

Innovations  
in Aesthetic Medicine

**SPRS**  
T H E R A P Y

Natural Skin  
Rejuvenation

A complex  
of personalized  
diagnostics and  
treatment procedures



The skin's condition and beauty directly depend on the quantity and the level of activity of a type of skin cells called fibroblasts. Fibroblasts are main skin cells which synthesize important components of the dermal matrix (collagen, elastin, hyaluronic acid, growth factor proteins and enzymes) and play a key role in maintaining the structure of the skin across its multiple layers.

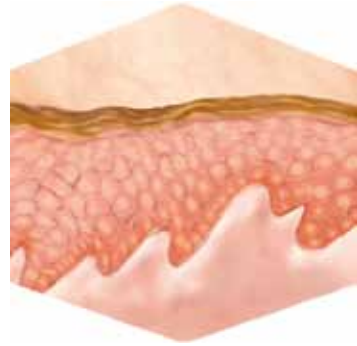
## 01. Can skin regain its youthful qualities?

The youthfulness and beauty of our skin largely comes from the effective functioning of a special skin cells called fibroblasts. As we age, the fibroblasts in the dermis decreases in number and become less active, thus reducing their capacity to produce collagen and elastic fibers (the main connective tissues supporting the skin) and hyaluronic acid (which retains water in the skin). As a result, the thickness of the skin is reduced, there is less moisture, the skin loses its firmness and wrinkles appear.

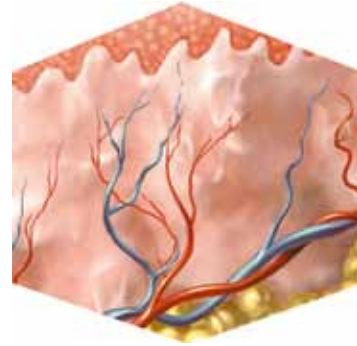
SPRS-therapy (Service for Personal Regeneration of Skin) is a complex of personalized diagnostics and treatment procedures for rejuvenating the skin through the application of one's own fibroblasts. This innovative approach to aesthetic medicine was developed by Human Stem Cells Institute, which is the leader in cell technologies in Russia and the first organization to receive authorization from Russia's health authorities to apply this highly effective technology to repair skin damage due to aging or other structural changes.

## Structure of the skin

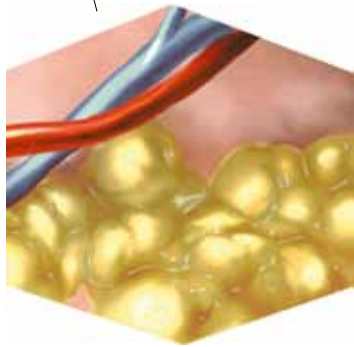
The human skin consists of three layers: the epidermis, dermis and hypodermis.



The epidermis (*outer layer*) is an impermeable barrier protecting the body from the outside environment.



The dermis (*middle layer*) provides firmness and elasticity and consists of cells, collagen and elastin, hyaluronic acid and other elements of the intercellular matrix.



The hypodermis (*inner layer*) is composed of fatty tissue and serves as both a physical and thermal barrier for the body.

# 02.

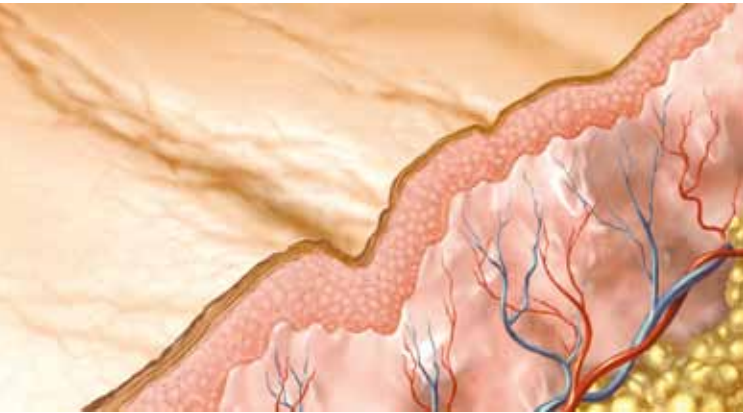
## How does the skin age?

Our skin ages as a result of a variety of both internal (natural) and external (sun damage, nicotine) factors which impact all layers of the skin but most significantly affect the main layer – the dermis.

