SKYLINE
MEDICAL REQUISITES TRADING LLC

smart hardware Image Algorithms skin measurement assessment

Skin Analyzer-Q1 series

Skin analyzer Instructions for operation and use

CONTENT

smart hardware Image Algorithms skin measurement assessment

Part one

Operation process

Operation process

Instrument installation process

1、 Confirm whether the instrument accessories are complete

Skin detector-tablet computer-tablet holder-moisture pen-data cable-power cable-shading cloth-certificate-instruction

2、Instrument installation

Tablet bracket installation - USB data cable installation (the interface is connected to the tablet and the instrument end) - power cable installation

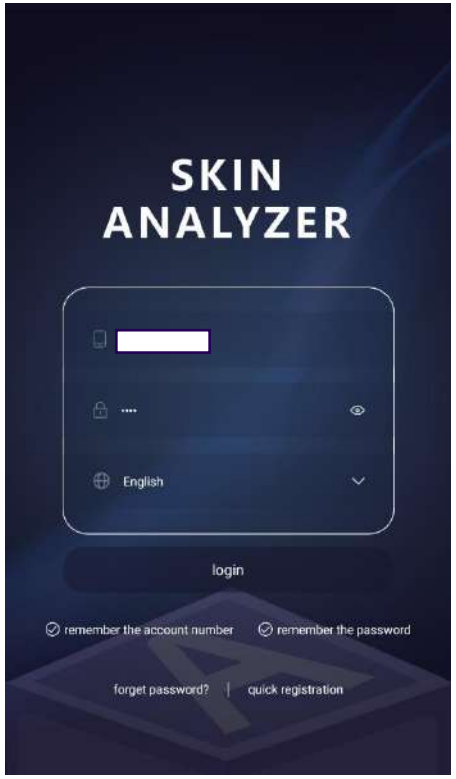
3、Tablet Internet Connection

Tablet power on - settings - connect to available WIFI or mobile phone hotspot

4、Turn on the instrument and enter the skin detection APP

Operation process

Registration and usage process



01、Login (new users need to register first)

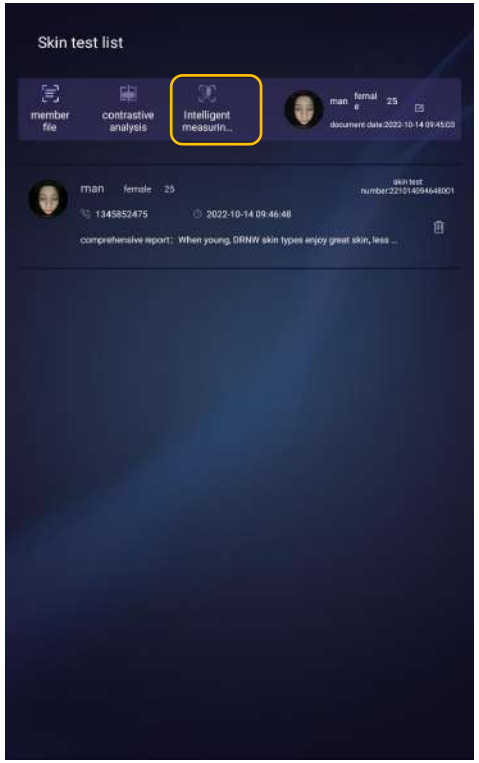
02、New User Registration

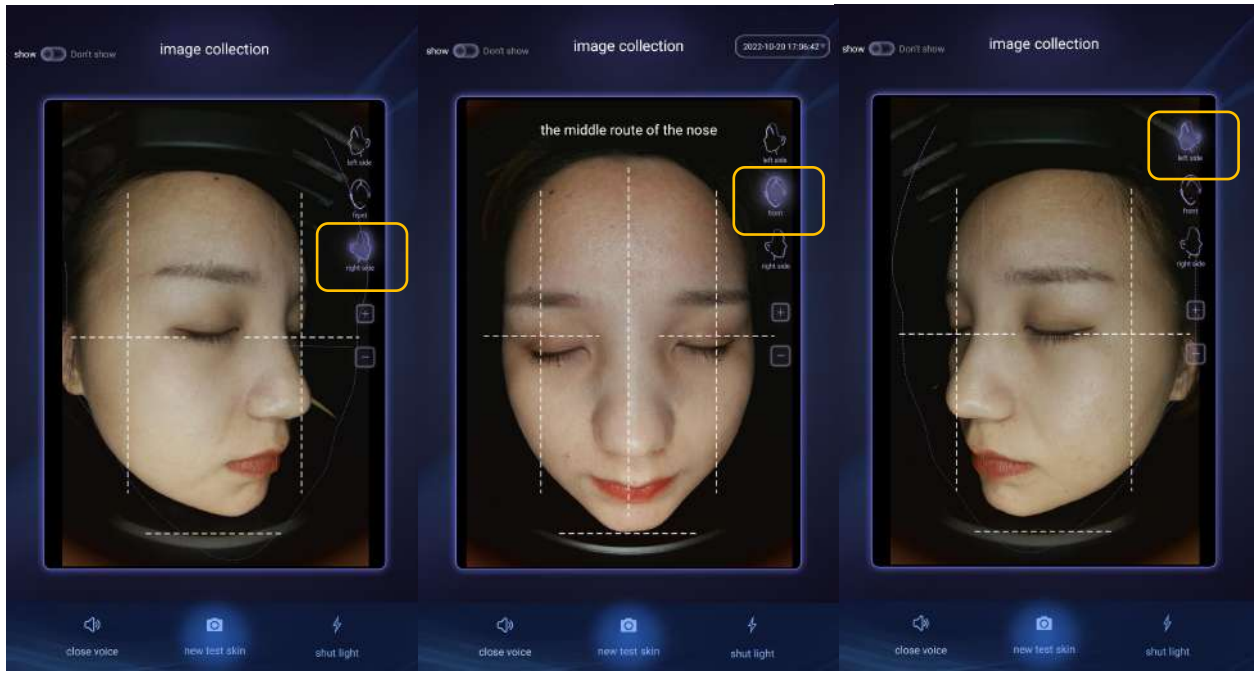
03、APP main interface

04、AI Skin Testing: New Customers Build Profiles

Operation process

Shooting process





01、AI skin test: new members create a profile skin test entrance

02、客户档案：已建档会员测肤入口
Customer profile: Profile member skin detection entry has been established

03、Right face shot

04、frontal face shot

05、Left face shot

Operation process

Photographing process

04、Eight Spectral Image Acquisition

05、Image detail display

Operation process

Precautions for Photographing

Preparation before taking pictures:

1、Remove makeup first

2、Fix the hair with black hair hoop,
and do not wrap white towel or bath cap

3、Wear black blackout cloth to avoid light leakage

4、Pull down the hidden hood on the instrument when
taking pictures

5、Remind the customer that the chin should not exceed
the chin bracket when taking pictures

6、Remind customers to close their eyes when taking pictures

Correct use of the Shading cloth/hood

Part TWO

Detection dimension parsing

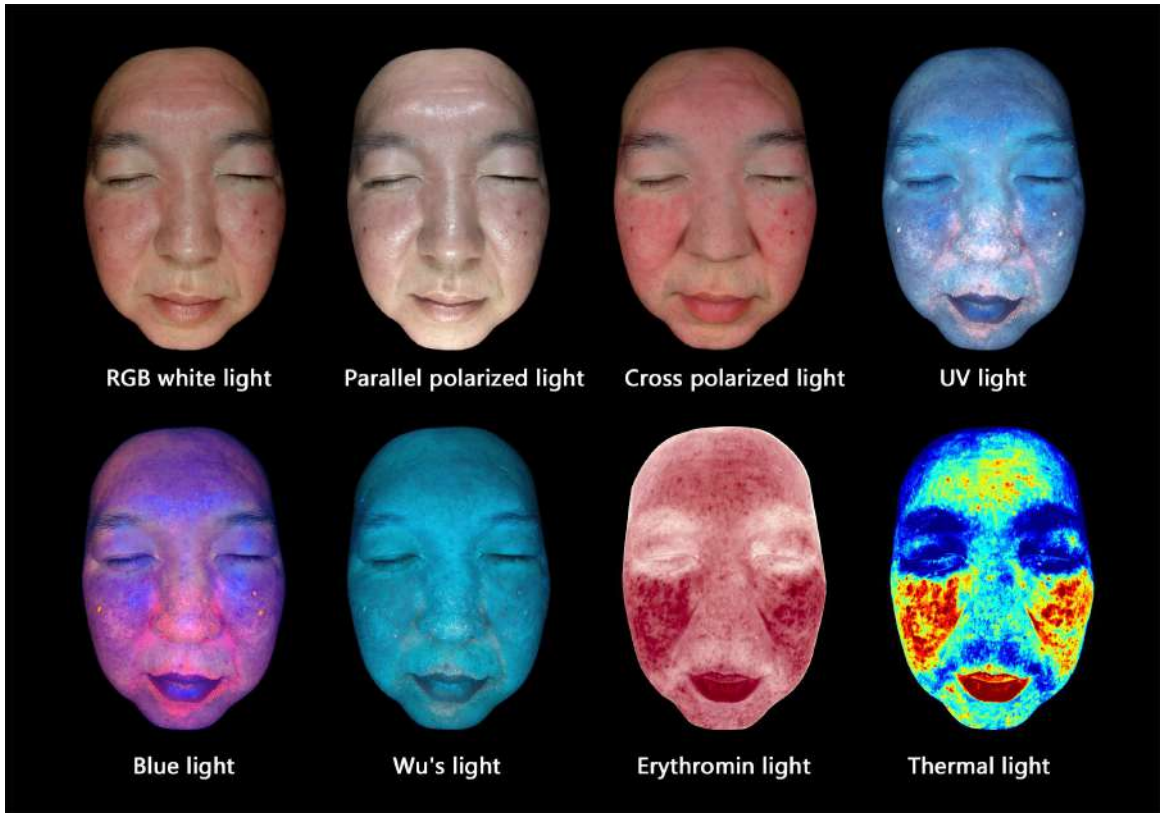
Detection dimension parsing

Image acquisition

Eight spectral imaging, taking eight sets of pictures

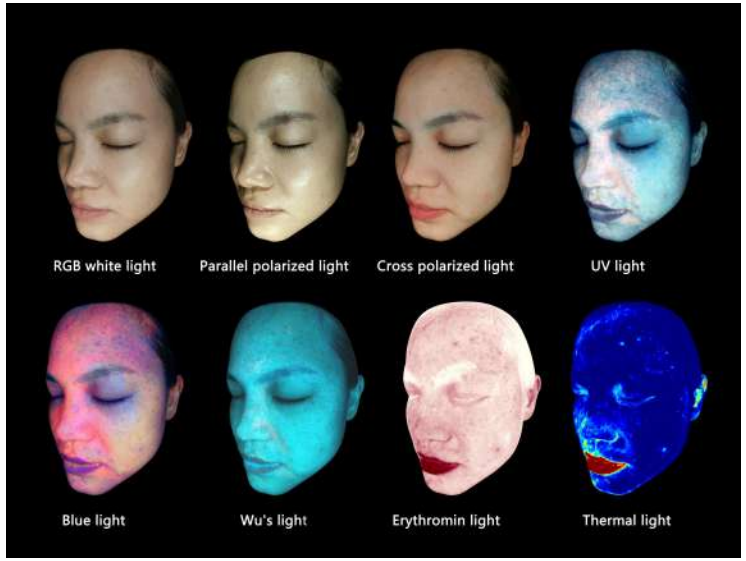
1、RGB white light, parallel polarized light, cross polarized light,UV light, blue light, Wood light、Red map, heat map

