
Adinizer®
Regenerative
Adipose Tissue Transfer
Mechanical SVF
VACUSERA
Biostimulants

Adinizer®

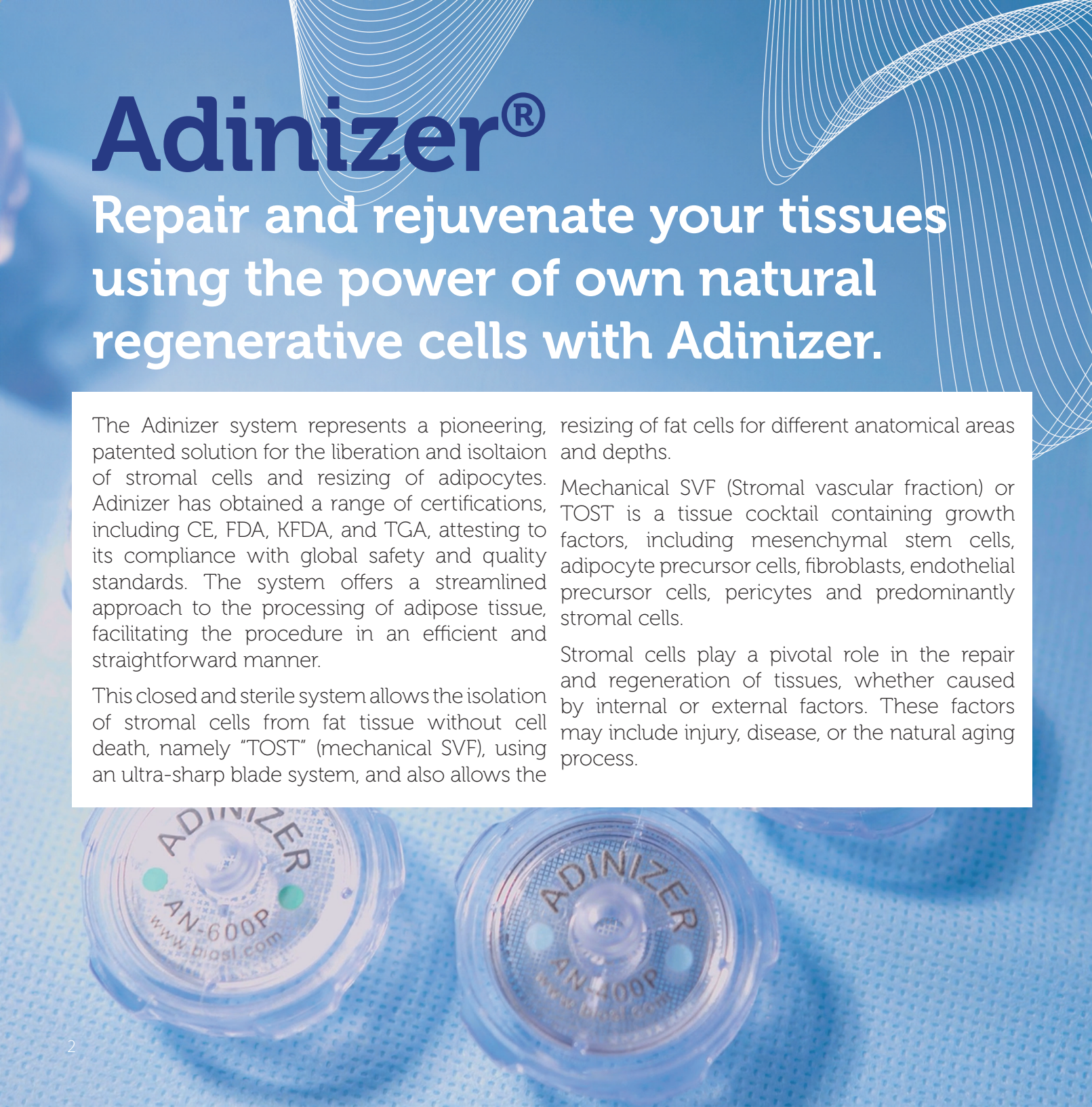
Repair and rejuvenate your tissues using the power of own natural regenerative cells with Adinizer.

