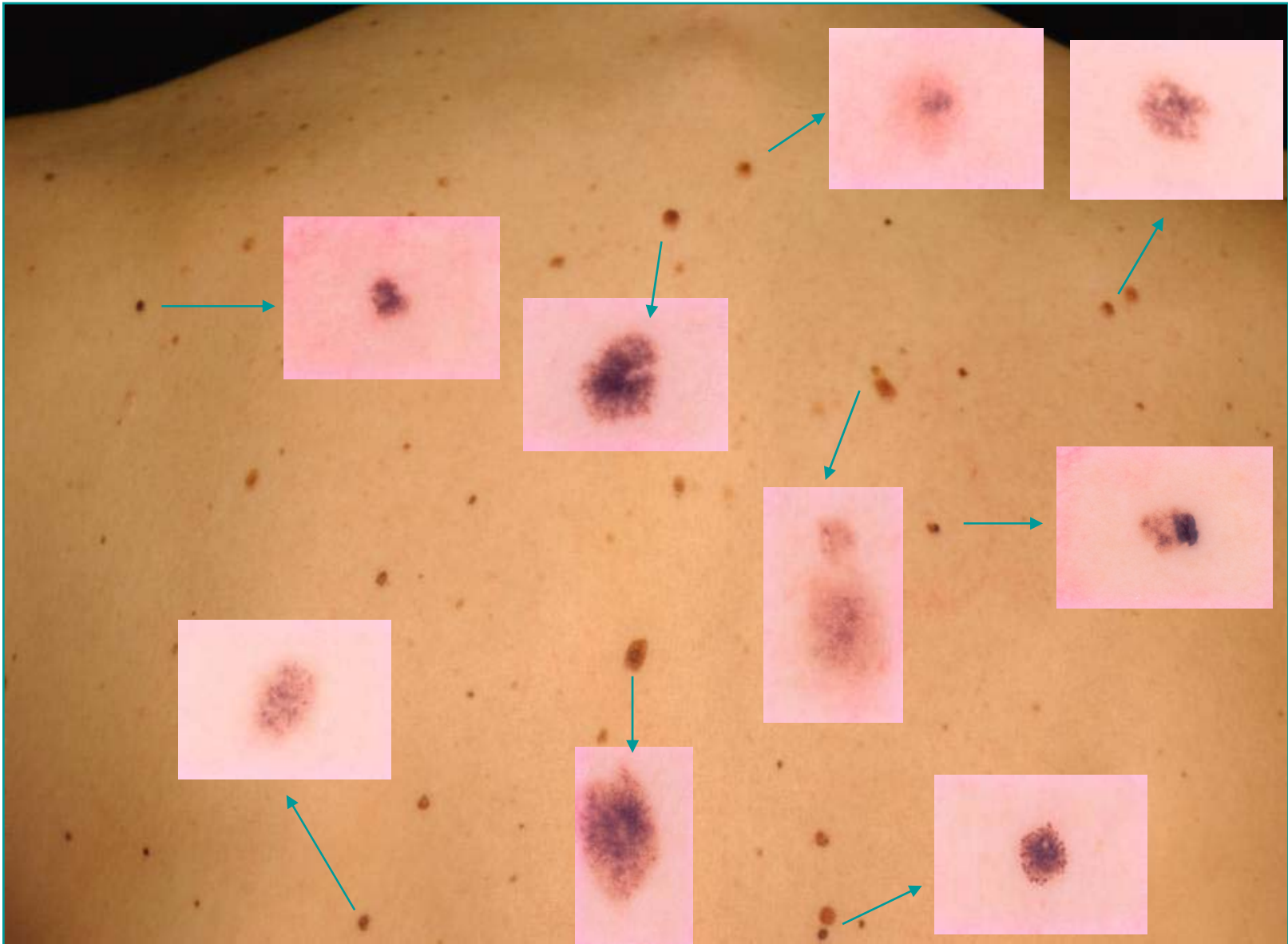


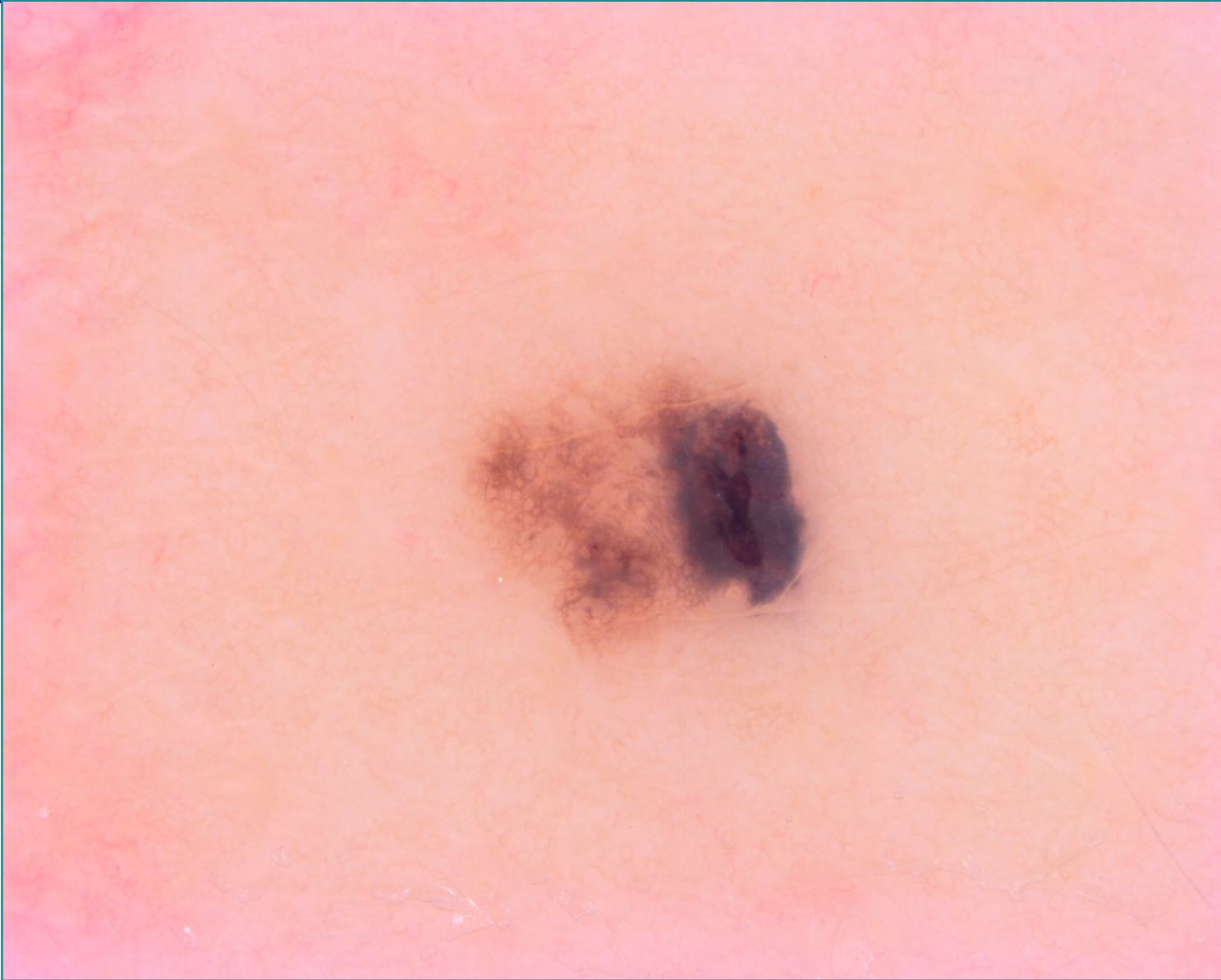
First Prospective Study of the Recognition Process of Melanoma in Dermatological Practice