2、Extract skin images at different levels of the face through 8-spectral imaging technology for quantitative analysis of AI algorithm, so as to obtain scientific diagnosis results

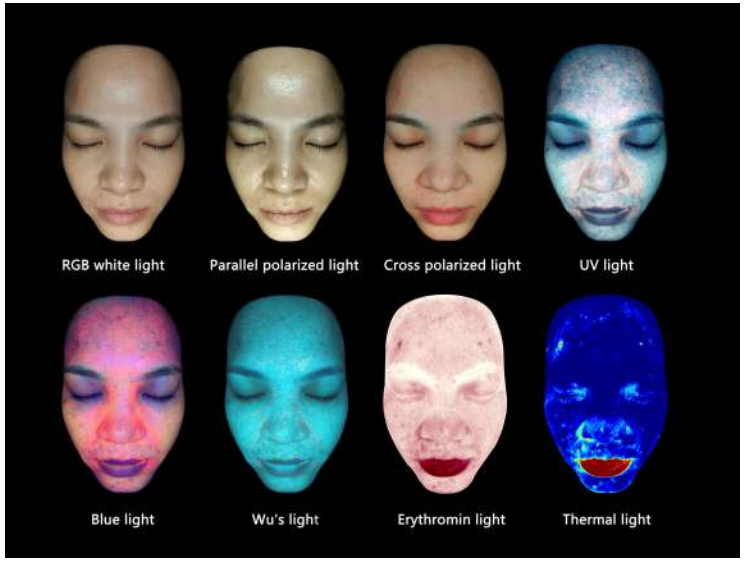


Detection dimension parsing

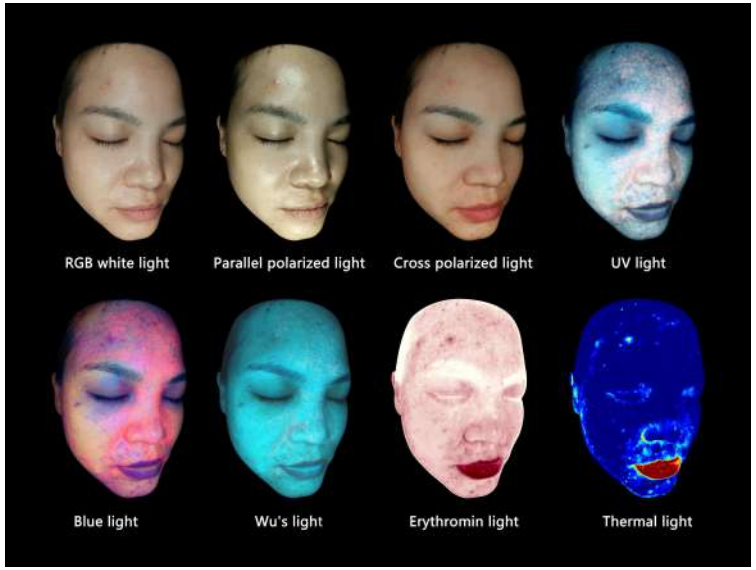
180-degree comprehensive interpretation of skin problems: left face, front face, right face



left face



front face



right face

Detection dimension parsing

Eight Spectrum Image Commentary

RGB white light: In the state of natural light, sunlight is soft and uniform light,Use multi-directional diffused light to evenly illuminate the entire face without shadows and sharp lines,Can detect skin color status, can clearly see wrinkles, pores, pigmentation, acne.
Clear representation of facial skin in natural sunlight as the basis for a holistic assessment of clinical skin.

RGB white light

Detection dimension parsing

Parallel polarized light: The parallel polarized light mode uses a special parallel polarized lens group to reduce the skin surface Visibility of underlying skin features, enhanced optical reflection of skin surface for enhanced skin surface texture
After switching to this mode, the recognition of details can be enhanced, and the smoothness of the skin can be clearly observed.
Fine lines and wrinkles. Strengthen fine lines and wrinkles, make skin texture easier to distinguish, and facilitate AI algorithm calculationnumber of wrinkles.

Parallel polarized light

Detection dimension parsing

Cross polarized light: The cross polarized light mode adopts a special cross polarized lens group, which can effectively Attenuates the direct reflected light, so that we can clearly observe the uneven skin tone under the epidermis and the hidden microvascular structure under the bright skin. Sensitive skin features are more pronounced and reveal irregular skin features beneath the epidermis.

cross polarized light

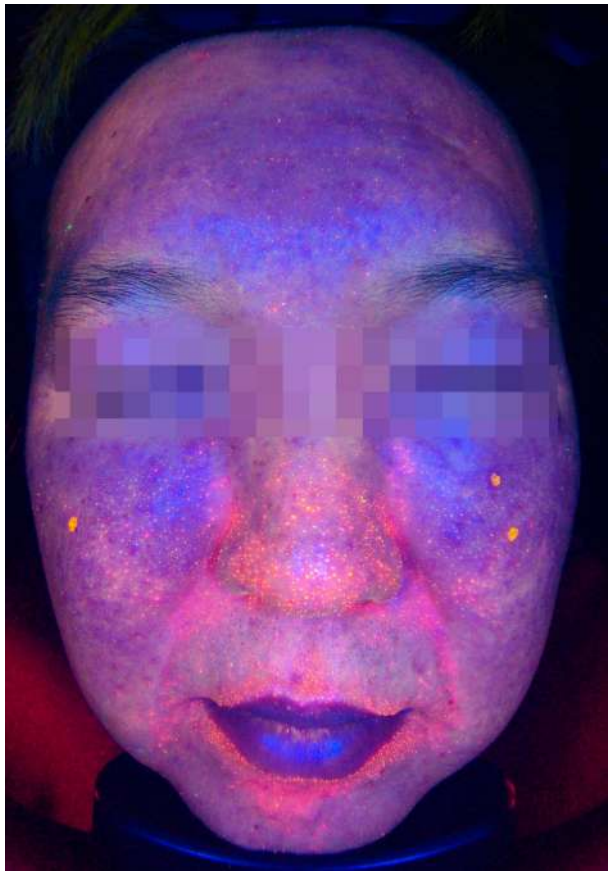
Detection dimension parsing

UV light: Under the irradiation of UV light with a wavelength of 365nm and a filter, the invisible light can penetrate harmlessly to the epidermis of the skin. It is mainly used to observe the skin characteristics such as pigmentationspots, acne scar pigment residues, and deep pigmentation caused by ultraviolet radiation.

UV light

Detection dimension parsing

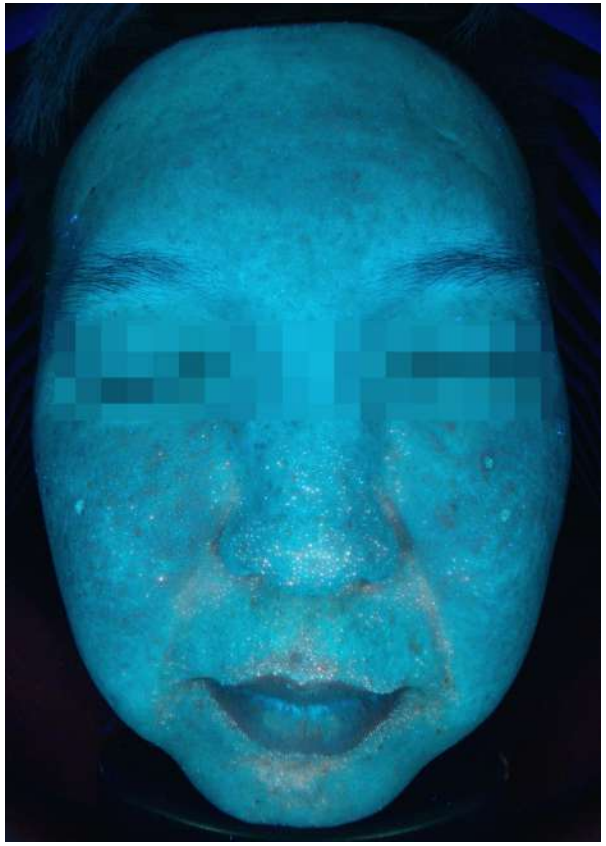
Blue light: Under the irradiation of UV blue light with a wavelength of 405nm and a filter, the invisible light can be harmlessly penetrated to the epidermis of the skin, and the cells and tissues of the skin have the natural function of converting invisible light into visible fluorescence, thereby It effectively turns the skin into a luminous body. Since the light is produced in the skin instead of the general projection effect, the sebum secretion, deep acne, and flora distribution can be clearly seen.



Blue light

Detection dimension parsing

Wu's light: The clinical role of the skin in response to a special WOOD'S mode, used to observe the subcutaneous vascular and pigmented lesions, brown spots, erythema, etc. caused by ultraviolet radiation, and revealed that caused by them such as chloasma Potential dangers of spots, acne, and spider veins. It has a strong prominent effect on fluorescent agents and chemicals, and there will be strong fluorescence and residual reflection of chemicals, so as to identify whether skin care products and cosmetics contain fluorescent agents.



