High Frequency Ultrasound

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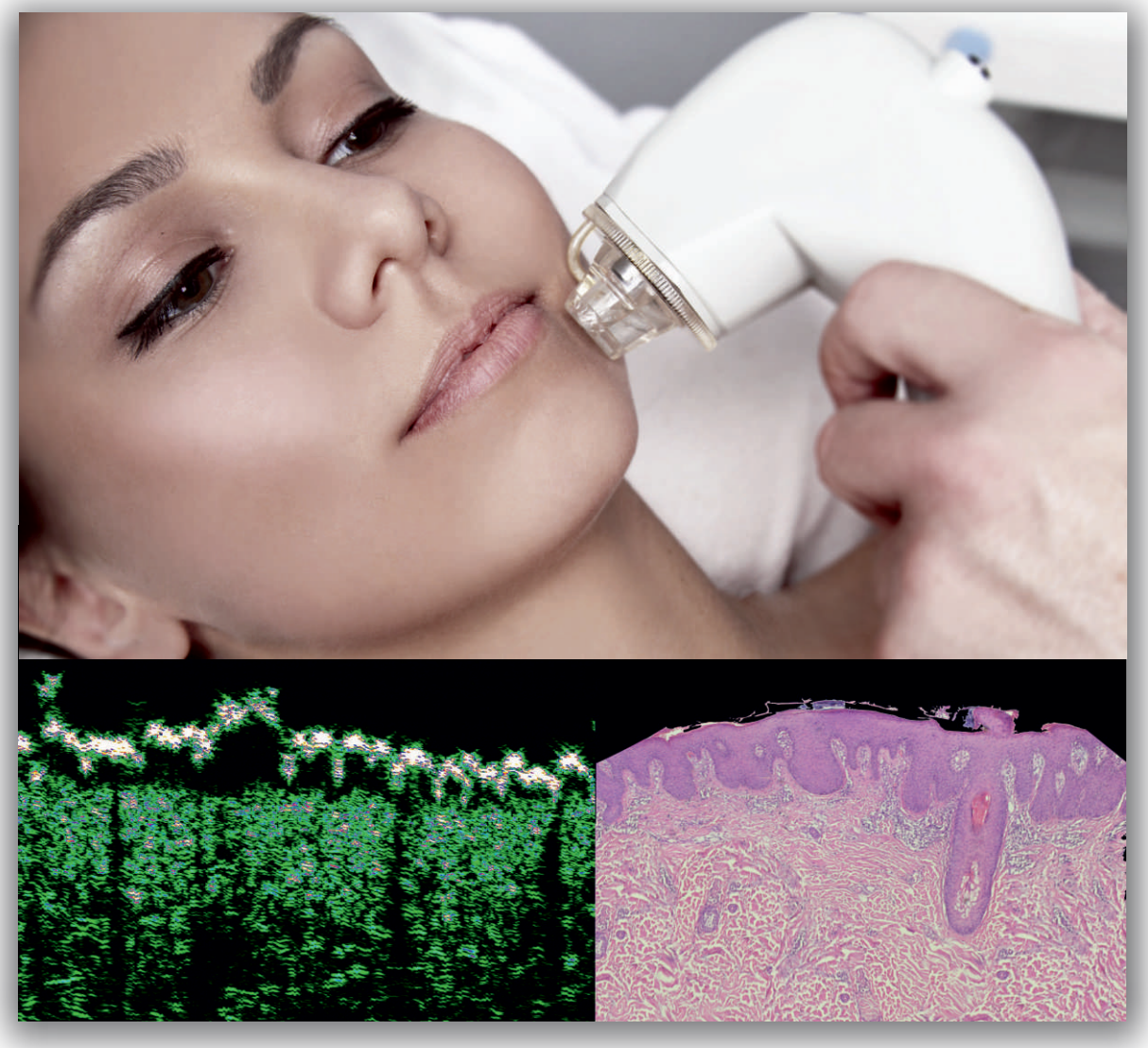
since 1978

