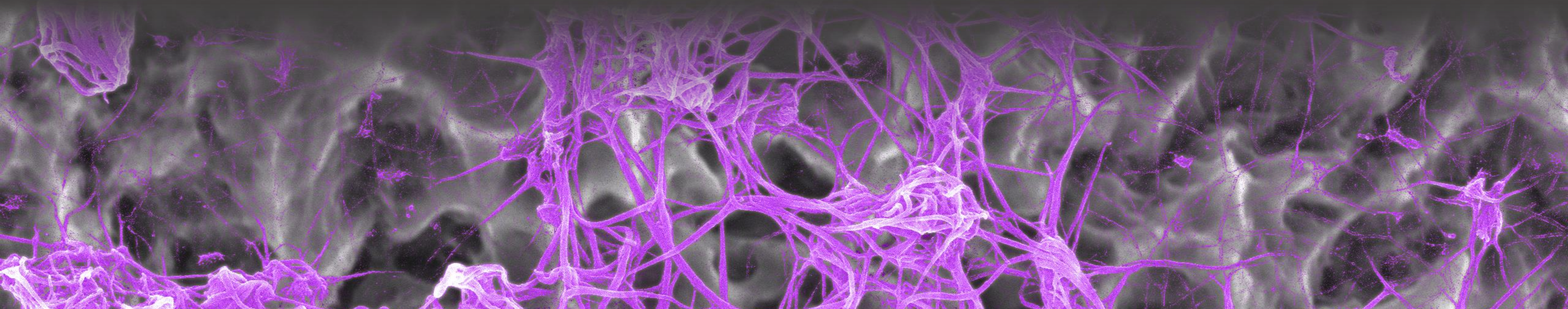


ENDORET[®] PRGF[®] TECHNOLOGY

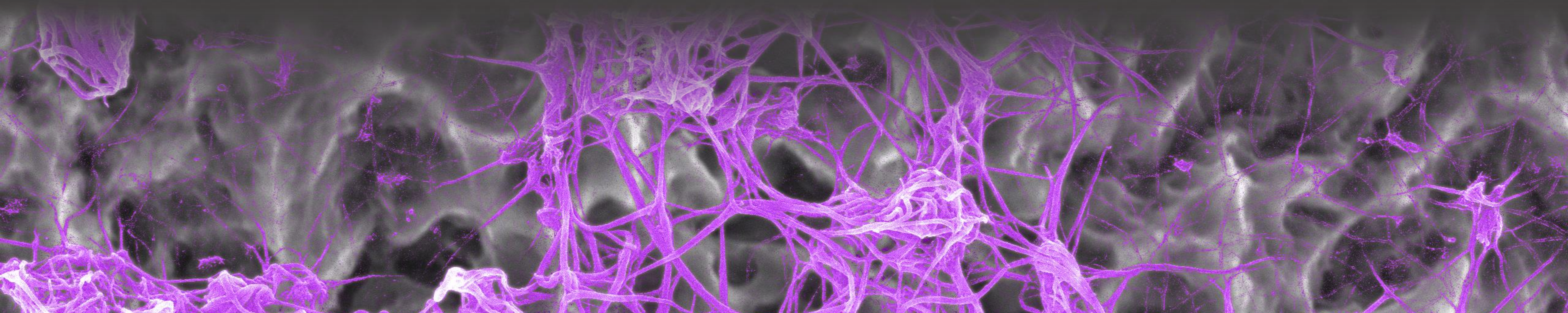


bti[®]



ENDORET®
TECHNOLOGY

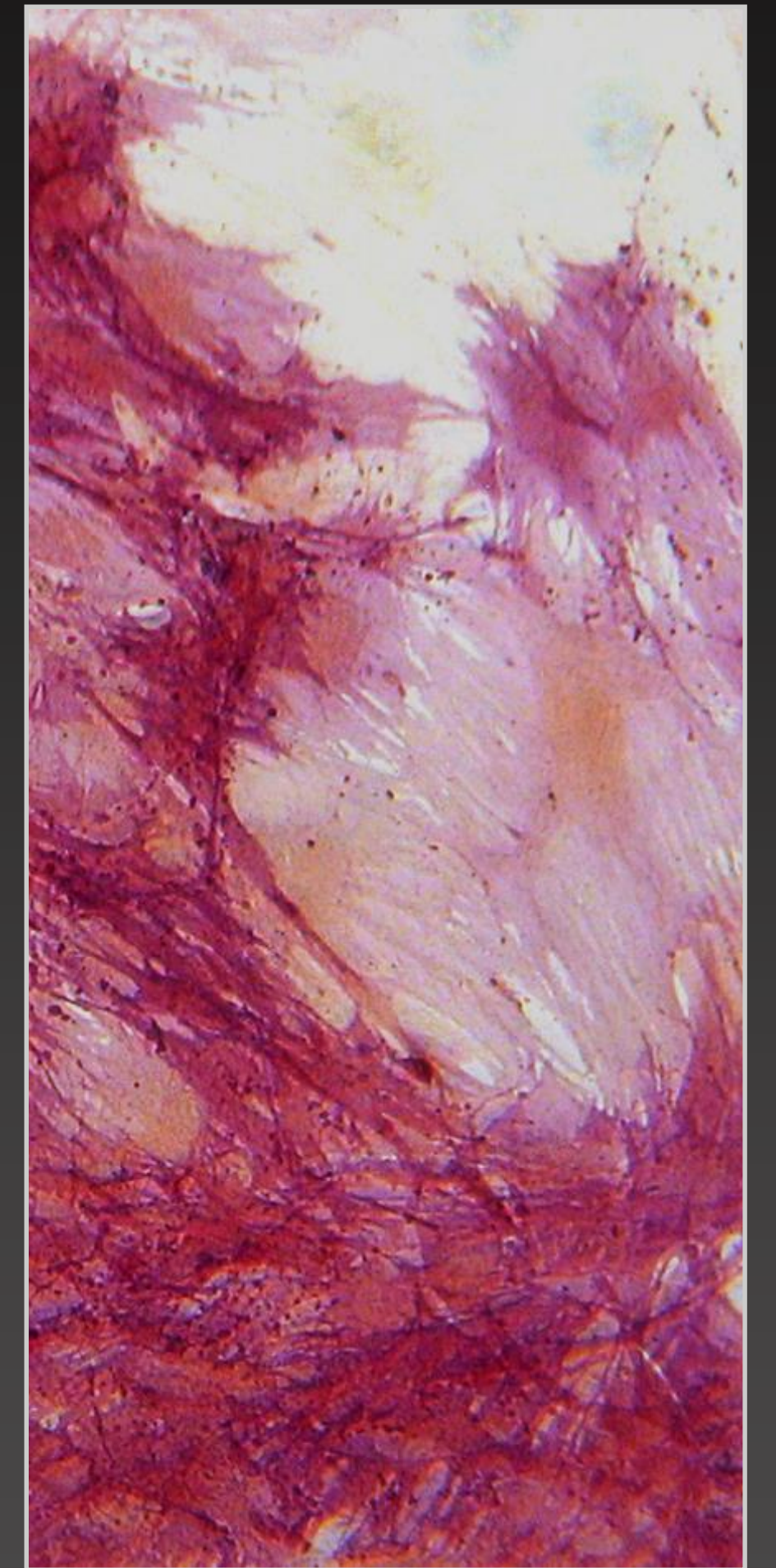
¿WHAT IS IT?



Endoret: Endogenous Regenerative Technology

PRGF: Plasma Rich in Growth Factor

ENDORET® is a biomedical technology aimed at stimulating tissue regeneration by applying autologous proteins.



Endoret[®] Technology is the most experienced in the market in the development of specific protocols for tissue regeneration, a pioneer technique developed exclusively by BTI Biotechnology Institute

- **Autologous**

It is made from the patient's own blood, so there are no known adverse effects

- **Reproducible**

The protocol for the preparation process and its clinical application is strictly defined and tested

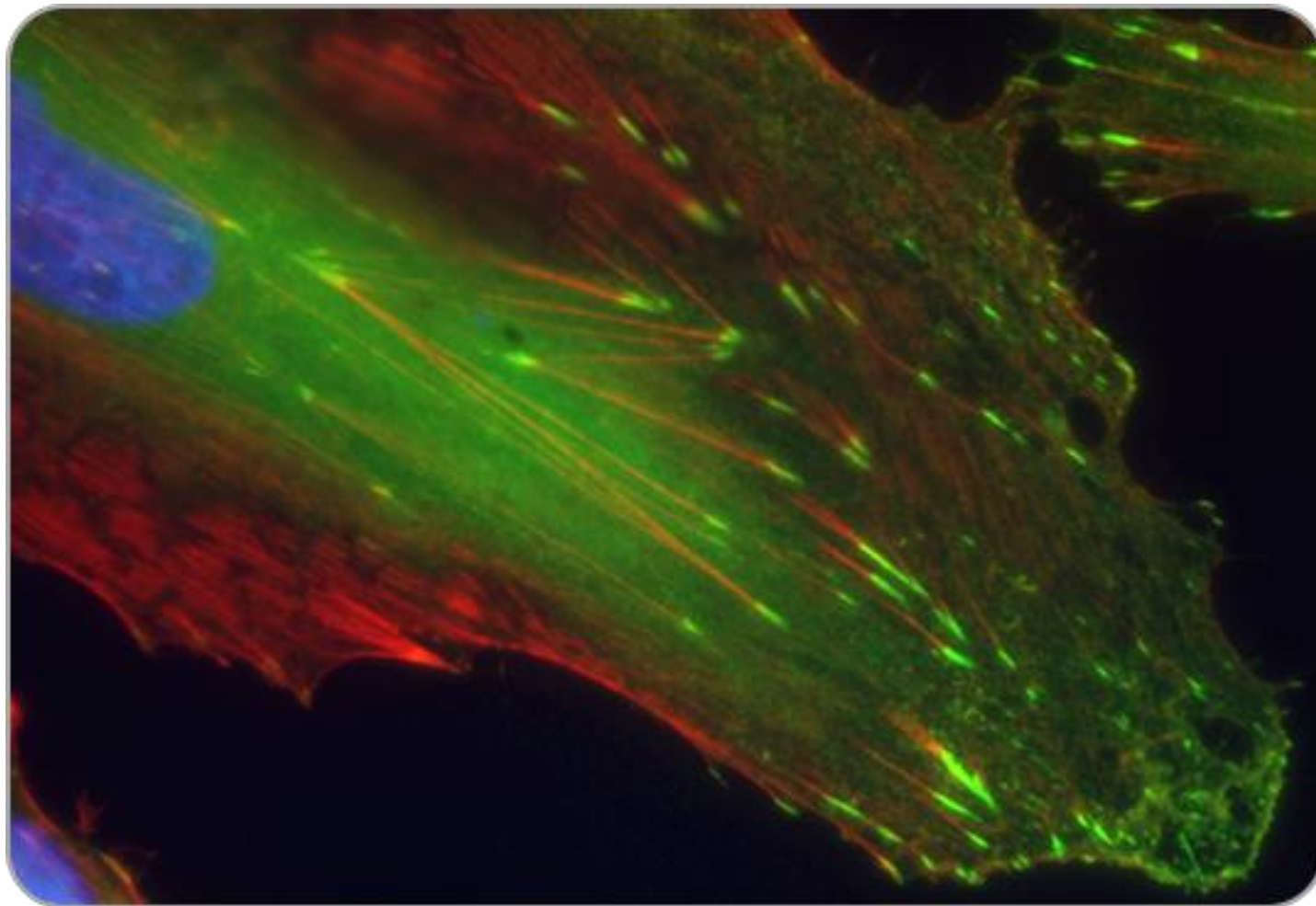
- **Versatile**

4 therapeutic formulations obtained in the same process means we can adapt the product to the patient's clinical needs