Wu's light

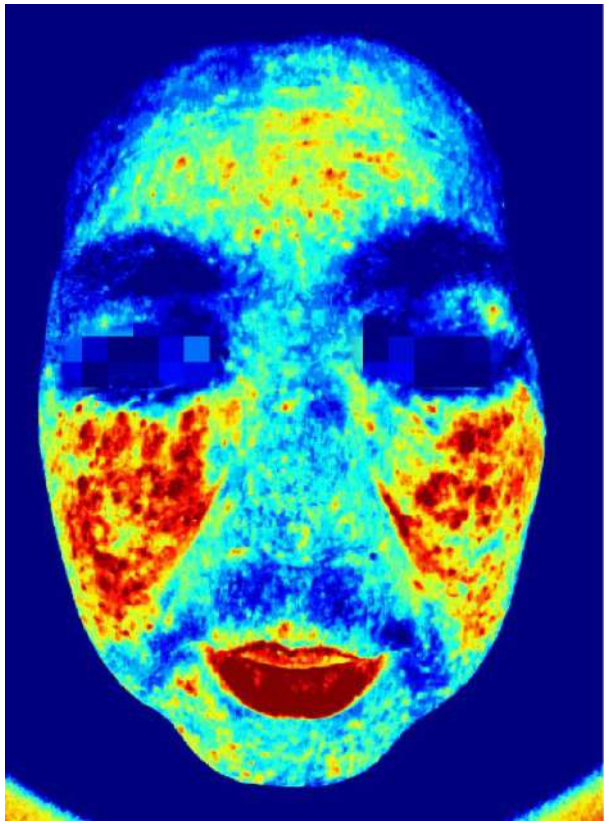
Detection dimension parsing

Composite light/Erythromin light: The red map obtained by the combination of composite spectrum and AI algorithm.
The degree of red zone is deepened, and the distribution of blood red blood cells can be seen more intuitively. It reflects the effects of skin sensitivity, redness, and deep inflammation, and the characteristics of sensitive skin are more obvious.

Erythromin map

Detection dimension parsing

Composite light/Thermal light: A heat map obtained by combiningcomposite spectra and AI algorithms.The main thing to look at is the sensitive reaction of the skin.Sensitive zone refers to the area with high hemoglobin content,Usually an area of the skin is inflamed or has other lesions, and the hemoglobin in this area is The content will increase, and you can clearly see obvious redness in sensitive areas.



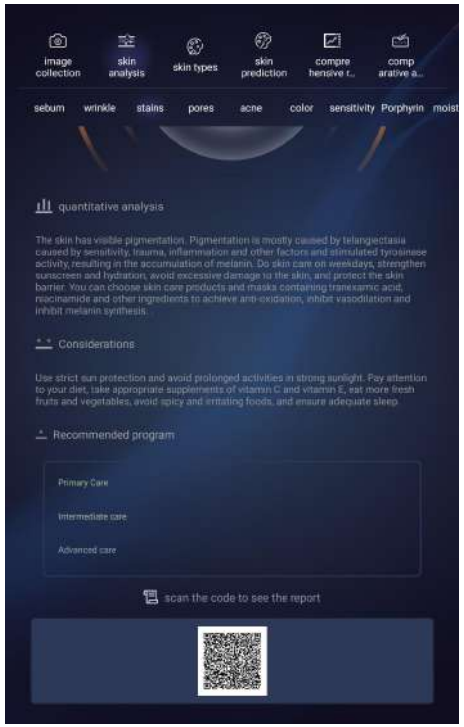
Thermodynamic diagram

Detection dimension parsing

skin analysis

01、19 quantitative indicators

02、Index quantification level



03、Quantitative analysis of indicators/ scheme recommendation

Detection dimension parsing

skin analysis

Quantitative index grade (levels 5)

Grade I - Green, numerical value: 1-20
Grade II - blue, numerical value: 21-40
Grade III - yellow, numerical value: 41-60
Grade IV - Orange, numerical value: 61-80
Grade V - red, numerical value: 81-100

The higher the quantification level, the more severe the skin damage(except sebum)

Quantitative index grade

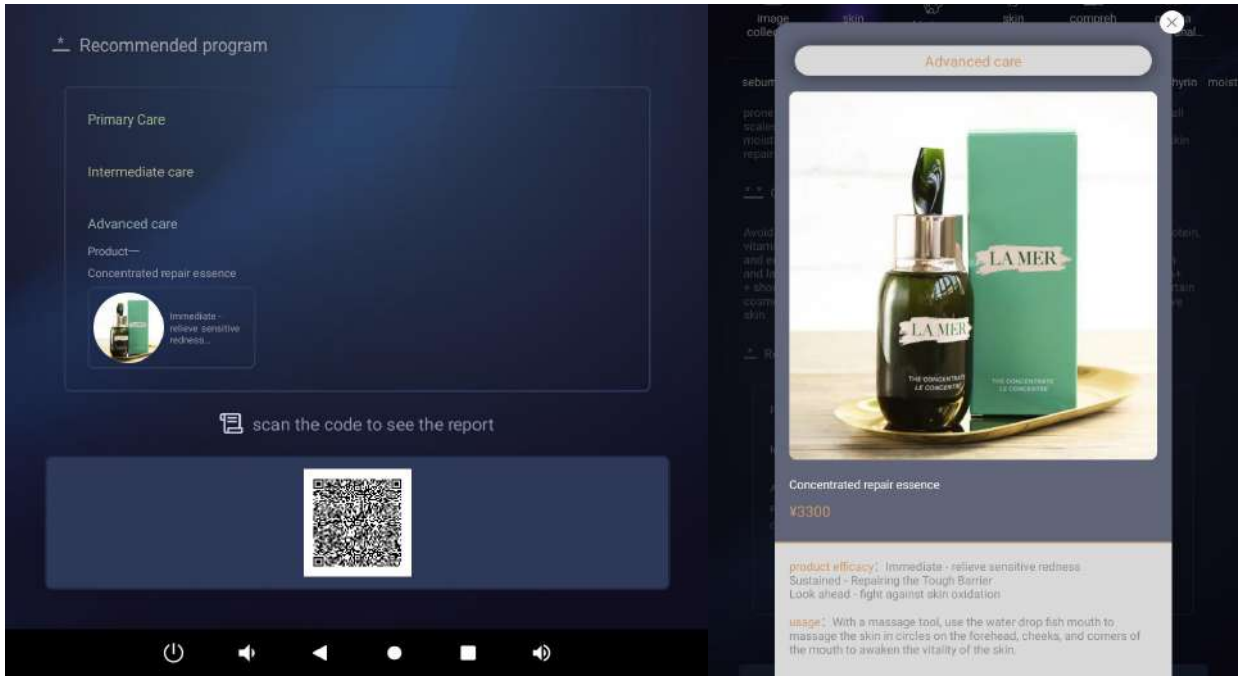
Detection dimension parsing

skin analysis

Recommended scheme

Each skin indicator corresponds to the test data from the surface layer to the deep layer, and provides analysis reports and daily maintenance suggestions, and scientifically and accurately recommends the most suitable products for customers through quantitative values. It can replace the traditional blunt sales, and it can also solve skin problems for customers more professionally。

According to the quantitative index level graded three levels of recommended nursing programs,Intelligent recommendation, precise skin care, symptomatic care



Recommended scheme

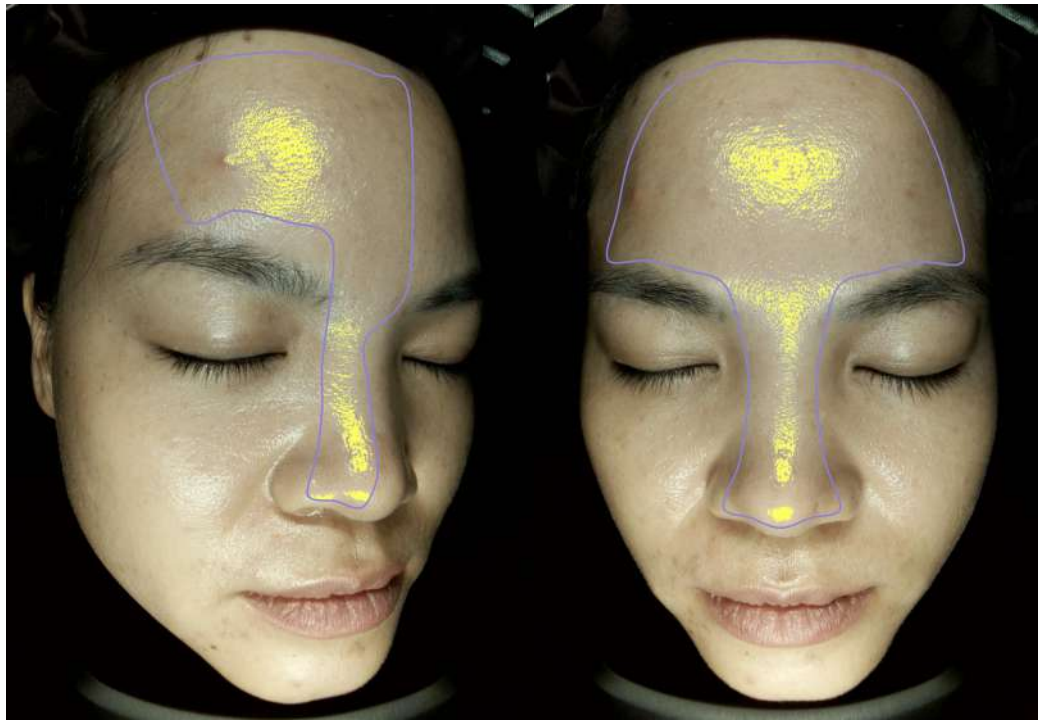
Detection dimension parsing

sebumT/U

Sebum: The sebum is a mixture of various lipid substances, which is secreted to the skin surface through the sebaceous gland to make the skin soft, prevent bacteria and fungi from breeding, and protect and moisturize the skin. The amount of sebum secreted directly affects the classification of the skin; Excessive sebum will form seborrheic dermatitis, acne, acne, acne, large pores, etc; Too little sebum will form dryness, wrinkles, long spots, and the skin barrier is easily damaged.

The yellow area is the sebum quantification area

Lighter color means less sebum secretion, darker color means more sebum secretion



Front face, side face (yellow area is the sebum quantification area)

Detection dimension parsing

skin analysis-sebumT/U

Sebum: Quantification level (level 5)

Grade I - green, less sebum
Grade II - blue, with less sebum
Grade III - yellow, normal sebum
Grade IV - orange, more sebum
Grade V - red, with a lot of sebum

Detection dimension parsing

wrinkles/textures/contrast

Wrinkles: The elastic fibers of the skin are reduced, the subcutaneous fat and moisture are reduced, and wrinkles occur due to the folds between the skin and the deep tissue.