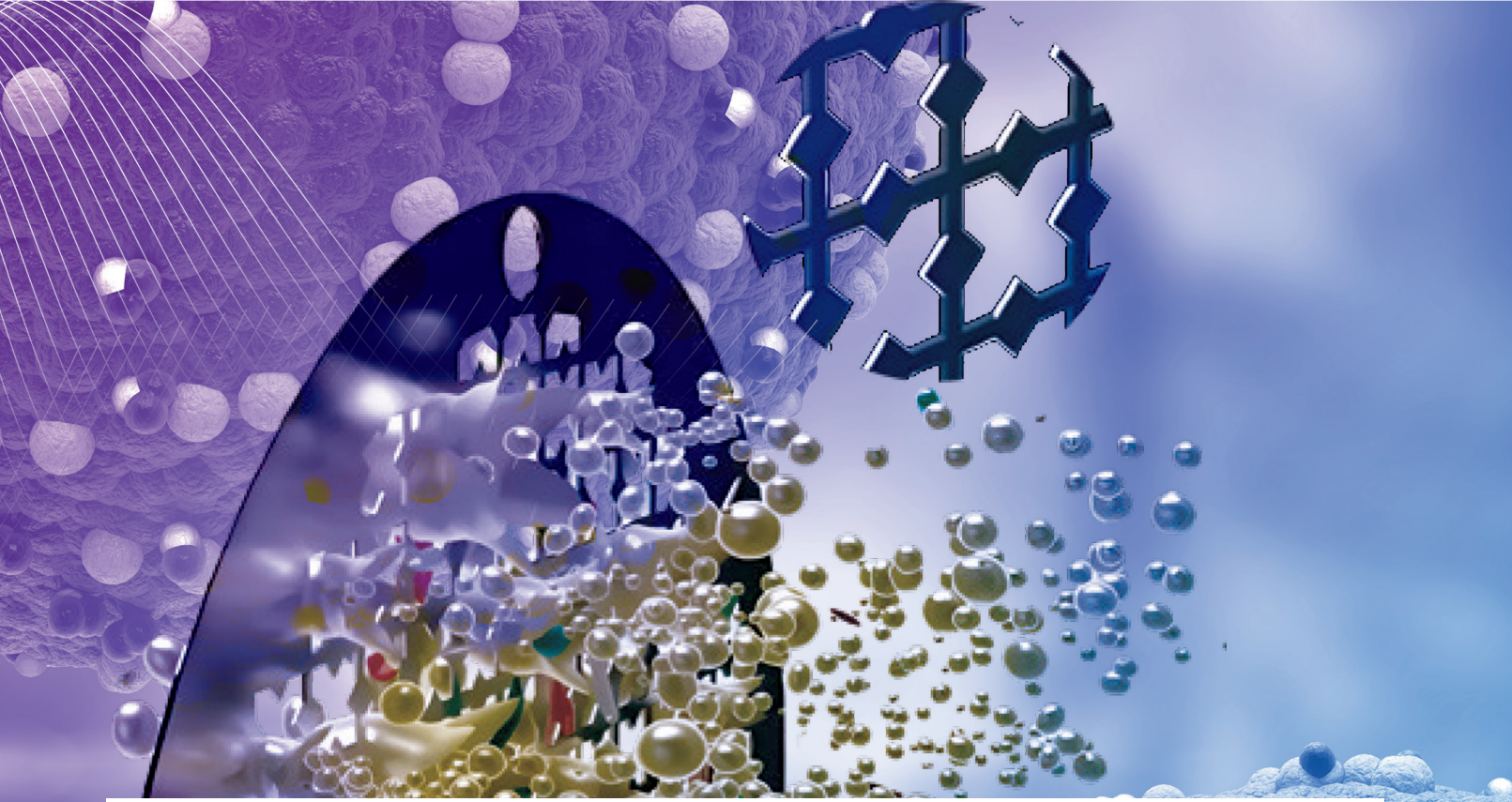
The Adinizer system represents a pioneering, patented solution for the liberation and isoltaion of stromal cells and resizing of adipocytes. Adinizer has obtained a range of certifications, including CE, FDA, KFDA, and TGA, attesting to its compliance with global safety and quality standards. The system offers a streamlined approach to the processing of adipose tissue, facilitating the procedure in an efficient and straightforward manner.

This closed and sterile system allows the isolation of stromal cells from fat tissue without cell death, namely "TOST" (mechanical SVF), using an ultra-sharp blade system, and also allows the resizing of fat cells for different anatomical areas and depths.

Mechanical SVF (Stromal vascular fraction) or TOST is a tissue cocktail containing growth factors, including mesenchymal stem cells, adipocyte precursor cells, fibroblasts, endothelial precursor cells, pericytes and predominantly stromal cells.

Stromal cells play a pivotal role in the repair and regeneration of tissues, whether caused by internal or external factors. These factors may include injury, disease, or the natural aging process.