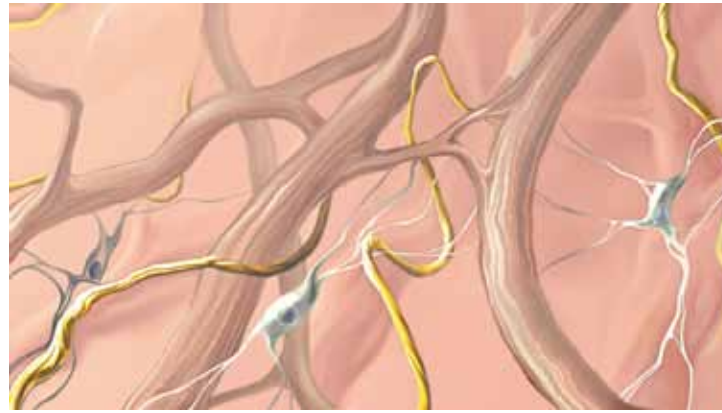
As we age, our skin comes to have less and less collagen, elastin, hyaluronic acid and other important components of the intercellular matrix of the dermis. As a result, we notice the skin becoming thinner and a loss of moisture; the skin loses its firmness and wrinkles appear.

Studies have shown that all of these age-related changes in the skin are linked to processes resulting from the reduction over time in both the number and the level of activity of fibroblasts in the dermis.

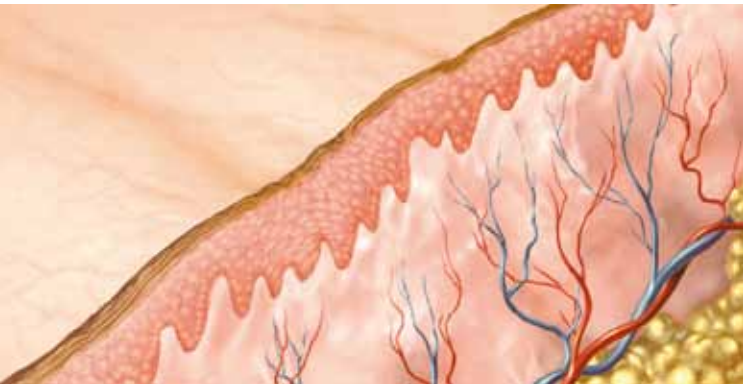
Illustrations of the skin before and after SPRS-therapy



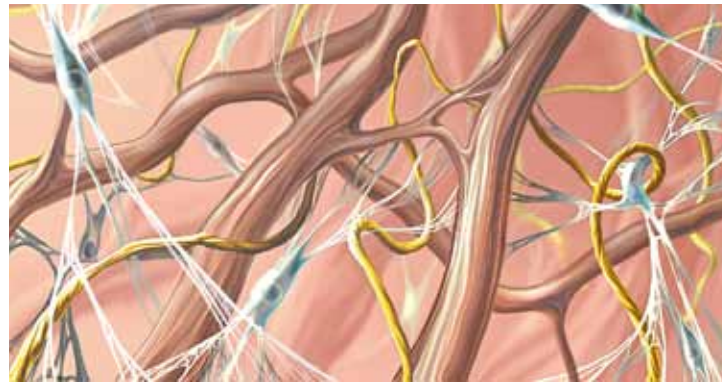
Before therapy



SPRS-therapy is designed to boost the number of functionally active dermal fibroblasts, which synthesize collagen, elastin, hyaluronic acid and other important components of the intercellular matrix, effectively correcting age-related changes in the skin.



After therapy



## 03. What is SPRS-therapy?

SPRS-therapy is a complex of personalized diagnostics and treatment procedures for repairing skin damage due to aging or other structural changes.

SPRS-therapy is based on innovative medical technologies which make it possible to:

- study the skin's condition at the micro-structural level
- develop and implement a personalized program to correct existing skin damage and slow down the skin aging process using one's own fibroblasts

SPRS-therapy includes:

