#WCD2019

AEDV HIGHLIGHTS

24th World Congress of Dermatology (WCD)

10-15 JUNIO 2019

Milàn

Patrocina:

janssen Immunology
PHARMACEUTICAL COMPANIES OF Johnson&Johnson

Organiza:

ACADEMIA ESPAÑOLA DE DERMATOLOGÍA Y VENEREOLOGÍA
AEDV 1909

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Milán

Diagnostic imaging in dermatology: advances in ultrasound

Dr. Azael Freites Martinez

Dermatologist. Clinica IVALIA- Gran Canaria

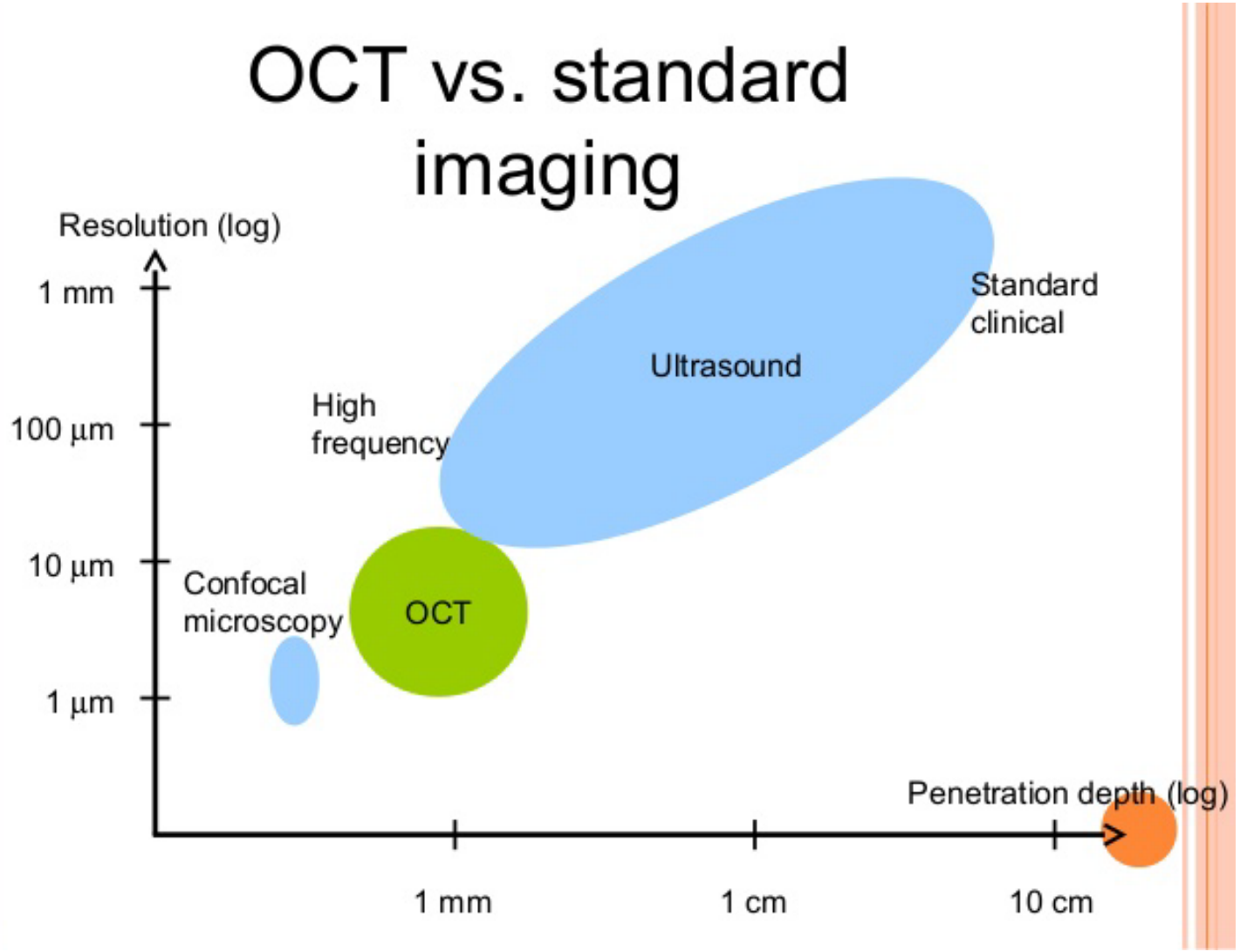
Fellow in Oncodermatology at MSKCC, New York

