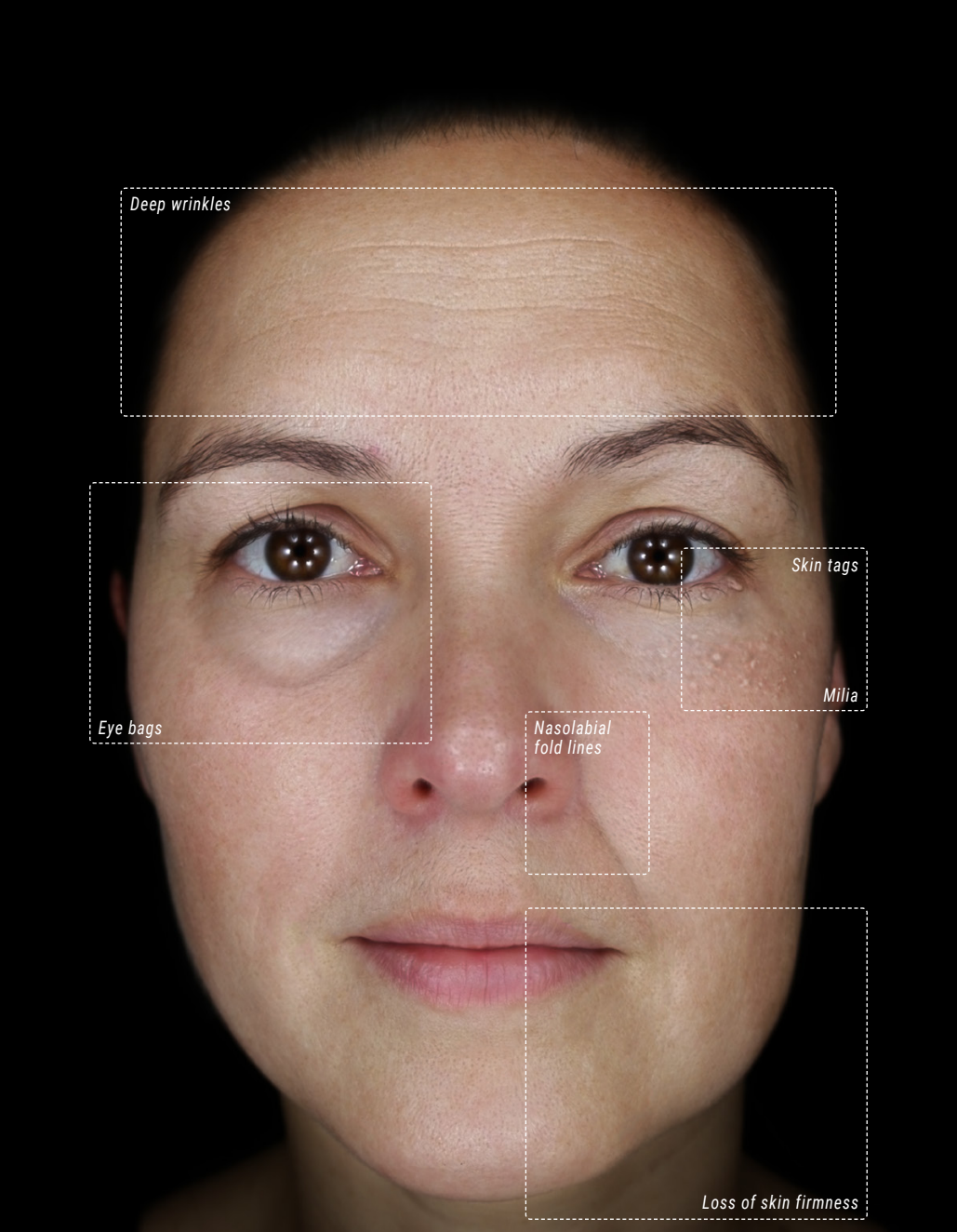
OBSERV® 520X

SKIN DIAGNOSIS

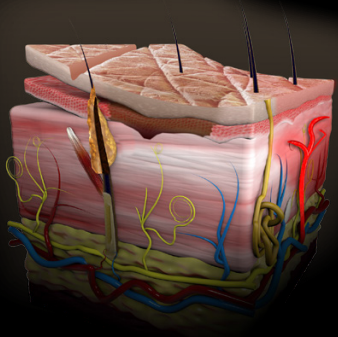
Quick Reference Guide for common skin concerns