Skin Analysis



Research & Development in Cosmetics and Pharmaceuticals

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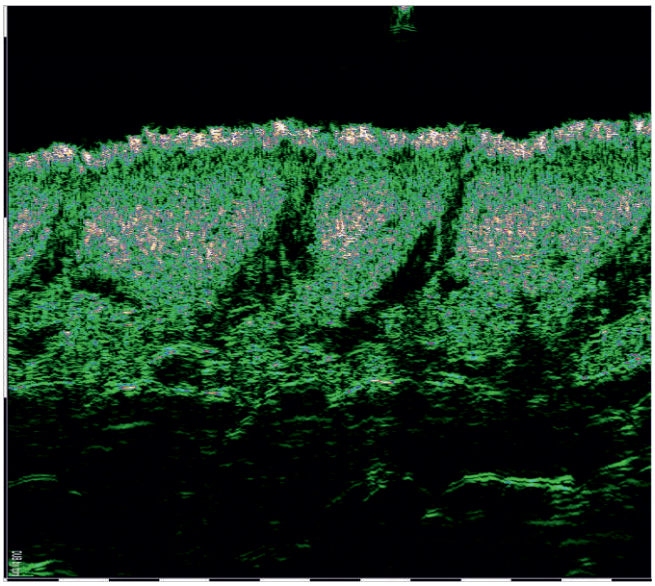
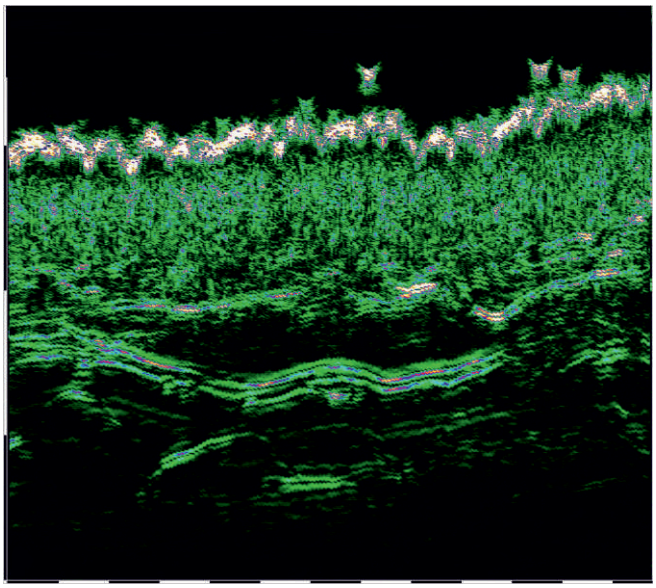
Visualization & objective measurements of epidermis, dermis and subcutaneous fat