Patrocina: Janssen Immunology, Pharmaceutical companies of Johnson & Johnson

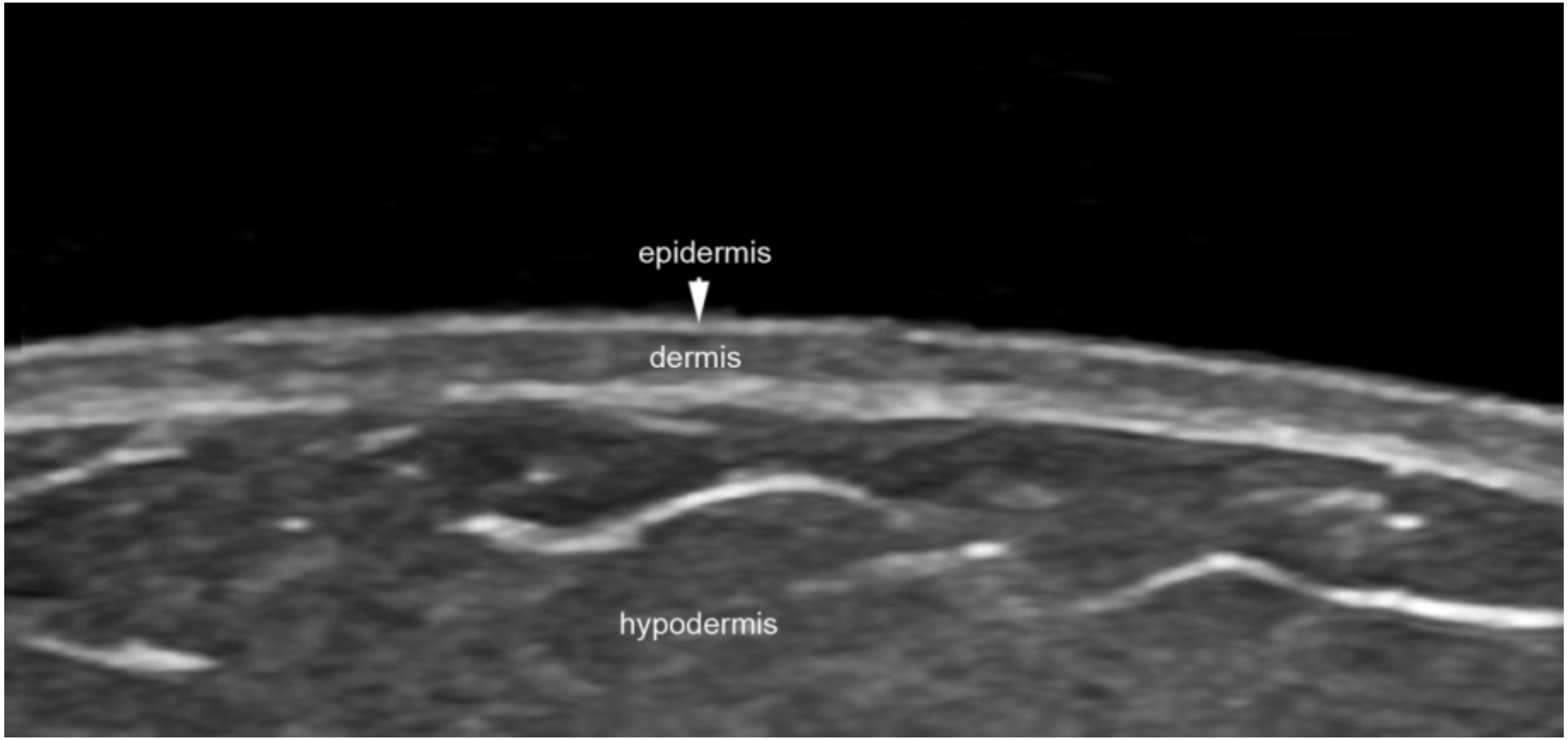
Organiza: Academia Española de Dermatología y Venereología AEDV 1909

Ximena Wortsman MD, FAIUM

- Chair of the Dermatologic Ultrasound Interest Group at AIUM- Fellow Member American Institute of Ultrasound in Medicine
- Adjunct Professor: Institute for Diagnostic Imaging and Research of the Skin and Soft Tissues Departments of Dermatology, Faculties of Medicine, University of Chile and Pontifical Catholic University of Chile, Santiago, Chile


OCT vs. standard imaging
Resolution (log)
1 mm
100 µm
10 µm
1 µm
Standard clinical
Ultrasound
High frequency
Confocal microscopy
OCT
Penetration depth (log)
1 mm
1 cm
10 cm

Better Anatomical Resolution



18 MHz Axial resolution of 100 µm /pixel, lateral resolution of 90 µm/ pixel

Wortsman X, Wortsman J, Clinical usefulness of variable frequency ultrasound in localized lesions of the skin. J Am Acad Dermatol 2010; 62 : 247-256