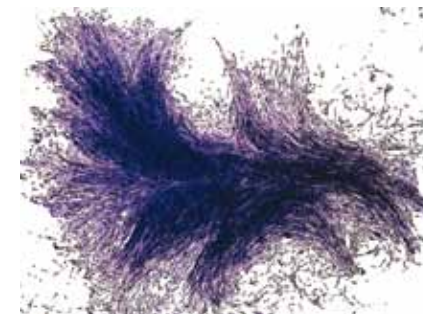
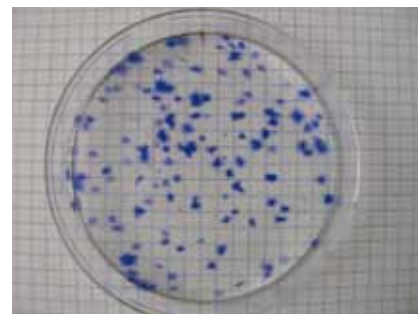
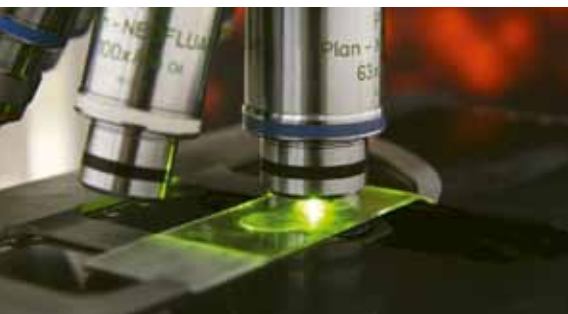
- SPRS-diagnostics of the skin based on morphofunctional methods for analyzing fibroblasts and creating a Skin Passport for the patient
- An SPRS-program to correct skin damage and slow down the aging process based on the patient's Skin Passport
- The SPRS-product – a cell-based suspension containing the patient's own fibroblasts for therapeutic treatment
- Applying of the treatment program
- Long-term storage of the patient's skin fibroblast culture in a cryogenic bank

# 03.

## SPRS-diagnostics:

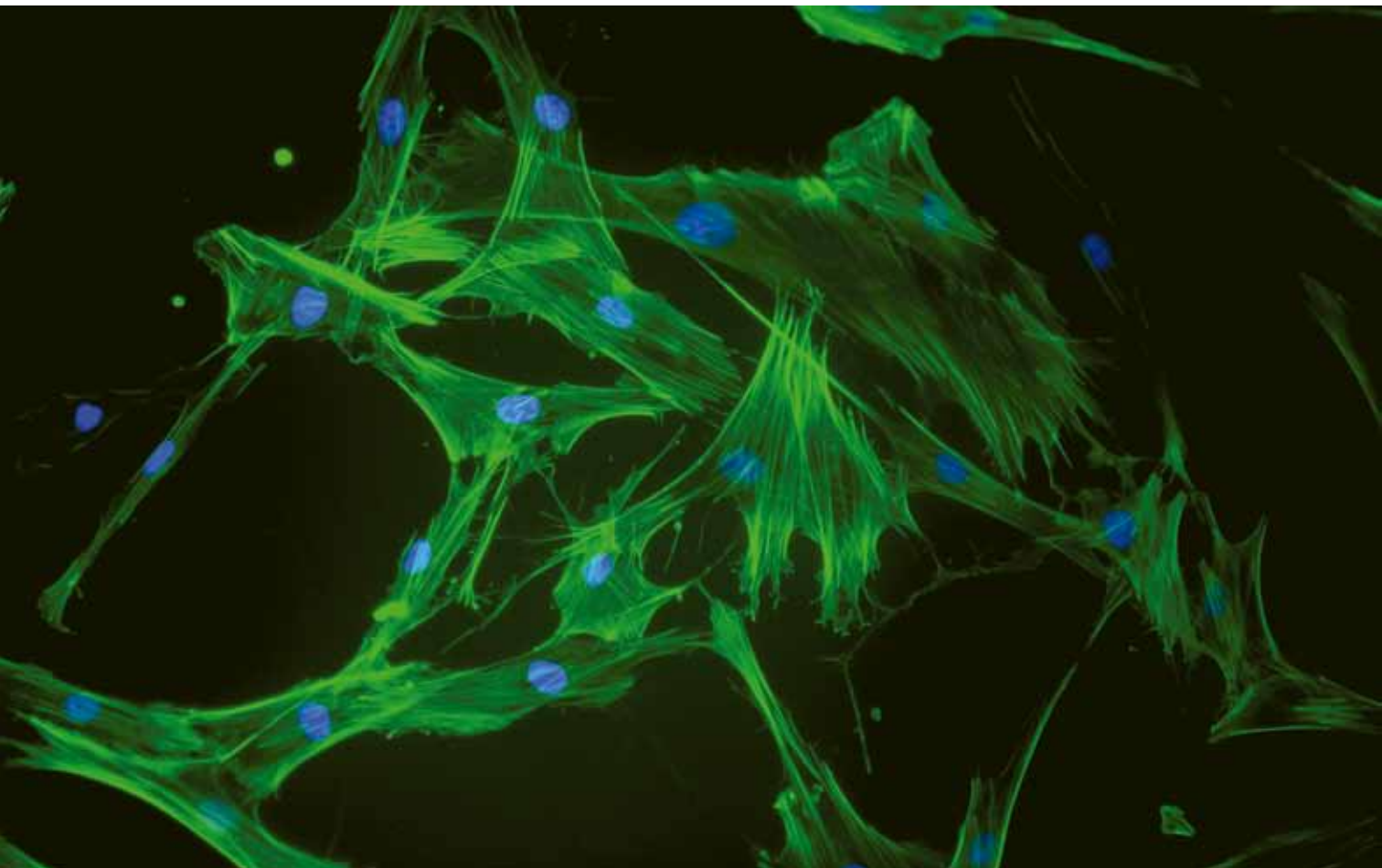
The patient's skin is studied with the help of modern laboratory methods allowing for an assessment of the cells' functional capacity to divide (effectiveness of colony formation), biosynthetic activity (the ability to synthesize collagen and other components of the intercellular matrix) and the morphological features of existing dermal fibroblasts.