- Strong bonds and bridges between parenchymal and stromal cells in adipose tissue are cut with the patented ultra-sharp blades in the Adinizer Smart Kit, completely freeing regenerative cells and resizing of adipocytes. Regeneration with Adinized fat and TOST provides rejuvenation of aged tissues, repairing of damaged tissues, revitalizing and reducing of wrinkles on the patient's skin. All those process creates a younger appearance.

- With this kit, tissue survival is increased without creating blunt pressure, and adipose can be injected in different anatomical areas and depths as desired diameters. The separation of stromal cells is a revolutionary approach because stromal cells in dormant mode switch to active mode and initiate regeneration. This procedure is called ARAT, or Adjustable Regenerative Adipose Transfer. While the applications you make with ARAT meet all the patient's filling needs, it prevents the transplanted adipose from being visible through thin skin.

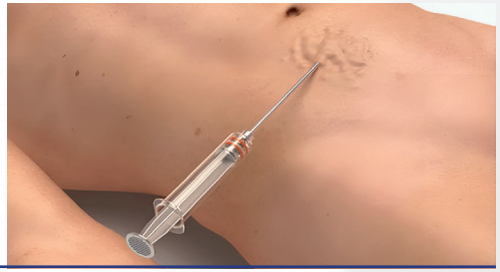
EFFECTIVE
EASY
SAFE

4 STEPS OF REGENERATION AND VOLUMIZATION BY ADINIZER

Autologous Adipose Tissue Harvesting

1

Adipose tissue is safely harvesting under appropriate sterile conditions by creating negative pressure with the specially designed fat harvesting cannula in the Adinizer Smart Kit.



Mechanical Separation in a Closed Sterile System

2

Following the initial centrifugation, the adipose tissue harvested from the patient is subjected to a cutting process through the 2,400µ, 1,200µ, 600µ and 400µ Adinizer blades situated between the two injectors. This results in the separation of the parenchymal cells and stromal cells present within the adipose tissue.

Mechanical SVF Isolation with Smartfuge

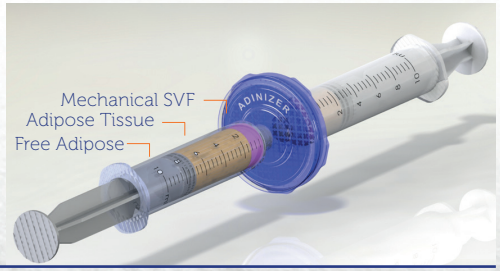
3

The mechanical SVF, comprising up to 99% live cells, is obtained from adipose tissue by centrifugation at 1200 G for 5 minutes in a Smartfuge centrifuge. This device is designed with an optimal weight to prevent vibration, reaches the desired rotation speed rapidly, and rotates with a radius angle of 90° to ensure equal distribution of internal pressure.

Regenerative Cell Cocktail Application

4

The mechanical SVF treatment has been demonstrated to result in a reduction in wrinkles and a younger appearance, mechanical SVF-enriched adipose tissue transfer has been shown to be a viable option for a number of areas, including the face, hands, legs, buttocks, breasts, and body fullness.



Adinizer®


Recommended diameters by areas.
2400 micron
1200 micron
600 micron
400 micron

The quantity of mechanical SVF and adipose tissue obtained

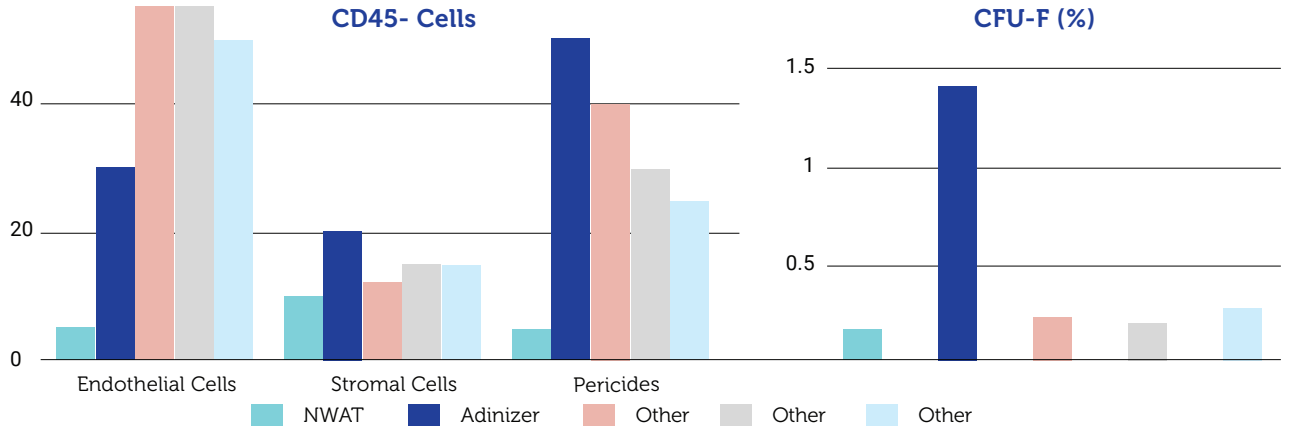
20 cc adipose: 4–6 cc Mechanical SVF
8-12 cc condensed fat is obtained.