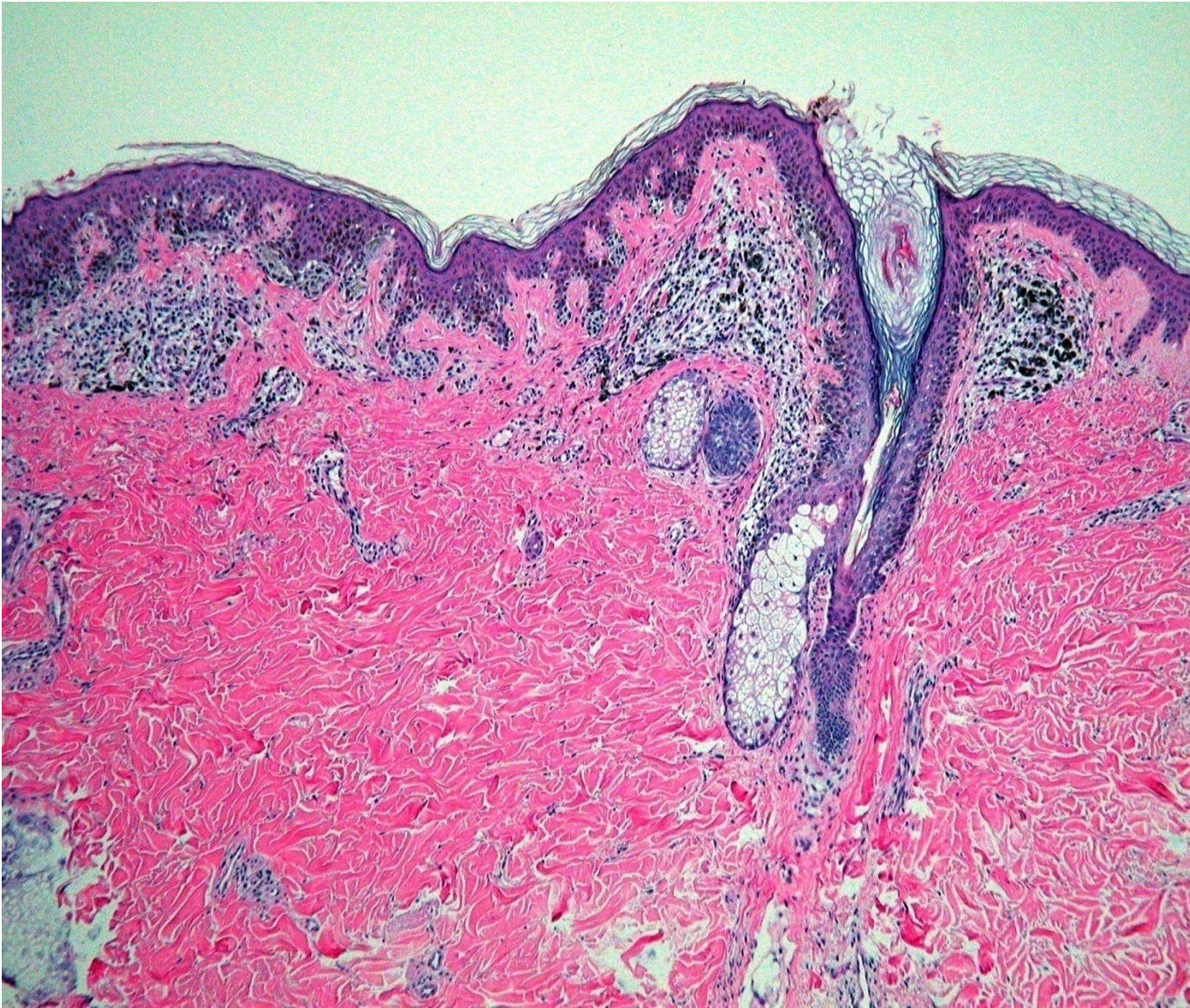
Julie Gachon et colleagues

Arch Dermatol 141: 434 – 438, 2005

- Assessment of the overall pattern – cognitive process
- ‘Ugly duckling sign’ – comparative process
- Knowledge of recent change – interactive process









The “Ugly Duckling” Sign

Agreement Between Observers

Alon Scope, MD; Stephen W. Dusza, MPH; Allan C. Halpern, MD, MS; Harold Rabinovitz, MD; Ralph P. Braun, MD; Iris Zalaudek, MD; Giuseppe Argenziano, MD; Ashfaq A. Marghoob, MD

Objectives: To assess whether multiple observers can identify the same pigmented lesion(s) as being different from a patient’s other moles (“ugly duckling” [UD] sign) and to explore whether the UD sign is sensitive for melanoma detection.