On the basis of the data obtained, the patient's Skin Passport is created, conclusions are drawn with regard to the microstructure of the dermis and recommendations are made for the development of a personalized program to correct skin damage and slow down the aging process (SPRS-program).



The fibroblasts' capacity to form colonies makes it possible to assess the degree to which existing dermal fibroblasts are functionally active.

A dermal fibroblast culture



By maintaining the necessary number of functionally active fibroblasts in the dermis, it is possible to preserve youthful skin for many years.

## 03.

### SPRS-program

The SPRS-program is an individualized program, based on the patient's Skin Passport, for restoring the microstructure of the dermis and gradually improving the skin's condition.

The program includes recommendations on the number of courses of SPRS-therapy, their duration and also recommendations on the use of cosmetology procedures taking into consideration the extent of their effects on the skin in order to achieve a consistent aesthetic result without damage to the fibroblasts.

# 03.

## Developing the SPRS-product

The SPRS-product contains the patient's own fibroblasts taken from a fragment of skin with an approximate diameter of 5mm from the area behind the ear. The fibroblasts are grown according to a patented technique until the necessary quantity is cultivated, with the process taking about 6 weeks.

During the cultivation process, only cells with a superior ability to divide and synthesize important skin components are selected and stimulated. Poorly functioning and weak cells are discarded.

## Storage of the fibroblast culture in a cryobank

A portion of the cultivated cells are placed in a cryobank, where they can be stored in liquid nitrogen for an indefinite period of time without affecting their viability. The stored fibroblasts may be used to make the SPRS-product throughout the patient's lifetime.



The SPRS-product contains only functionally active cells.



## 04. In which situations is SPRS-therapy most effective?

SPRS-therapy can be effectively used to:

- correct aging-related changes to the skin of the face, neck, decollete area and hands (small and medium wrinkles, loss of elasticity)
- correct post-acne scarring
- speed up skin restoration after medium and deep skin peels
- prepare the skin for plastic surgery
- prevent skin aging





Forehead

Bridge of the nose

Periorbital area

Cheeks

Nasolobial folds

Mouth area

Chin area

Hands

Neck area

D collet area

## 05.

### How is the treatment applied?

One course of treatment usually consists of two procedures with an interval of 4-6 weeks, with the treatment applied to the skin of the face and body.

The SPRS-solution is administered intradermally using very fine needles. For the comfort of the patient an anesthetic cream is applied to the skin one hour before the procedure. Following the injection procedure, as with any intradermal injection, there may be slight swelling and bruising at the injection sites, but this disappears without a trace within several days.

Once in the dermis, the active fibroblasts begin to synthesize collagen and other important elements of the intercellular matrix, therefore restoring the physiological balance in the skin and the natural renewal processes of the dermis. As a result the skin's external appearance improves, its elasticity and hydration increase, wrinkles are smoothed out and the skin aging process begins to slow down.

