



icoone®

The fibers, extracellular matrix and cells observation under the action of the Multi Micro Alveolar Stimulation (M.M.A.S.) on normal and scarring tissues.

i-Tech®
INDUSTRIES
The Science of Skin



The skin is the most extensive organ of the human body. Although it is probably the organ that we take the least care of, it is of vital importance because of its sensitivity and protective action against all external agents.

For this reason, i-Tech Industries has always focused on the study of the skin structure and related changes, increasingly expanding its expertise in this area over time.

Introduction

"What happens in the subcutaneous tissue under Multi Micro Alveolar Stimulation (M.M.A.S.)?"



Pictures taken during the surgery at the Saint Martin Hospital Pessac (Bordeaux).

i-Tech Industries has studied and disseminated an important scientific study with the aim of showing the impact of Multi Micro Alveolar Stimulation (M.M.A.S.) on normal and scarring tissues.

This study - conducted by i-Tech Industries in collaboration with Dr. Jean-Claude Guimberteau, Dr. Elias Sawaya and the

Saint Martin Hospital Pessac (Bordeaux) team - was carried out during a surgery, under regional anesthesia, on a patient who gave his consent to this demo. It was performed with an endoscope and a 3D camera to evaluate the skin structure, both **internally** and **externally**.

MULTI MICRO ALVEOLAR STIMULATION (M.M.A.S.)

Observing the skin from the outside, there was a great curiosity to go deeper and take a journey under the skin stimulated with the Multi Micro Alveolar Stimulation (M.M.A.S.). This demo shot in vivo demonstrates better than images the unique mechanical action of mobilization in 3D dimension of icoone® on cutaneous and subcutaneous structures.

The unique specificity and technology provided by icoone® is the full contact with the skin without the use of an intermediate gel.

Above all, icoone® works on the skin by executing 3D movements - rather than 2D - consistent with the conclusions of the new subcutaneous explorations performed with intratissular endoscopes.

It stimulates the surface of the skin and the propagation of the microstimulations can be observed not only under the headpiece, but also on more distant tissues.

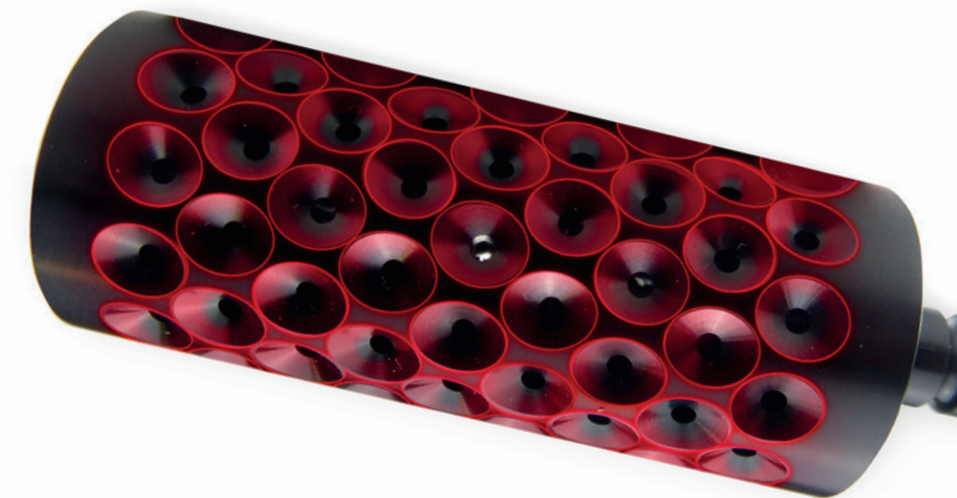
ROBO[®]DERM

Roboderm® represents a new concept of technology for skin treatment. This patented technology works differently from any other technology and device available on the market today, thanks to the microstimulators.

The microstimulators rotate forward, backward, inward and outward to release multiple skin stimulation depending on the desired goals. The micro-hole matrices designed on the surface of the microstimulators (Roboderm®) work and stimulate the mechanical behavior of the subcutaneous fibrillar network.

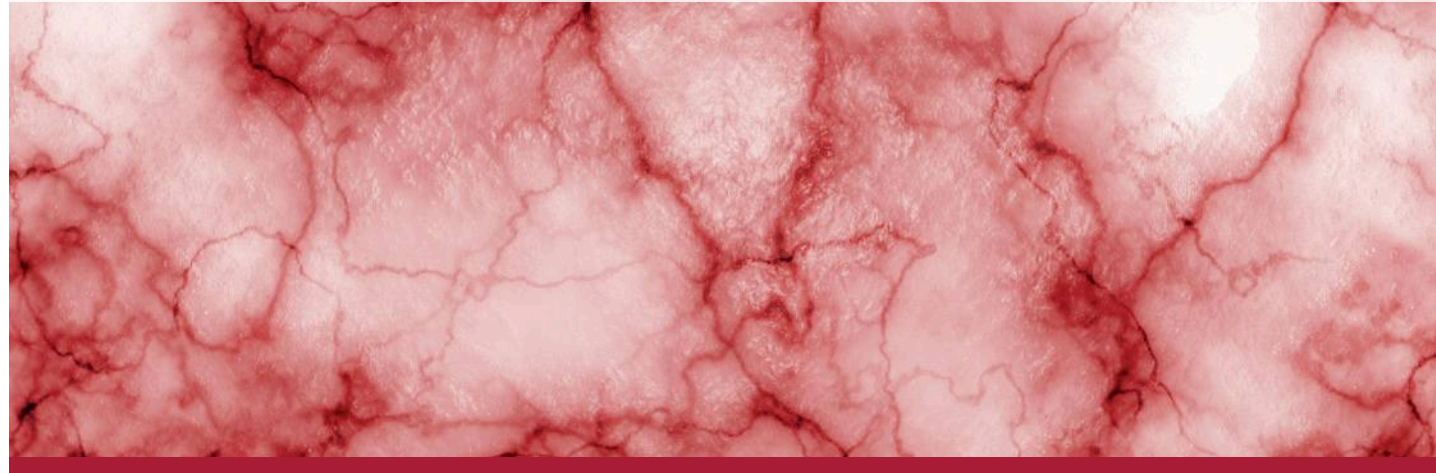
The microstimulators induce with their movements up to **21,600 microstimulations per minute** on the skin, and the connective tissue fibers that delimit microvacuoles transmit this stimulation to deeper tissues.