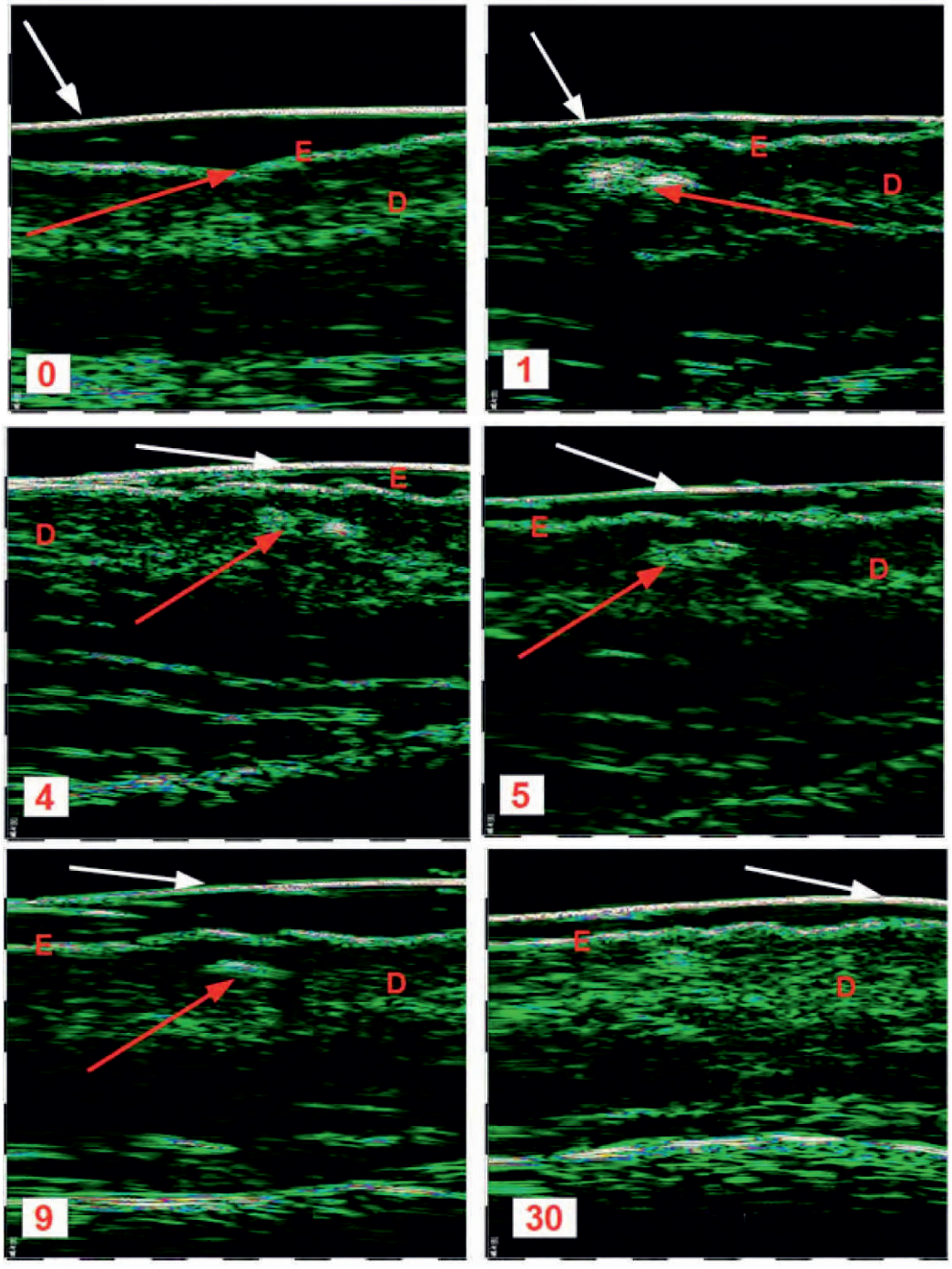


The DUB SkinScanner system for complete skin examination designed for research laboratories, pharmaceutical and cosmetics manufacturers, certification centers and CROs.

Highest ultrasound frequencies up to 100 MHz combined with cross-polarized dermoscopy allow visualizing of all processes occurring in the skin with resolutions up to 16 µm.

That helps to detect minimal skin changes.

Monitoring wrinkle treatment



Scans taken with 22 MHz, # = treatment sessions

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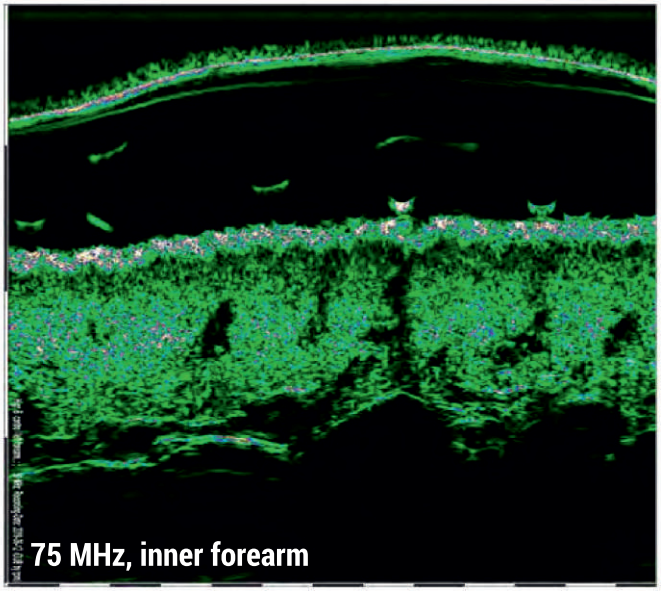
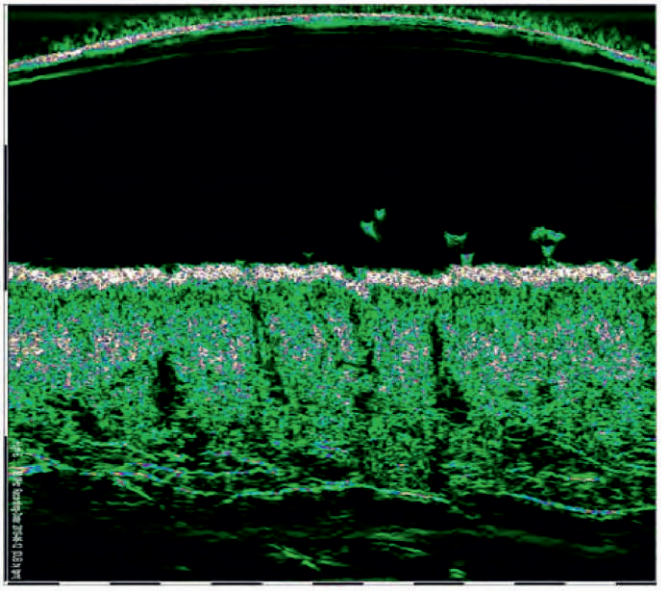
Fractional radio frequency treatment