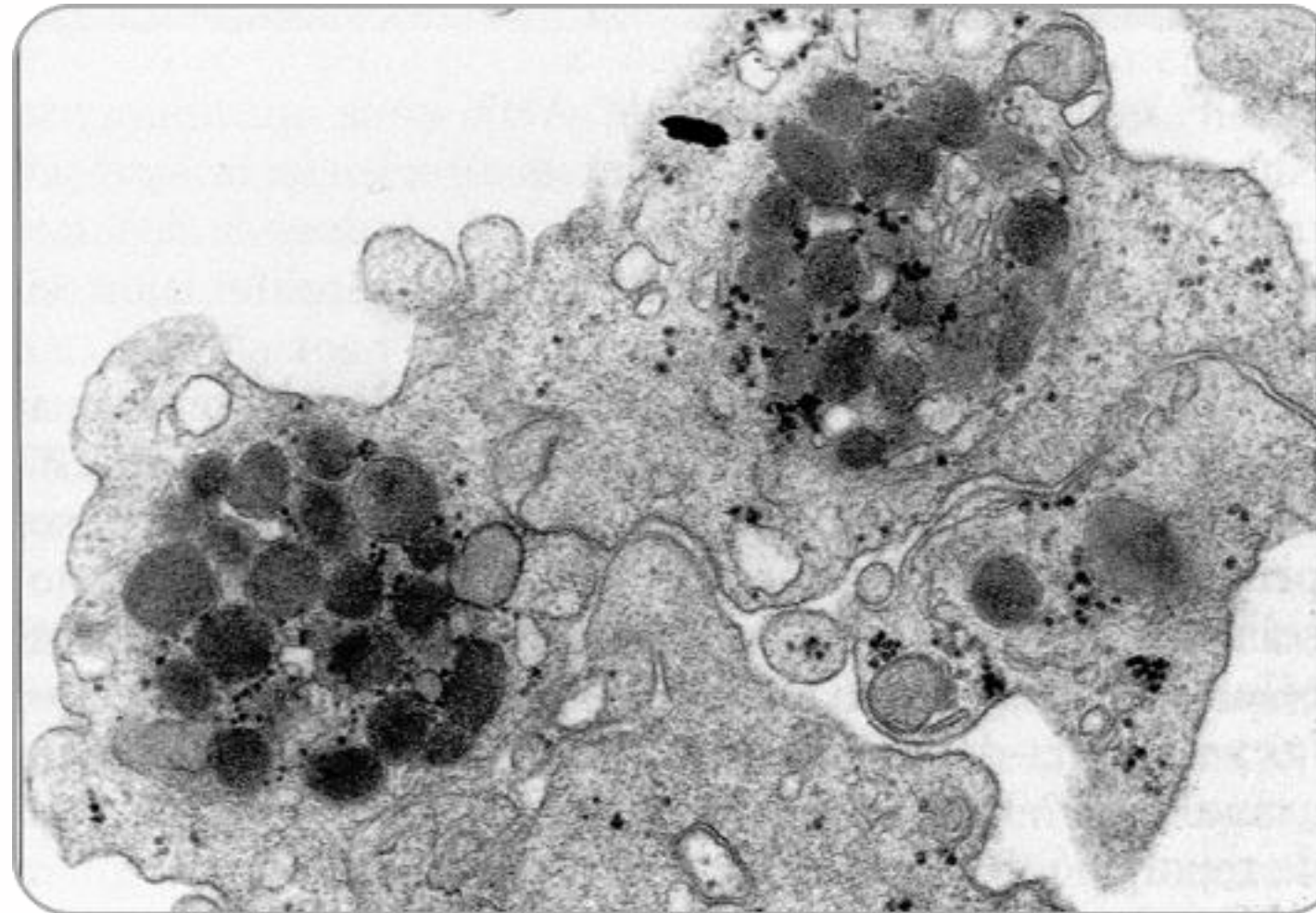
Endoret[®] PRGF[®]

Endoret[®] PRGF: an unique formulation optimized for tissue regeneration

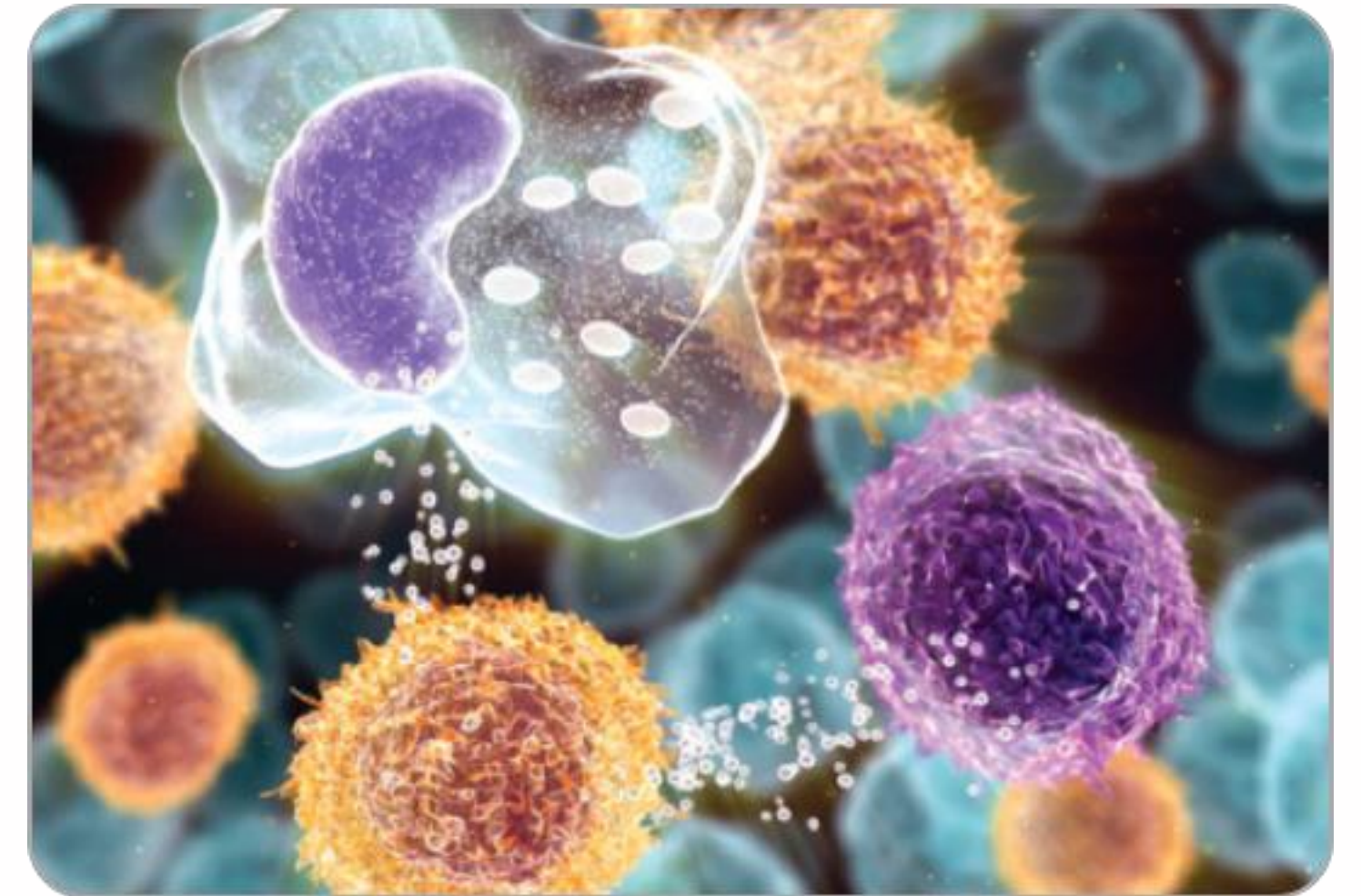
1 Platelets are concentrated
at optimum fold



2 Activation with **Calcium**
(Patent BTI)



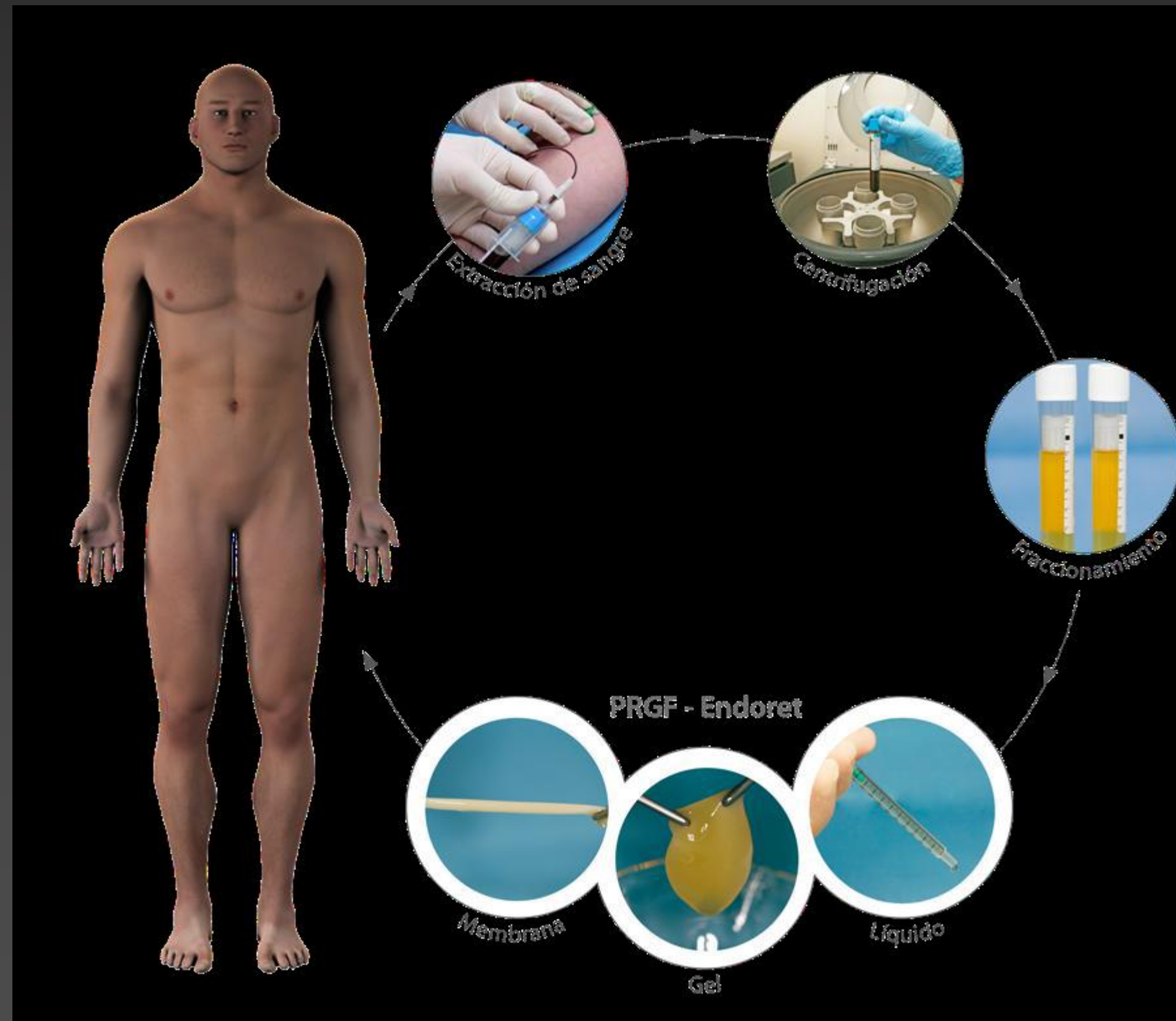
3 PRGF Endoret is a
formulation
leukocyte free