This specific action is called **Multi Micro Alveolar Stimulation (M.M.A.S.)** and it allows the delivery of a more efficient, gentler action for the client who receives the treatment and for the operator who applies it.



MULTI MICRO ALVEOLAR STIMULATION (M.M.A.S.)

Superficial effect on a normal skin **VASCULARIZATION**



When we focus on the polyhedral skin structure, we can clearly see the vasodilation, papillary vessel movement and tissue oxygenation. We can also see the colour difference (redder) in the treated skin area as compared to the untreated skin area.

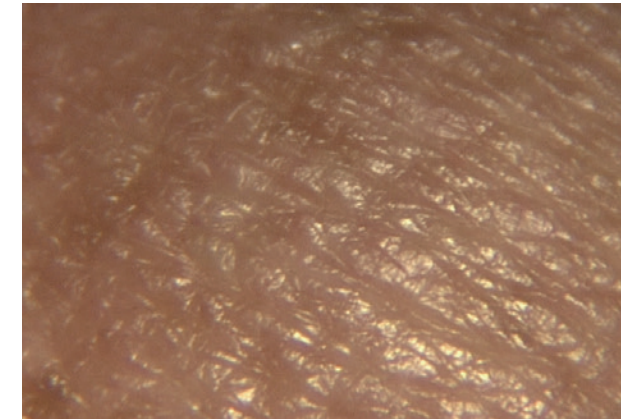
The Multi Micro Alveolar Stimulation (M.M.A.S.) is improving the blood flow.

The Multi Micro Alveolar Stimulation (M.M.A.S.) not only affects the blood, but it also has an incredible effect on the polyhedral

skin structure. We can see these results by comparing untreated and treated skin a few minutes after the treatment.

Untreated skin is more stressed, while treated skin is smoother, its polyhedral structure is relaxed and lighter. This destressing action of icoone® also encourages the gymnastics of the cutaneous polyhedral of the skin with regard to the dermis and the hypodermis.

Superficial effect on a normal skin **VASCULARIZATION**



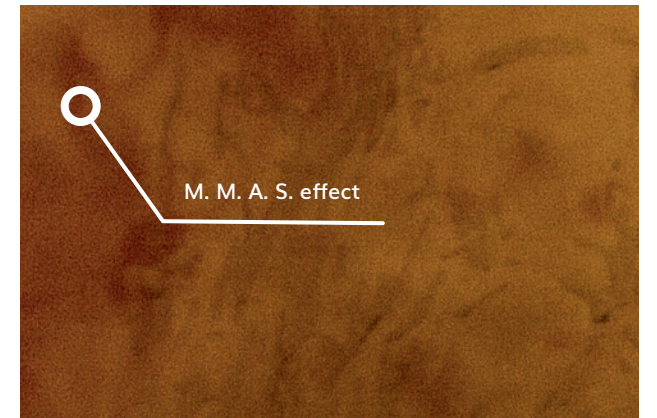
BEFORE

Untreated skin is more stressed.



AFTER

Treated skin is smoother, its polyhedral structure is relaxed and lighter.

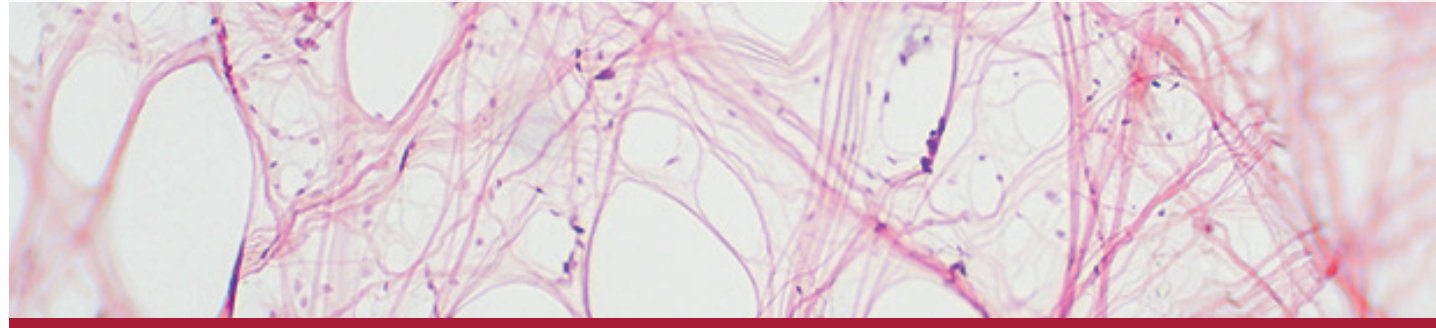


Superficial endoscopy: the skin under the Multi Micro Alveolar Stimulation (M.M.A.S) effect is more vascularized (red) than the untreated skin.