40 cc adipose: 8–12 cc Mechanical SVF
16-24 cc condensed fat is obtained.

Adipose Density processed in Adinizer according to cannula/ needle fineness.	Adiniser Phases	Adinizer Cutting Process
15~17G	Single operation with 2400µ Adinizer blade	10-15 times
18~22 G	Two processes with 2400µ and 1200µ Adinizer blade	15-20 times for each process
24~27G	Three processes with 2400µ, 1200µ and 600µ Adinizer blades	15-20 times for each process
27~34G	Four processes with 2400µ, 1200µ, 600µ and 400µ Adinizer blades	15-20 times for each process

2019 IFATS
Comparison of Mechanical Separation Products

Adinizer won the best-in-class award at the IFATS Nanofat competition



Adinizer®

Effective results

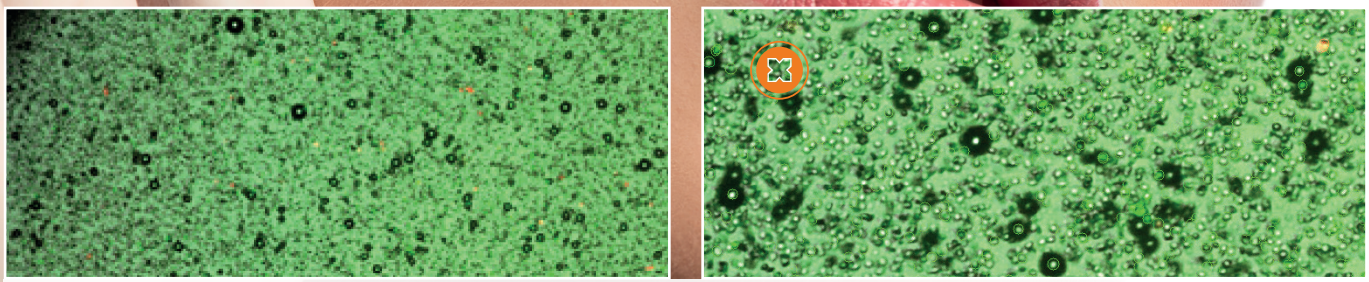
- Stromal cell isolation without blunt pressure
- Up to 99% of viable cells
- The highest cell counts

Results of cell counting

Total cells: 1.87 x 10^8 cells/mL
Nucleated cell: 7.63 x 10^6 cells/mL
Non-nucleated cell: 1.79 x 10^8 cells/mL
Nucleated cell viability rate: 95.8%
Average nucleated cell size: 13.2 µm
Total number of cells:: 83776
Number of nucleated cells: 3424
Number of viable nucleated cells: 3280
Number of non-viable nucleated cells: 144
Number of non-nucleated cells: 80352

Protocol

Protocol name: ASSUMED
Reconstitution factor 1.11
Min. cell size: 3 µm
Max. cell size: 60 µm
Cell size range: 3~60 µm
Noise reduction: 5
Roundness: 60%
Fluorescence threshold: 5
Green exposure: 15
Red exposure: 5
Green calibrated value: 0x7AE0
Red calibrated value: 0x55D



The results of the cell quantity and viability tests conducted using the LunaStem Automatic Fluorescent Cell Counter IPs3 (Biosystems, South Korea) are presented herewith.

Easy to Use

- Easily on-site sse in the operating theatre and clinic
- Ready-to-use process set
- Short proecessing time

Safer Applications

- Closed system operation set
- Approved product
- Enzyme-free mechanical SVF
  - •No allergic side effects.
  - •TNon-toxic.
  - •Does not contain synthetic components.

