OCCHIO
A QUEL NEO
CHE CRESCE!

Diagnosi precoce nel melanoma
Dermatoscopia e microscopia confocale

Ignazio Stanganelli
Professore Associato Clinica Dermatologica Università di Parma
Responsabile Skin Cancer Unit – IRCCS IRST - Istituto Tumori Romagna

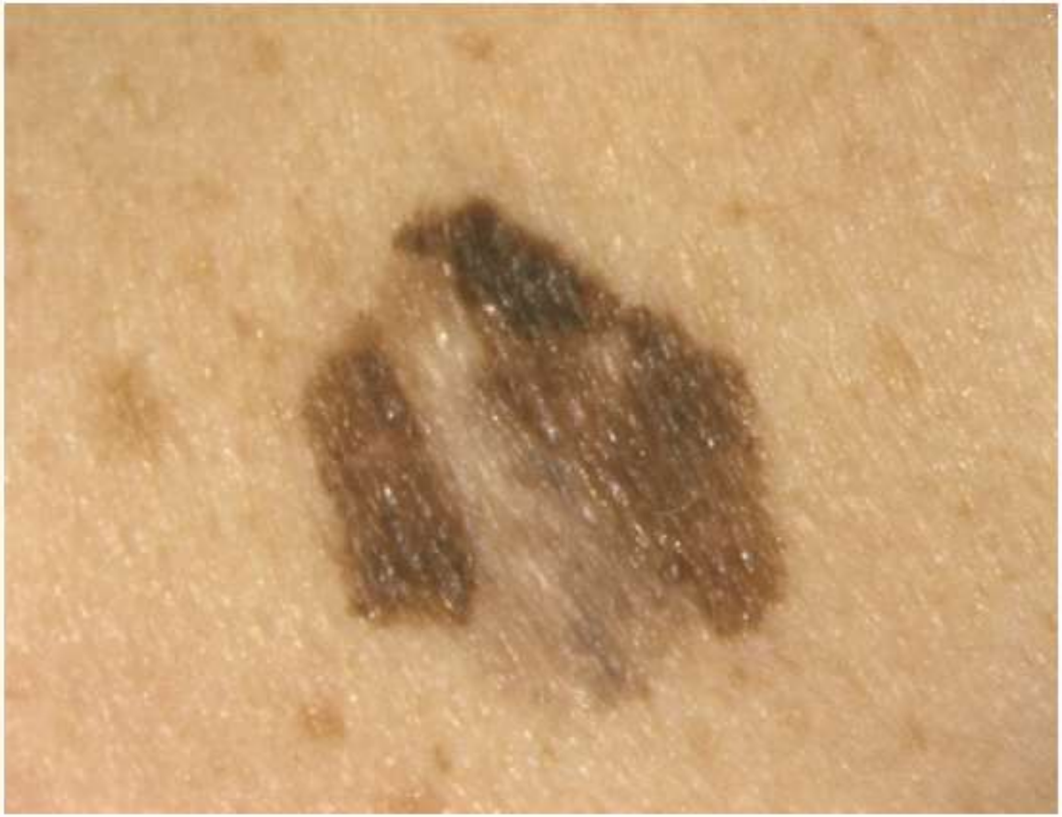
SERVIZIO SANITARIO REGIONALE
EMILIA-ROMAGNA
Istituto Scientifico Romagnolo per lo Studio e la Cura dei Tumori
Istituto di Ricovero e Cura a Carattere Scientifico

ISTITUTO SCIENTIFICO ROMAGNOLO PER LO STUDIO E LA CURA DEI TUMORI

UNIVERSITÀ DEGLI STUDI DI PARMA

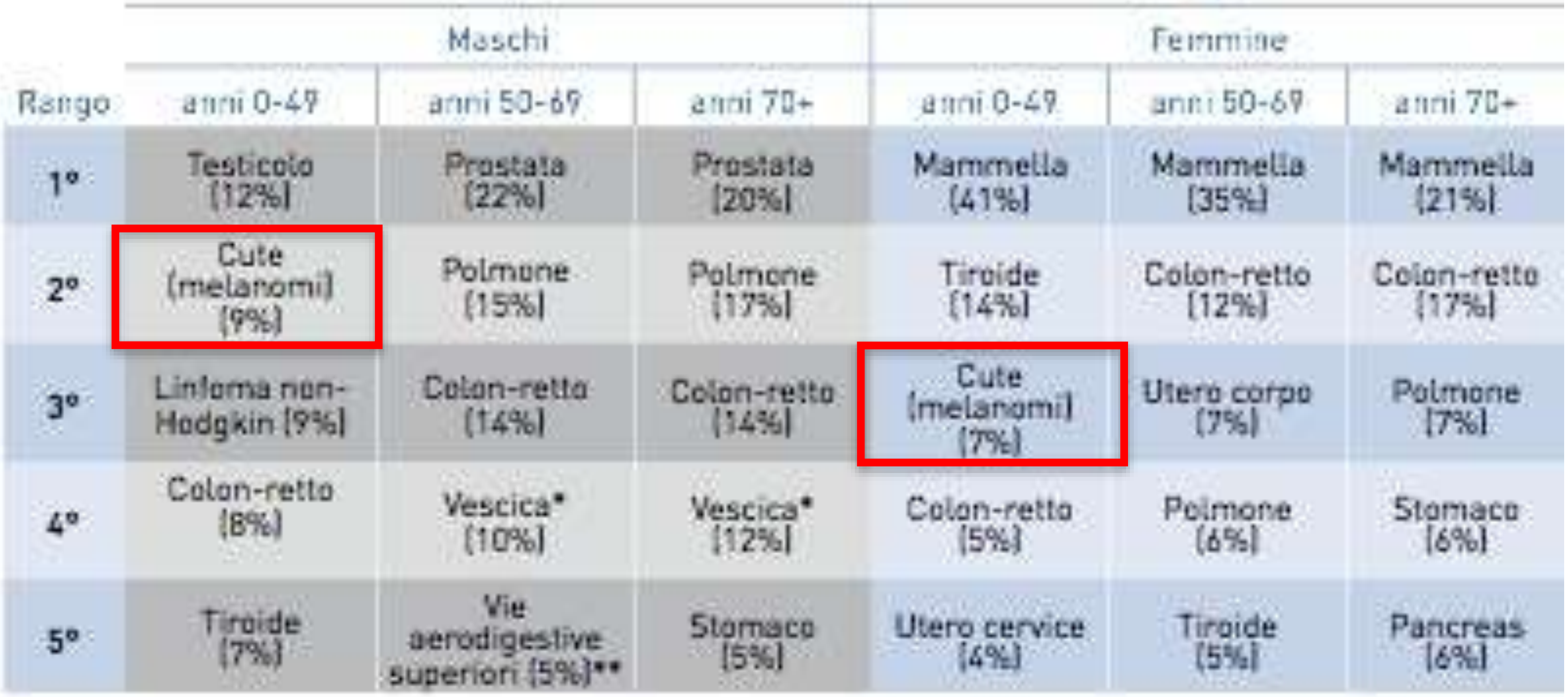
MELANOMA CUTANEO

Tumore maligno a genesi melanocitaria su cute apparentemente sana o dalla modificazione di un nevo preesistente



AIRTUM
MELANOMA MALIGNO AL SECONDO (Maschi) e al TERZO POSTO (Femmine) TRA LE NEOPLASIE MALIGNE NELLA POPOLAZIONE < 50 anni

Sono un Melanoma!
STOPPALO!



	Maschi			Femmine		
Rango	anni 0-49	anni 50-69	anni 70+	anni 0-49	anni 50-69	anni 70+
1°	Testicolo (12%)	Prostata (22%)	Prostata (20%)	Mammella (41%)	Mammella (35%)	Mammella (21%)
2°	Cute (melanomi) (9%)	Polmone (15%)	Polmone (17%)	Tiroide (14%)	Colon-retto (12%)	Colon-retto (17%)
3°	Linfoma non-Hodgkin (9%)	Colon-retto (14%)	Colon-retto (14%)	Cute (melanomi) (7%)	Utero corpo (7%)	Polmone (7%)
4°	Colon-retto (8%)	Vescica* (10%)	Vescica* (12%)	Colon-retto (5%)	Polmone (6%)	Stomaco (6%)
5°	Tiroide (7%)	Vie aerodigestive superiori (5%)**	Stomaco (5%)	Utero cervice (4%)	Tiroide (5%)	Pancreas (6%)

MELANOMA IN ITALIA Rapporto AIRTUM 2015

Fattori di rischio

FATTORI DI RISCHIO ENDOGENI

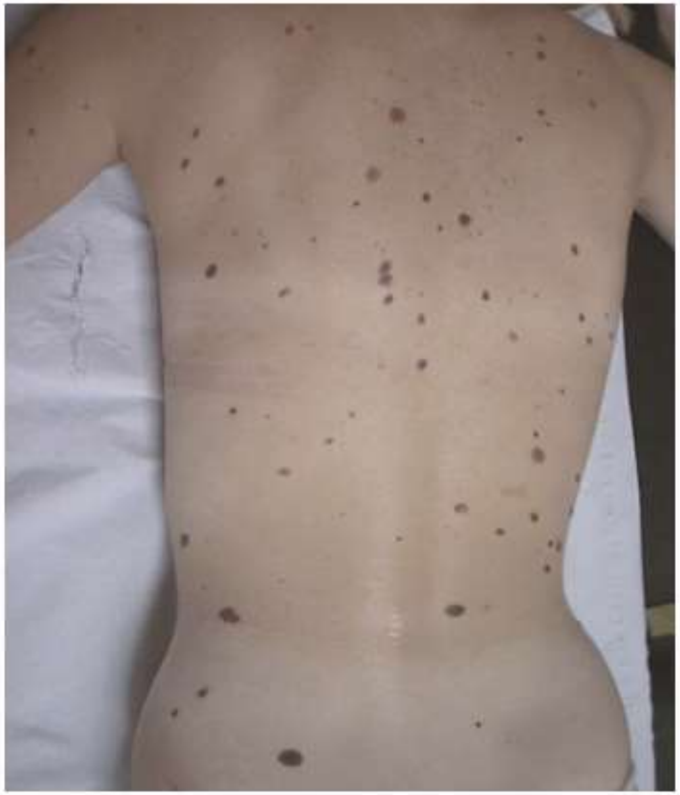
- Fototipo cutaneo di tipo 1 o 2
- Anamnesi familiare di melanoma
- Sindrome da Nevo Atipico (AMS)
- Mutazioni genetiche
- Densità di nevi melanocitici (fattore massa)
- Nevi melanocitici atipici
- Immunosoppressione o immunodeficienza

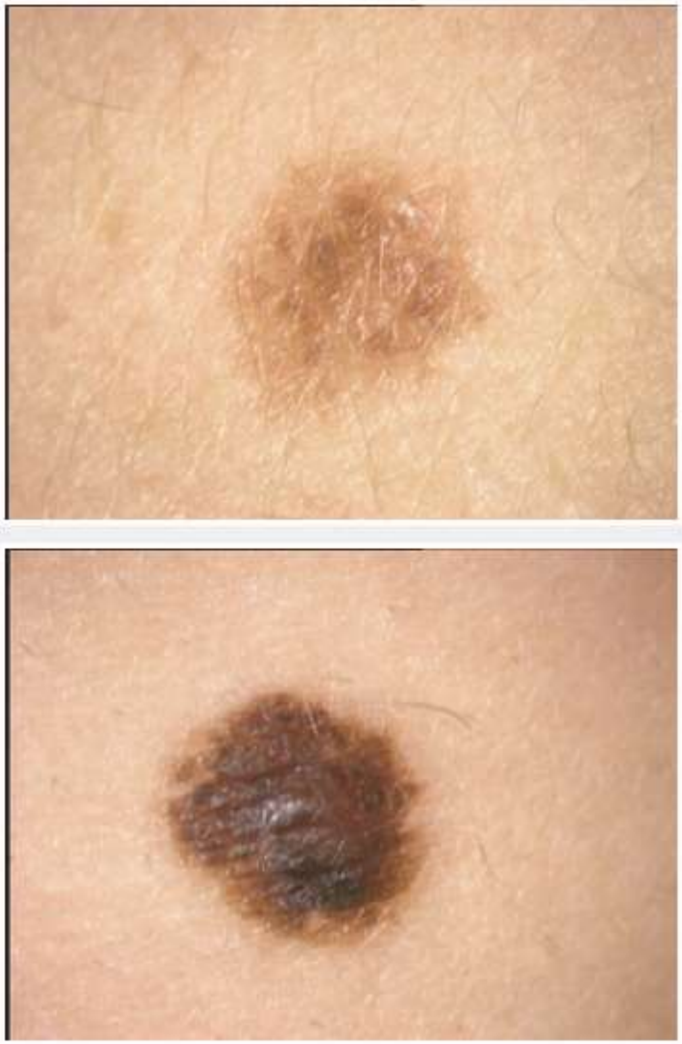
FATTORI DI RISCHIO ESOGENI

- Anamnesi di intensa e intermittente esposizione solare in gioventù
- Ustioni solari
- Esposizione a UV artificiali (solarium)
- Fotoprotezione

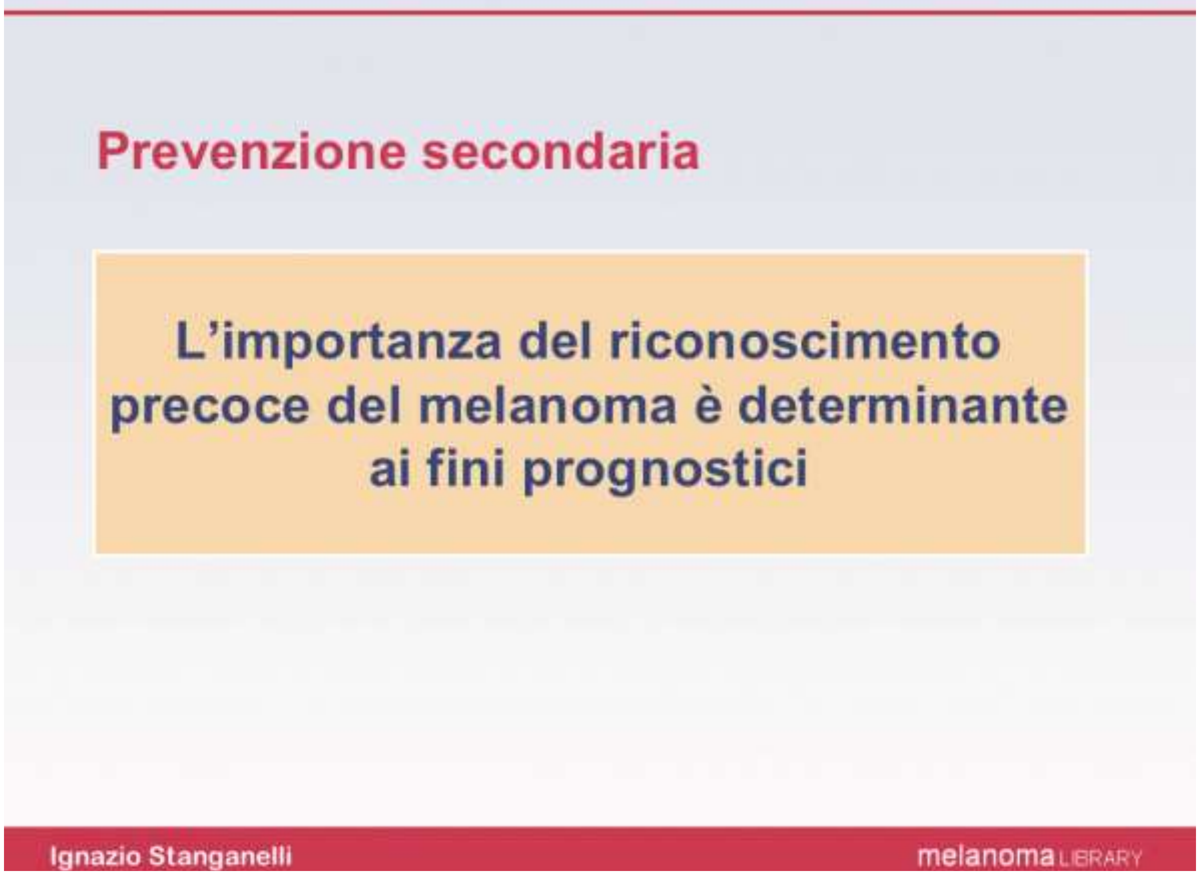
Nevi melanocitici acquisiti

(nevi di Clark)





Per gentile concessione ©Istituto Oncologico Romagnolo/Stanganelli



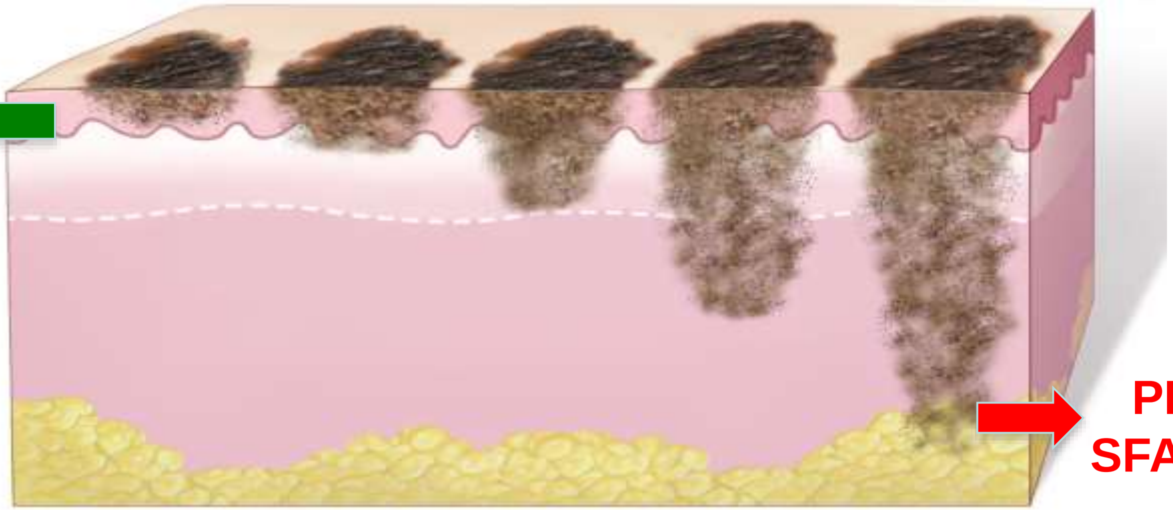
Prevenzione secondaria

L'importanza del riconoscimento precoce del melanoma è determinante ai fini prognostici

Ignazio Stanganelli

melanoma LIBRARY

PROGNOSI ECCELLENTE



PROGNOSI SFAVOREVOLE

Diagnosi clinica

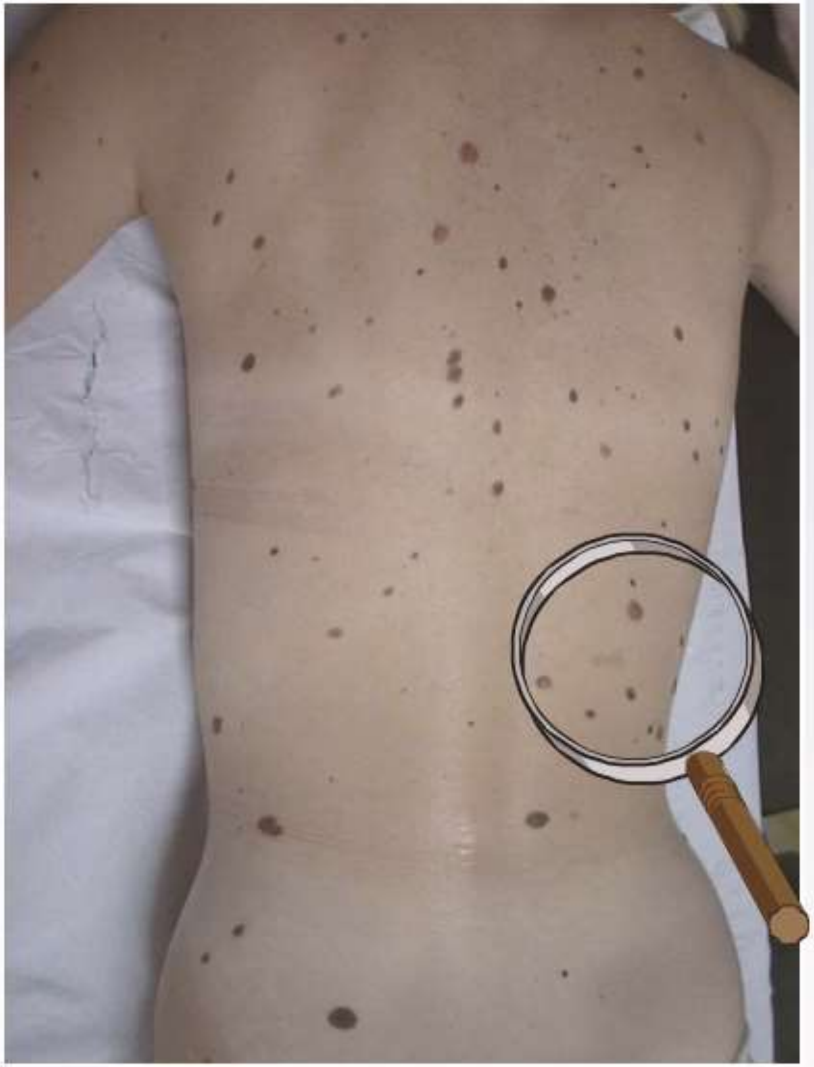
Analisi di tutto l'ambito cutaneo in condizioni di illuminazione ottimale e con l'uso di lente di ingrandimento

Osservazione diretta della distribuzione del **COLORE** e differenza delle caratteristiche geometriche (**FORMA**)

Irregolarità del profilo (**SUPERFICIE e BORDI**) associata alle modificazioni temporali

Confronto dei parametri cromatici dei nevi per identificare il **"BRUTTO ANATROCCOLO"**, ovvero la lesione più scura

Applicazione della regola **ABCDE**



Per gentile concessione ©Istituto Oncologico Romagnolo/Stanganelli CD Melanoma Cutaneo 2001

PROGETTO FORMAZIONE
MMG REGIONE EMILIA ROMAGNA
2006

Istituto Oncologico Romagnolo

Melanoma Cutaneo

Atlante interattivo per la prevenzione, la diagnosi e la terapia del melanoma e delle lesioni pigmentate cutanee

Ignazio Stanganelli

Con la collaborazione di
Claudio Clemente
Martin C. Mihm

Presentazione di
Natale Cascinelli

Istituto oncologico romagnolo
Ignazio Stanganelli Editore

CD Rom Melanoma Cutaneo

Presentazione Natale Cascinelli

Ignazio Stanganelli
Claudio Clemente
Martin C Mihm Jr

Modificato 2002
Maurizio Cancian
Niccolò Seminara

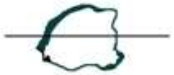
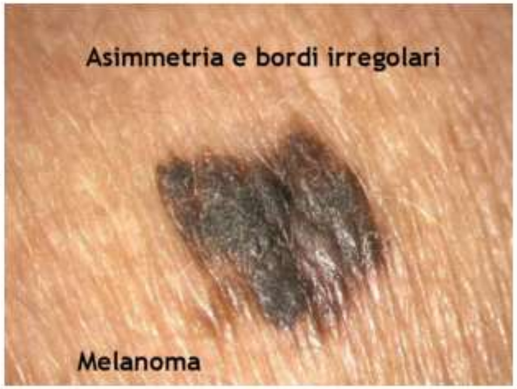
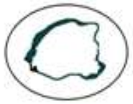
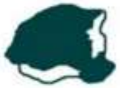
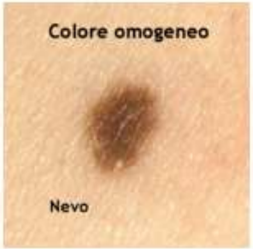
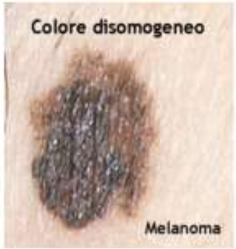
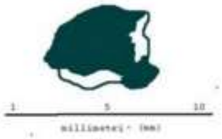
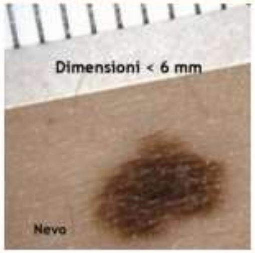
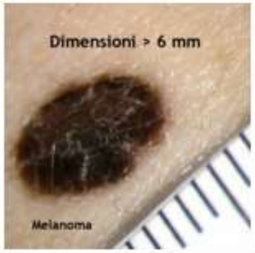
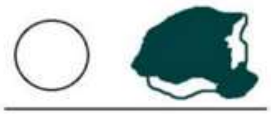
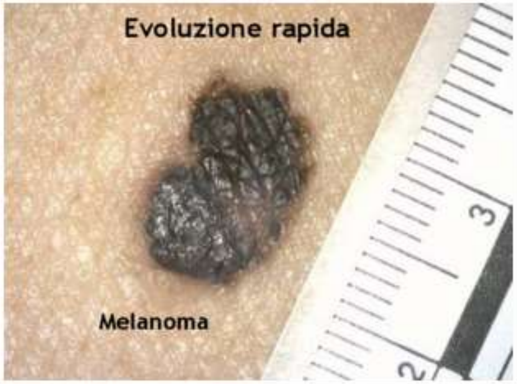
Strumento didattico - valutativo
Seminario Regionale

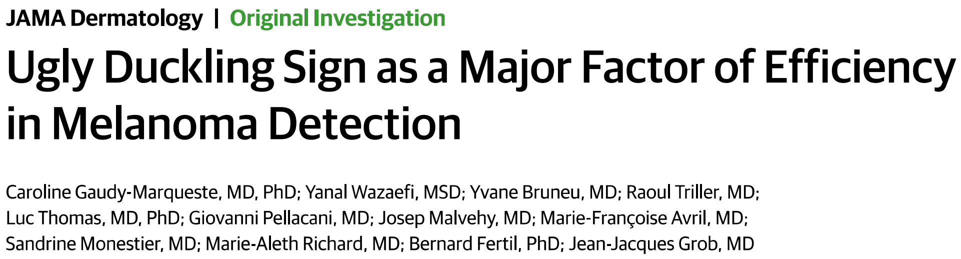
Regione Emilia-Romagna
Assessorato Politiche per la salute

La prevenzione e la diagnosi tempestiva del Melanoma in Medicina Generale

Bologna 28 Ottobre 2006

rivolto agli animatori di formazione dei MMG
AUSL della Regione Emilia Romagna

Regola dell'ABCDE per la diagnosi del sospetto melanoma		
	A come Asimmetria della lesione	 Asimmetria e bordi irregolari Melanoma
	B come Bordi irregolari e frastagliati a "carta geografica"	
	C come **Colore** disomogeneo a varie tinte (nero, rosso-bruno, rosa non uniforme) o nero molto intenso	 Colore omogeneo Nevo  Colore disomogeneo Melanoma
 1 5 10 millimetri - (mm)	D come Dimensioni > a 6 mm	 Dimensioni < 6 mm Nevo  Dimensioni > 6 mm Melanoma
	E come Evoluzione progressiva; la lesione tende a crescere ed allargarsi con modifiche cromatiche	 Evoluzione rapida Melanoma 3 2

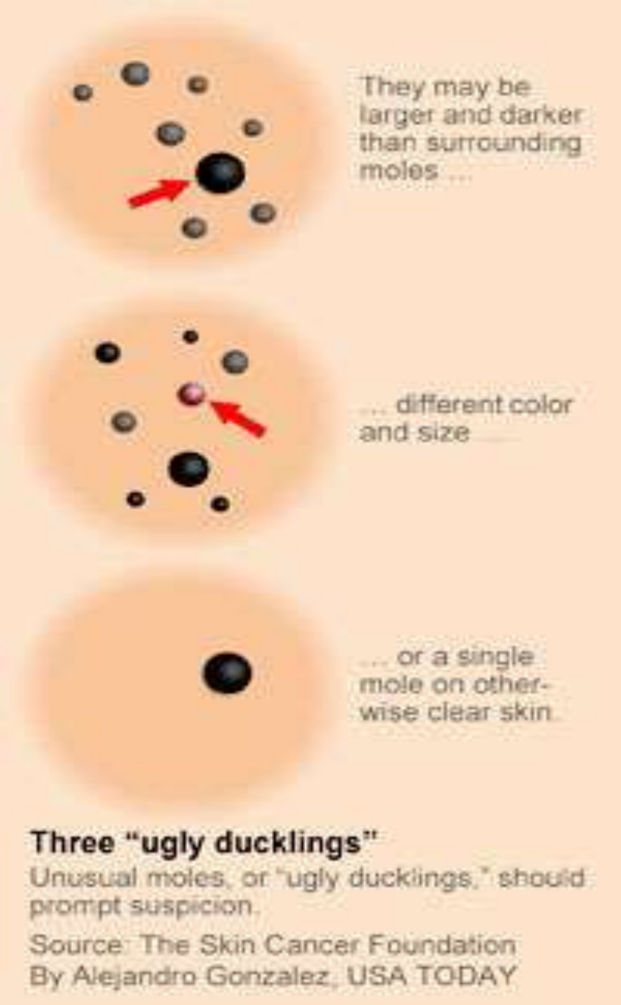


JAMA Dermatology | Original Investigation

Ugly Duckling Sign as a Major Factor of Efficiency in Melanoma Detection

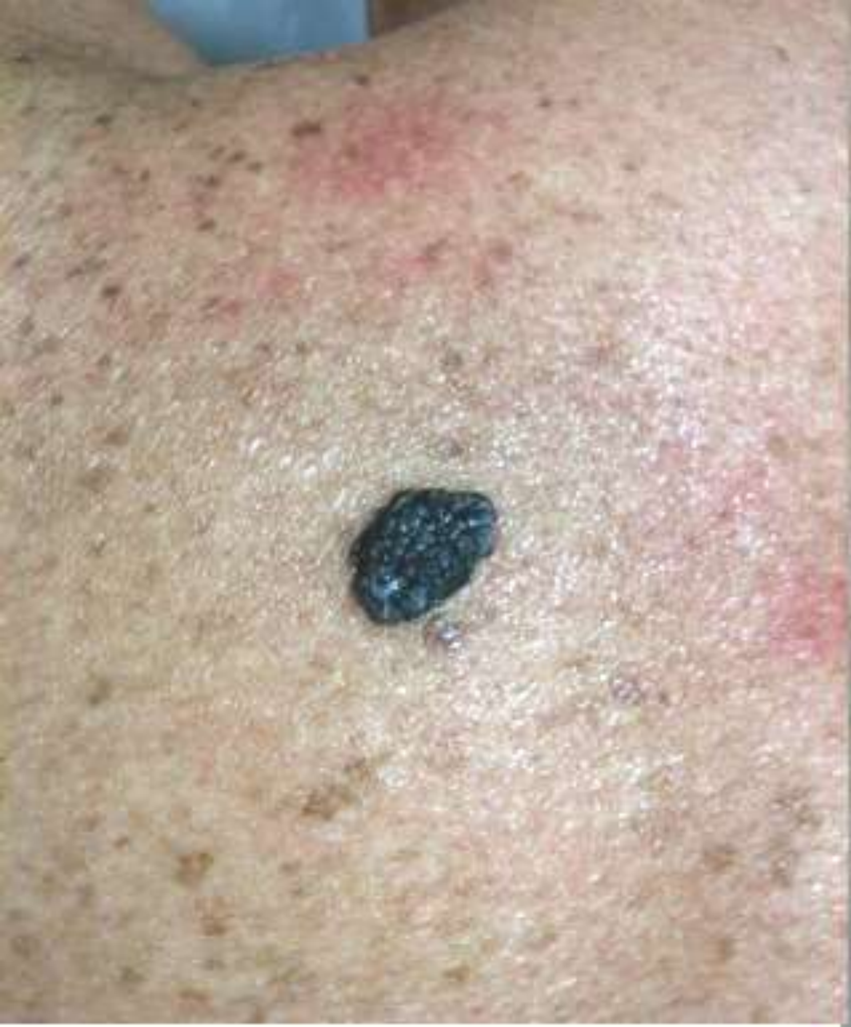
Caroline Gaudy-Marqueste, MD, PhD; Yanal Wazaefi, MSD; Yvane Bruneu, MD; Raoul Triller, MD; Luc Thomas, MD, PhD; Giovanni Pellacani, MD; Josep Malvehy, MD; Marie-Françoise Avril, MD; Sandrine Monestier, MD; Marie-Aleth Richard, MD; Bernard Fertil, PhD; Jean-Jacques Grob, MD

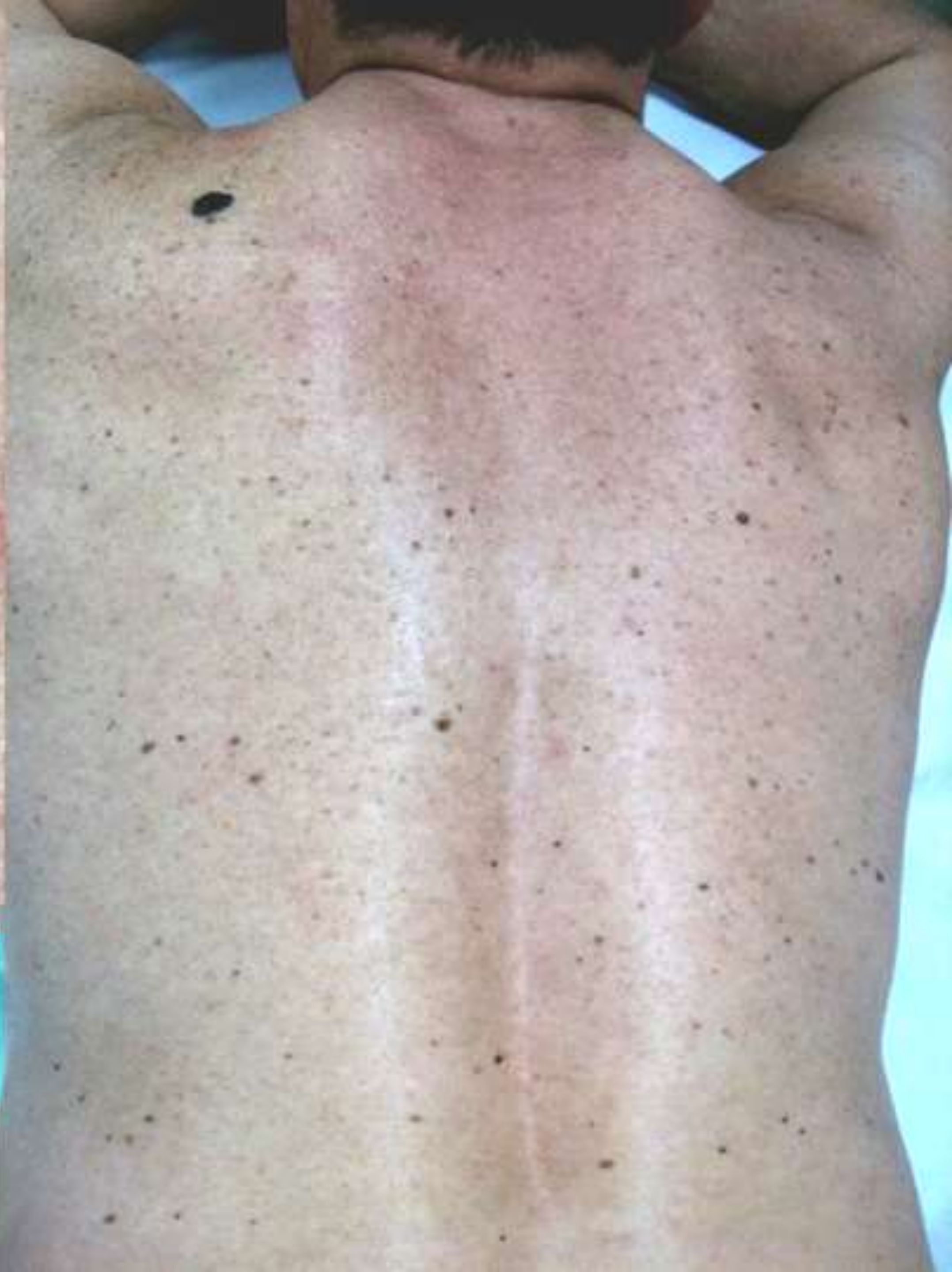
JAMA Dermatol. 2017;153(4):279-284


They may be larger and darker than surrounding moles ...
... different color and size ...
... or a single mole on other-wise clear skin

Three "ugly ducklings"
Unusual moles, or "ugly ducklings," should prompt suspicion.
Source: The Skin Cancer Foundation
By Alejandro Gonzalez, USA TODAY

Including the concept of **Intrapatient Comparative Analysis using the ugly duckling sign** in the education of medical students, the training of practicing physicians, and campaigns targeted to the community could **probably improve the accuracy of diagnosis of melanoma.**





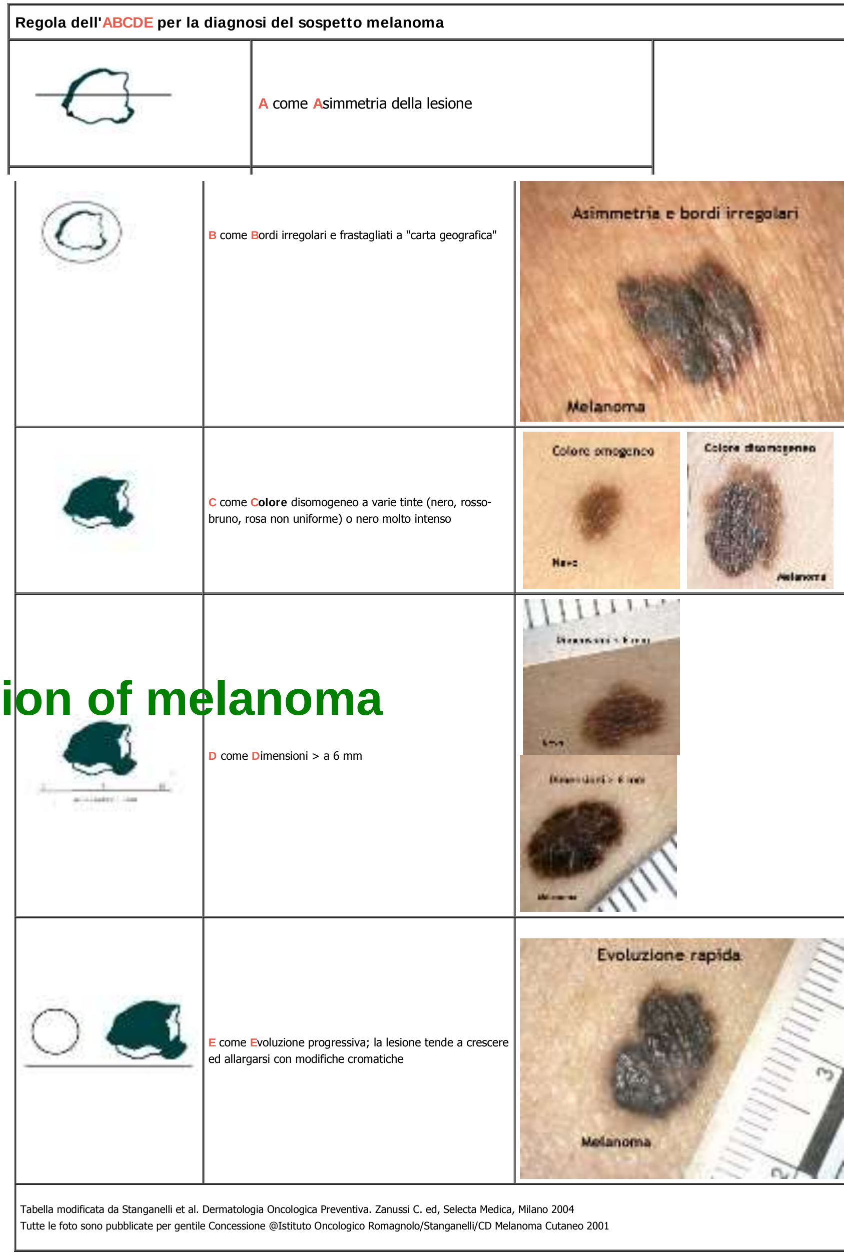
Melanoma
in un soggetto con lentigginosi diffusa con nevi reticolari e storia di ustioni solari

***Friedman RJ, Rigel DS, Kopf AW*. Early detection of malignant melanoma: the role of physician examination and self-examination of the skin.**
CA Cancer J Clin. 1985 May-Jun; 35(3):130-51.