These images were extracted from the video made in surgery with icoone® device

MULTI MICRO ALVEOLAR STIMULATION (M.M.A.S.)

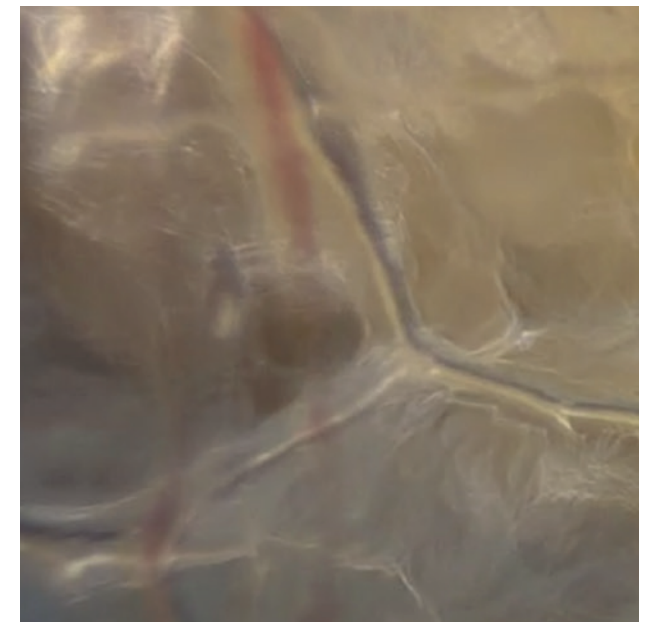
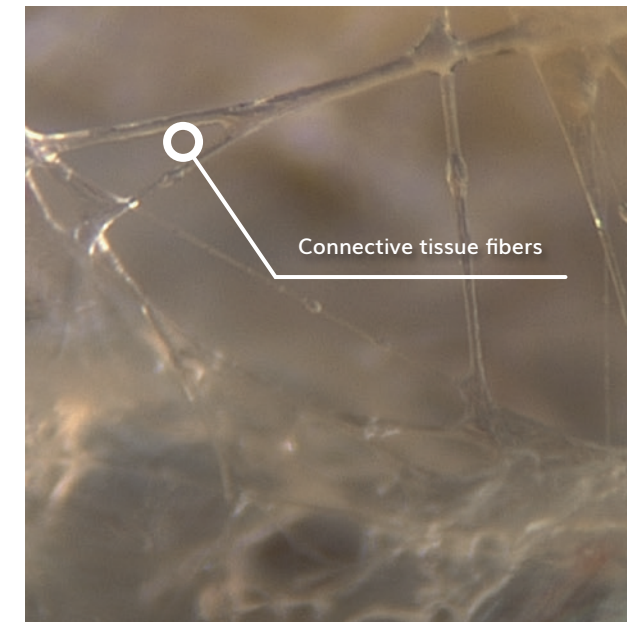
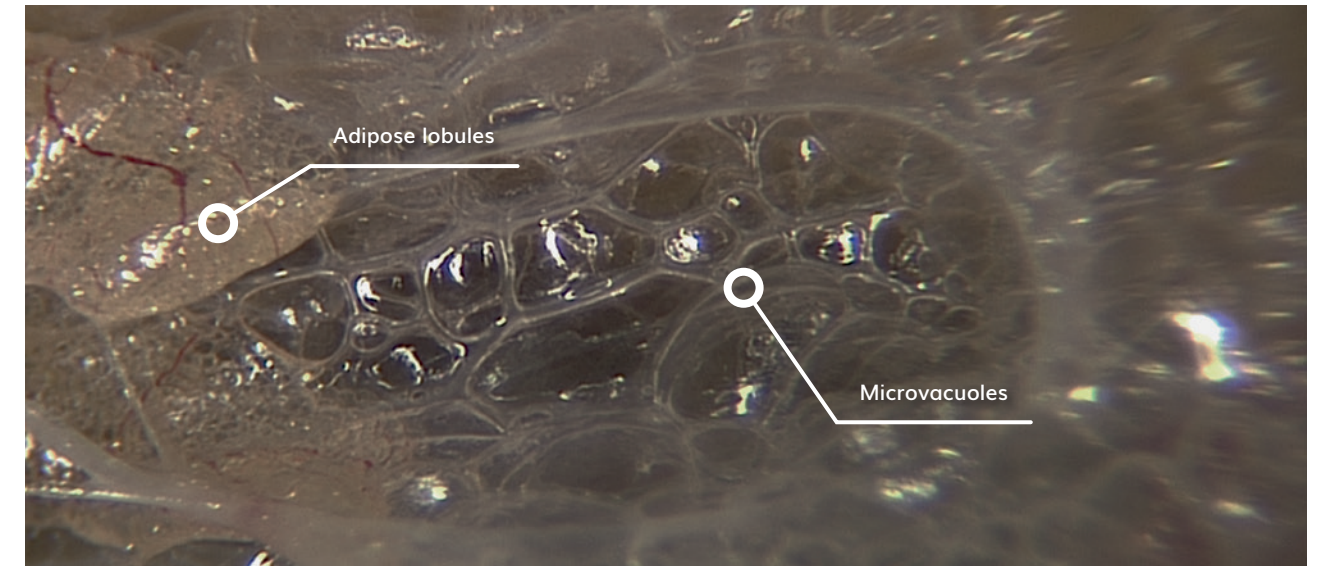
Effects on the subcutaneous tissue in a normal skin **CONNECTIVE TISSUE FIBERS**