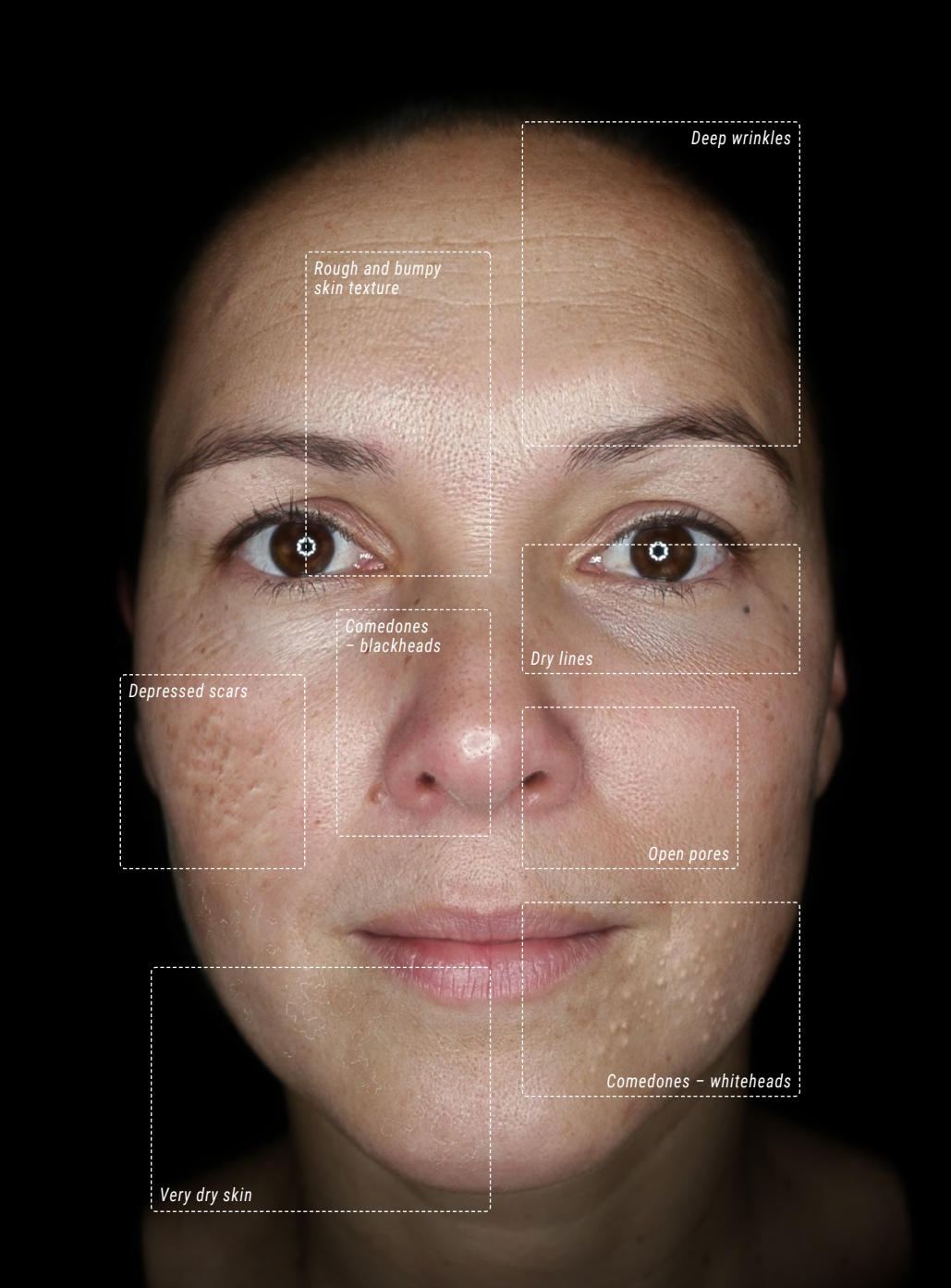
SYLTON®



Daylight

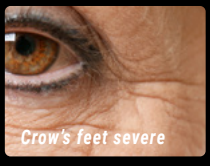
The face is illuminated with a natural and soft light coming from all directions. There is no shadow or emphasis on particular skin features. This mode provides a clear means for the overall appearance evaluation of the skin and the baseline of aesthetic skin consultations.





