

AAD ANNUAL MEETING

AEDV highlights

SAN DIEGO 
8-12 MARZO



#AEDVENAAD2024



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DE DERMATOLOGÍA
Y VENEREOLOGÍA

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Diagnóstico por imagen en Dermatología y Dermatoscopia





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Diagnóstico por imagen en Dermatología y Dermatoscopia

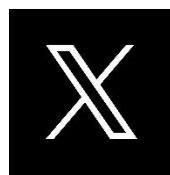
Dr Oriol Yélamos

Hospital de la Santa Creu i Sant Pau, Barcelona

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@oriol_yelamos



dryelamos



dryelamos



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CONFLICTOS DE INTERÉS



Almirall S.A (consultancy,
speaker, clinical trials)

Leo Pharma (consultancy,
speaker, advisory board)

Isdin (speaker)

Isispharma (consultancy,
speaker)

BMS (speaker, consultancy)

MSD (speaker)

Abbvie (speaker)

Bioderma (consultancy)

La Roche Posay (speaker)

Pierre Fabre (speaker)

Philogen (clinical trials)

Novartis (consultancy)

Kiowa Kirin (advisory board)

UCB (speaker)

Viatrix (speaker)

Agenda

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- Dermatoscopia
- Otros aparatos de imagen
- Inteligencia artificial

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Dermatoscopia

Iniciativa científica de:





ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA

Malign nail tumors

Bianca Maria Piraccini

1 Dermatology Unit- IRCCS Azienda Ospedaliero-Universitaria di Bologna

2 Department of Experimental, Diagnostic and Specialty Medicine *Alma Mater Studiorum*

University of Bologna, Italy

Onicoscopia de tumores ungueales

Do not forget

- ✓ peri or subungual neof ormation
- ✓ 1 digit only
- ✓ unresponsive to treatments
- ✓ tendency to ulceration

Think about a tumor



Squamous cell carcinoma

The great mime

- Median time before diagnosis: 10 years
- Slow progression
- Bone invasion in 60% of longlasting tumors
- Metastases very rare



Squamous cell carcinoma

Development from keratinocytes of

- nail fold (60%)
- nail bed (40%)

1. Lateral onycholysis and warty appearance of exposed nail bed
2. Painless erosion of the nail bed
3. Large erosion of the nail bed associated or not with a nodule
4. Longitudinal erythronychia
5. Localized subungual hyperkeratosis
6. SCC involving multiple fingers



Squamous cell carcinoma: the great mime

Onychoscopy features

- **Structural alterations:** detachment, onycholysis, fissures
- **Color alteration:** brown, gray, reddish and whitish lines
- **Alterations of free margin:** irregular and non-parallel edges, hyperkeratosis, polycyclic and faded lesion
- **Vascular polymorphism:** vessels with dot-like appearance up to glomerular or grouped, splinter hemorrhages

Teyssiere et al. Dermatology 2017; 233: 184–191

Starace et al. Dermatol Pract Concept 2018; 8: 237-243

¡Cuidado con el Bowen subungueal!

Bowen disease

Structural alterations:

Warty/hyperkeratotic growth of the lateral fold with onycholysis

Color alteration: brown longitudinal band boarding the detached nail

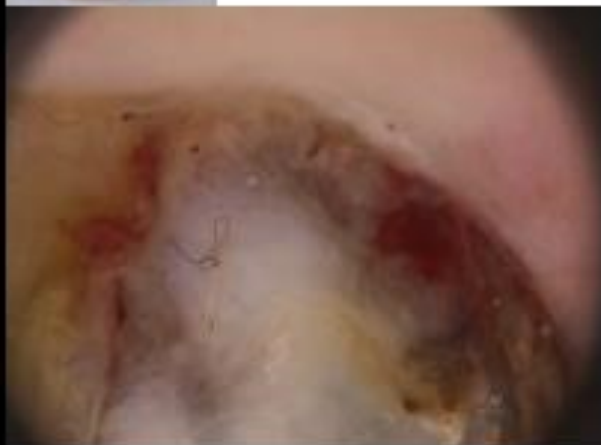


Resembles a viral wart!

Diagnóstico diferencial CEC subungueal

The most important differential diagnosis of squamous cell carcinoma presenting as eroded nodule

Amelanotic melanoma



Pyogenic granuloma



Exostosis

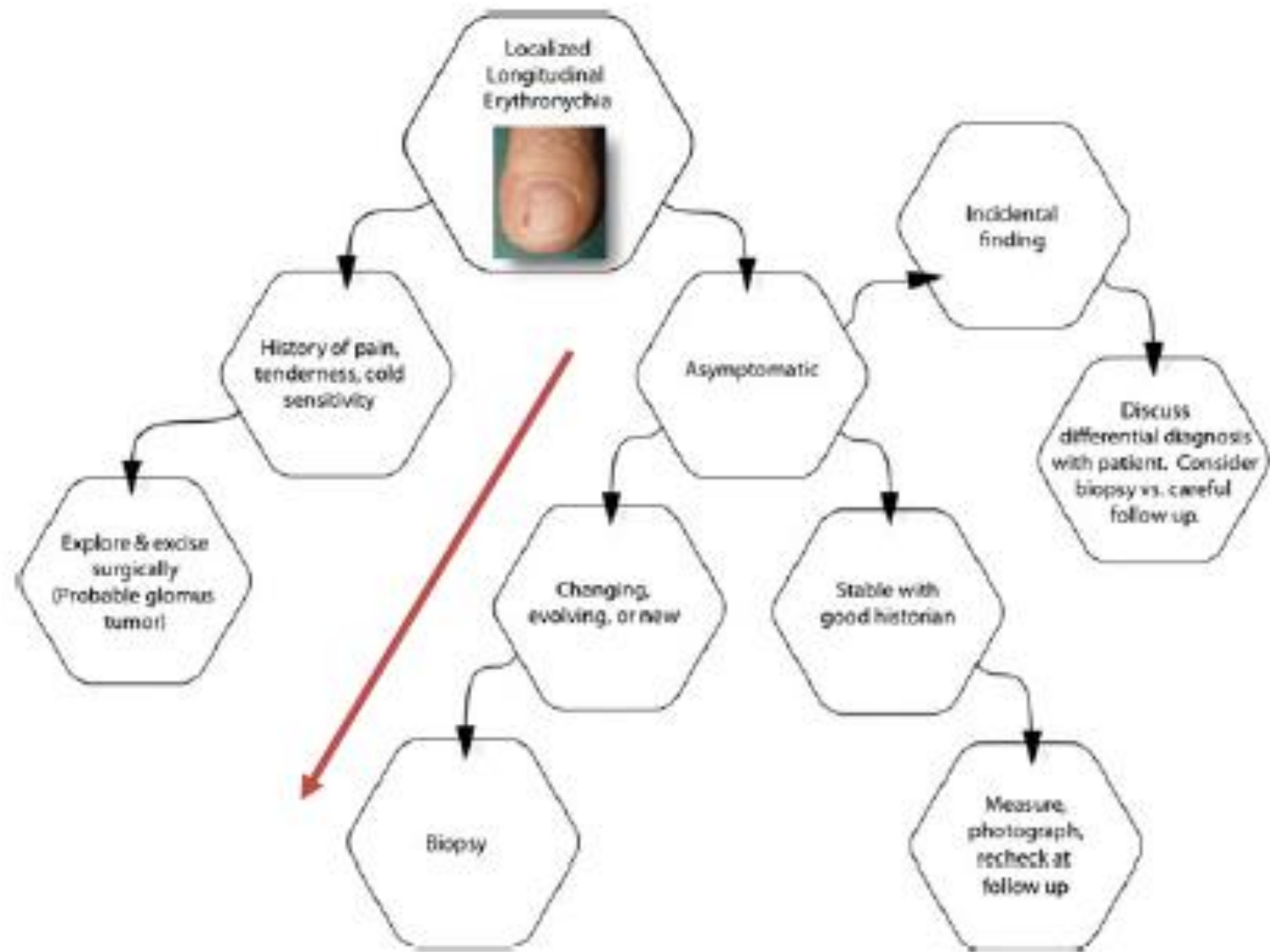


Squamous cell carcinoma

4. Longitudinal erythronychia

- **Color alteration:** reddish and whitish longitudinal line
- Splinter hemorrhages
- **Alterations of free margin:** irregular hyperkeratosis





Eritroniquia monodactílica → ¡biopsia!

Erythronychia of a single digit

- Not painful –clinically unstable **Do a biopsy!**



Staraceet al. Dermatol Pract Concept. 2018; 8: 238-244.