Courtesy: Ximena Wortsman

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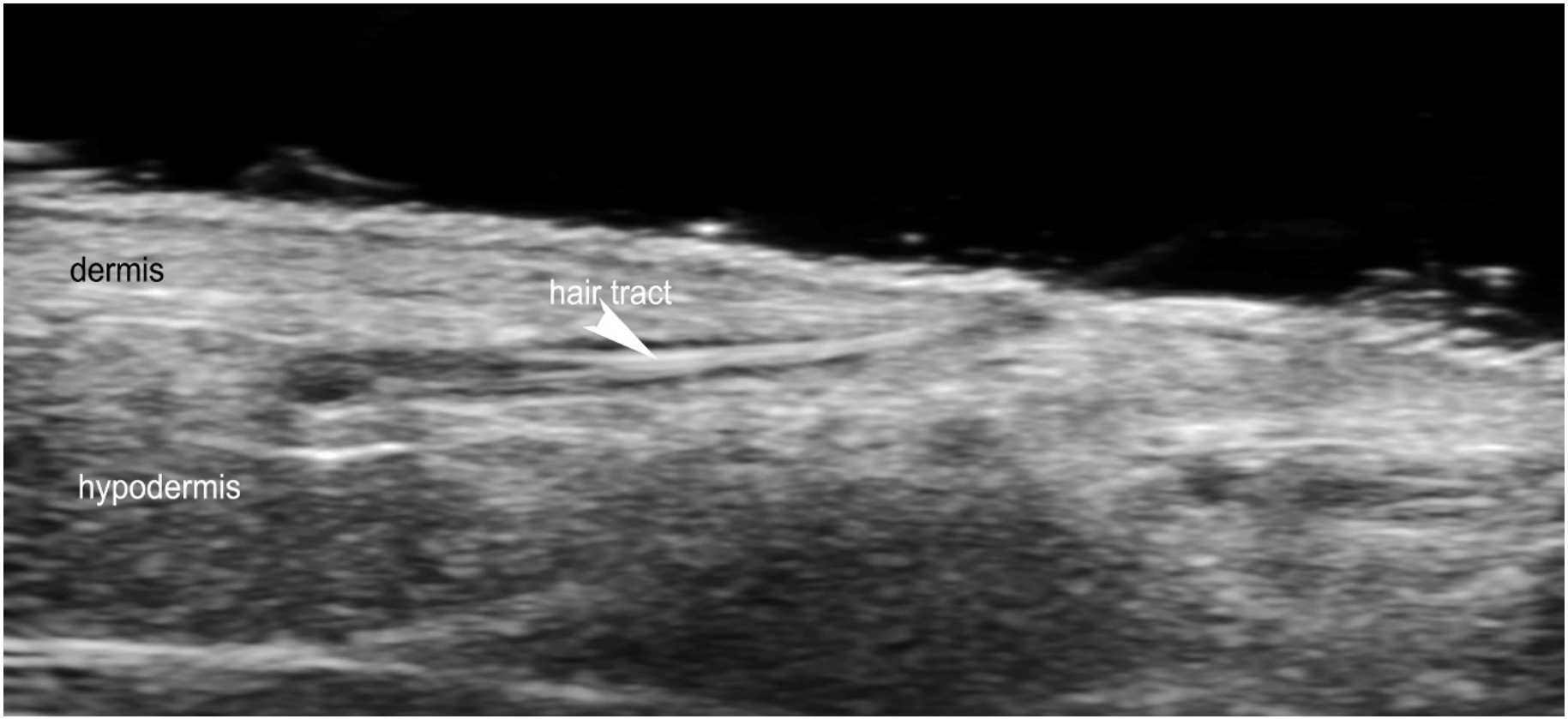
Better Anatomical Resolution



70 MHz. Axial resolution of 30 µm/pixel lateral resolution of 65 µm /pixel.

Wortsman X. Carreño L. Ferreira-Wortsman C, Poniachik R, et al. 2018 Ultrasound Characteristics of the Hair Follicles and Tracts, Sebaceous Glands, Montgomery Glands, Apocrine Glands, and Arrector Pili Muscles. J Ultrasound Med. 2018 Dec 20. doi: 10.1002/jum.14888
Courtesy: Ximena Wortsman