After 25 Years

***Rigel DS, Russak J, Friedman RJ.* The evolution of melanoma diagnosis: 25 years beyond the ABCDs.**
CA Cancer J Clin. 2010 Sep-Oct;60(5):301-16

WARNING for small melanoma and nodular lesion



Regola dell'ABCDE per la diagnosi del sospetto melanoma		
	A come Asimmetria della lesione	
	B come Bordi irregolari e frastagliati a "carta geografica"	
	C come **Colore** disomogeneo a varie tinte (nero, rosso-bruno, rosa non uniforme) o nero molto intenso	
	D come Dimensioni > a 6 mm	
	E come Evoluzione progressiva; la lesione tende a crescere ed allargarsi con modifiche cromatiche	

Tabella modificata da Stanganelli et al. Dermatologia Oncologica Preventiva. Zanussi C. ed, Selecta Medica, Milano 2004
Tutte le foto sono pubblicate per gentile Concessione @Istituto Oncologico Romagnolo/Stanganelli/CD Melanoma Cutaneo 2001

Asimmetria e bordi irregolari
Melanoma
Colore omogeneo
Nevo
Colore disomogeneo
Melanoma
Dimensioni > 6 mm
Evoluzione rapida
Melanoma
3
2

Melanoma Diagnostic Accuracy by Naked eye varies from 50% to 75%

Cassiteth et al. J Am Acad Dermatol 1986; 14:550-560

Grin et al. Arch Dermatol 1990; 126: 763-766

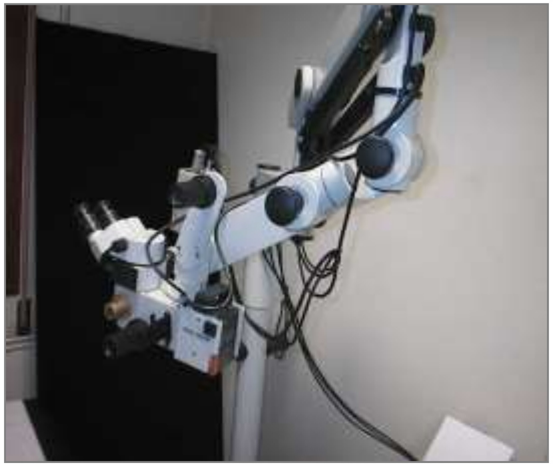
Miller et al. Arch Dermatol 1992; 128:559-560

Rampen et al. Acta Dermatol Venereol 1988; 68: 612-64

Standard tecnologico

Applicazioni in vivo

Dermatoscopio



Stereomicroscopio

Applicazioni digitali

Epiluminescenza digitale

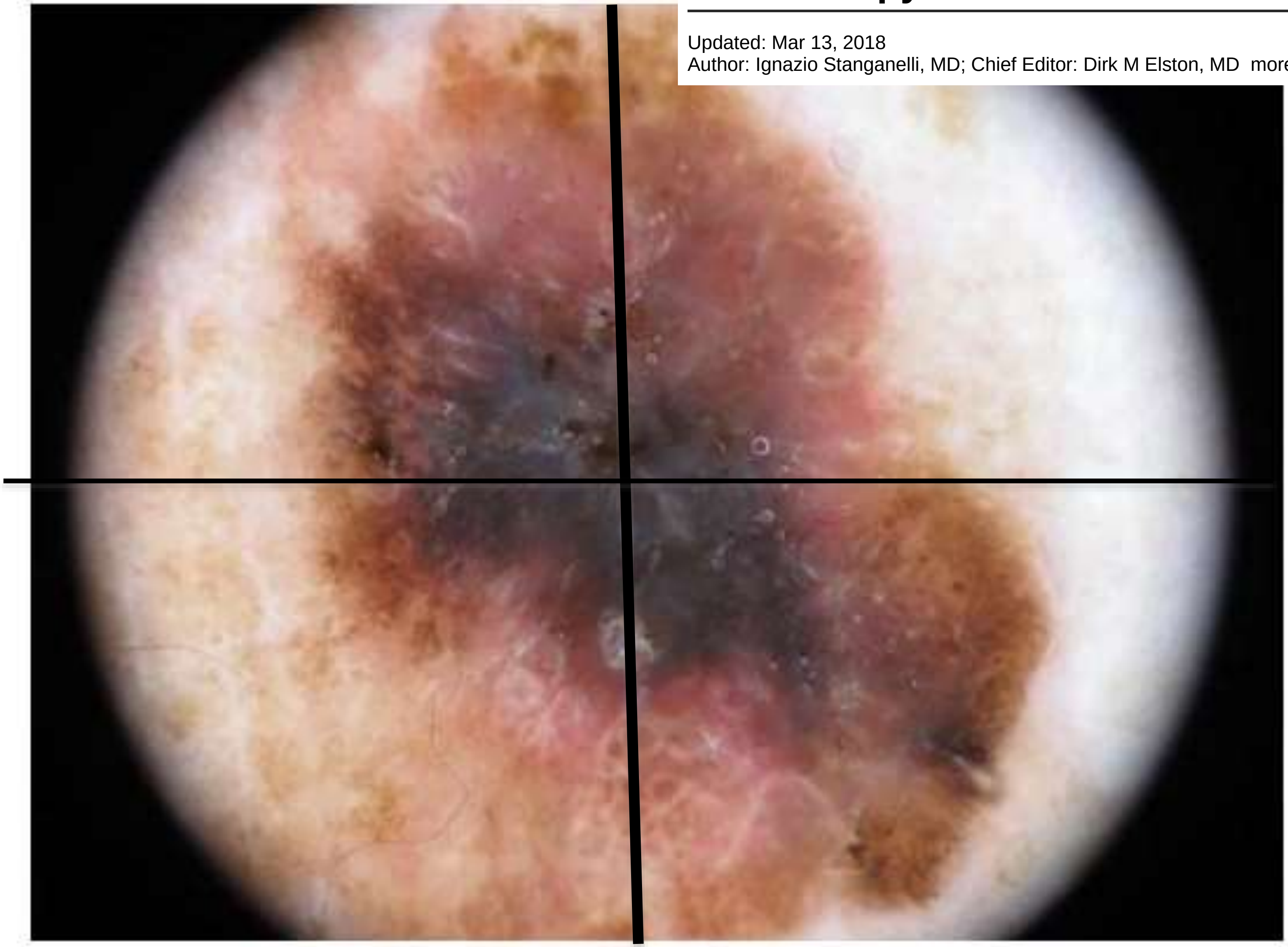
Videomicroscopio digitale

Macchina fotografica digitale

Medscape

Dermoscopy

Updated: Mar 13, 2018
Author: Ignazio Stanganelli, MD; Chief Editor: Dirk M Elston, MD more...



A focal and asymmetrically located negative pigment network in the lower periphery of this melanoma (0.85 mm thick).

Diagnostic Services for Melanoma in Italy

Ignazio Stanganelli[a] Paolo Ascierto[b] Riccardo Bono[c] Vincenzo De Giorgi[d]
Nicola Pimpinelli[d] Vanna Chiarion-Sileni[e] Giuseppe Palmieri[f]
Maria Antonietta Pizzichetta[g] Alessandro Testori[h]

[a]Istituto Scientifico Romagnolo per lo Studio e la Cura dei Tumori, IRCCS IRST, Meldola, [b]IRCCS National Cancer Institute, Naples, [c]Immacolata Dermatological Institute, IRCCS, Rome, [d]Dermatologic Clinic, University of Florence, Florence, [e]Veneto Institute of Oncology, Padua, [f]Genetica Oncologica, CNR, Sassari, [g]Centro di Riferimento Oncologico, Aviano, and [h]Istituto Europeo di Oncologia, Milan, Italy

Dermatology

Dermatology 2013;226(suppl 1):3–6
DOI: 10.1159/000348860

120 Hospitals

HIGH PREVALENCE COMBINED CLINICAL-DERMOSCOPICAL APPROUCH

General visit	**27**
Visit and manual dermoscopy	**51**
Visit, manual /Videodermoscopy	**22**

73 %

Data are expressed as percentages.

Bafounta ML et al. Is dermoscopy (epiluminescence microscopy) useful for the diagnosis of melanoma ? Results of a meta-analysis using technique adapted to the evaluation of diagnostic test.
Arch Dermatol 2001 137(10):1343-50
Kittler H et al. Diagnostic accuracy of Dermoscopy.
Lancet Oncol 2002; 3; 159-65
Vestergaard ME et al Dermoscopy compared with naked eye examination for the diagnosis of primary melanoma: a meta-analysis of studies performed in a clinical setting.
Br J Dermatol 2008 , 159:669-76
Rajpara SM et al. Systematic review of dermoscopy and digital dermoscopy/artificial intelligence for the diagnosis of melanoma.
Br J Dermatol 2009 , 161:591-604.

For experienced users, dermoscopy is more accurate than cli Examination for the diagnosis of melanoma in a pigmented s lesion.

In this setting dermoscopy has the potential to improve up to the diagnostic accuracy.

TELEMEDICINA

JOURNAL OF THE AMERICAN ACADEMY OF
DERMATOLOGY

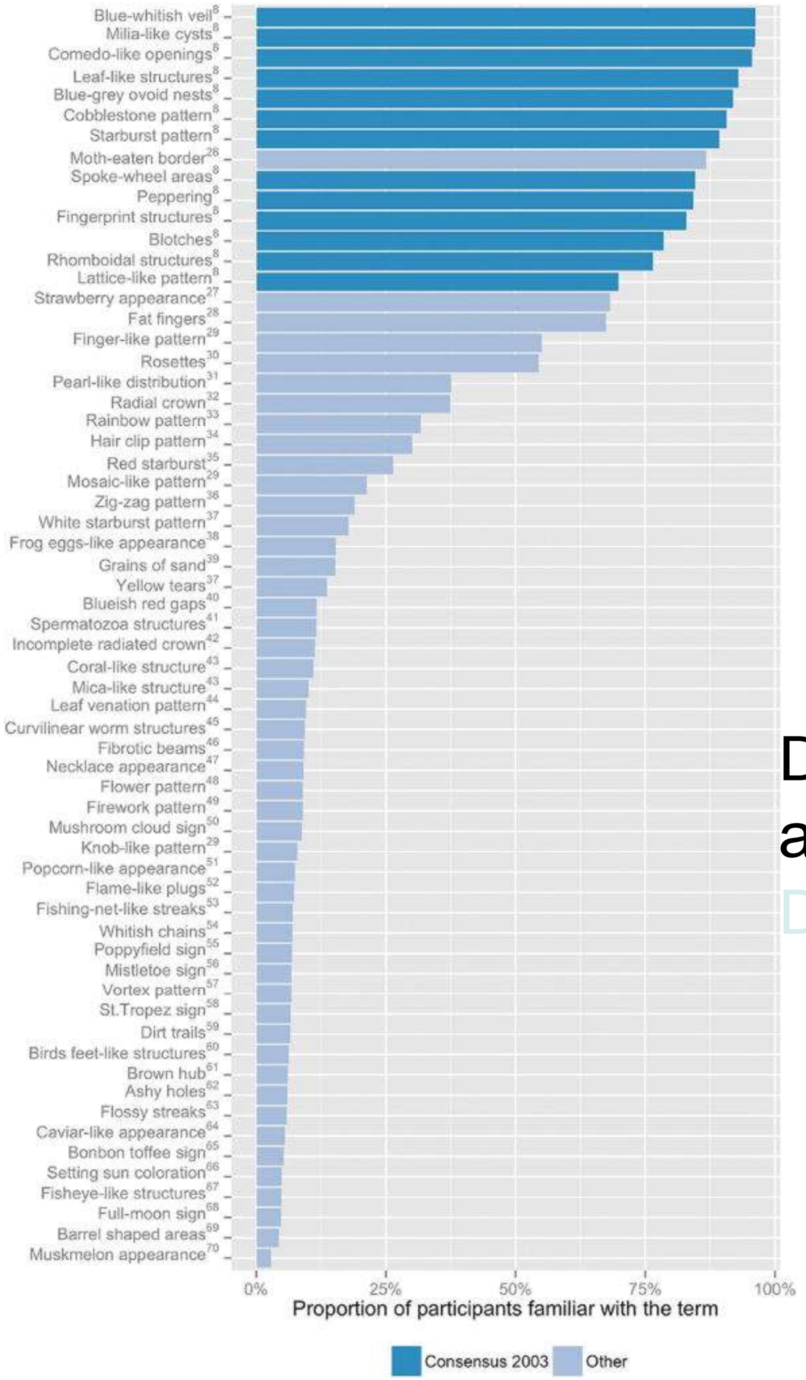
May 2003, part 1 Volume 48 Number 5

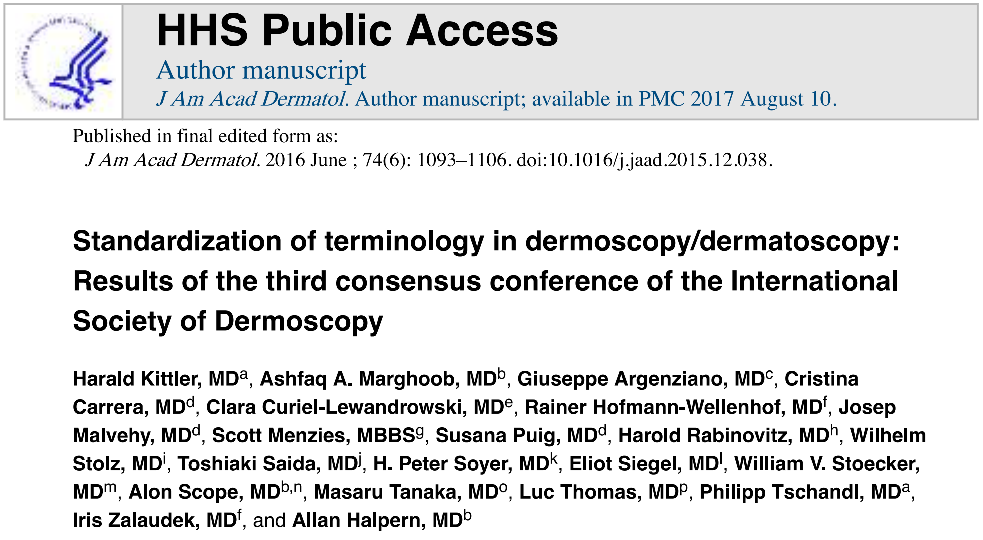
Dermoscopy of pigmented skin lesions: results of a consensus meeting via the Internet.

Argenziano G, Soyer HP, Chimenti S, Talamini R, Corona R, Sera F, Binder M, Cerroni L, De Rosa G, Ferrara G, Hofmann-Wellenhof R, Landthaler M, Menzies SW, Pehamberger H, Piccolo D, Rabinovitz HS, Schiffner R, Staibano S, Stolz W, Bartenjev I, Blum A, Braun R, Cabo H, Carli P, De Giorgi V, Fleming MG, Grichnik JM, Grin CM, Halpern AC, Johr R, Katz B, Kenet RO, Kittler H, Kreusch J, Malvehy J, Mazzocchetti G, Oliviero M, Ozdemir F, Peris K, Perotti R, Perusquia A, Pizzichetta MA, Puig S, Rao B, Rubegni P, Saida T, Scalvenzi M, Seidenari S, Stanganelli I, Tanaka M, Westerhoff K, Wolf IH, Braun-Falco O, Kerl H, Nishikawa T, Wolff K, Kopf AW.

Teledermoscopy via the Internet is a feasible tool for a Consensus Meeting on the validity of dermoscopy in diagnosing pigmented skin lesions

VALIDAZIONE DERMOSCOPIA VIA TELEMATICA




HHS Public Access

Author manuscript

J Am Acad Dermatol. Author manuscript; available in PMC 2017 August 10.

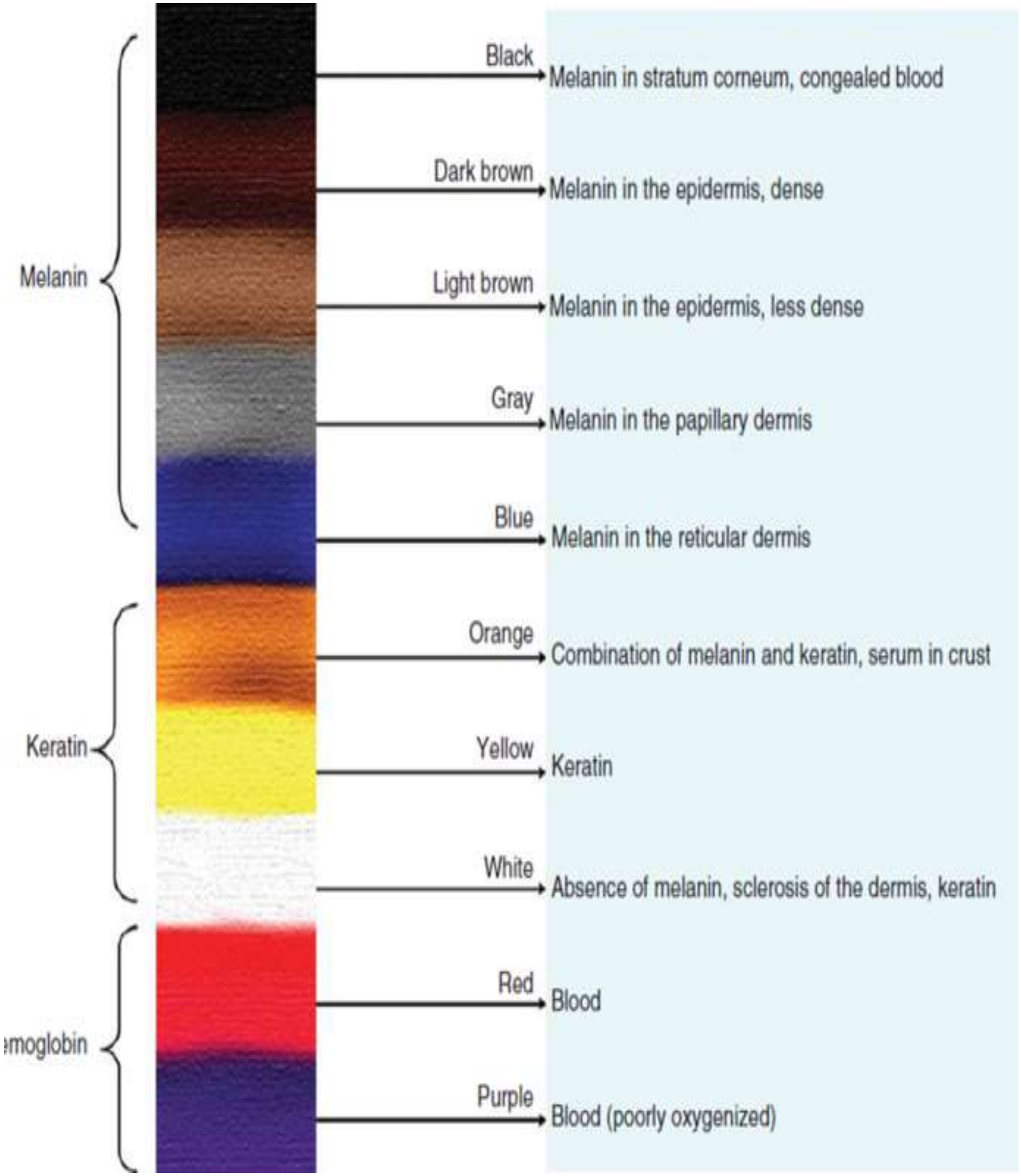
Published in final edited form as:
J Am Acad Dermatol. 2016 June ; 74(6): 1093–1106. doi:10.1016/j.jaad.2015.12.038.

Standardization of terminology in dermoscopy/dermatoscopy: Results of the third consensus conference of the International Society of Dermoscopy

Harald Kittler, MD[a], **Ashfaq A. Marghoob, MD**[b], **Giuseppe Argenziano, MD**[c], **Cristina Carrera, MD**[d], **Clara Curiel-Lewandrowski, MD**[e], **Rainer Hofmann-Wellenhof, MD**[f], **Josep Malvehy, MD**[d], **Scott Menzies, MBBS**[g], **Susana Puig, MD**[d], **Harold Rabinovitz, MD**[h], **Wilhelm Stolz, MD**[i], **Toshiaki Saida, MD**[j], **H. Peter Soyer, MD**[k], **Eliot Siegel, MD**[l], **William V. Stoecker, MD**[m], **Alon Scope, MD**[b,n], **Masaru Tanaka, MD**[o], **Luc Thomas, MD**[p], **Philipp Tschandl, MD**[a], **Iris Zalaudek, MD**[f], and **Allan Halpern, MD**[b]

Dalla **CONSENSUS NET MEETING** (2
ad oggi sono presenti una “PLETORA
DI VARIABILI aggiuntive

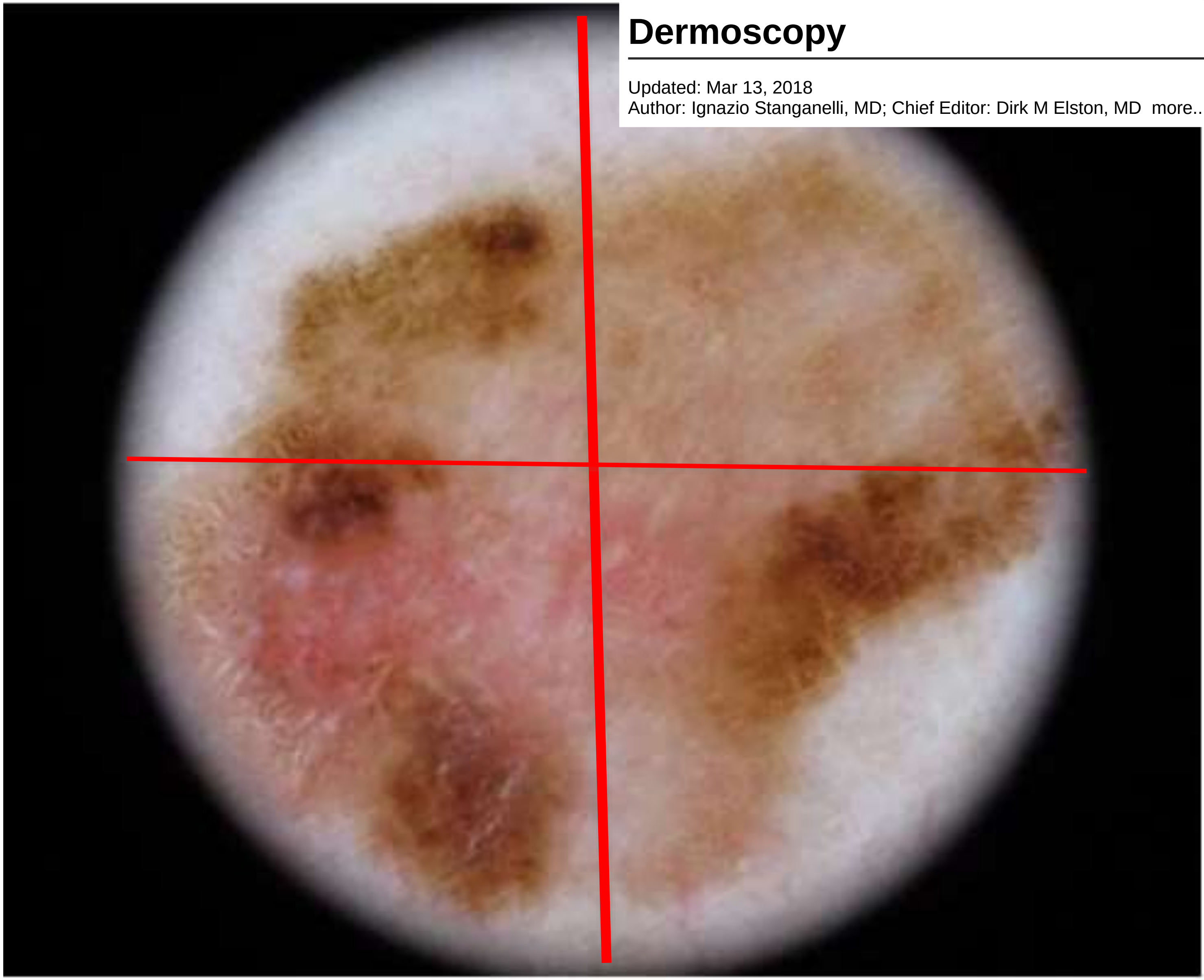
PRINCIPALI CROMOFORI VISIBILI IN DERMOSCOPIA


Melanin
Keratin
emoglobin
Black
Melanin in stratum corneum, congealed blood
Dark brown
Melanin in the epidermis, dense
Light brown
Melanin in the epidermis, less dense
Gray
Melanin in the papillary dermis
Blue
Melanin in the reticular dermis
Orange
Combination of melanin and keratin, serum in crust
Yellow
Keratin
White
Absence of melanin, sclerosis of the dermis, keratin
Red
Blood
Purple
Blood (poorly oxygenized)

Medscape

Dermoscopy

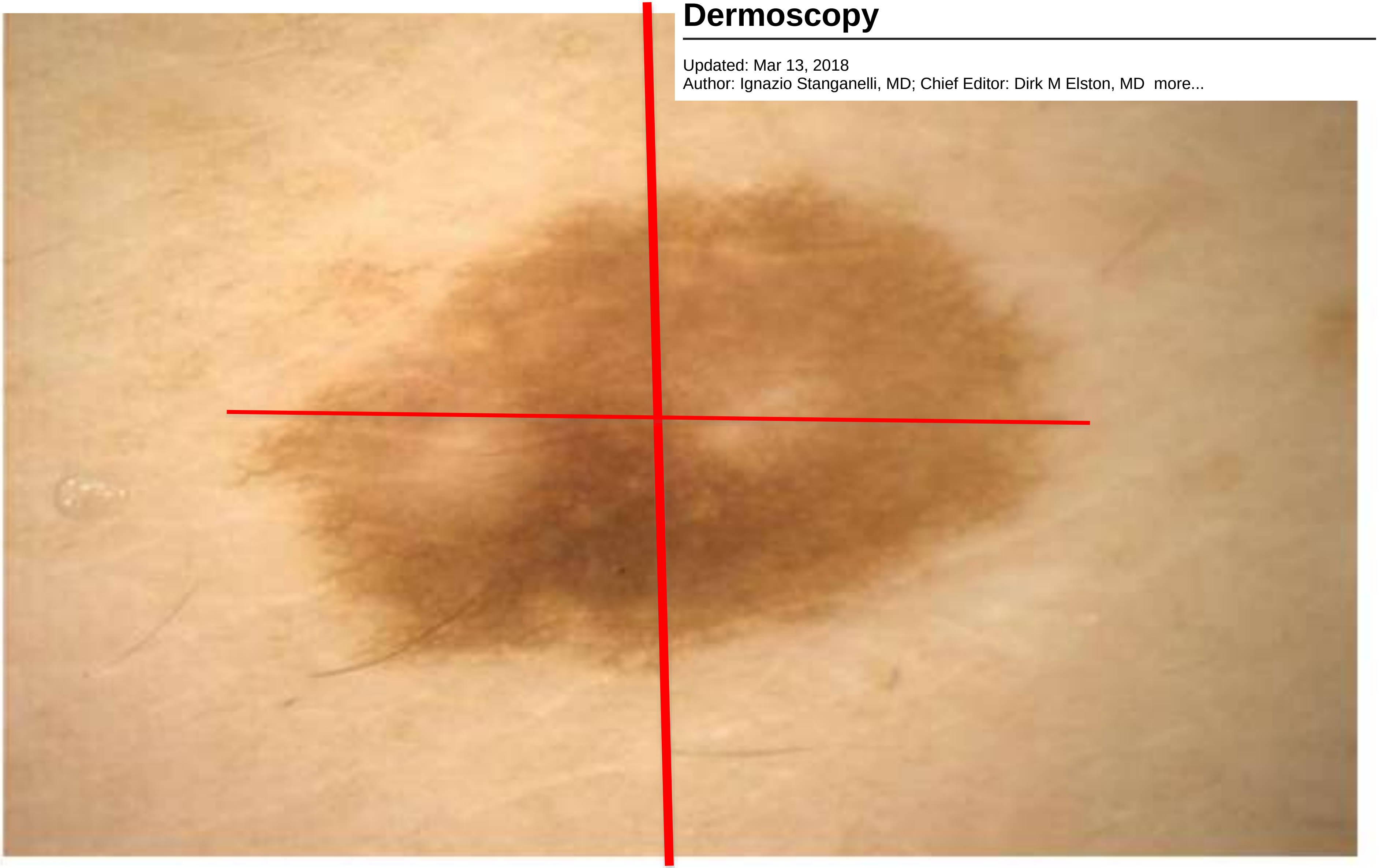
Updated: Mar 13, 2018
Author: Ignazio Stanganelli, MD; Chief Editor: Dirk M Elston, MD more...



Shine white streaks orthogonally oriented in the left periphery of this melanoma.

Dermoscopy

Updated: Mar 13, 2018
Author: Ignazio Stanganelli, MD; Chief Editor: Dirk M Elston, MD more...



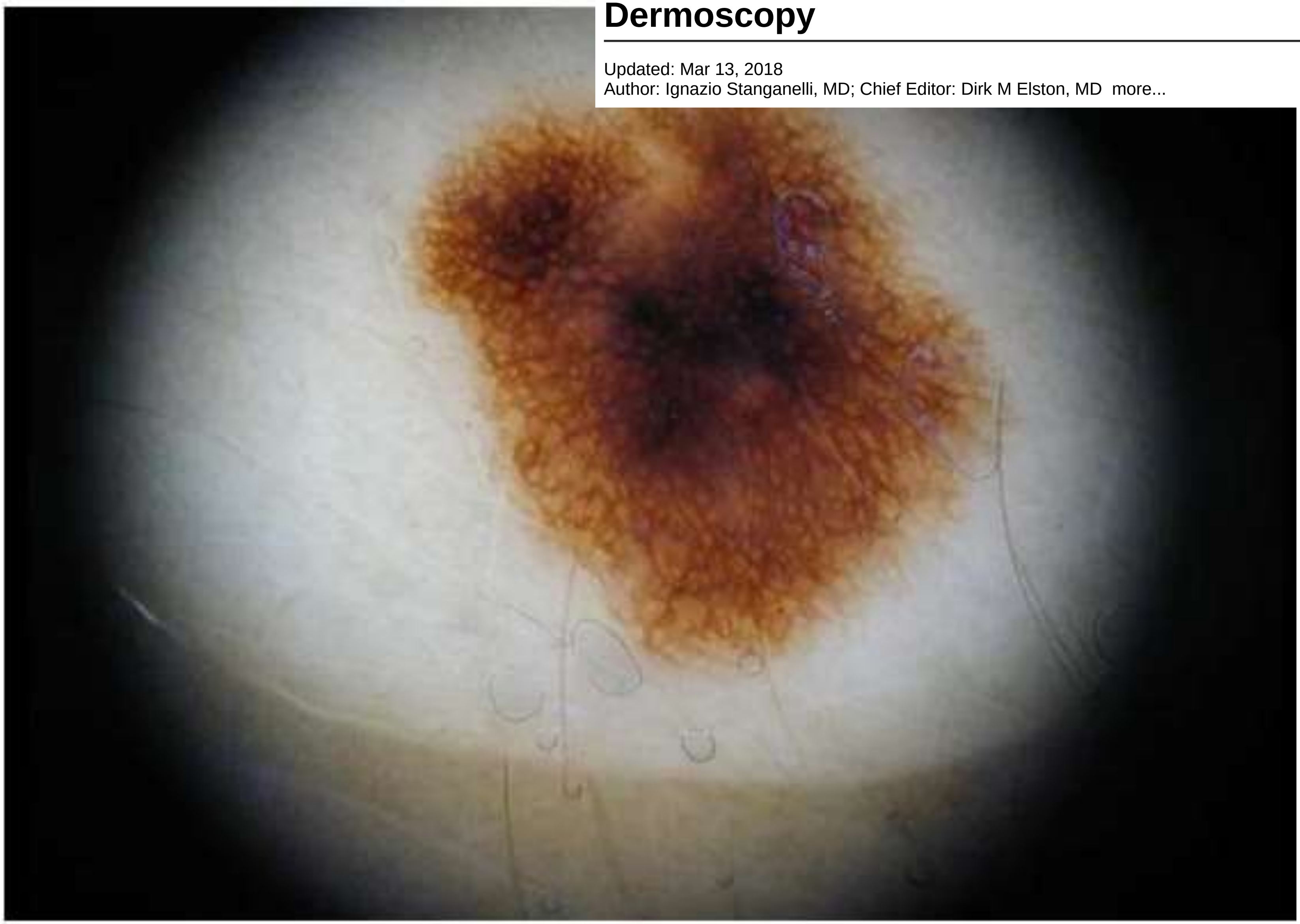
Brown pigment network in a melanocytic nevus.

Medscape

Dermoscopy

Updated: Mar 13, 2018

Author: Ignazio Stanganelli, MD; Chief Editor: Dirk M Elston, MD more...

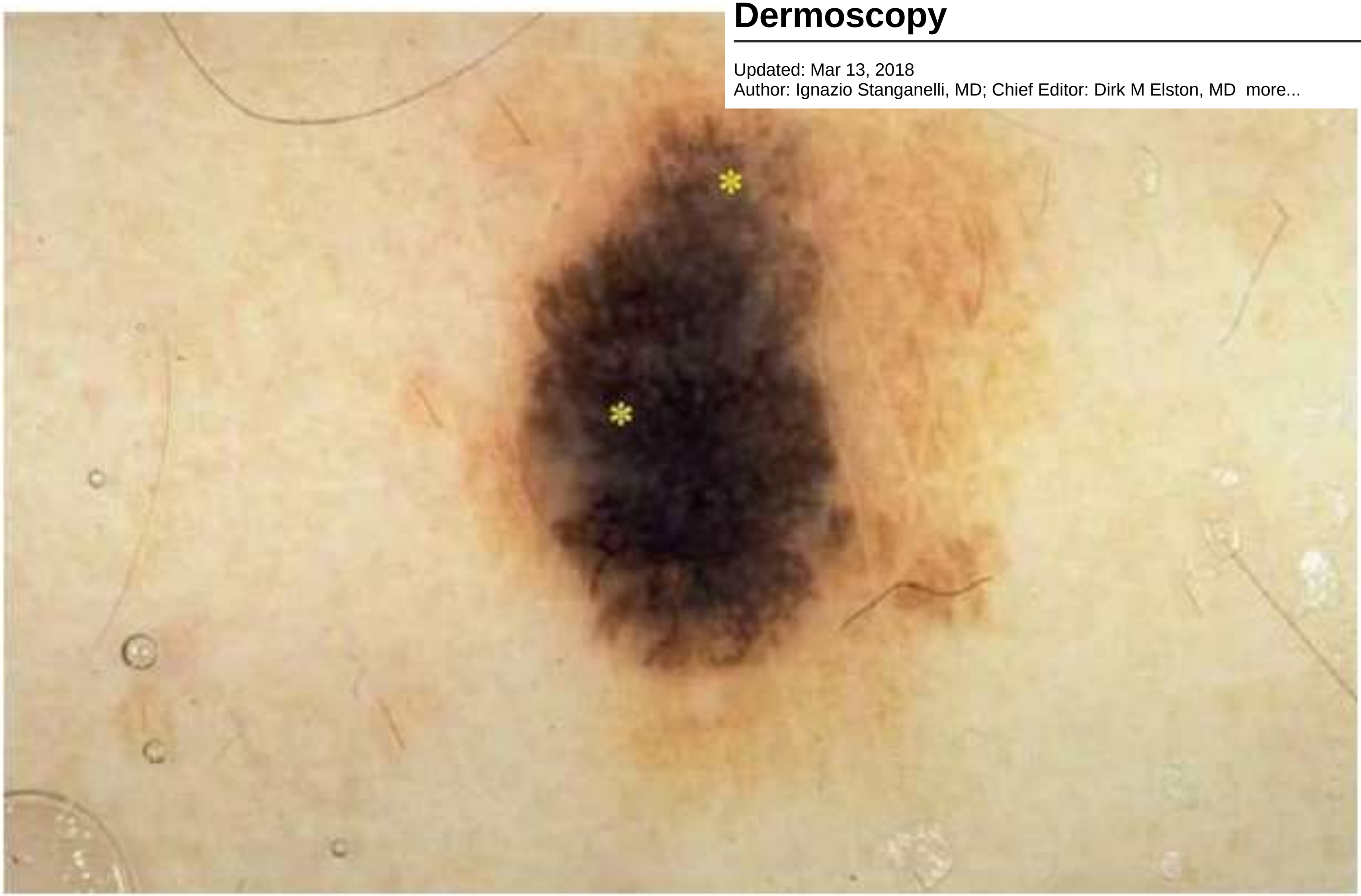


Dark-brown pigment network in a melanocytic nevus.

Dermoscopy

Updated: Mar 13, 2018

Author: Ignazio Stanganelli, MD; Chief Editor: Dirk M Elston, MD more...



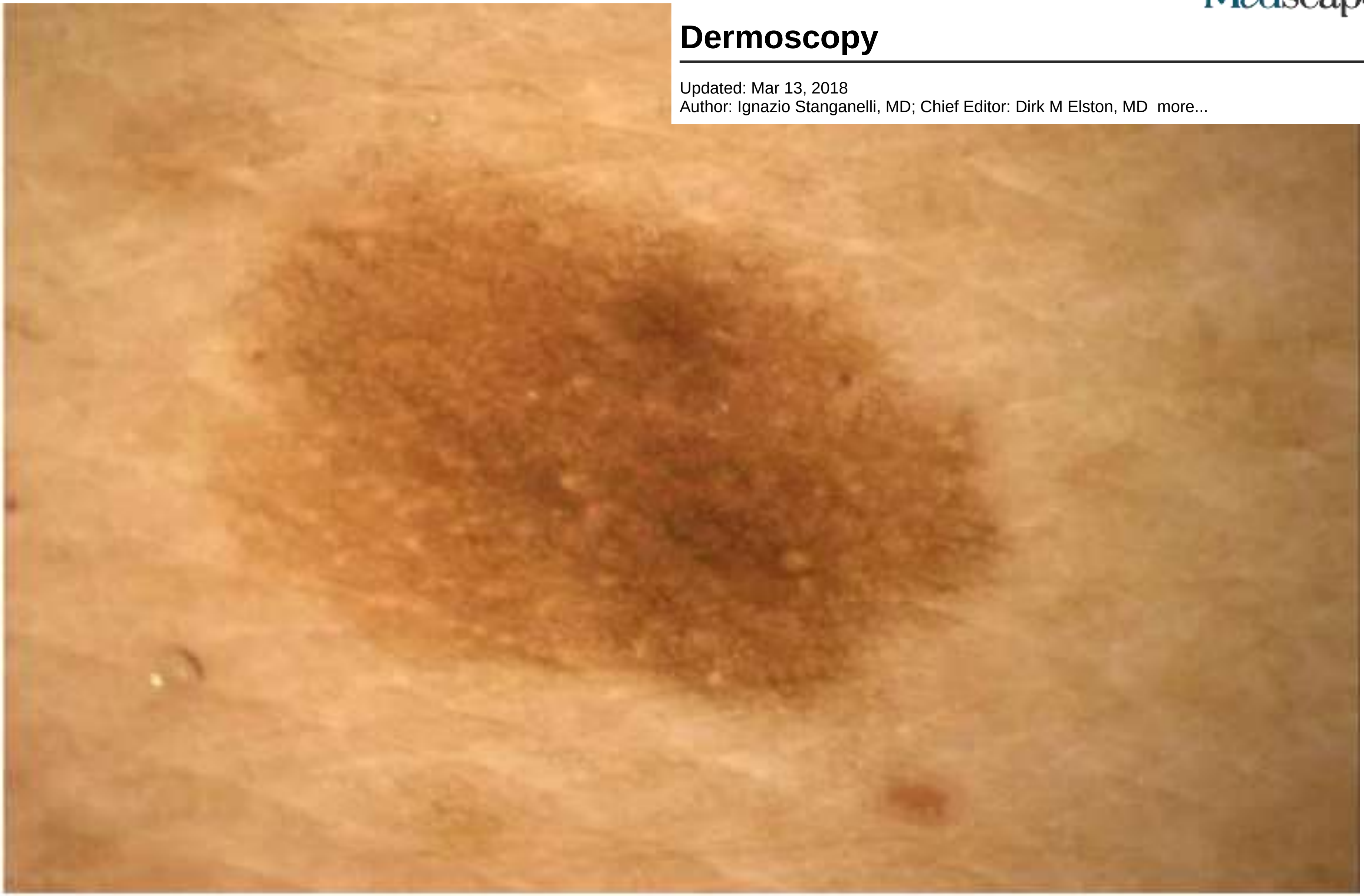
In situ melanoma with asymmetric color distribution, irregular pigment network, and a whitish veil (*).

PIGMENT NETWORK

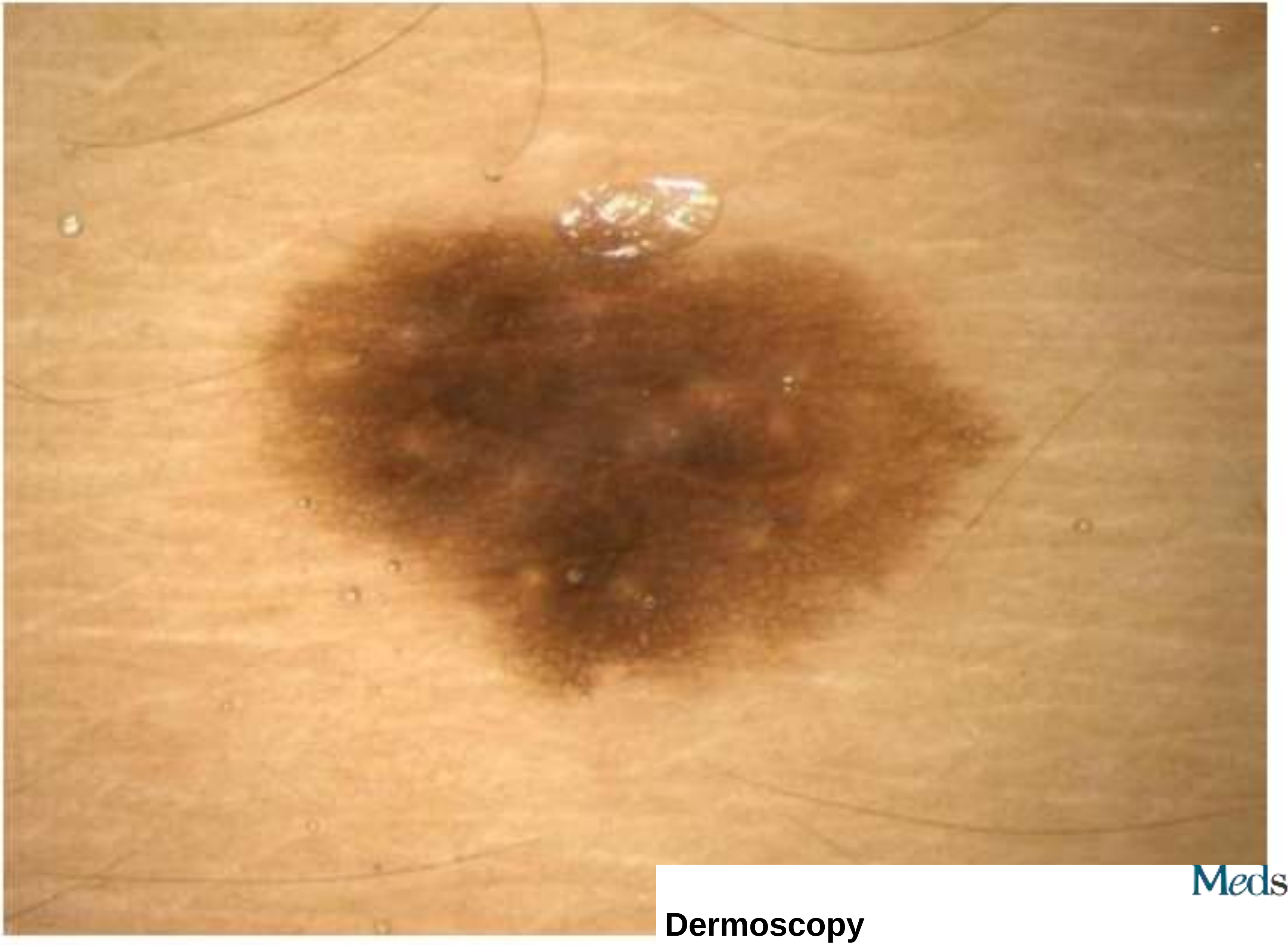
RETICOLO PIGMENTATO

Dermoscopy

Updated: Mar 13, 2018
Author: Ignazio Stanganelli, MD; Chief Editor: Dirk M Elston, MD more...