Wrinkle types quantified on the front face: forehead wrinkles, Sichuan-shaped wrinkles, fine eye wrinkles, nasolabial wrinkles
Wrinkle types quantified on the side face: fine lines around the eyes, crow's feet

The green striped area is the wrinkle quantification area

The higher the quantification level, the more serious the skin wrinkles

Front face,side face (green strip area is the wrinkle quantification area)

Detection dimension parsing

textures: You can see the aging of the skin after the loss of collagen in the dermis, and you can know the development and trend of wrinkles

Quantized regions of textures in regions where the texture is not smoothly connected,Represents the appearance of fine lines and lack of hydration and lack of collagen in the skin

The higher the quantification level, the more severely damaged skin texture

Front face, side face (textures map)

Detection dimension parsing

Contrast: The contrast between the epidermis and the deep layer of the wrinkle dimension

Through RGB white light and parallel polarized light, you can slide to see the changes in the surface layer of wrinkles and the texture of the dermis layer

Comparison chart (comparison of skin textures at different levels))

Detection dimension parsing

Epidermal spots/UV spots/pigmentation/contrast

Epidermal spots: Refers to the visible spots on the skin surface or other pigmentation of the epidermis, such as sunburn, freckles, melasma, acne marks, and moles.

The green marked area is the quantified area of the color spot

The higher the quantification level, the more pigmentation on the epidermis.

Front face, side face (spots on the epidermis)

Detection dimension parsing

UV spots: The skin features such as color spots, acne pigment residues, deep pigmentation and so on caused by ultraviolet radiation are observed through UV light, and the spots that are separated from the basal layer and metabolized to the skin surface but have not yet reached the epidermis.

The black dotted area is the quantified area of the UV spot

The higher the quantification level, the more UV spots in the deeper layers of the skin

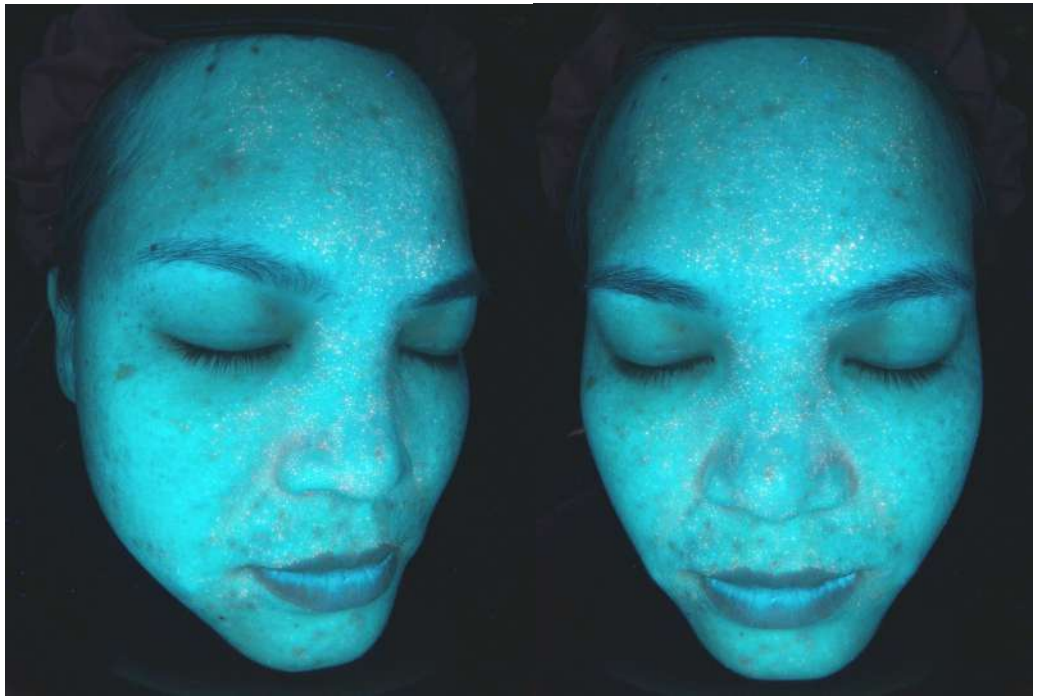
Front face, side face (UV spots)

Detection dimension parsing

Pigment: Pigmented skin lesions in the basal layer and dermis can be observed under special Wu’s light

The black block is the basal layer pigment quantification area

The higher the quantification level, the more pigment in the basal layer of the skin

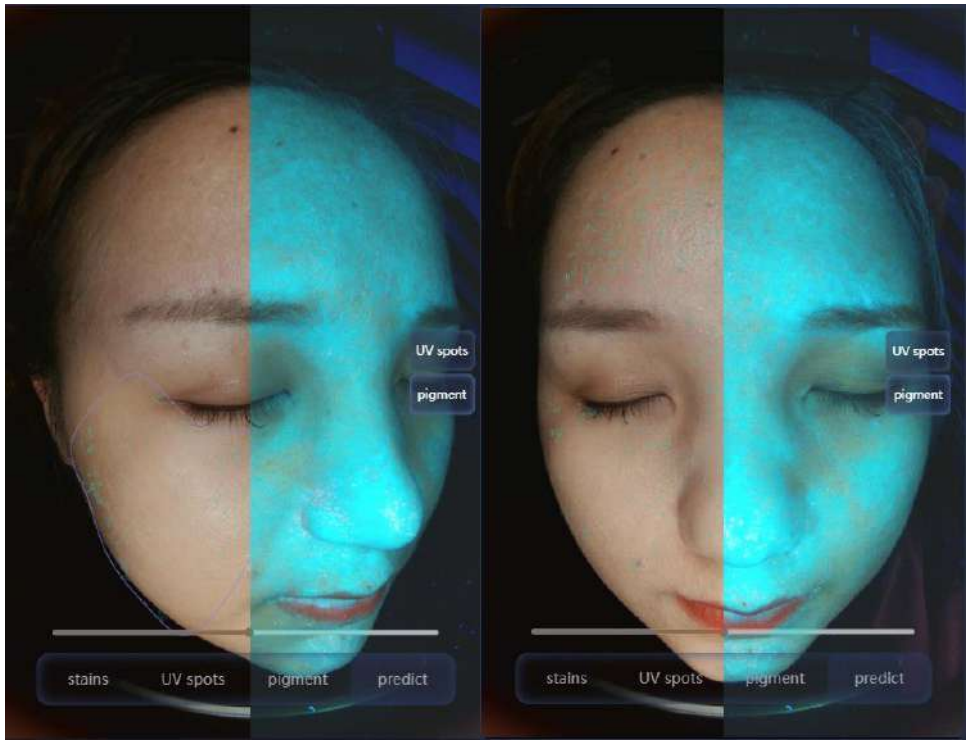


Front face, side face (skin texture map)

Detection dimension parsing

Contrast: The contrast between the epidermis and the deep layer of the wrinkle dimension

The RGB white light, UV light, and Wu’s light can be used to slide to view the changes of the surface layer, granular layer, acanthous layer, and base layer of the stain



Comparison chart (comparison of skin textures at different levels)

Detection dimension parsing

Pores/Blackheads

Pores: Reflect the expansion and flatness of the sebaceous gland opening. The open pores will have shadows, and its color will be darker than the normal skin color. The skin measuring instrument uses this principle to identify pores. With more sebum secretion, the pores will be larger and more,

There are more than 20,000 pores on the face, quantifying the large pores. Black dots are quantified areas of pores

The higher the quantification level, the more pores

Front face, side face (Pore map)

Detection dimension parsing

Blackhead: also known as blackhead acne, open. It is mainly a kind of "plug" like substance composed of sebum, cell debris and bacteria, which is formed by blocking the opening of hair follicle. The dust, dirt and oxidation in the air make the end contacting the air turn black gradually, forming a blackhead

only the nose is quantified, and the blue dots are the blackhead quantification area

The higher the quantification level, the more blackheads in the nose area

Front face, side face (black head chart)

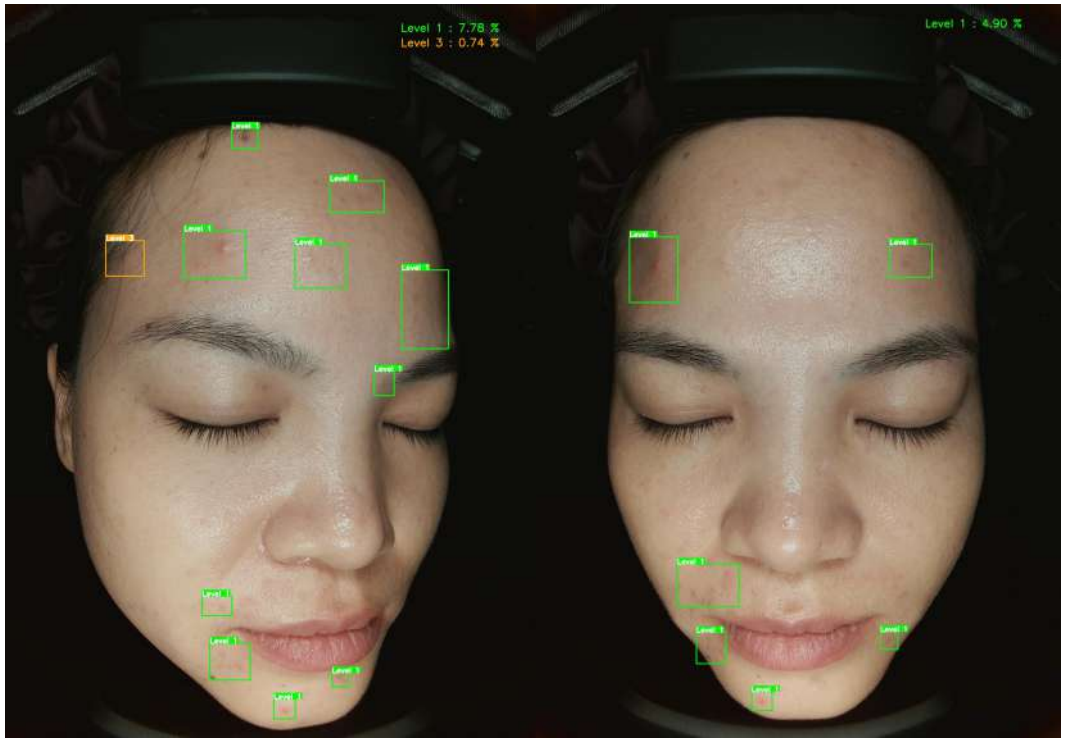
Detection dimension parsing

Acne/UV acne

Acne: It is a chronic inflammatory and capacitive skin disease occurring in the hair follicle sebaceous gland, mainly related to androgen, sebum secretion, keratinization of hair follicle duct mouth and hair follicle microorganisms, as well as genetic and immune factors

Quantized region: Green sign - Acne, Acne Scars, Partial Rose Acne

Yellow sign - pimples, inflammation,
Orange sign - Pustules, Papules
Red sign- Cyst, Nodule



Front face, side face (acne chart)

Detection dimension parsing

UV acne: it refers to the bacteria in the sebaceous gland multiply, and the propionibacterium acnes causing acne are analyzed, so as to obtain the probability of skin acne outbreak in the near future. You can see the acne invisible to the naked eye through the blue light, prevent the problem from causing the surface, and solve the problem from the root

Quantification status: Bright red fluorescent dots are quantified areas of UV acne

The higher the quantification level, the more UV acne

Front face, side face (UV acne chart)

Detection dimension parsing

skin color

Skin color: It is mainly determined by the melanin synthesized by melanocytes and related to the distribution of melanin in the epidermis. The skin color of different races (white, yellow, black) can be quantified by white light photography

Quantification status: Grade I-green, transparent white
Grade II - blue, white
Grade III - yellow, uneven skin color
Grade IV - orange, dark yellow skin color
Grade V - swarthy

Front face, side face (skin color map)

Detection dimension parsing

Sensitive/Erythromin map/Thermodynamic diagram

Sensitivity: observe the location of skin reddening caused by damage of subepidermal microvessels by cross polarized light. There are acne, redness caused by sensitivity, redness caused by rubbing face, sunburn, etc.