Design: Baseline back images of 12 patients were obtained from a database of standardized patient images. All patients had at least 8 atypical moles on the back, and in 5 patients, one of the lesions was a histologically confirmed melanoma. The overview back images were supplemented with close-up clinical images of lesions. Participants were asked to evaluate whether the images showed any lesions on the back that differed from other nevi.

Setting: Dermatology clinic specializing in pigmented lesions.

Participants: Images were evaluated by 34 participants, including 8 pigmented lesion experts, 13 general

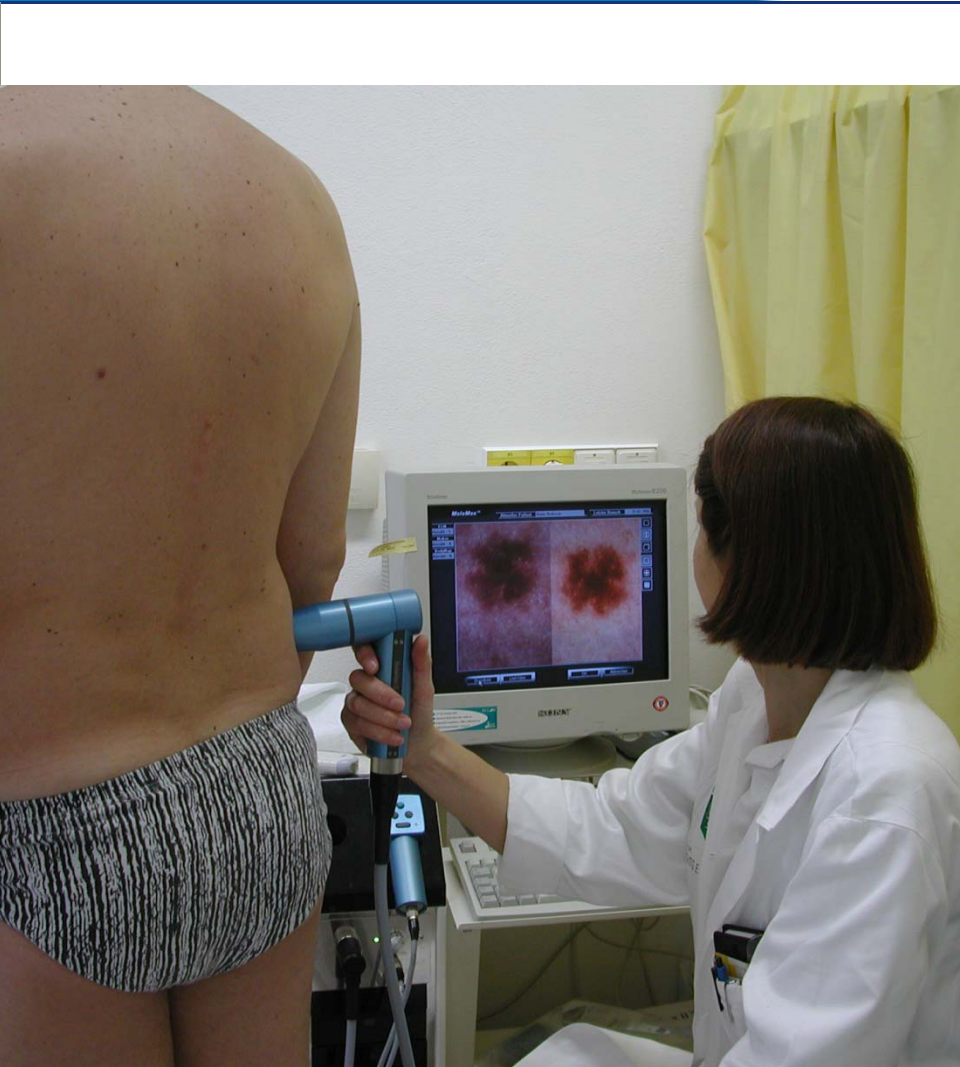
dermatologists, 5 dermatology nurses, and 8 nonclinical medical staff.