before treatment



60 days after treatment

Skin parameters	Before	After
Dermis thickness	1160 µm	1625 µm
Dermis acoustic density	39	66
Ratio Upper/Lower dermis acoustic density	0.57	0.86
Epidermis thickness	137 µm	98 µm
Epidermis acoustic density	142	180
SLEB	266 µm	105 µm
SLEB acoustic density	22	46

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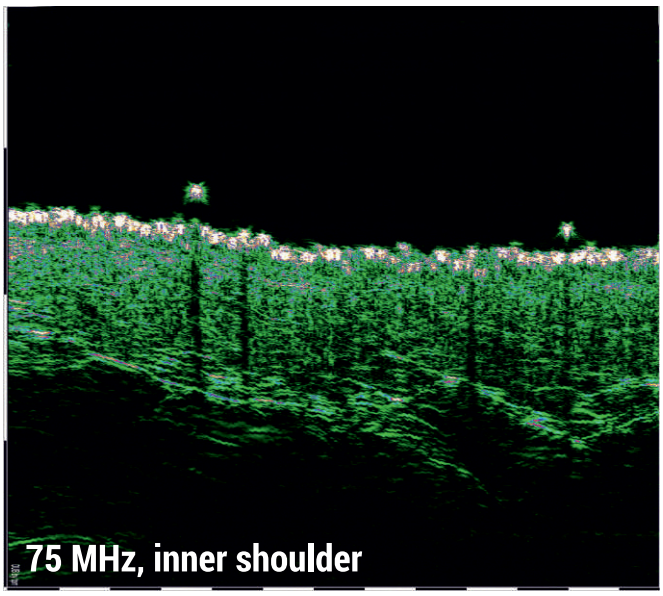
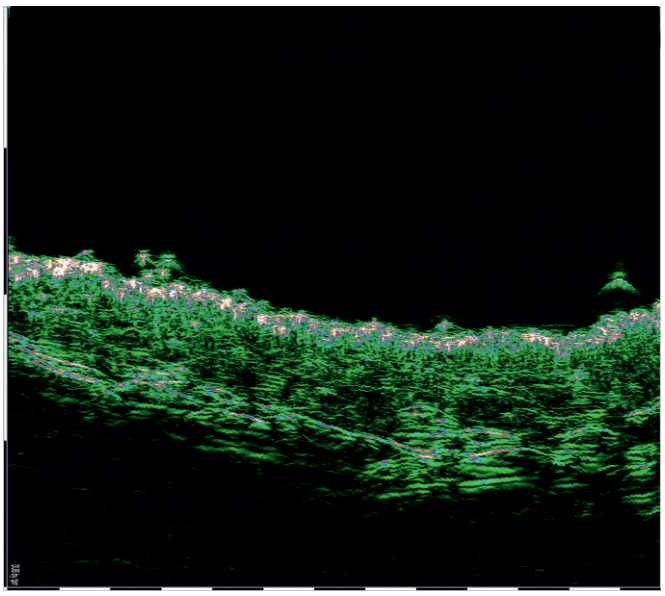
Skin aging comparisson



female, 22 years



female, 60 years

Skin parameters	22 years	60 years
Dermis thickness	1066 µm	633 µm
Dermis acoustic density	25	53
Ratio Upper/Lower dermis acoustic density	2.71	0.92
Epidermis thickness	92 µm	129 µm
Epidermis acoustic density	213	176