The action of the icoone® device is even more remarkable when the skin has been incised. Everything is moving under the mobility effect of the icoone® device: the epidermis and the gymnastic of its grooves, the papillary vessels of the vertical dermis, the lobules of the hypodermis which are tossed to the rhythm of the machine and the muscular aponeurosis, which also participates in this commotion. Everything is connected and moving. When we bring the endoscope closer, the architecture of the material is revealed, and all the fine and irregular fibrillary structures are agitated by the shuddering of icoone® mechanics, the

polyhedral microvacuoles between the fibers absorb vibrations by deforming slightly the collagen frames, shaping them, exteriorizing themselves, testifying to their distension, their mobility and their mechanical harmony. Even the slightest fiber movement can be sensed with 3D observation. The cells sheltered by the fibrillar network are also shaken, both in groups and individually. It moves the pericellular framework, the cells and the energy carrying blood vessels.

Effects on the subcutaneous tissue in a normal skin **CONNECTIVE TISSUE FIBERS**



These images were extracted from the video made in surgery with icoone® device

MULTI MICRO ALVEOLAR STIMULATION (M.M.A.S.)

Effects on the subcutaneous layer in a **SCARRING TISSUE**

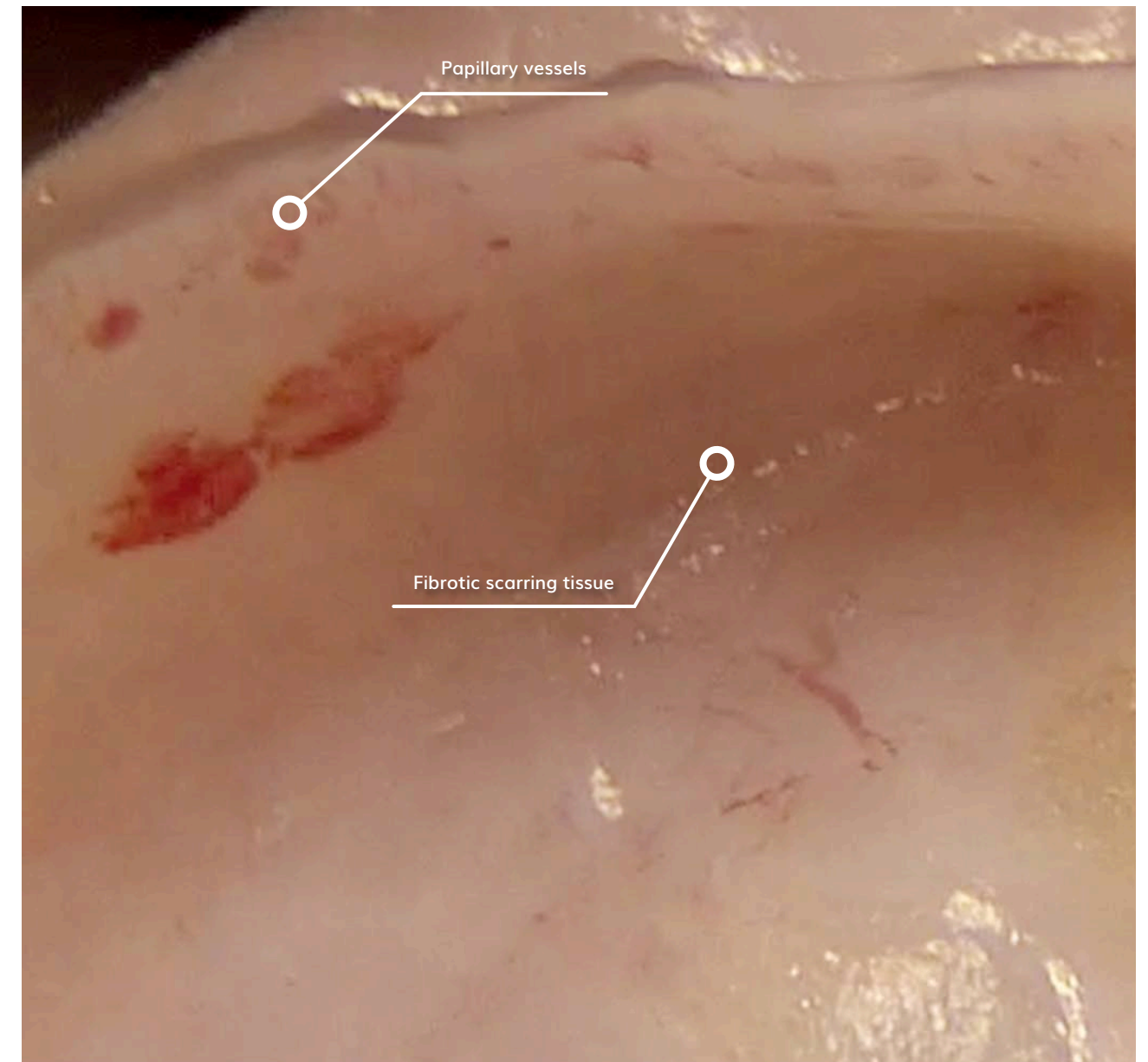


How is the Multi Micro Alveolar Stimulation (M.M.A.S.) working on and under the surface of scar tissue?

During the subcutaneous visualization without stimulation, clearly there is no movement.

We can see that the fibrotic tissue linked to the scar is fixed.

