LOOKING INTO SKIN FOR BETTER RESULTS

VivoSight

OCT Image-Guided Laser Treatments
Better Information – Better Outcomes

OCT elevates patient care through high resolution imaging of skin sub-structures and vascular networks

Enhanced Treatment Capabilities
- Assessment of unclear micro-anatomy and pathology
- More confidence with assertive treatment protocols
- Real-time, intraoperative diagnosis for new decision making
- More control to lower the laser therapy learning curve or explore new frontiers

Elevated Patient Interaction
- Effective communication tool between physician and patient
- Documentation of therapy and healing process
- Opportunity for practice differentiation

Advanced Research Capacity
- New application development
- Detection of skin changes

VivoSight Optical Coherence Tomography (OCT)
Non-invasive, no-pain, high resolution: < 10 microns
Real-time measurements: pre-, peri-, and post operatively
Imaging depth: > 1 mm

“OCT will be the greatest addition to the laser clinician’s armamentarium against scars since the fractional ablative laser.”
Jill Waibel, MD | Miami, FL

“You can’t take this thing away from me anymore. Also, in case of doubt, VivoSight comes out.”
Jason Pozner, MD | Boca Raton, FL
See Tissue to Treat Better and Safer

Already indispensable in Ophthalmology, OCT provides added control and confidence

For years already, OCT has been used to assess ophthalmic pathology and guide advanced therapy. Its high sensitivity and specificity is also applied in skin cancer evaluation and to monitor treatment progress.

Through new user-friendly features, VivoSight OCT can now be employed in an aesthetic setting and, more specifically, in cases where extracting additional information is crucial for an enhanced outcome:

**Skin Structure and Morphology**
- Fibrotic skin disorders (scars, striae, collagen variations etc.)
- Sub-surface anomalies, pre-malignant lesions, BCC etc.
- Safe and danger zones
- Epidermal thickness

**Vascular Networks**
- Identification of superficial vascular plexus & papillary dermis
- Analyzing underlying, occult vascular patterns (size, depth, location, density)

**Adnexal Structures**
- Assessment of skin healing capacity from distribution of hair follicles and glandular structures, also intra-operatively
- Pore densities

**Skin Surface Texture**
- Documentation of change in skin roughness and quality after resurfacing procedures
- Assessment of depth of wrinkles and other surface features
Precision Scanning for Precision Treatment

For enhanced personalized treatments, VivoSight uncovers strong individual skin and pathology variations

Skin varies tremendously from patient to patient and site to site, even on the same patient. Added pathology exacerbates this situation.

For specific cases, typically only routine laser parameters are often selected, whereas a more effective treatment may be possible.

VivoSight enables new capabilities for patient assessment and information gathering, in order to intervene more effectively.

Do you know where you are going without a map?

For demanding outcome goals, laser and other treatments can disappoint. VivoSight provides an opportunity to evolve from estimate-driven to data-driven therapy as in cases like these:

<table>
<thead>
<tr>
<th>Application</th>
<th>OCT Value</th>
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<tbody>
<tr>
<td>Deep fractional lower eyelid resurfacing</td>
<td>Periorbital OCT-mapping identifies depth of orbicularis oculi muscle for treatment staging</td>
</tr>
<tr>
<td>Remaining, persistent vascular lesions</td>
<td>Assess underlying pathology for better treatment settings</td>
</tr>
<tr>
<td>No under- or over treatment of thin scars</td>
<td>Match treatment to locally varying depth of scars</td>
</tr>
<tr>
<td>Intraoperative real-time imaging</td>
<td>Assess local micro-anatomy during cases for new decision making</td>
</tr>
<tr>
<td>Data-driven treatments of striae</td>
<td>Match treatment to locally varying depth of stretch marks and underlying vascular patterns</td>
</tr>
<tr>
<td>(Very) Deep resurfacing, aka laser facelift</td>
<td>Identify locally varying endpoints, safe- and danger zones</td>
</tr>
<tr>
<td>Off-face laser &amp; light applications</td>
<td>Assess skin morphology and adnexal structure density to guide treatment approach</td>
</tr>
<tr>
<td>Unclear pathology cases</td>
<td>Use as a probing tool gives better understanding of clinical context</td>
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</table>

Skin thickness varies with age, race, gender, and degree of photo damage.

An up to 300 % difference in skin thickness from individual to individual warrants the concept of facial mapping for demanding applications.

More Value For Your Laser with OCT

Deep lower eyelid resurfacing

Periorbital OCT-mapping identifies depth of orbicularis oculi muscle.

Ablative ProFractional Er:YAG laser resurfacing can be adjusted to depth of muscle or per physician preference.

VivoSight-OCT determines the extent of fibrotic and vascular anomalies and as a function of location.

Fractional Er:YAG laser parameters are set to match the depth of the scar. The Nd:YAG laser or BBL are set to target larger vessels first.

OCT imaging of orbicularis oculi muscle (arrow) enables precise measurement of depth. (Upper & lower eyelids shown respectively.)

No over- or under treatment of scars, stretch marks etc.