Glóbulos periféricos en dermatoscopia



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Dermatology


RESEARCH ARTICLES | JUNE 06 2023

The Natural Evolution of Nevi with Peripheral Globules

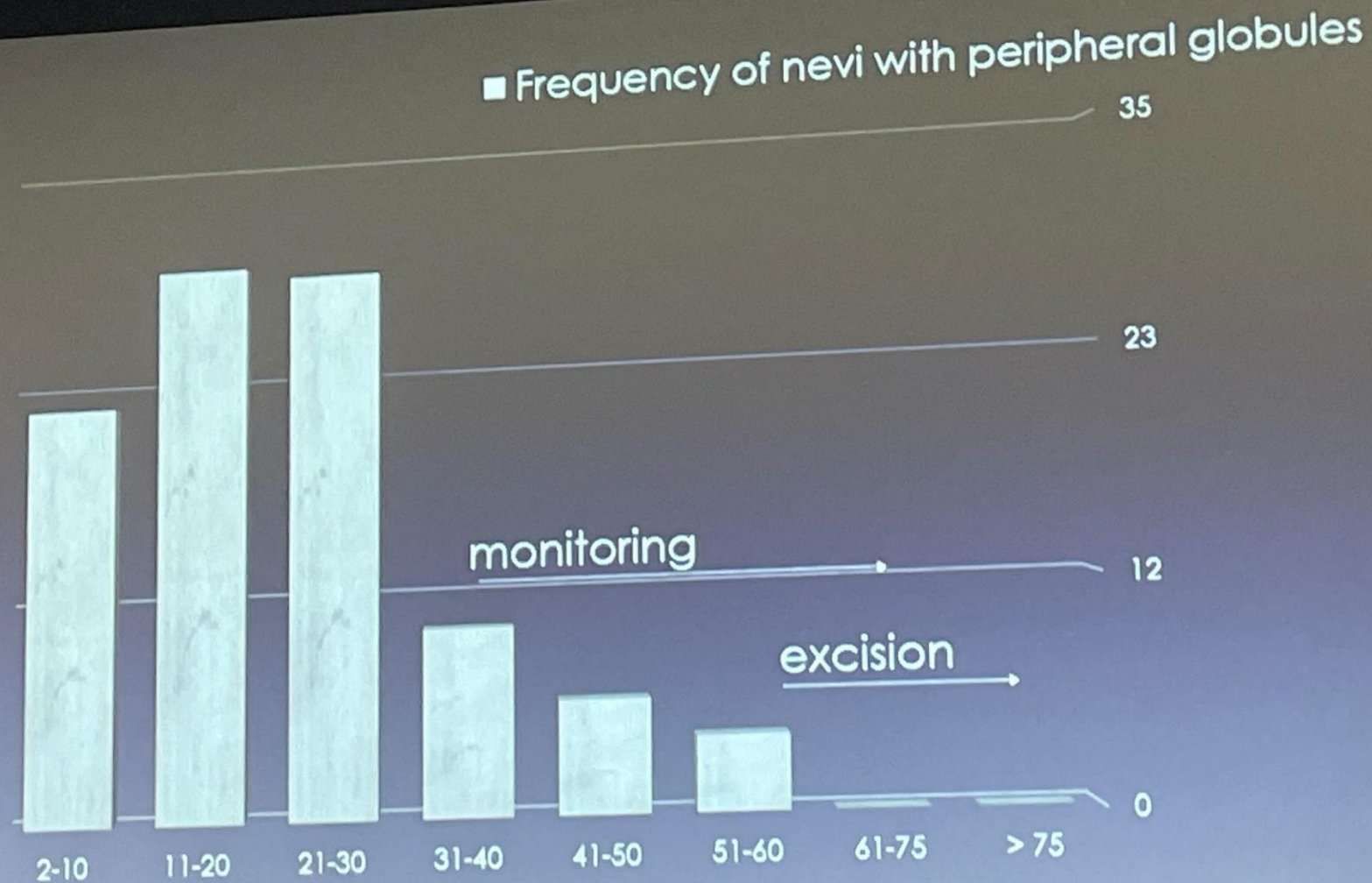
Subject Area:  Dermatology ,  Immunology and Allergy

Paula Anca Ilut  ; Elisa Camela  ; Konstantinos Lallas  ; Chryssoula Papageorgiou;
Sofia-Magdalini Manoli; Athanassios Kyrgidis; Konstantinos Liopyris  ; Dimitrios Sgouros  ;
Zoe Apalla; Aimplios Lallas 

Dermatology 1.

<https://doi.org/10.1159/000531004>  Article history

Glóbulos periféricos en dermatoscopia



Glóbulos periféricos en dermatoscopia

Variable	<u>Melanoma</u>		<u>Nevus</u>		p-value	OR (95% CI)	*
	Sample Size	115	178	178			
class	43	37%	11	6.18%	9.07	(4.42, 18.58)	*
tiered-focal-atypical	9	7.83%	18	10.11%	0.75	(0.33, 1.74)	
tiered-focal-typical	11	9.57%	4	2.25%	4.60	(1.43, 14.82)	*
tiered-completely circumferential -atypical	0	0.00%	15	8.43%	0.05	(0.00, 0.77)	*
tiered-completely circumferential -typical	27	23%	7	3.93%	7.50	(3.14, 17.89)	*
Single-rim-focal-atypical	19	16.52%	63	35.39%	0.36	(0.20, 0.65)	*
Single-rim-focal-typical	3	3%	7	3.93%	0.65	(0.17, 2.58)	
Single-rim- completely circumferential -atypical	3	2.61%	53	30%	0.06	(0.02, 0.21)	*
Single-rim- completely circumferential -typical	63	54.78%	48	26.97%	3.28	(2.00, 5.38)	*
tiered globules	98	85.22%	99	55.62%	4.60	(2.54, 8.33)	*
focal globules	84	73.04%	29	16.29%	13.92	(7.85, 24.68)	*
atypical globules	38	33.04%	102	57.30%	0.37	(0.23, 0.60)	*
distant globules							

Glóbulos periféricos en dermatoscopia

Conclusion: Nevi with peripheral globules grow at a mean rate of $0.16\text{mm}^2/\text{month}$. Growth curves do not depend on age, gender or anatomic location, but appear to differ by global dermoscopic pattern. Peripheral globules, as a sole feature, does not appear to justify concern for malignancy. These data favor a conservative approach for the management of nevi with peripheral globules.

Glóbulos periféricos en dermatoscopia

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Conclusions: Melanocytic lesions with atypical or asymmetrically distributed peripheral globules, especially when located on the extremities, should raise suspicion for malignancy. Melanocytic lesions with typical and symmetrically distributed peripheral globules, and with no other concerning dermoscopic features, are unlikely to be malignant.

ORIGINAL ARTICLE

Association between the dermoscopic morphology of peripheral globules and melanocytic lesion diagnosis

O. Reiter,^{1,2,*} E. Chousakos,¹ N. Kurtansky,¹ J.K. Nanda,¹ S.W. Dusza,¹ M.A. Marchetti,¹ N. Jaimes,³ A. Moraes,⁴ A.A. Marghoob¹

¹Dermatology Service, Memorial Sloan Kettering Cancer Center, New York, NY, USA

²Department of Dermatology, Rabin Medical Center, Petah Tikvah and Sackler Faculty of Medicine, Tel Aviv University, Tel Aviv, Israel

³Dr. Phillip Frost Department of Dermatology and Cutaneous Surgery, Sylvester Comprehensive Cancer Center, University of Miami, Miami, FL, USA

⁴Department of Dermatology, AC Camargo Cancer Center, São Paulo, Brazil

*Correspondence: O. Reiter. E-mail: ofer.rtr@gmail.com



Results 184 lesions with peripheral globules from our clinic were included in the analysis; only 6 of these proved to be melanoma. 109 melanomas with peripheral globules from the International Skin Imaging Collaboration archive were added to the analysis. Melanomas were more common on the extremities and among older individuals. Melanomas were more likely to display atypical, tiered and/or focal peripheral globules. Only 5% of melanomas lacked dermoscopic melanoma-specific structures compared to 48% of naevi.

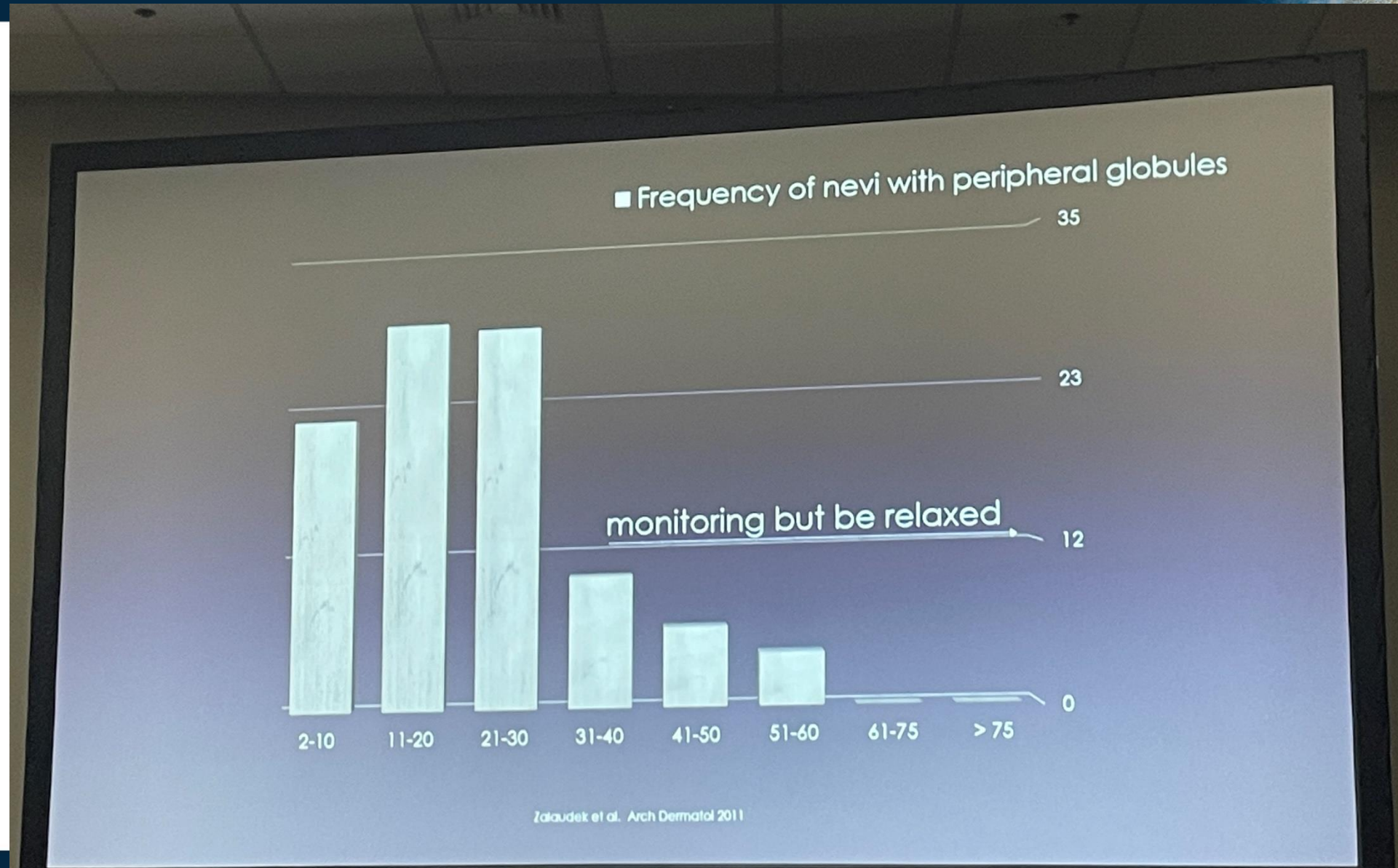
Conclusions Melanocytic lesions with atypical or asymmetrically distributed peripheral globules, especially when located on the extremities, should raise suspicion for malignancy. Melanocytic lesions with typical and symmetrically distributed peripheral globules, and with no other concerning dermoscopic features, are unlikely to be malignant.