The reddened area of the epidermis is the sensitive area

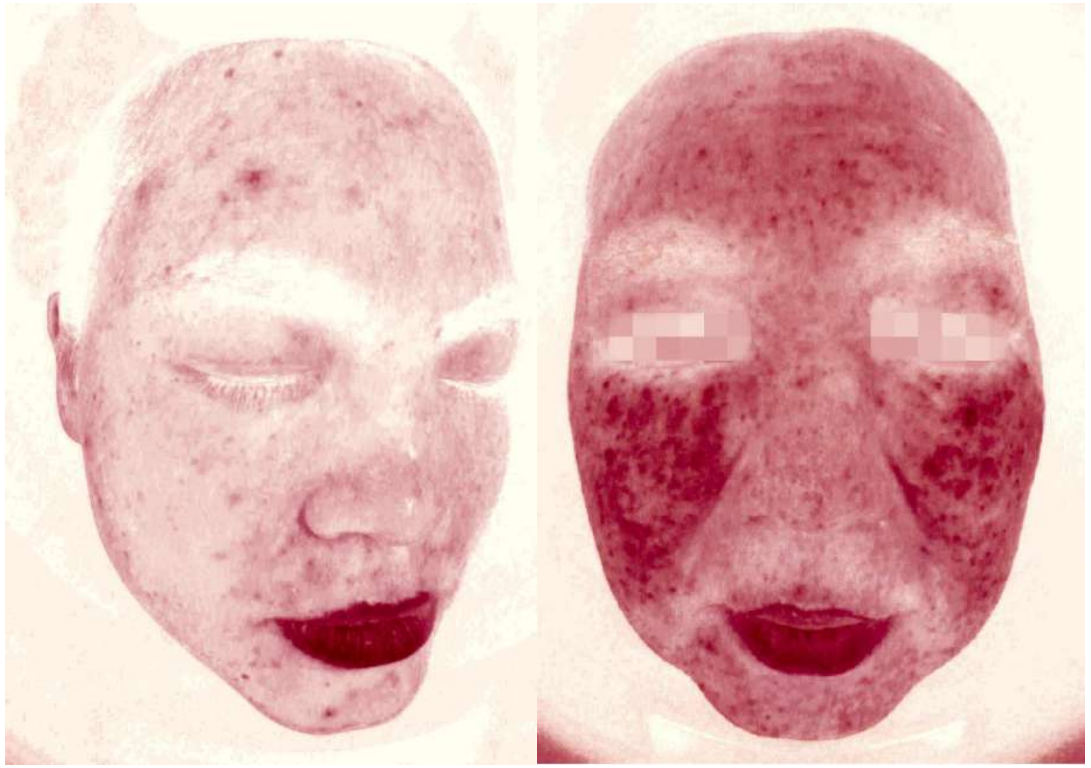
The higher the quantification level, the more sensitive the skin is

Front face, side face (sensitive map)

Detection dimension parsing

Erythromin map: The skin capillaries are permanently dilated, and the cuticle is damaged/too thin, resulting in the accumulation of facial heme to form red blood filaments that can exist on the face in the form of dots, lines, nets and blocks.

Quantized state: Type 1 red blood filaments - punctate
Type 2 red blood filaments - thread
Type 3 red blood filaments - reticular
Type 4 red blood filaments - lumpy

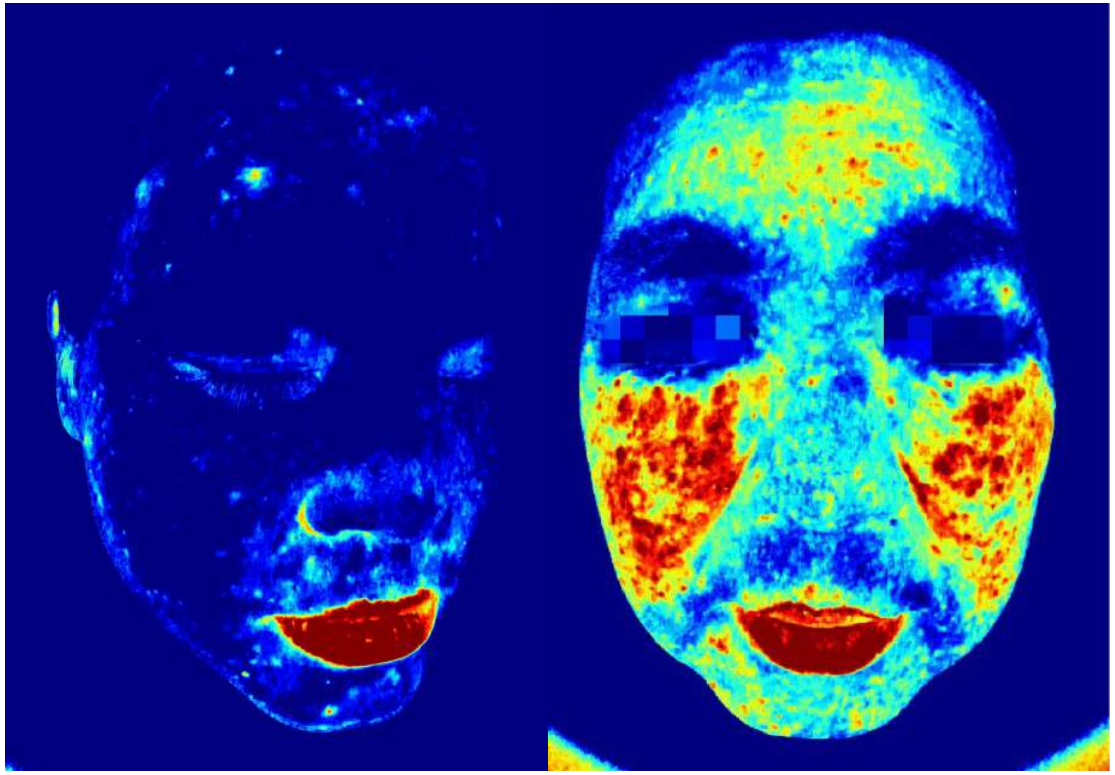


Front face, side face (erythrogram)

Detection dimension parsing

Thermodynamic diagram: It mainly looks at the deep inflammation of the skin. The sensitive area refers to the area with hemoglobin content. Generally, a certain area of the skin is inflamed or has other lesions. The content of blood red eggs in this area will increase, and it can be clearly seen that there is obvious redness in the sensitive area

Red and yellow areas are quantified areas of inflammation



Front face, side face (Thermodynamic diagram)

Detection dimension parsing

Porphyrin/Fluorescent Agent/Heavy Metal

Porphyrin: It is the metabolite of bacteria in the pores. It will produce a fluorescent reaction under the irradiation of UV light. The higher the porphyrin content, the easier it is for bacteria to breed acne. The lower the porphyrin content, the lack of skin nutrients. Therefore, there is no porphyrin content in severe skin lesions.

Bright white fluorescent spots are quantified areas of porphyrins

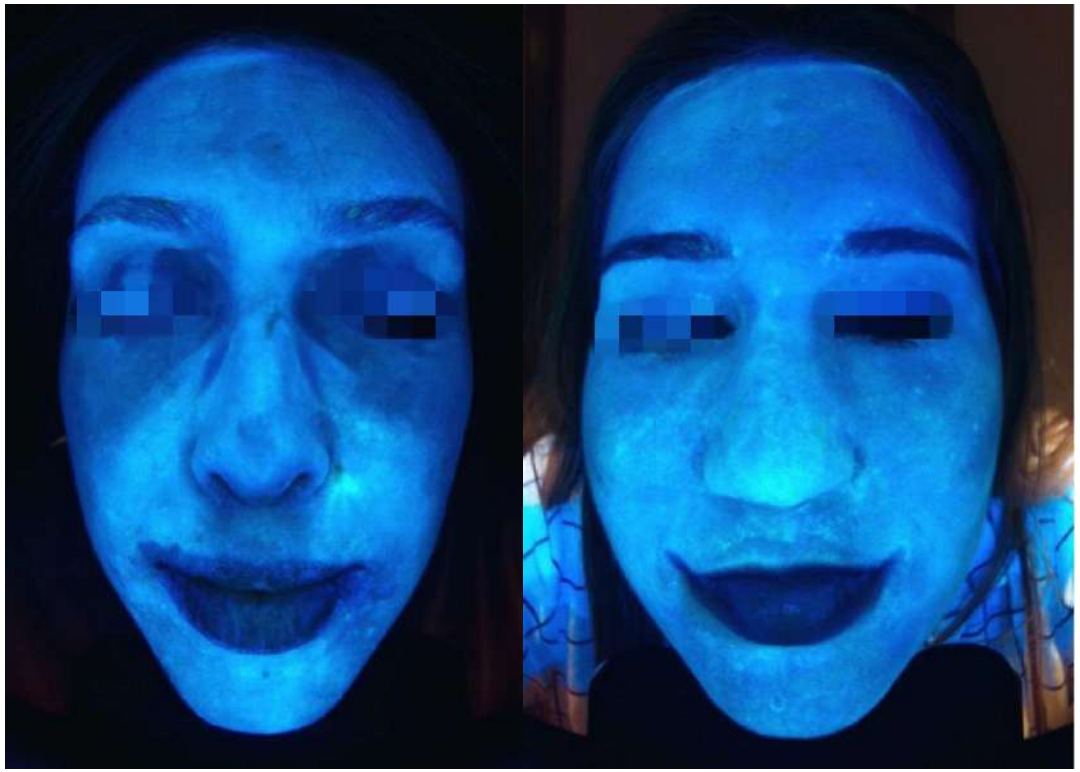
The higher the quantification level, the more porphyrins, and the worse the cleanliness of the skin

Front face, side face (Porphyrin map)

Detection dimension parsing

Fluorescent agent/heavy metal: the special Wu 'S light mode reflects the clinical effect of the skin, which has a strong highlighting effect on the fluorescent agent and chemicals. Strong fluorescence and chemical residual reflection will appear, so as to identify whether the skin care products and cosmetics contain fluorescent agents and heavy metals.