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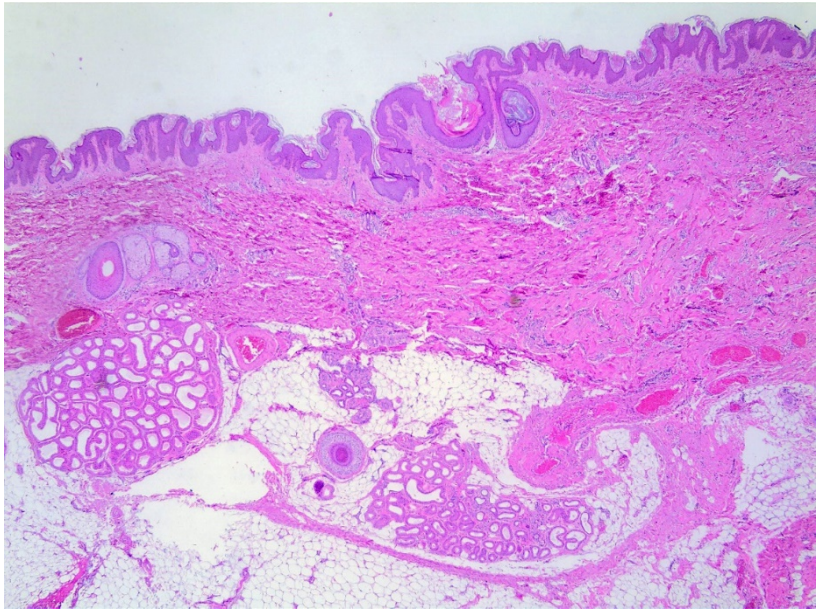
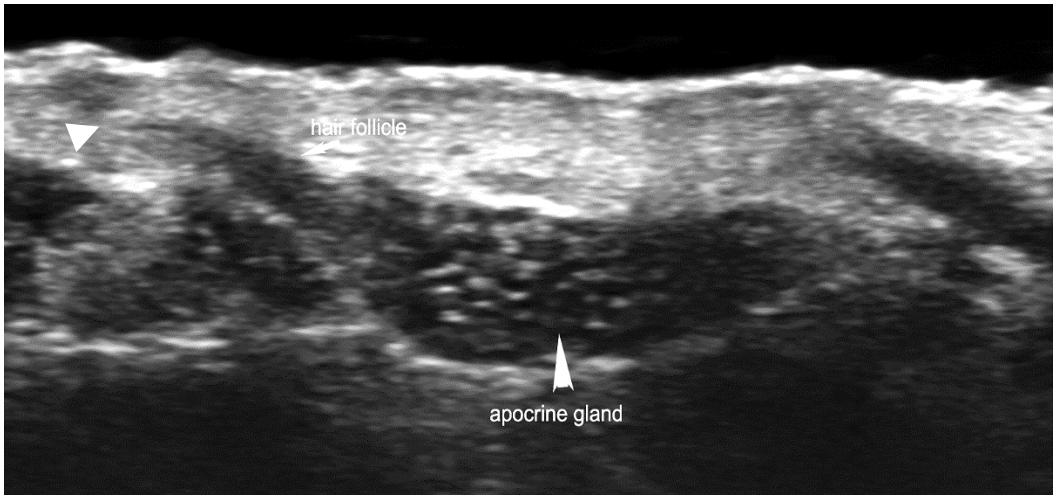
Better Anatomical Resolution: Apocrine Glands



Apocrine gland



“pseudo-ovary” morphology

Wortsman X. Carreño L. Ferreira-Wortsman C, Poniachik R, Pizarro K, Morales C, Calderon P, Castro C. Ultrasound Characteristics of the Hair Follicles and Tracts, Sebaceous Glands, Montgomery Glands, Apocrine Glands, and Arrector Pili Muscles. J Ultrasound Med. 2018 Dec 20. doi: 10.1002/jum.14888
Courtesy: Ximena Wortsman