Received: 23 August 2020; Accepted: 27 October 2020

Glóbulos periféricos en nevus y melanomas

PG nevi	Melanoma
Grow symmetrically	Grow asymmetrically (63%)
No new features & no change in pattern	Often develop new features (melanoma-specific structures)
Globules become sparser and smaller and eventually disappear	Globules do not disappear & if they do they are replaced by another MM specific structures
Growth cessation (50 months)	No growth cessation

Glóbulos periféricos en nevus y melanomas



Nuevos hallazgos dermatoscópicos en LM

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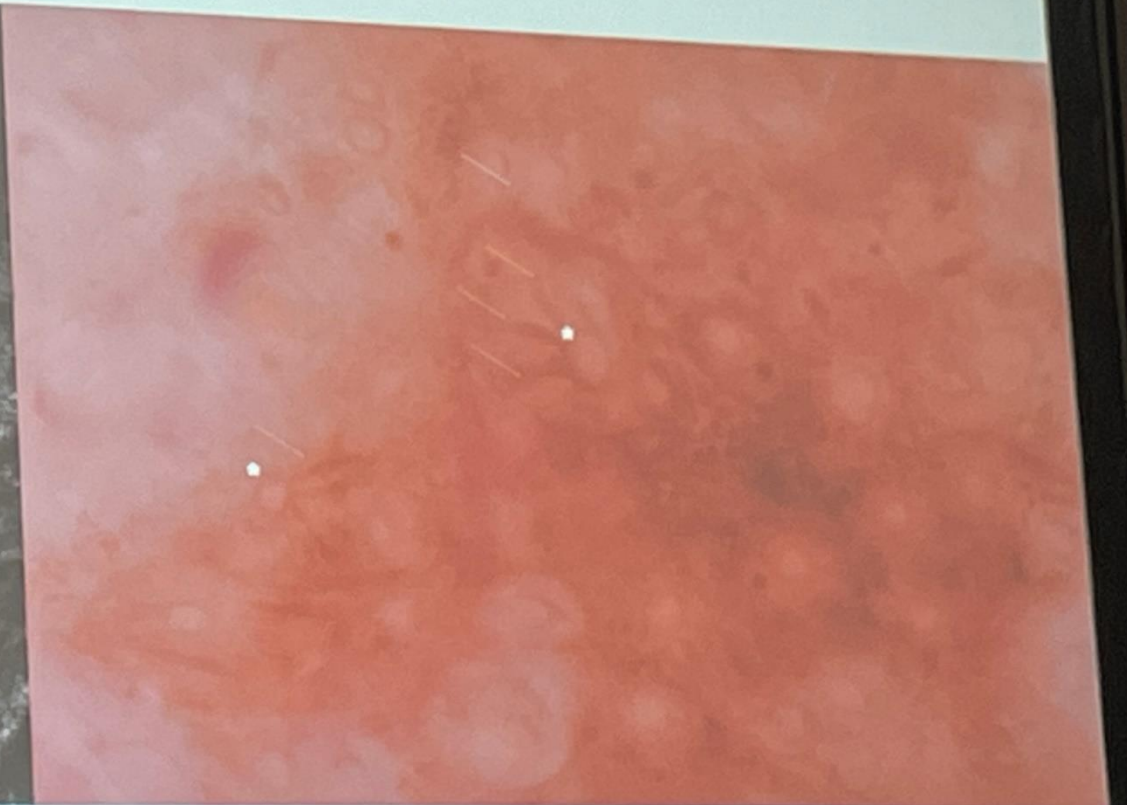
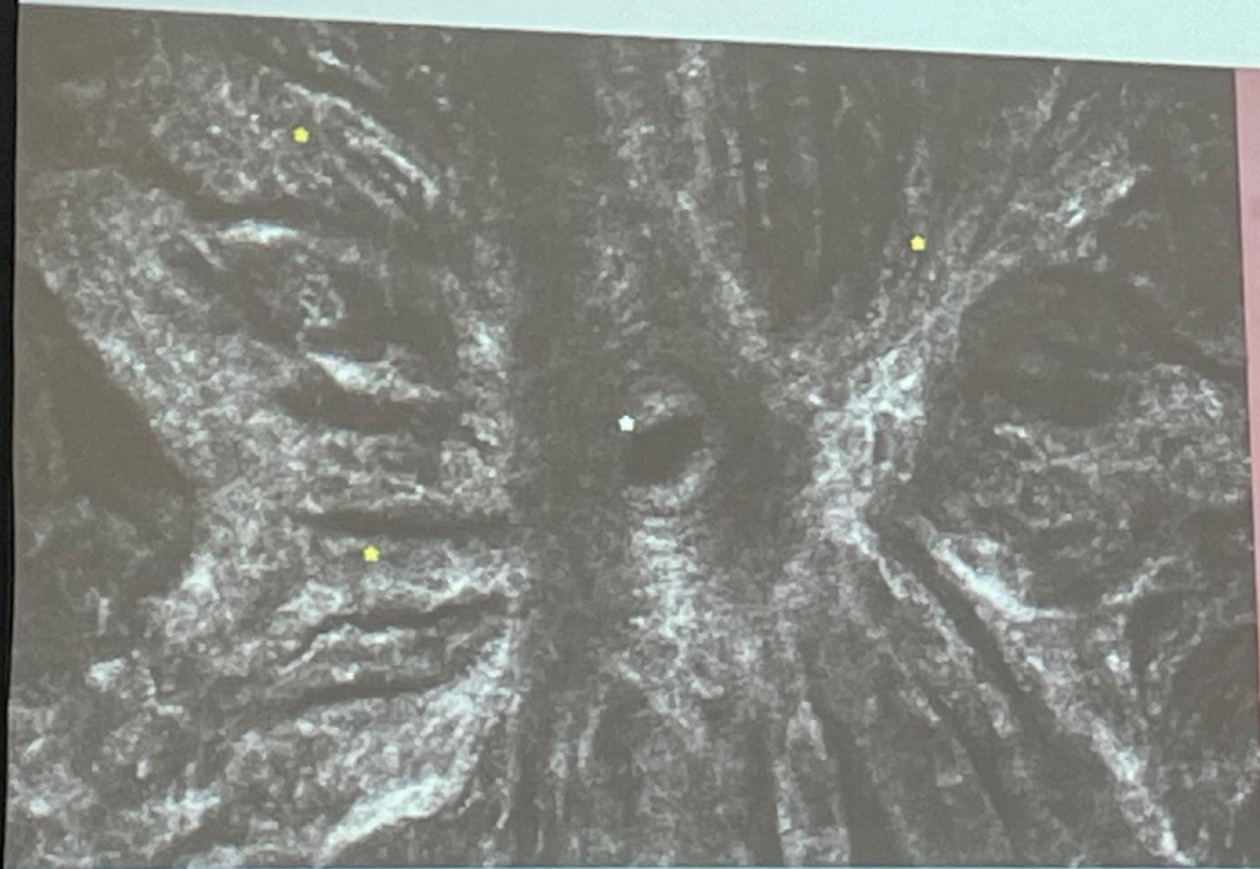
ORIGINAL ARTICLE

Perifollicular linear projections: A dermatoscopic criterion for the diagnosis of lentigo maligna on the face

Cristian Navarrete-Dechent, MD,^{a,b,c} Natalia Jaimes, MD,^{d,e} Stephen W. Dusza, DrPH,^g
Konstantinos Liopyris, MD,^{a,b} Michael A. Marchetti, MD,^a Miguel Cordova, MD,^a Margaret Oliviero, ARNP,^c
Miguel A. Villaseca, MD,^{c,f} Melissa Pulitzer, MD,^g Klaus J. Busam, MD,^g Anthony M. Rossi, MD,^a
Harold S. Rabinovitz, MD,^c Kishwer S. Nehal, MD,^a Alon Scope, MD,^{a,h} and Ashfaq A. Marghoob, MD^a

Lineas perifoliculares en LM facial

Perifollicular projections – RCM/
dermoscopy





Hallazgos dermatoscópicos en CBC metatípico



metatypical BCC
(Basosquamous carcinoma)

arborizing vessels
ulceration
white circles
keratin masses

Trichoscopy of Scalp Metastases

Lidia Rudnicka

Tricoscopia de metástasis cuero cabelludo

Breast cancer metastases

blood vessel polymorphism

pink-whitish background

thick arborizing vessels

serpentine-like vessels

ulcerations

thin linear vessels

Roberta Vezzonja et al 2020

The image shows a trichoscopic view of a scalp lesion. The background is a mix of pink and white. A central area is brownish and irregular. Surrounding this are several types of blood vessels: thick, branching (arborizing) vessels; winding (serpentine) vessels; and thin, straight (linear) vessels. There are also some white, irregular patches that look like ulcers. A small inset in the bottom left shows a close-up of the hair shafts, which appear brittle and broken.