Brown pigment network in a melanocytic nevus.



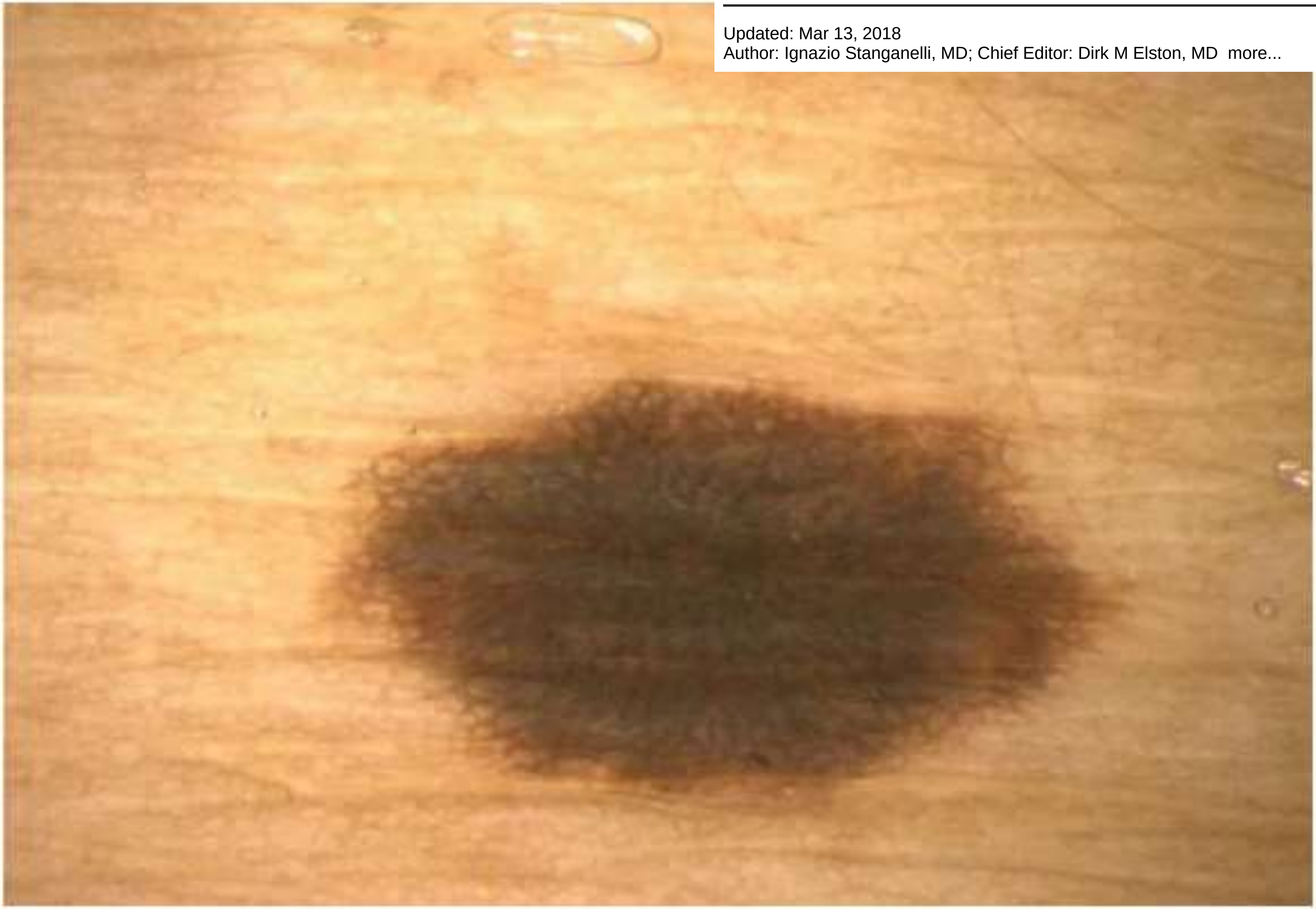
Dark-brown pigment network in a melanoc

Dermoscopy

Updated: Mar 13, 2018
Author: Ignazio Stanganelli, MD; Chief Editor: Dirk M Elston, MD more...

Dermoscopy

Updated: Mar 13, 2018
Author: Ignazio Stanganelli, MD; Chief Editor: Dirk M Elston, MD more...



Dark-brown pigment network in a melanocytic nevus.

Dermoscopy

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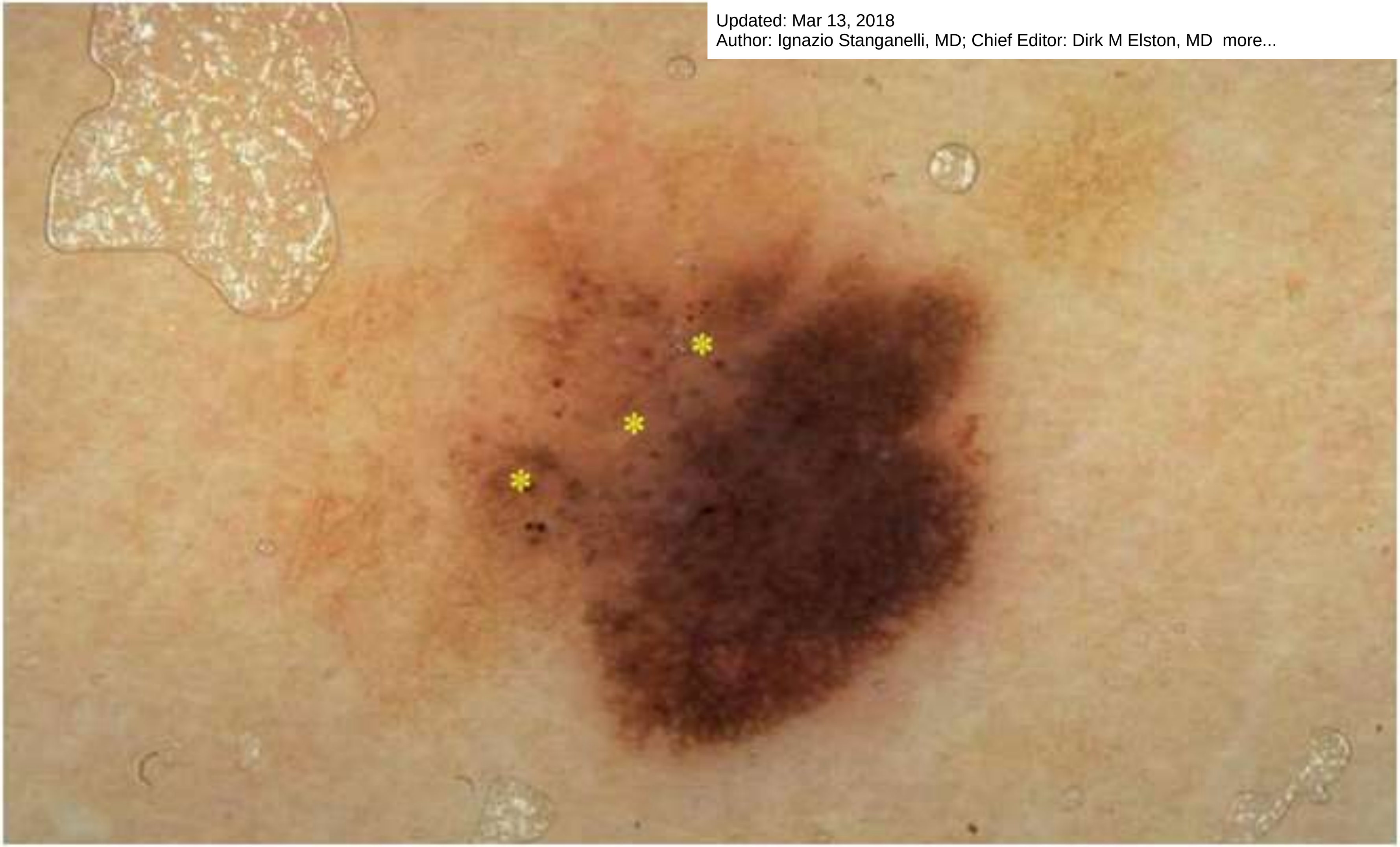
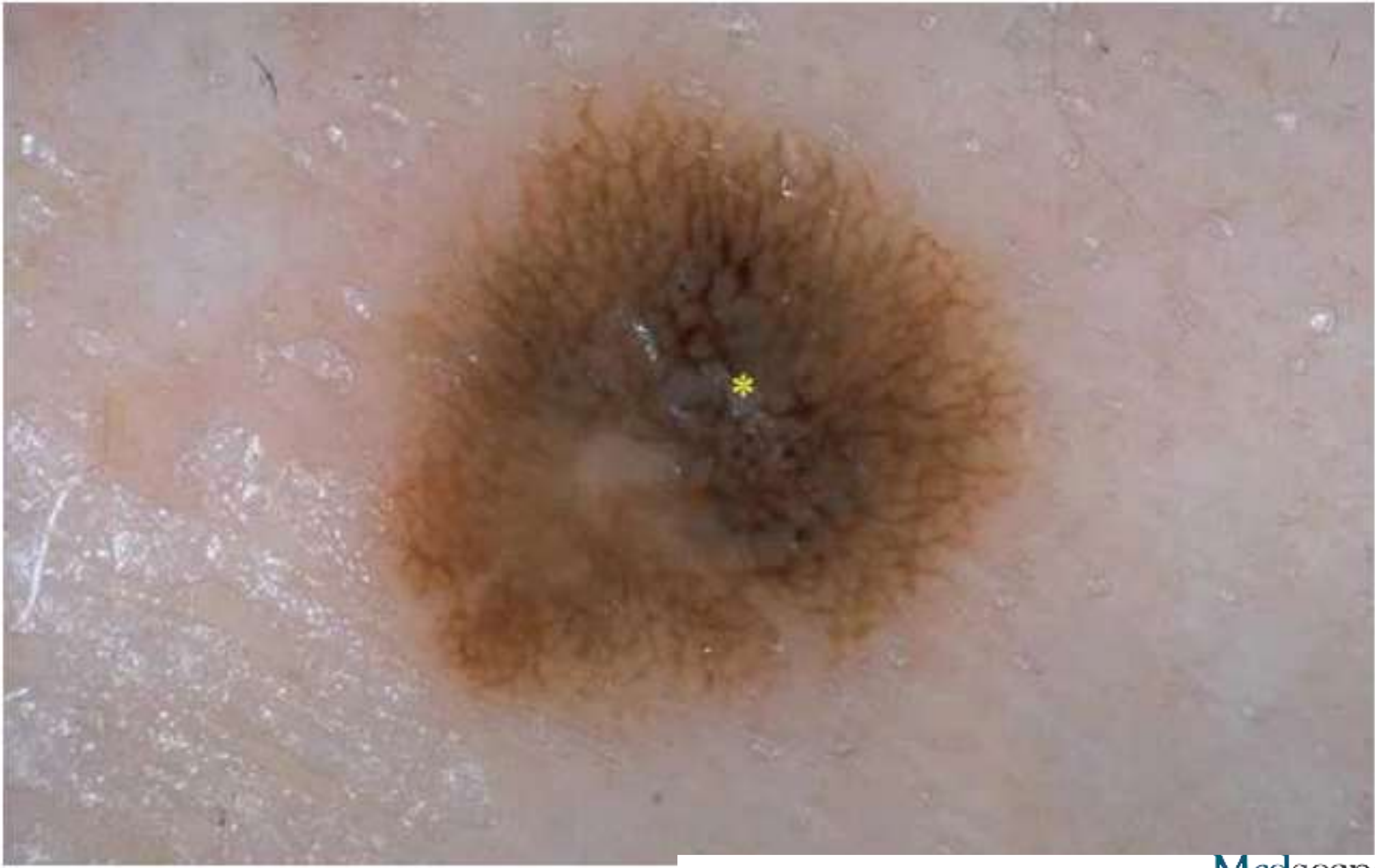


In situ melanoma with asymmetric color distribution, irregular pigment network, and pigment dots with varied size (*).



Dysplastic nevus with irregular pigment network

Medscape

Dermoscopy

Updated: Mar 13, 2018
Author: Ignazio Stanganelli, MD; Chief Editor: Dirk M Elston, MD more...

RADIAL STREAMING AND PSEUDOPDS

STRIE

Dermoscopy

Updated: Mar 13, 2018

Author: Ignazio Stanganelli, MD; Chief Editor: Dirk M Elston, MD more...

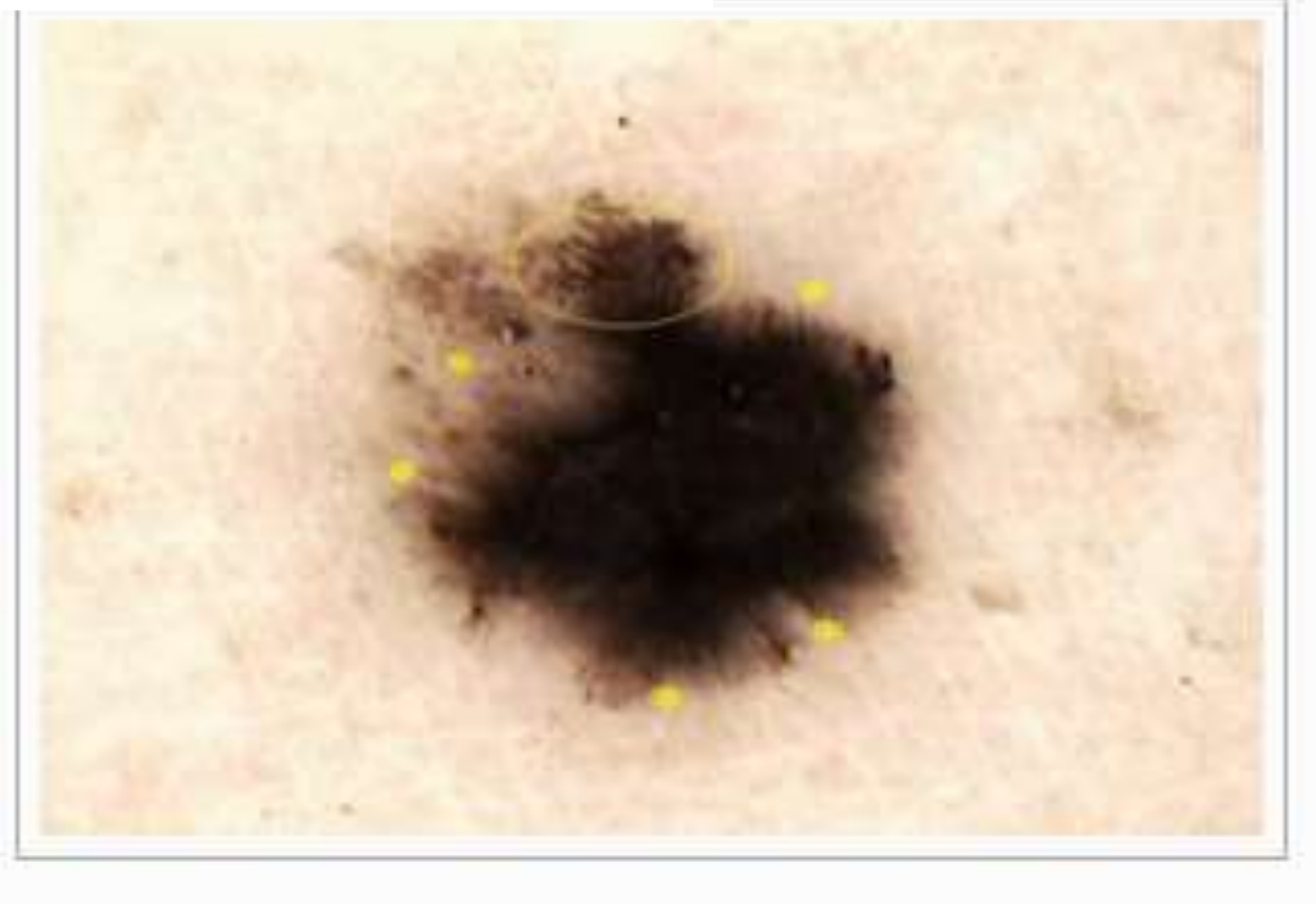
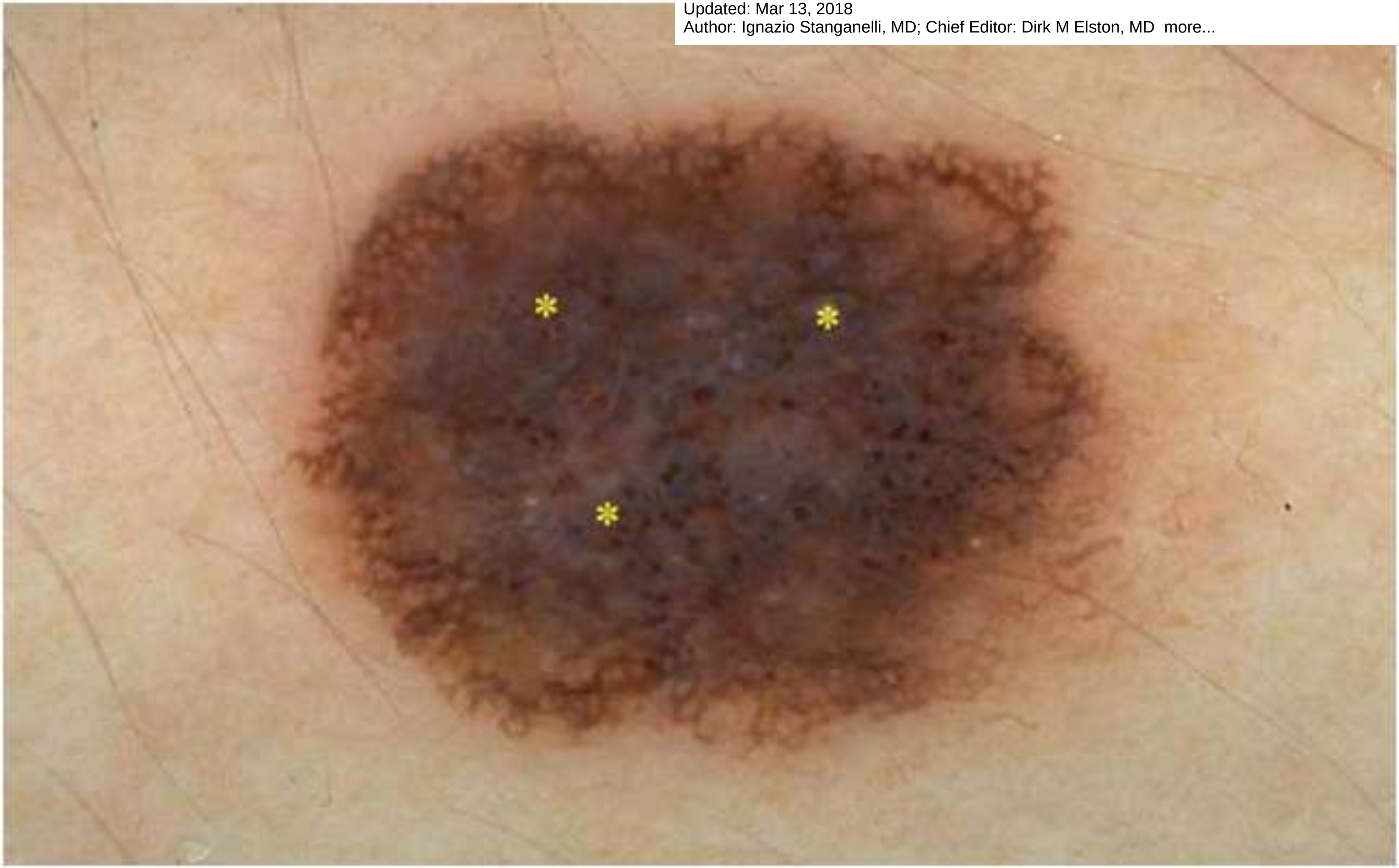


FIGURE 20: In situ melanoma: radial streaming at periphery (*) and pseudopods (circled area).



Melanoma in situ with radial streamings at periphery and a whitish veil (*).

Dermoscopy

Updated: Mar 13, 2018

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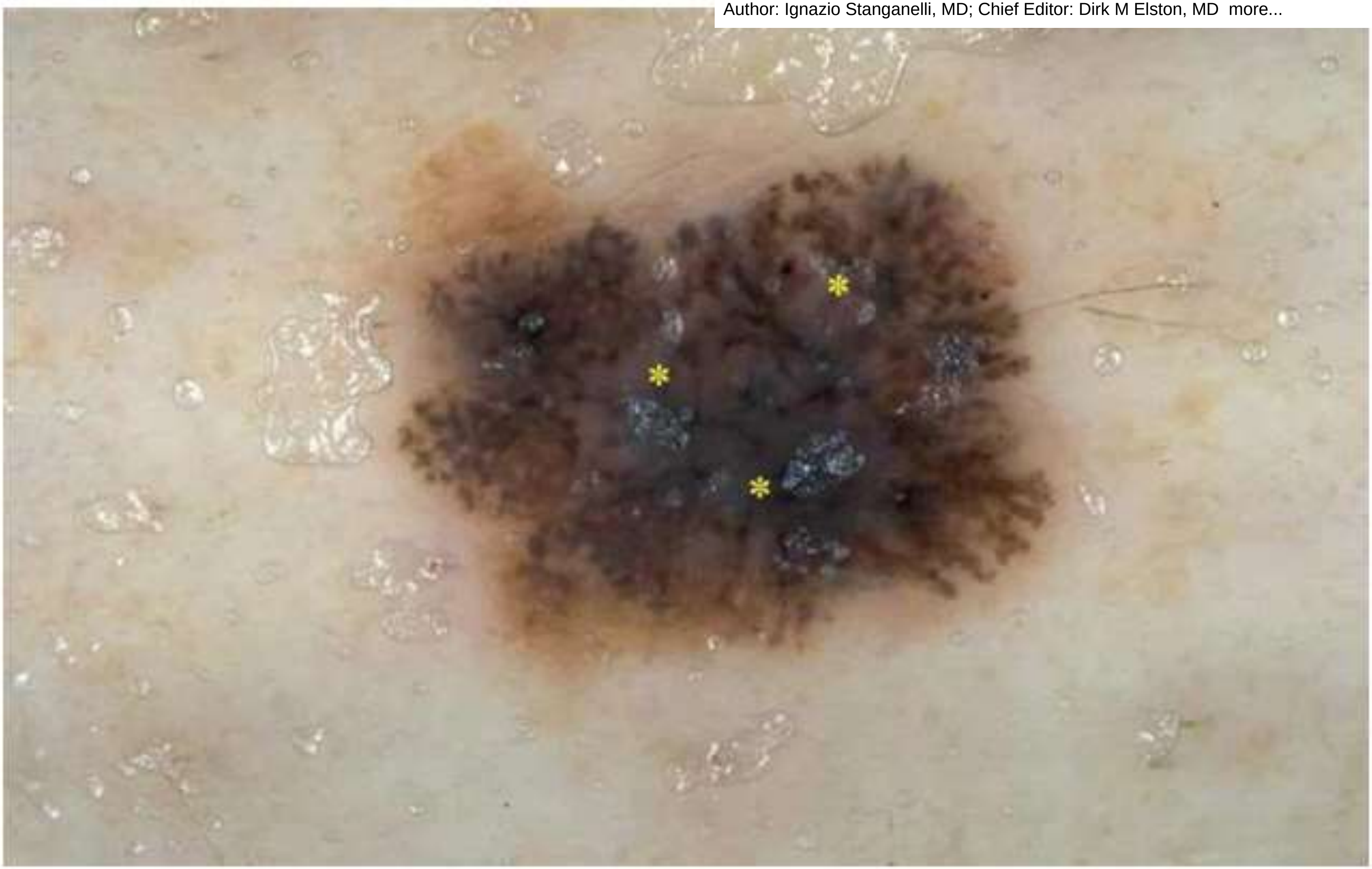


Microinvasive melanoma with pseudopods at the periphery and a whitish veil (*).

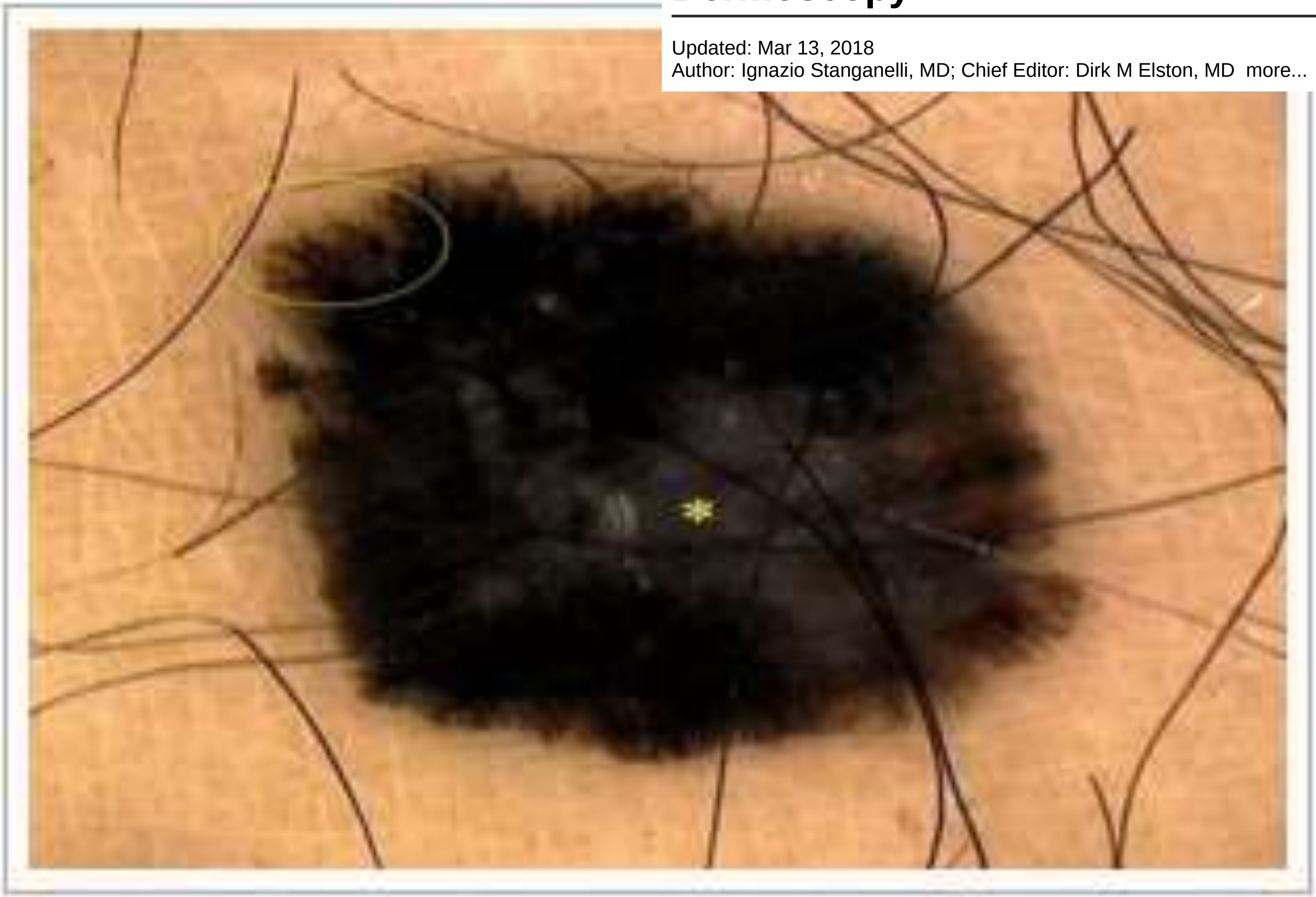
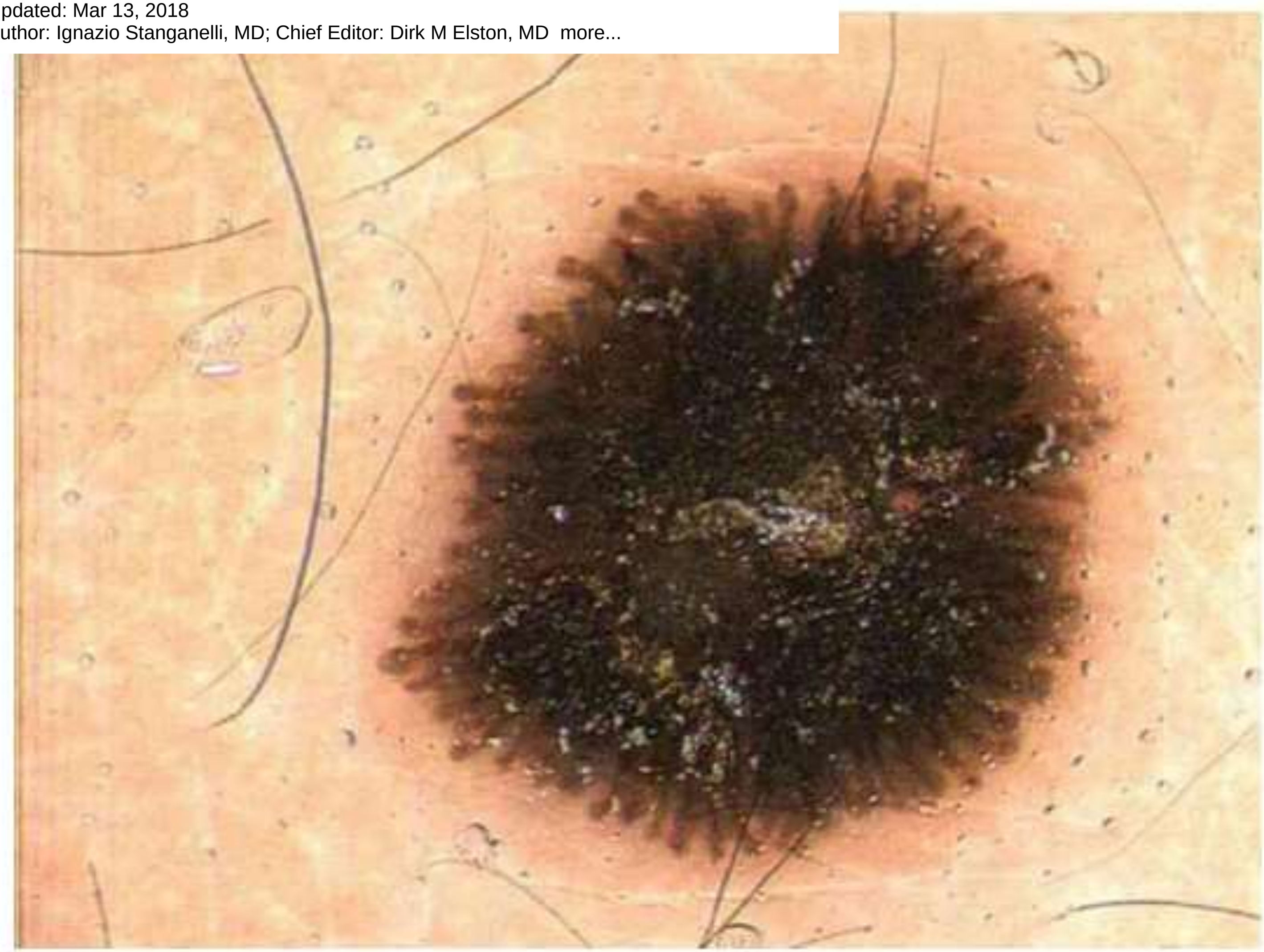


FIGURE 19: Microinvasive melanoma: multicomponent pattern with black color irregularly distributed. The pigmentation is associated to blue-whitish veil (*) and radial streaming/pseudopods at periphery (circled area): these structures are related to severe melanocytic dysplasia.

Dermoscopy

Updated: Mar 13, 2018

Author: Ignazio Stanganelli, MD; Chief Editor: Dirk M Elston, MD more...



Typical starburst pattern characterized by the presence of pseudopods (streaks) visible at the periphery of the lesion radially distributed in a Reed nevus.

PSEUDOPIGMENT NETWORK

Dermoscopy

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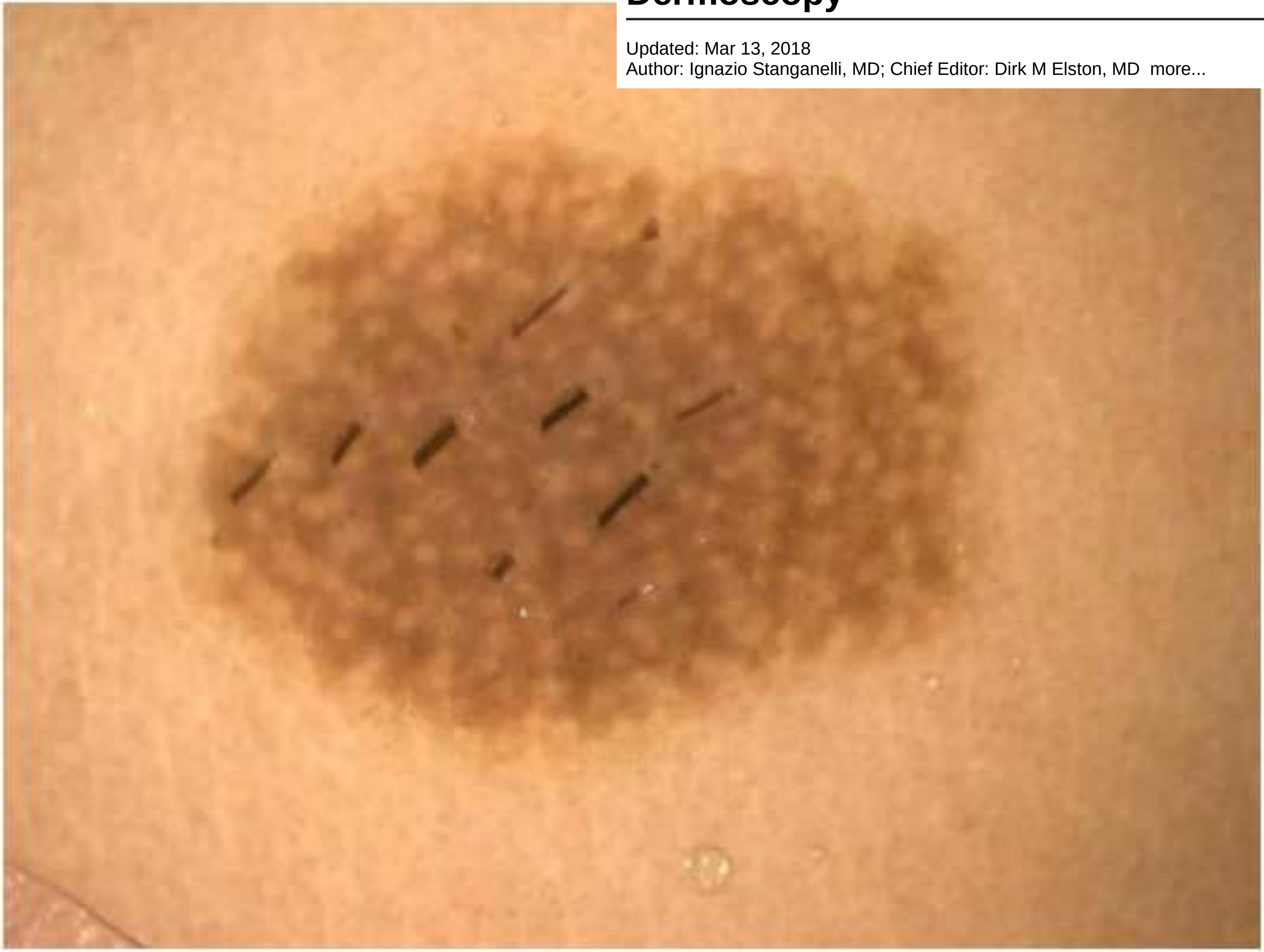
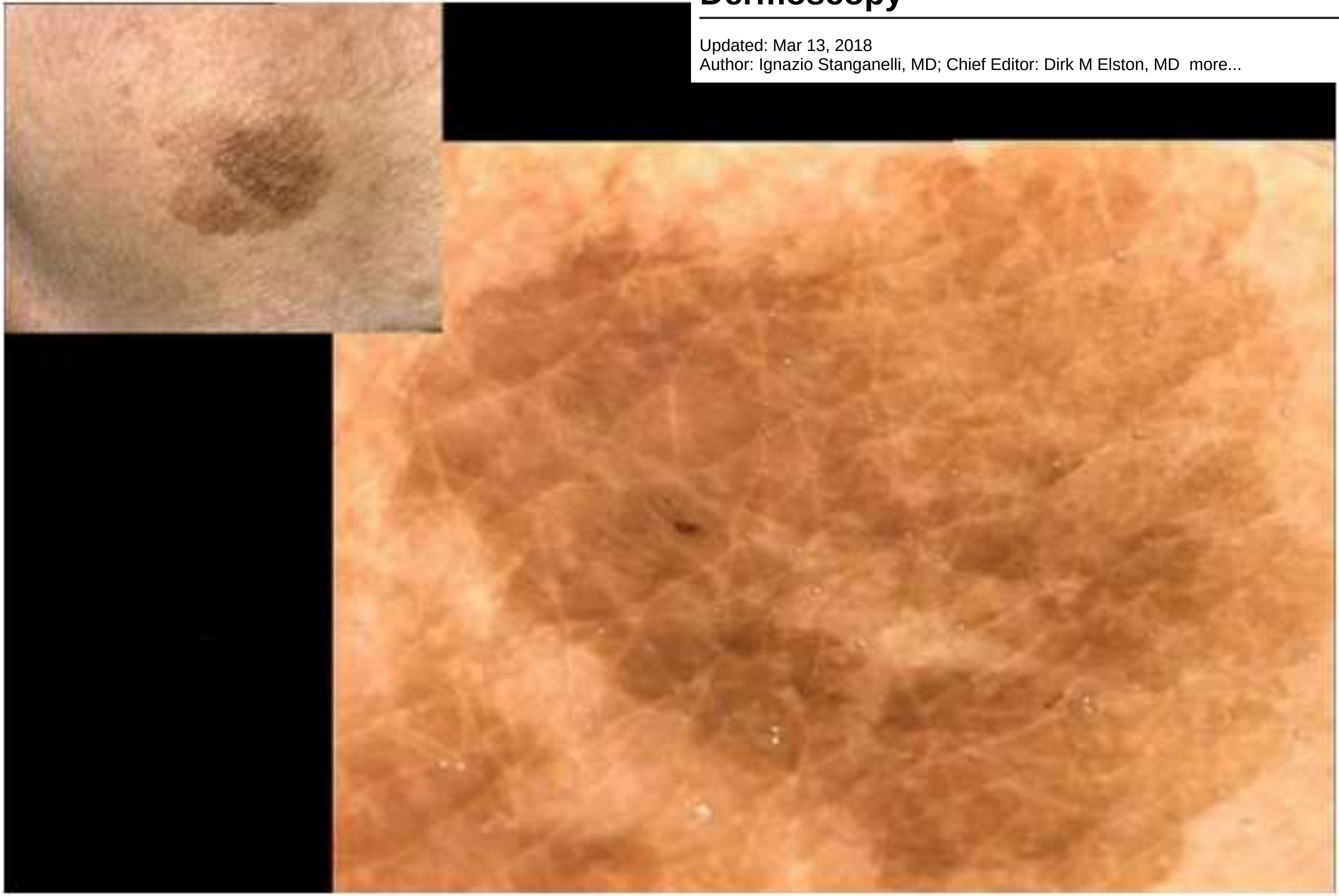


Pseudopigment network of a nevus located on the face.



Solar lentigo.

Medscape

Dermoscopy

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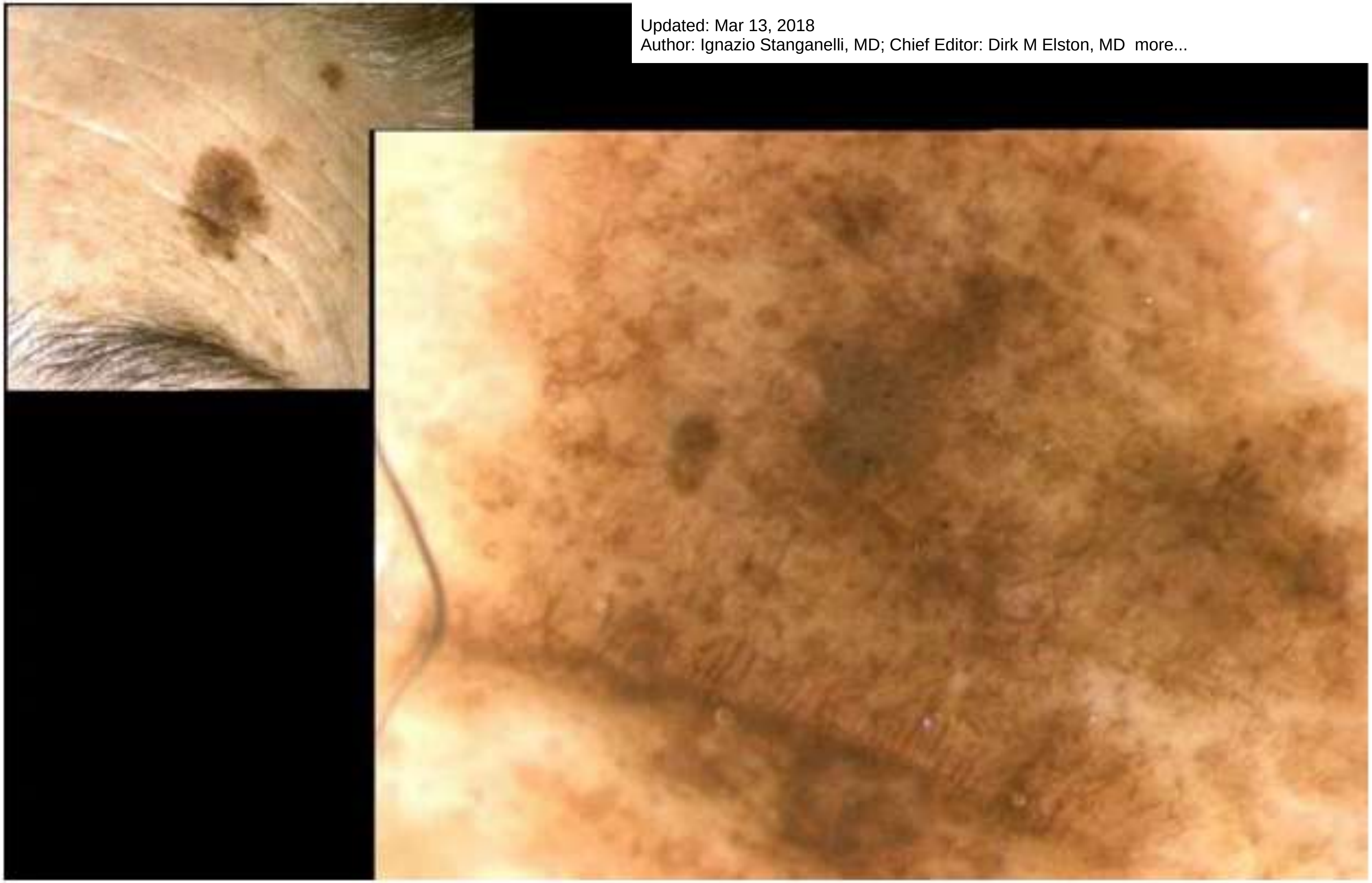

Malignant melanoma in situ on face or lentigo maligna.