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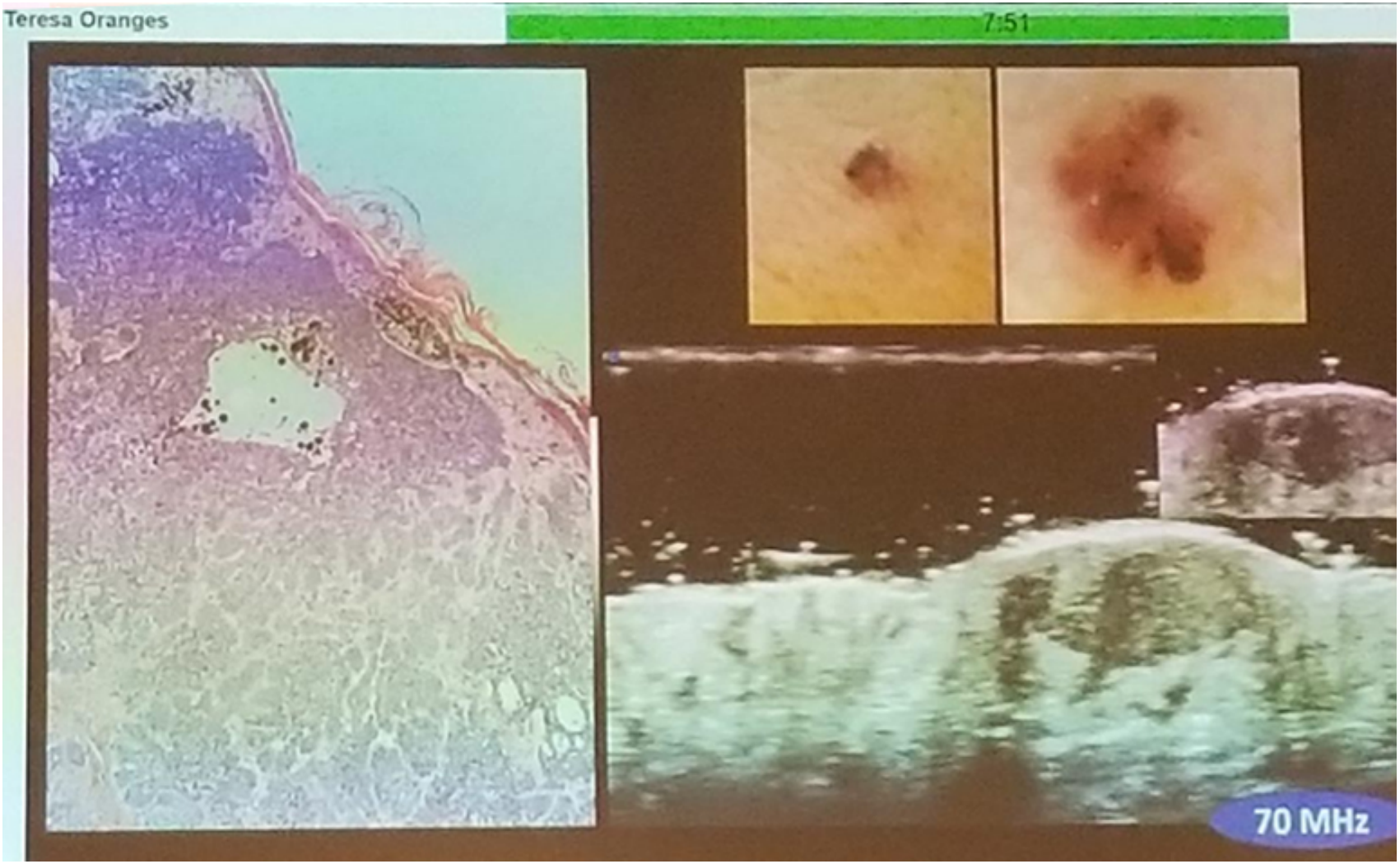
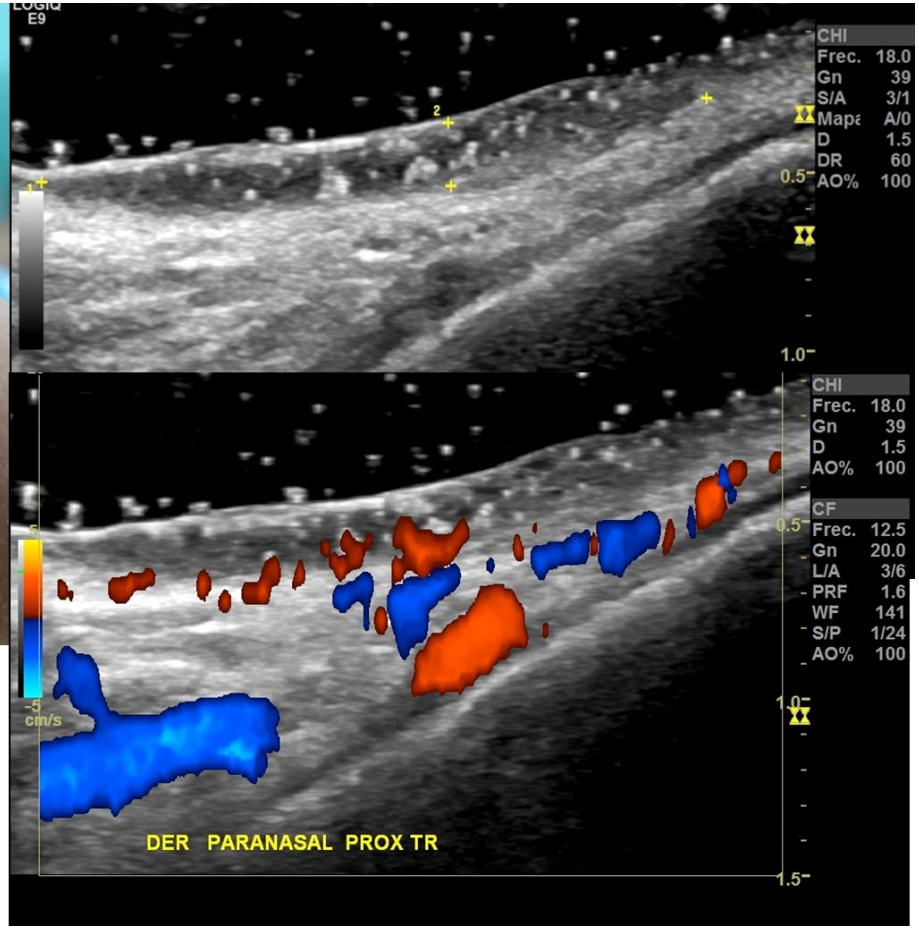