The white area is the quantification area of the fluorophore

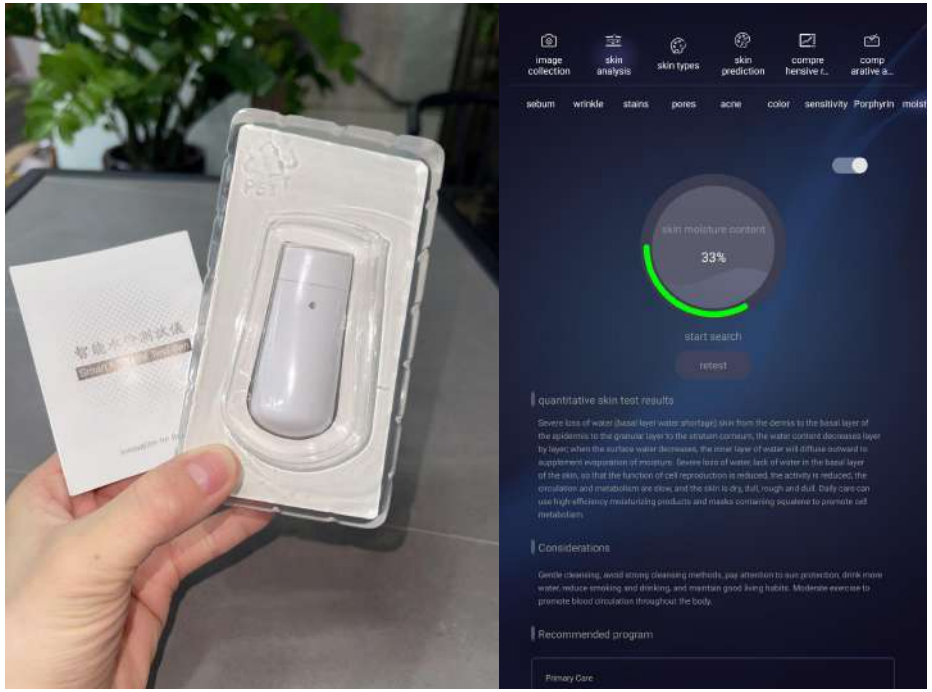


Fluorescent agent

Detection dimension parsing

moisture

Moisture: Use a professional separate moisture pen to test the moisture value of each part of the skin.
The higher the moisture value, the more moisture the skin contains.
When the moisture value reaches 40 or more, the skin moisture content is normal.
The moisture value is below 40, and the skin is in a state of water shortage



moisture test

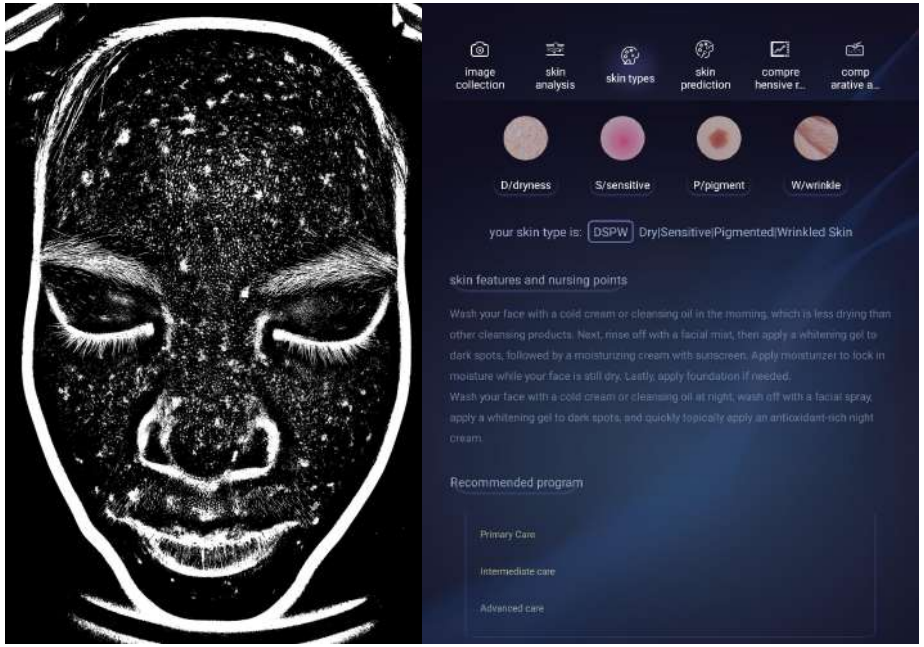
Detection dimension parsing

skin classification

Using international Bowman dermatology, combined with digital algorithms, the skin type of the skin is accurately quantified according to the symptoms of the skin surface and deep layers, and the skin attributes and solutions are obtained, which provides the basis for setting the course of treatment.

Skin classification:

Oily/Dry, Resistant/Sensitive,
Pigmented/Non-pigmentary, Wrinkle / Tight



skin classification

Detection dimension parsing

skin prediction

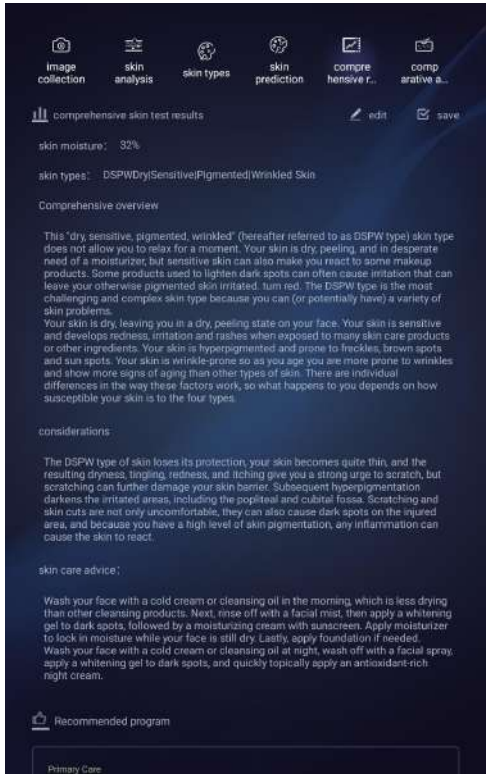
Extract the current RGB white light map of the skin: simulate and predict the state of the skin after aging and compare the state map after product item care, giving customers a sense of crisis.

skin aging prediction

Detection dimension parsing

Integrated report

01、Comprehensive analysis chart of 19 indicator



02、Comprehensive skin analysis, editable /Comprehensive solution recommendation

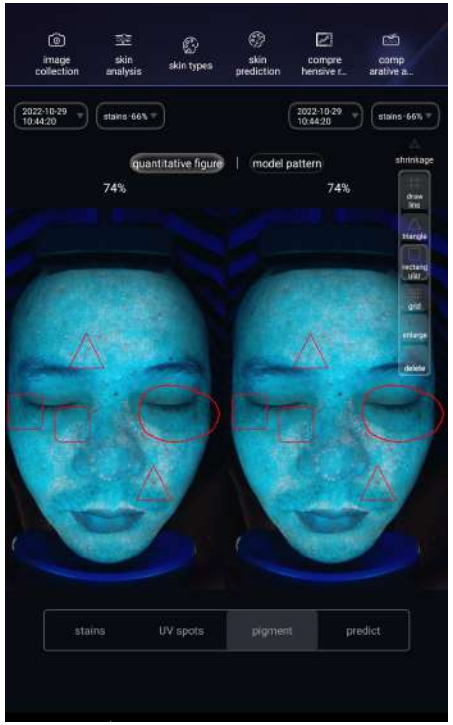
03、Scan the code on your mobile phone to view the comprehensive report

Detection dimension parsing

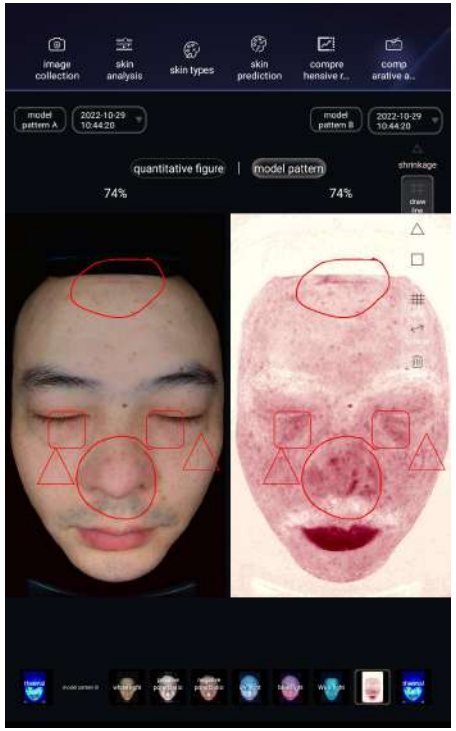
Comparative analysis

1. Comparative analysis: compare before and after nursing and before and after treatment to verify the efficacy of products and projects。
2. Comparative analysis of two modes: Quantitative figure /model pattern
3. Comparative analysis advantages:Quantitative figure: You can choose time to compare data for indicators,You can zoom in, draw lines, matrix, triangle, grid and other fixed-point comparisons through the toolbar image on the right.

Model pattern: You can choose the time to compare different skin levels for different light sources.Provide a basis for solving the root cause of skin problems.