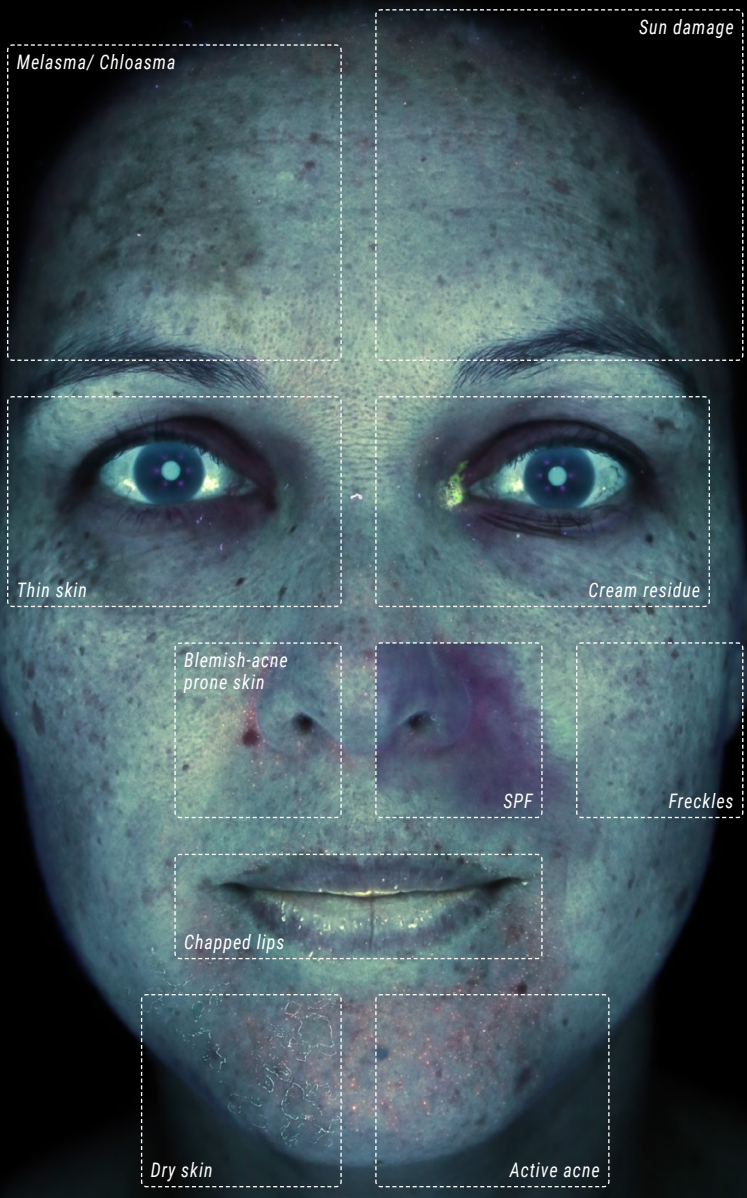
Parallel Polarised

By enhancing specular reflections of light on the surface texture of the skin, the glyphic patterns, distribution of the hydrolipid film, pore structures, fine surface textures and beginning wrinkles will be revealed in detail. This mode assists in diagnosing skin conditions related to the skin's micro-relief, while the view on deeper tissues is diminished.