Clinical appearance of three distinct scars is similar, but OCT reveals significant differences in sub-surface scar thickness and vascularity, resulting in different treatment protocols. (Images courtesy of Jill Waibel, MD.)

Intra-operative use of OCT to guide full-field (very) deep ablation in perioral area. Managing risk and uncertainty.

During full-field Contour TRL Er:YAG perioral resurfacing, deep wrinkles may still be visible after several passes.

After 800 µm of Er:Yag laser ablation, it is seen (during intra-operative OCT measurements) that at least 700 µm of remaining skin is left and at 300 µm depth, capillary bleeding may be expected. An additional resurfacing of 300 µm was deemed safe and wrinkles disappeared. (Images courtesy of Jason Pozner, MD.)
More Value *(continued)*

Clearing stubborn, residual vascular lesions

Comprehensive vascular mapping as a factor in alternative treatment approaches.

OCT characterized vascular lesions reveal different vascular patterns than originally thought. New information on size, depth and density lead to improved treatment outcomes.

Vascular lesions can be resistant to laser treatments or require many repeats to clear. OCT images reveal vessel morphology that is highly variable from patient to patient in terms of vessel diameters and depths. OCT can be used to precisely measure vessels, enabling treatments to be tuned to specific lesion characteristics for better outcomes and to find out why a lesion is not responding so that action can be taken directly. (Images courtesy of Jill Waibel, MD.)

Targeting vessels with a depth-adjustable laser

Quick information on depth of vessels leads to convenient eradication.

For small to medium size vessels, a depth-adjustable laser’s impact quickly seals small to medium size vessels.

Large vessel resistant to treatment (far left, middle) was scanned with OCT. The vessel diameter and depth was measured from the OCT image (top right). Based on this data, vessel was treated with a depth-adjustable laser resulting in complete clearance both clinically (2nd left) and confirmed with OCT (bottom right). (Images courtesy of Jason Pozner, MD.)

Off-face laser & light applications

OCT revealed different skin characteristics that require a cautious therapy approach.

VivoSight OCT reveals differences in skin layer thicknesses, vascular supply and adnexal structure distribution. Therapy options have to be adapted accordingly.

Facial skin (e.g. cheek) shows dense superficial vessel plexus (far left) and high hair follicle count (2nd left – dark spots). Compare with skin of neck with low vessel density (3rd left) and low hair follicle count (far right) indicating much more cautious treatment parameters.
Practice Distinction and Revenue Opportunity

A common business model makes VivoSight an attractive investment opportunity

As with any new and advanced technology, VivoSight creates value for the innovative practice along several dimensions:

- Patient pays a VivoSight scan fee for premium treatments
- Patient reviews of premium results from unique cases
- Practice distinction and PR opportunity in local market

Integrating VivoSight into the daily workflow

A practical workflow is for a physician assistant to OCT-scan the patient in areas where more information is needed or are sites of particular concern. The physician then uses this information, often in the form of a map, for effective therapy planning:

- VivoSight OCT-scans enhance the communication between patient and physician during the consultation
- Underlying issues and recommended treatments are better understood
- In alignment with other high resolution imaging technologies, such as Confocal Microscopy, a fee is generally paid for the advanced treatment options.

My patients love being scanned. They appreciate seeing what I am talking about and it is easier for a productive consultation. I use OCT where it has a high chance to enhance outcomes. The patient is generally also willing to pay an additional fee for this service.

Jason Pozner, MD | Boca Raton, FL
## DIAGNOSTICS & THERAPY = SUCCESS

The diagnostic precision of VivoSight OCT matches the precision of the JOULE platform’s therapeutic capabilities. Both systems synergize to exploit each other’s performance for new applications being developed. It is the beginning of a new era in patient care and solidifies the commitment that **Sciton Owns Skin.**

### VivoSight OCT System

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
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<tbody>
<tr>
<td>Wavelength</td>
<td>1300 nm</td>
</tr>
<tr>
<td>Type</td>
<td>Swept-source FD-OCT</td>
</tr>
<tr>
<td>Scan mode</td>
<td>2D or 3D</td>
</tr>
<tr>
<td>Range</td>
<td>150 nm</td>
</tr>
<tr>
<td>A-line rate</td>
<td>20kHz</td>
</tr>
<tr>
<td>Scan width</td>
<td>up to 6mm in each axis</td>
</tr>
<tr>
<td>Axial resolution</td>
<td>&lt; 10 µm (in tissue)</td>
</tr>
<tr>
<td>Pixel size</td>
<td>4.4 µm isotropic (tissue)</td>
</tr>
<tr>
<td>Beams</td>
<td>4</td>
</tr>
<tr>
<td>Depth of focus</td>
<td>1mm</td>
</tr>
<tr>
<td>Lateral resolution</td>
<td>&lt; 7.5 µm</td>
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VivoSight Indications for Use: VivoSight is a Multi-Beam Optical Coherence Tomography (OCT) system indicated for use in the two-dimensional, cross-sectional, real-time imaging of external tissues of the human body. This indicated use allows imaging of tissue microstructure, including skin, to aid trained and competent clinicians in their assessment of a patient’s clinical conditions.