GLOBULES

Medscape

Dermoscopy

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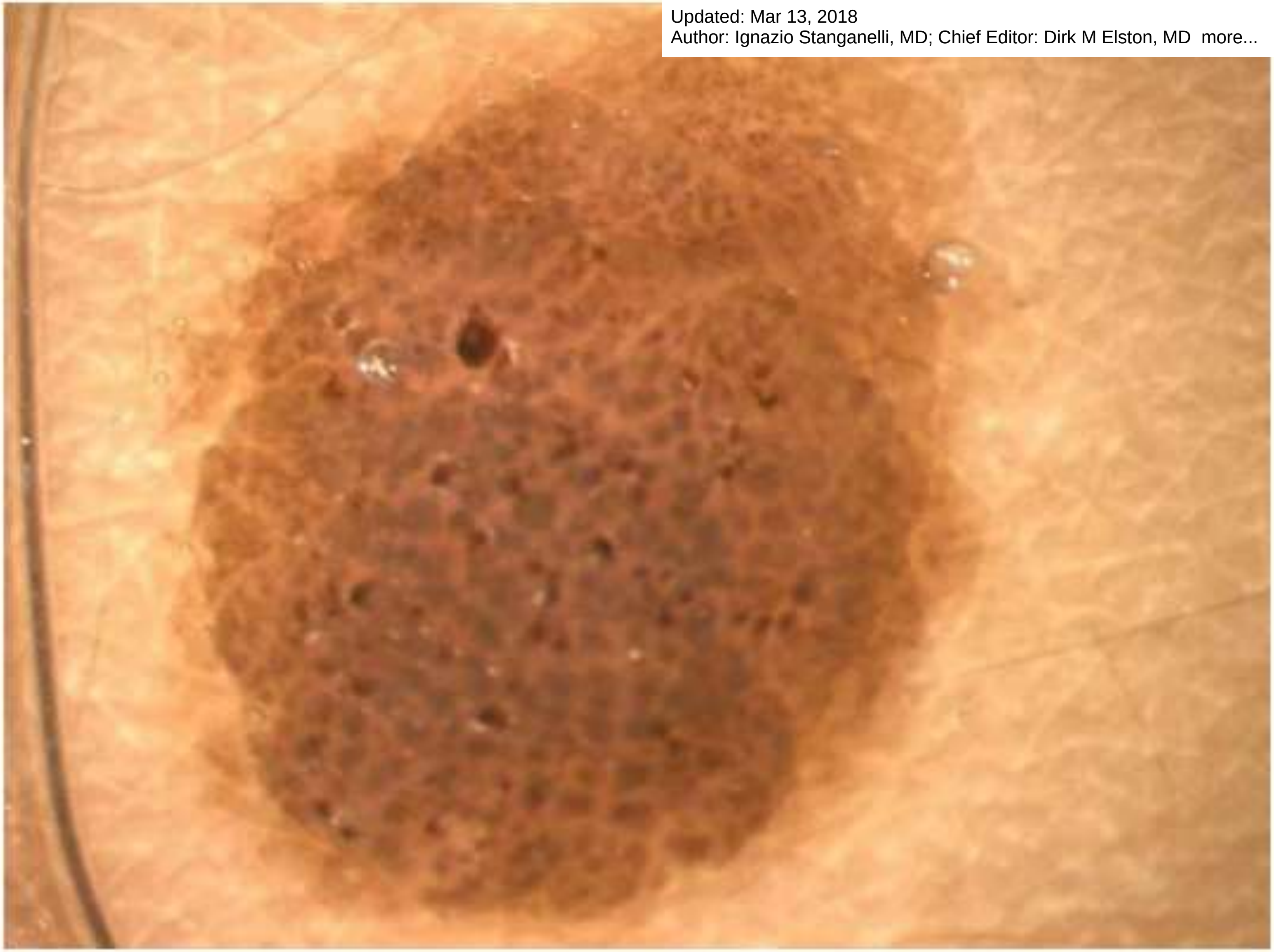

Melanocytic nevus with globular pattern.

Dermoscopy

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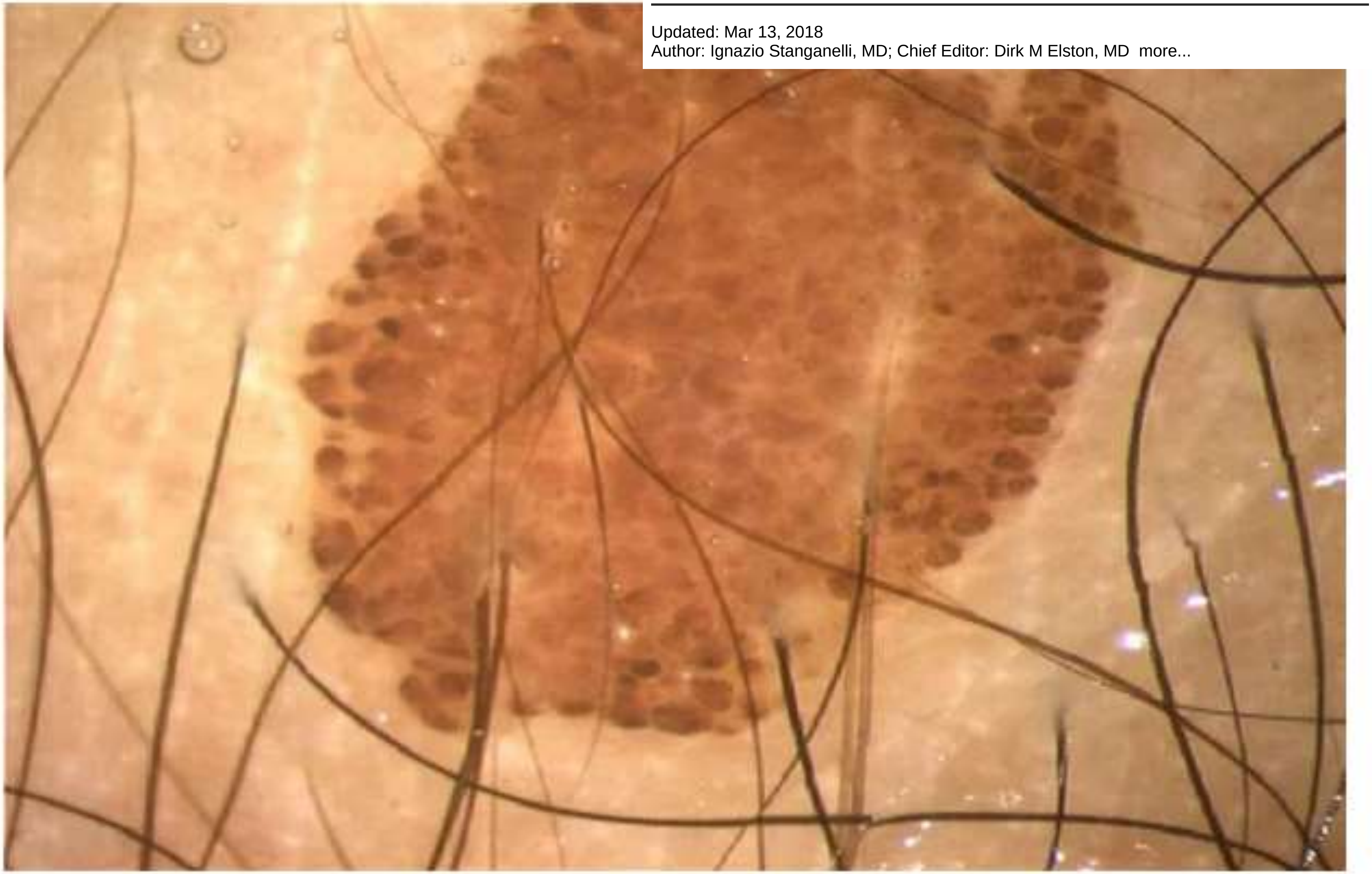

Melanocytic nevus with globular pattern.

Dermoscopy

Updated: Mar 13, 2018
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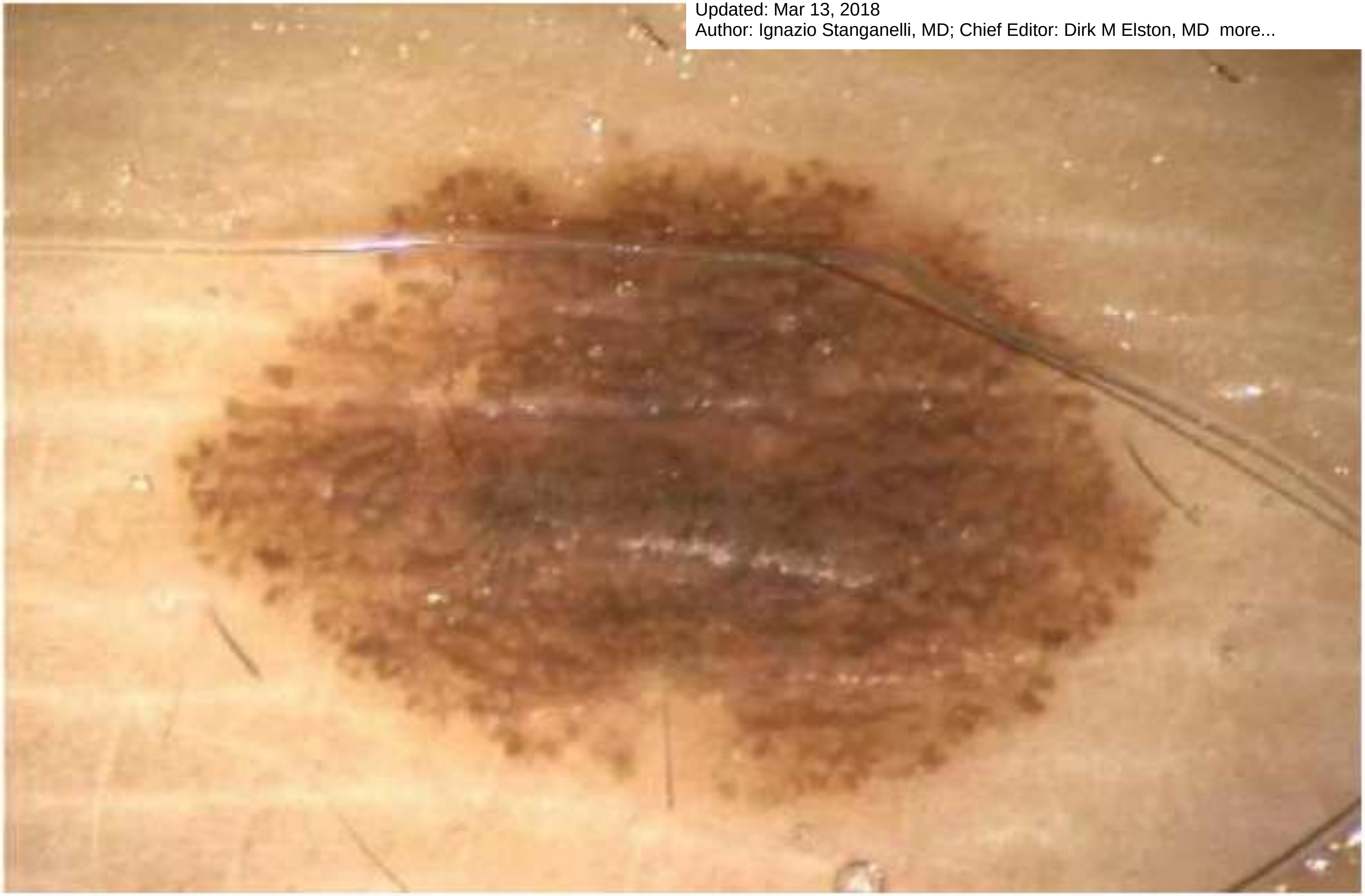

Melanocytic nevus with regular distribution of globules at periphery.

Dermoscopy

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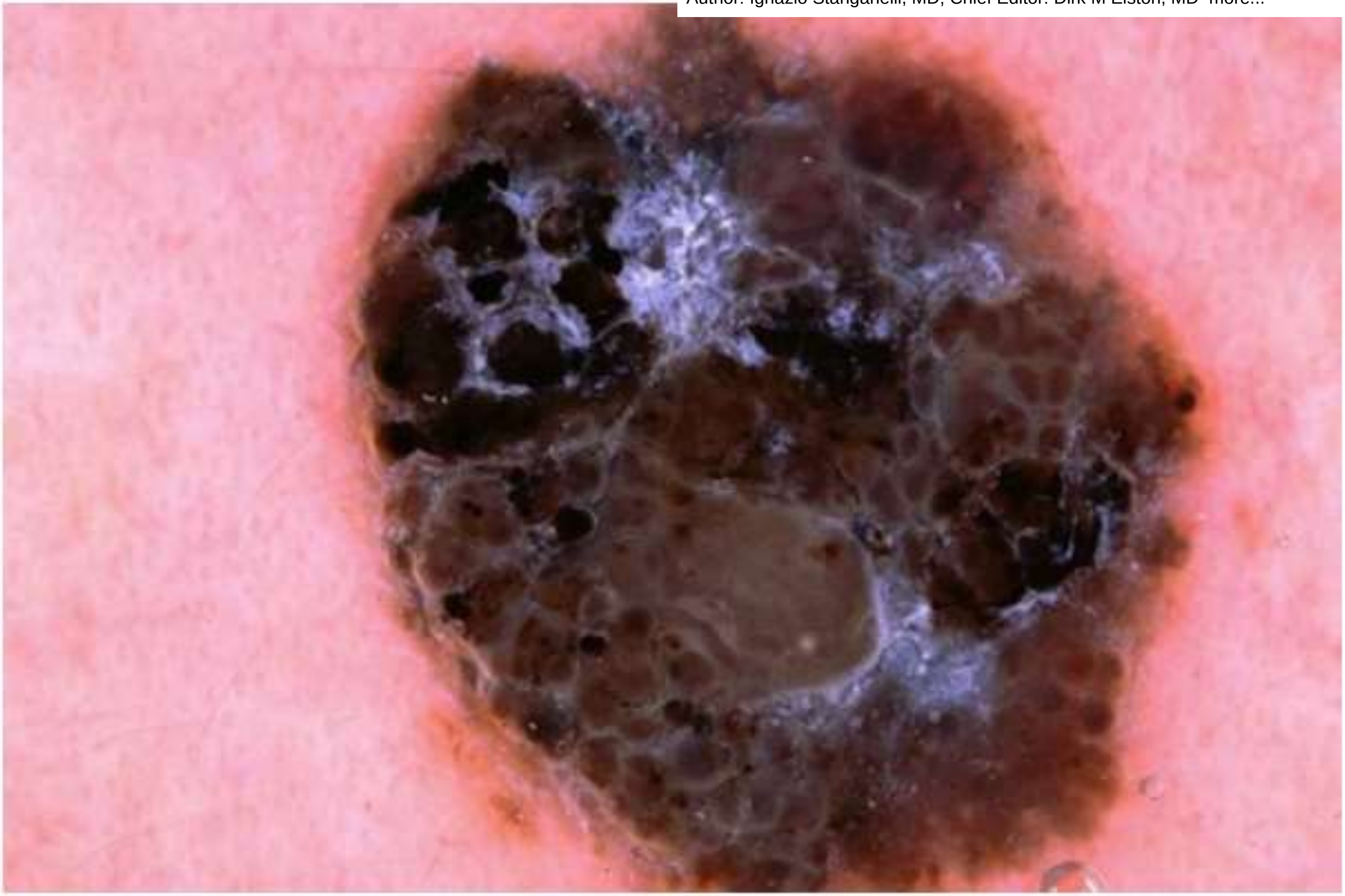
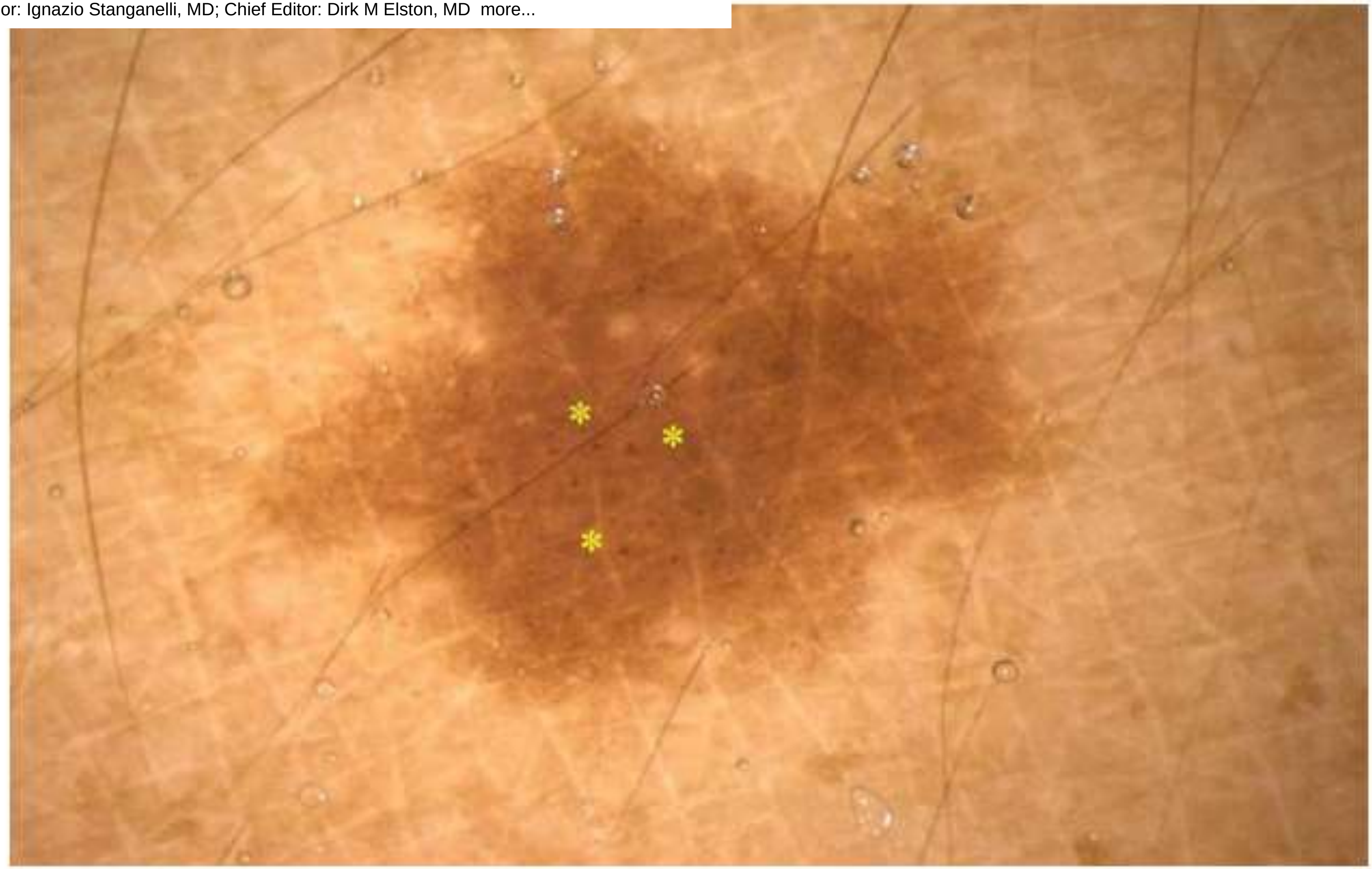
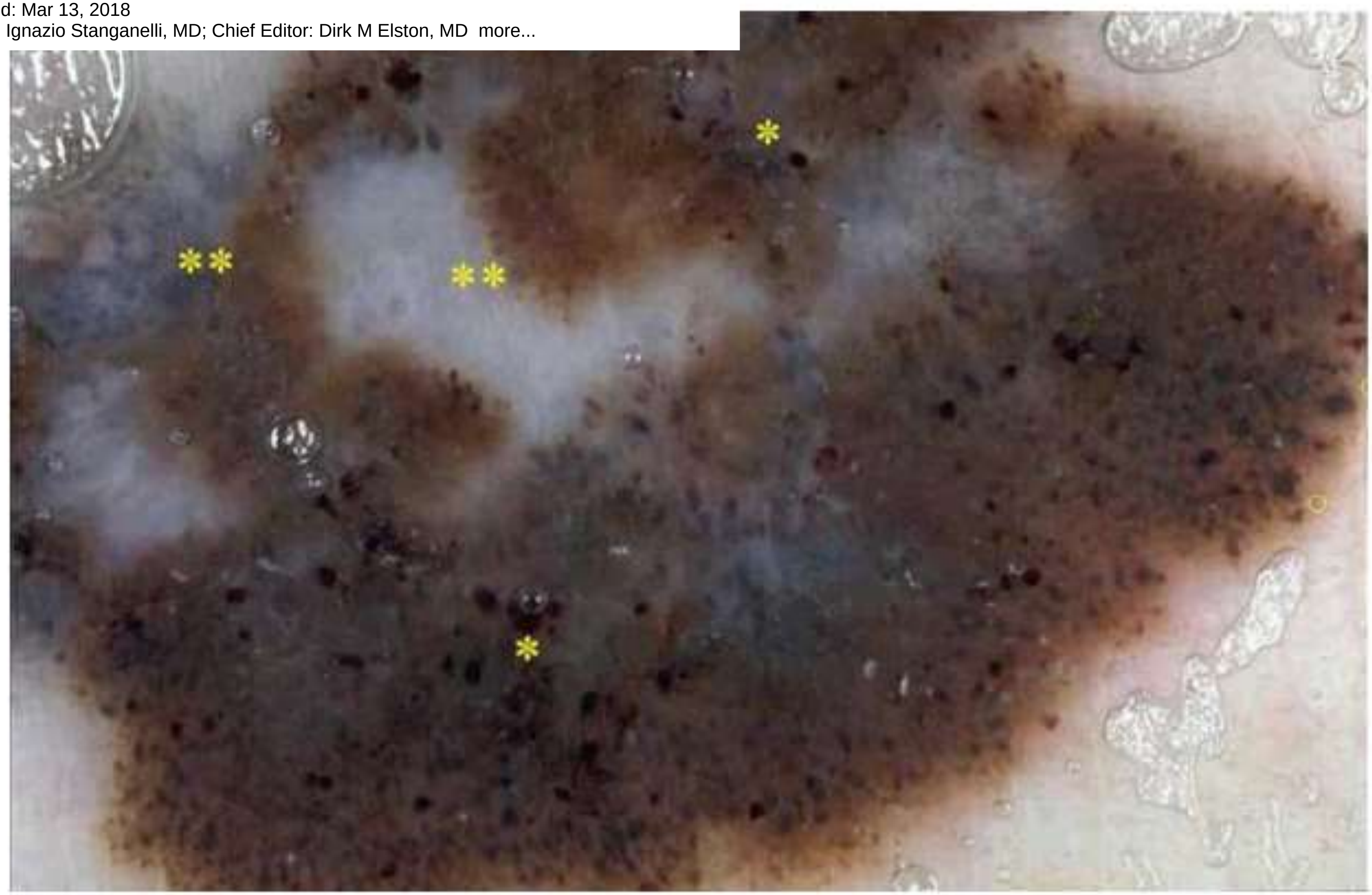


Peripheral irregular globules with varied colors in an invasive melanoma.

DOTS

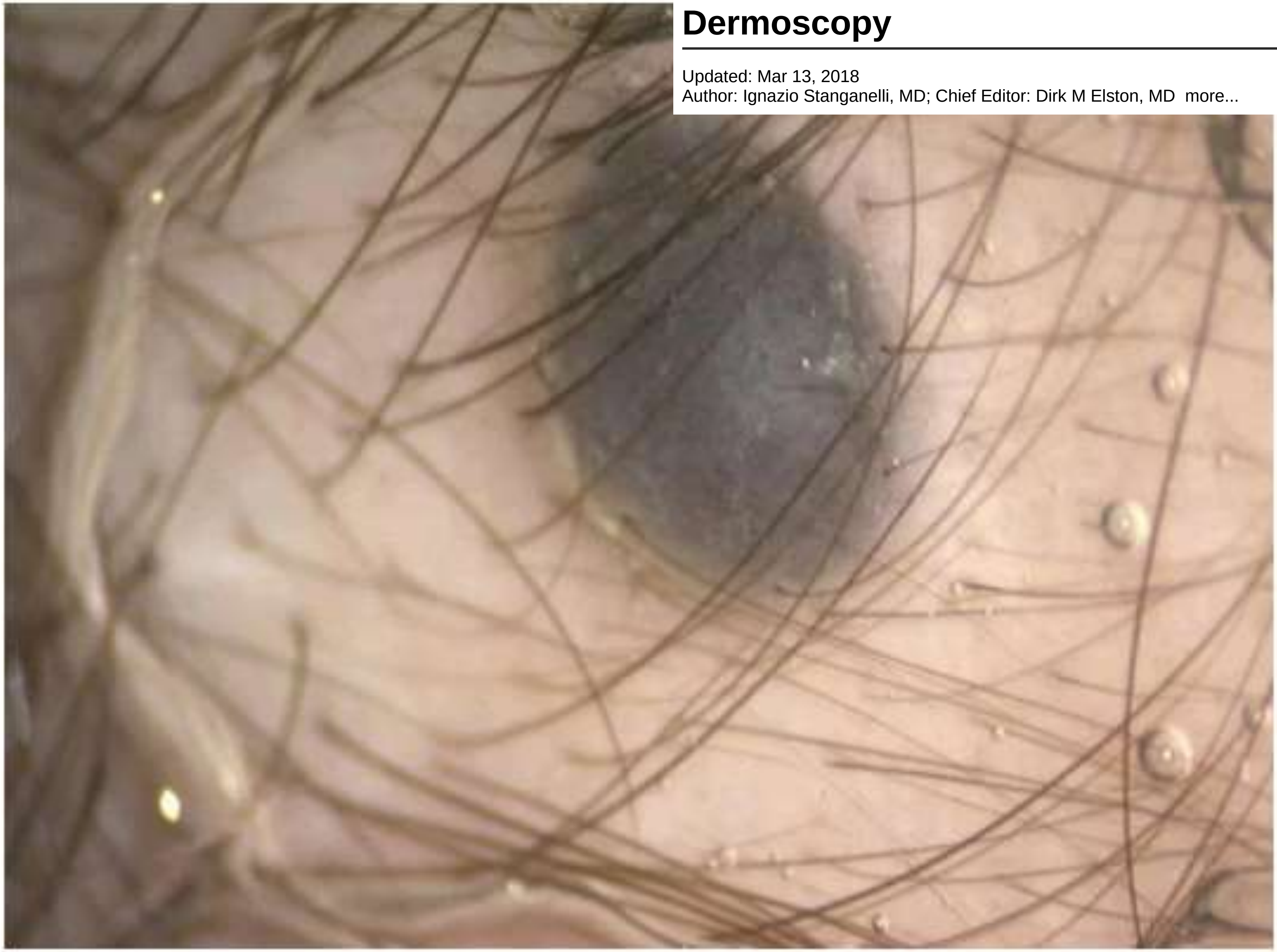


Pigmented dots (*) in a melanocytic nevus.



Invasive melanoma with white and gray areas (**), different expressions of pigmented dots (*), and globules (O).

BLUE-WHITE VEIL



Homogeneous steel blue areas in a blue nevus.

Dermoscopy

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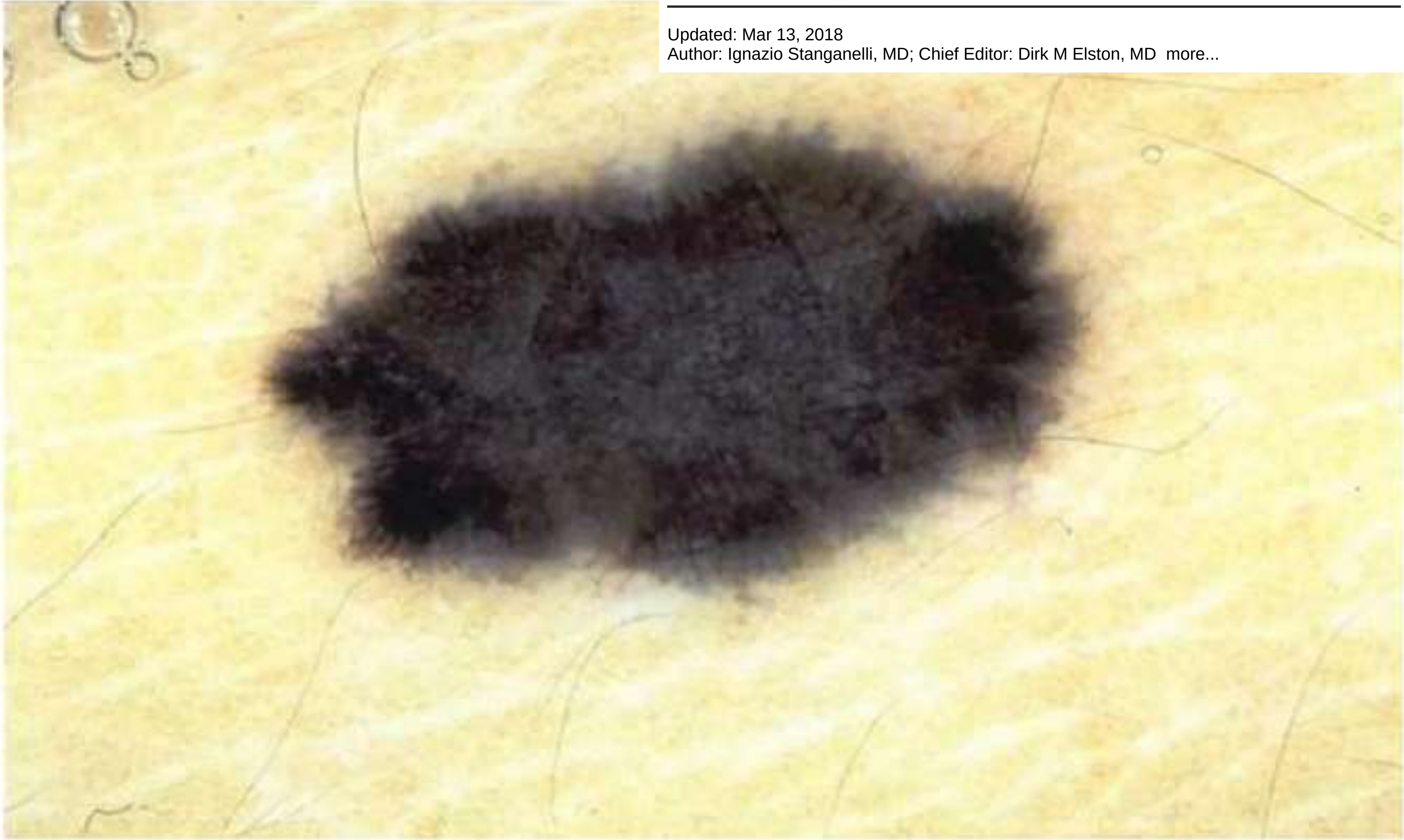

Whitish blue veil in a pigmented Spitz nevus.

Dermoscopy

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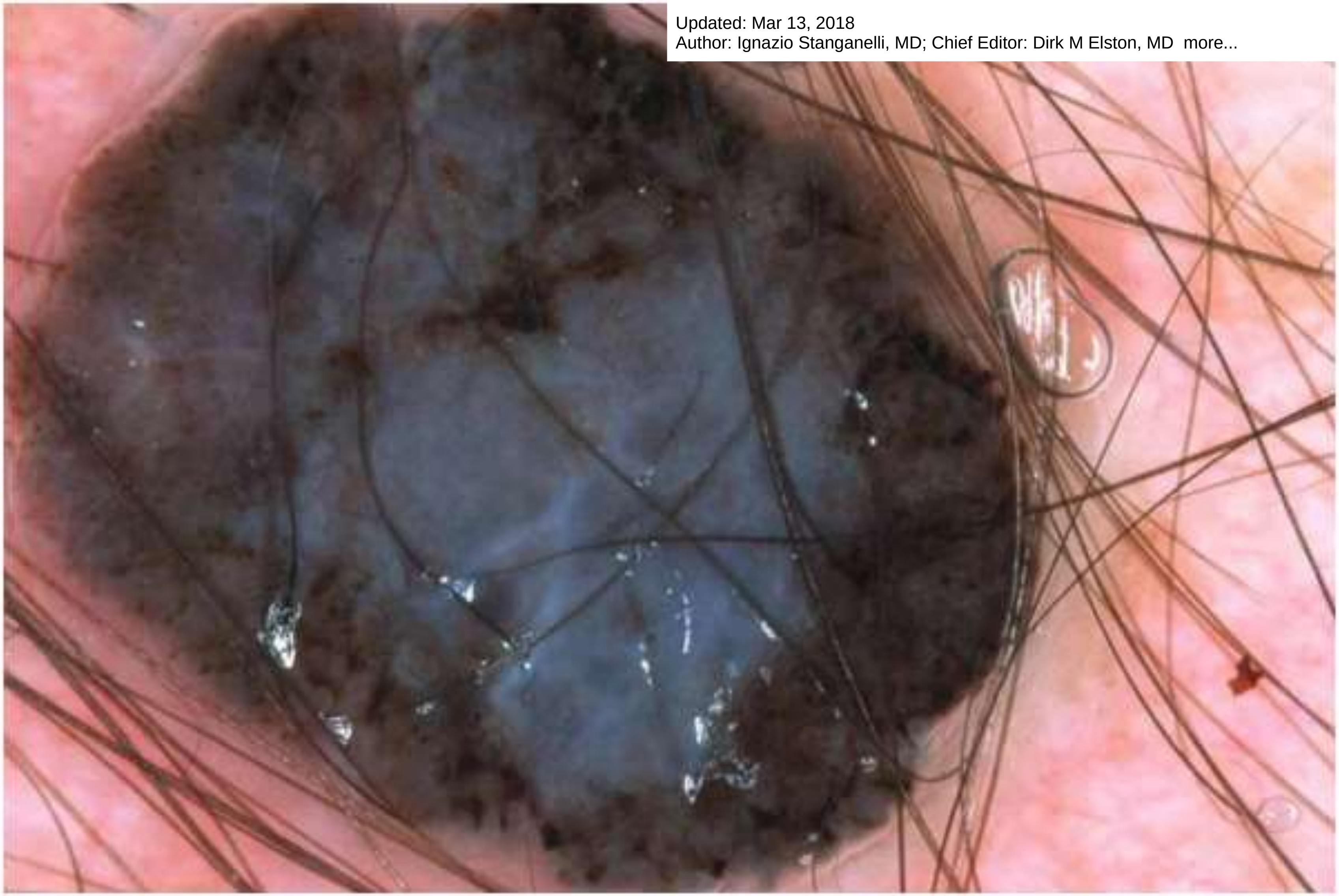

Whitish blue veil and gray-blue areas in invasive melanoma.

DEPIGMENTATION

Dermoscopy

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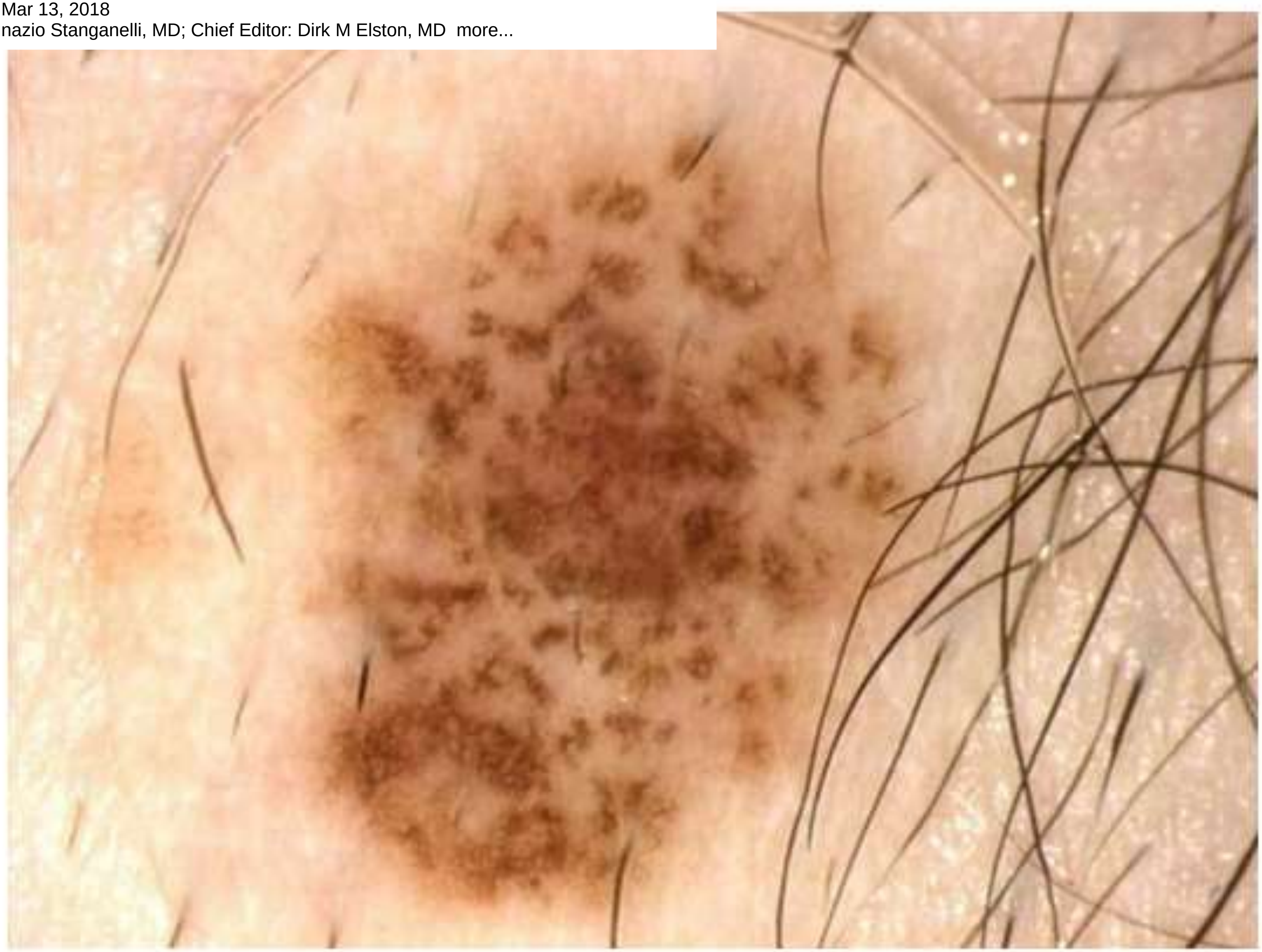

Hypopigmented areas in a melanocytic nevus.

Dermoscopy

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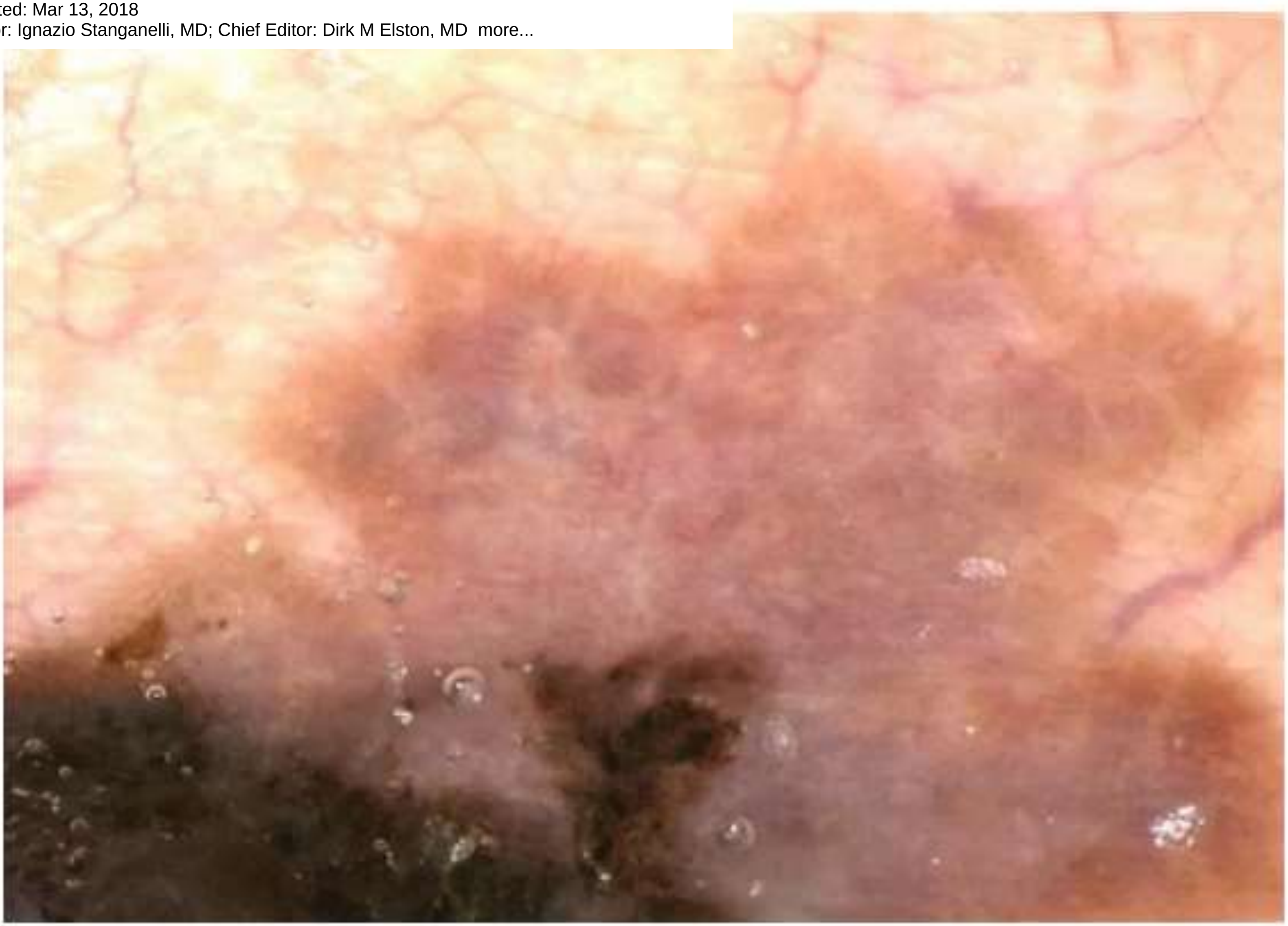


White areas in invasive melanoma.