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Otros aparatos de imagen

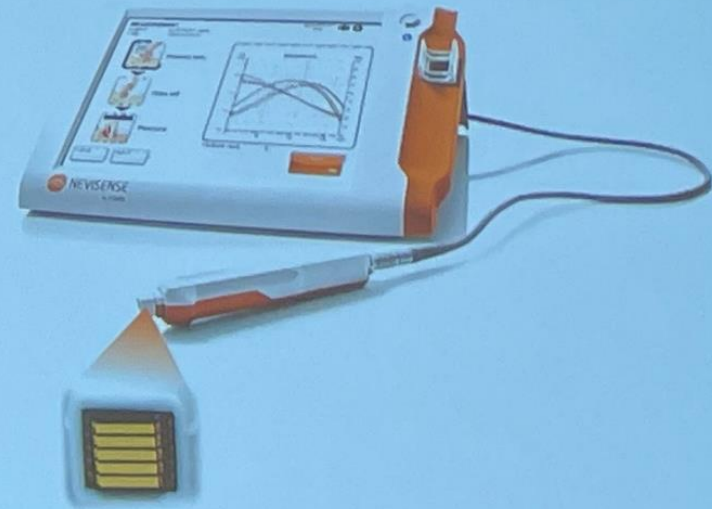
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Electrical Impedance Spectroscopy (EIS) method

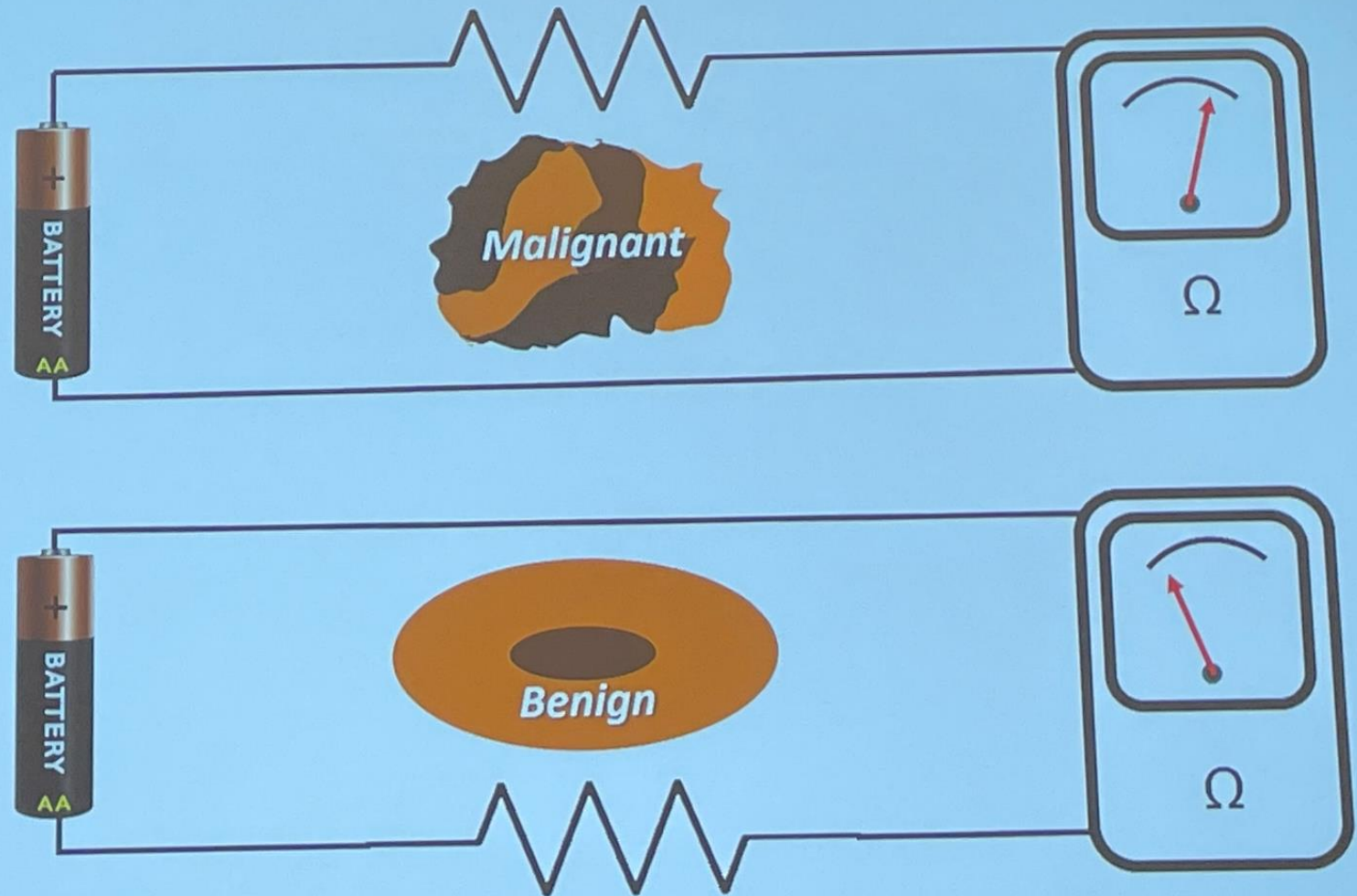
- EIS is a measure of the overall resistance within a tissue at alternating currents of various frequencies
- EIS is measured by applying an unnoticeable and harmless alternating electrical current onto the skin and measure the response
- The platform consists of a handheld probe with a disposable electrode connected to a device analyzing the signals
- Disposable electrode can be used up to 20 times per patient and must be changed between patients



Espectroscopia de impedancia eléctrica

Premise of EIS

Malignant and benign lesions have different electrical resistance

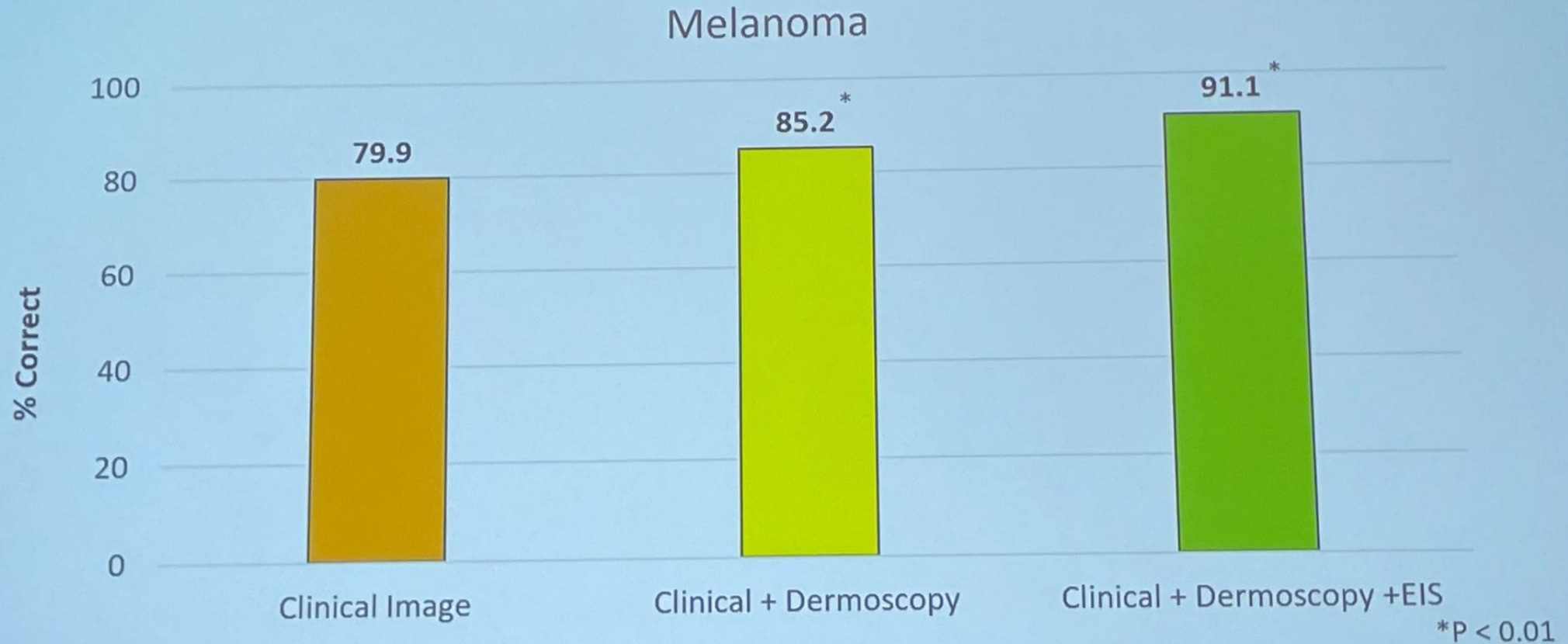


Diagnostic Enhancement of EIS beyond Dermoscopy for Pigmented Lesions

- 213 Derms evaluated 50 histologically confirmed pigmented lesions for selecting for biopsy
 - 15 MMs
 - 6 Severe DNAs
 - 29 Benign Pigmented lesions
- Each lesion evaluated with clinical image, then dermoscopy then EIS results