Teresa Oranges
7:51
70 MHz


Teresa Oranges
5:40
70 MHz

Better Anatomical Resolution: for better surgery outcome



Carcinoma Basocelular Paranasal
Espesor 1,8 mm
Diámetro Transverso: 18,9 mm

Wortsman X. Ultrasound of Skin Cancer. In : Wortsman ed. Atlas of Dermatologic Ultrasound. Springer 2018
Courtesy: Ximena Wortsman

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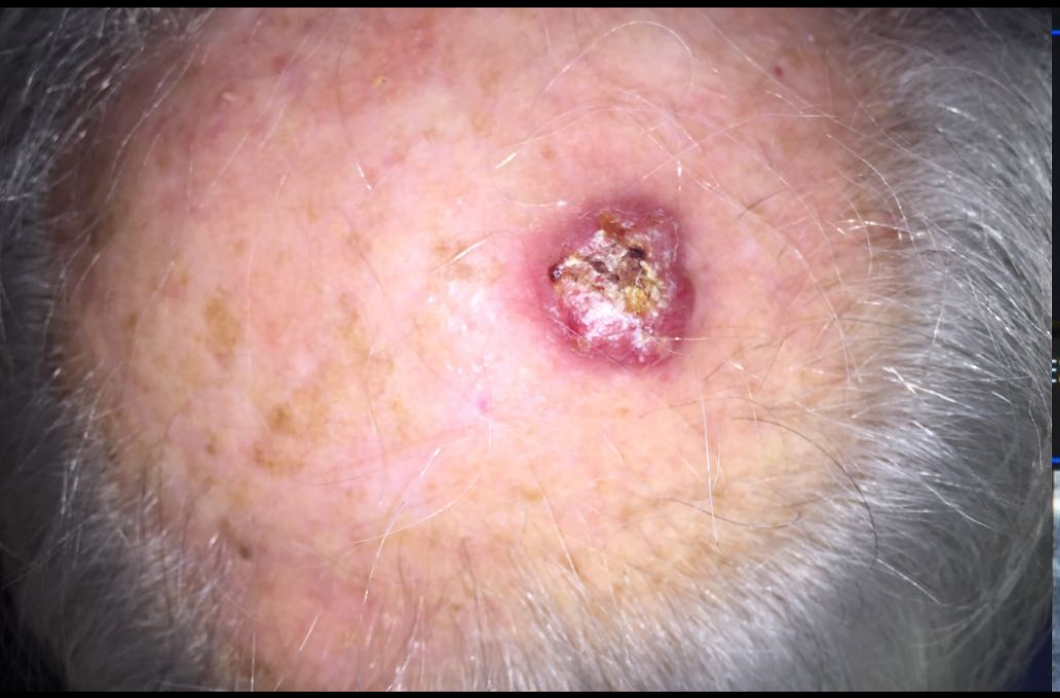
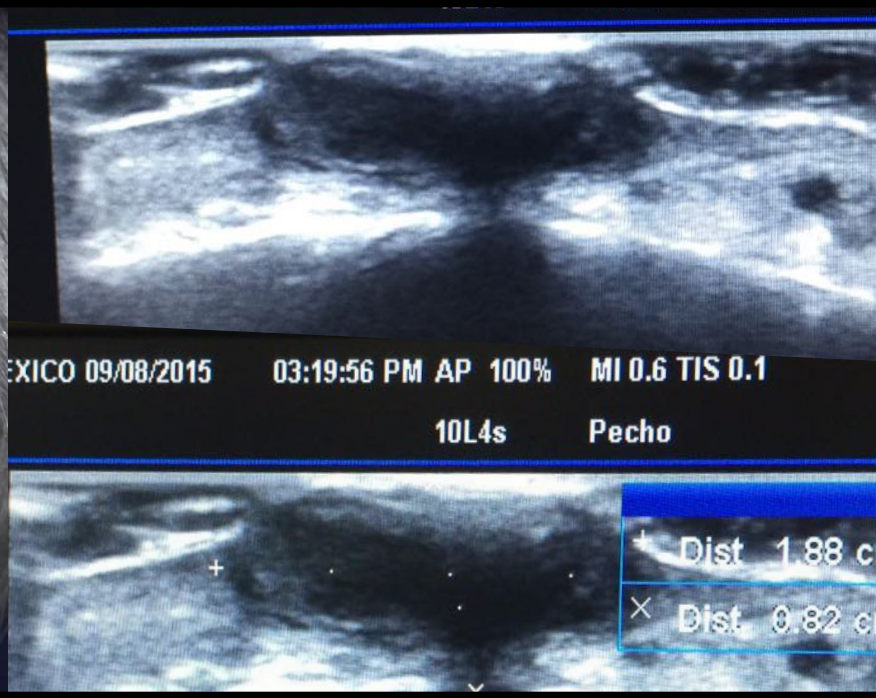
Better Anatomical Resolution: for better surgery outcome