Quantitative figure



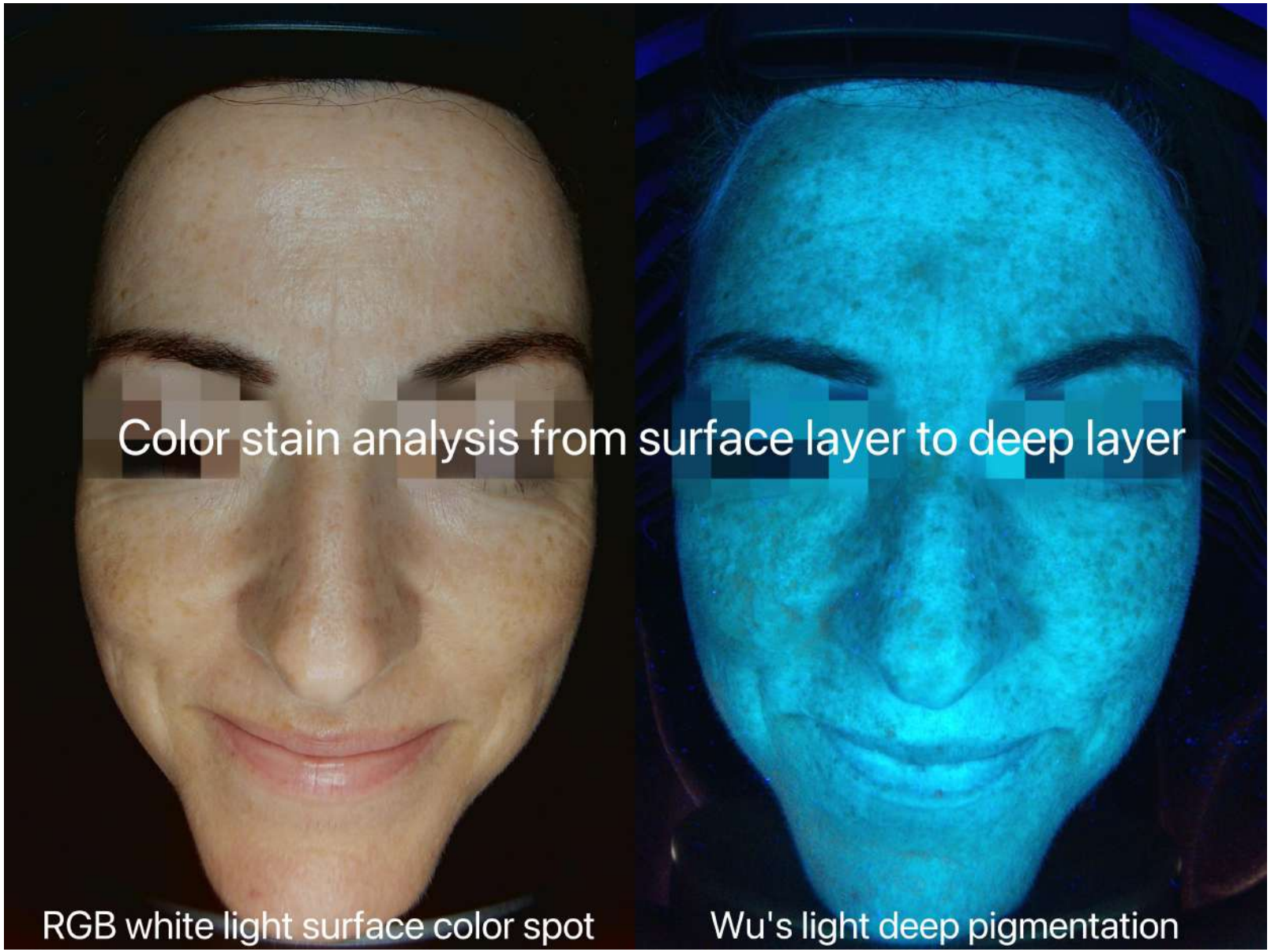
model pattern

Part three

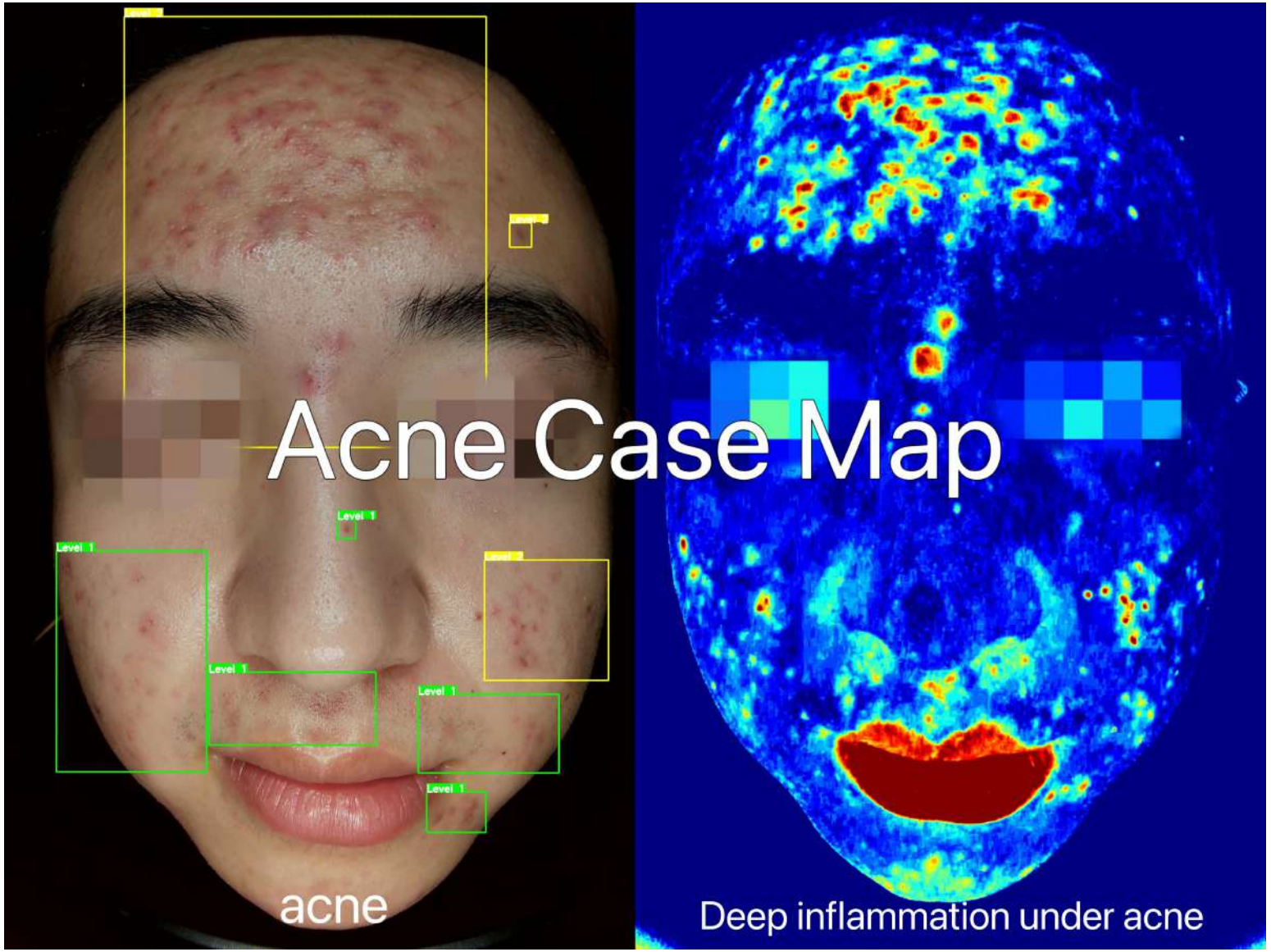
Case sharing

Case sharing

Case sharing



Case sharing



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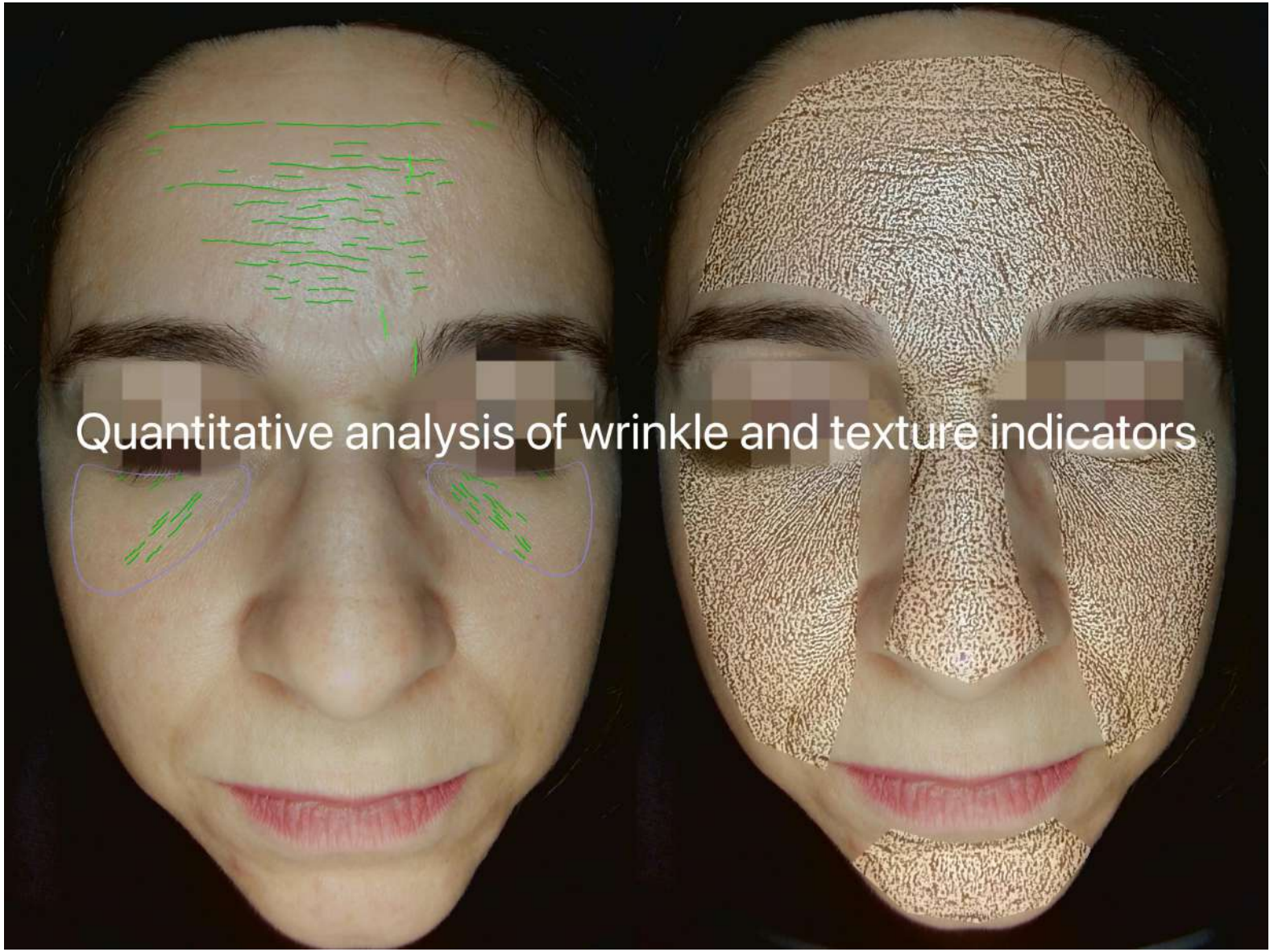