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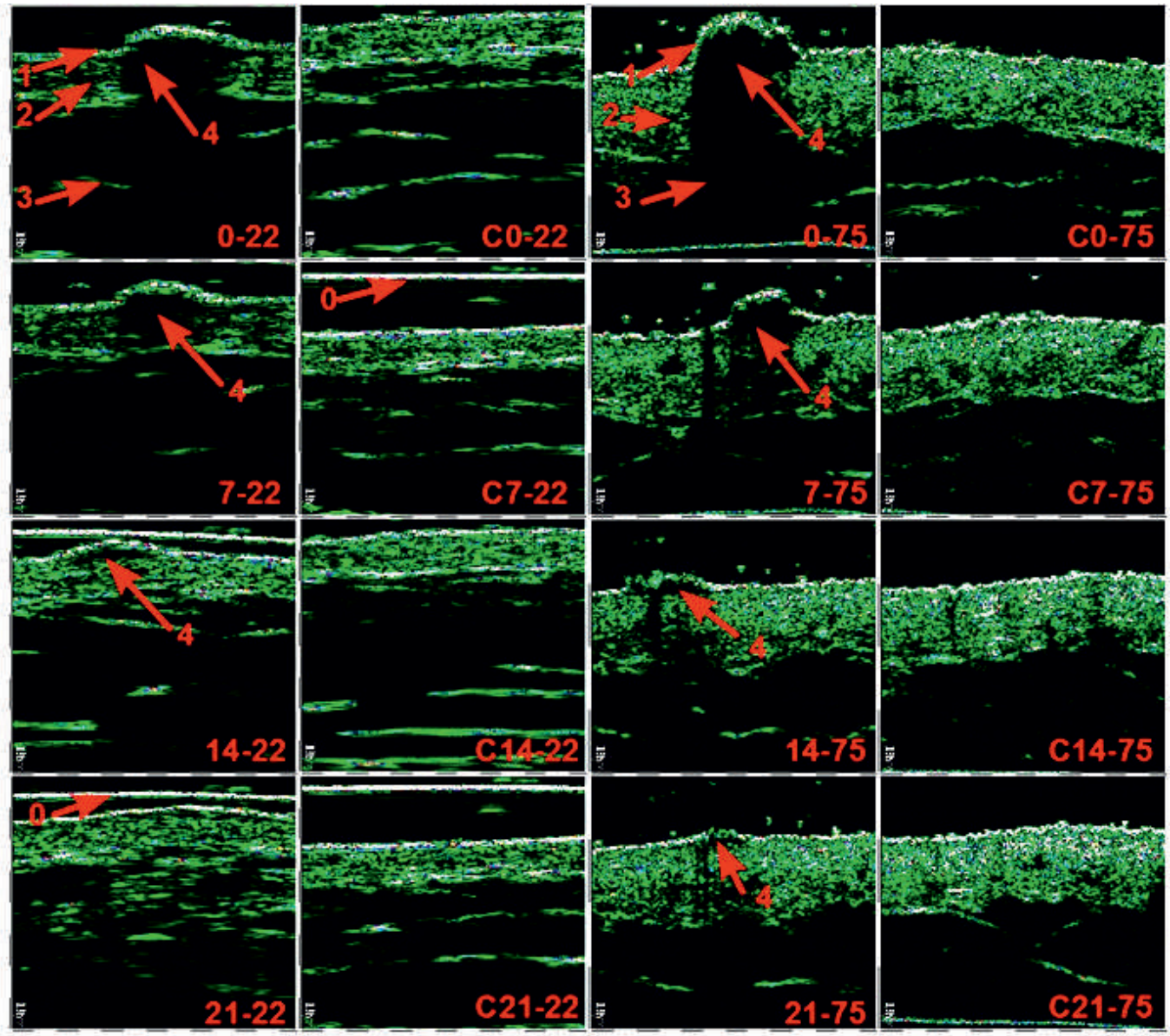
Evaluation of skin treatment effects



Psoriasis treatment efficacy
 # = treatment day
xx = ultrasound frequency
C = control scan