Endoret® PRGF®

Endoret® PRGF: an unique formulation optimized for tissue regeneration

The obtention of Plasma Rich in Growth Factors (PRGF) with Endoret® PRGF® is performed in a closed and defined protocol that involves:



- **Blood extraction** standardized, safe and efficient process for a fit volume of blood
- Unique and optimized **centrifugation** procedure for an efficient separation of all the blood cellular components
- **Plasma fractioning** patented system for the isolation of plasma free of leucocytes and erythrocytes
- **Activation** patented system for the obtention of an optimum concentration of serum, fibrin and growth factors derived from plasma and platelets

Endoret[®] PRGF[®]

Endoret[®] PRGF: an unique formulation optimized for tissue regeneration

Therapeutic formulations

With Endoret technology we can make 4 different therapeutic formulations and adapt them to the different clinical goals

Liquid



Clot



Graft

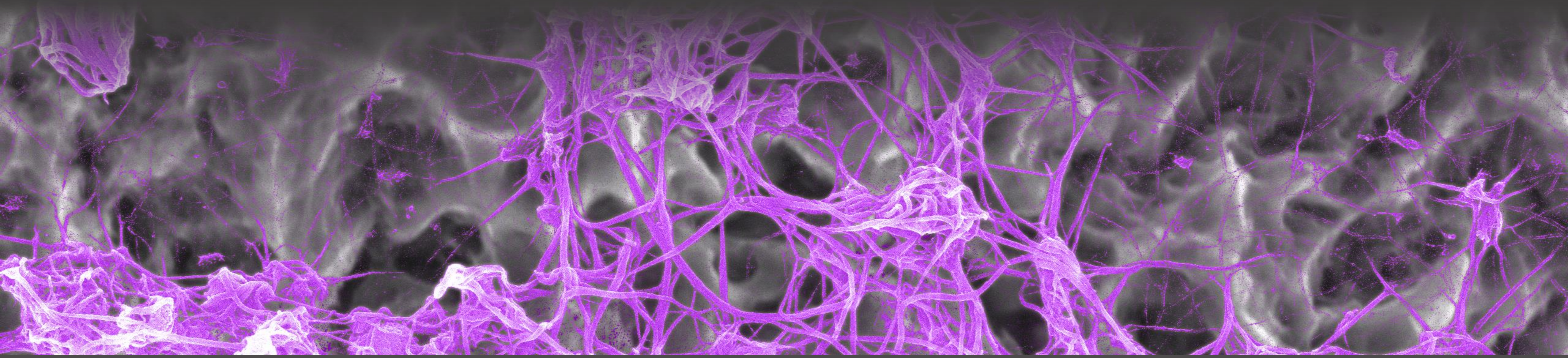


Membrane



ENDORET® TECHNOLOGY

How does it work?

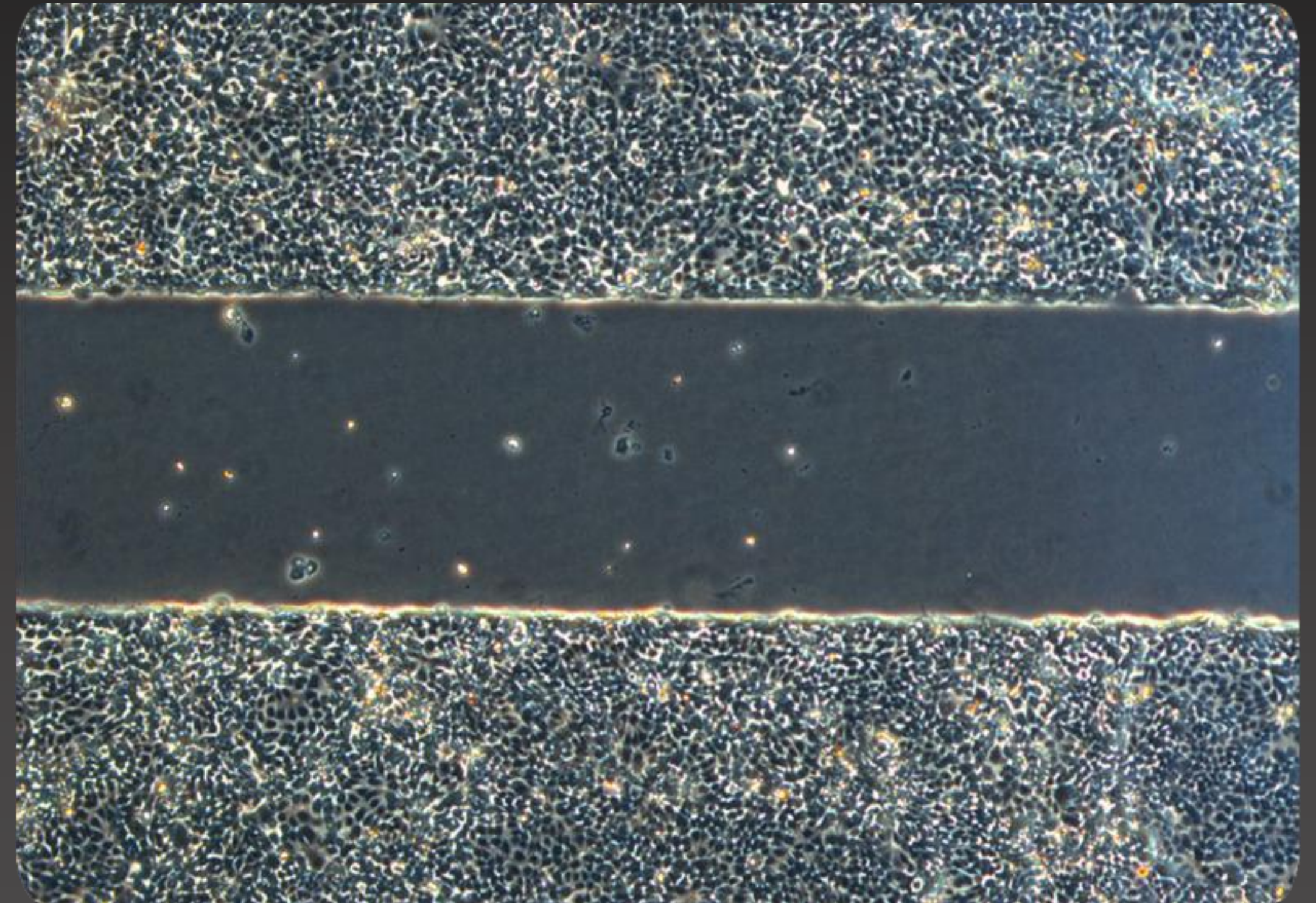


Endoret[®] PRGF[®]

Growth factors: responsables of the mechanisms of tissue repair

Mechanism of action

- ▶1- Promotes angiogenesis
- ▶2- Increases proliferation
- ▶3- Stimulates cell migration
- ▶4- Stimulates autocrine and paracrine secretion
- ▶5- Decreases inflammation and pain
- ▶6- Antimicrobial potential



Anitua E, Troya M, Orive G. Plasma rich in growth factors promote gingival tissue regeneration by stimulating fibroblast proliferation and migration and by blocking transforming growth factor- β 1-induced myodifferentiation. J Periodontol. 2012 Aug;83(8):1028-37. doi: 10.1902/jop.2011.110505. Epub 2011 Dec 6.

Anitua E, Prado R, Orive G. Bilateral sinus elevation evaluating plasma rich in growth factors technology: a report of five cases. Clin Implant Dent Relat Res. 2012;14:51-60.

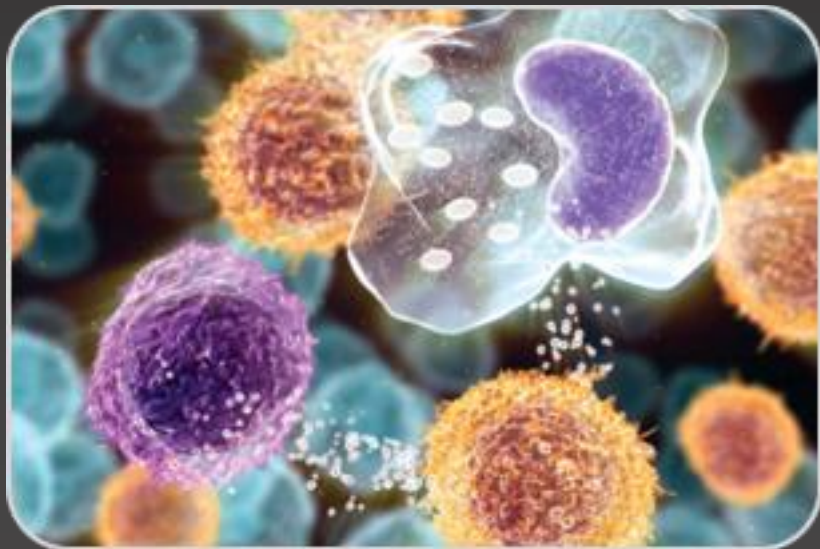
Bendinelli P, Matteucci E, Dogliotti G, Corsi MM, Banfi G, Maroni P, Desiderio MA. Molecular basis of anti-inflammatory action of platelet-rich plasma on human chondrocytes: mechanisms of NF- κ B inhibition via HGF. J Cell Physiol. 2012;225:757-766.

Endoret[®] PRGF[®]

Quality of life

¿How can we improve the quality of life of patients?

less inflammation



less pain



less analgesics

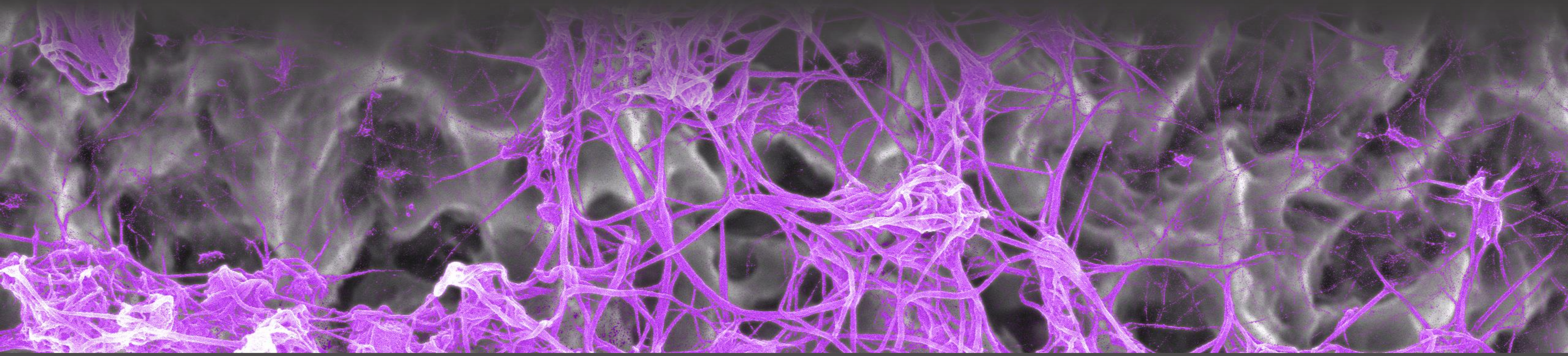


Better quality of life



ENDORET®
TECHNOLOGY

APPLICATIONS



Endoret[®] PRGF[®]

Applications of Endoret[®] Technology

Aesthetic Dermatology

Endoret infiltration promotes tissue remodeling in aging skin, increasing hydration, angiogenesis and improving overall skin health



Applications of Endoret[®] Technology

Aesthetic dermatology

Improves the skin consistency.