Effects on the subcutaneous layer in a **SCARRING TISSUE**



These images were extracted from the video made in surgery with icoone® device

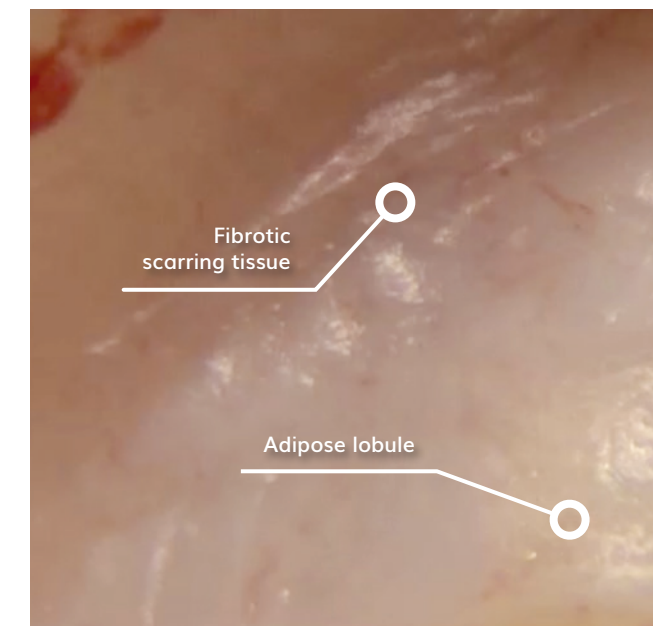
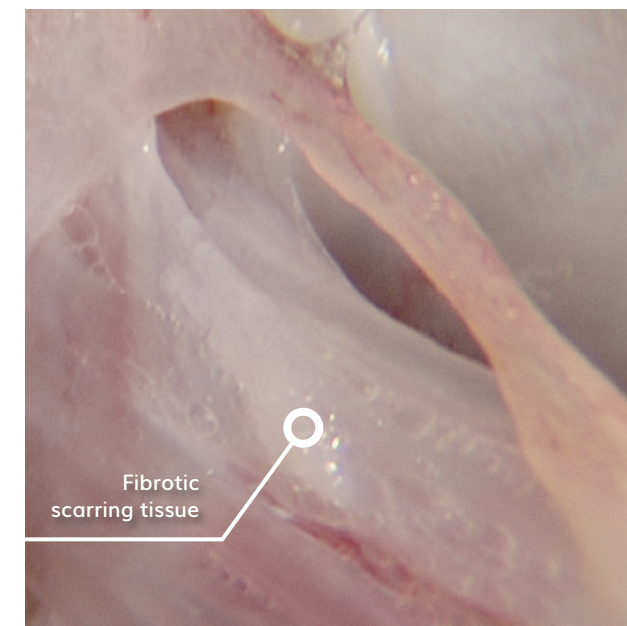
As soon as icoone® was turned on, the effects on the subcutaneous tissue were incredible: superficial movement and propagation on all superficial areas; 3D stimulation in all directions; papillary vessel movement (up and down); fibers movement, adipose lobules movement, cells movement.

Everything started to move thanks to the propagation of the microstimulations.

All of that is translated into a mechanical transmission from the superficial area to the deeper and also lateral tissues. Everything is connected.



Effects on the subcutaneous layer in a **SCARRING TISSUE**



These images were extracted from the video made in surgery with icoone® device

MULTI MICRO ALVEOLAR STIMULATION (M.M.A.S.)

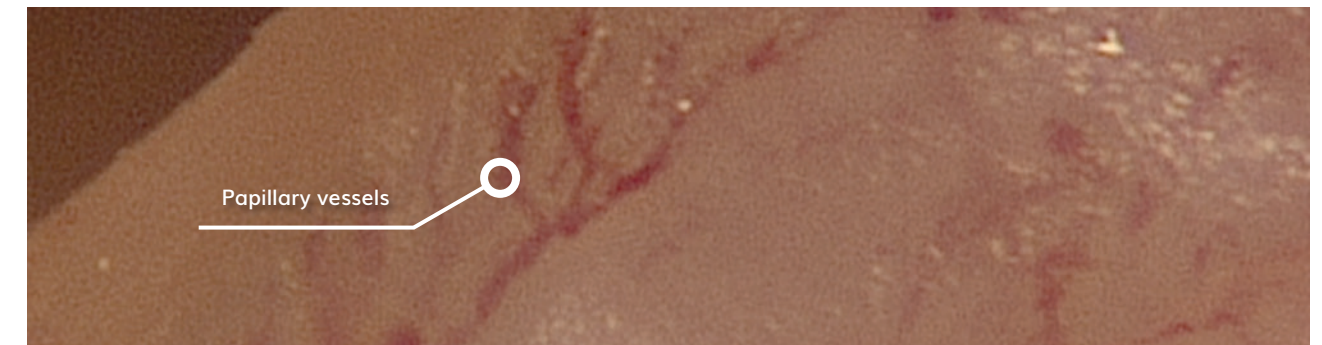
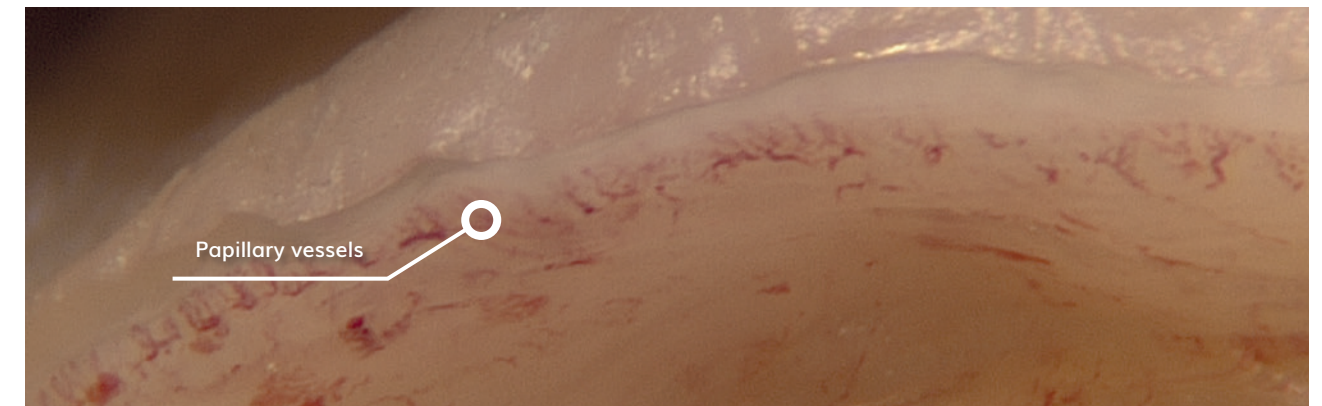
Effects on the subcutaneous layer in a scarring tissue
VASCULARIZATION