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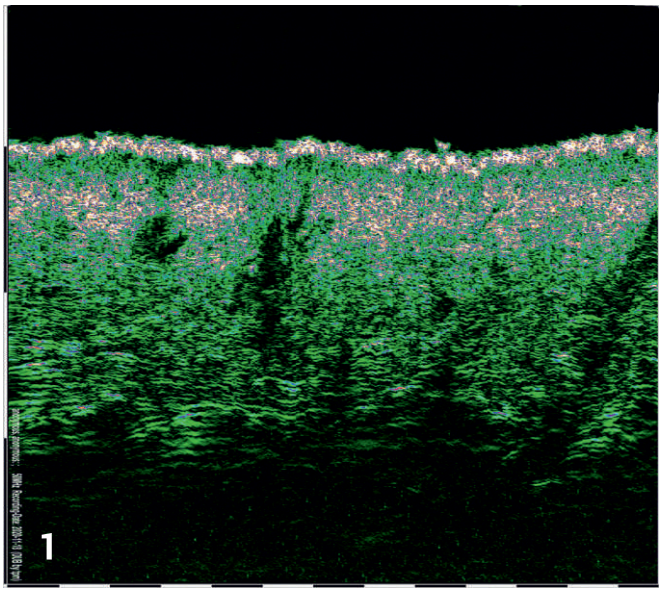
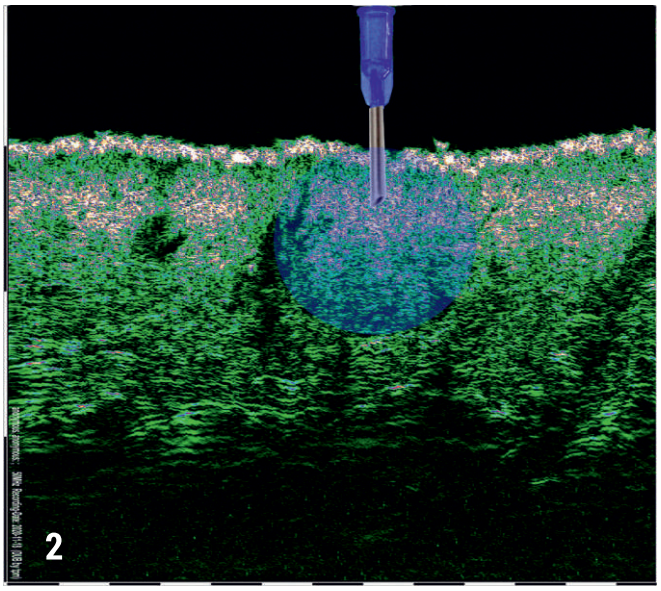
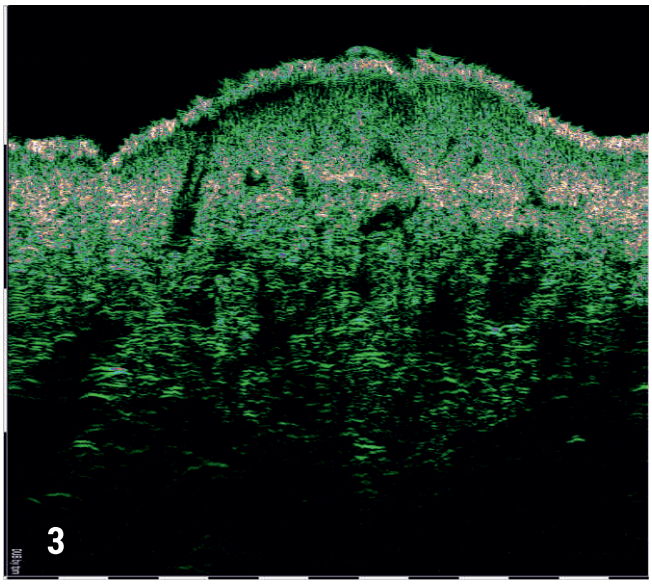
Patch test and vaccination results







50 MHz intradermal injection
1 - before treatment
2 - needle placement
3 - right after injection (0,1 ml)

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DUB SkinScanner documents skin

HFUS skin quantitative measurements	Frequency
Total skin thickness	22-75 MHz
Dermal thickness	22-75 MHz
Epidermal Thickness	50-100 MHz
Stratum corneum thickness	100 MHz
Epidermal echogenicity	50-100 MHz
Dermal-epidermal junction echogenicity	75-100 MHz
Dermal echogenicity	22-75 MHz
Papillary dermis visualization	75-100 MHz
Ratio upper and lower dermis echogenicity	22-75 MHz
Hair follicles and glands dimensions	50-100 MHz
Length of dermis-hypodermis junction	22-75 MHz
Texture feature analysis	75-100 MHz
Dimensions and echogenicity of lesions caused by dermatological diseases	22-100 MH
Morphological characterization of skin tumours (edge, invasion depth, volume)	22-100 MHz

DUB SkinScanner has been successfully used in cosmetology, oncology, food additives and especially in several research activities.