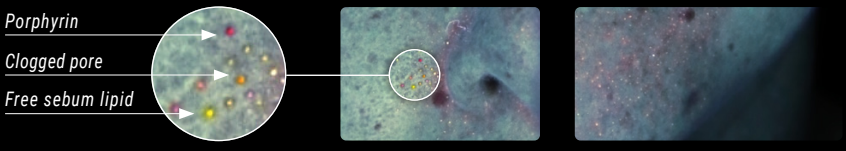
Cross Polarised

With the skin's surface shine suppressed, an unobstructed view of dermal structures, vascular anomalies and conditions, inflammations and pigmentations are revealed. Healthy young skin may appear less sharp as light is diffused by the milky epidermis. Ageing skin becomes more transparent and less diffuse; sharp contours of irregularities inside the skin will be more visible.

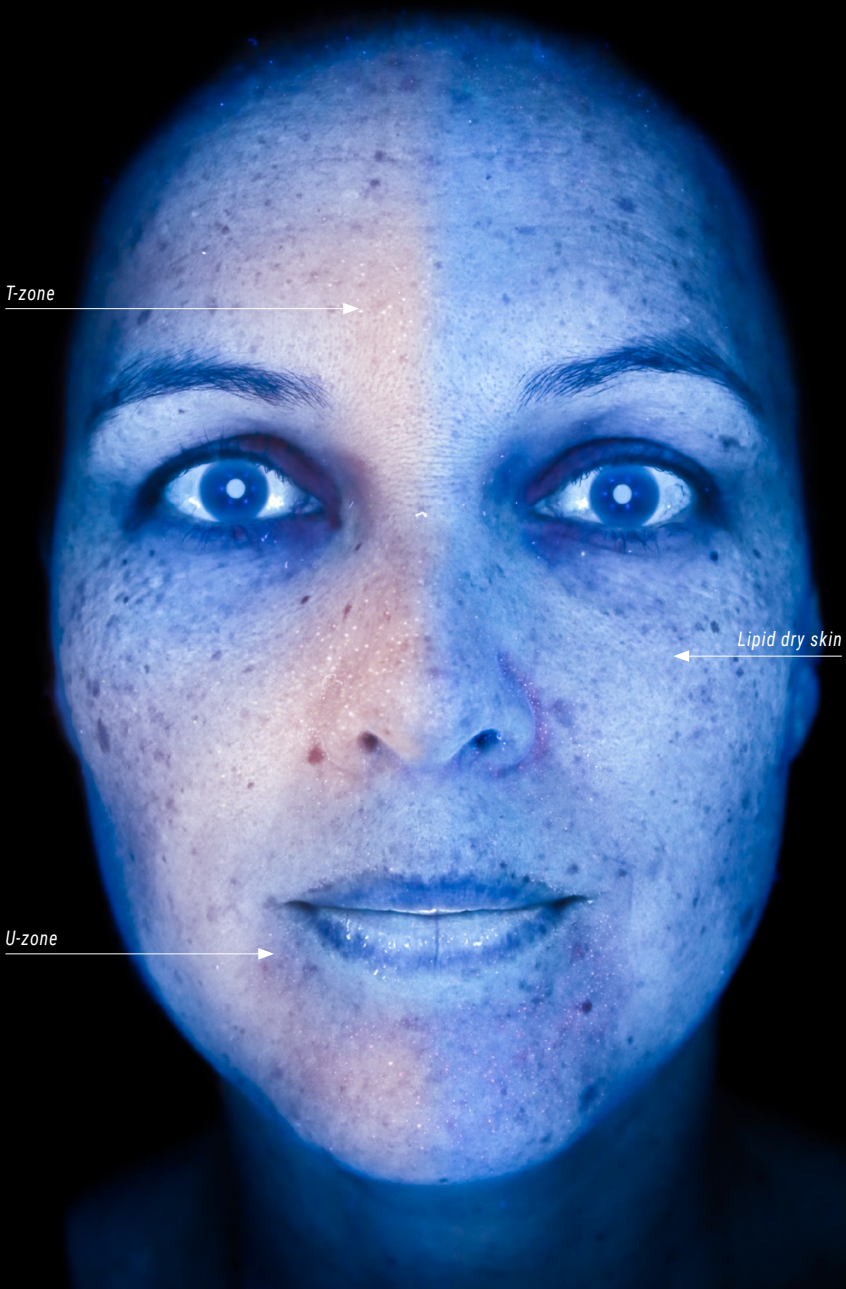


True UV

Most skin imperfections are caused by anomalies in deeper skin layers. In this mode, a harmless dose of invisible UV light is radiated on the skin. Through the interaction with different cells, vessels and microorganisms, abnormalities on both epidermis and dermis will create distinguishable fluorescence patterns which stand out from surrounding healthy skin.