When we address a very hard tissue such as a fibrotic scar tissue, the stimulation is not aggressive for the tissue and we can see that it is possible to reach the scar lesion borders.

We can observe a clear vasodilation on the papillary vessels which suggests improved oxygenation.

Effects on the subcutaneous layer in a scarring tissue
VASCULARIZATION



These images were extracted from the video made in surgery with icoone® device

MULTI MICRO ALVEOLAR STIMULATION (M.M.A.S.)

Effects on the subcutaneous layer in a scarring tissue **CONNECTIVE TISSUE FIBERS**



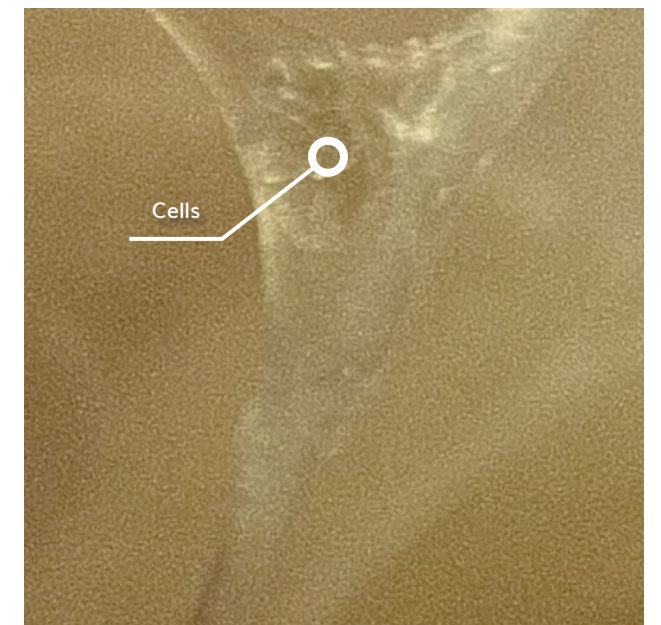
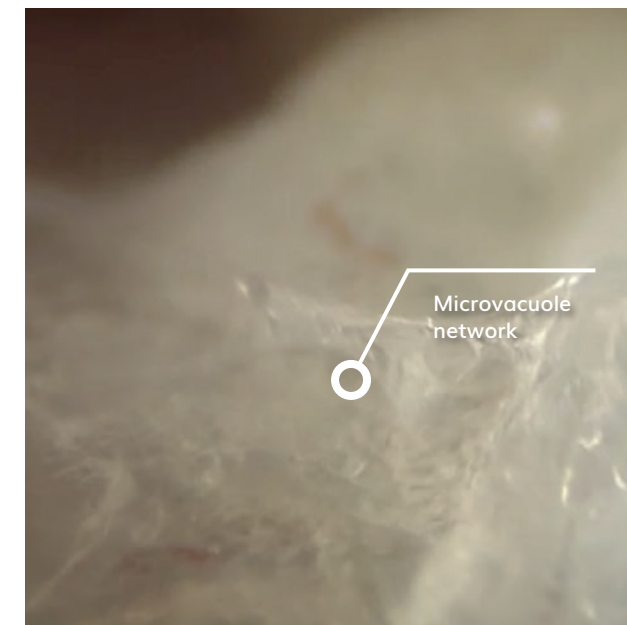
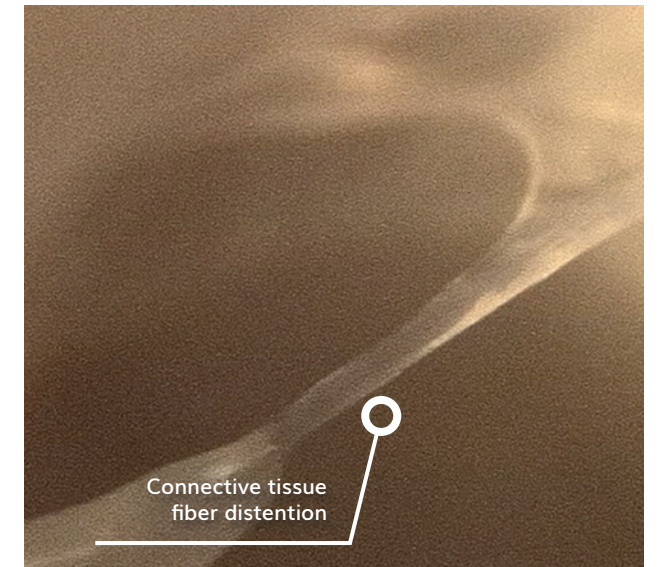
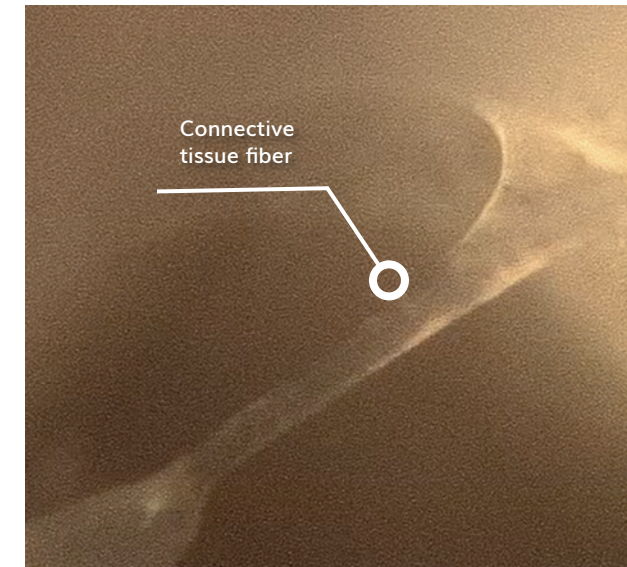
The fibers (fibrotic gymnastics) change their structure, stretching and expanding their length, improving their shapes. They also change their diameter.

