





Narcis Ricart¹, Enric Campmol¹, Marc Combalia^{2 3 4} J. Malvehy^{2 3 4 5 6}

¹Dermavision Solutions, Barcelona

²Fundació Clínic, Barcelona

³Dermatology, Hospital Clínic of Barcelona, Barcelona

⁴IDIBAPS, Barcelona

⁵Universitat de Barcelona, Barcelona

⁶CIBERER ISC III, Madrid

DEVISKAN: A NEW MEDICAL DEVICE TO DEMOCRATISE ACCESS TO MELANOMA EARLY DETECTION TECHNIQUES.



EFFICIENT EARLY-DETECTION DEVICE NEEDED

The best-known medical practice to early detect melanoma in high-risk patients is whole body examination, dermoscopy and detection of new lesions and changes in pre-existing lesions by digital follow-up using total body photography and digital dermoscopy.



This process requires **30-45 minutes** of a trained technician or dermatologist plus multiple devices. Time-consuming is a major drawback, which may discourage its spread use in dermatological departments. Thus, **a new approach is necessary**.

WHEN AI GATHERS DATA DERMATOLOGISTS SAVE TIME

FIRST AUTONOMOUS PROTOTYPE

A prototype called **Deviskan** has been built to **automatically** capture high quality dermoscopic images in short time.

The prototype combines: To obtain:

- Robotics
- Deep Learning
- High Resolution cameras
- Whole body examination
- Non-contact dermoscopy
- Interactive report

HOW DOES DEVISKAN WORK AUTONOMOUSLY?

Body image acquisition

2 Lesion detection

EACH Lesion Deep learning: Lesion requires dermoscopic image? NO NO B B

Back to step 1: Body image acquisition

YES

dermoscopic image acquisition

PILOT STUDY WITH 50 VOLUNTEERS TIME COMPARISON



5-8 minutes **Deviskan**

VS.



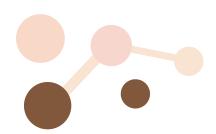
30-45 minutes **Dermatologist**

- + total body scanner
- + digital dermoscope

DIGITAL FOLLOW-UP COULD BE AVAILABLE TO EVERYONE

Deviskan shows that using Artificial Intelligence and robotics is possible to **capture high quality dermosco- pic images** while creating a body-map of skin lesions without wasting personnel time.

This has the potential to enhance access of thousands of patients to complete body examination and digital follow-up while providing a huge amount of valuable real data for further studies at almost no cost.







QUALITY COMPARISON