Main Outcome Measures: A lesion was considered a generally apparent UD if it was perceived as different by at least two-thirds of the participants. Sensitivity was defined as the fraction of melanomas identified as different.

Results: All 5 melanomas (100%) and only 3 of 140 benign lesions (2.1%) were generally apparent as different. The sensitivity of the UD sign for melanoma detection was 0.9 for the whole group, 1.0 for experts, 0.89 for general dermatologists, 0.88 for nurses, and 0.85 for nonclinicians. A limitation of the study is that assessment was done in virtual settings.

Conclusions: In the present study, melanomas were generally apparent as UDs. The potential of the UD sign for melanoma screening should be further assessed.

Arch Dermatol. 2008;144(1):58-64



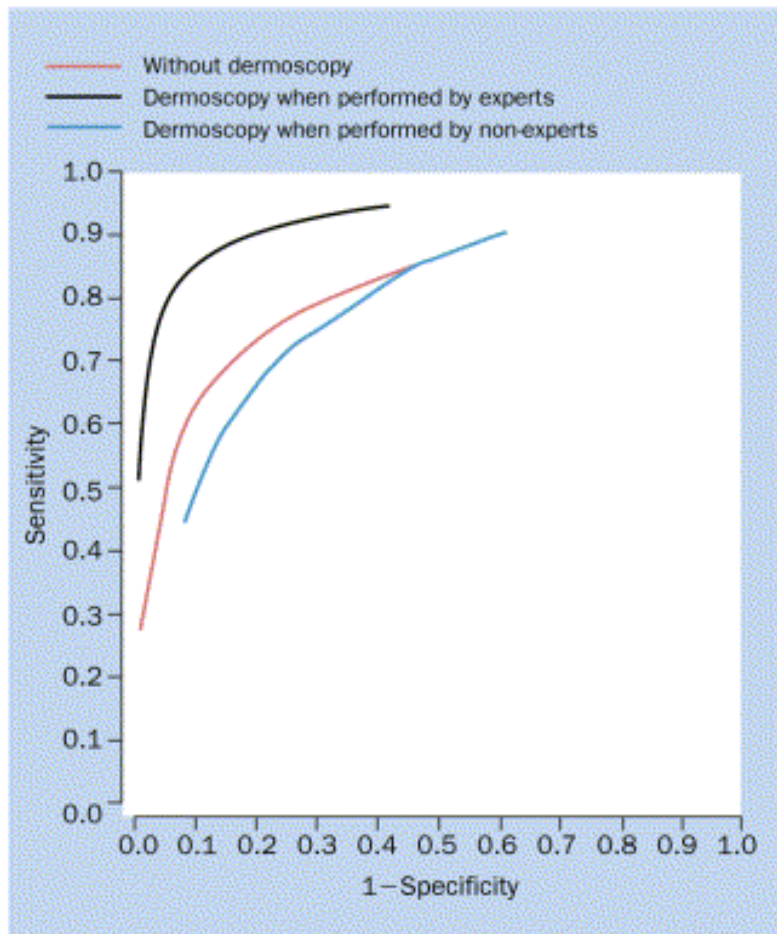
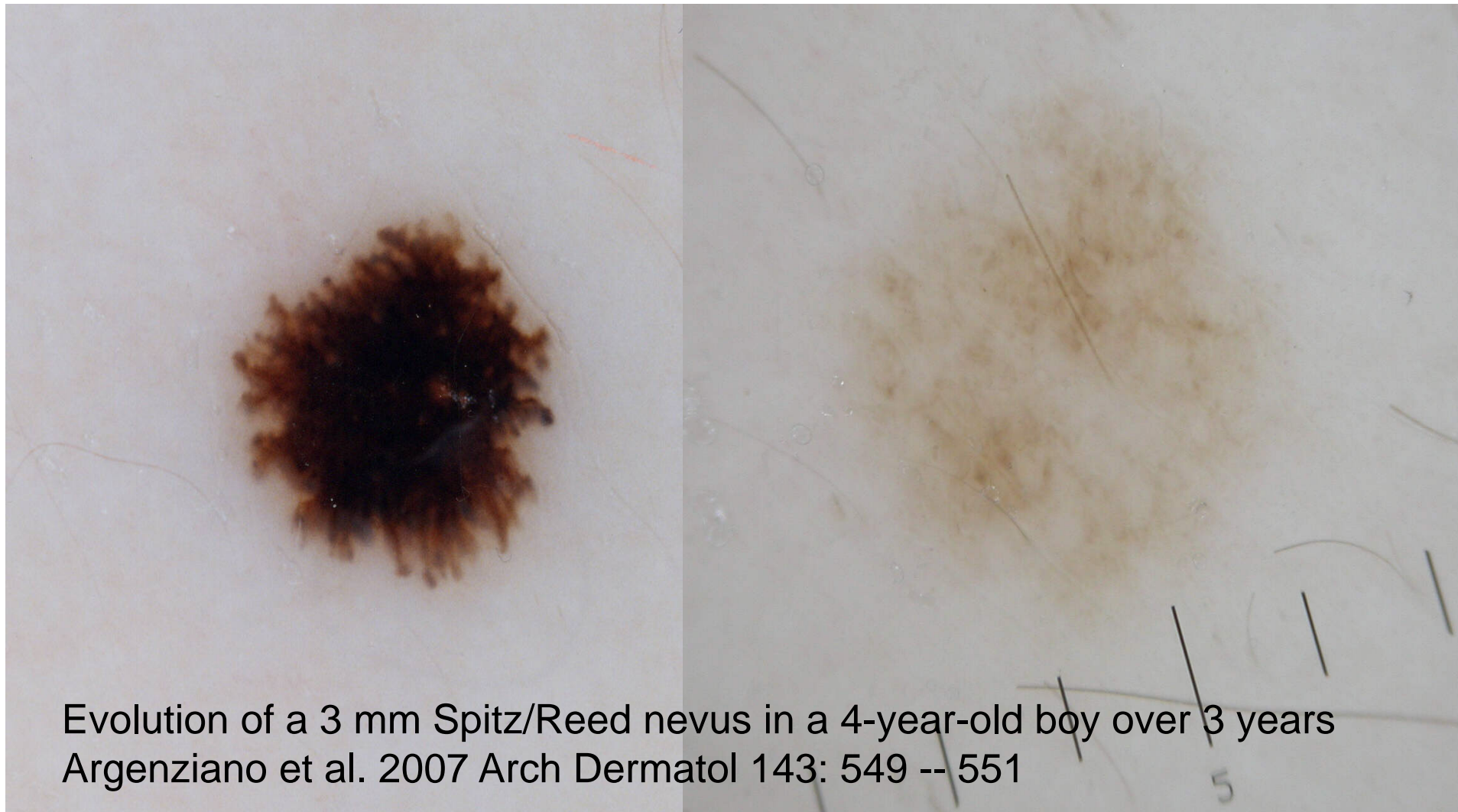