These changes are translated into collagen distension and microvacuole network is also influenced.

This mobilization is transmitted to each fiber in all three dimensions.

This is the transmission of a mechanical action creating an increased mechanical behaviour.

Effects on the subcutaneous layer in a scarring tissue **CONNECTIVE TISSUE FIBERS**

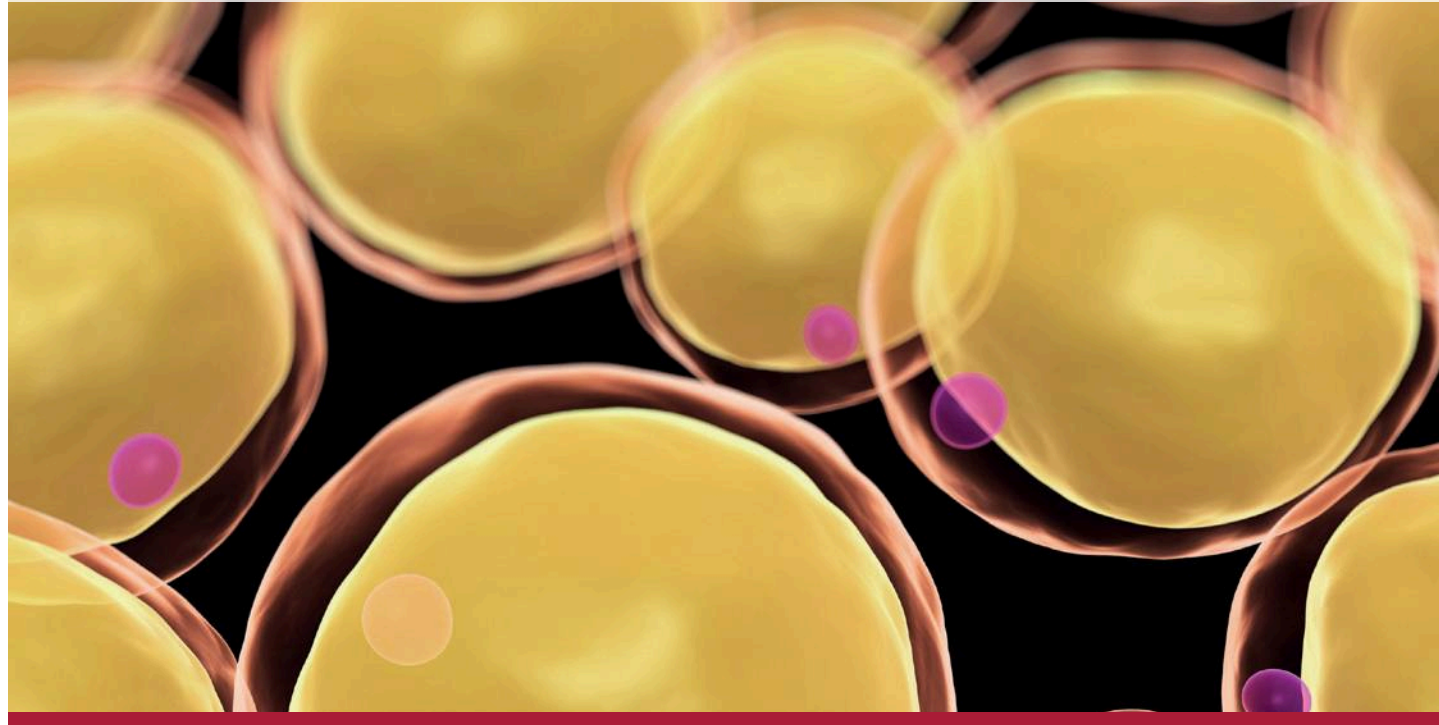


These images were extracted from the video made in surgery with icoone® device

MULTI MICRO ALVEOLAR STIMULATION (M.M.A.S.)