LITERATURES

1. Copcu HE, Oztan S. New Mechanical Fat Separation Technique: Adjustable Regenerative Adipose-tissue Transfer (ARAT) and Mechanical Stromal Cell Transfer (MEST). **Aesthet Surg J** Open Forum. 2020 Jul 22;2(4):ojaa035.
2. Copcu HE, Oztan S. Not Stromal Vascular Fraction (SVF) or Nanofat, but Total Stromal-Cells (TOST): A New Definition. Systemic Review of Mechanical Stromal-Cell Extraction Techniques. **Tissue Eng Regen Med.** 2021 Feb;18(1):25-36.
3. Copcu HE. Indication-based protocols with different solutions for mechanical stromal-cell transfer. **Scars Burn Heal**. 2022 Jan 5;8:20595131211047830
4. Copcu HE. Supercharged Mechanical Stromal-cell Transfer (MEST). **Plast Reconstr Surg** Glob Open. 2021 May 10;9(5):e3552.
5. Rodriguez-Unda, Nelson A. MD1; Novak, Matthew D. MD1; **Rohrich, Rod J.** MD2. Techniques in Facial Fat Grafting: Optimal Results Based on the Science of Facial Aging. **Plast Reconstr Surg** 152(6):p 1040e-1043e, December 2023
6. Sawai, Seiji MD1; Sowa, Yoshihiro MD, PhD2; Kishida, Tsunao PhD3; Inokawa, Hitoshi PhD4,5; Inafuku, Naoki MD2; Tsuchida, Shinji MD, PhD1; Oda, Ryo MD, PhD1; Fujiwara, Hiroyoshi MD, PhD6; Mazda, Osam MD, PhD4; **Yoshimura, Kotaro** MD, PhD7; Takahashi, Kenji MD, PhD1. Micronized Cellular Adipose Matrix Promotes the Therapeutic Effect of an Artificial Nerve Conduit in Peripheral Nerve Gap Injury. **Plast Reconstr Surg** 151(6):p 959e-969e, June 2023.
7. Sowa Y, Inafuku N, Kishida T, Mori M, Mazda O, **Yoshimura K.** Prophylactic Application of Human Adipose Tissue-Derived Products to Prevent Radiation Disorders. **Plast Reconstr Surg**. 2023 Jun 1;151(6):1207-1216.
8. Sowa Y, Sawai S, Yamamoto K, Sunaga A, Saito N, Shirado T, Toyohara Y, Bolun L, Yoshimura K, Mazda O. Micronized cellular adipose matrix purified with a bladed connector contains abundant functional adipose stem cells. **Tissue Cell.** 2024 Aug;89:102457.
9. Namgoong, S.; Yoon, I.-J.; Han, S.-K.; Son, J.-W.; Kim, J. A Pilot Study Comparing a Micronized Adipose Tissue Niche versus Standard Wound Care for Treatment of Neuropathic Diabetic Foot Ulcers. **J. Clin. Med.** 2022, 11, 5887.
10. Kaliterna, D. and Barac, B. 2023. New approach for the treatment of autoimmune diseases. **Journal of Applied Cosmetology.** 41, 1 (Feb. 2023), 4/11.
11. Mundluru VK, Naidu MJ, Mundluru RT, Jeyaraman N, Muthu S, Ramasubramanian S, Jeyaraman M. Non-enzymatic methods for isolation of stromal vascular fraction and adipose-derived stem cells: A systematic review. **World J Methodol.** 2024 Jun 20;14(2):94562. doi: 10.5662/wjm.v14.i2.94562.
12. Deane EC, Wong A, Bloom JD. Fat Grafting the Male Face. **Facial Plast Surg Clin North Am.** 2024 Aug;32(3):391-398. doi: 10.1016/j.fsc.2024.03.003.
13. Goncharov, E.N.; Koval, O.A.; Nikolaevich Bezuglov, E.; Encarnacion Ramirez, M.d.J.; Engelgard, M.; Igorevich, E.I.; Saporiti, A.; Valentinovich Kotenko, K.; Montemurro, N. Stromal Vascular Fraction Therapy for Knee Osteoarthritis: A Systematic Review. **Medicina** 2023, 59, 2090.
14. Vargel, İ.; Tuncel, A.; Baysal, N.; Hartuç-Çevik, İ.; Korkusuz, F. Autologous Adipose-Derived Tissue Stromal Vascular Fraction (AD-tSVF) for Knee Osteoarthritis. **Int. J. Mol. Sci.** 2022, 23, 13517.
15. Copcu, H. Eray MD. Autologization of Exosomes with Deparenchymized Adipose Tissue: An Innovative Approach for Regenerative Medicine and Surgery. **Plastic & Reconstructive Surgery** - Global Open 12(7):p e5982, July 2024.

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