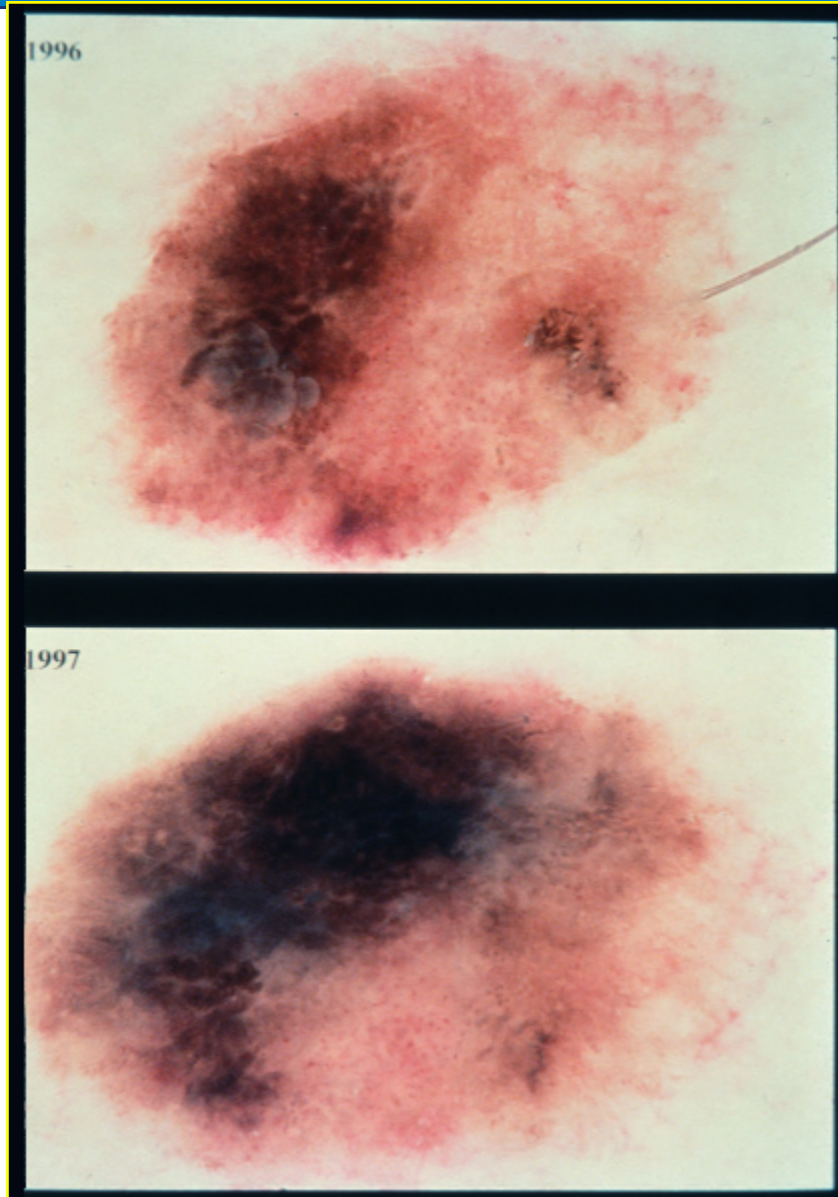
Figure 2. SROC curves for the performance of the clinical diagnosis without dermoscopy (red line), dermoscopy by experts (black line), and dermoscopy by non-experts (blue line).

Kittler H et al. Diagnostic accuracy of dermoscopy. *Lancet Oncology* 2002; 3: 159





Do we now
monitor
melanomas?









MoleMap Programme

A comprehensive melanoma surveillance programme utilizing a tele-dermatology infrastructure.

- Imaging systems in imaging clinics staffed by melanographers (nurses)
- Uses total body photography combined with digital dermoscopic techniques and a comprehensive set of data collected during the procedure
- Connects to a network of dermatologists highly experienced in the identification of melanoma – **DERMOSCOPISTS**



Welcome to telederm.org

The Community for Tele dermatology | Dermatology

The **Teledermatology project: telederm.org** was conceived in 2002 and is aimed towards the exchange of knowledge and expertise on a worldwide level. The goal of the Community for Tele dermatology | Dermatology is to create a surplus value for experts, physicians and healthcare workers interested in dermatology and teledermatology.