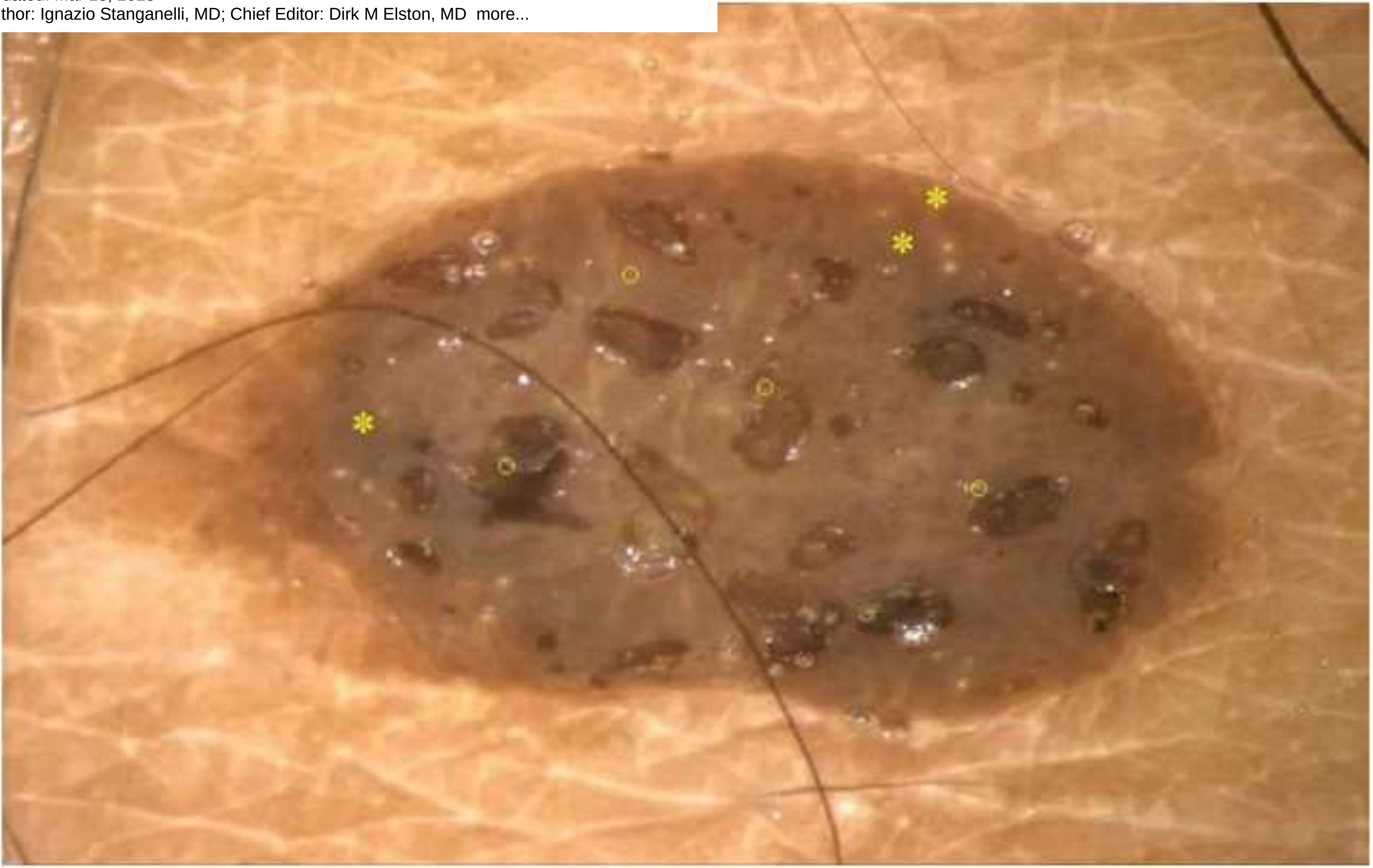
MILIA-LIKE CYSTS
AND
COMEDO-LIKE OPENINGS

MILIA-LIKE CYSTS

Medscape

Dermoscopy

Updated: Mar 13, 2018
Author: Ignazio Stanganelli, MD; Chief Editor: Dirk M Elston, MD more...



Milialike cysts (*) and comedolike openings (O) in seborrheic keratosis.

Medscape

Dermoscopy

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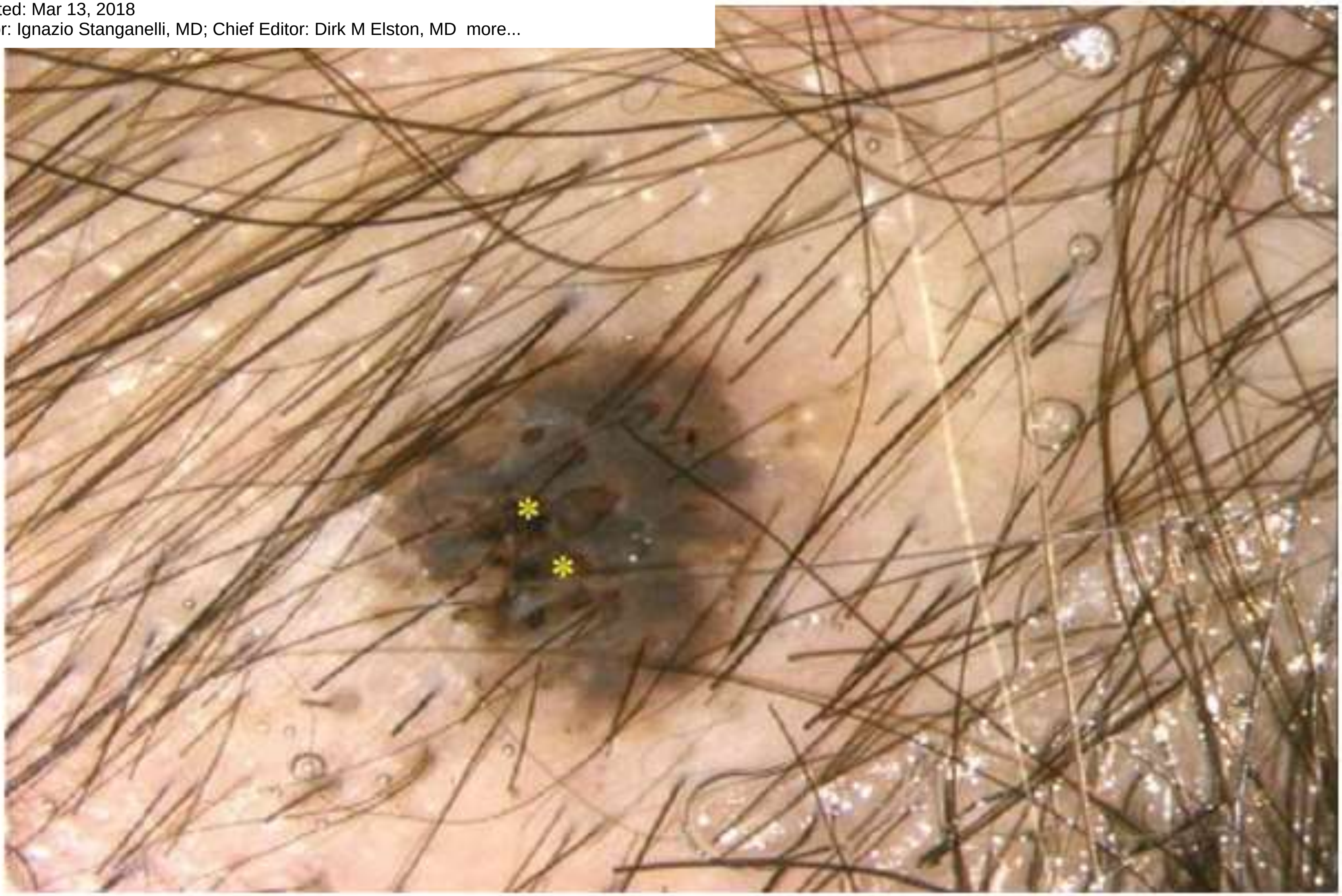
COMEDO-LIKE OPENINGS



Comedolike openings (*) in seborrheic keratosis.

RED-BLACK LAGOONS

Dermoscopy

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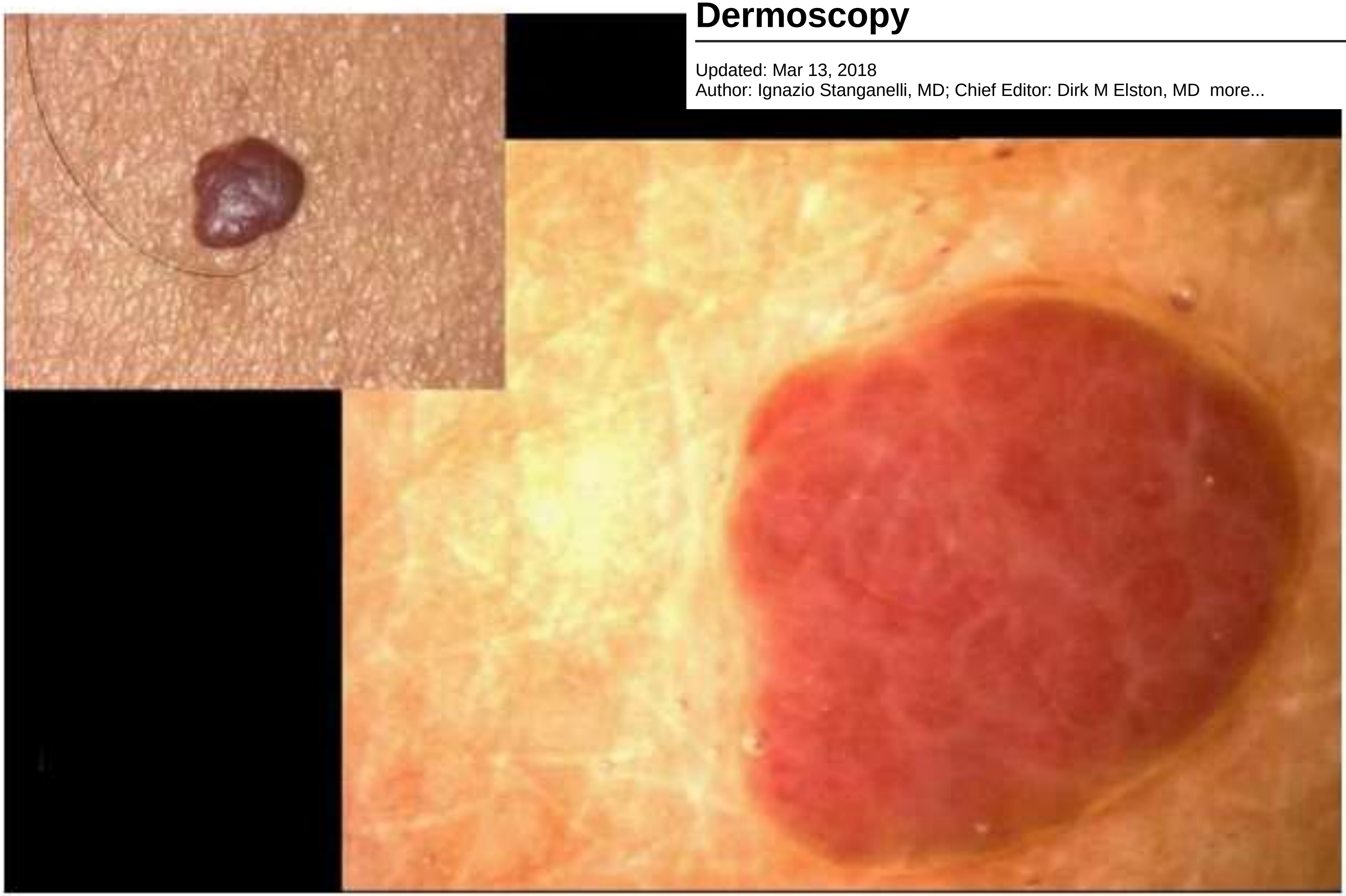

Red vascular lagoons.

Dermoscopy

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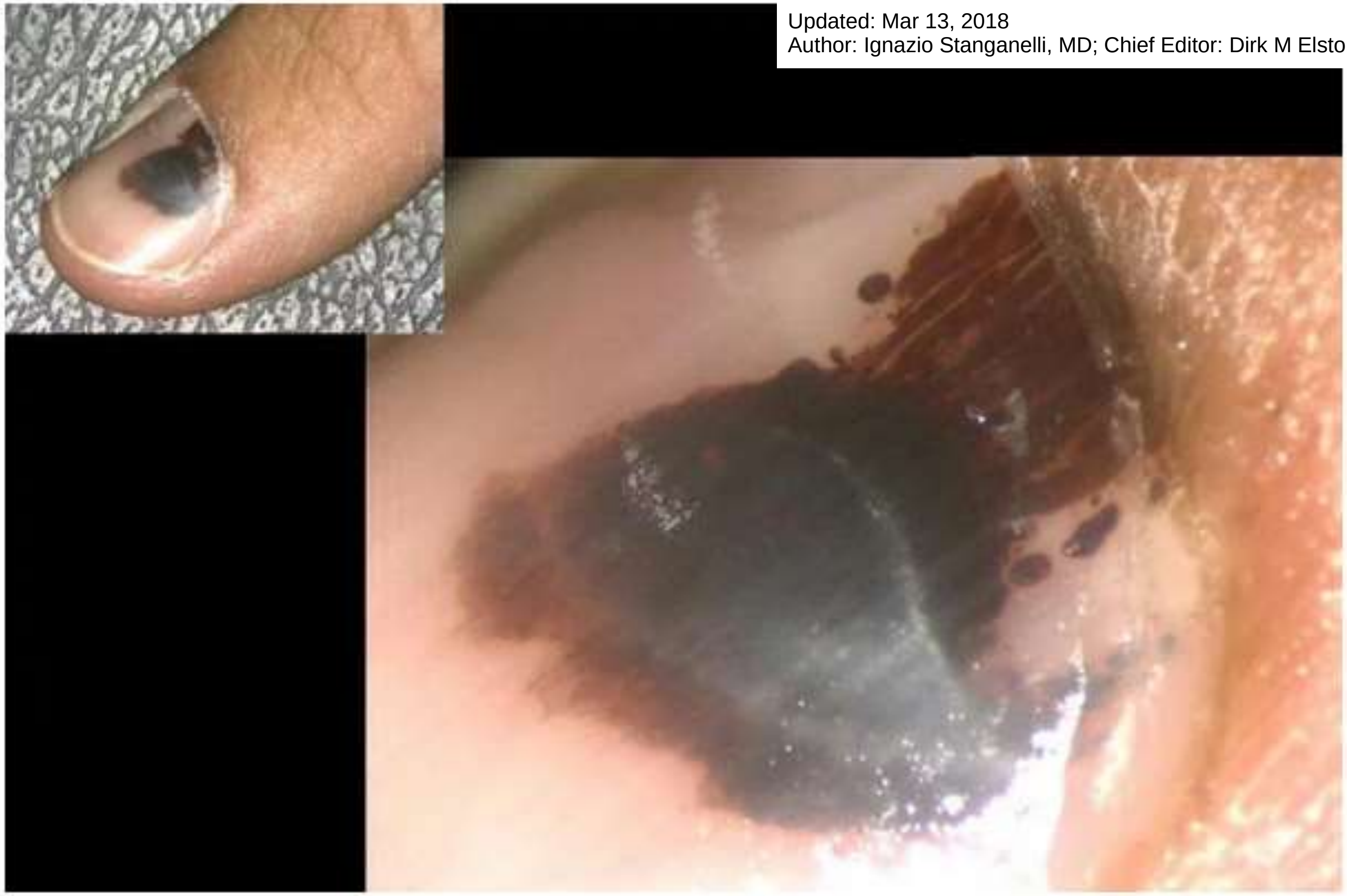

Subungual hemorrhage.

MAPLE LEAF-LIKE PIGMENTATION

Medscape

Dermoscopy

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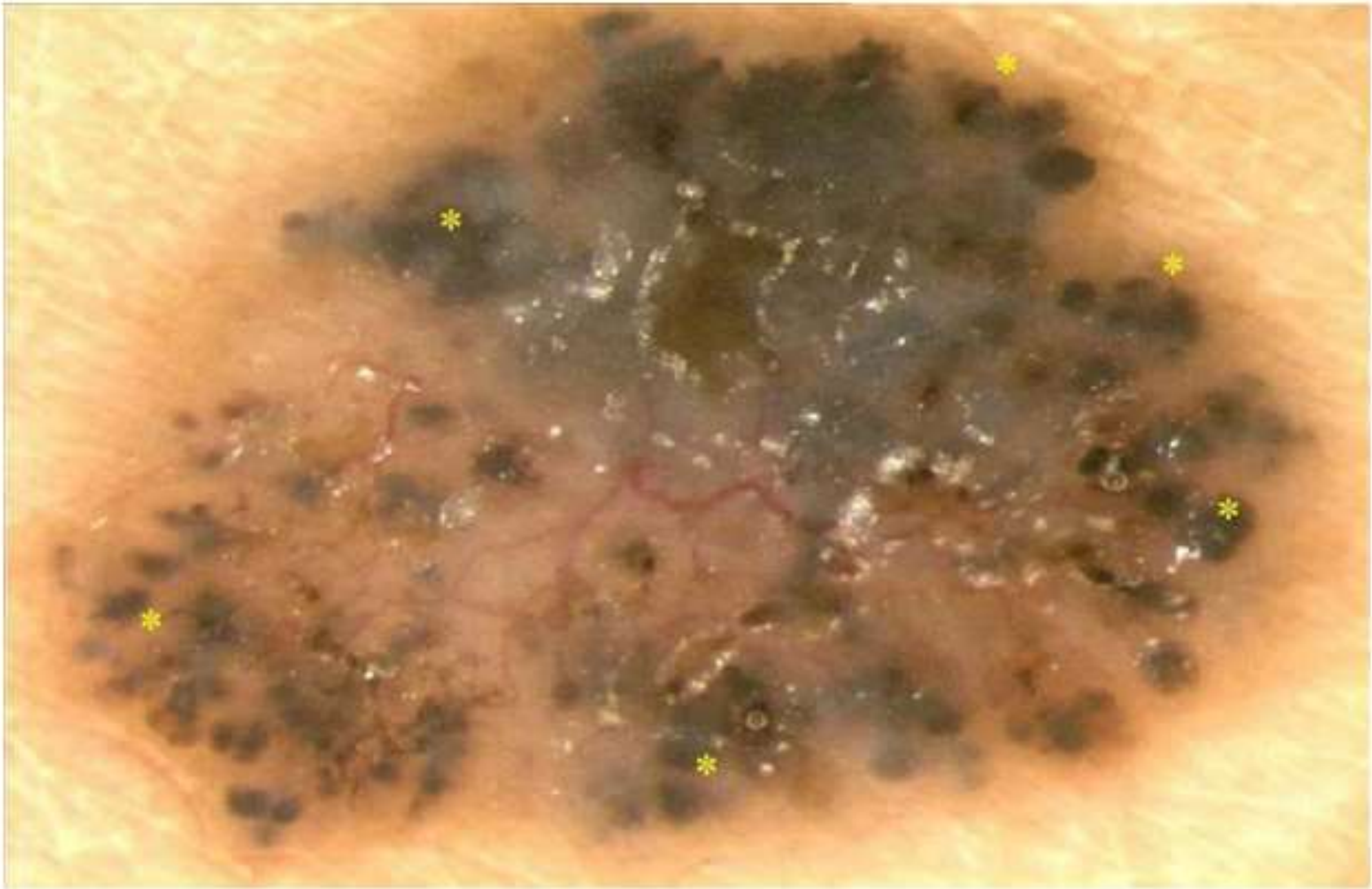
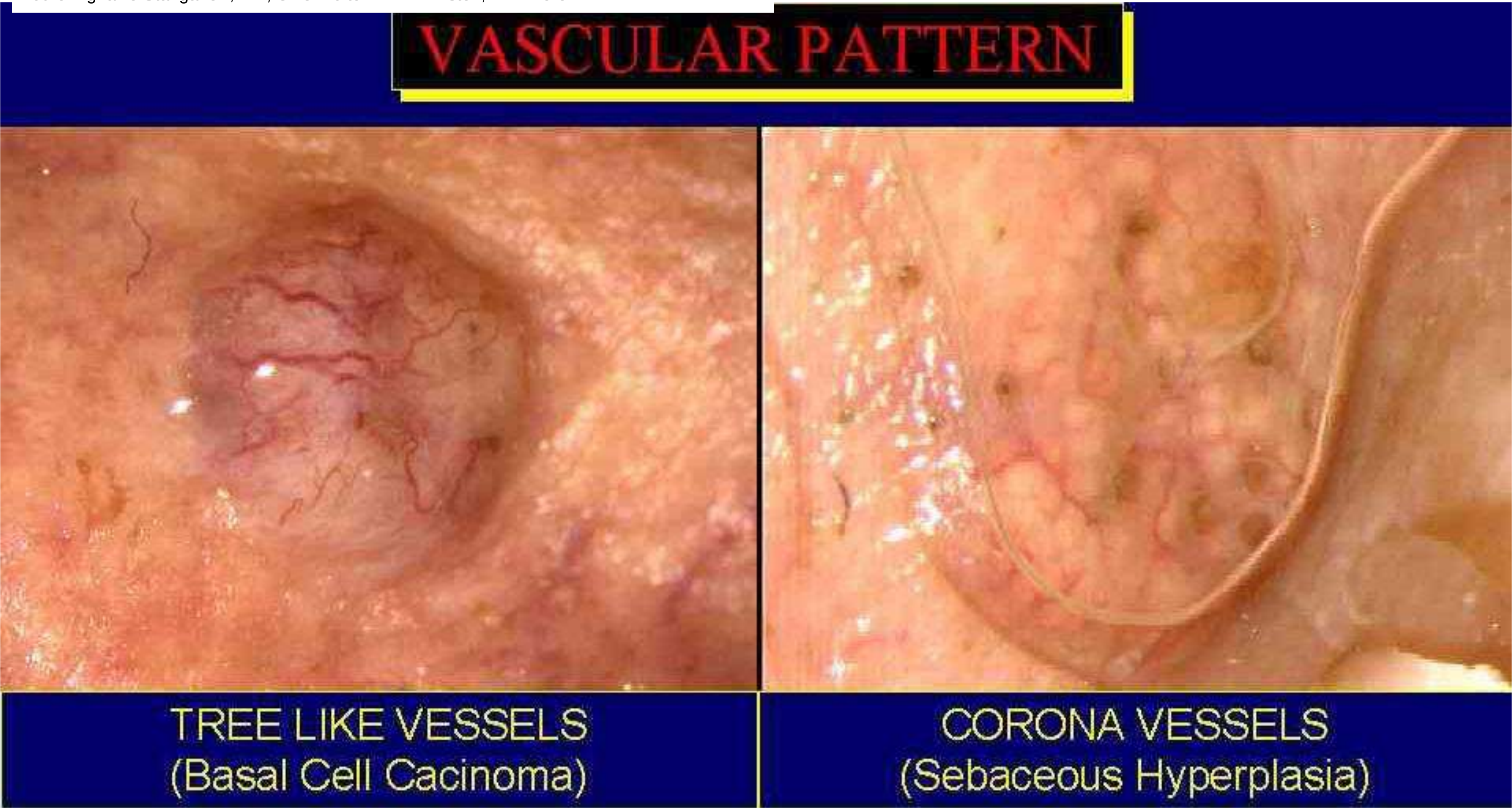


Maple leaf–like pigmentation (*), treelike vascular pattern, and gray-blue ovoid nests in a basal cell carcinoma.

VASCULAR PATTERN



VASCULAR PATTERN

TREE LIKE VESSELS
(Basal Cell Cacinoma)

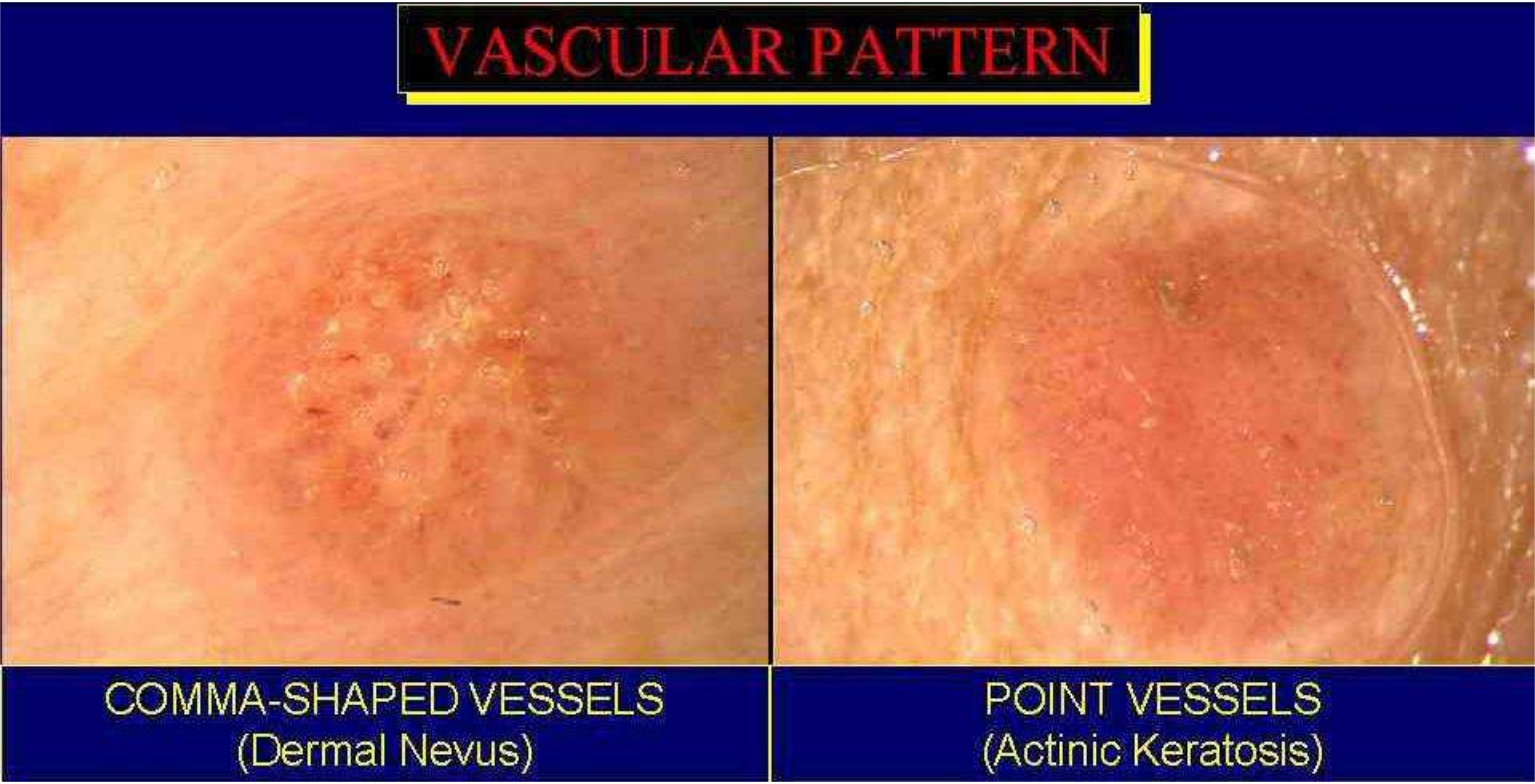
CORONA VESSELS
(Sebaceous Hyperplasia)

On the left, treelike vessels in a basal cell carcinoma, and, on the right, corona vessels that are thin and curved and are surrounding a sebaceous gland hyperplasia.

Dermoscopy

Updated: Mar 13, 2018

Author: Ignazio Stanganelli, MD; Chief Editor: Dirk M Elston, MD more...

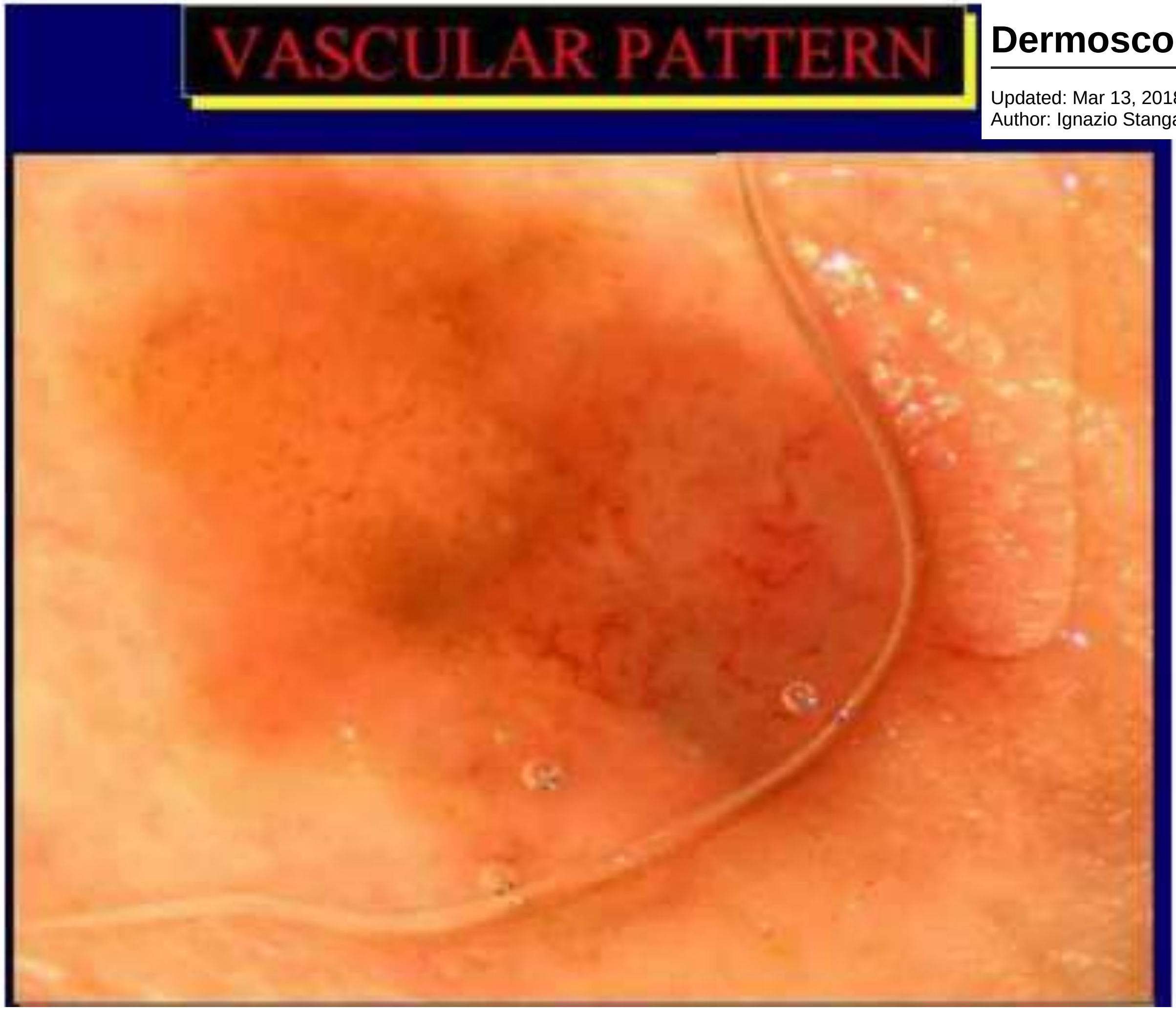


VASCULAR PATTERN

COMMA-SHAPED VESSELS
(Dermal Nevus)

POINT VESSELS
(Actinic Keratosis)

On the left, comma-shaped vessels parallel to the skin surface in a dermal nevi. On the right, point vessels in an actinic keratosis.



VASCULAR PATTERN

Pizzichetta MA, Talamini R, Stanganelli I, Puddu P, Bono R, Argenziano G, Veronesi A, Trevisan G, Rabinovitz H, Soyer HP. ***AMELANOTIC/HYPOMELANOTIC MELANOMA: CLINICAL AND DERMOSCOPIC FEATURES Br J Dermatol. 2004 Jun;150(6):1117-24***

Pizzichetta MA, Kittler H, Stanganelli I, Ghigliotti G, Corradin MT, Rubegni P, Cavicchini S, De Giorgi V, Bono R, Alaibac M, Astorino S, Ayala F, Quaglino P, Pellacani G, Argenziano G, Guardoli D, Specchio F, Serraino D, Talamini R; Italian Melanoma Intergroup. **DERMOSCOPIC DIAGNOSIS OF AMELANOTIC/HYPOMELANOTIC MELANOMA. Br J Dermatol. 2017 Aug;177(2):538-540**

Dermoscopy

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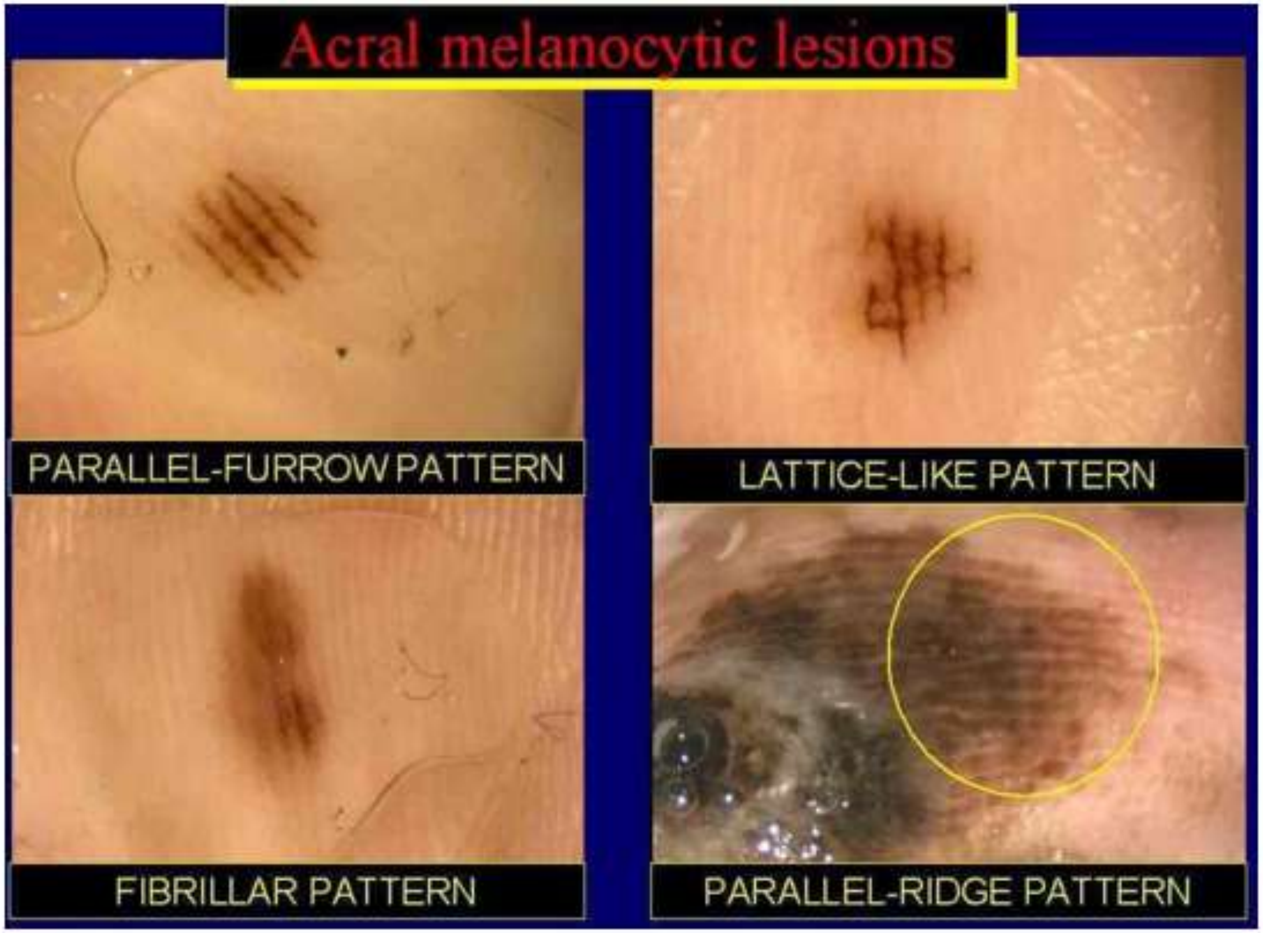
Acral melanocytic lesions
PARALLEL-FURROW PATTERN
LATTICE-LIKE PATTERN
FIBRILLAR PATTERN
PARALLEL-RIDGE PATTERN

The main patterns in acral lesions: parallel furrow pattern, latticelike pattern, fibrillar pattern, and parallel ridge pattern.

Medscape

Dermoscopy

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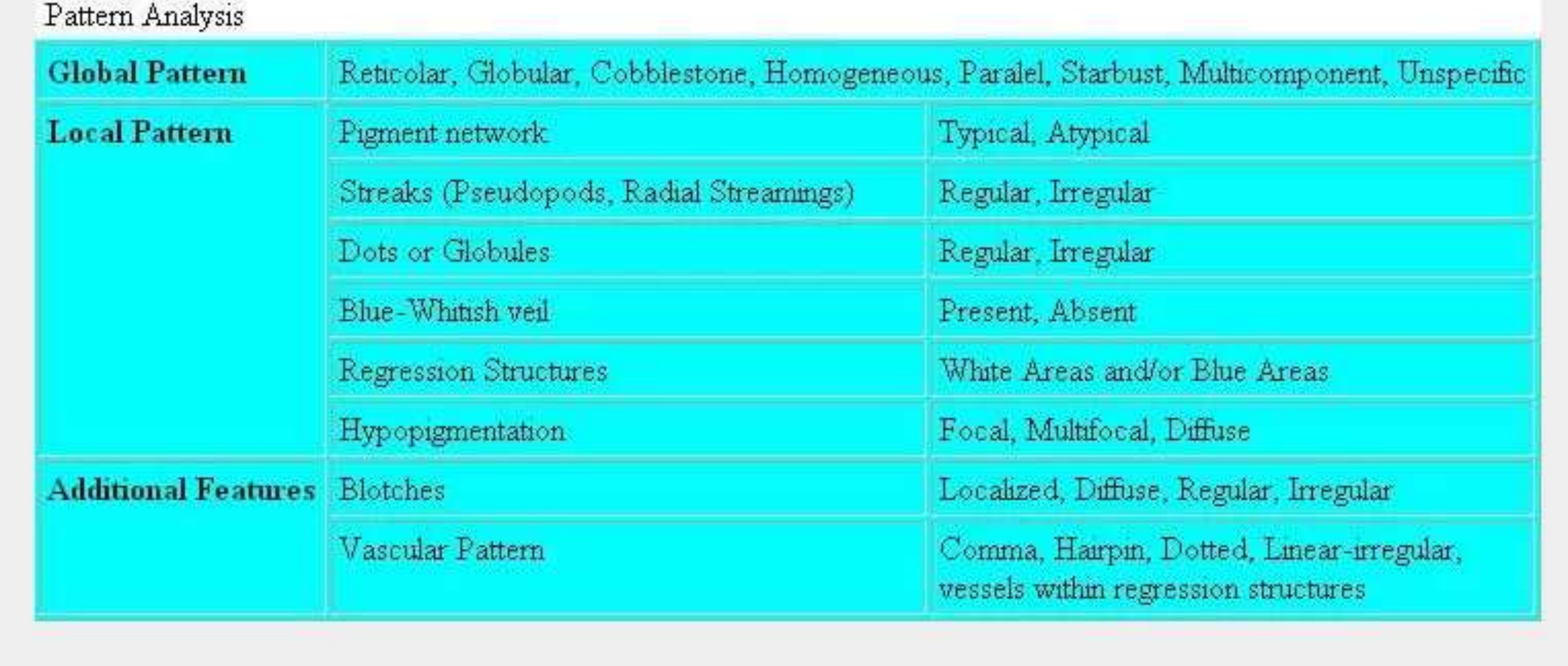

Pattern Analysis

Global Pattern	Reticolar, Globular, Cobblestone, Homogeneous, Paralel, Starbust, Multicomponent, Unspecific	
Local Pattern	Pigment network	Typical, Atypical
	Streaks (Pseudopods, Radial Streamings)	Regular, Irregular
	Dots or Globules	Regular, Irregular
	Blue-Whitish veil	Present, Absent
	Regression Structures	White Areas and/or Blue Areas
	Hypopigmentation	Focal, Multifocal, Diffuse
Additional Features	Blotches	Localized, Diffuse, Regular, Irregular
	Vascular Pattern	Comma, Hairpin, Dotted, Linear-irregular, vessels within regression structures

Global and local patterns such as additional features in the pattern analysis classification system.