Endoret decreases elastosis, enhance cell proliferation and improves collagen secretion.



Aesthetic dermatology

Clinical assay comparing Endoret vs low density Hialuronic acid .

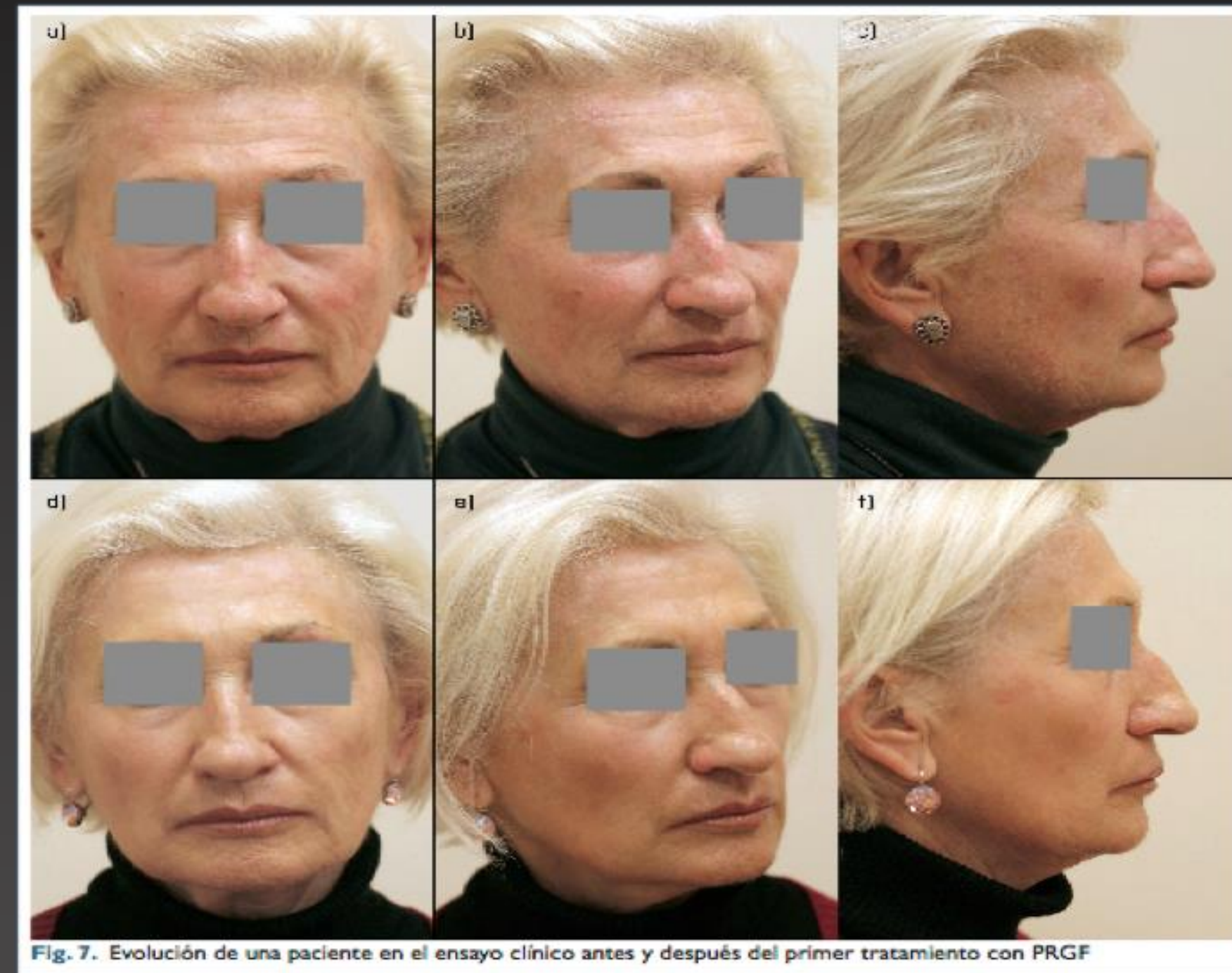
100 patients

5 cutaneous phototype

3 treatments, 1 every 3 weeks

Measures: Hydration, elasticity, pH.

REVISTA DE LA ABECE



En los últimos 5 años, varios ensayos clínicos aleatorizados y controlados con colágeno¹⁴⁻¹⁷ muestran la eficacia y seguridad del ácido hialurónico en el tratamiento de pliegues nasogenianos.

Moers-Carpi presentó en 2008 los resultados de un ensayo clínico en el que se analizó, mediante un diseño a cara partida, la eficacia y seguridad de las inyecciones de hidroxiapatita versus ácido hialurónico en el relleno de pliegues nasolabiales¹⁸. En el

estudio se evaluó la profundidad de los pliegues nasogenianos en 60 pacientes a los 6, 9 y 12 meses de haber iniciado el tratamiento, demostrándose la eficacia y seguridad de las inyecciones de hidroxiapatita en el tratamiento de relleno de arrugas.

Al valorar la eficacia de estos tratamientos en la regeneración cutánea desde un punto de vista biológico únicamente hemos encontrado un estudio prospectivo no controlado publicado por Di Pietro y colaboradores¹⁹ en 2007. En este estudio se reclu-

Applications of Endoret[®] Technology

Aesthetic dermatology

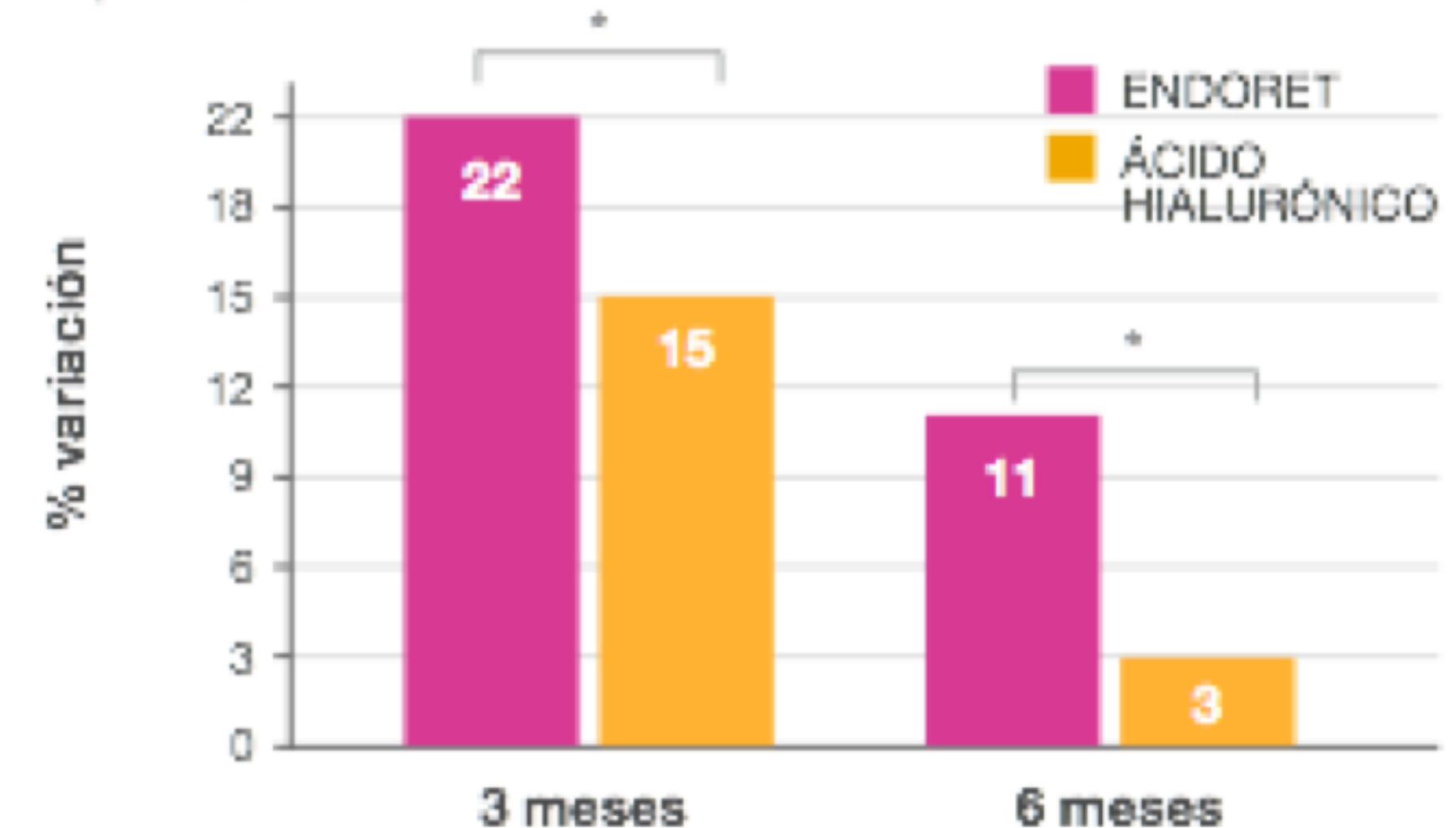
Clinical assay comparing Endoret vs low density Hialuronic acid .

More hydrated skin

Endoret leads to significantly more hydrated skin than HA, 3 and 6 months after treatment.

ENSAYO COMPARATIVO CON ÁCIDO HIALURÓNICO. % EVOLUCIÓN DE LA CORNEOMETRÍA RESPECTO A LA VISITA BASAL PARA AMBOS GRUPOS DEL TRATAMIENTO