Effects on the subcutaneous layer in a scarring tissue

CELLS

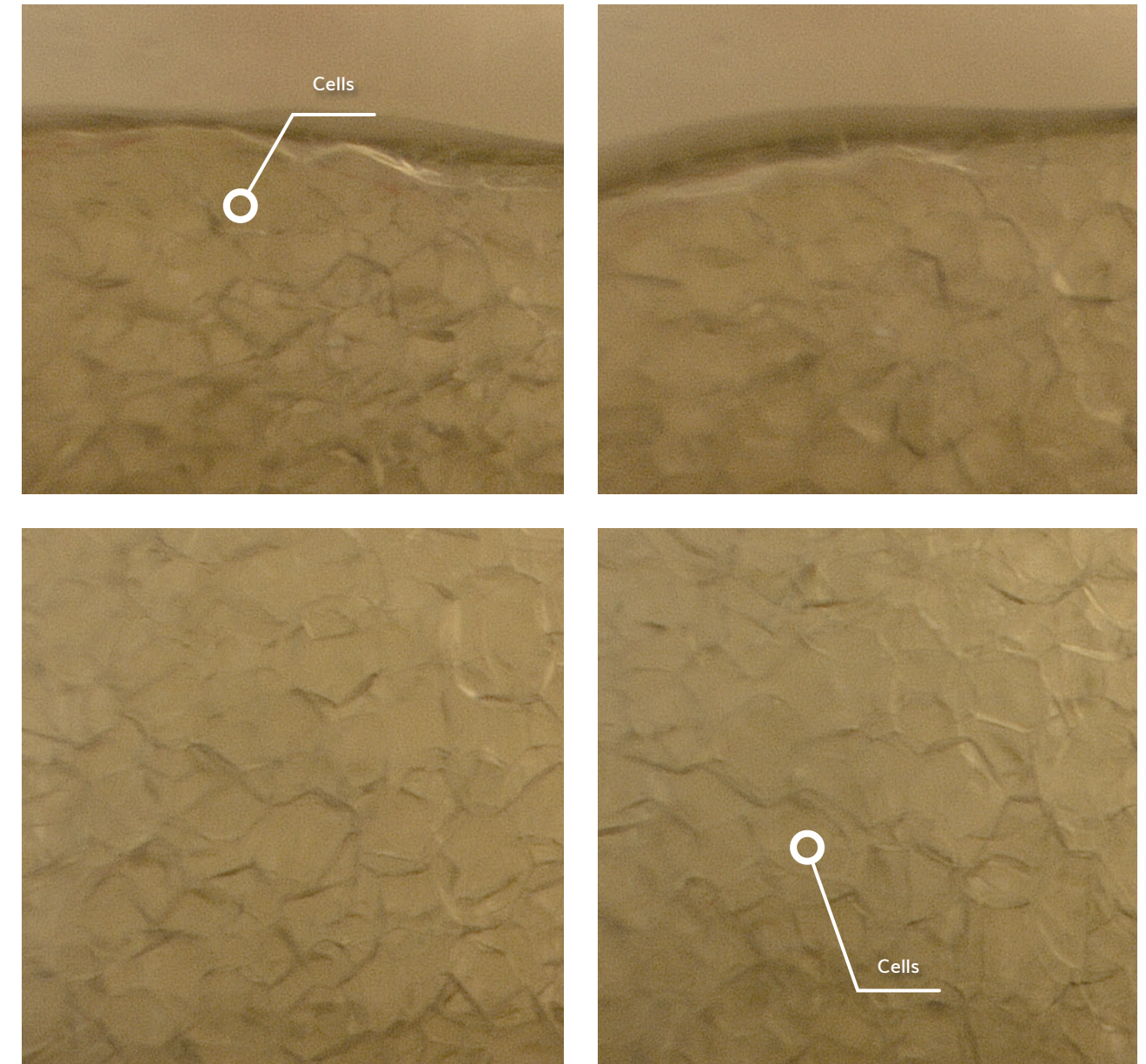


The same happens to cells. Cells are linked with this mechanical behaviour, they can change slightly in shape and this **microstimulation** could have an impact on protein production.

This is the transmission of a mechanical action which increases the mechanical behaviour.

Effects on the subcutaneous layer in a scarring tissue

CELLS



These images were extracted from the video made in surgery with icoone® device

The benefits of Multi Micro Alveolar Stimulation (M.M.A.S.)

It is clear that the propagation of the mechanical action through the fibrillar network is passed onto the other tissues, fatty lobules, veins, arteries, nerves, lymphatic system. In fact the microstimulation is able to stimulate the smallest part of the tissues from the surface to the deeper tissues.

The Multi Micro Alveolar Stimulation (M.M.A.S.) acts at all levels, improving all the capacities of the fibrillar frame, and can be efficient to

improve also the functional recovering of the scarring tissue.

The benefit of the 3 dimensional icoone® treatment then takes all its meaning.

The microstimulations allow the recreation of conditions of flexibility which enable movement and restore balance.



"The ultimate technology for skin treatment: Roboderm®"

THE SCIENCE BEHIND ROBODERM®



Dr. Guimberteau, Dr. Sawaya and the Hospital team.

Conclusion: The effects of Multi Micro Alveolar Stimulation (M.M.A.S.), both superficial and subcutaneous, on both normal and scar tissue, can be demonstrated after skin incision.

These effects involve increased mobility of the epidermis, the dermis, papillary vessels, fatty lobules, fibers and the induction of cell movement.



Picture taken during our last scientific meeting.

And the research is always ongoing.
i-Tech Industries Scientific Committee Meeting takes place every year with the aim of developing innovative solutions for the skin

care and quality, based on the new research and scientific studies conducted by its skin expert team.



The Science of Skin

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