Cortesía de la Dra. Lucia Achell

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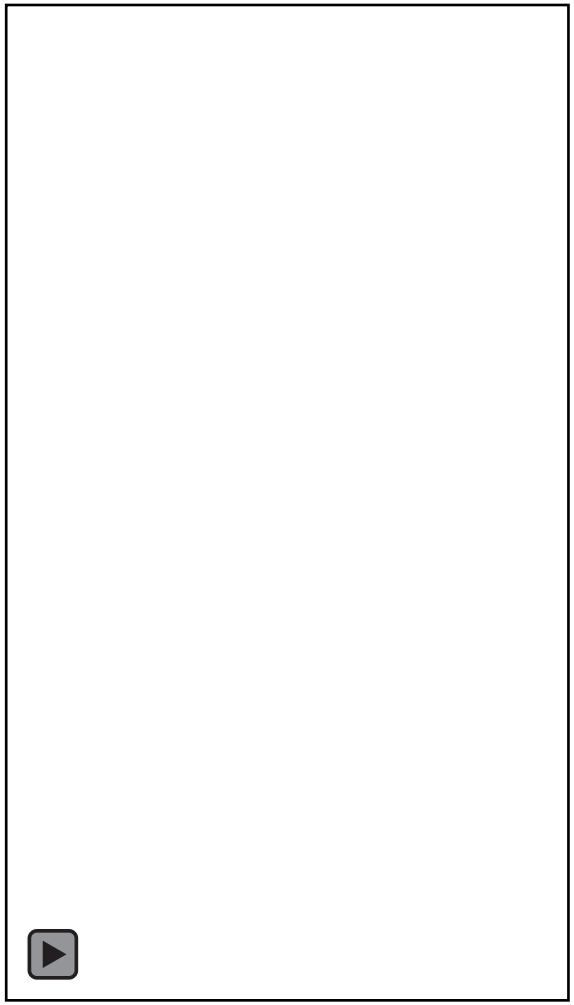
Better Anatomical Resolution: for better surgery outcome



Better Anatomical Resolution: for better surgery outcome

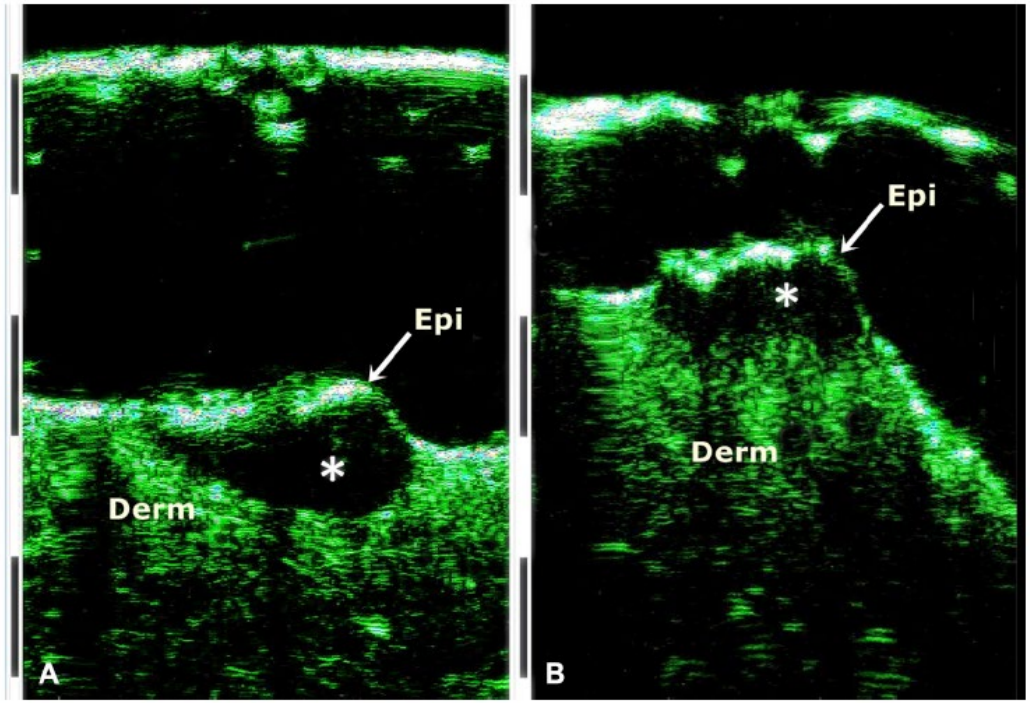


Fig 1. **A**, In vivo high-frequency ultrasound (HFUS) image of a nodular basal cell carcinoma (BCC); **B**, Ex vivo HFUS image of the same tumor. Note the different tumor shape obtain by ex vivo, well-demarcated hypoechoic tumor (*), epidermis (*Epi*), dermis (*Derm*), and the free surgical margins.