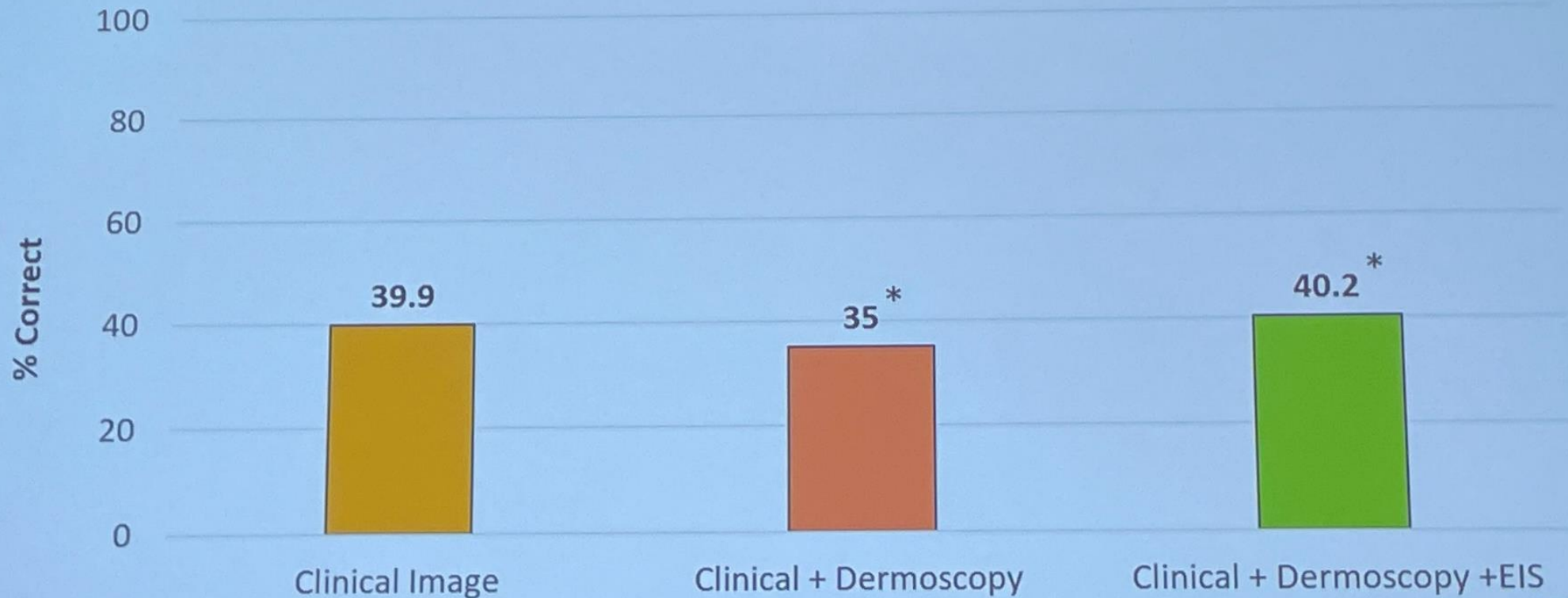
Espectroscopia de impedancia eléctrica

Correct Biopsy Choice



Correct Biopsy Choice

Benign Lesions

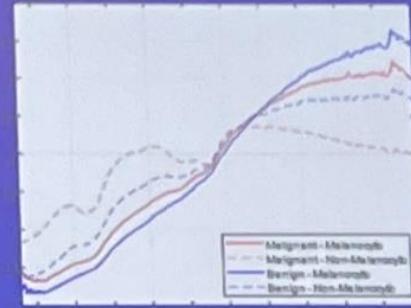


*P < 0.01

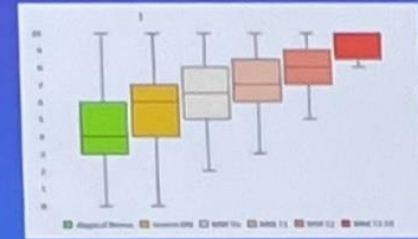
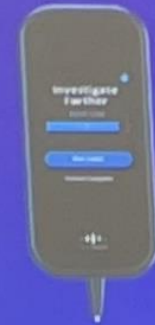
Otros aparatos de decisión clínica

Adding objective information

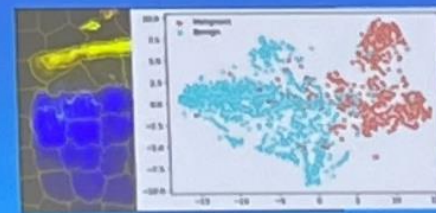
To improve precision



(ESS) Spectral signatures



(EIS) Electrical signal classifications



(Multimodal RCM-MPM) Skin segmentation analysis / skin classification



Espectroscopia de dispersión elástica

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Elastic scattering spectroscopy

Positive Device Result
A positive result of “Investigate Further” is accompanied by a 1-10 spectral score indicating the degree of similarity to malignant lesions

Investigate Further
#234-1234
9
New Lesion
Patient Complete

BACK
This lesion has a score of 9 out of 10 for its spectral similarity to malignant lesions in studies.

Low Spectral Similarity High Spectral Similarity
1 2 3 4 5 6 7 8 9 10

MONITOR
#E4365-10326
New Lesion
Patient Complete

Negative Device Result
A negative result of “Monitor” is not accompanied by a 1-10 score given the device’s high sensitivity and NPV

Determina firmas espectrales, da un valor y si la lesión se puede observar o derivar

Elastic Scattering Spectroscopy (ESS) FDA Clearance

The ESS device is indicated for use to evaluate skin lesions suggestive of melanoma, basal cell carcinoma, and/or squamous cell carcinoma in **patients aged 40 and above** to assist in the **decision regarding referral of the patient to a dermatologist**. The ESS device should be used in conjunction with the totality of clinically relevant information from the clinical assessment, including visual analysis of the lesion, by physicians who are not dermatologists. The device should be used on lesions already assessed as suspicious for skin cancer and not as a screening tool. The device should not be used as the sole diagnostic criterion nor to confirm clinical diagnosis of skin cancer.

Dermatoscopia digital con inteligencia aumentada

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Digital dermatoscopy imaging augmented intelligence (DDI-AUI)

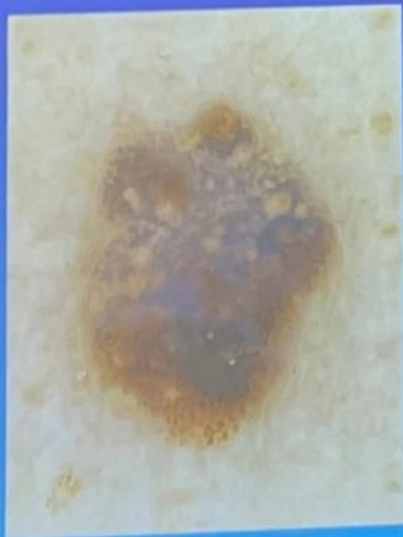


Diferencias entre inteligencia aumentada e inteligencia artificial

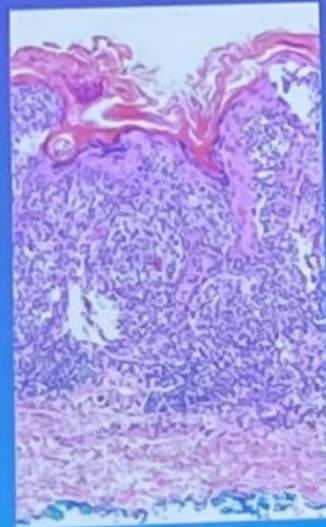
Why DDI-AUI and not DDI-AI?

Dermoscopy AI / AUI

Artificial Intelligence (AI)



Data input

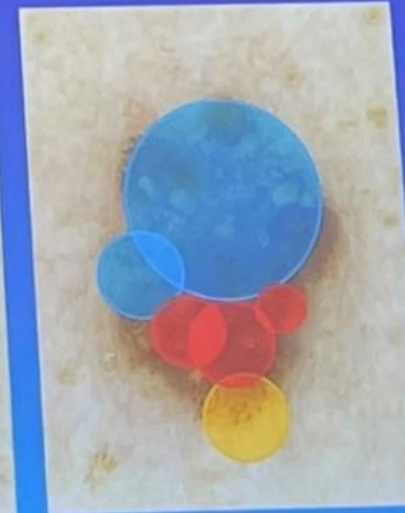


Path result

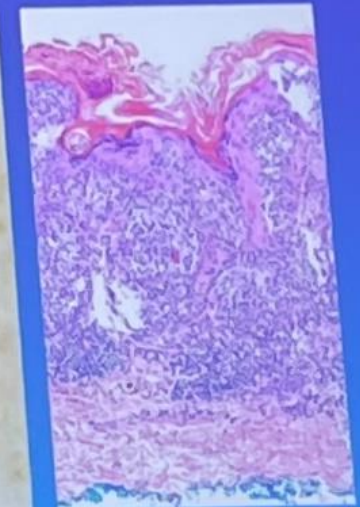
Augmented Intelligence (AI)



Data input



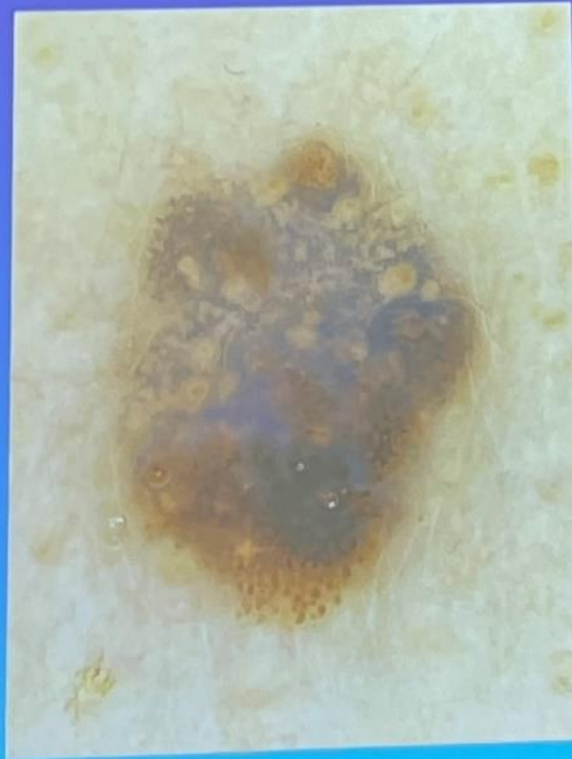
Human expert
labelling



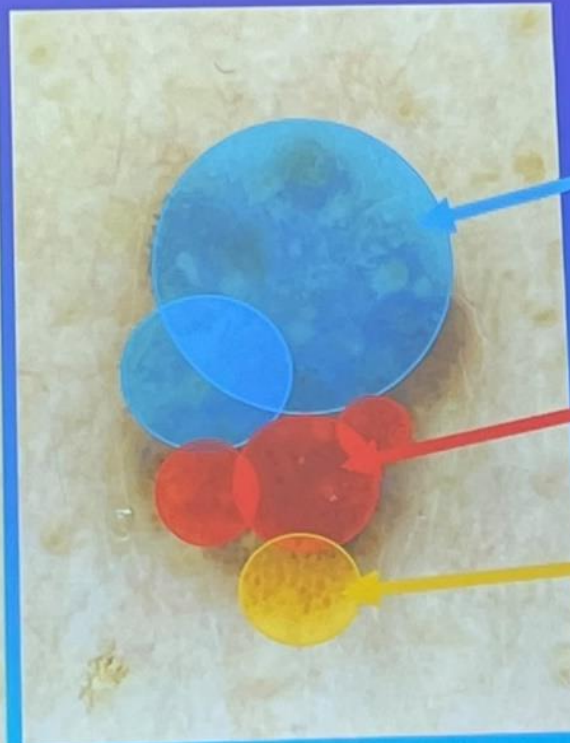
Path result

Diferencias entre inteligencia aumentada e inteligencia artificial

Why is expert labelling important? (supervised learning)



This IS melanoma



This is WHY it is a melanoma

Blue-white-grey-violet colors

Asymmetry and/or atypical network

Round (or oval) structures

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Inteligencia artificial

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DermGPT: How language model based Generative AI can improve clinic flow and practice management

Fara Kamangar, MD
Founder, DermGPT
Department Chair, Palo Alto Medical
Foundation
Chair, SF Derm Society



Derm + Data + AI + Trust

www.dermgpt.com

Inteligencia artificial

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For every 8 hours of scheduled patient time, ambulatory physicians spend more than 5 hours on the EHR.