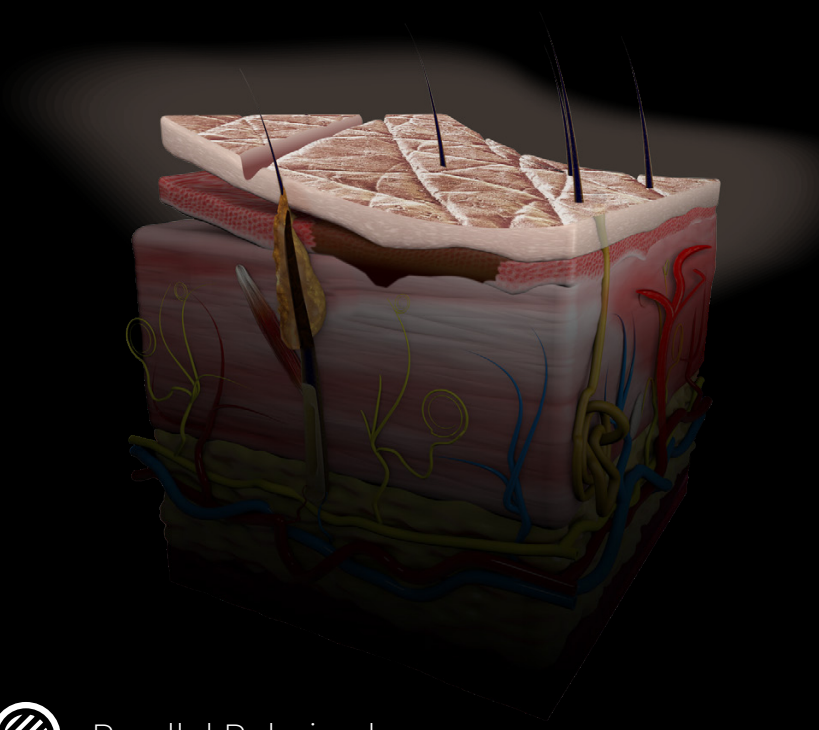
A Blemish-prone skin tends to develop Comedones and pimples. It is often oily and appears shiny due to an excessively sebum production by sebaceous glands.



Woods

In this mode the illumination of Wood's lamp is replicated. Short wavelength blue light is reflected by skin lipids. As a result, a light and pinkish colored haze appears on areas (T-zone and U zone) on which the hydrolipid film is distributed and sebaceous glands are active. Additionally, thinning skin structures and (de)pigmentation become visible.

Pigmentation structures generally become more frequent with age, or excessive exposition to UV light, but can also be present in people with fair skin.