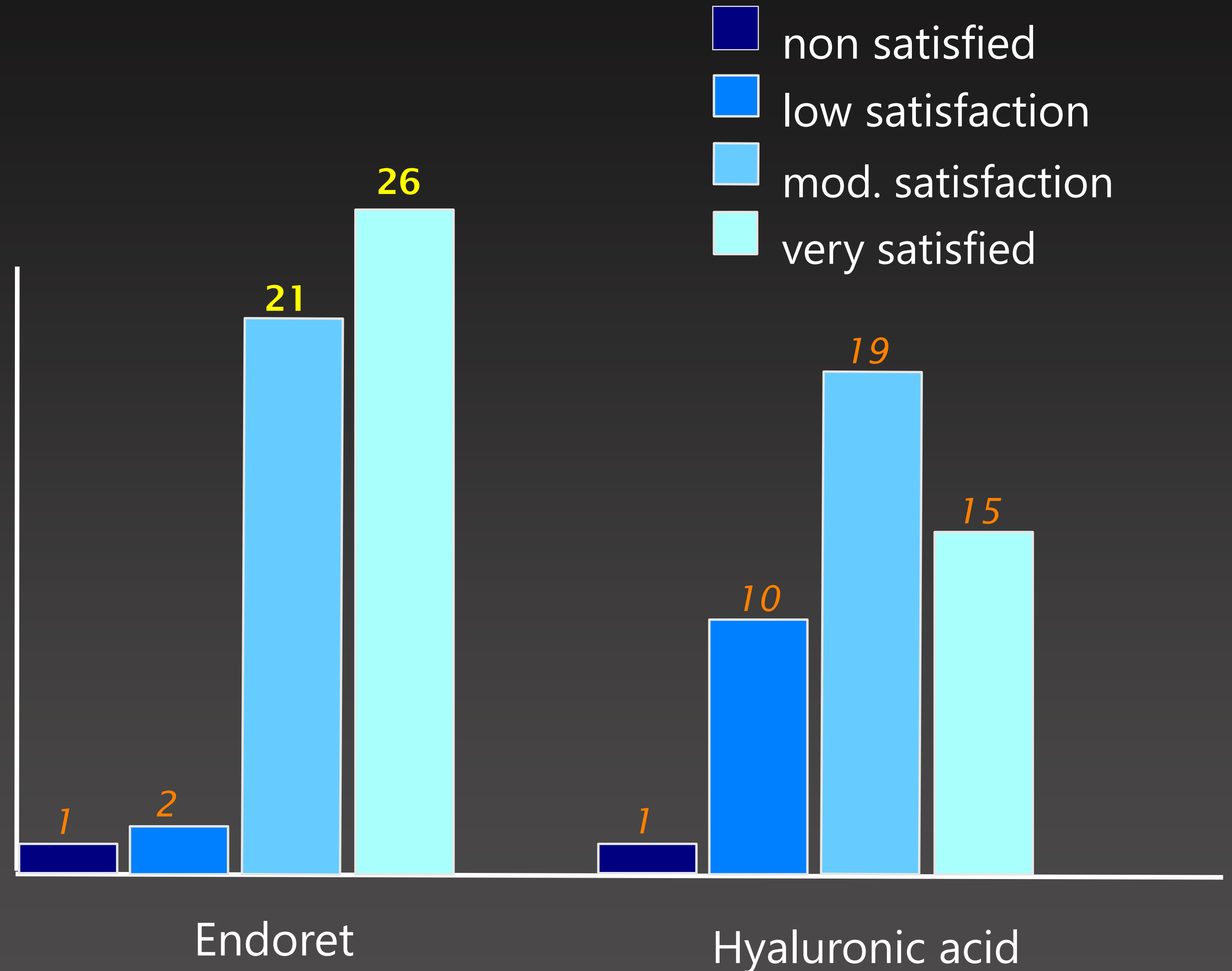
* $p < 0.05\%$



Aesthetic dermatology

Clinical assay comparing Endoret vs low density Hialuronic acid .

Higher patient satisfaction.



Aesthetic dermatology

Infiltration of Endoret promotes tissue remodelling in aged skin, influencing in hydration, angiogenesis and the overall condition of the skin



- Comparative clinic study with low density Hyaluronic Acid
- Endoret in reduction of signs of photo ageing

Endoret[®] PRGF[®]

Clinic study 1: Comparative with low density Hyaluronic Acid

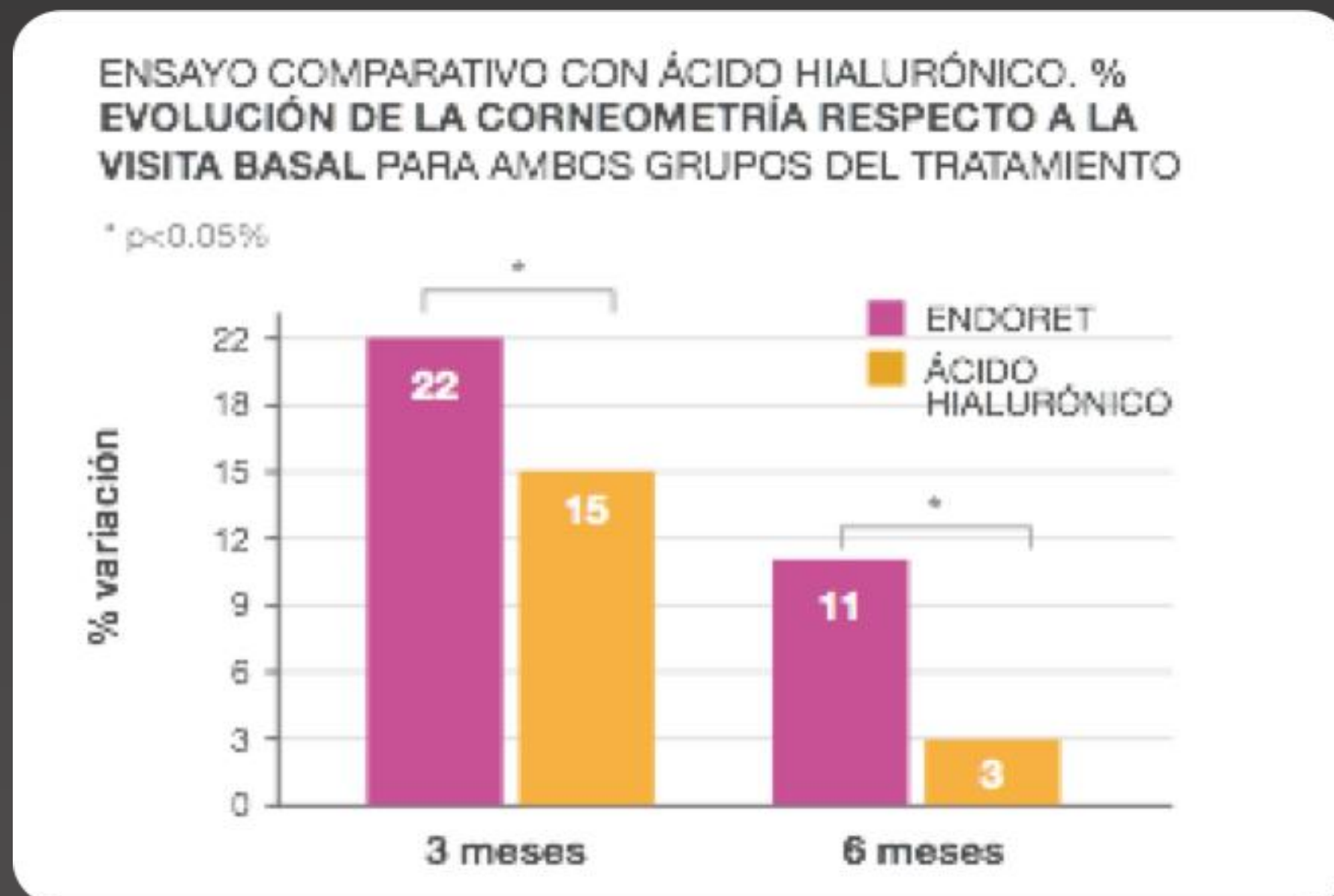
- 100 patients
- 5 skin fototypes
- 3 sessions of treatment, 1 every 3 weeks
- Measurements: Corneometry, cutmetry, sebumetry, pH measurement

Endoret[®] mejora de forma significativa la hidratación y el pH de la piel

Clinic study 1: Comparative with low density Hyaluronic Acid

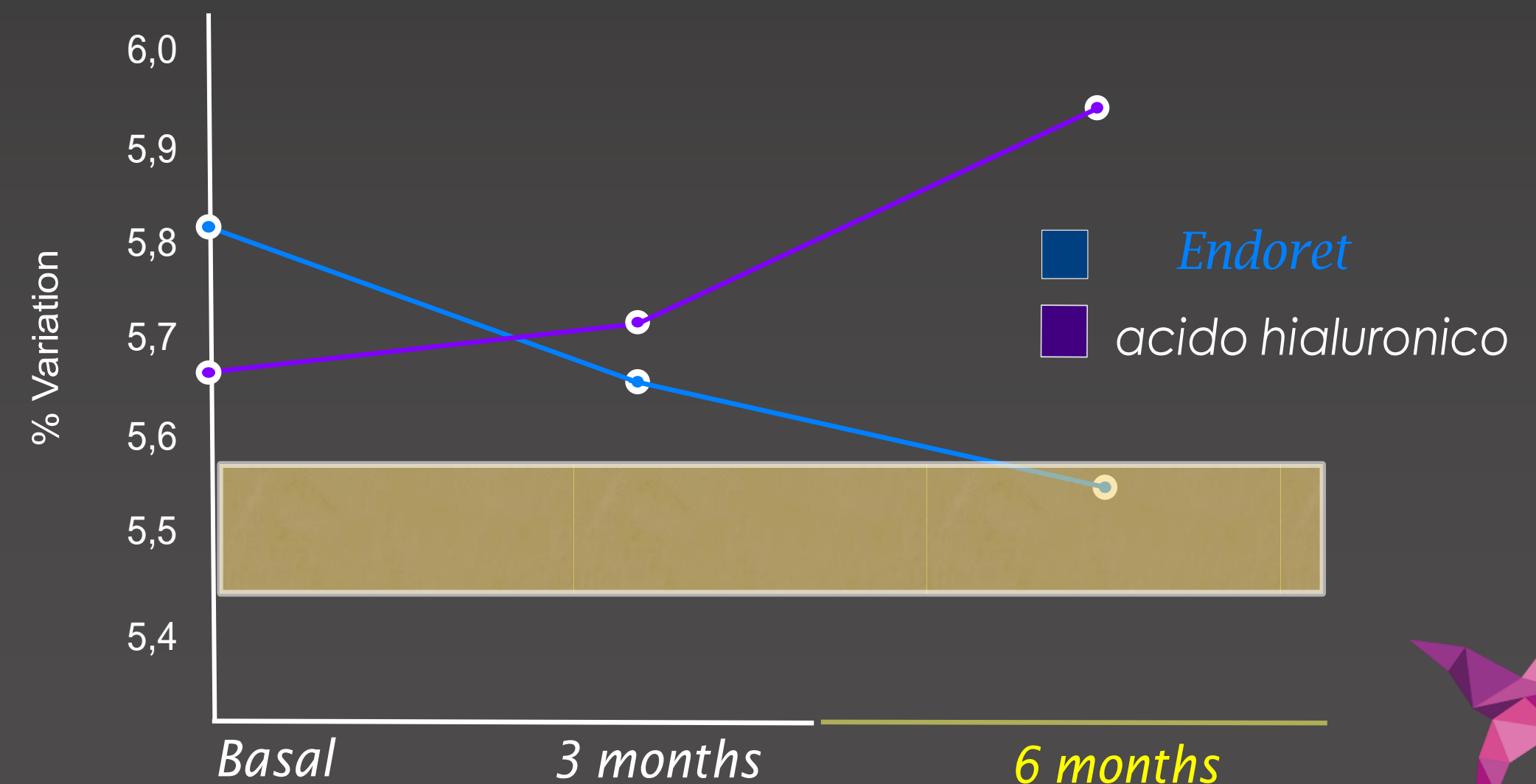
- Skin Hydration

- Endoret improves significantly the hydration of the skin comparing to treatment with hyaluronic acid, after 3 and 6 months after treatment.