Melnick et al. AMIA. May 2021.

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Let Generative AI improve your QOL!



THE FEAR:

Will Gen AI Take My Job?

REALITY:

No. People who use Gen AI will take your job!

Inteligencia artificial

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[Account](#)

DermGPT

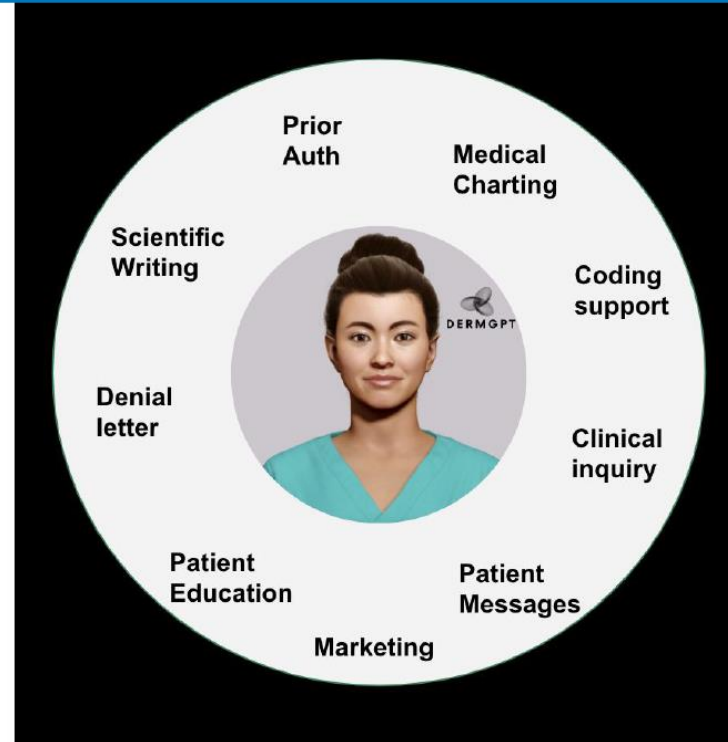
*Is the only advanced AI powered tool
specializing in dermatology.*

DermGPT allows dermatologists to ask questions in natural language and receive relevant, helpful answers – just like they would with real-life colleagues.

Inteligencia artificial

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can you help me write a denial letter to an insurance company for upadacitinib for a patient with atopic dermatitis

Subject: Denial of Coverage for Upadacitinib for Atopic Dermatitis

Dear [Insurance Company Name],

I am writing to appeal the denial of coverage for Upadacitinib for the treatment of atopic dermatitis for [Patient's Name]. After reviewing the provided documentation and considering the patient's medical history, it is evident that Upadacitinib is medically necessary for the management of their condition.

According to the approval criteria outlined in the Rinvoq prescribing information ¹, Upadacitinib (also known as Rinvoq) may be approved for the treatment of atopic dermatitis in individuals who are 12 years of age or older with refractory, moderate to severe atopic dermatitis. It is important to note that Upadacitinib has demonstrated efficacy in improving symptoms and quality of life in patients with atopic dermatitis ².

Furthermore, the black box warnings for Upadacitinib, including serious infections, mortality, malignancy, major adverse cardiovascular events (MACE), and thrombosis, should not be a sole basis for denial of coverage. These risks are well-documented and can be managed through appropriate monitoring and patient education ¹.

Considering the patient's refractory, moderate to severe atopic dermatitis and the lack of adequate response to other treatment options, Upadacitinib is a necessary and appropriate therapeutic choice. It is crucial to provide the patient with access to this medication to improve their quality of life and manage their condition effectively.

I kindly request a reconsideration of the denial of coverage for Upadacitinib for [Patient's Name]. I have attached the

what is the differential diagnosis for acne

1. Rosacea: Rosacea can present with facial redness, papules, and pustules similar to acne, but it typically affects older individuals and is associated with flushing and telangiectasias .
2. Folliculitis: Folliculitis is an infection or inflammation of the hair follicles that can resemble acne. It is often caused by bacteria, fungi, or viruses .
3. Perioral dermatitis: Perioral dermatitis is a rash that primarily affects the area around the mouth and can resemble acne. It is characterized by small papules and pustules with surrounding redness .
4. Drug-induced acne: Certain medications, such as corticosteroids, antiepileptics, and lithium, can cause acne-like eruptions as a side effect .
5. Gram-negative folliculitis: Gram-negative folliculitis is a bacterial infection that can occur as a complication of long-term antibiotic treatment for acne. It is characterized by pustules and nodules .
6. Acneiform drug eruptions: Some medications, such as iodides, bromides, and oral contraceptives, can cause eruptions that resemble acne .
7. Malassezia folliculitis: Malassezia folliculitis is a fungal infection of the hair follicles that can mimic acne. It is characterized by pruritic papules and pustules .
8. Steroid acne: Prolonged use of topical or systemic corticosteroids can lead to the development of acne-like lesions, known as steroid acne .

I am seeing a patient with blisters what is the differential diagnosis

1. **Bullous pemphigoid:** Bullous pemphigoid is an autoimmune blistering disorder characterized by tense blisters that typically occur in elderly individuals ^{1 2}.
2. **Epidermolysis bullosa acquisita:** Epidermolysis bullosa acquisita is a rare autoimmune blistering disorder that can present with subepidermal blisters on trauma-prone areas of the body ^{3 2}.
3. **Linear IgA bullous dermatosis:** Linear IgA bullous dermatosis is an immune-mediated blistering disorder characterized by IgA deposition at the dermoepidermal junction ³.
4. **Pemphigoid gestationis:** Pemphigoid gestationis is a rare autoimmune blistering disorder that typically occurs during pregnancy or postpartum period ⁴.
5. **Frostbite:** Frostbite is a condition caused by exposure to extreme cold temperatures, resulting in tissue damage and the formation of blisters ⁵.
6. **Pernio (chilblains):** Pernio is a condition characterized by cold-induced erythematous patches and plaques, often accompanied by pain and pruritus ⁵.
7. **Tinea corporis:** Tinea corporis, also known as ringworm, is a fungal infection that can cause circular or oval-shaped blisters on the skin ³.

what are jak inhibitors

Janus kinase (JAK) inhibitors are a class of medications that target the JAK-STAT signaling pathway, which plays a crucial role in immune cell signaling and inflammation. JAK inhibitors work by inhibiting the activity of JAK enzymes, thereby modulating the immune response and reducing inflammation. They have been studied and used in the treatment of various inflammatory and autoimmune conditions, including dermatological disorders such as atopic dermatitis, psoriasis, and alopecia areata.

Some examples of JAK inhibitors include:

1. Ruxolitinib: Ruxolitinib is a JAK1/JAK2 inhibitor that has been approved for the treatment of myelofibrosis and polycythemia vera. It is also being investigated for its potential use in the treatment of atopic dermatitis.
2. Baricitinib: Baricitinib is a JAK1/JAK2 inhibitor that has been approved for the treatment of rheumatoid arthritis. It is also being studied for its efficacy in other inflammatory conditions, including atopic dermatitis and alopecia areata.
3. Tofacitinib: Tofacitinib is a JAK1/JAK3 inhibitor that has been approved for the treatment of rheumatoid arthritis, psoriatic arthritis, and ulcerative colitis. It is also being investigated for its use in other dermatological conditions, such as vitiligo and alopecia areata.

can you please make a draft of a patient handout for use or tretinoin

Patient Handout: Using Tretinoin for Acne Treatment

What is Tretinoin? Tretinoin is a topical medication that belongs to a class of drugs called retinoids. It is commonly used for the treatment of acne. Tretinoin works by promoting skin cell turnover, reducing inflammation, and unclogging pores, which helps to improve acne symptoms.

How to Use Tretinoin:

1. Cleanse your face with a mild cleanser and pat dry.
2. Apply a pea-sized amount of tretinoin to the affected areas of your skin.
3. Gently massage the medication into your skin until it is fully absorbed.
4. Use tretinoin once daily, preferably in the evening, unless otherwise directed by your dermatologist.
5. Avoid applying tretinoin to broken or irritated skin, as it may cause further irritation.
6. It is important to use sunscreen with a minimum SPF of 30 during the day, as tretinoin can increase your skin's sensitivity to the sun.

Tips for Using Tretinoin:

- Start with a lower concentration of tretinoin (e.g., 0.025%) and gradually increase the strength as tolerated.
- Avoid using other topical acne medications or products that may cause skin irritation while using tretinoin, unless recommended by your dermatologist.
- Be patient. It may take several weeks to see noticeable improvements in your acne.
- Avoid excessive sun exposure and tanning beds while using tretinoin, as it can increase the risk of sunburn.
- If you experience severe skin irritation, redness, or peeling, contact your dermatologist for further guidance.