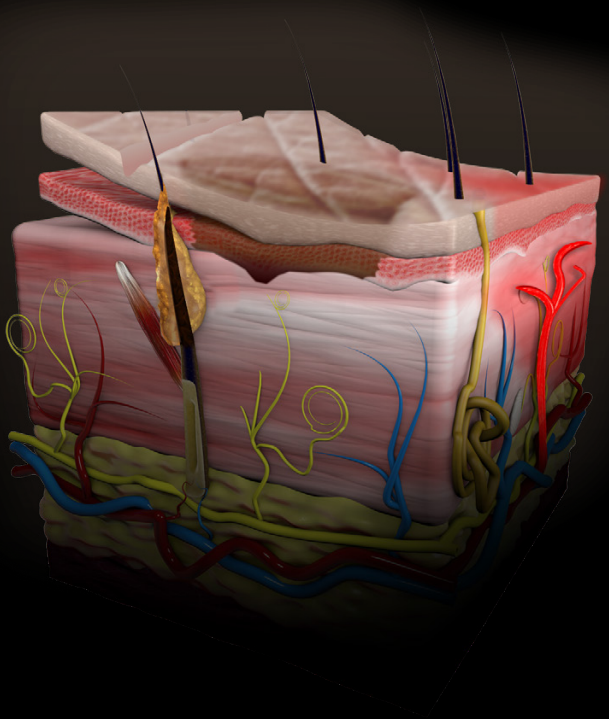


Parallel Polarised

With aging, the surface texture of the skin becomes rougher and pore structures become more apparent due to changes in the underlaying structural and functional biochemistry of dermal and epidermal components.

The parallel polarisation mode enhances glare reflections of the surface texture. In this way, the edges of pores and fine lines become more defined. The surface microrelief of the epidermis can be analysed in more detail without the distraction of information coming from below the surface like vascular and pigmentational textures and lesions.

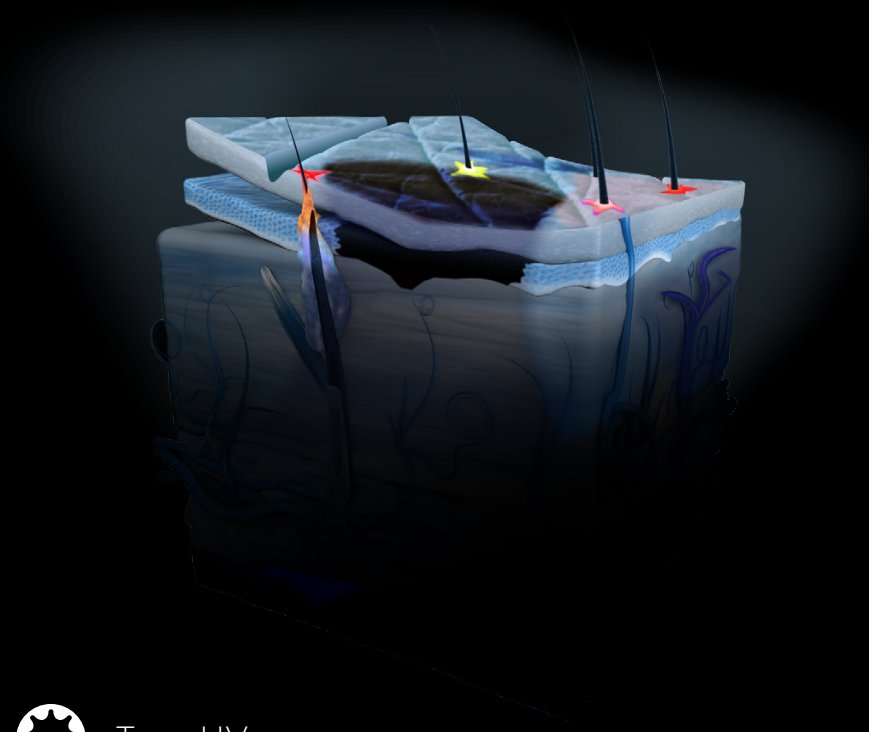
The parallel polarisation mode is also very suited for analysing scar lesions like keloid, hypertrophic and pitted scars as these are marks on the epidermal layer of the skin.



Cross Polarised

The cross polarised mode suppresses surface shine and allows a view into the skin. As the specular reflections of the skin are filtered out, a deeper view into the skin is created. Vascular and pigmentation lesions and discolorations reveal themselves clearly when the view is no longer obscured by the shiny surface of the skin.