- pH of skin

- Endoret improves the pH of the skin after 6 month of treatment

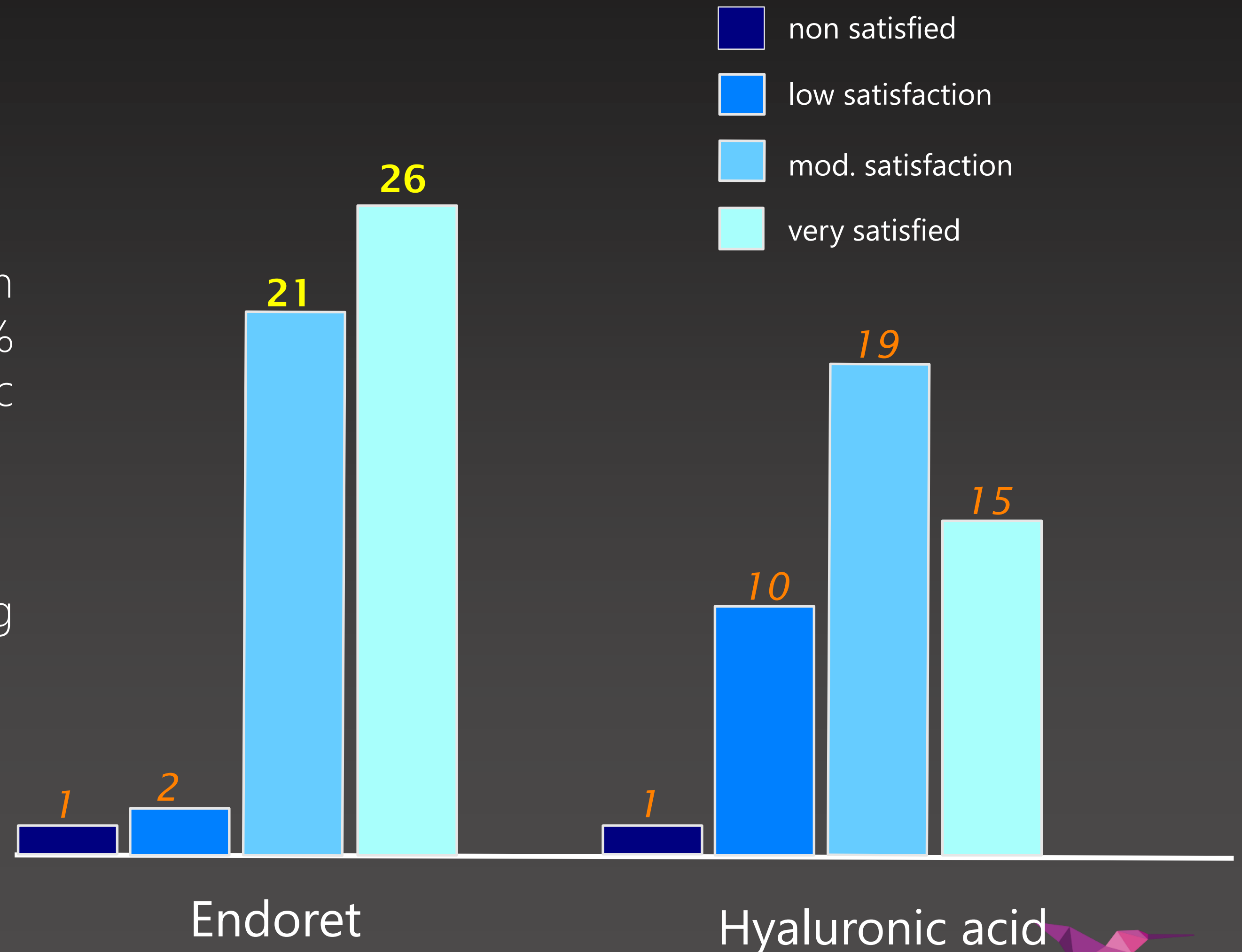


Clinic study 1: Comparative with low density Hyaluronic Acid

- More satisfaction of patients

- 94% of patients were satisfied or very satisfied with the results of Endoret, in comparison with 75% satisfaction of the patients treated with hyaluronic acid.

- Patients responded to survey without knowing which treatment did they receive



Clinic study 2: Endoret in reduction of signs of photo ageing

Assay H. Ramón y Cajal. Pedro Jaén group

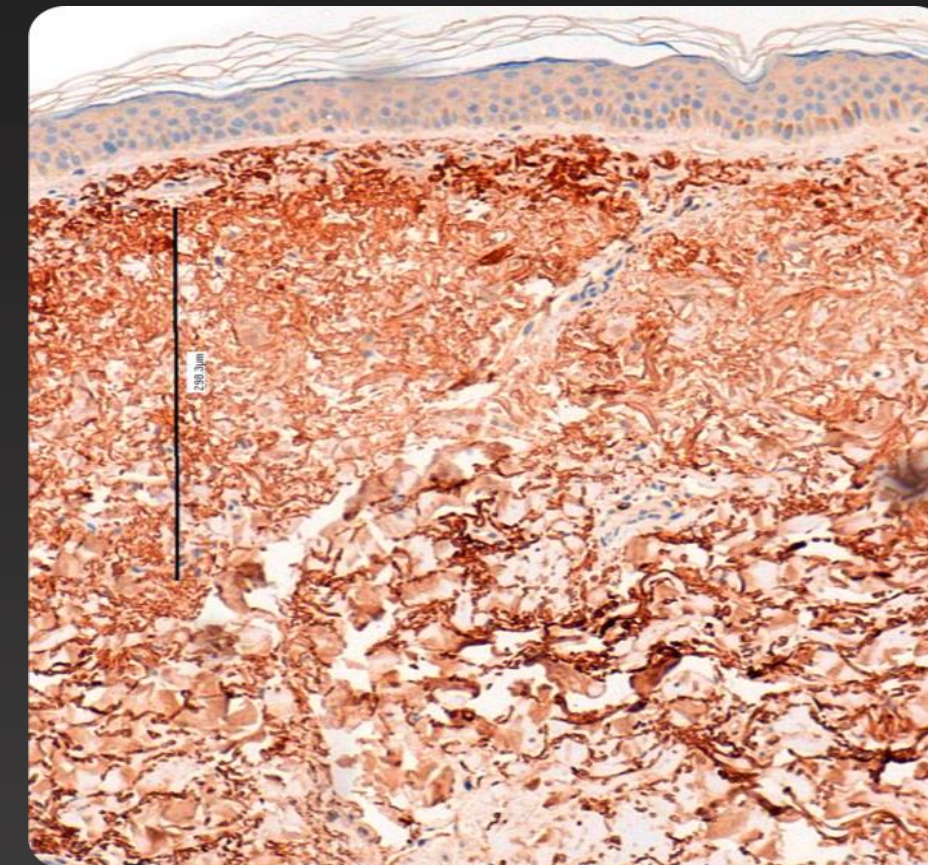
- 9 patients
- dermic infiltration of 8ml of fraction 2 of Endoret
- 3 separated sessions, 1 every 3 weeks



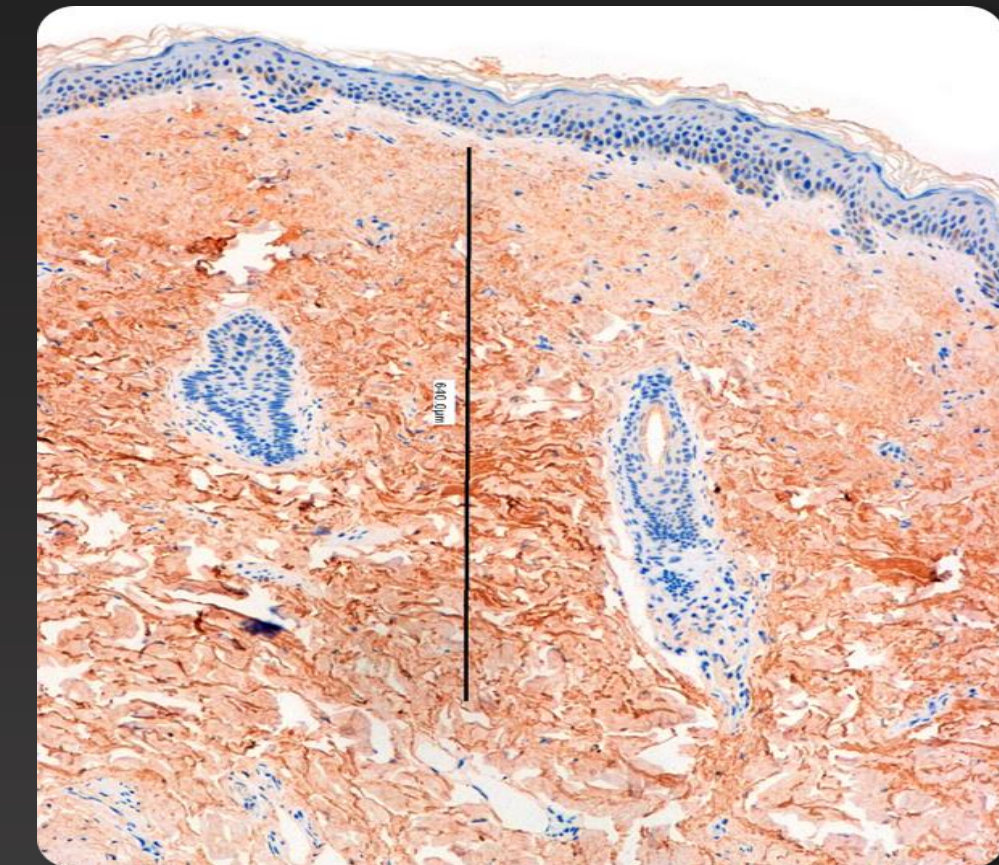
Clinic study 2: Endoret in reduction of signs of photo ageing

- Dermic thickness

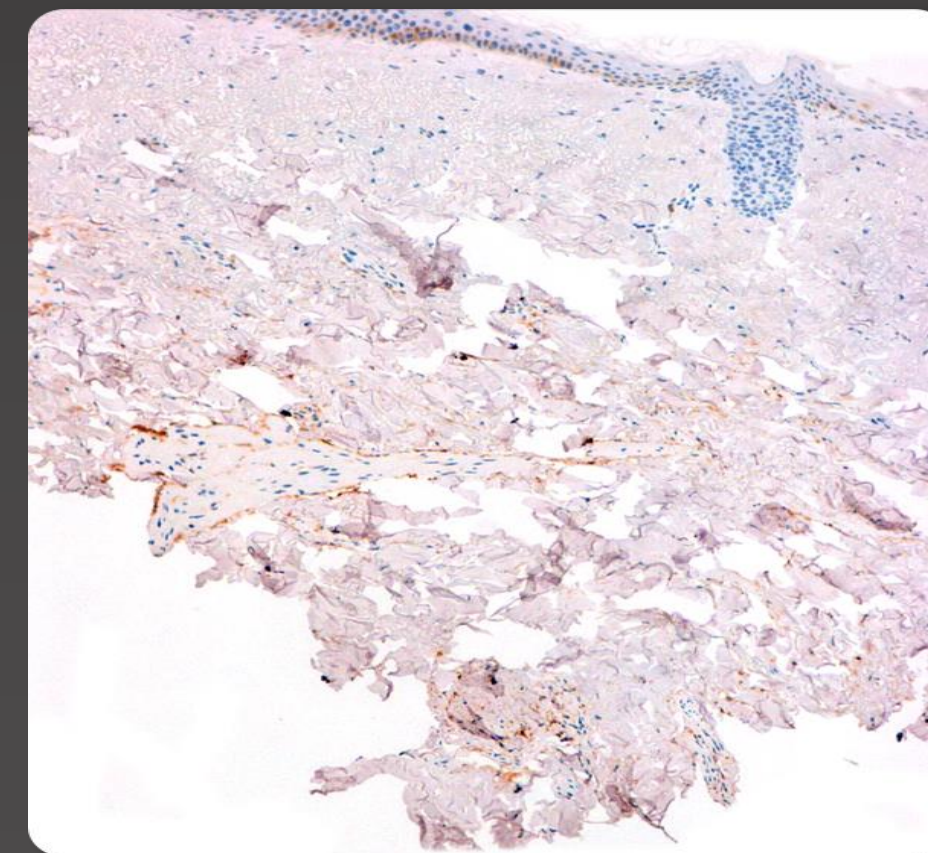
- In the histologic study we observed an increase of dermic thickness and an important increase of dermic dendrocytes CD34+