This **teleconsultation service** is based on the transmission of digital images following the **store-and-forward method**. Users are invited to submit clinical and dermatopathologic cases of interest to the **discussion forum** thus making them available for viewing and comment by all other members.

Free Membership

The Community for Tele dermatology | Dermatology is completely free of charge and the site does not host or receive funding from advertising.

The basic aim of the project is to create a user-friendly platform for a **teleconsultation service** where physicians can quickly and easily seek **diagnostic advice in dermatology** from a pool of expert consultants and where they can present and discuss particular dermatological cases with an emphasis on diagnostic procedures, diagnosis and therapy.

Our Aim

Telederm.org is the homebase of The Community for Tele dermatology | Dermatology. The concept of Open Access Teleconsultation in Dermatology has been introduced to provide and share user-generated content on a worldwide level. This goal is achieved by establishing a moderated user-content-driven community.

Your Telederm.org Team



This photograph of the telederm.org team was taken during [the World Congress of Tele dermatology](#), held in November 2006 in Graz.

From the right side to the left: Zrinjka Pastar, Murat Borlu, Shahbaz Janjua, Rainer Hofmann-Wellenhof,

LOGIN

user:

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[Yasin Al-Qubati, Yemen](#)
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[Figen Akin, Turkey](#)
[Thomas Jayakar, India](#)
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TOP SITES

- 1) [Dermatologic Image Database](#)
- 2) [Global Skin Atlas](#)
- 3) [American Telemedicine Association](#)
- 4) [Dermatology Image Atlas of Tele dermatology](#)
- 5) [International Society of Tele dermatology](#)
- 6) [European Academy of Dermatology and Venereology \(EADV\)](#)



Global Community





Telederm Discussion Forum

Forums->Telederm Discussion Forum->pigmentary leg tumor

[next topic]

pigmentary leg tumor



Start watching this case.

REPLY ON CASE

TDerm ID: 1ac91947dc5914ea457b547e1bfe338c
 Age: 74
 Sex: female
 Location: thigh

Clinical history: 2 years lasting history, with progressive growth and color change

Diagnosis: Seborheic keratosis, melanoma

Question: Diagnostic suggestions, worrisome central redish structureless area

[laurentiu_vladau](#)

posts:15



DSC05041.JPG (324.37 Kb)



DSC05046.JPG (321.38 Kb)



DSC05053.JPG (348.89 Kb)

on: Tue 05 of May, 2009 [00:51]

reads: 56

Add Case

- [MyTelederm Home](#)
- [MyTelederm Details](#)
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- [MyTelederm Mail](#)
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Do you think that "Parapsoriasis en Plaques of Brocq" is a precursor of mycosis fungoides?



Yes



No



I don't know

vote

[View Results](#)
 (Votes: 13)
 (Comments: 1)



Tue 05 of May, 2009

7 new posts



LAST 20 VISITORS

- [HPS](#)
May 07, 2009 - 15:11
- [admin](#)
May 07, 2009 - 15:11
- [LeoCab](#)
May 07, 2009 - 14:40
- [shahbazj](#)
May 07, 2009 - 08:40



author	message
 Iris posts:271 	<p>highly suspicious on: Tue 05 of May, 2009 [03:24]</p> <p>This lesion is highly suspicious for invasive melanoma and entire excision is urgently recommended!</p>

author	message
<p>laurentiu_vladau posts:15 </p>	<p>The lesion was already excised... on: Tue 05 of May, 2009 [03:33]</p> <p>The lesion was already excised with 1 cm margin, I will let you know about the histopathology.</p>

author	message
 HPS posts:450 	<p>Verrucous melanoma on: Tue 05 of May, 2009 [08:15]</p> <p>Of course there is a very very tiny chance that this is a seborrheic keratosis, but ... as mentioned above this is most probably a verrucous melanoma mimicking a seborrheic keratosis. Breslow will be about 1.5mm or even close to 2mm -- thanks for keeping us posted.</p>

author	message
 omleila posts:209 	<p>highly suspicious lesion for MM on: Tue 05 of May, 2009 [11:09]</p>

- May 06, 2009 - 10:10
- [flaviusmarinescu](#)
May 06, 2009 - 14:51
- [drmyintmyintgyi](#)
May 06, 2009 - 07:24
- [DrKlenkar](#)
May 06, 2009 - 00:36
- [rsavall](#)
May 06, 2009 - 00:32
- [elisko](#)
May 05, 2009 - 20:04
- [libovi](#)
May 05, 2009 - 19:26
- [jim](#)
May 05, 2009 - 18:07

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TELEDERMOSCOPY



Application was initialized successfully

[International Society of Dermoscopy](#)

Welcome to the member area of the IDS website!

Open Access Teleconsultation in Dermoscopy

Welcome to the discussion forum of the IDS. This is a forum open to all IDS members where you can discuss issues related to dermoscopy and skin tumors.

The structure of this forum follows the open access philosophy utilized by the [telederm.org](#) community.

You can use this application to share questions or images with other members!

Note: Before registering to use the restricted area and the discussion forum, you first have to [register as an IDS member](#).

member area registration

e-mail* address:

Your username is your e-mail address. We will send e-mail to you at this address.

After you register, you will be sent an e-mail describing the next steps.