Possible Side Effects: Tretinoin may cause some side effects, which can include:

- Skin dryness, redness, or peeling
- Mild stinging or burning sensation
- Increased sensitivity to sunlight

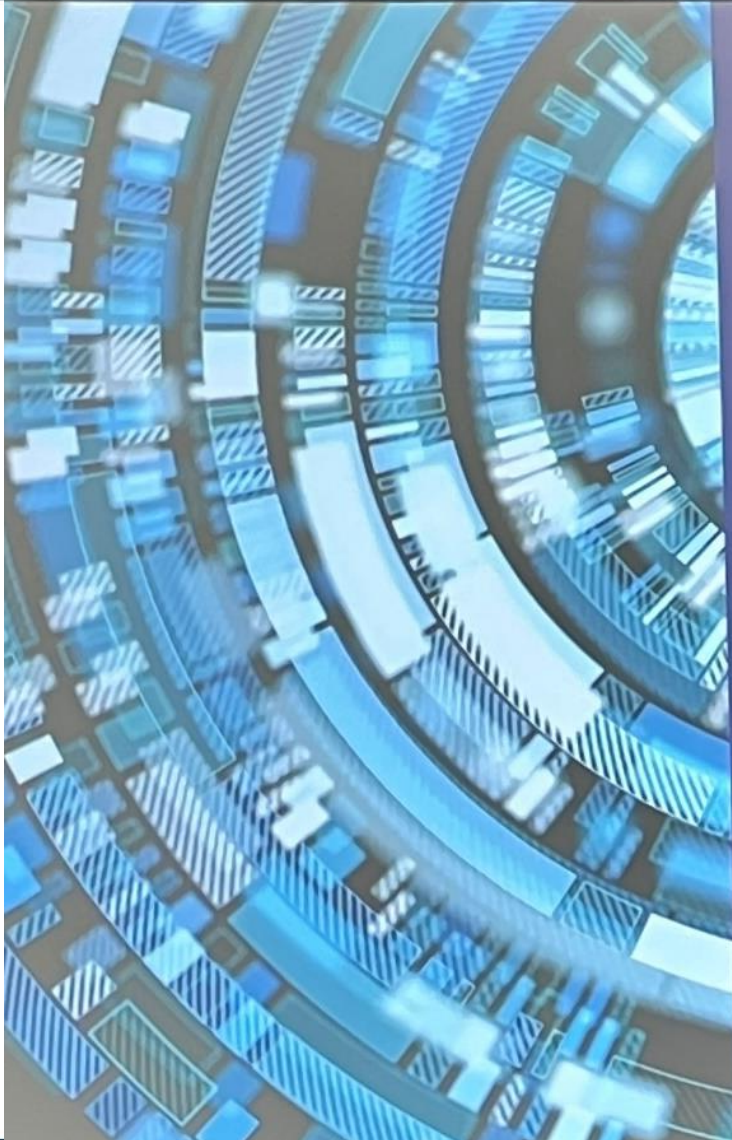
These side effects are usually temporary and can be managed with proper skincare and by adjusting the frequency or strength of tretinoin. If you experience severe or persistent side effects, consult your dermatologist.

Important Precautions:

- Inform your dermatologist about any other medications or skincare products you are using, as they may interact with tretinoin.
- Avoid using tretinoin if you are pregnant or planning to become pregnant, as it may cause harm to the unborn baby. Use effective contraception while using tretinoin.
- If you are breastfeeding, consult your dermatologist before using tretinoin.

Ambient AI for the Dermatologist: Promises and Pitfalls

JANE YOO, MD, MPP
NEW YORK, NY



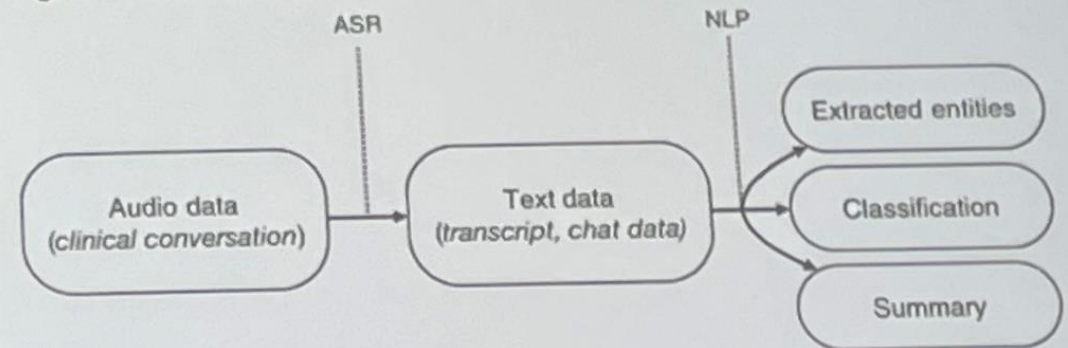
Ambient AI

- ▶ Involves employing contactless sensors and contact based wearable devices to collect data (imaging, audio, body temp etc) coupled with machine learning algorithms to interpret this data
- ▶ Advances in multi-modal sensing technology, data processing, machine learning and computer vision have enabled its development

Ambient AI in Medical Practice

- ▶ System that utilizes AI to assist providers in documenting patient encounters
 - ▶ Listens to the conversation between the healthcare provider and the patient
 - ▶ Interprets and weeds out information
 - ▶ Drafts a note for the medical record based on natural lingual processing (NLP) and machine learning algorithms
- ▶ Ambient scribes harness speech to text technology and AI to transform physician/patient interactions into an action
 - ▶ Encounter Note
 - ▶ Generate Patient Referrals
 - ▶ Prior Authorization
 - ▶ Insurance claims

Fig. 2: Overview of a digital scribe.



Scope of the different aspects and techniques of the included digital scribes.

Ambient AI Benefits

- ▶ Integrating ambient listening technology into EHR and clinical workflows has potential to enhance provider efficacy and patient care
 - ▶ Allows providers to be more attentive to patients by transcribing conversations in real time
 - ▶ Enhances the efficiency and accuracy of clinical documentation
 - ▶ Diminish possible burnout and increasing provider satisfaction
 - ▶ Reduce labor costs with manual transcriptions/traditional scribing
 - ▶ Offers patients copies of their visit notes before they leave the office

EMR Vendors

EPIC—Nuance Communications and Microsoft collaboration to draft clinical notes, recording in office and telehealth visits

Oracle Clinical Digital Assistant—integrates seamlessly into EHRs

NextGen Healthcare—Ambient Assist generates notes where providers can review within 30 seconds of patient encounter, make edits and integrate into EHR

eClinicalWorks—Integrates Sunoh.ai which in addition to notes handles labs, imaging, medications and follow up visits

Inteligencia artificial ambiente



DATE OF SERVICE

01/26/2024

DATE OF BIRTH

08/31/1990

History

The patient is a 33-year-old male who presents with a rash around his eye. He reports that the rash flares up occasionally and has tried not to scratch it, applying lotion to the area. He does not recall having similar rashes during childhood.

The patient also reports having acne on his chin and the left side of his face, which has recently started to reappear. He has had previous treatments for this issue, including corticosteroid injections.

The patient mentions his brother's hair loss condition and his ongoing trial with a JAK inhibitor, which is showing promising results. Again after you as you know if we are talking and I want to have

Review of Systems

- No other systemic symptoms were discussed during the encounter.

Physical Exam

- Rash around the eye with mild inflammation
- Acne on the chin and left side of the face

Assessment and Plan

1. Rash around the eye (eczema): The patient's rash appears to be eczema. I advised him to apply Vaseline on the affected area, particularly at bedtime, to keep it moisturized. I also prescribed hydrocortisone cream to be applied sparingly up to twice a day for two weeks. I recommended using Dove soap for sensitive skin while showering. We will monitor the rash and consider other treatment options if it worsens.
2. Acne on the chin and left side of the face: The patient's acne is returning in the chin area and the left side of his face. I administered corticosteroid injections to the affected areas to help reduce inflammation and improve the appearance of the acne. We will continue to monitor the acne and consider alternative treatment options if needed.
3. Brother's hair loss condition: The patient discussed his brother's hair loss condition and the ongoing trial with a JAK inhibitor. Although the hair loss condition is not directly related to the patient, it is important to consider the potential genetic predisposition for hair loss in the patient's family. What do you think about that and I think they agreed to do so this is why I think this is stupid because dilated

Pitfalls

- ▶ Does it really integrate with my EMR?
- ▶ Accuracy and Liability → AI Hallucinations
- ▶ Dealing with PHI and HIPAA compliance -> hacking/surveillance
- ▶ AI can have built in racial, gender and age biases
- ▶ Medicine is not static—tons of medications and jargon
- ▶ Lack of transparency in underlying data and methods used to train models—accuracy concerns

Legal Recourse & Regulations

- ▶ The medical record is a legal document
- ▶ Physicians face increased malpractice risk of using technology they don't understand to make clinical decisions
- ▶ FDA has approved 692 AI products
- ▶ Policymakers are lagging as AI changes rapidly: How to regulate AI?
- ▶ Lack of regulatory guidance and standardization

AI: Are we there yet?

- ▶ AI needs to develop more solid assumptions, falsifiable hypotheses and rigorous experimentation
- ▶ AI platforms and tools are still maturing
- ▶ Having access to good data is critical
- ▶ Domain specific AI will ensure more trusted environment
- ▶ We can remain cautiously optimistic for AI to address healthcare challenges

Inteligencia artificial ambiente

Pick the right tool for your practice

Ensure the tool complies with regional privacy and data regulations, preferably with a third-party Privacy Impact Assessment (PIA).

Take the time to configure it

While most are plug-and-play, ensure you take the time to go through the setup appropriately and try it a few times before use with real patients

Obtain informed patient consent

Inform the patient about the solution, its purpose, and its function. Mention the inherent risks of information breaches with web solutions. Obtain written consent if legally required.



Set up an optimal environment

Use a quality microphone, minimize background noise, ensure the room door is closed, and position the microphone between you and the patient.

Speak clearly and summarize when necessary

Speak with clarity and at a moderate speed. Recap unclear patient statements and vocalize physical exam results when relevant.

Thoroughly review generated output

Read the produced content closely. If your name is on it, you're accountable for its content.

TIPS FOR USING AN AMBIENT SCRIBE IN CLINICAL PRACTICE

Inteligencia artificial en educación

AAD ANNUAL MEETING
highlights
AEDV

SAN DIEGO
8-12 MARZO

An AI-powered Future for Dermatology Education

Arlene Ruiz de Luzuriaga MD, MPH, MBA

University of Chicago – Section of Dermatology

March 9, 2024

American Academy of Dermatology Annual Meeting, San Diego, CA

AI Chatbots



- automate time-intensive tasks, such as summarizing and evaluating research and medical literature (ref 9)
- virtual teaching assistants to answer learners' queries and suggest resource materials
- integrating content, quick access, allowing multiple users and immediate assistance
- Limitations/cautions
 - create false references, a phenomenon described as “hallucination”

Inteligencia artificial en educación



You

Create a table from the following information: Introduction to melanocytic immunohistochemical markers

Below we will highlight many of the common as well as novel immunohistochemical markers that can aid in the diagnosis of melanocytic lesions.

