

Nesai Demo Derm Plan

ECHOGENIC STUDY OF THE DERMIS

An analysis of the dermis echogenicity has been carried out by evaluating luminescence expressed on a grayscale. This technique allows the identification of structural changes in the dermis induced by exogenous stimuli, especially those caused by ultraviolet radiation, and enables indirect inference of the amount and distribution of collagen present in this skin layer.

Patient Info

Historic Clinic Number: NESAI

Gender: Female

Age: 26 years

Fitzpatrick: Type 1

Glogau: Type 2

Analysis Date: 04/03/2026 11:15

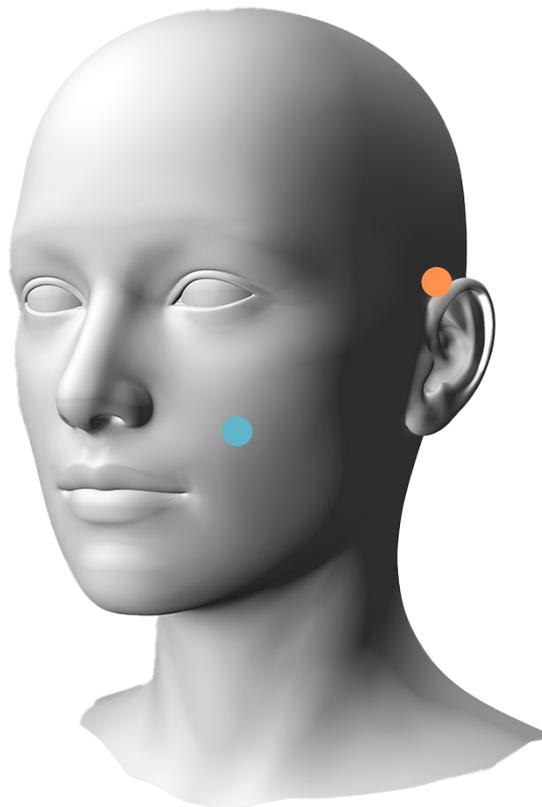
MARKED VIEWS

HEAD

CHEEK

JAW

OTHER ZONE



● derm1 ● derm2

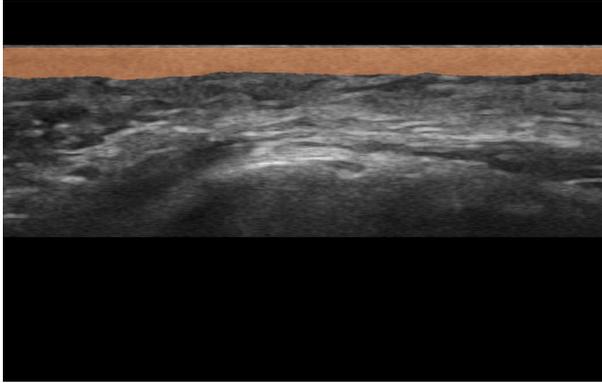


Analyzed Images

Ultrasound images of the zones analyzed by the Nesai Health platform. Image analysis histogram for obtaining results.

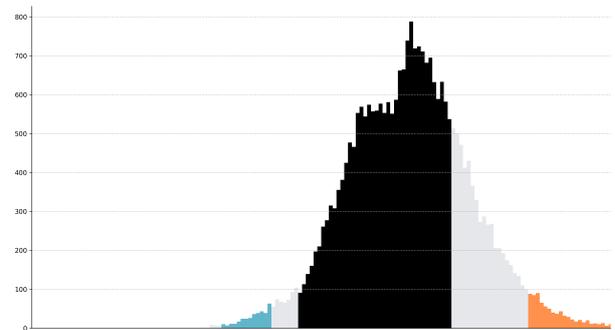
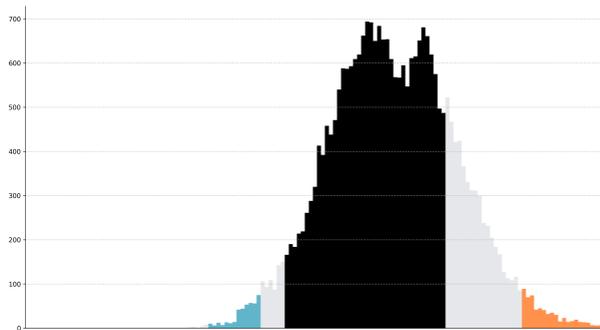
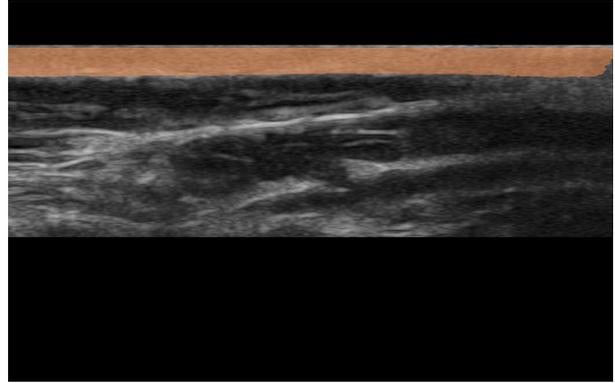
derm1

Cheek



derm2

Non-sun exposed



LEP

MEP

HEP

LEP: Quantifies cutaneous hydration, inflammatory processes, solar elastosis, and collagen degeneration. The LEPs/LEPi ratio provides assessment of extracellular matrix density and integrity, serving as an objective marker for photoaging processes.

