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Products and
Related Science
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Arthrex Aesthetics.

Welcome to Arthrex Aesthetics™

Clinically Proven. Naturally Better.

Arthrex is a world leader in regenerative medicine, sports medicine, and minimally invasive surgery. For over 40 years, Arthrex has been recognized for innovation and uncompromising quality, developing more than 24,000 products and surgical procedures. With a global presence in more than 100 countries, we continue to uphold our mission of Helping Surgeons Treat Their Patients Better®.

We proudly introduce Arthrex Aesthetics, bringing our decades of experience and a globally renowned reputation to the world of aesthetic medicine. As the global leader for platelet-rich plasma (PRP) and platelet-rich fibrin (PRF) systems, we have delivered high-quality medical products for more than a decade to leading professionals in aesthetic medicine and plastic surgery. Arthrex Aesthetics is dedicated to making patients “Naturally Better.”

Each year, Arthrex trains thousands of medical professionals worldwide on the safe and effective use of our products and procedures, demonstrating our commitment to medical education and research. Arthrex continues to experience unprecedented growth and demand for our products; however, we remain a privately held company with a family business culture committed to delivering uncompromising quality to the health care professionals who use our products, and ultimately, the millions of patients whose lives we impact.

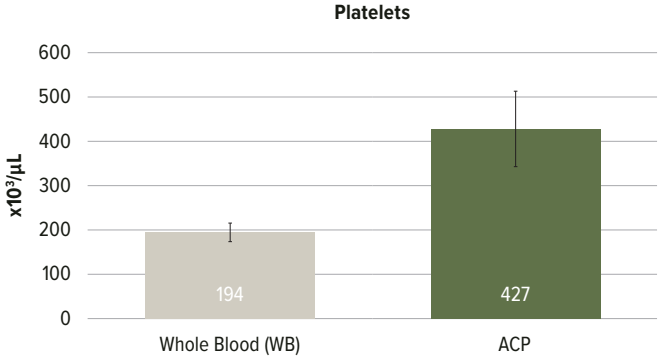
Better with BIO™

Arthrex ACP® Double-Syringe System

Best-in-Class Fluid PRF[1]

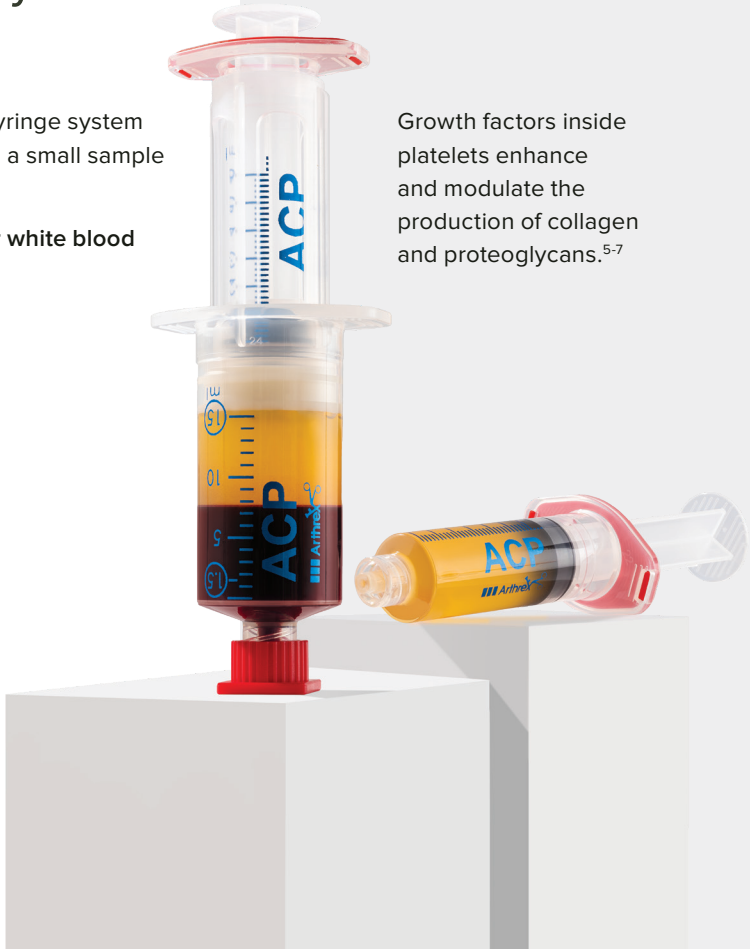
Trusted for more than 15 years, the proven Arthrex ACP double-syringe system quickly and safely concentrates platelets and growth factors from a small sample of autologous blood—delivering consistent, validated yields.[1,2]

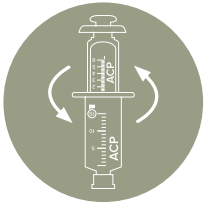
The Arthrex ACP system effectively reduces inflammatory red or white blood cells that can negatively interfere with the healing process.[3,4]



Indications
The Arthrex ACP double-syringe kit is indicated for the safe and rapid preparation of autologous 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.

