LINE RAISE
Skin Regeneration

Swiss4med
SKIN REGENERATION
HETEROLOGOUS COLLAGEN TYPE I
CHRONO & PHOTO-AGING
causes and histological characteristics

- CHRONO-AGING is due to the physiological aging as time goes by.
- PHOTO-AGING is premature aging of the skin caused by repeated exposure to ultraviolet radiation (UVB and UVA) primarily from the sun, but also from artificial UV sources.
The skin and UV rays

The skin can repair many of the mutations caused by UV but if the damage is too great, the affected cells may die. Alternatively, the damage in the skin is often not repaired perfectly and mutations occur. This results in premature aging.
PHOTO-AGING cause a number of clinical and histological complex mutations.

Dermal hypertrophy is the most important between these.
Dermal biostimulation is a medical treatment. It consists of carrying out a number of injections into the derma to deliver active substances in order to promote collagen production. Between these the most commonly used are:

- hyaluronic acid (HA)
- amino acids
- polynucleotides
- vitamins
- PRP
- calcium hydroxylapatite (CaHA)
- poly-L-lactic acid (PLLA)
WHAT HAPPENS RIGHT NOW
WHAT HAPPENS RIGHT NOW

OLD FIBROBLAST

extracellular matrix
IS THERE ANY NEWS?

Yes!
IS THERE ANY NEWS?

from cutaneous biostimulation to tissue bioregeneration

80s

2015
From Dermatology to Aesthetic Medicine. «Condress», heterologous collagen type I, has been applied over the last 30 years by numerous MD in the field of ulcers, complicated wound and vascular surgery with excellent results.

It is the same product. What is new is the shape: from pad to powder.
WHAT IS IT

“Condress” commonly used for wounds
Linerase is equine type I collagen. It is exactly the same molecule of the well known “Condress” that was manufactured in a different way: cold micro miniaturization. All original chemical, biochemical, immunological characteristics and safety profile were maintained.

Because of that we have the same characteristics of this protein.

So, this special type of collagen allows:

- fibroblasts proliferation
- fibroblasts and monocytes activation
- platelets and coagulation factors activation
- neoangiogenesis support
No alteration of collagen’s fibers is made during cold micro miniaturization process.
Each pack contains 1 glass vial of 100 mg of pure equine collagen and user manual.
HOW TO PREPARE

Linerase must be brought in suspension immediately before use in WFI (Water For Injection) in the ratio of **100 mg.** collagen (1 vial) / **5 ml.** WFI.
PRODUCT STABILITY

After 21 days product stability is the same.

Preparation time

Within 21 days
Warning

This is just to demonstrate product stability. When opened must be used immediately.
HOW IT WORKS
HOW IT WORKS

COLLAGEN TYPE I

GROWTH FACTOR

OLD FIBROBLAST

NEW FIBROBLAST

NEW FIBROBLAST

NEW FIBROBLAST

COLLAGEN TYPE III
It is in progress a study carried on by University of L'Aquila. Preliminary results are positive, as a matter of fact they highlight that:

1. after 24/28 hours was detected a new collagen production
2. after 72 hours was confirmed the ability of collagen in stimulating an orderly fibroblastic proliferation
3. these new fibroblasts produce new collagen
HISTOLOGY

from infiltration

after 6 hours

after 15 days
HISTOLOGY

from infiltration

after 6 hours   after 15 days
HISTOLOGY

from infiltration

after 6 hours

after 15 days
Linerase is a class III medical device CE marked.

It was carried out by independent lab a biological evaluation aimed to identify:

1. skin irritation
2. allergy sensitization
3. cytotoxicity

On the basis of the results, interpreted according to ISO 10993-10, the test item “COLLAGEN POWDER” must be considered:

• NOT IRRITANT
• IT DOES NOT CAUSE ANY ALLERGIC REACTIONS
• NOT CYTOTOXIC
INfiltration Technique
INfiltration Technique

4 MM Needle 30G or 32G
INfiltration Technique

2 cm

4 mm Needle 30G or 32G
INFILTRATION TECHNIQUE
INfiltration Technique

Face

bumps  0.10 ml
range   2-3 cm

bumps  0.10 ml
range   1-2 cm
INfiltration technique

neck & décolleté

bumps 0.10 ml
range 2-3 cm
INfiltration Technique

Hands

Bumps: 0.10 ml
Range: 2-3 cm
PRODUCT RIGHT QUANTITY

- that's why 100mg / 5.0 ml

- effectiveness
- undesirable effects

- 50mg
  - 1.0%

- 100mg
  - 1.2%

- 200mg
  - 21.5%
what's happen if I use too much quantity?
PROTOCOLS
Hard attack way

