Using the AURA 3D imaging system to bring a new shared visual language to the consultation process

BY FABRIZIO VIGNOLI

Technology now allows us to go to a higher level of detail in evaluating the characteristics of patients. Up to now, the acquisition of patient images has been carried out with 2D cameras.

Unlike 2D photographs, 3D imaging devices provide a more realistic representation of a patient's face. They allow objective measurements of facial features, including the depth and location of wrinkles, sunspots, telangiectasias and pores. We can scan the quality of skin, measure aspects of the face such as lips, and simulate how the face might look after treatments for direct comparisons.

The latest available 3D imaging technology is called AURA. Compared to other equipment on the market that can capture a static image of the patient, this technology can capture up to five different emotions in the same session: neutral, angry, surprised (useful for an objective evaluation of the results with botulinum toxin), smiling (useful for both botulinum toxin and dermal fillers) and kissing (fundamental for evaluating the pre and post treatment of lip fillers).

The image quality is improved, and the speed of acquisition is rapid with an entire patient acquisition session including all emotions taking only two minutes. The skin analysis function is essential to evaluate a patient's degree of photo-ageing. This was developed by training AURA's artificial intelligence (AI) with several thousand photographs where the project developers had rated skin parameters including wrinkles, brown spots and the degree of skin inflammation.

Furthermore, the system has two useful tools. Firstly, the volume comparison between one image and another, i.e., the possibility of evaluating the quantity of material injected in a session and its duration over time. This is useful for evaluating the exact moment when to inject and not overfill. Secondly, the evaluation of the vectors between one image and another, which, for example, is essential after botulinum toxin to evaluate the effect of the treatment.

The first visit with a patient in my clinic now always includes an image acquisition by AURA. Generally, either a trained member of staff or myself, seat the patient in front of the device, with a band on their hair to avoid distortions and we carry out all the facial scans required.

Next, we listen to the patient's needs and the reasons for the visit to our clinic. It is not unusual for a patient to attend clinic desiring a dermal filler or biostimulation procedure, but their skin analysis evaluated by the system highlights the presence of poor skin texture, sunspots or telangiectasias. In this situation we would proceed to perform a laser procedure to improve these aspects and in subsequent appointments we would then perform fillers. Patients often have no idea of their degree of photo-ageing and therefore this tool is invaluable in helping them understand it.

I believe that a 3D imaging method is indispensable in a medical aesthetic and plastic surgery practice because it offers a series of advantages compared to the 2D method. Perhaps most importantly, it leads to better communication between doctor and patient regarding their facial issues. For example, AURA provides a series of objective data and simulations that allows both doctors and patients to visualise treatment results. This makes it easier to explain the effects of the procedures and allows the patient to better understand the path the doctor wants to take.
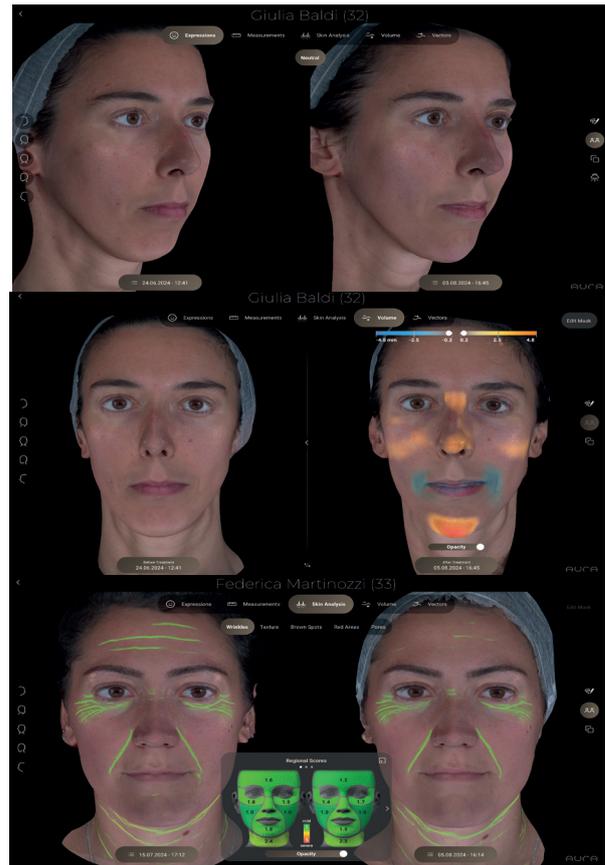
The system software is very user efficient and can be used in any clinic by both doctors and clinic staff, and all patient data is stored together for easy retrieval. This improves the efficiency of your consultation, elevating your professionalism and the quality of your follow-up appointments.

I also believe that this image acquisition method is a valuable educational tool. We can take images, perform procedures such as dermal fillers, and then compare before and after results. This continuous feedback loop helps identify where we can improve, so we can achieve better results in future treatments.

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