Skin shine is easily influenced by the application of topical products on the skin, the activity of the sebaceous glands, the distribution the hydrolipid film and the structure of the corneocytes on the top layer of the skin. Therefore, the cross polarisation mode is ideal to monitor and track treatment effects on rosacea, pigmentary and capillary lesions even when a topical product has been applied on the skin.

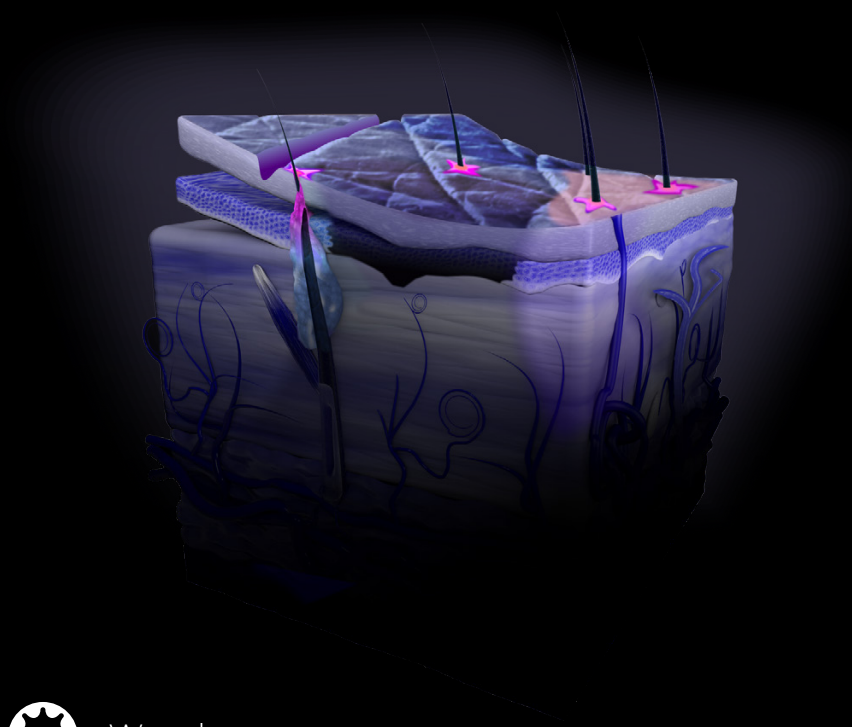


True UV

As a low dose of UV rays is projected on the skin, the cells of the skin light up via the process of fluorescence. As different skin cells have different fluorescence characteristics, visual patterns arise revealing underlaying skin conditions in great detail. Glowing clusters of skin cells on the surface demonstrate the presence of dry and flaky squames.

Even subtle hyper-pigmentary disorders such as light pigment spots, hidden discolorations and freckles that are caused by locally accumulated melanin depositions in epidermis and dermis create a high contrast from the surrounding skin as the melanin cells absorb the UV ray energy. Next to this, the health of sebaceous glands can also be analysed in the True UV mode. Healthy, open pores with active sebaceaous glands can easily be seen as white, soft yellow dots on the face.

Pores with a sluggish flow of the sebum can be identified as the color of the fluorescence changes with the oxidation of the sebaceous lipids. The presence of the skin bacterium which is linked to the pathogenesis of acne can be visualised as the Propionibacterium acnes bacteria produce a type of porphyrin which emits a bright red color when exposed to the True UV light.



Woods

The simulated Wood's mode is a modern artificial recreation of the original mercury discharge lamp where next to the invisible light emitted in the True UV mode, a narrow and subtle source with a peak at 405 nm is added. This peak is typical for the h-line of mercury which is used in the classical Woods lamp.

The Wood's illumination mode correspondents with a dark blue color which lays within the visible range of human vision. As this visible light component reflects of areas on which the hydrolipid film is present. The T-and U-zones visible as a light purplish hue appears locally.

The subtle peak of illumination also exposes area under the eyes with an impaired structural integrity as the blue light component is absorbed by the thinned skin, whereas the surrounding skin reflects the blue light component and emits a stronger fluorescence as structural proteins, collagen and elastin respond strongly when exposed to the rays of the lamp.

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