Application provided by [e-derm-consult gmbh](#), Graz, Austria

log on

username

password

Coordinators:

- [Giuseppe Argenziano](#)
- [H. Peter Soyer](#)

Moderators:

- [Jim Muir](#)
- [Iris Zalaudek](#)

Archive Manager:

- [Rainer Hofmann-Wellenhof](#)



The Skin Cancer Clinic Blog is an educational website of The Skin Cancer Society. Any cases you might have for the blog should be sent to one of the Editors or imccoll@ozemail.com.au.

Our motto- There are no wrong answers- only different opinions.

" Finally I have experienced something great, physically feeling the rotation of the earth as the bloggers answered one by one." Jean-Yves Gourhant.

WEDNESDAY, AUGUST 27, 2008

MASTERCLASS 2008



Editors

- [Dr Alan Cameron](#)
- [Dr Alex Chamberlain](#)
- [Dr Jeff Keir](#)

<http://www.skincancerclinic.blogspot.com/>



Systematic review of dermoscopy and digital dermoscopy/artificial intelligence for the diagnosis of melanoma

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Summary

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18 September 2008

Key words

artificial intelligence, dermoscopy, digital dermoscopy, melanoma, systematic review

Conflicts of interest

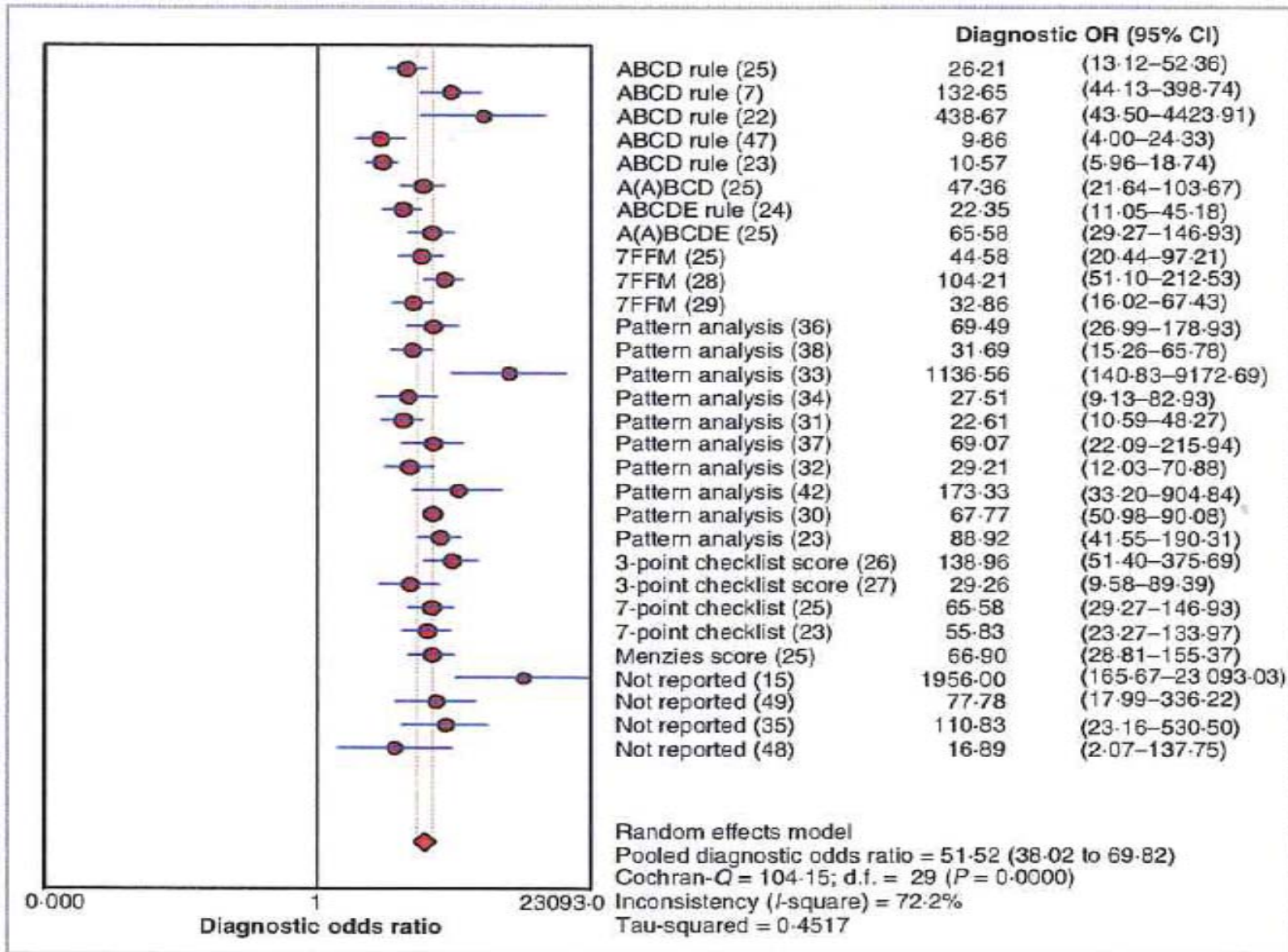
None declared.