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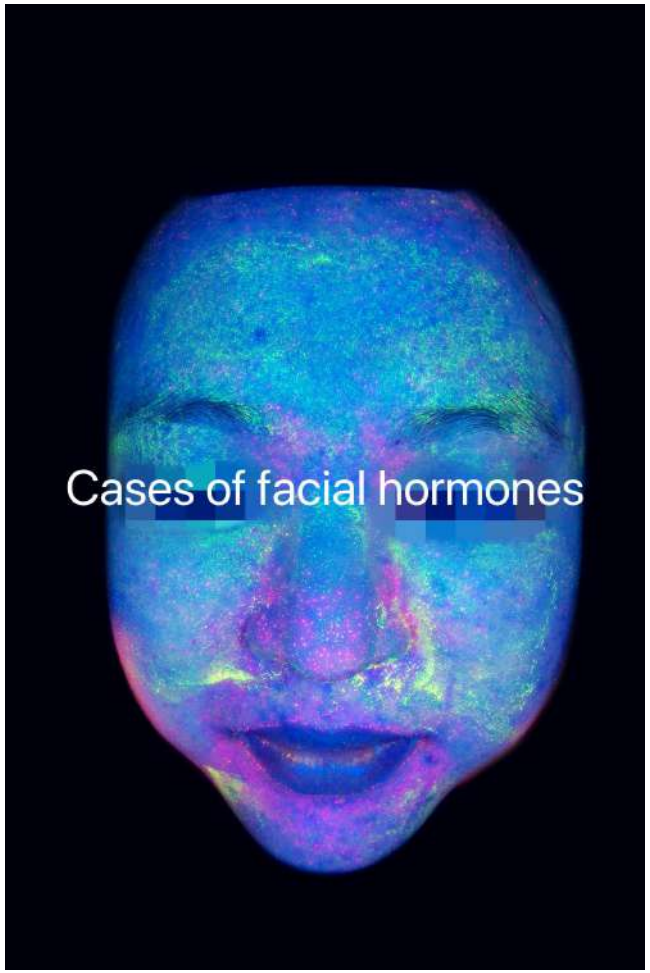

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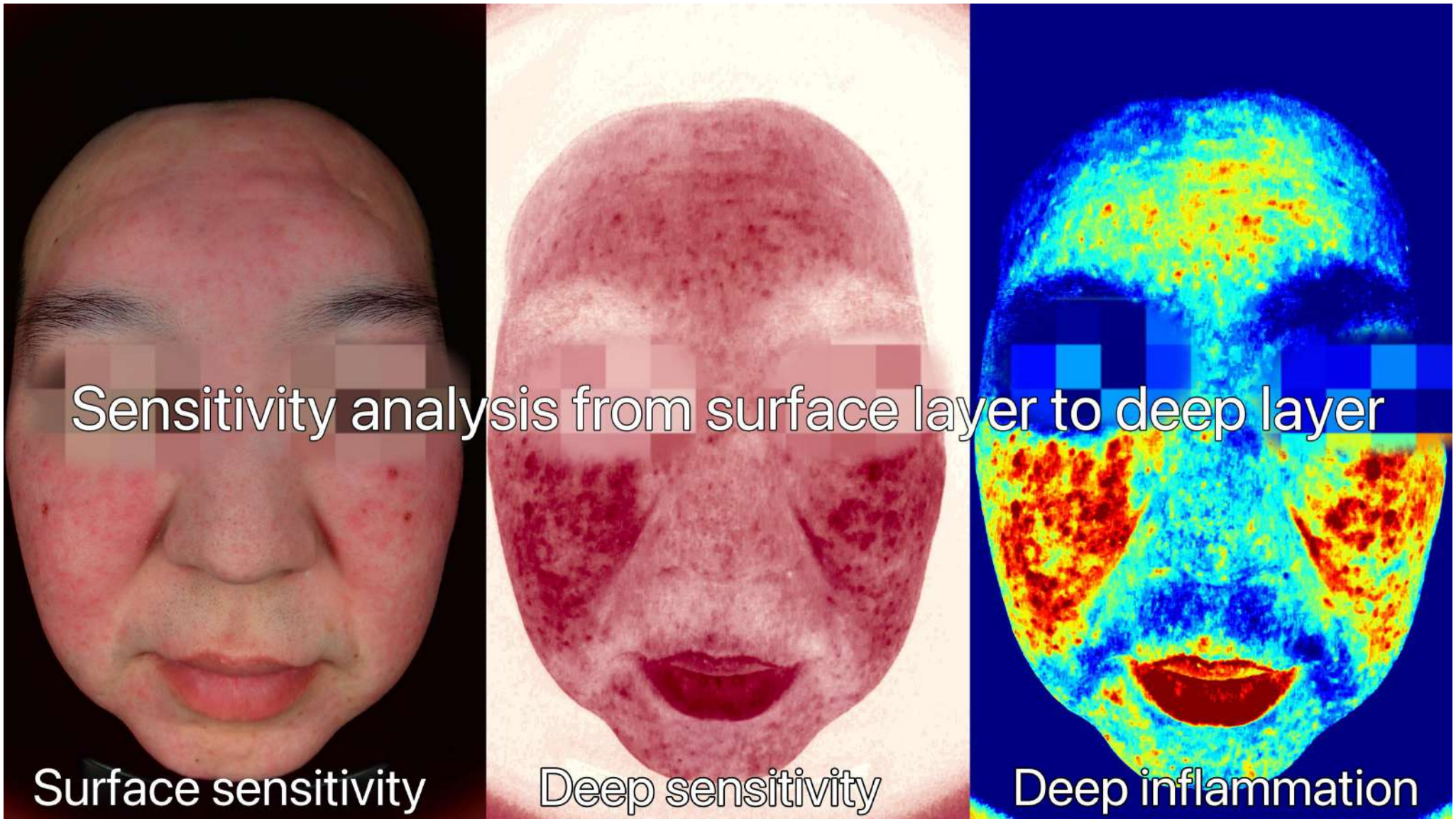
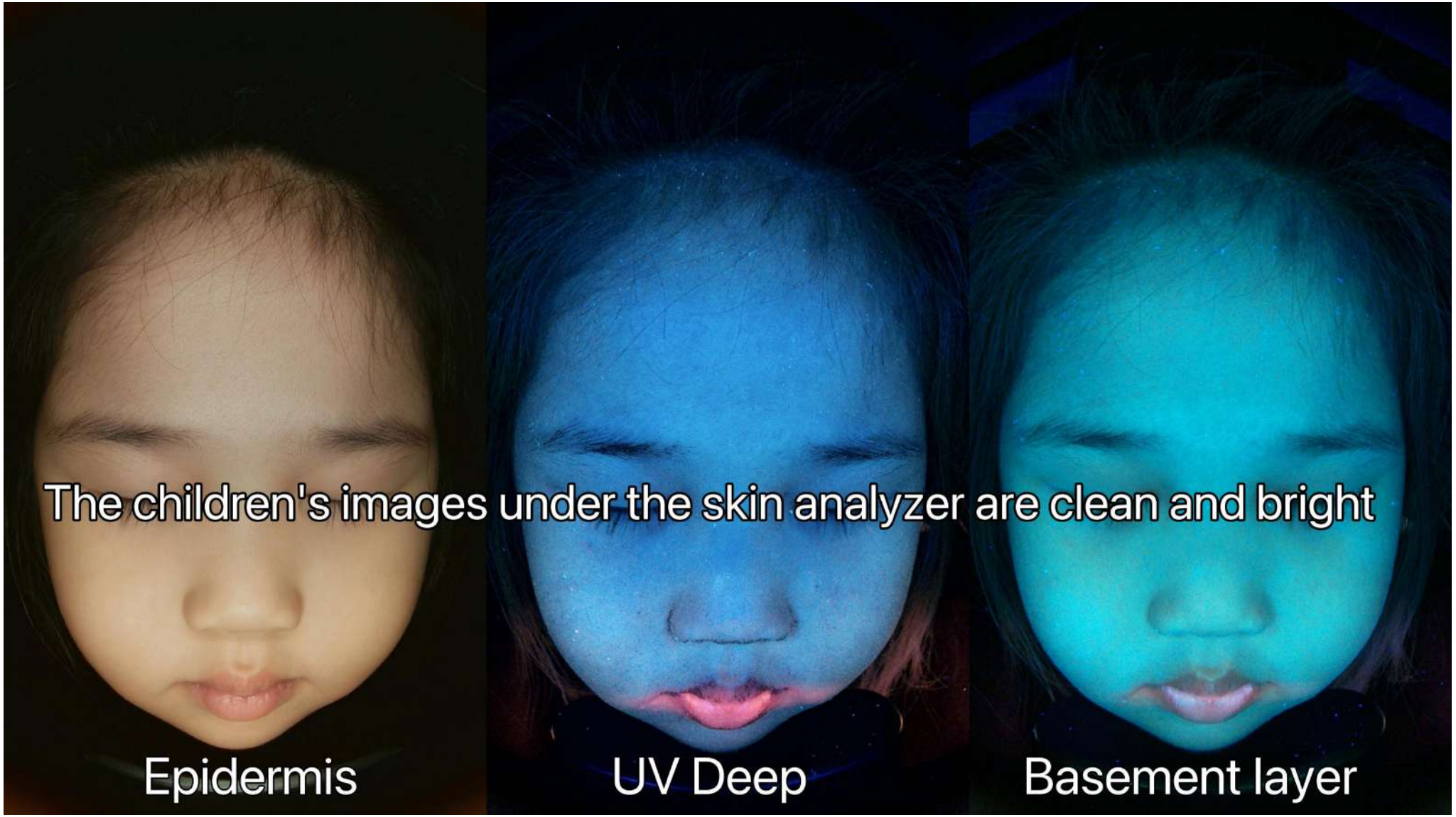


Case sharing



Skin Analyzer-Q1 Series

THANKS

SKYLINE
MEDICAL REQUISITES TRADING LLC

Head Office: Office 509, Churchill Executive Tower, Al Amal St., Business Bay, Dubai,UAE
Phone: +971 4 569 3474 **Mobile**: +971 50 912 4577 **Email**: admin@skyline-med.com