1 session twice a month for 4 sessions

15 days
15 days
15 days

T1 T2 T3 T4
PROTOCOLS

Maintenance

1 session **each 60 days**

T1 60 days T2 60 days T3 60 days T4

1 session twice a month for 4 sessions **each 6 months**

T1 6 months T2 6 months T3 6 months T4
# Comparing Techniques

<table>
<thead>
<tr>
<th></th>
<th>Biostimulation</th>
<th>Biorigeneration</th>
<th>Filler</th>
<th>Botulin toxin</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Product</strong></td>
<td>HA not crosslinked, Polynucleotides Amino Acids</td>
<td>Collagen</td>
<td>HA crosslinked, Calcium Hydroxyapatite, carboxymethylcellulose crosslinked, polycaprolactone</td>
<td>A type Botulin toxin</td>
</tr>
<tr>
<td><strong>Technique</strong></td>
<td>30G 4-6 mm needle Close bumps</td>
<td>30G 4-6 mm needle Far bumps</td>
<td>Needle or cannula implant</td>
<td>Specific points</td>
</tr>
<tr>
<td><strong>Difficulty</strong></td>
<td><img src="star.png" alt="★" /></td>
<td><img src="star.png" alt="★ ★ ★" /></td>
<td><img src="star.png" alt="★ ★ ★ ★ ★" /></td>
<td><img src="star.png" alt="★ ★ ★ ★ ★" /></td>
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<tr>
<td><strong>Indication</strong></td>
<td>Biostimulation</td>
<td>Biorigeneration</td>
<td>Filling</td>
<td>Muscle relaxant</td>
</tr>
</tbody>
</table>
### OTHER TECHNIQUES COMBINE

<table>
<thead>
<tr>
<th>Imperfection</th>
<th>Attack treatment</th>
<th>Combining with</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aging &amp; Photo-Aging</td>
<td>3 sessions &lt; 40 YO</td>
<td>Fillers, Botox, Superficial peeling, Carboxytherapy</td>
</tr>
<tr>
<td></td>
<td>4 sessions &gt; 40 YO</td>
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<tr>
<td>Acne scars</td>
<td>4/5 sessions</td>
<td>Medium/deep peeling, Needling, CO2 laser</td>
</tr>
<tr>
<td>Stretch marks</td>
<td>4/5 sessions</td>
<td>Medium/deep peeling, Needling, CO2 laser</td>
</tr>
<tr>
<td>Skin laxity</td>
<td>4/5 sessions</td>
<td>Carboxytherapy, PDO Threads, Needling</td>
</tr>
<tr>
<td>Gingival recession</td>
<td>3 sessions &lt; 40 YO</td>
<td>Tartar removal</td>
</tr>
<tr>
<td></td>
<td>4 sessions &gt; 40 YO</td>
<td></td>
</tr>
</tbody>
</table>
CLINICAL RESULTS

our studies
Patients:

- **216** patients
- **212** F
- **4** M
- Age 35~65 YO
This study was conducted on 2014 by Prof. Andrea Corbo, MD, in Rome (Italy).

The aim of the study was to prove compliance, safety profile and effectiveness of the micronized product injected as a mesotherapy (intradermic).
Clinical results

side effects

- Erythema: Absent (211), Moderate (4), Important (1)
- Edema: Absent (216), Moderate (0), Important (0)
- Desquamation: Absent (216), Moderate (0), Important (0)
- Itch: Absent (213), Moderate (2), Important (0)
- Pain: Absent (213), Moderate (3), Important (1)
Clinical results

Effectiveness

- Improved
- Unchanged
- Worsened

Brightness: 198
Consistency: 209
Texture: 216
Moisturizing effect: 207
CLINICAL RESULTS

conclusions

• All patients completed the study
• No side effects
• No tissue damage in histological preparations
• Increase of fibroblast
• Increase of collagen fibers
• Excellent compliance of patients
• Good clinical effectiveness with subjective evaluation of patients
BEFORE & AFTER
performed only with Linerase

Courtesy of Poleva I., MD

THREE SESSIONS
BEFORE & AFTER
performed only with Linerase

Courtesy of Poleva I., MD

THREE SESSIONS
BEFORE & AFTER
performed only with Linerase

Courtesy of Corbo A., MD

TWO SESSIONS
BEFORE & AFTER
performed only with Linerase

Courtesy of Corbo A., MD
BEFORE & AFTER
performed only with Linerase

 Courtesy of Corbo A., MD

TWO SESSIONS
BEFORE & AFTER
performed only with Linerase

Courtesy of Corbo A., MD

ONE SESSION
BEFORE & AFTER
performed only with Linerase

Courtesy of Corbo A., MD
BEFORE & AFTER

performed with Linerase combined with ablative therapy

Courtesy of Corbo A., MD
BEFORE & AFTER
performed with Linerase combined with ablative therapy

Courtesy of Corbo A., MD

TWO SESSION
BEFORE & AFTER
performed with Linerase combined with ablative therapy

Courtesy of Corbo A., MD
BEFORE & AFTER
performed with Linerase combined with ablative therapy

Courtesy of Corbo A., MD

TWO SESSIONS
BEFORE & AFTER
performed with Linerase combined with ablative therapy

Courtesy of Corbo A., MD
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Thank you for your attention