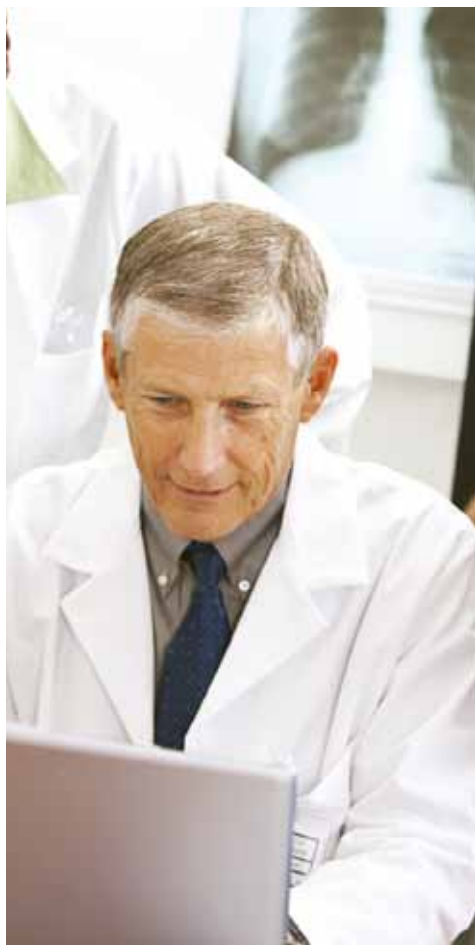


SPRS-therapy is based on natural rejuvenation of the skin using the patient's own cells.

## 06. What are the advantages of SPRS-therapy? most effective?

SPRS-therapy clearly stands out from all other existing cosmetic procedures and drugs:

- SPRS-therapy is the only method in modern aesthetic medicine which not only corrects visible skin defects but also restores the skin at the micro-structural level.
- SPRS-therapy is a highly personalized approach to rejuvenating the skin of each patient that allows not only for the study of the patient's skin condition but also makes it possible to develop an individualized program to correct existing skin damage and prevent its aging.
- SPRS-therapy works in such a way as to avoid all allergic reactions and other side effects (as only the patient's own cells are used in the procedure).
- SPRS-therapy provides a long-term clinical effect, as it treats the reasons behind the aging of the skin not only the symptoms
- SPRS-therapy can serve as a starting point for the subsequent effective use of various other skincare products and procedures



SPRS-therapy does not induce medical complications or side effects

## 07. Is SPRS-therapy safe?

SPRS-therapy is a safe procedure:

The results of numerous pre-clinical and clinical trials carried out throughout the world have proven the safety and effectiveness of the administration of a patient's own cultivated fibroblasts to correct aging-related skin damage (more information about the results of clinical trials of SPRS-therapy can be found on our website: [www.sprs-therapy.ru](http://www.sprs-therapy.ru)).

A sample of cell material from each patient undergoes compulsory safety testing in order to eliminate the risk of viral or bacterial contamination.

SPRS-therapy — natural skin  
rejuvenation



A pronounced effect is already be noticeable after the first procedure and increases over the span of several months following the conclusion of the course of treatment.

## 08. What are the results of SPRS-therapy?

The clinical results of SPRS-therapy are as follows:

- an increase in the number of functionally active fibroblasts in the dermis
- an increase in the amount of collagen in the dermis
- a thickening of the skin
- a reduction in the number and depth of wrinkles
- a smoothing of the skin

Following the first course of SPRS-therapy, the patient receives:

- a Skin Passport
- the SPRS-program
- a certificate confirming the storage of the patient's fibroblast culture in a cryobank

Furthermore, the attending doctor can subsequently prescribe for the patient, based on the SPRS-program and information contained in the Skin Passport, an individual program of supplemental cosmetic procedures to help prevent the aging of the skin and achieve the desired aesthetic effect.



## 09. Is SPRS-therapy compatible with other cosmetology procedures?

SPRS-therapy can be administered in conjunction with all other skincare methods used in modern cosmetology today. Furthermore, SPRS-therapy is an essential procedure for any individualized program prescribed by dermatologists and/or cosmetologists. It is a well-known fact that the success of cosmetology procedures directly depends on the number and functional activity of fibroblasts. Thus, having successfully rejuvenated the skin's microstructure, one can apply any cosmetic product, the basic objective of which is to stimulate the fibroblasts to produce components of the intercellular matrix: collagen, elastin and hyaluronic acid.



## 10. Where is SPRS-therapy offered?

Moscow's leading dermatology and cosmetology clinics provide SPRS-therapy courses, offering an individualized and comprehensive approach to correcting skin defects and slowing the aging process.

SPRS-therapy is administered by highly qualified dermatologists and cosmetologists who have successfully completed training at our specialized center and attained certification.

More information about SPRS-therapy as well as a list of clinics offering this innovative treatment can be found on our website: [www.sprs-therapy.ru](http://www.sprs-therapy.ru).

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License

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Authorization

No. FS No.2009/398

This treatment has contraindications  
Consultation with a specialist is required