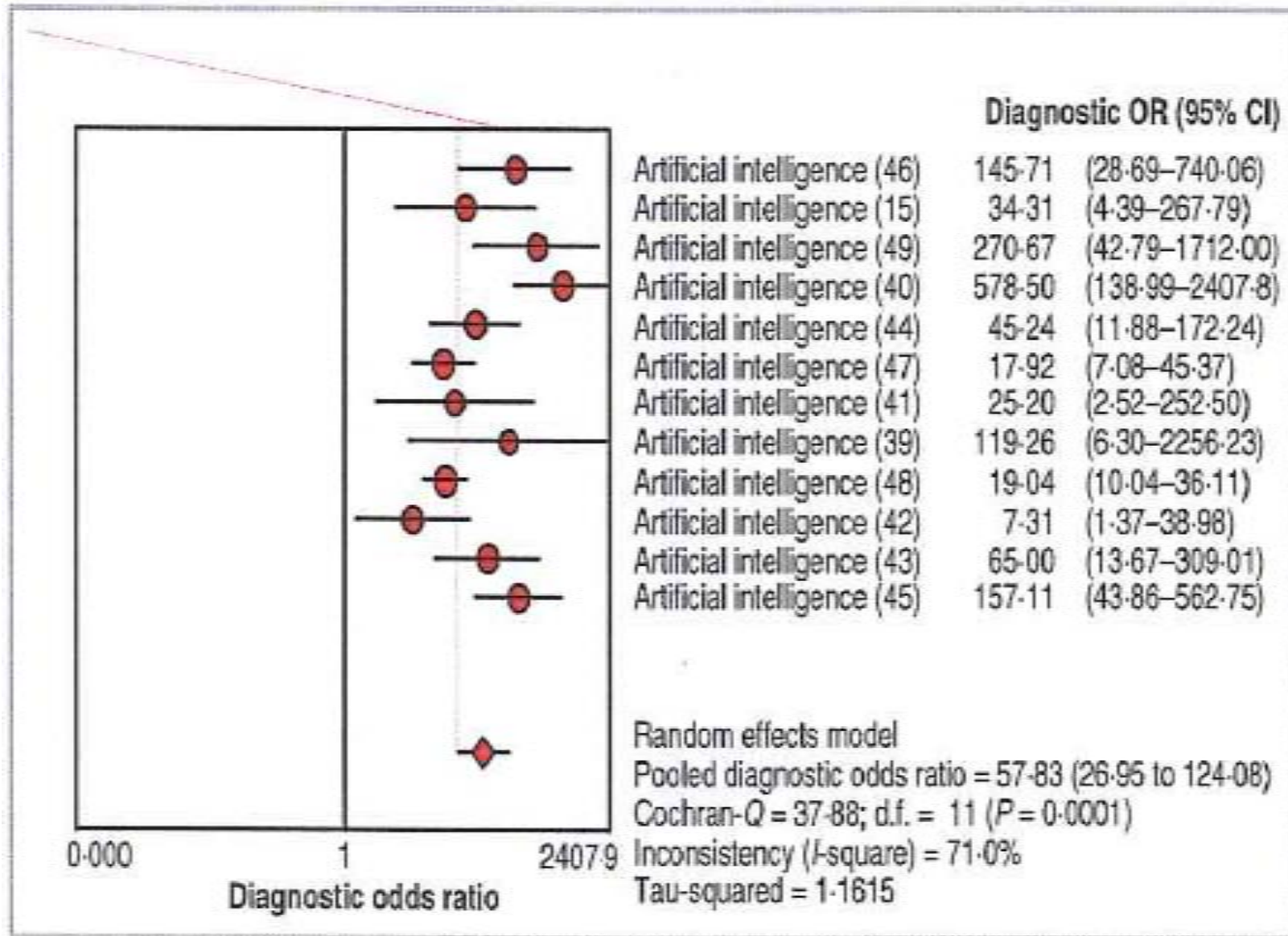
DOI 10.1111/j.1365-2133.2009.09093.x

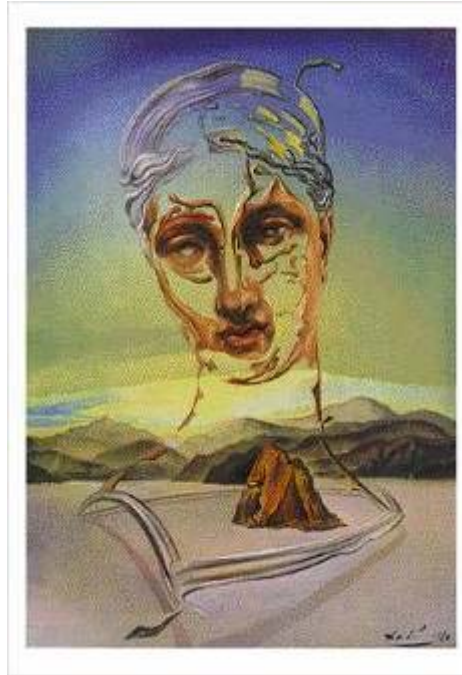
Background Dermoscopy improves diagnostic accuracy of the unaided eye for melanoma, and digital dermoscopy with artificial intelligence or computer diagnosis has also been shown useful for the diagnosis of melanoma. At present there is no clear evidence regarding the diagnostic accuracy of dermoscopy compared with artificial intelligence.

Objectives To evaluate the diagnostic accuracy of dermoscopy and digital dermoscopy/artificial intelligence for melanoma diagnosis and to compare the diagnostic accuracy of the different dermoscopic algorithms with each other and with digital dermoscopy/artificial intelligence for the detection of melanoma.

Methods A literature search on dermoscopy and digital dermoscopy/artificial intelligence for melanoma diagnosis was performed using several databases. Titles and abstracts of the retrieved articles were screened using a literature evaluation form. A quality assessment form was developed to assess the quality of the included studies. Heterogeneity among the studies was assessed. Pooled data were analysed using meta-analytical methods and comparisons between different algorithms







‘The eye sees what
the mind knows’