MEP: Quantifies protein synthesis and neofibrilogenesis - a process that remains active until approximately age 50 before gradually decreasing. Histologically, adult fibroblasts can reactivate secretory properties to compensate for age-related protein changes under physiological conditions.

HEP: Serves as an imaging marker for intrinsic aging processes. Quantifies mature collagen assembled into thick fibers that, with progressive aging, arrange parallel to tension forces in the deep dermis.

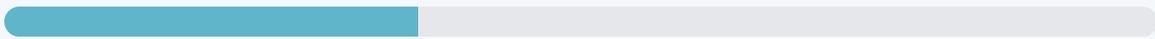
PHOTOAGING STUDY

The results presented in this report have been analyzed using our artificial intelligence system, trained on thousands of clinical images, and subsequently reviewed by a medical imaging specialist with expertise in facial ultrasound. This dual-layer evaluation is aimed at maximizing diagnostic accuracy and ensuring clinical excellence.

The report provides essential information to guide therapeutic decisions or subsequent interventions, helping to prevent actions that could lead to adverse effects. It also supports the assessment of individualized responses at each of the analyzed anatomical points.

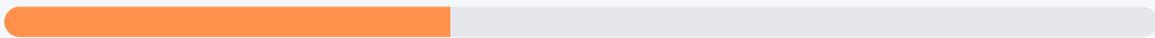
Sun-exposed image / pre-treatment - derm1

91



Non sun-exposed image / post-treatment - derm2

98



Potential Rejuvenation

7.6%



NesAI Pro Analysis Results

LEP Statistics

LEP Metric	derm1	derm2	Difference
LEP Percentage (%)	1%	1%	0%
LEP Average Echogenicity	28	28	0
LEP Accumulated Pixels	400	350	-50

MEP Statistics

MEP Metric	derm1	derm2	Difference
MEP Percentage (%)	72%	70%	-2%
MEP Average Echogenicity	125	128	2
MEP Accumulated Pixels	19869	19110	-759

HEP Statistics

HEP Metric	derm1	derm2	Difference
HEP Percentage (%)	2%	3%	1%
HEP Average Echogenicity	228	228	0
HEP Accumulated Pixels	696	872	176

General Comparison Statistics

Statistic	derm1	derm2	Difference
Total Pixels	27249	26933	-316
Dermis Height (mm)	1.071	1.053	-0.018
Average Echogenicity	91	98	6
Dermis Area (mm ²)	25.49	25.231	-0.259
LEPs ≈ SLEB	159	78	-81

derm1

**Dermis Area
(mm²)**

25.49

LEPs over LEPI

0.7

(159 / 241)

**Dermis Height
(mm)**

1.071

derm2

**Dermis Area
(mm²)**

25.231

LEPs over LEPI

0.3

(78 / 272)

**Dermis Height
(mm)**

1.053



Comparative Dermis Ultrasound Report

Quantitative assessment using NESAI

1) Dermis Thickness

Pre: 1.071 mm

Post: 1.053 mm

Difference: -0.018 mm (-1.72%)

2) SLEB

Pixel count: Pre: 159 – Post: 78 – Difference: -81

Percentage: Pre: 1% – Post: 1% – Difference: 0%

3) Total Dermis Echogenicity*

Pre: 91

Post: 98

Difference: 6 (7%)

*mean gray value (grayscale, 0-255)

4) Echogenic Bands Percentage Distribution

LEP: 1% → 1%

MEP: 72% → 70%

HEP: 2% → 3%

Clinical Interpretation (Guidance for Physician)

Guidance ultrasound interpretation. Requires clinical correlation. Dermal thickness is essentially comparable between the cheek and the non-sun-exposed site, without a relevant structural asymmetry in dermal volume. SLEB increases in the cheek, supported by a higher superficial low-echogenic component relative to the deeper compartment, which is consistent with a greater superficial photoaging/edema-type contribution in the exposed area. Overall mean echogenicity is similar between both zones, so there are no relevant global differences in fibrillar organization at the full-dermis level. In the echogenic bands, LEP is slightly higher in the cheek, aligning with a mildly increased hydration/inflammatory or elastotic signal superficially. MEP remains broadly predominant and very similar across both areas, suggesting comparable baseline dermal metabolic activity. HEP is slightly lower in the cheek, indicating a relative

reduction in the most highly organized/mature collagen component compared with the protected reference. The inter-zone contrast is overall modest, matching the limited rejuvenation potential signal reported by the software for this comparison.

Conclusion: The cheek area shows mild superficial changes due to sun exposure, such as slight swelling or early signs of aging, but overall, both areas have similar collagen structure and skin health. These differences are modest and indicate only minimal variation between sun-exposed and non-exposed skin.

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