Dermoscopy

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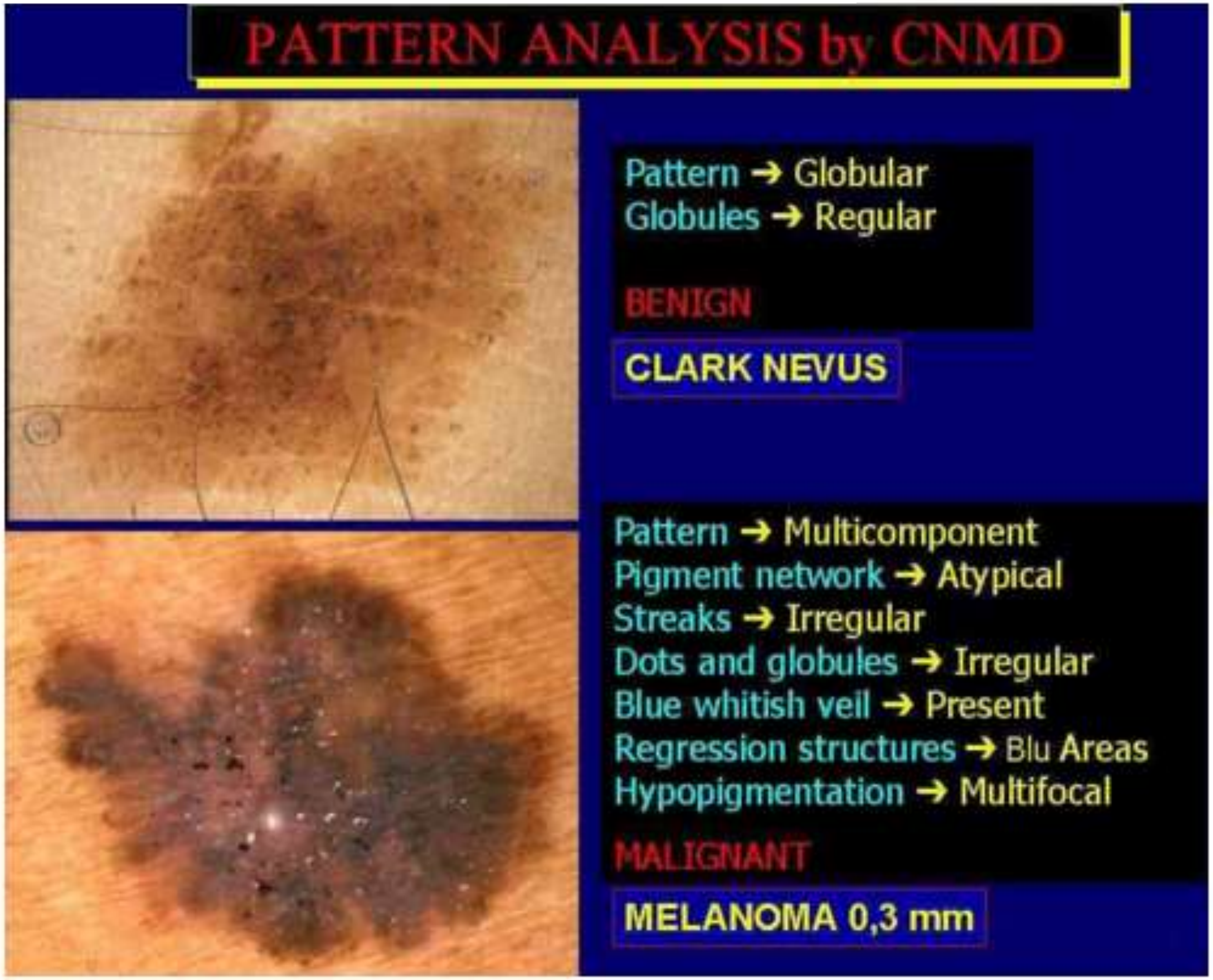

PATTERN ANALYSIS by CNMD

Pattern ➔ Globular
Globules ➔ Regular

BENIGN

CLARK NEVUS

Pattern ➔ Multicomponent
Pigment network ➔ Atypical
Streaks ➔ Irregular
Dots and globules ➔ Irregular
Blue whitish veil ➔ Present
Regression structures ➔ Blu Areas
Hypopigmentation ➔ Multifocal

MALIGNANT

MELANOMA 0,3 mm

A typical globular pattern in a Clark nevus and the multifaceted colors and structures visible in a microinvasive malignant melanoma according to the pattern analysis classification. CNMD is Consensus Net Meeting on Dermoscopy.

Dermoscopy

Updated: Mar 13, 2018
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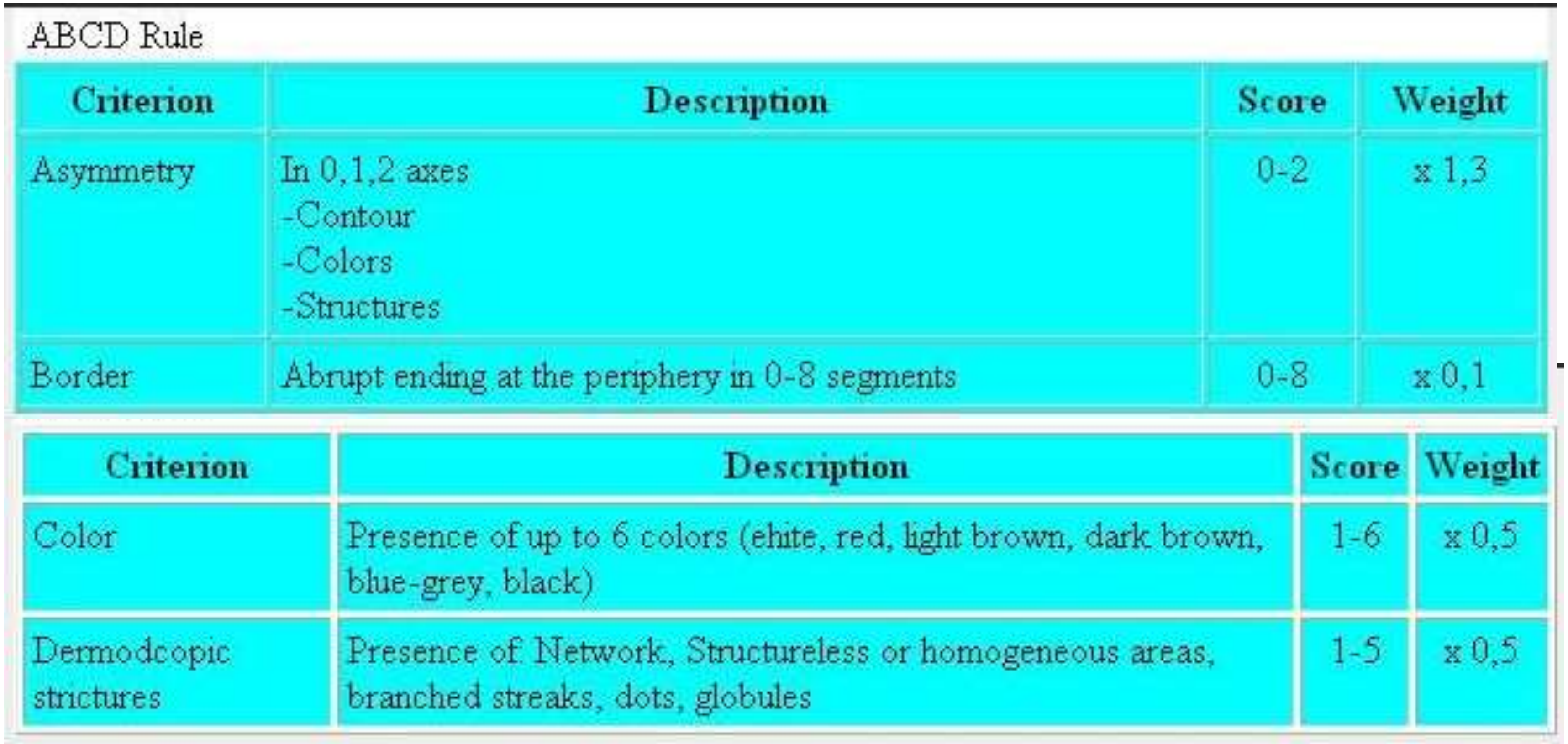

ABCD Rule

Criterion	Description	Score	Weight
Asymmetry	In 0,1,2 axes -Contour -Colors -Structures	0-2	x 1,3
Border	Abrupt ending at the periphery in 0-8 segments	0-8	x 0,1

Criterion	Description	Score	Weight
Color	Presence of up to 6 colors (ehite, red, light brown, dark brown, blue-grey, black)	1-6	x 0,5
Dermodcopic strictures	Presence of Network, Structureless or homogeneous areas, branched streaks, dots, globules	1-5	x 0,5

ABCD rule of dermoscopy. Asymmetry and border with relative weight and score.

Medscape

Dermoscopy

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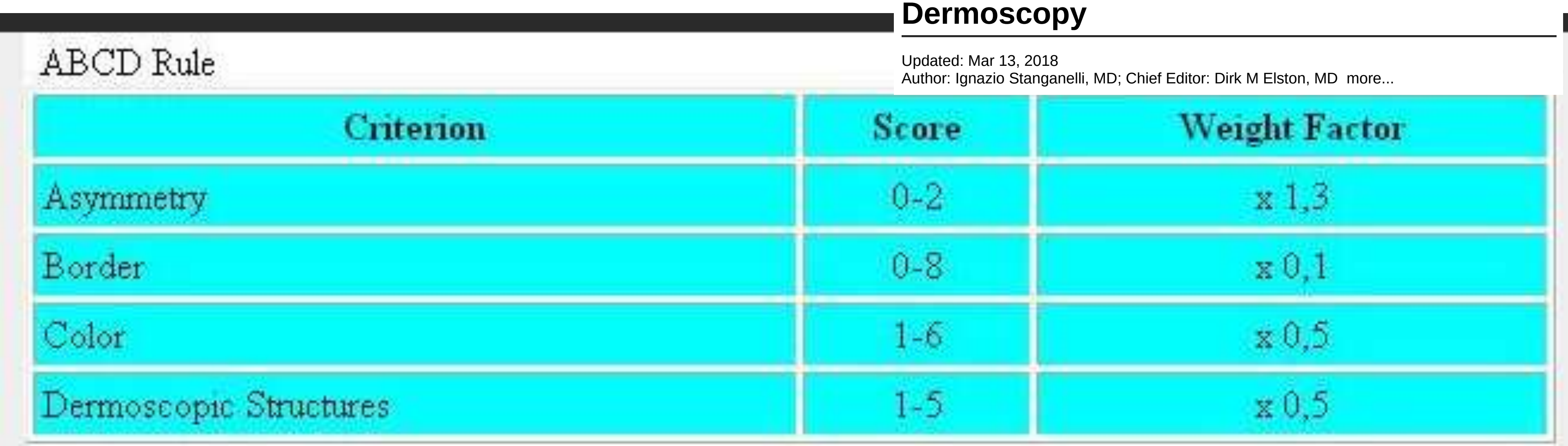
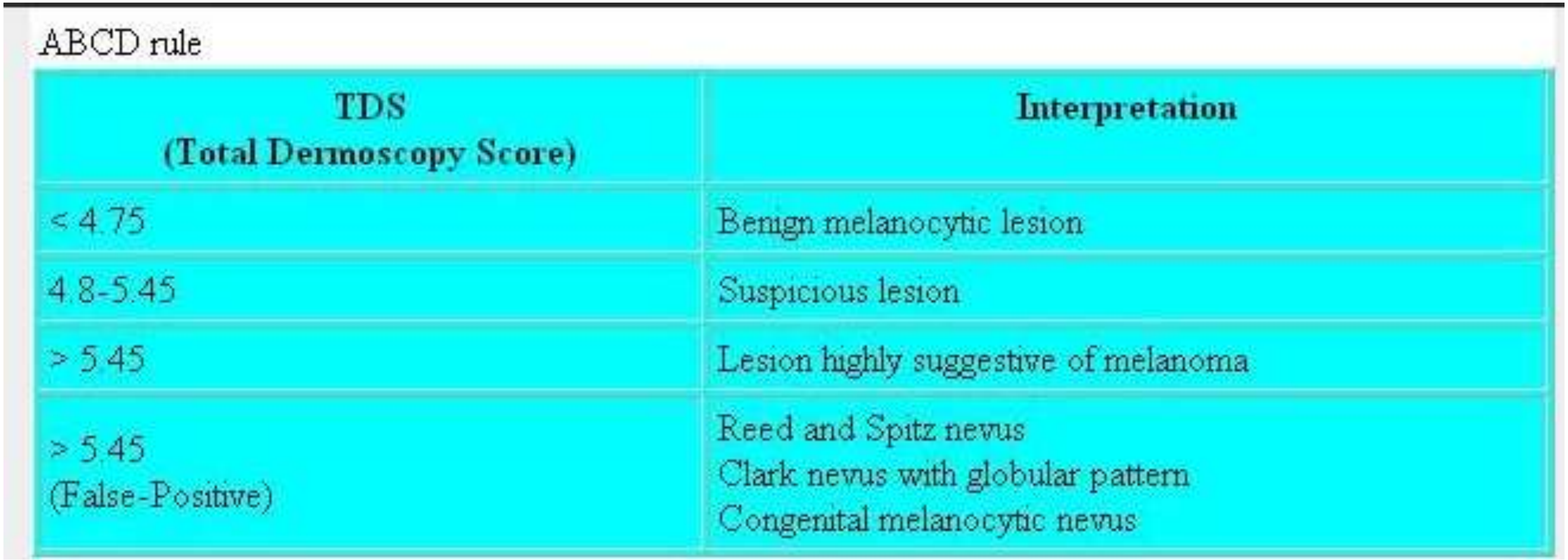


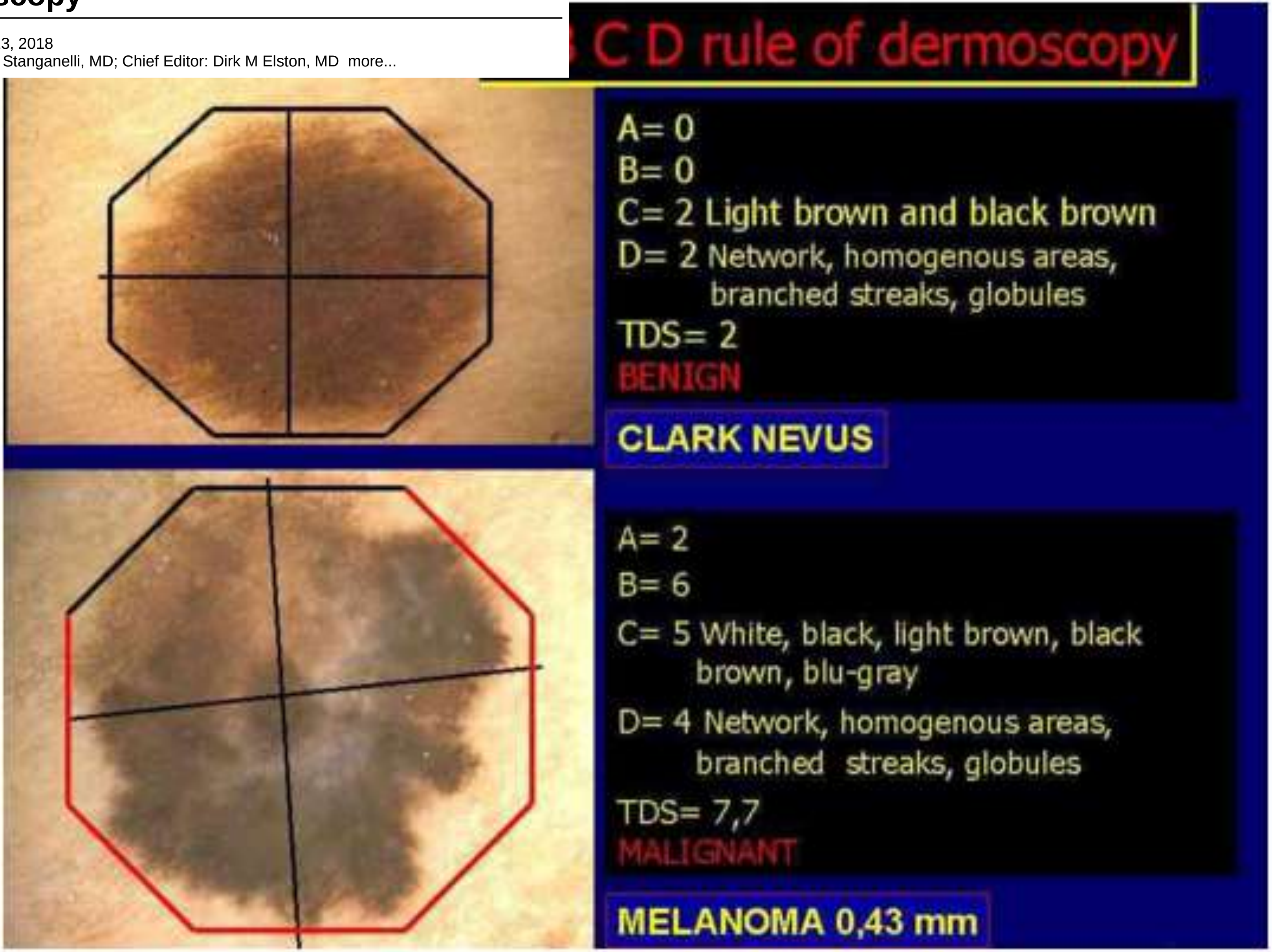
ABCD Rule

Criterion	Score	Weight Factor
Asymmetry	0-2	x 1,3
Border	0-8	x 0,1
Color	1-6	x 0,5
Dermoscopic Structures	1-5	x 0,5



ABCD rule

TDS (Total Dermoscopy Score)	Interpretation
< 4.75	Benign melanocytic lesion
4.8-5.45	Suspicious lesion
> 5.45	Lesion highly suggestive of melanoma
> 5.45 (False-Positive)	Reed and Spitz nevus Clark nevus with globular pattern Congenital melanocytic nevus



C D rule of dermoscopy

A= 0
B= 0
C= 2 Light brown and black brown
D= 2 Network, homogenous areas, branched streaks, globules
TDS= 2
BENIGN

CLARK NEVUS

A= 2
B= 6
C= 5 White, black, light brown, black brown, blu-gray
D= 4 Network, homogenous areas, branched streaks, globules
TDS= 7,7
MALIGNANT

MELANOMA 0,43 mm

Application of ABCD rule of dermoscopy in melanocytic lesions.

Dermoscopy

Updated: Mar 13, 2018

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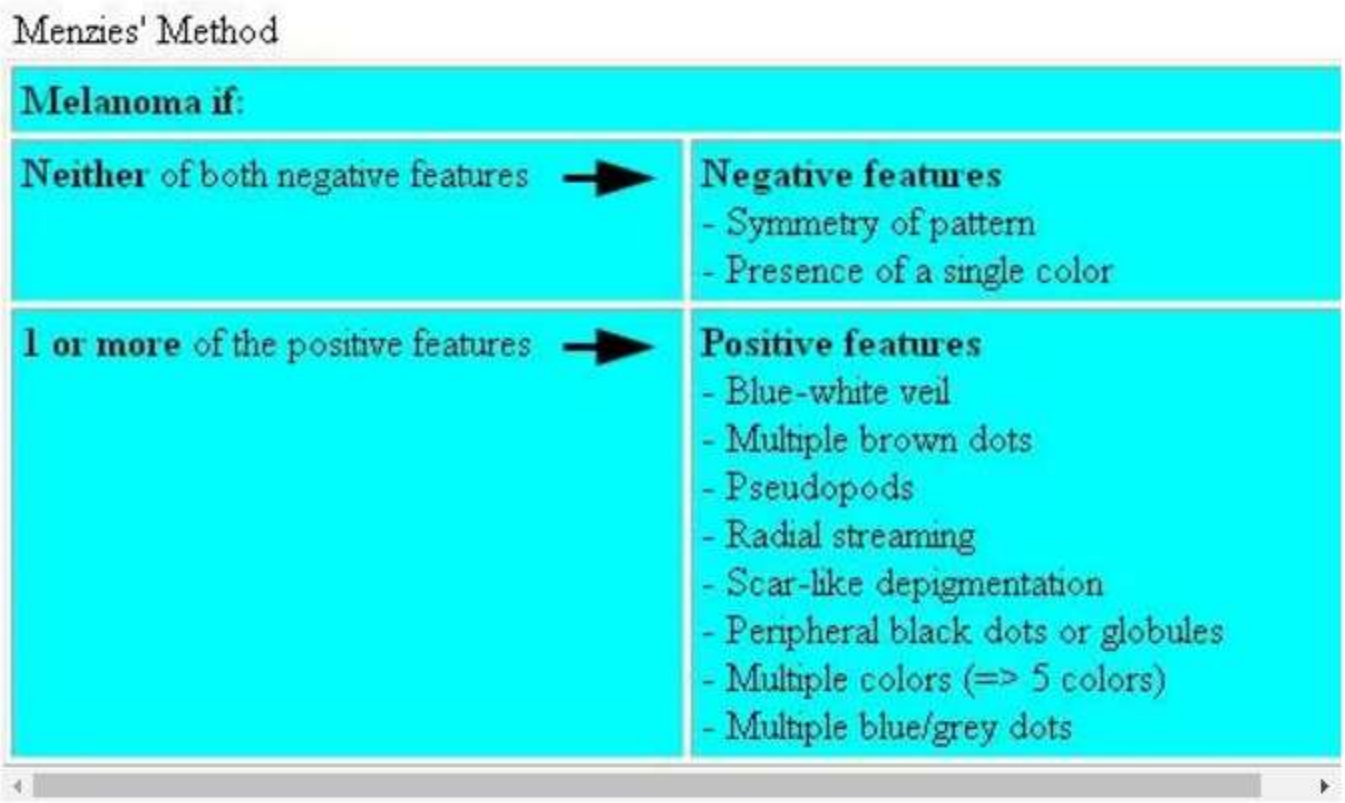
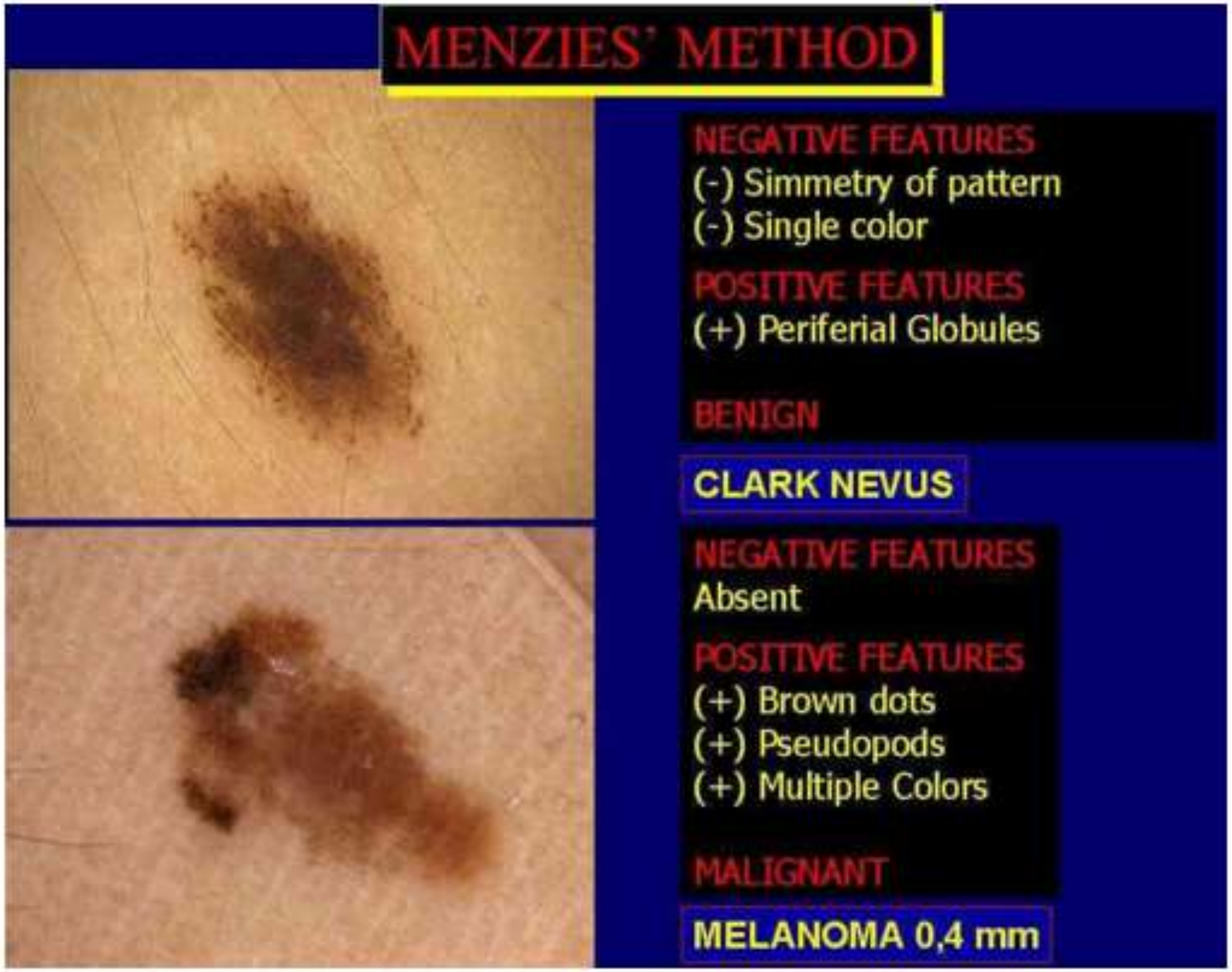


Menzies' Method

Melanoma if:	
Neither of both negative features →	**Negative features** - Symmetry of pattern - Presence of a single color
1 or more of the positive features →	**Positive features** - Blue-white veil - Multiple brown dots - Pseudopods - Radial streaming - Scar-like depigmentation - Peripheral black dots or globules - Multiple colors (=> 5 colors) - Multiple blue/grey dots

Menzies method. Classification system used to make a diagnosis of suspected melanoma.



MENZIES' METHOD

NEGATIVE FEATURES
(-) Simmetry of pattern
(-) Single color

POSITIVE FEATURES
(+) Periferial Globules

BENIGN

CLARK NEVUS

NEGATIVE FEATURES
Absent

POSITIVE FEATURES
(+) Brown dots
(+) Pseudopods
(+) Multiple Colors

MALIGNANT

MELANOMA 0,4 mm

Application of Menzies method to evaluate the different spectra of melanocytic lesions.

Dermoscopy

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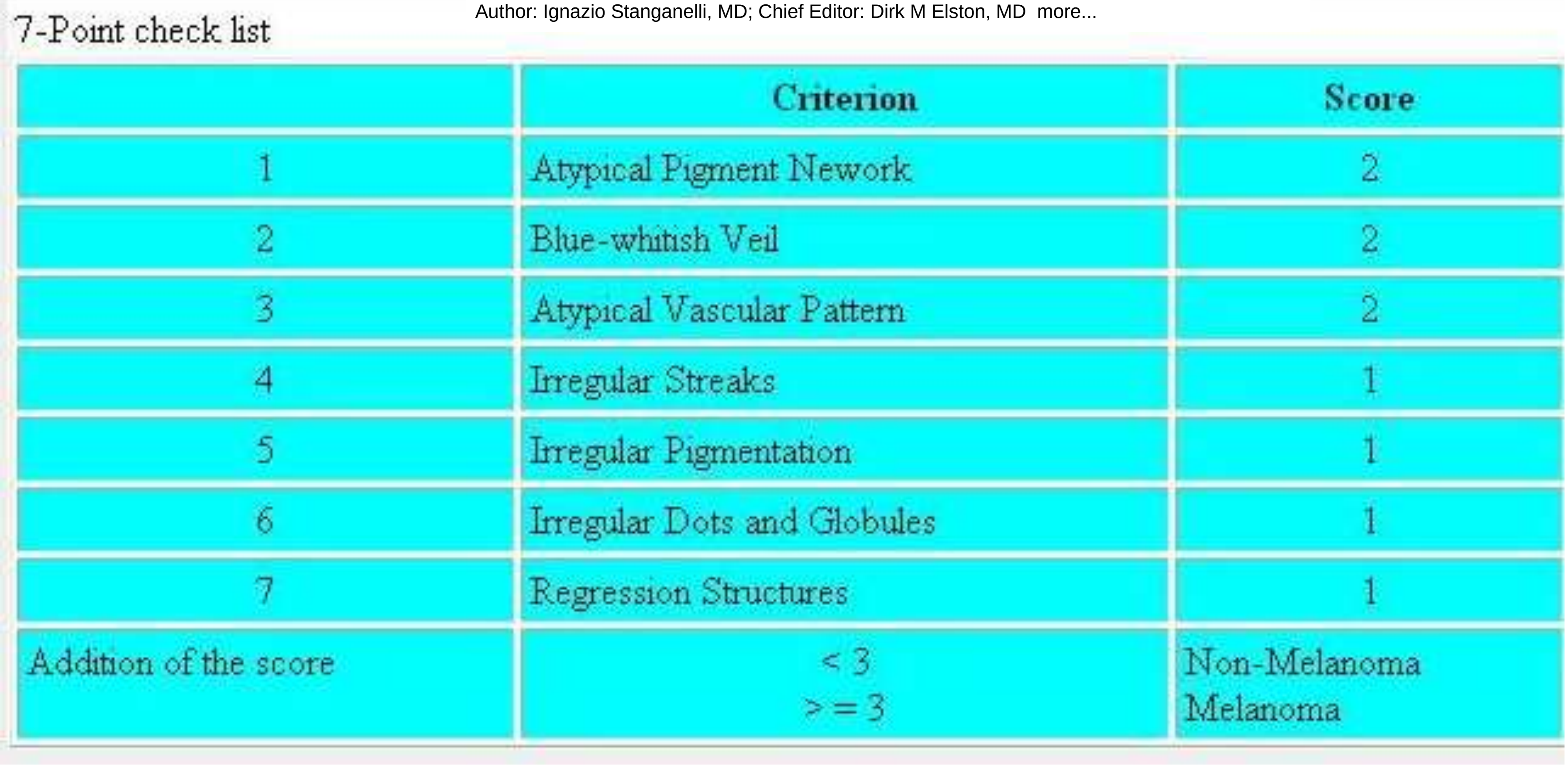

7-Point check list

	Criterion	Score
1	Atypical Pigment Nework	2
2	Blue-whitish Veil	2
3	Atypical Vascular Pattern	2
4	Irregular Streaks	1
5	Irregular Pigmentation	1
6	Irregular Dots and Globules	1
7	Regression Structures	1
Addition of the score	< 3 > = 3	Non-Melanoma Melanoma

Seven-point checklist uses 7 melanoma-specific criteria: 3 major criteria (score 2 points each) and 4 minor criteria (score 1 point each).

Medscape

Dermoscopy

Updated: Mar 13, 2018

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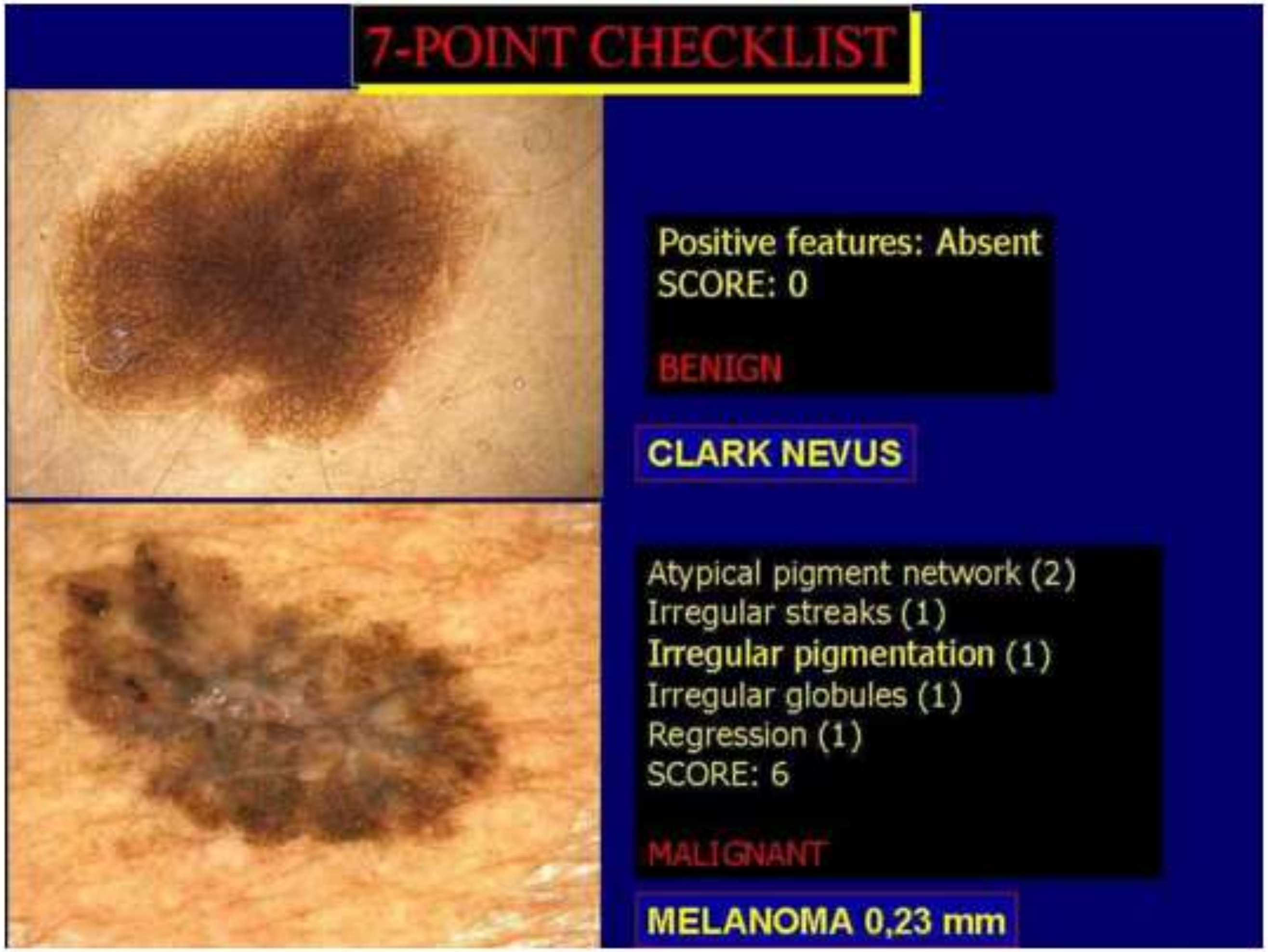

7-POINT CHECKLIST

Positive features: Absent
SCORE: 0

BENIGN

CLARK NEVUS

Atypical pigment network (2)
Irregular streaks (1)
Irregular pigmentation (1)
Irregular globules (1)
Regression (1)
SCORE: 6

MALIGNANT

MELANOMA 0,23 mm

A typical benign melanocytic lesion and a malignant melanoma classified using the 7-point checklist parameters and the relative score.

Dermoscopy

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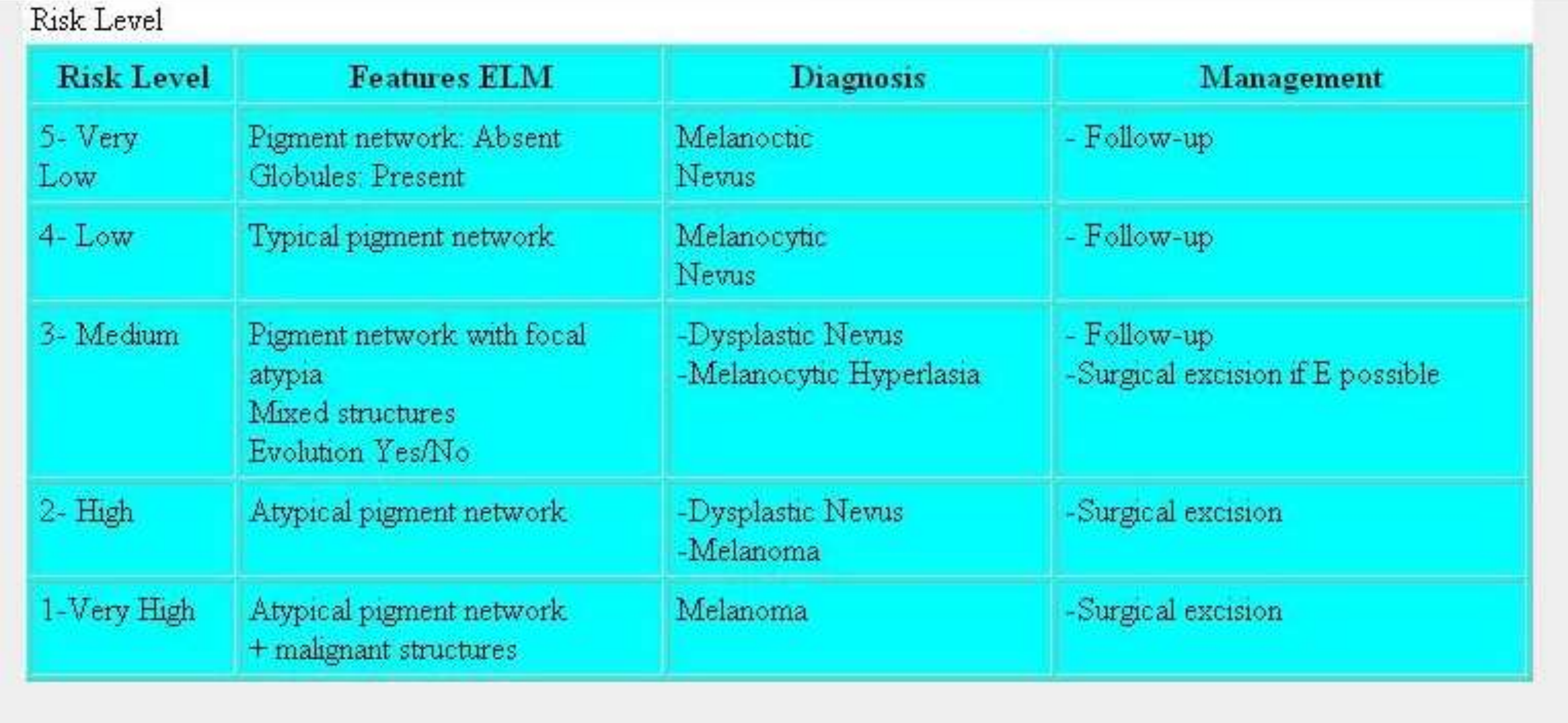


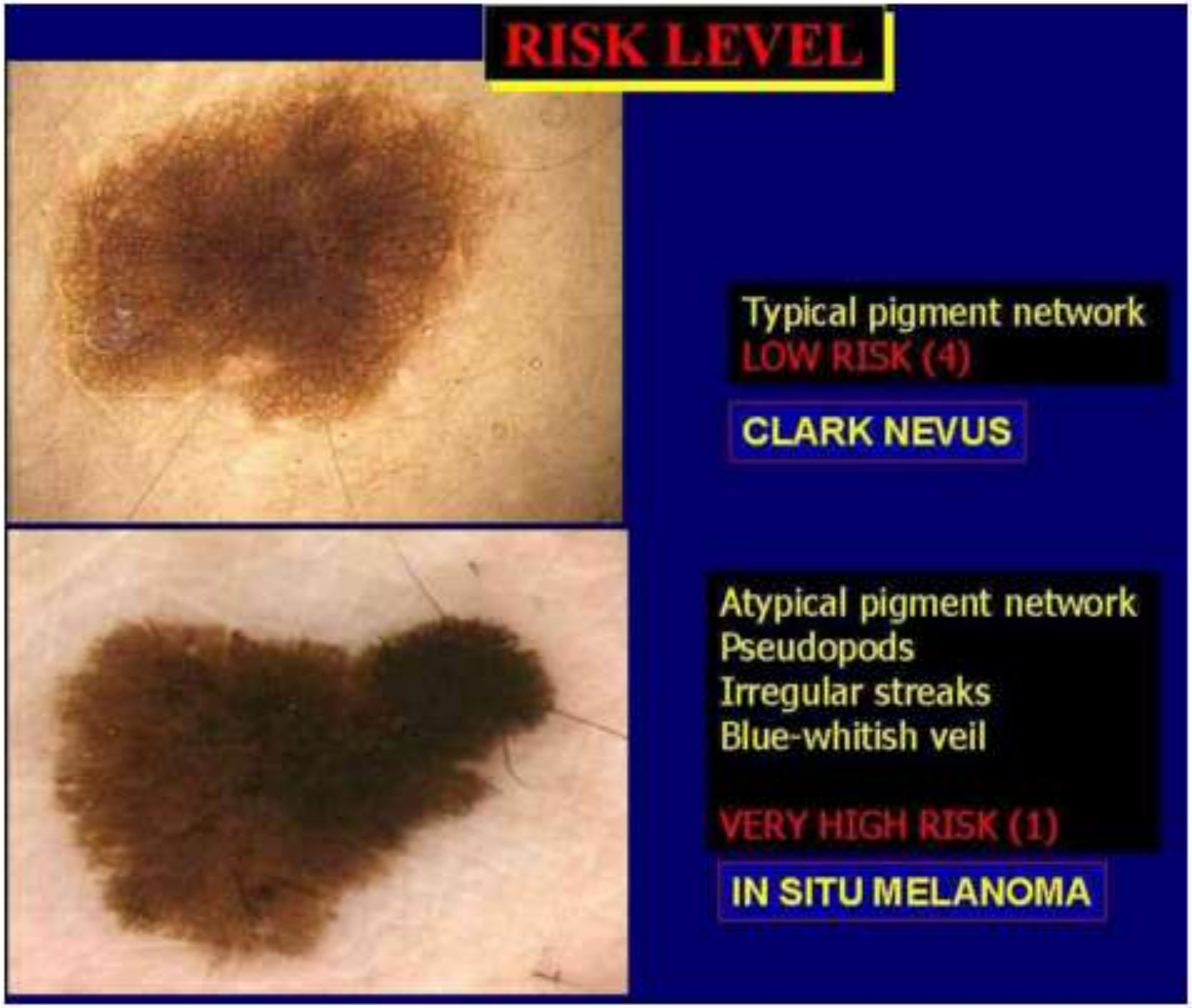
Risk Level

Risk Level	Features ELM	Diagnosis	Management
5- Very Low	Pigment network: Absent Globules: Present	Melanoctic Nevus	- Follow-up
4- Low	Typical pigment network	Melanocytic Nevus	- Follow-up
3- Medium	Pigment network with focal atypia Mixed structures Evolution Yes/No	-Dysplastic Nevus -Melanocytic Hyperlasia	- Follow-up -Surgical excision if E possible
2- High	Atypical pigment network	-Dysplastic Nevus -Melanoma	-Surgical excision
1-Very High	Atypical pigment network + malignant structures	Melanoma	-Surgical excision

Stratification of risk levels correlated to the different spectra of melanocytic lesions and relative management.

Dermoscopy

Updated: Mar 13, 2018
Author: Ignazio Stanganelli, MD; Chief Editor: Dirk M Elston, MD more...