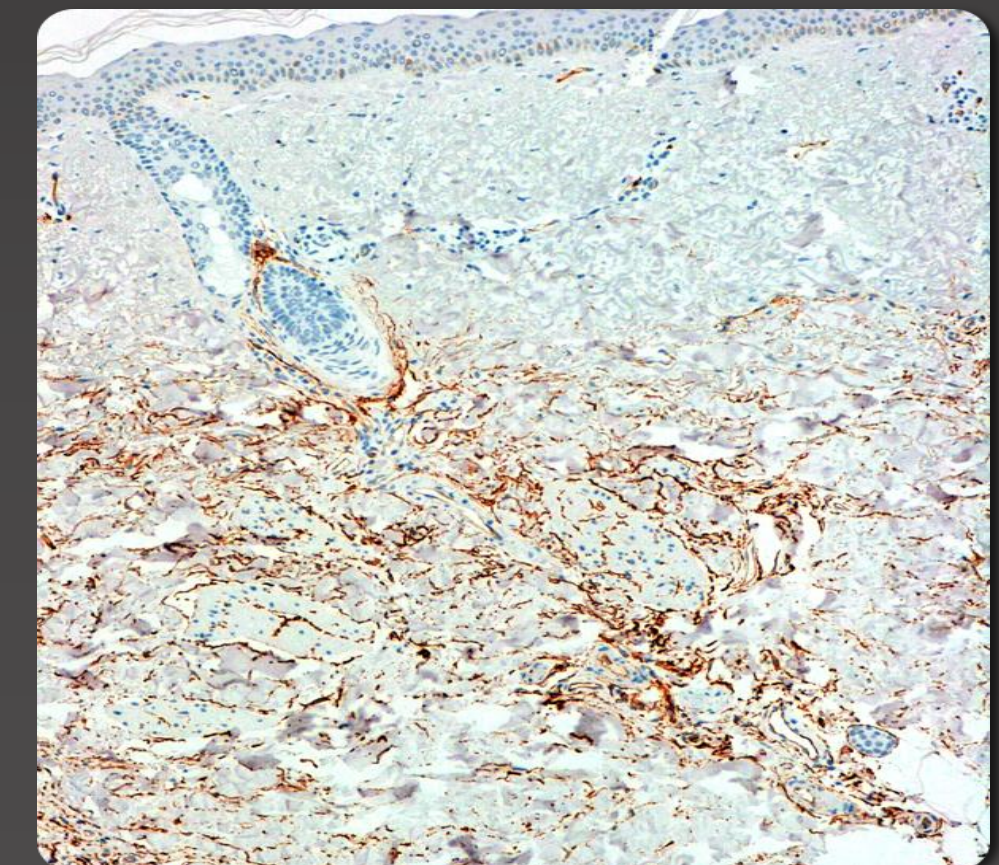
Pre – treatment: 295um



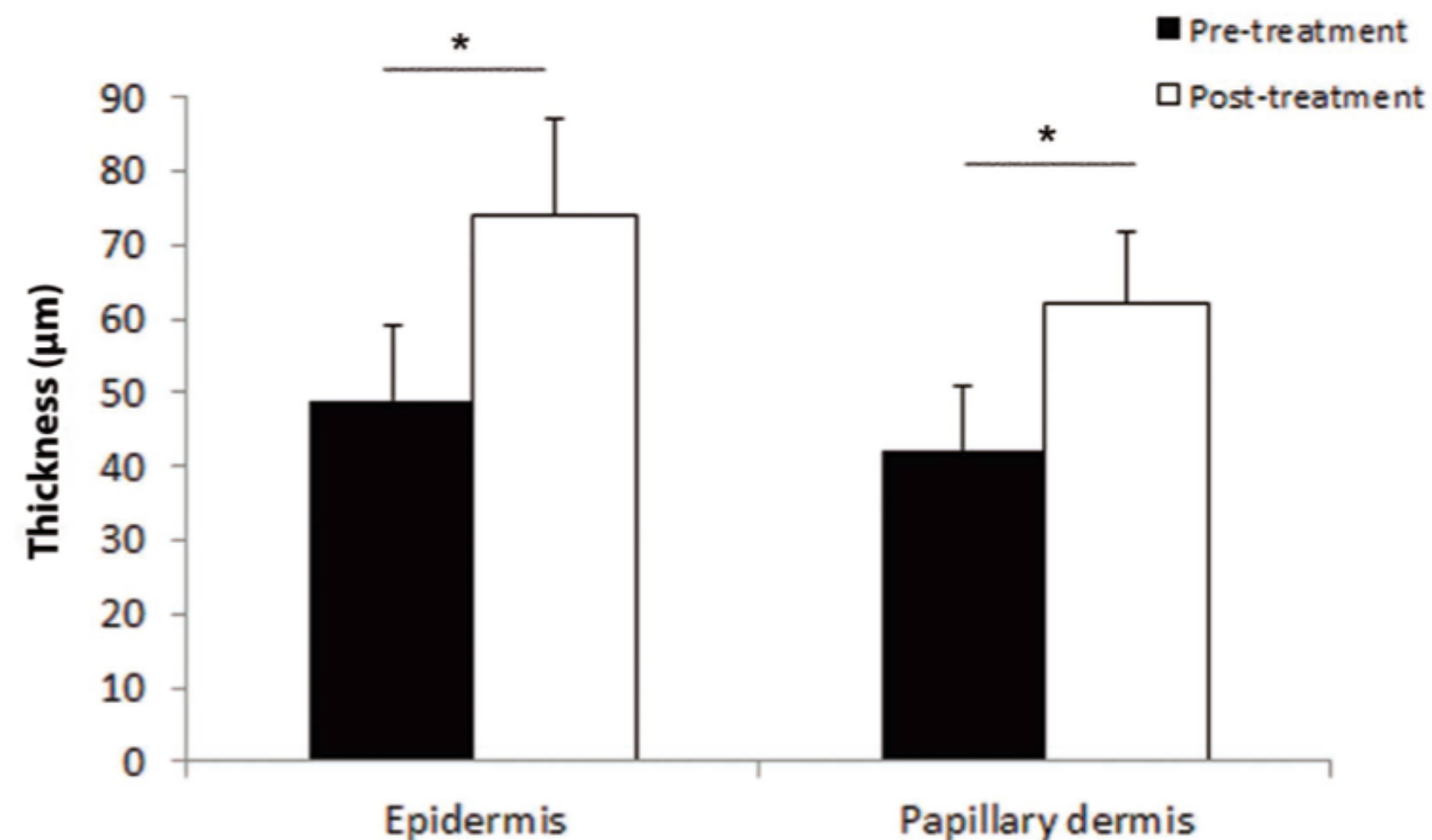
Post – treatment: 610um



Scarse amount of deep dendrocytes



Increase of deep dendrocytes

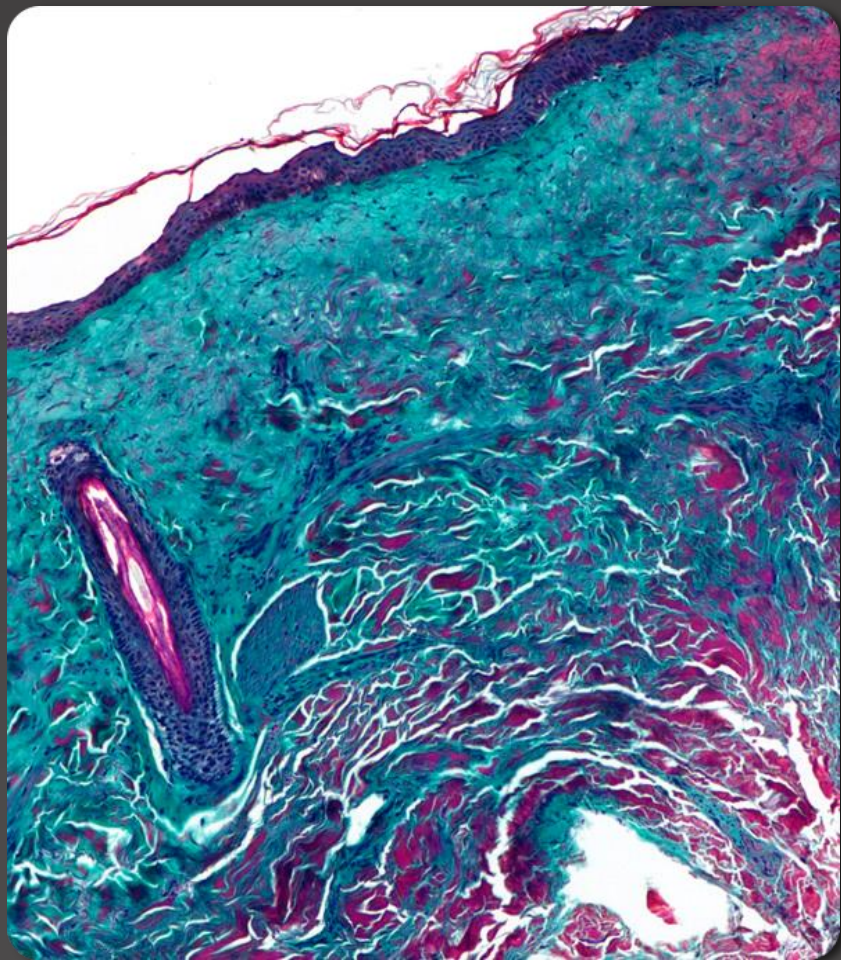


Clinic study 2: Endoret in reduction of signs of photo ageing

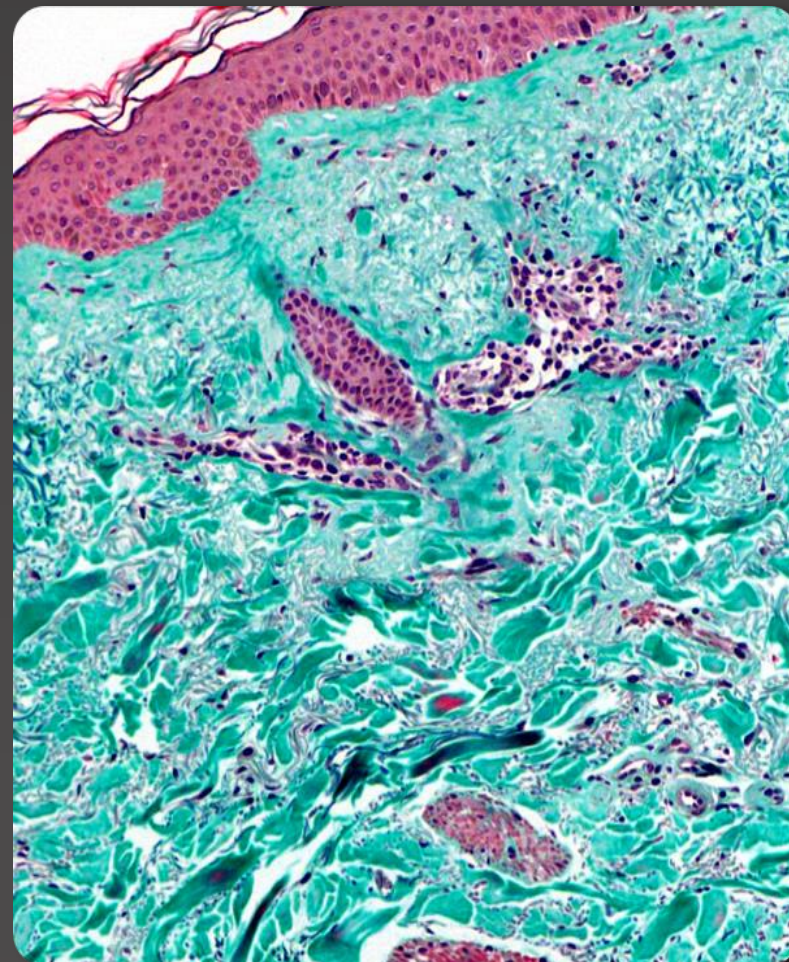
- Elastosis

- In patients with signs of photoageing, there is an important reduction of solar elastosis
- We clearly observe a reorganization of collagen and increase of elastic fibers