SOX10

Sex determinant region Y box 10 (SOX10) functions as a transcription factor and therefore shows nuclear expression, which can be more effective and efficient than the nuclear and cytoplasmic S100 staining in heavily pigmented lesions. SOX10 is positive in melanocytes, oligodendrocytes, myoepithelial cells, Schwann cells of peripheral nerves, and neural tumors such as schwannomas, neurofibromas, and malignant peripheral nerve sheath tumors.

SOX10 has a similar sensitivity but higher specificity than S100 in the diagnosis of melanocytic lesions, making it an ideal choice when evaluating lymph nodes for melanoma metastases. This is further supported in that normal constituents, such as Langerhans cells and interdigitating dendritic cells, express S100; this can make interpretation challenging

Although both demonstrate sensitivities of 100%, SOX10 is more specific (96%) than Melan-A (MART-1) in detecting epidermal melanocytes on sun-damaged skin. Some argue that Melan-A (MART-1) can exaggerate normal epidermal melanocytes, imparting a near-confluent appearance as compared to SOX10 and resulting in overdiagnosis of melanoma.

S100

S100 refers to a family of calcium-binding proteins and shows nuclear and cytoplasmic expression. In normal tissues, S100 can stain melanocytes, astrocytes, maturing oligodendrocytes, Schwann cells, chondrocytes, adipocytes, myoepithelial cells, renal epithelial cells, Langerhans cells, and dendritic (including interdigitating) cells.



ChatGPT

Here's a table summarizing the information about various immunohistochemical markers used in the diagnosis of melanocytic lesions:

Marker	Expression & Function	Sensitivity & Specificity	Clinical Utility
SOX10	Nuclear expression; transcription factor; positive in melanocytes, oligodendrocytes, myoepithelial cells, Schwann cells, neural tumors.	Sensitivity similar to S100, higher specificity; ideal for lymph node evaluation.	Efficient nuclear staining; specificity in melanoma diagnosis; less overlap with other normal cells.
S100	Nuclear and cytoplasmic expression; stains melanocytes, astrocytes, Schwann cells, etc.	High sensitivity (93-100%), low specificity; common in neural crest-derived tumors.	Commonly used, but low specificity for melanoma; needs combination with more specific markers.
HMB-45	Recognizes gp100; stains melanoma, angiomyolipomas, PEComa; low sensitivity, high specificity.	Useful to confirm melanocytic lineage; negative in desmoplastic melanoma.	Confirms melanocytic lineage in S100-positive neoplasms; negative in desmoplastic melanoma.
Melan-A	Melanoma-associated antigen; positive in melanocytes; higher sensitivity than HMB-45.	High sensitivity (73.3%); positive in various types of nevi and most metastatic melanomas.	Useful in spindle cell melanoma; essentially negative in desmoplastic melanoma.
Tyrosinase	Catalyzes melanin production; high sensitivity and specificity for melanocytic differentiation.	Positive in junctional component of compound nevi;	Good marker for melanocytic differentiation; positive

Intelligent Tutoring System (ITS)

- Try to model the benefits of one-on-one human tutoring
- analyze data regarding past performance, preferences and learning style.
- algorithms identify the learning gaps → personalized learning experience tailored to student's needs and progress.

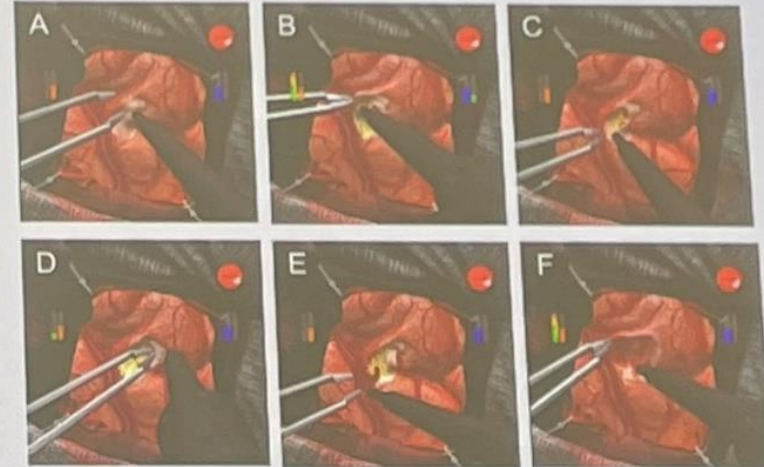
JAMA Network | **Open**

Original Investigation | Medical Education

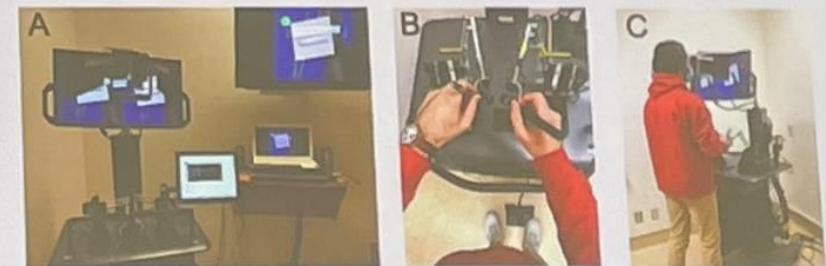
Effect of Artificial Intelligence Tutoring vs Expert Instruction on Learning Simulated Surgical Skills Among Medical Students A Randomized Clinical Trial

Ali M. Fazelzadeh, MSc; Mohammad Bakhaidez, MD, MSc; Ahmad Alsayegh, MD; Reza Vilmaz, MD; Alexander Winkler-Schwartz, MD; Nylan Mirchi, MSc; Ian Langlois, MSc; Nicole Ledwith, MSc; Abdolrahman J. Sabbagh, MChB; Khalid Bajrasid, MD, MSc; Jason M. Harley, PhD; Rolando F. Del Maestro, MD, PhD

eFigure 2. Realistic Subpial Tumor Resection Scenario

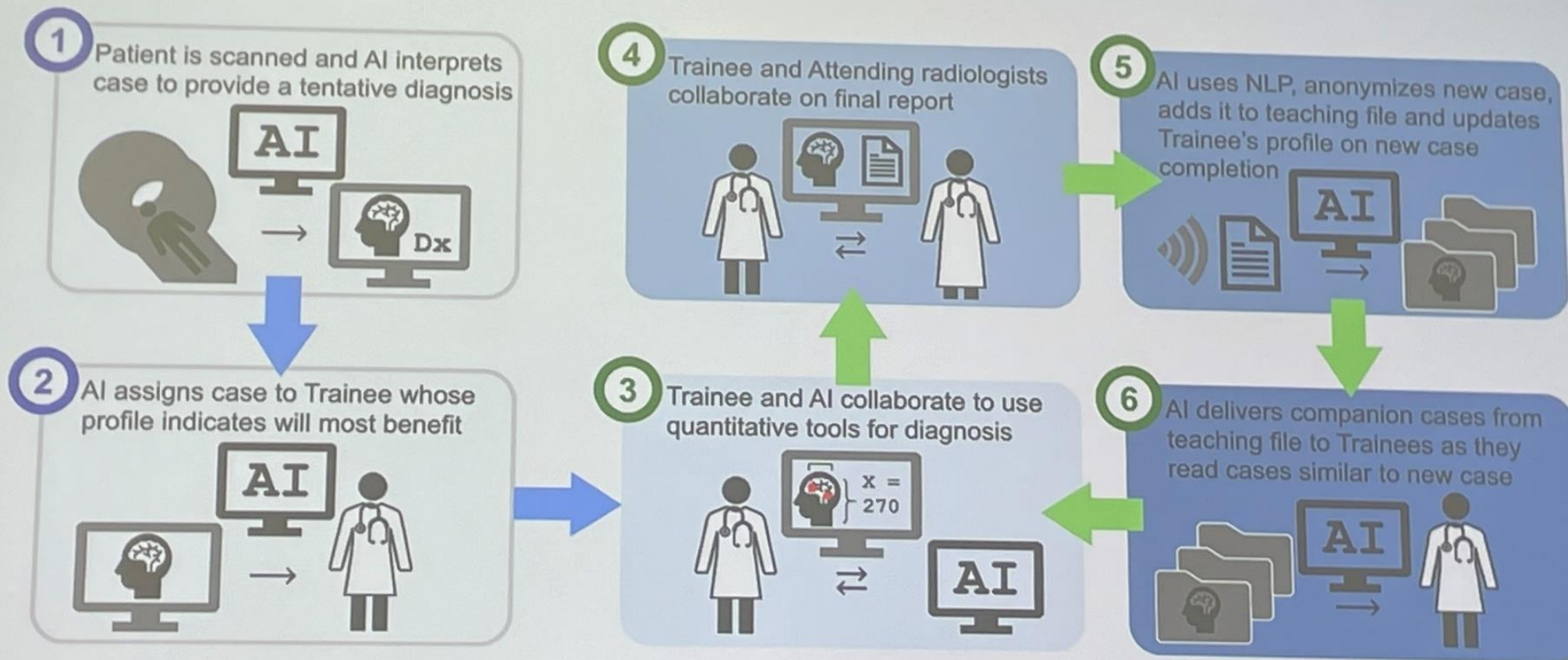


eFigure 3. The Virtual Reality Simulator Platform



(A) The NeuroVR simulator with the practice subpial scenario on the screen. (B) Participant using the handles for subpial tumor resection (bipolar instrument with the left hand and the aspirator with the right hand) foot pedals (at the bottom of the image) control the activation of the corresponding instruments. (C) Participant viewing the screen through the stereoscope and performing the practice subpial scenario.

Inteligencia artificial en educación



AAD ANNUAL MEETING

AEDV highlights

SAN DIEGO 
8-12 MARZO



La Academia Española de Dermatología y Venereología expresa su agradecimiento al patrocinador UCB, por su especial apoyo y contribución con la actividad formativa Highlights 2024.

AAD ANNUAL MEETING

AEDV highlights AEDV

SAN DIEGO ●
8-12 MARZO



ACADEMIA ESPAÑOLA
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Y VENEREOLOGÍA

GRACIAS