RISK LEVEL

Typical pigment network
LOW RISK (4)

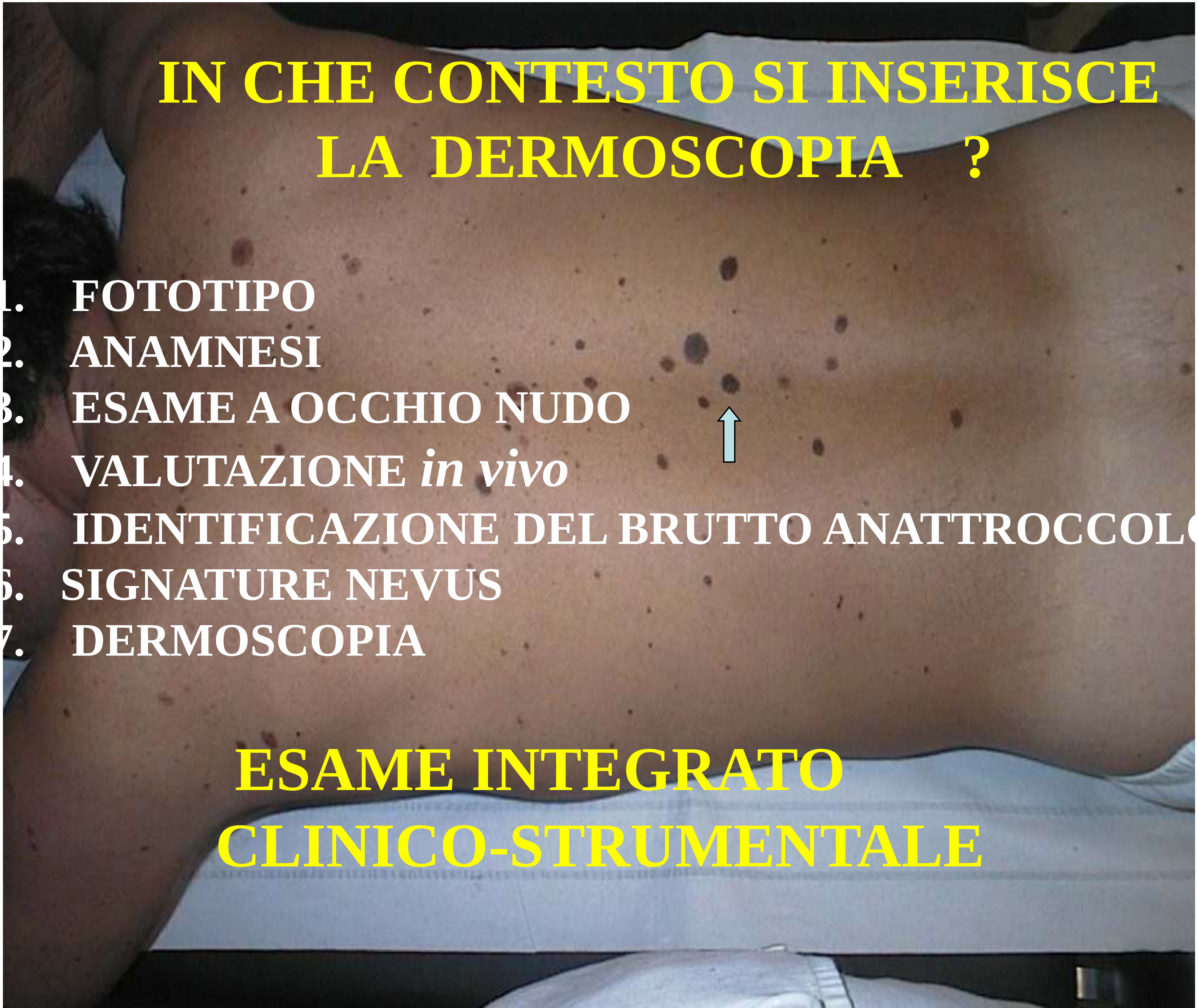
CLARK NEVUS

Atypical pigment network
Pseudopods
Irregular streaks
Blue-whitish veil

VERY HIGH RISK (1)

IN SITU MELANOMA

A low-risk melanocytic lesion with a typical pigment network (Clark nevus) and a very high-risk melanocytic lesion (melanoma) classified using the level of risk stratification method.



IN CHE CONTESTO SI INSERISCE LA DERMOSCOPIA ?

1. **FOTOTIPO**
2. **ANAMNESI**
3. **ESAME A OCCHIO NUDO**
4. **VALUTAZIONE *in vivo***
5. **IDENTIFICAZIONE DEL BRUTTO ANATTROCCOL**
6. **SIGNATURE NEVUS**
7. **DERMOSCOPIA**

ESAME INTEGRATO CLINICO-STRUMENTALE

Digital Monitoring
Mole Mapping
"Mappatura"

Total Body

Single lesion

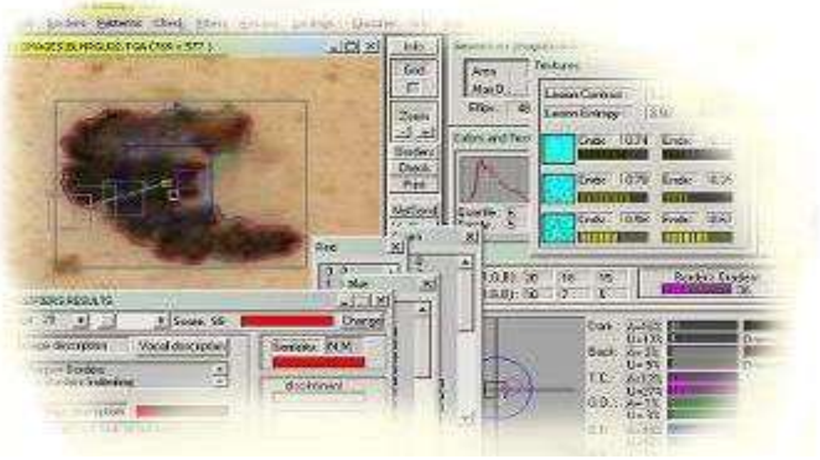
3 MIPS

FOTOFINDER

SOLARSCAN

SMALL MOLEMAX 1

Teledermoscopy.net

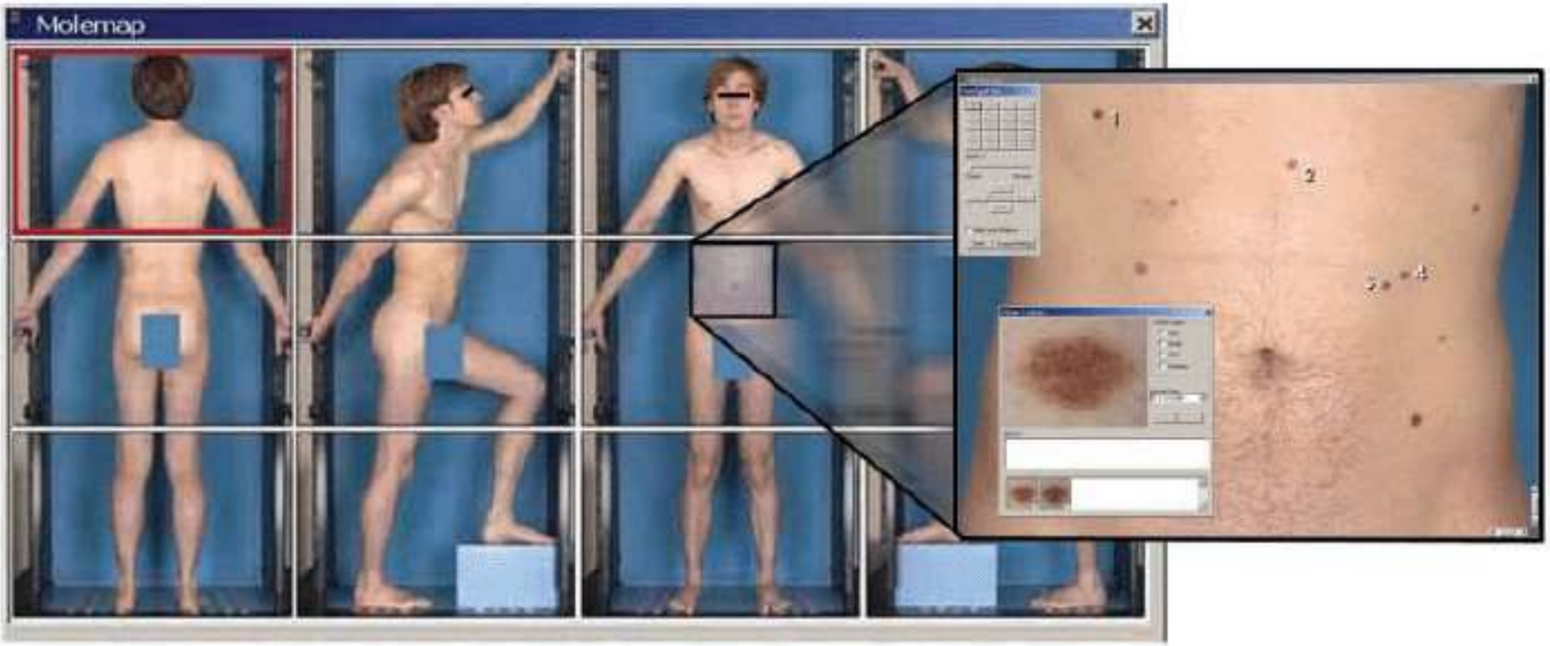


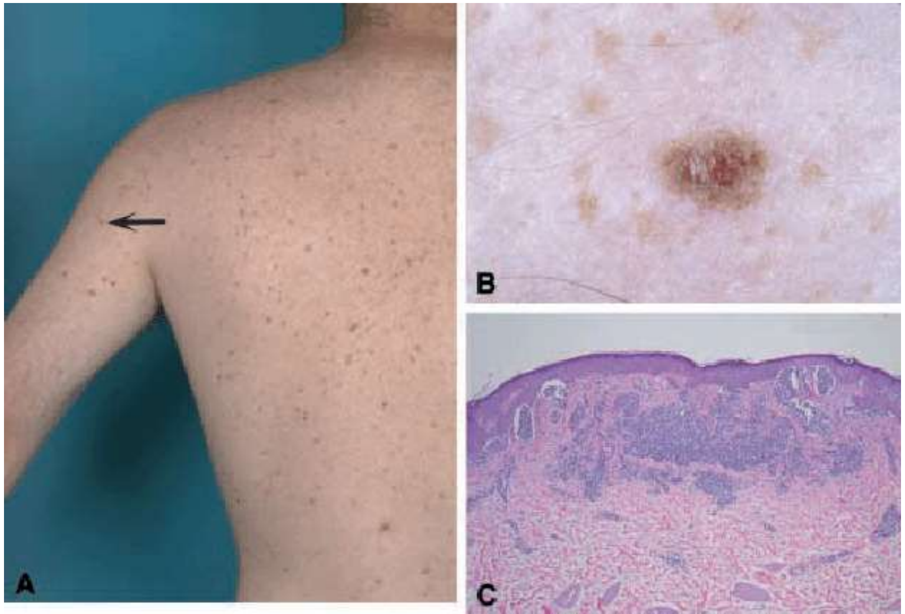
British Journal of Dermatology 2004; **150:** 706–714.

Melanomas detected with the aid of total cutaneous photography

N.E.FEIT, S.W.DUSZA AND A.A.MARGHOOB

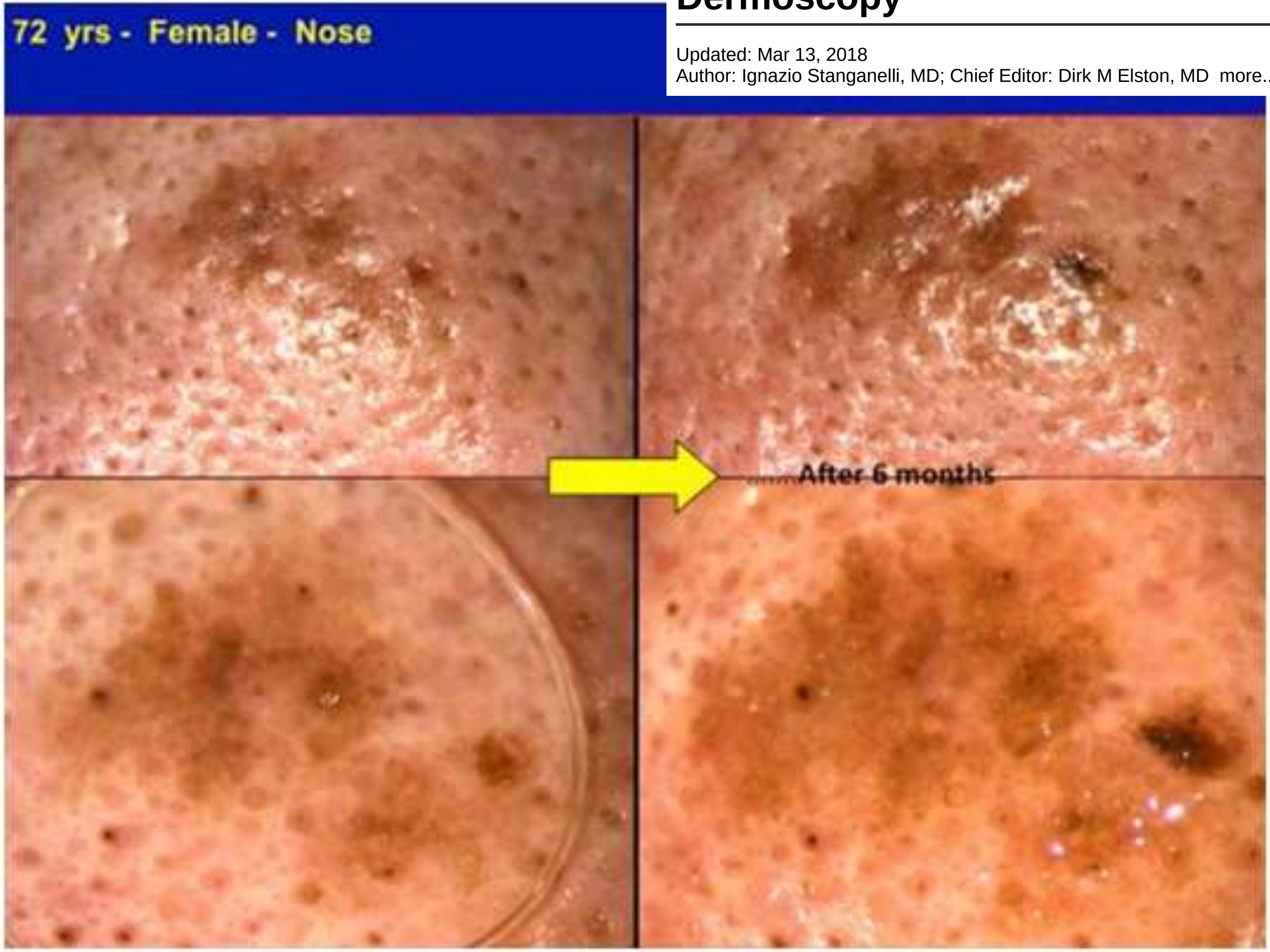
Department of Dermatology, Memorial Sloan-Kettering Cancer Center, 160 East 53rd St, New York, NY 10022, U.S.A.





Dermoscopy

Updated: Mar 13, 2018
Author: Ignazio Stanganelli, MD; Chief Editor: Dirk M Elston, MD more...



In situ melanoma, malignant lentigo type, detected using digital dermoscopy. Hyperpigmentation around follicular opening, increasing in size and brown pigmentation suggested atypical melanocytic proliferation after 6 months from baseline.

REVIEW ARTICLE

Meta-analysis of digital dermoscopy follow-up of melanocytic skin lesions: a study on behalf of the International Dermoscopy Society

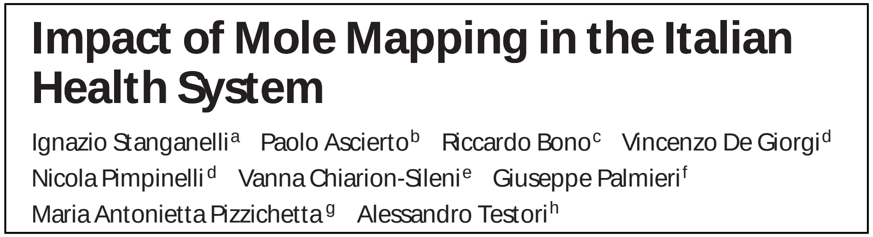
G. Salerni,[1,*] T. Terán,[2] S. Puig,[3,4] J. Malvehy,[3,4] I. Zalaudek,[5,6] G. Argenziano,[6] H. Kittler[7]

JEADV 2012

Digital dermoscopy follow-up of melanocytic skin lesions with digital dermoscopy demonstrated the **early detection of melanomas with a low rate of excisions.**

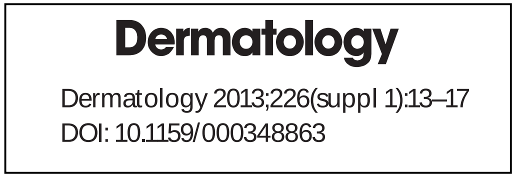
Proportion of in situ melanoma and thin melanomas are higher than expected in general population.

Criteria for selection of patients and lesions may influence the clinical outcome, as **only the high-risk individuals and / or the most atypical lesions** seem to benefit with digital follow-up.



Impact of Mole Mapping in the Italian Health System

Ignazio Stanganelli[a] Paolo Ascierto[b] Riccardo Bono[c] Vincenzo De Giorgi[d]
Nicola Pimpinelli[d] Vanna Chiarion-Sileni[e] Giuseppe Palmieri[f]
Maria Antonietta Pizzichetta[g] Alessandro Testori[h]



Dermatology

Dermatology 2013;226(suppl 1):13–17
DOI: 10.1159/000348863

LIMITATIONS

1. Time-consuming (30–60 min per patient)
2. Risk of low compliance in long-term follow-up
3. Extreme subjectivity in determining the follow-up period, features of patients and lesions to be evaluated (subjective parameters)
4. Images intended for comparison may contain artifactual changes caused by operator errors or skin changes other than those of interest
5. Follow-up is limited to high-risk patients
6. In slow-growing melanomas follow-up at 3 months is not long enough to detect changes of the dermoscopic features
7. Follow-up at 6 weeks does not present an advantage over follow-up at 3 months
8. Need for dermoscopic examination of all lesions at follow-up examinations
9. Soggettive application of guidelines
10. Risk of not excising lesions highly suspicious for melanoma at first examination
11. Expert health operators

ActaDV Acta Dermato-Venereologica ActaDV

2017

Digital Dermoscopy Monitoring: Is it Time to Define a Quality Standard?

Calogero PAGLIARELLO[1], Ignazio STANGANELLI[2], Giuseppe FABRIZI[3], Claudio FELICIANI[1] and Sergio DI NUZZO[1]
[1]Department of Clinical and Experimental Medicine, University of Parma, Via Gramsci 14, IT-43100 Parma, [2]Skin Cancer Unit IRCCS IRST, Istituto Scientifico Romagnolo per lo Studio e la Cura dei Tumori, Meldola (FC), and [3]Istituto Dermopatico dell'Immacolata, IDI IRCCS, Rome, Italy. E-mail: calogero.pagliarello@libero.it

Minimum set of requirements for accomplishing SDI (spatial and colour resolution, post-acquisition image processing, such as high dynamic range , using conventional or polarized light dermoscopy , colour calibration and image compression).

Compelling digital videodermoscope or dermoscopy camera producers to provide real high-end, calibrated, standard equipment (DICOM) that justifies their cost.

Eliminate the proliferation of non-standard (and therefore barely comparable) SDI follow-up

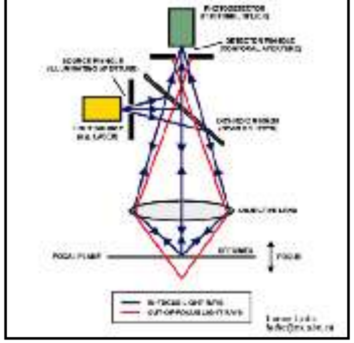
MICROSCOPIA LASER CONFOCALE

BIOPSIA OTTICA VIRTUALE

Meldola dal 2009
Ravenna dal 2017

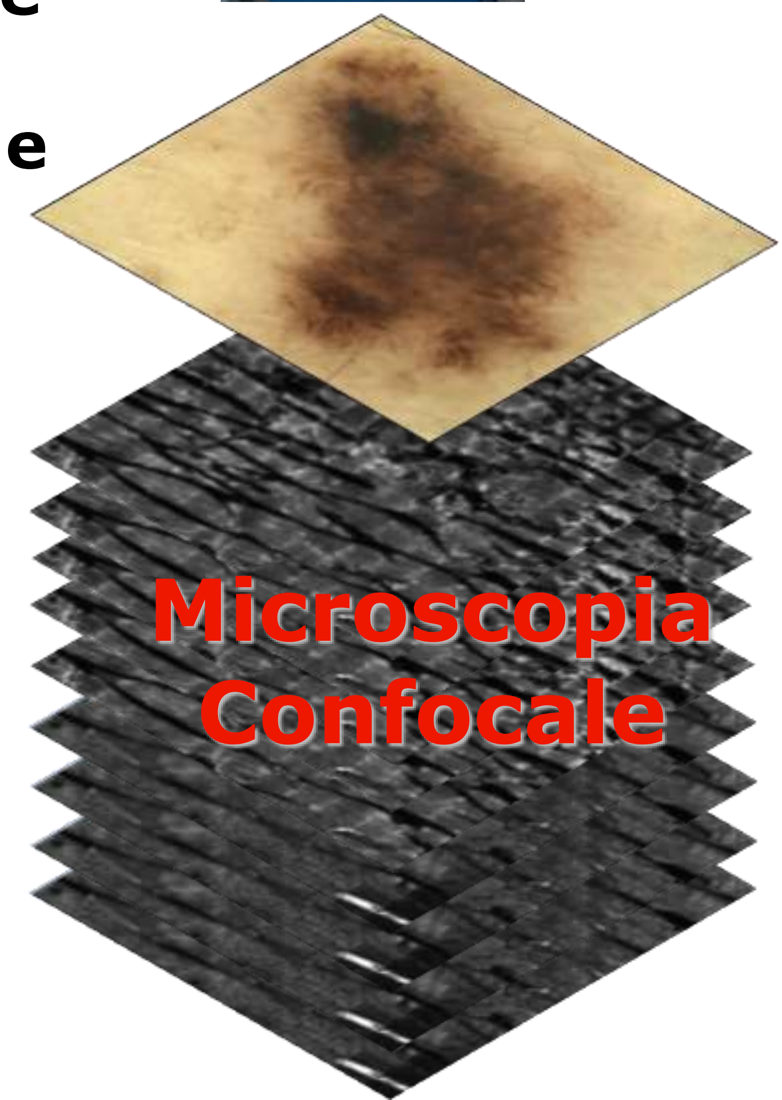
ACQUISIZIONE

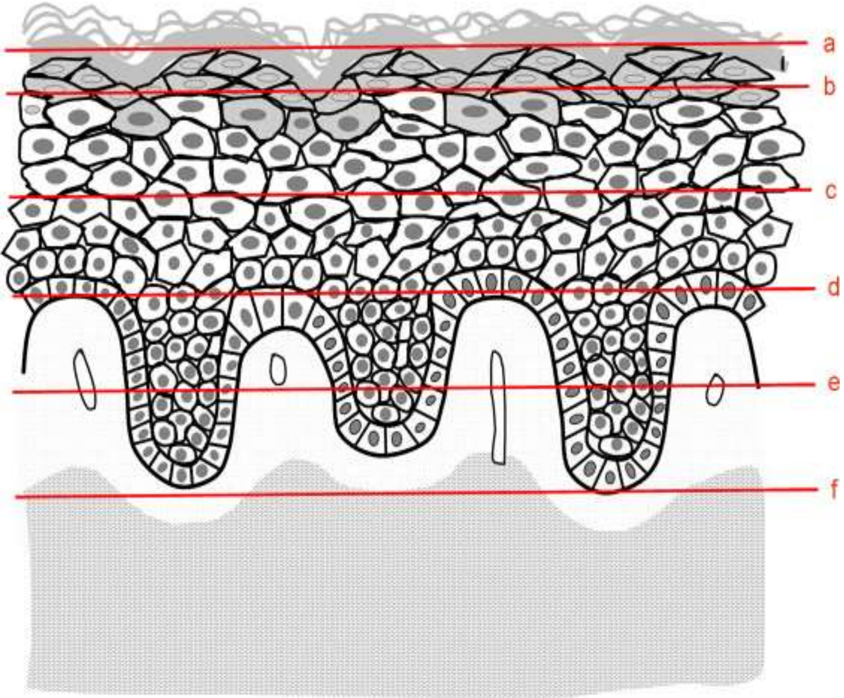
REFERTAZIONE


PHOTODETECTOR
DETECTOR PINHOLE
SOURCE PINHOLE
FOCAL PLANE
FOCUS
IN-FOCUS LIGHT RAYS
OUT-OF-FOCUS LIGHT RAYS

NTEGRAZIONE TECNOLOGICA

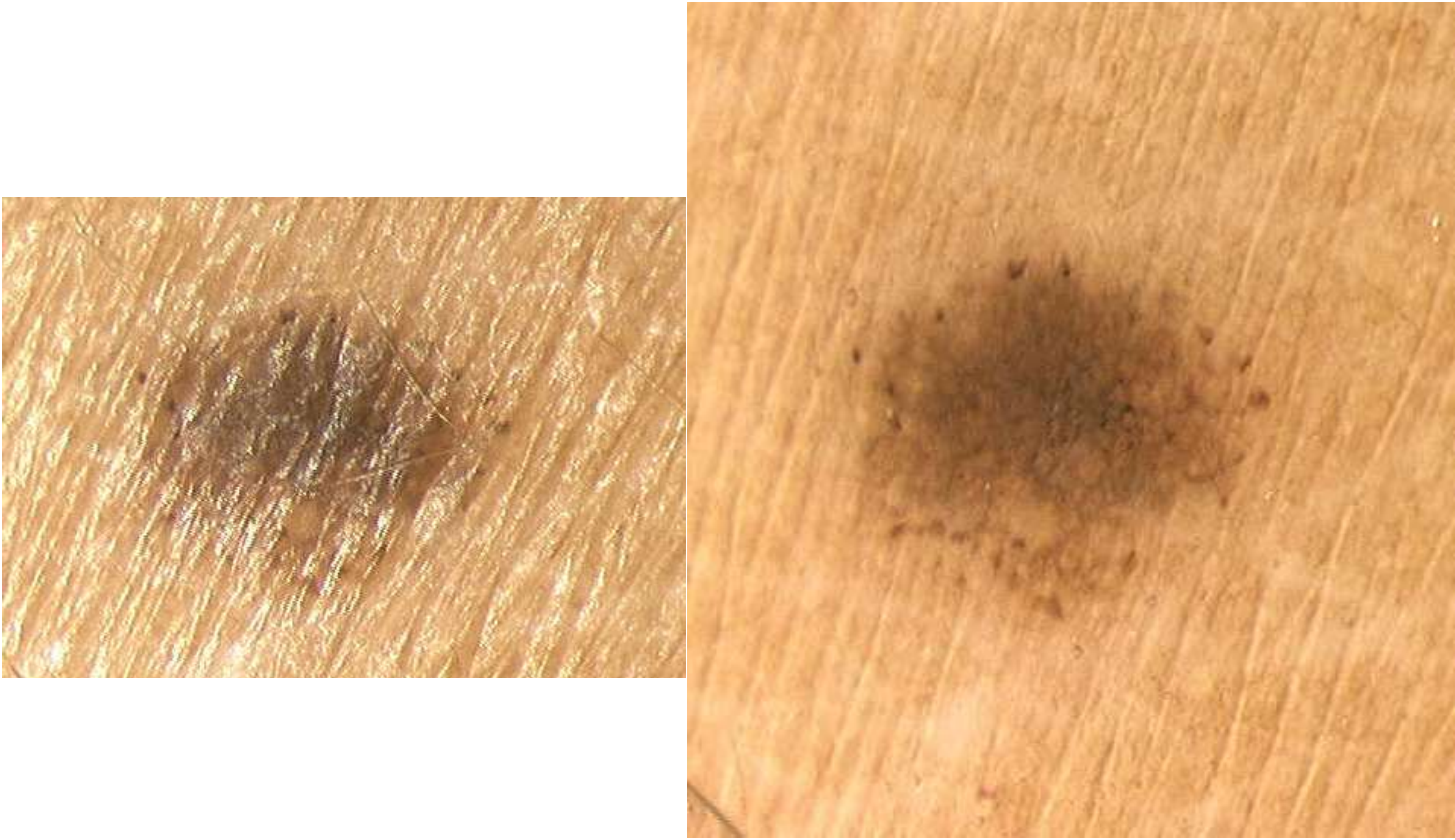
Dermoscopia Digitale
e
Microscopia Confocale


Microscopia
Confocale



FEMALE 47 Y - ABDOMEN

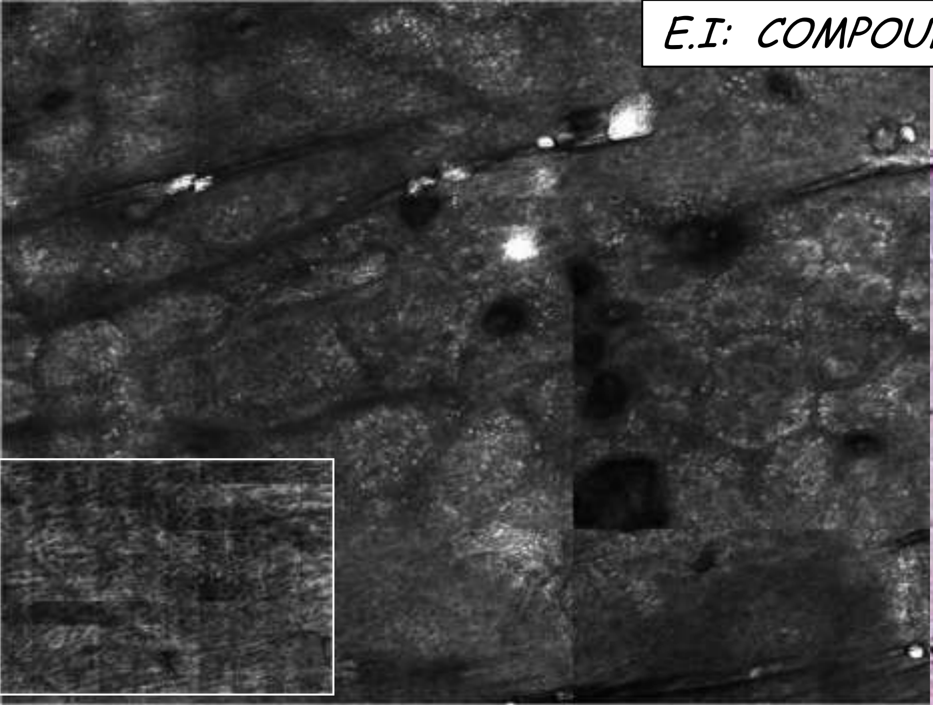
EARLY ONSET OF GROWING MELANOCYTIC NEVUS

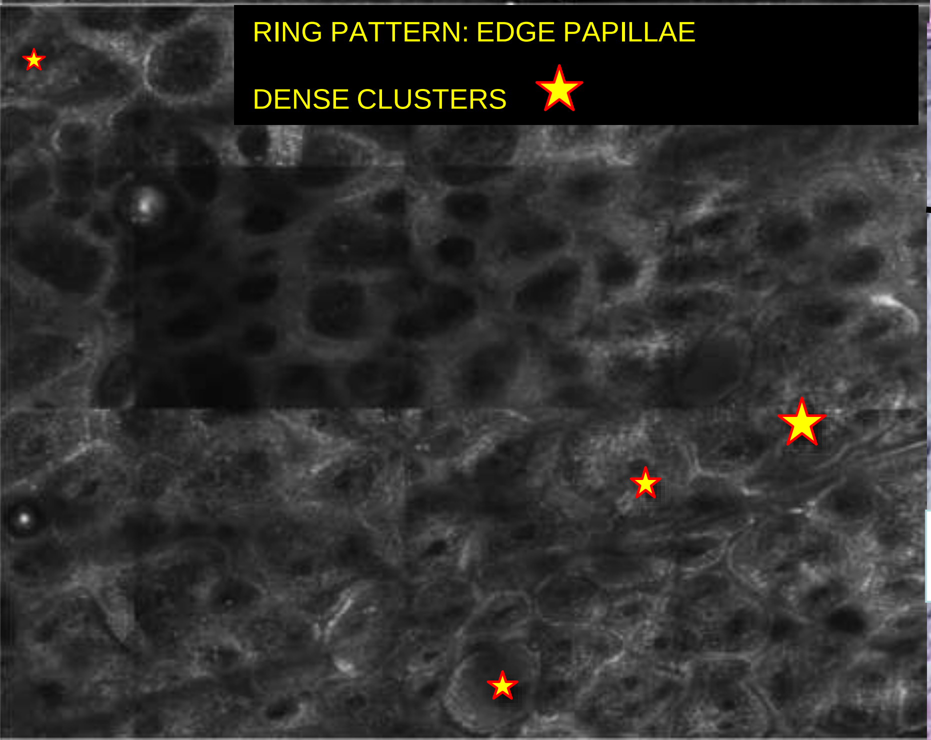


E.I: COMPOUND NEVUS

ISTITUTO SCIENTIFICO ROMAGNOLO PER LO STUDIO E LA CURA DEI TUMORI

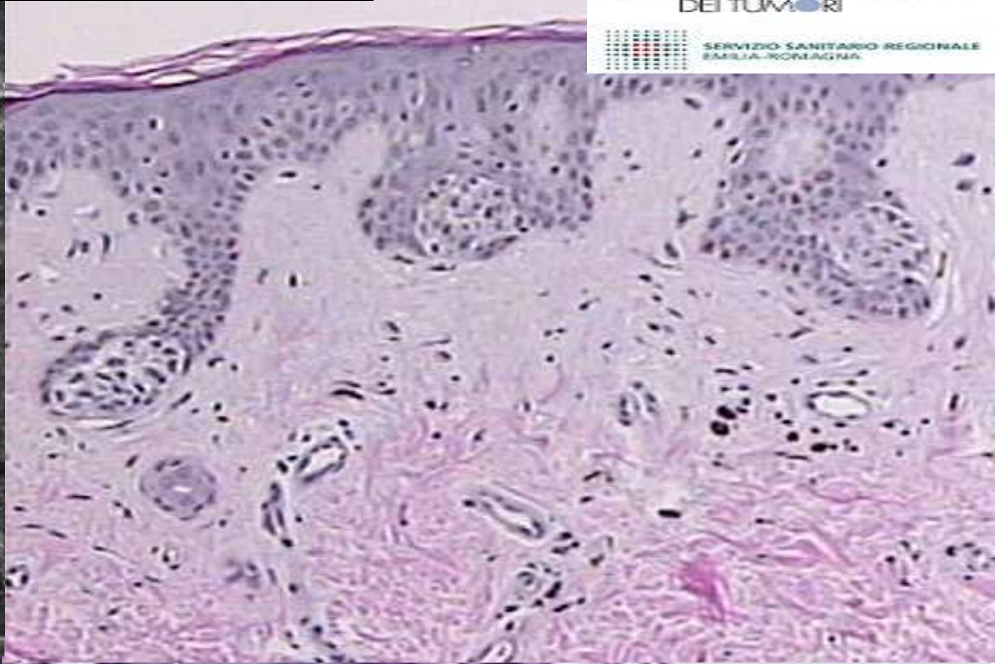
SERVIZIO SANITARIO REGIONALE EMILIA-ROMAGNA

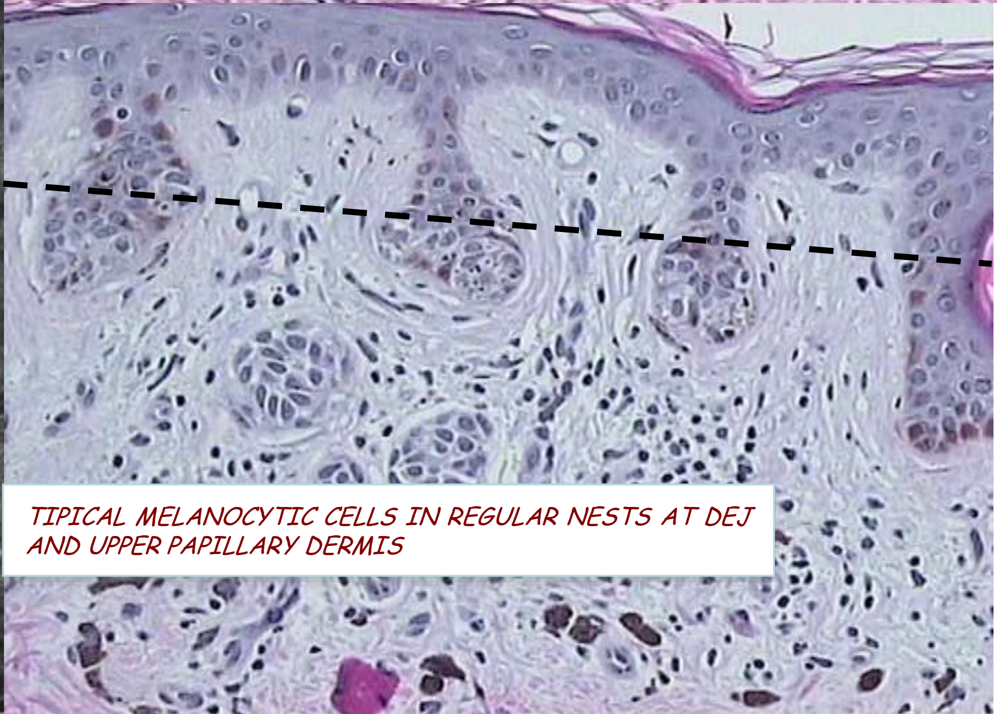




RING PATTERN: EDGE PAPILLAE

DENSE CLUSTERS ★



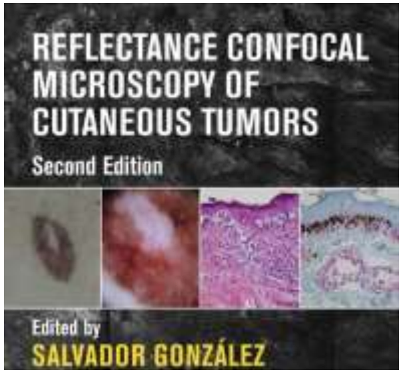


TIPICAL MELANOCYTIC CELLS IN REGULAR NESTS AT DEJ AND UPPER PAPILLARY DERMIS

CHAPTER 43

Integration of reflectance confocal microscopy for the management of patients with multiple nevi