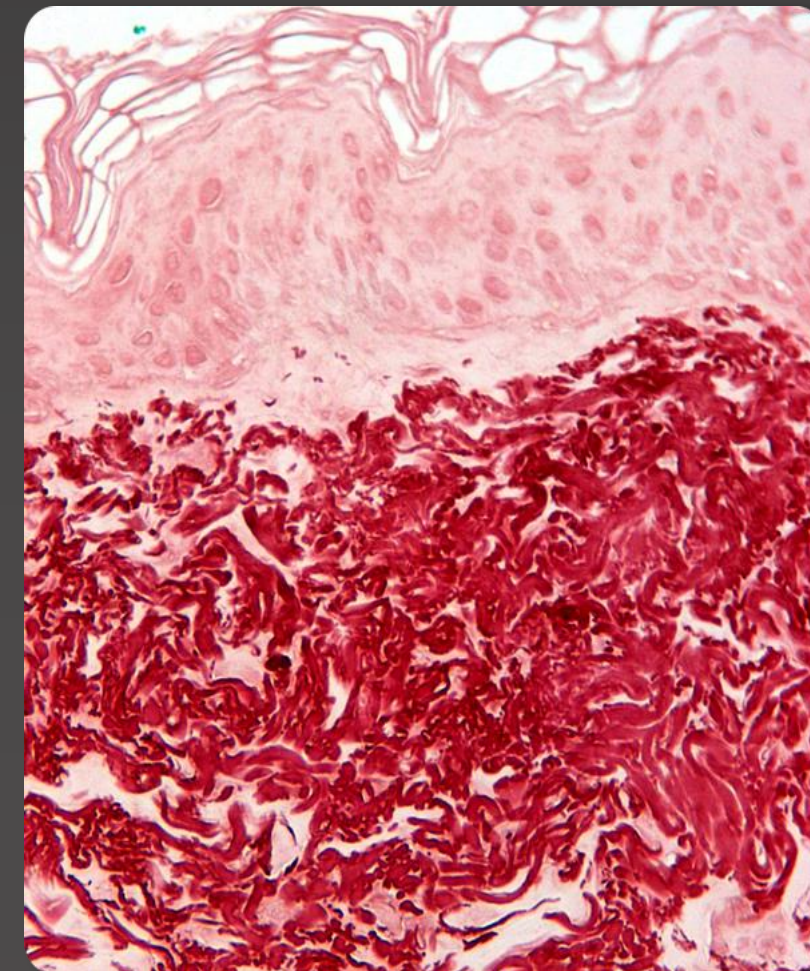
Elastosis – Degeneration of collagen before treatment



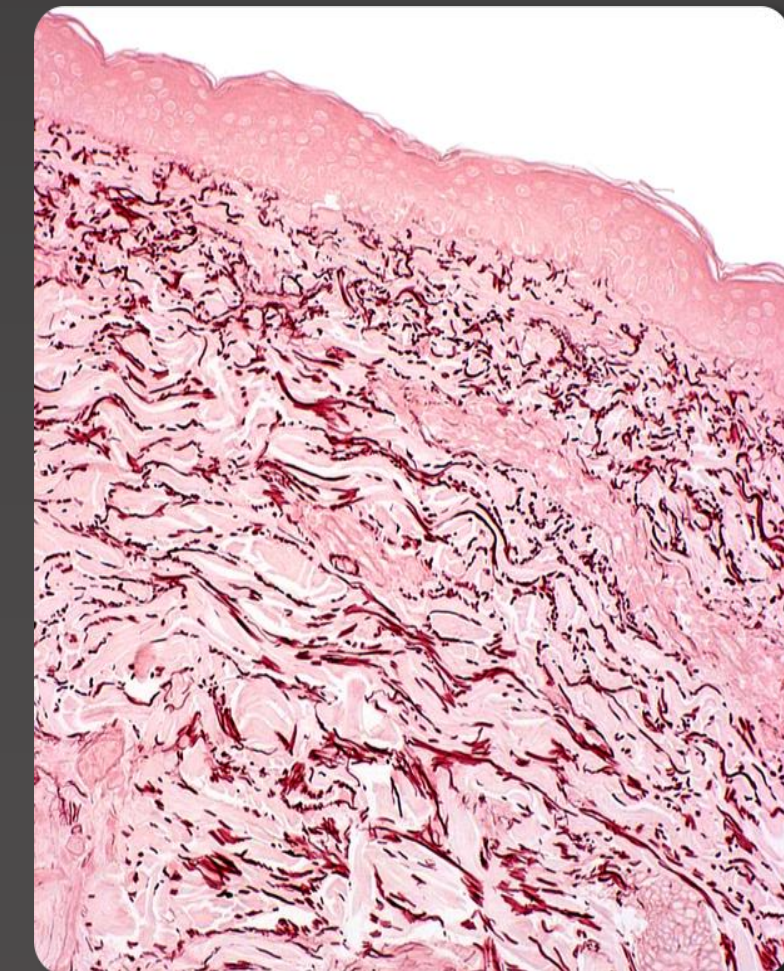
Restructuration and increase of fibers after treatment



Elastosis – elastic fibers

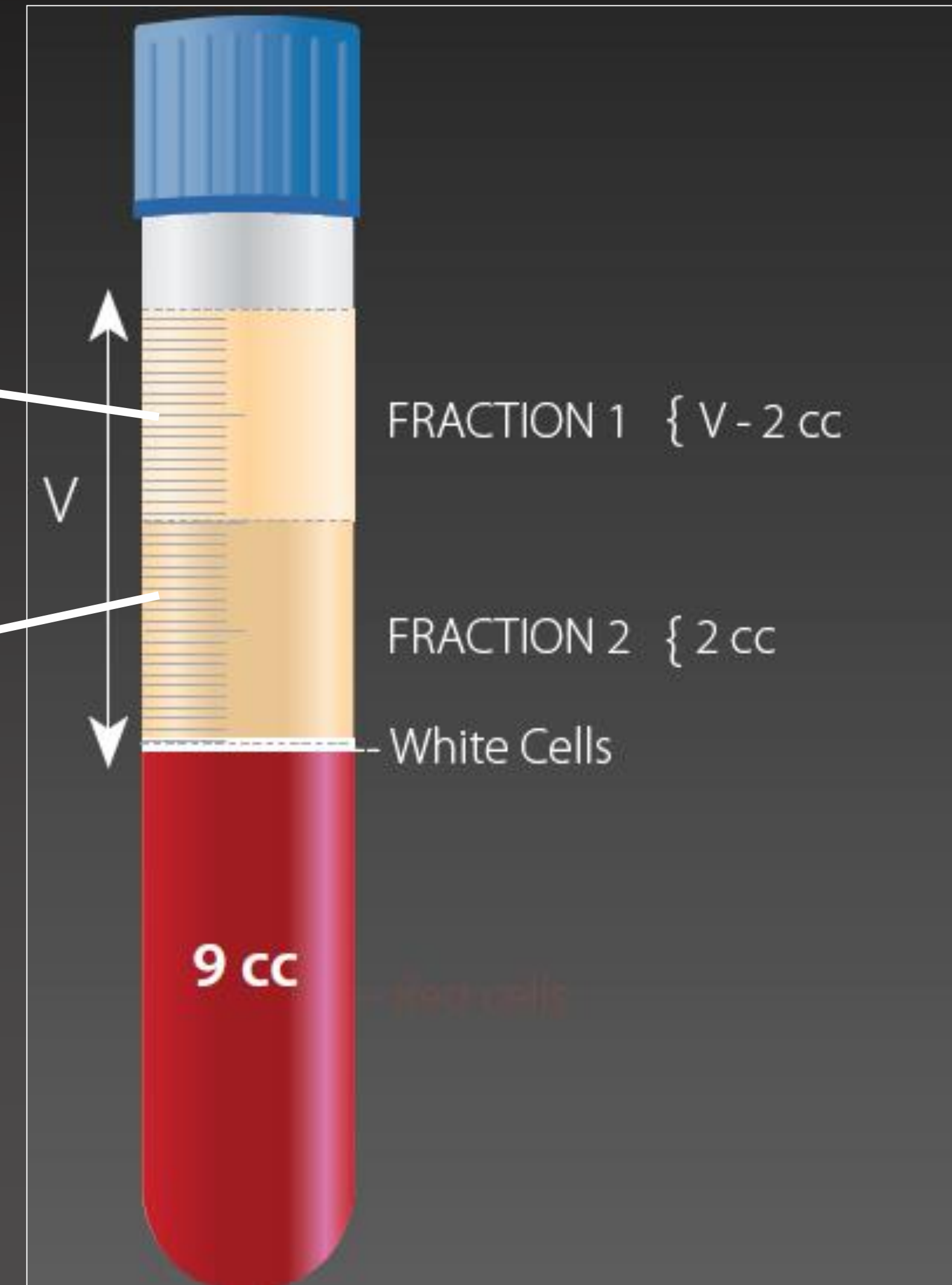


Reorganized elastic fibers



Platelet concentration x1
mask

Platelet concentration x2,5
infiltrations



Aesthetic dermatology. Selection of patients



Selection of patients (Expected results)

- Make-up effect
- Thicker skin
- Hydration
- Solar protection
- Uniformity
- General rejuvenation



1er tratamiento: 20 Junio

II tratamiento: 27 Julio

III tratamiento: 19 Septiembre



BEFORE



AFTER

1er tratamiento: 20 Junio

II tratamiento: 27 Julio

III tratamiento: 19 Septiembre



BEFORE



AFTER



BEFORE



AFTER



BEFORE



AFTER

Endoret[®] PRGF[®]

Results of the treatment



BEFORE



AFTER 3 PROCEDURES

Endoret[®] PRGF[®]

Results of the treatment



BEFORE



AFTER 2 PROCEDURES

Endoret[®] PRGF[®]

Results of the treatment



BEFORE



AFTER 2 PROCEDURES

Endoret[®] PRGF[®]

Results of the treatment



BEFORE



AFTER 2
PROCEDURES



AFTER 3
PROCEDURES

Safety and regulatory assurance

►Quality assurance

The Endoret[®] closed-technique system complies with the highest standards of quality. Both the system and the materials have the EC health certificate awarded by TÜV for specific application to musculoskeletal injuries.

FDA 510K Clearance: *"The ENDORET© Kit is designed to be used for the safe and rapid preparation of autologous platelet-rich-plasma (PRP) from a small sample of peripheral blood at the patient's point of care. The PRP is mixed with autograft and/or allograft bone prior to application to a bony defect for improving handling characteristics"*. BK150294 CBER-Clearance Letter is available for your reference at the following [link](#).

►Guarantees of efficacy

BTI has the greatest clinical support in the world published in this field; its effectiveness is proven in more than 150 international scientific publications

►Additional Guarantees

BTI certifies its customers' specific training in the use of this technology. In addition, BTI guarantees the traceability of its materials and helps transfer all necessary information to its patients.



ENDORET[®] PRGF[®] TECHNOLOGY



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