J Am Acad Dermatol
June 2016

Ex vivo high-frequency ultrasound: A novel proposal for management of surgical margins in patients with non-melanoma skin cancer

Pasquali P, Freites-Martinez A, Fortuño-Mar A. Ex vivo high-frequency ultrasound: A novel proposal for management of surgical margins in patients with non-melanoma skin cancer. J Am Acad Dermatol. 2016 Jun;74(6):1278-80.

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Review

November 28, 2017

Hidradenitis Suppurativa

Advances in Diagnosis and Treatment

Ditte Marie Lindhardt Saunte, MD, PhD[1]; Gregor Borut Ernst Jemec, MD, DMSc[1]

Author Affiliations

JAMA. 2017;318(20):2019-2032. doi:10.1001/jama.2017.16691

Comment & Response

April 17, 2018

Diagnosis and Treatment of Hidradenitis Suppurativa

Ximena Wortsman, MD[1]

Author Affiliations

JAMA. 2018;319(15):1617-1618. doi:10.1001/jama.2018.0814

Multicentric Study : Ultrasound is useful for staging and managing HS

13 Hospitals from Spain

Fig. 1a. Differences in staging criteria.

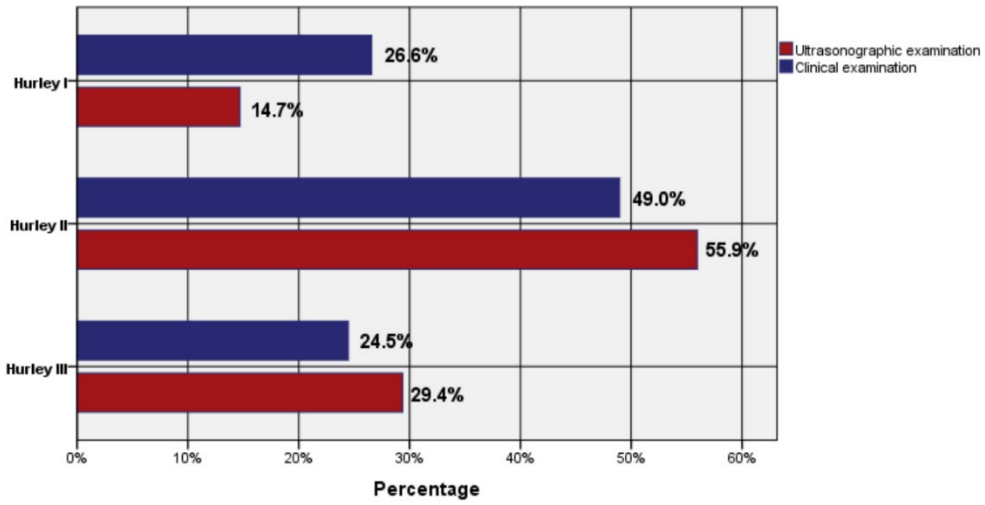

Fig. 1b. Differences in clinical approach.

Table 2. Intra-observer and inter-observer agreement

Clinical vs ultrasonographic examination			
Intra-observed agreement			
ICC	**95% CI**		**P value**
0.37	0.11	0.56	<0.01
Ultrasonographic examination			
Intra-observed agreement (blinded reassessment)			
Kappa	**SE**		**P value**
0.95	0.01		<0.01
External radiologist vs researchers			
Ultrasonographic inter-observed agreement			
Kappa	**SE**		**P value**
0.82	0.09		<0.01

CI, confidence interval; ICC, intra-class correlation coefficient; SE, standard error.

Strong Validation of Ultrasound

Martorell A, Alfageme Roldán F, Vilarrasa Rull E, Ruiz-Villaverde R, Romaní De Gabriel J, García Martínez F, Vidal Sarro D, Velasco Pastor M, Ciudad Blanco C, Segura Palacios JM, Rodríguez Bandera AI, Pascual Ramírez JC, Sancho Sánchez C, Michelena De Gorosábel N, Wortsman X. Ultrasound as a Diagnostic and Management Tool in Hidradenitis Suppurativa Patients: A Multicenter Study. J Eur Acad Dermatol Venereol. 2019 May 24. doi: 10.1111/jdv.15710.

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Standarization, Staging, Monitoring Activity, Increase of the level of Evidence and Validation

- Ultrasound can detect subclinical information and modify disease management in hidradenitis suppurativa (HS)
- Clinical examination alone can underestimate HS severity
- Ultrasound examination is an essential tool for accurately staging HS