Ignazio Stanganelli, Serena Magi, and Laura Mazzoni

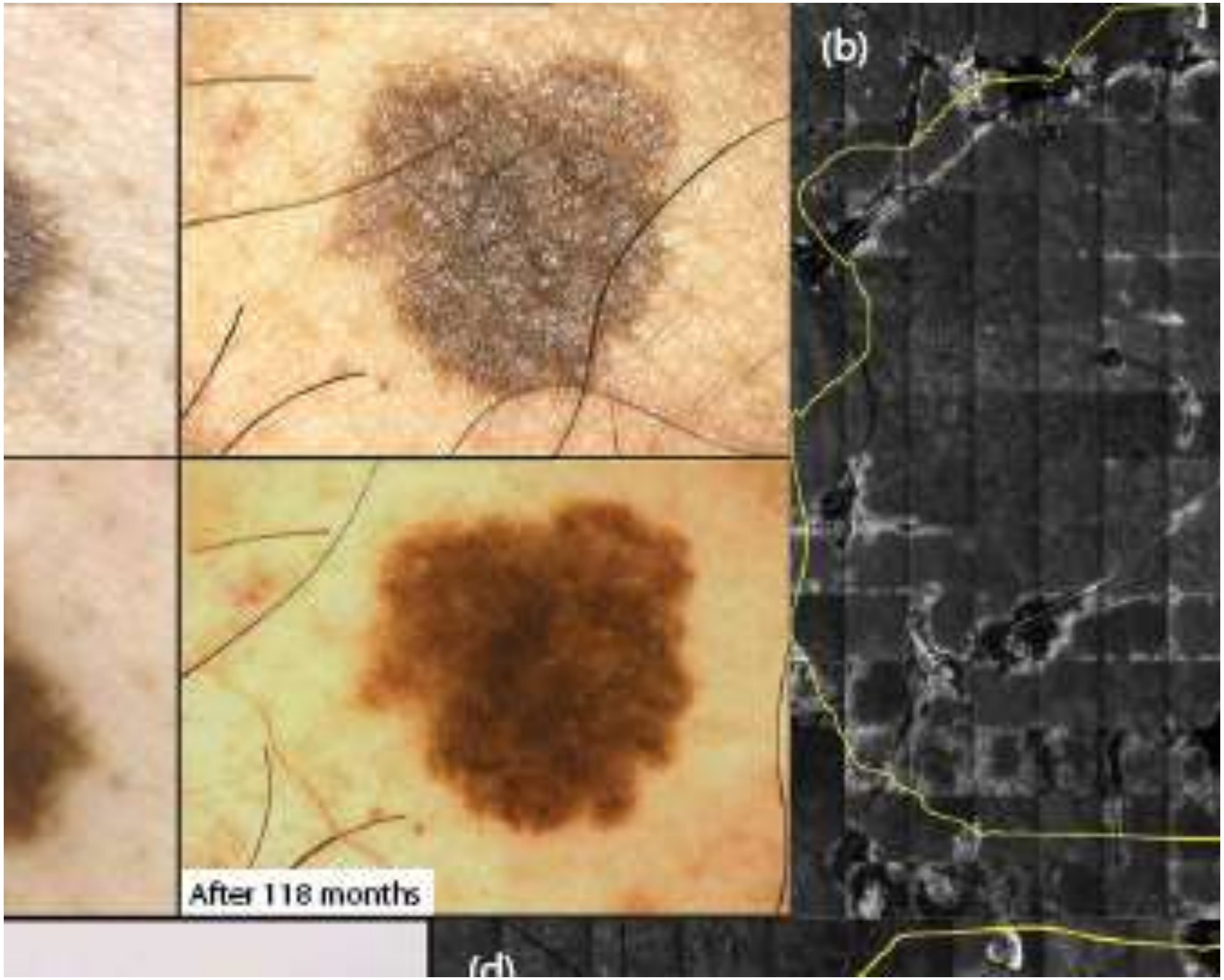


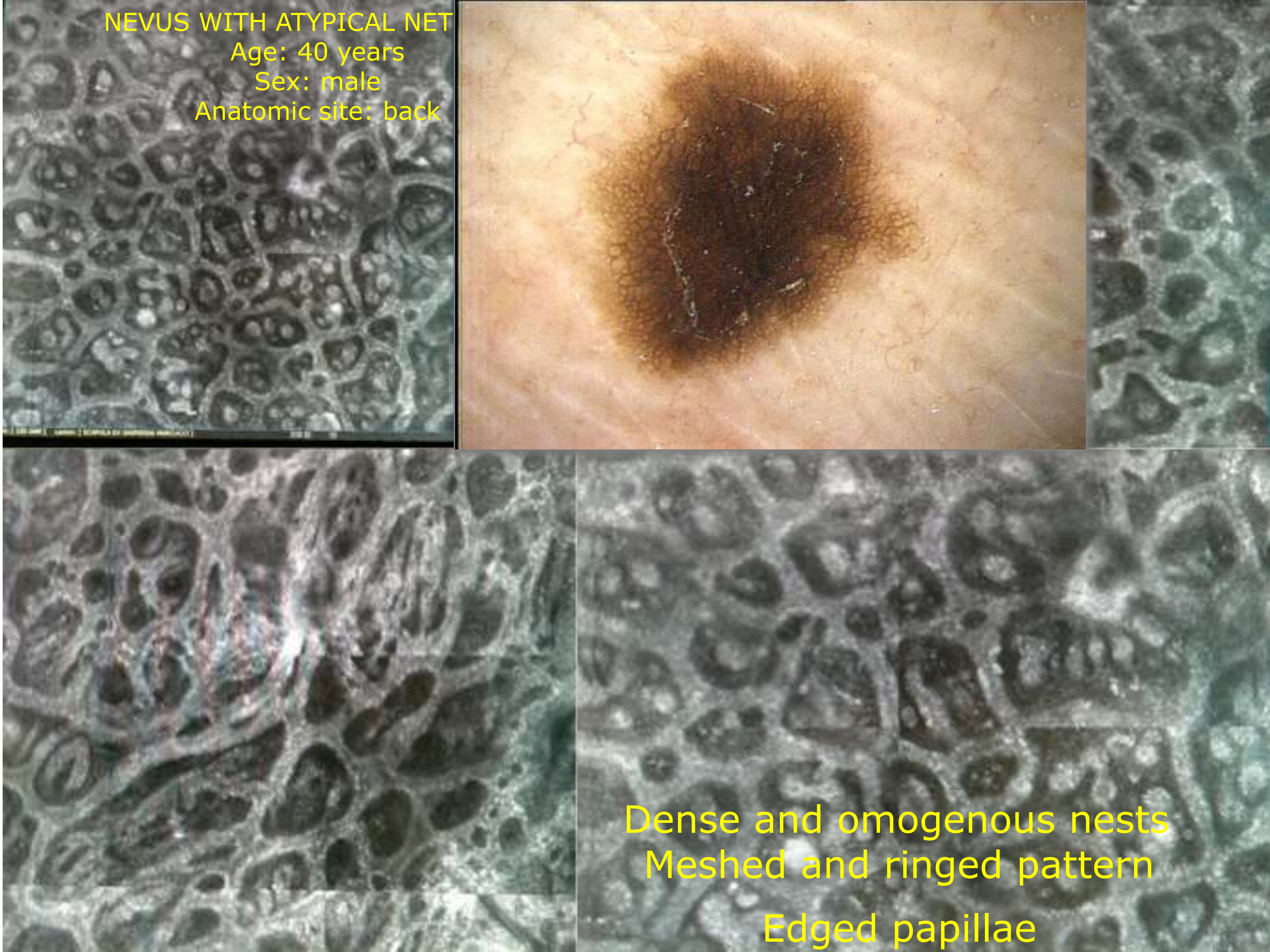
REFLECTANCE CONFOCAL MICROSCOPY OF CUTANEOUS TUMORS

Second Edition

Edited by

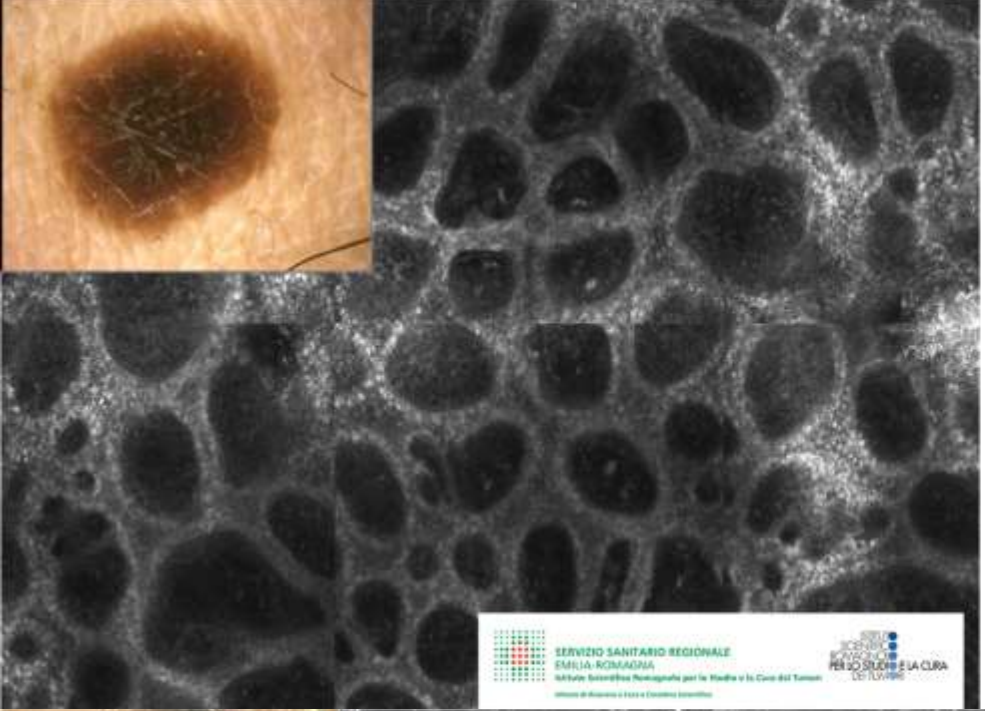
SALVADOR GONZÁLEZ



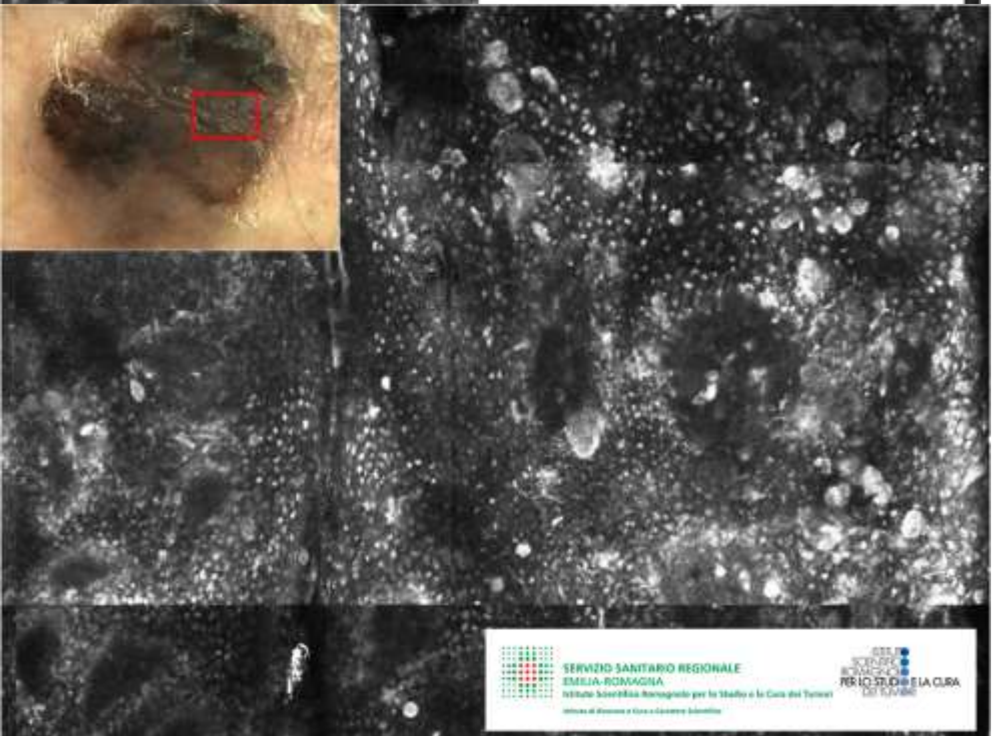


NEVUS WITH ATYPICAL NET
Age: 40 years
Sex: male
Anatomic site: back

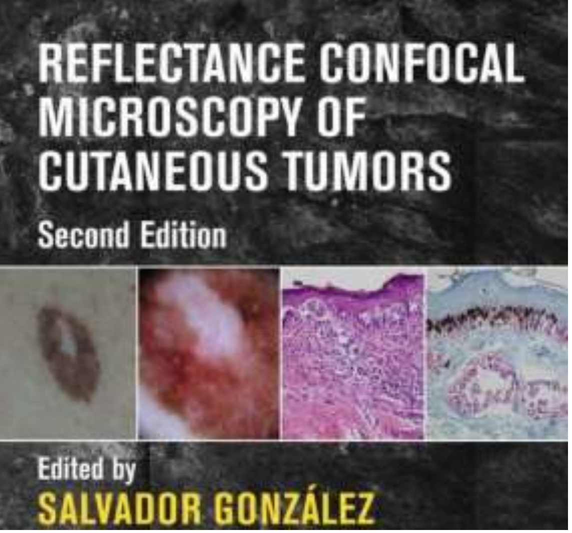
Dense and omogenous nests
Meshed and ringed pattern
Edged papillae


SERVIZIO SANITARIO REGIONALE
EMILIA-ROMAGNA

NEVO MELANOCITICO


SERVIZIO SANITARIO REGIONALE
EMILIA-ROMAGNA

MELANOMA



REFLECTANCE CONFOCAL MICROSCOPY OF CUTANEOUS TUMORS

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2017

CHAPTER 43

Integration of reflectance confocal microscopy for the management of patients with multiple nevi

Ignazio Stanganelli, Serena Magi, and Laura Mazzoni

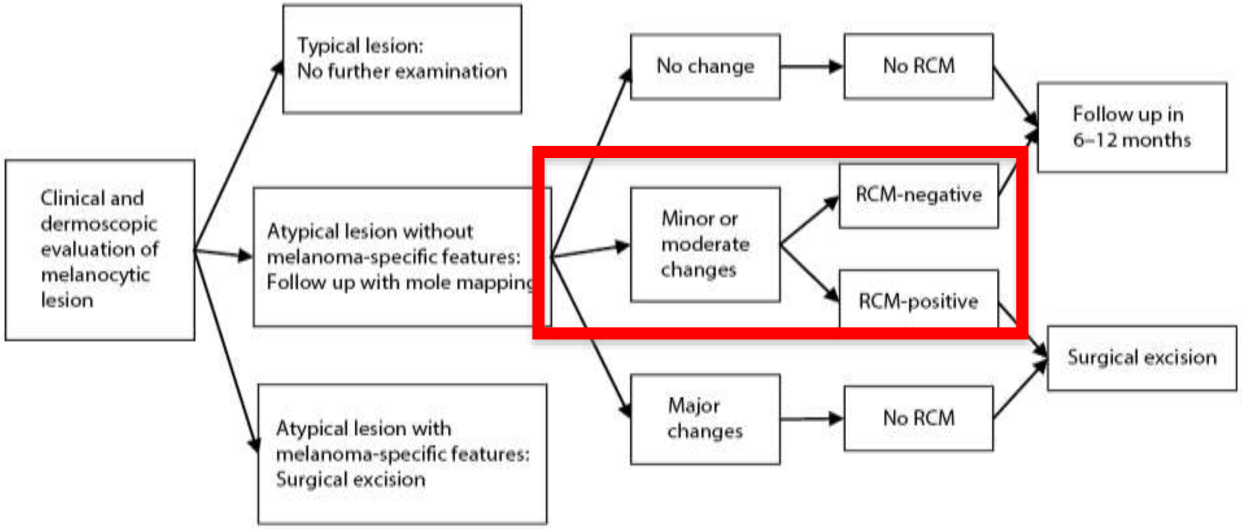
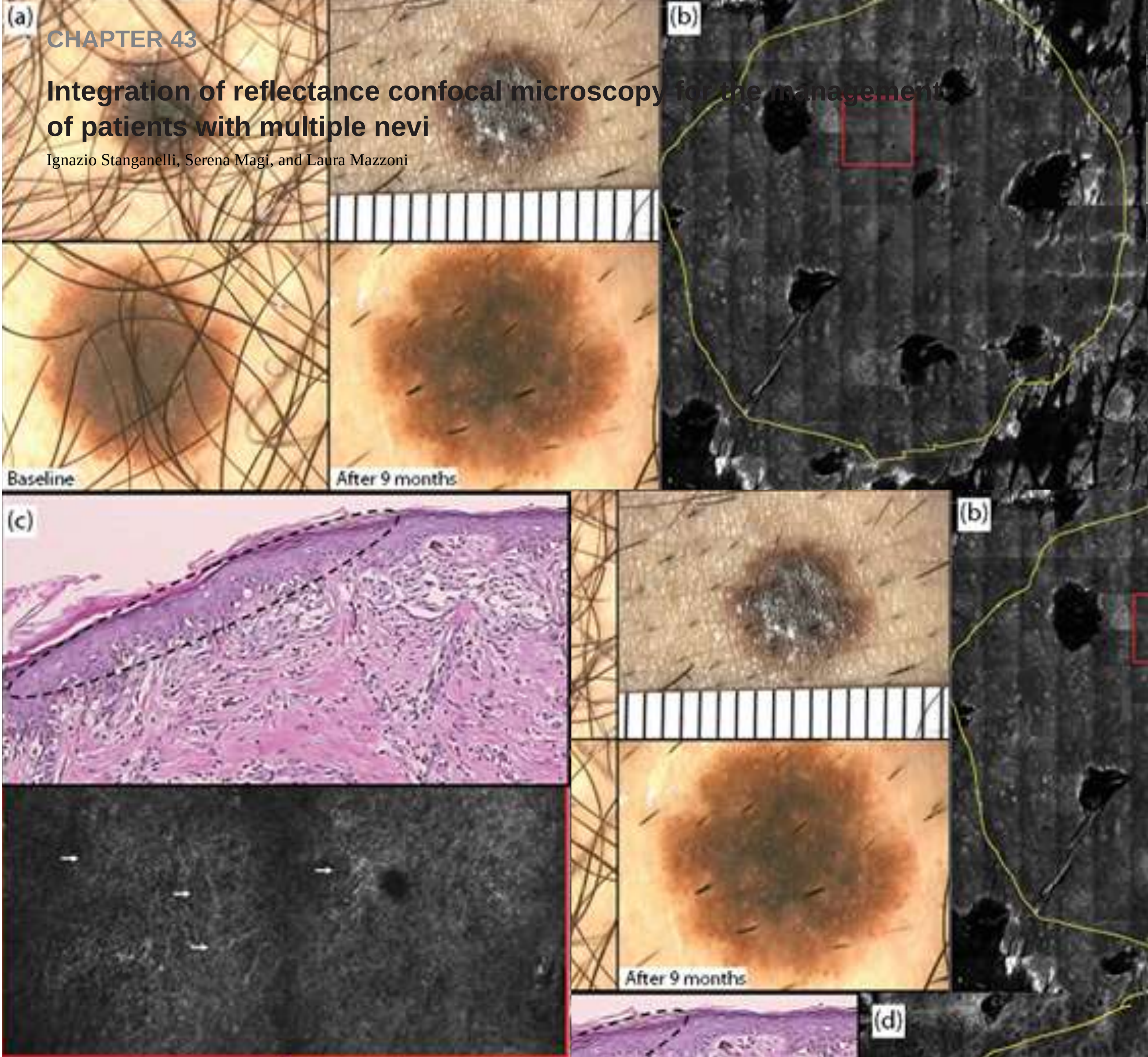

Clinical and dermoscopic evaluation of melanocytic lesion
Typical lesion: No further examination
Atypical lesion without melanoma-specific features: Follow up with mole mapping
Atypical lesion with melanoma-specific features: Surgical excision
No change
No RCM
Minor or moderate changes
RCM-negative
RCM-positive
Major changes
No RCM
Follow up in 6–12 months
Surgical excision

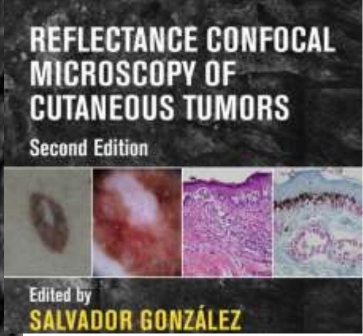
Figure 43.1 Management algorithm. (Modified from Stanganelli I et al. *Br J Dermatol*. 2015;172:365–371.)

CHAPTER 43

Integration of reflectance confocal microscopy for the management of patients with multiple nevi

Ignazio Stanganelli, Serena Magi, and Laura Mazzoni


(a)
Baseline
After 9 months
(b)
(c)
(b)
After 9 months
(d)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CHAPTER 43

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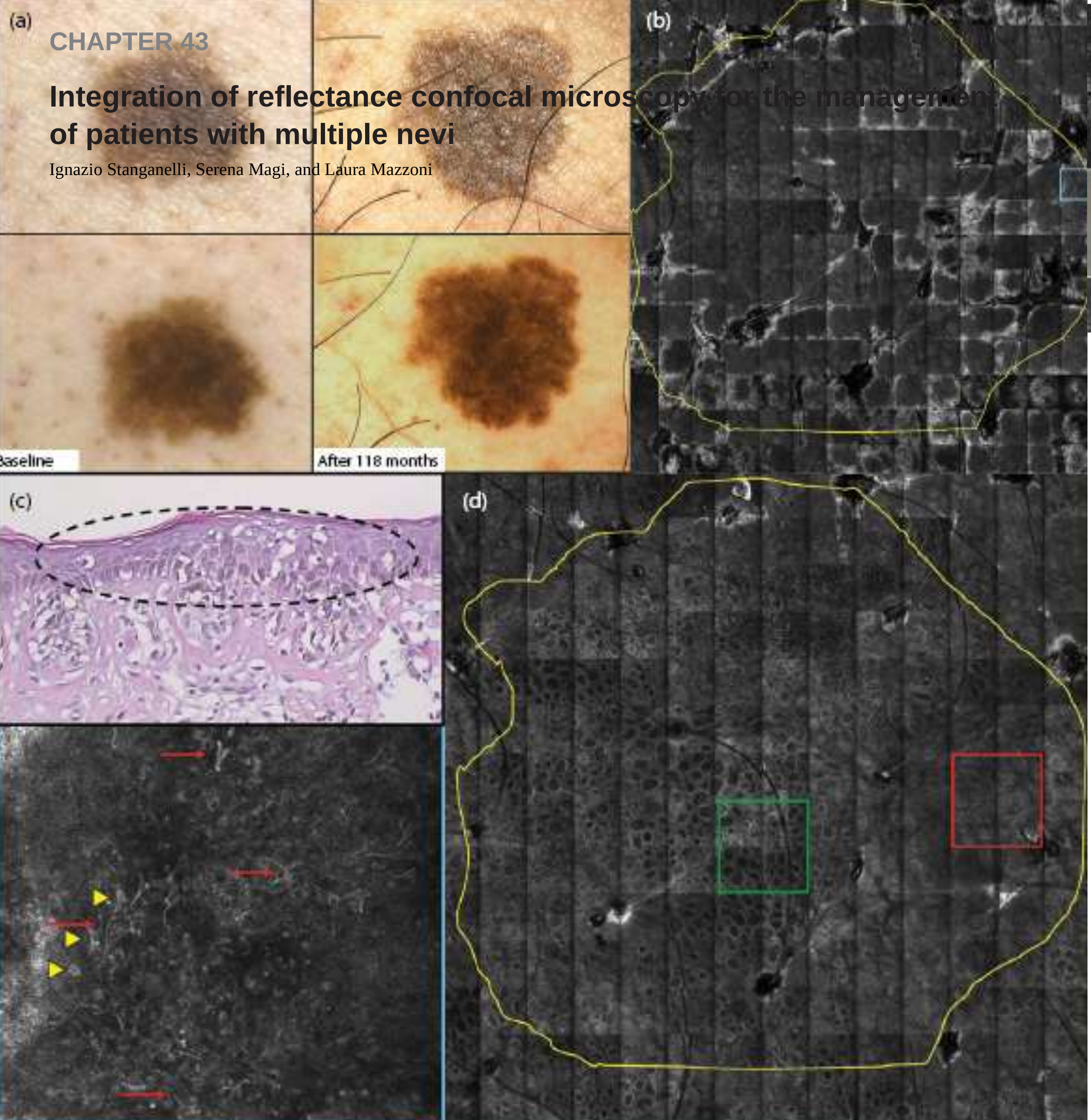
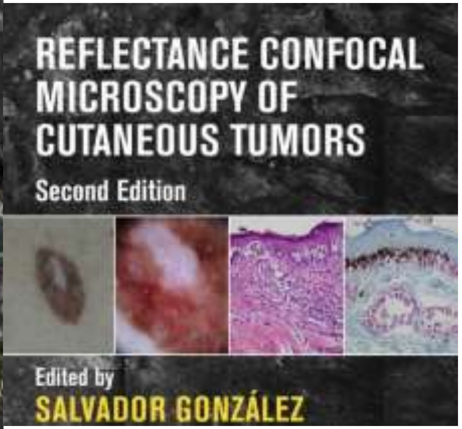
Ignazio Stanganelli, Serena Magi, and Laura Mazzoni


(a)
(b)
Baseline
After 118 months
(c)
(d)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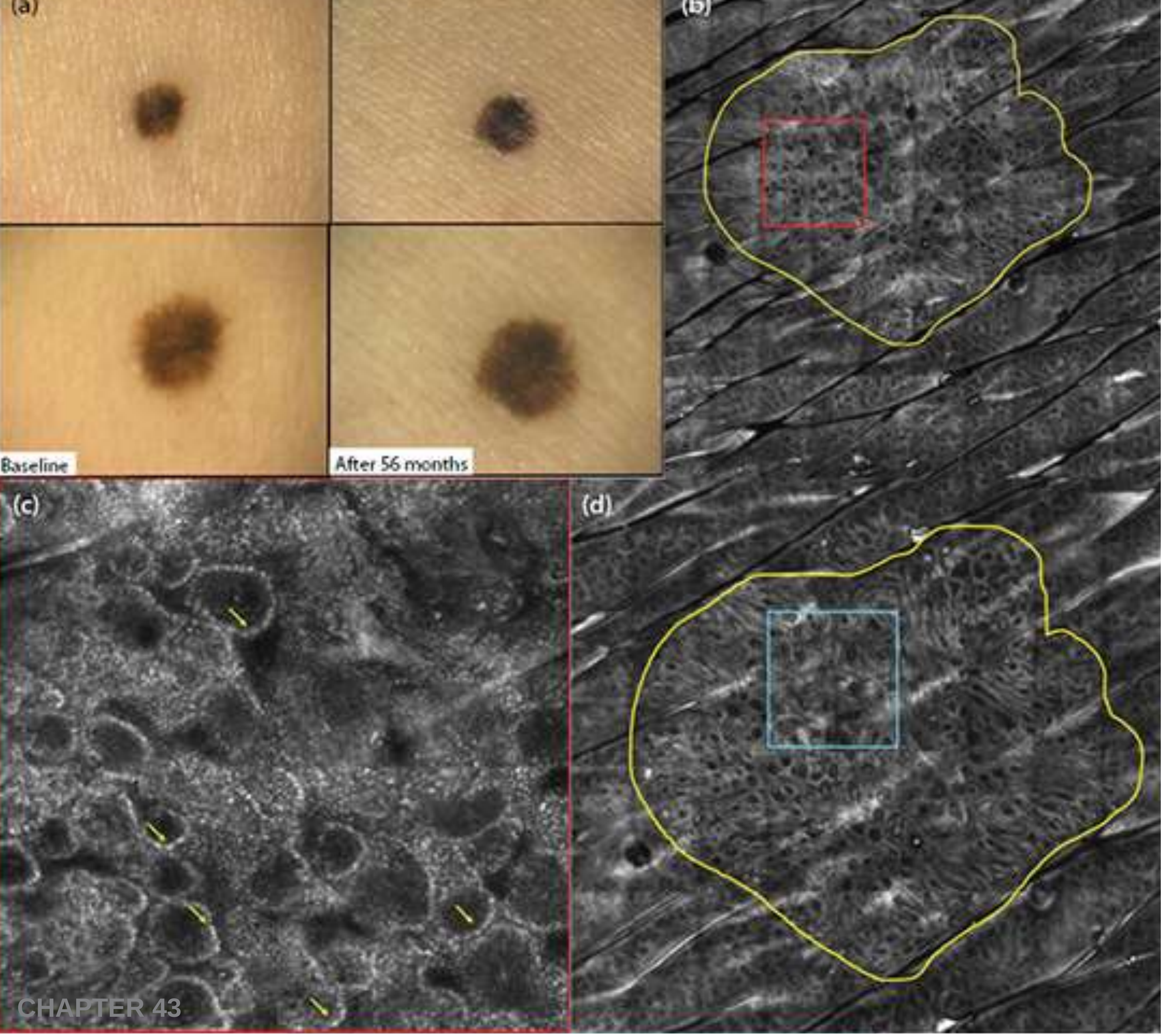
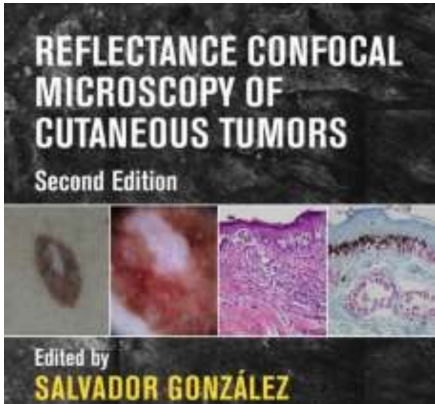

(a)
(b)
Baseline
After 56 months
(c)
(d)

CHAPTER 43

Integration of reflectance confocal microscopy for the management of patients with multiple nevi

Ignazio Stanganelli, Serena Magi, and Laura Mazzoni



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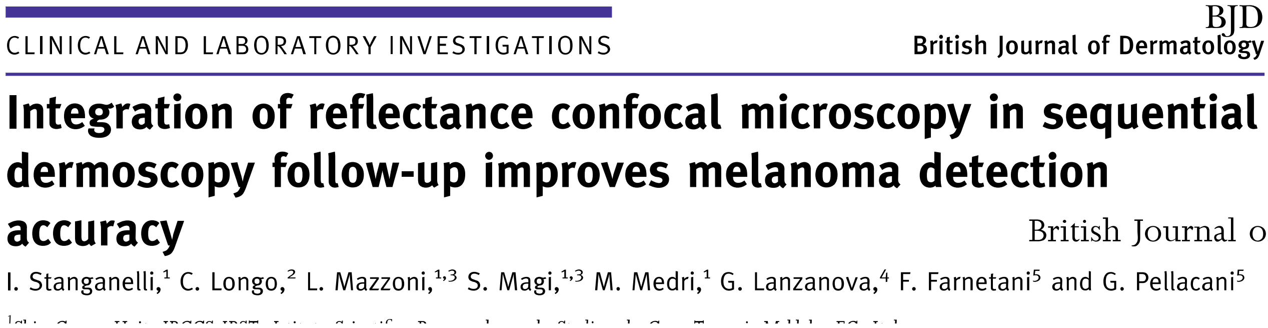


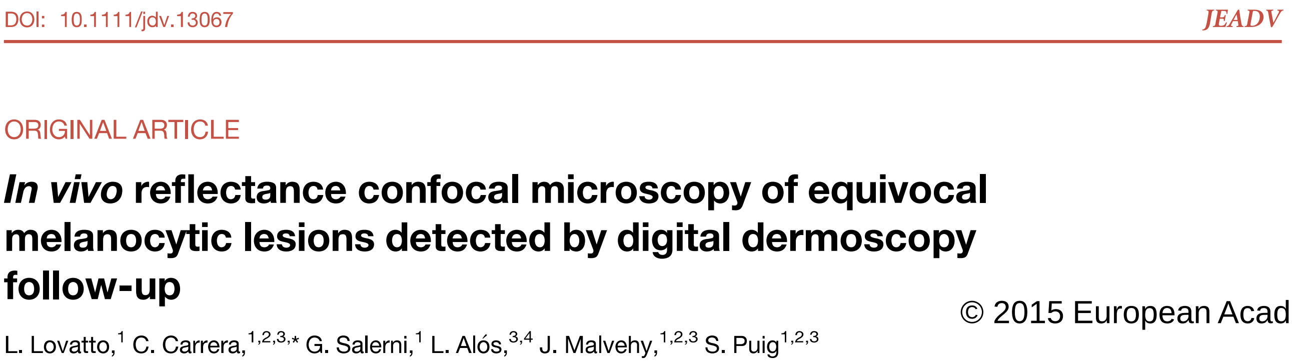
CLINICAL AND LABORATORY INVESTIGATIONS

BJD
British Journal of Dermatology

Integration of reflectance confocal microscopy in sequential dermoscopy follow-up improves melanoma detection accuracy

I. Stanganelli,[1] C. Longo,[2] L. Mazzoni,[1,3] S. Magi,[1,3] M. Medri,[1] G. Lanzanova,[4] F. Farnetani[5] and G. Pellacani[5]

British Journal of Dermatology (2015) **172**, pp365–371



DOI: 10.1111/jdv.13067

JEADV

ORIGINAL ARTICLE

In vivo reflectance confocal microscopy of equivocal melanocytic lesions detected by digital dermoscopy follow-up

L. Lovatto,[1] C. Carrera,[1,2,3,*] G. Salerni,[1] L. Alós,[3,4] J. Malvehy,[1,2,3] S. Puig[1,2,3]

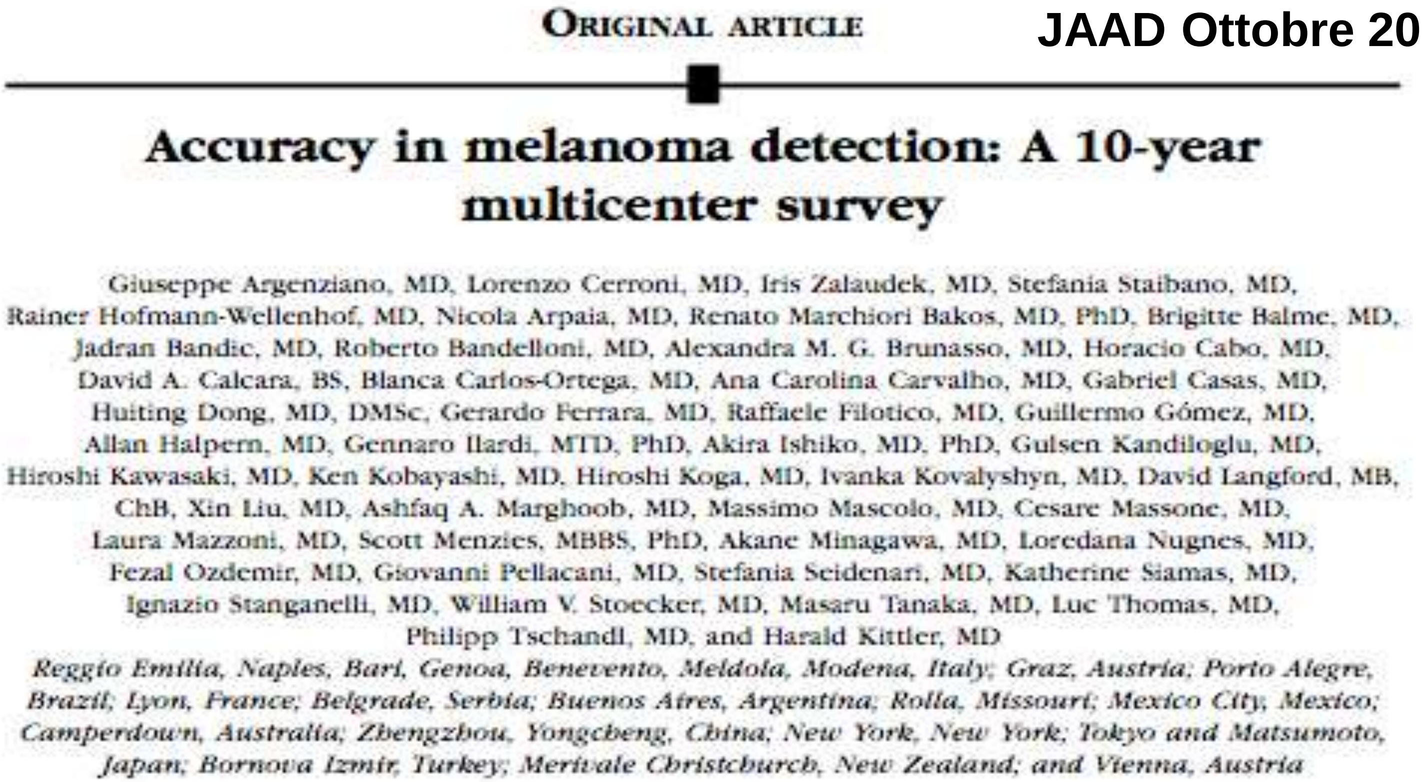
© 2015 European Academy of Dermatology and Venereology

Combining sequential dermoscopy imaging with RCM may help to reduce

the burden of unnecessary excisions of lesions and increase diagnostic

confidence in the case of melanoma with minor or moderate change

JAAD Ottobre 2011



ORIGINAL ARTICLE

Accuracy in melanoma detection: A 10-year multicenter survey

Giuseppe Argenziano, MD, Lorenzo Cerroni, MD, Iris Zalaudek, MD, Stefania Staibano, MD,
Rainer Hofmann-Wellenhof, MD, Nicola Arpaia, MD, Renato Marchiori Bakos, MD, PhD, Brigitte Balme, MD,
Jadran Bandic, MD, Roberto Bandelloni, MD, Alexandra M. G. Brunasso, MD, Horacio Cabo, MD,
David A. Calcara, BS, Blanca Carlos-Ortega, MD, Ana Carolina Carvalho, MD, Gabriel Casas, MD,
Huiting Dong, MD, DMSc, Gerardo Ferrara, MD, Raffaele Filotico, MD, Guillermo Gómez, MD,
Allan Halpern, MD, Gennaro Ilardi, MTD, PhD, Akira Ishiko, MD, PhD, Gulsen Kandiloglu, MD,
Hiroshi Kawasaki, MD, Ken Kobayashi, MD, Hiroshi Koga, MD, Ivanka Kovalyshyn, MD, David Langford, MB,
ChB, Xin Liu, MD, Ashfaq A. Marghoob, MD, Massimo Mascolo, MD, Cesare Massone, MD,
Laura Mazzoni, MD, Scott Menzies, MBBS, PhD, Akane Minagawa, MD, Loredana Nugnes, MD,
Fezal Ozdemir, MD, Giovanni Pellacani, MD, Stefania Seidenari, MD, Katherine Siamas, MD,
Ignazio Stanganelli, MD, William V. Stoecker, MD, Masaru Tanaka, MD, Luc Thomas, MD,
Philipp Tschandl, MD, and Harald Kittler, MD
Reggio Emilia, Naples, Bari, Genoa, Benevento, Meldola, Modena, Italy; Graz, Austria; Porto Alegre, Brazil; Lyon, France; Belgrade, Serbia; Buenos Aires, Argentina; Rolla, Missouri; Mexico City, Mexico; Camperdown, Australia; Zhengzhou, Yongcheng, China; New York, New York; Tokyo and Matsumoto, Japan; Bornova Izmir, Turkey; Merivale Christchurch, New Zealand; and Vienna, Austria

IMPLICAZIONI NELLA GESTIONE SANITARIA

	Rapporto Melanoma : Nevi
Dermatologia Generale	**1 : 29,4**
Centri di Dermatologia Oncologica	**1 : 8.7**

UNIVERSITÀ
DI PARMA

TESI DI LAUREA
22 marzo 2018

PERCORSO CLINICO E DIAGNOSTICO NELLA IDENTIFICAZIONE DEL MELANOMA: UNO STUDIO COMPARATIVO RETROSPETTIVO DI 10 ANNI (2002-2011)

Relatore: Chiar.mo Prof. Ignazio Stanganelli
Laureando: Emanuele Conte

Anno Accademico 2016-2017

RISULTATI

- NNE Medio

IRST 4,4

Parma 10,6

Rapporto benigno:maligno

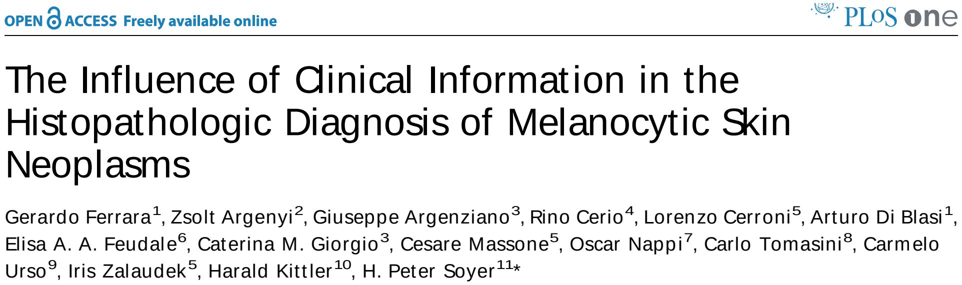
- TTP

IRST 12%

Parma 24%

% Melanomi > 1 mm

	IRST	PARMA
NNE	4.42	10.6
NNE maschi	3.98	9.52
NNE femmine	4.81	11.48
NNE testa e collo	3.79	9.45
NNE tronco	5.42	15.35
NNE arti superiori	2.19	6.88
NNE arti inferiori	3.31	5
NNE palmo-plantari	11.33	11.47



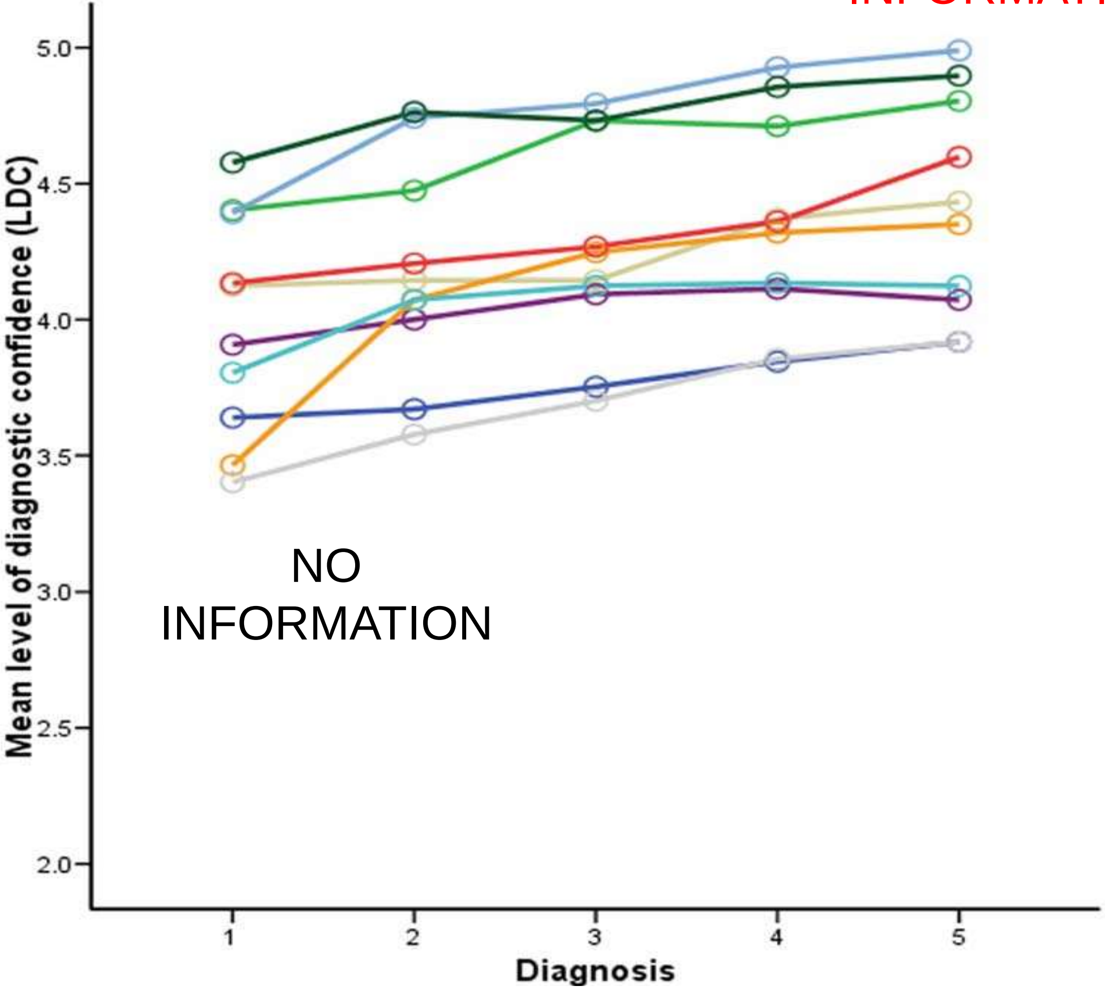
OPEN ACCESS Freely available online

PLoS one

The Influence of Clinical Information in the Histopathologic Diagnosis of Melanocytic Skin Neoplasms

Gerardo Ferrara[1], Zsolt Argenyi[2], Giuseppe Argenziano[3], Rino Cerio[4], Lorenzo Cerroni[5], Arturo Di Blasi[1], Elisa A. A. Feudale[6], Caterina M. Giorgio[3], Cesare Massone[5], Oscar Nappi[7], Carlo Tomasini[8], Carmelo Urso[9], Iris Zalaudek[5], Harald Kittler[10], H. Peter Soyer[11]*

WITH INFORMATION



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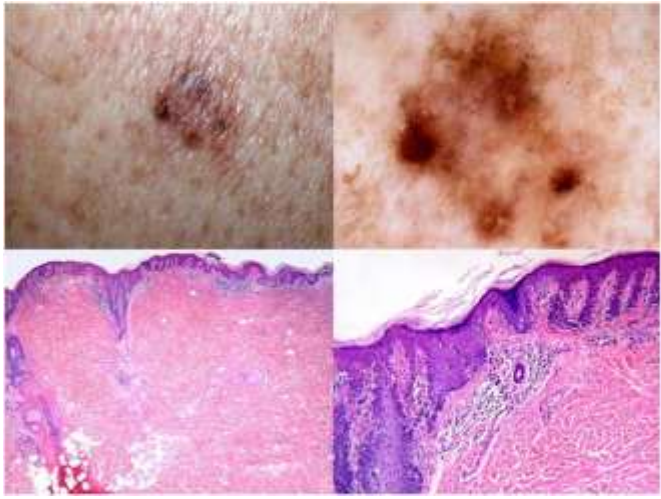

No information	With clinical and ELM
six pathologists	Eight pathologists