Growth factors inside platelets enhance and modulate the production of collagen and proteoglycans.[5-7]





80% reduction of white blood cells (WBCs) in ACP[8]

- Closed, rapid, and simple production of fluid PRF
- Completely autologous
- No anticoagulants
- No synthetic separation gels

Features and Benefits

The Arthrex ACP system enables the production of ~5-6 mL of autologous conditioned plasma (ACP) with a platelet concentration that is 2-3 times increased over baseline, coupled with simultaneous depletion of white and red blood cells.[9,10]

ACP Max™ System

Highly Concentrated PRP Containing Platelet-Derived Exosomes

Building on the innovative and proven technology of the Arthrex ACP® double-syringe system, the ACP Max system offers a unique PRP formulation that increases platelet concentration up to 12 times over baseline and significantly reduces neutrophils by up to 98.9%.[11-13] The ACP Max system maximizes platelet concentration by using a dual-spin regimen. The first spin cycle separates the platelet-poor plasma (PPP) and creates a buffy-coat layer. Following the first spin, PPP is removed, allowing the second spin to concentrate platelets, which results in a highly concentrated PRP solution depleted of red blood cells (RBCs) and WBCs, including neutrophils.[11-13]

Recent advances have shown that highly concentrated PRP formulations contain platelet-derived exosomes[14] while also providing increased platelet concentrations and growth factors. Exosomes are small extracellular vesicles (EVs), ranging from 30-200 nm in size, that facilitate intercellular communication by transporting proteins, lipids, and nucleic acids between cells.

Features and Benefits

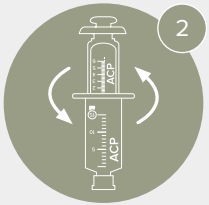
- Preparation of highly concentrated PRP containing platelet-derived exosomes at the point of care[14]
- Processing capabilities for volumes of 30, 60, and 90 mL
- Increased platelet concentration by up to 12× over baseline[11-13]
- Effective reduction of neutrophils by up to 98.9% and RBCs by up to 99%[11-13]
- Sterile, triple-syringe system

Indications

The ACP Max PRP system is indicated for the safe and rapid preparation of autologous PRP from a small sample of peripheral blood or a small mixture of blood and bone marrow 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.

First Spin

Blood Volume	RPM	Time
30 mL	3200 rpm	3 min
60 mL	3200 rpm	6 min
90 mL	3200 rpm	9 min



Second Spin

Blood Volume	RPM	Time
15 mL	1500 rpm	5 min

High Flexibility

One system for multiple PRP formulations

Closed System

Completely automated separation in a closed processing system

Ease of Use

PRP production at the touch of a button

Angel® PRP Processing System

Automated and Customizable PRP Formulations

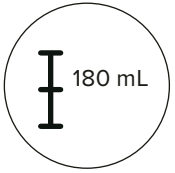
Users can adjust platelet, WBC, and RBC concentrations to tailor the PRP therapy for each patient. Different PRP compositions can be obtained by changing the hematocrit value. Through a proprietary platelet sensor system, platelet concentrations and WBC concentrations can be adjusted.

The Angel system uses three advanced sensors and cell-specific light wavelengths to precisely separate blood components. It detects platelets and leukocytes at 470 nm, erythrocytes at 940 nm, and compensates for ambient light at 1300 nm. This automated process directs PPP, PRP, and RBCs into sterile compartments, yielding high concentrations of PRP and PPP from whole blood.

Adjust platelet concentrations (up to 18x over baseline) and leukocyte and neutrophil levels*

3-sensor technology for customizable PRP formulations

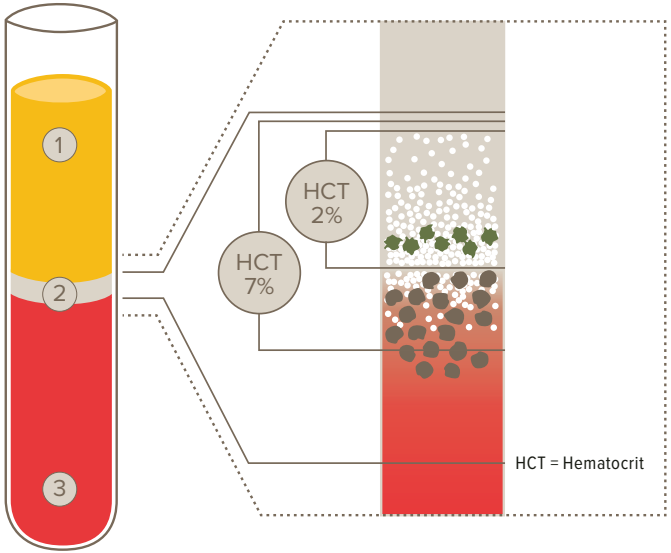
Each processing kit can process 3 cycles on the same patient



Process up to 180 mL of patient blood with a single processing set

Indications
Angel system kits are to be used intraoperatively at the point of care for the safe and rapid preparation of autologous platelet-poor plasma and platelet concentrate (platelet-rich plasma) from a small sample of peripheral blood or a small sample of a mixture of peripheral blood and bone marrow. The platelet-poor and -rich plasmas are mixed with autograft and/or allograft bone prior to application to a bony defect for improving handling characteristics.

*Per estimations provided from the Angel Calculator



Angel® System App

- Educational online tool for calculating estimated cellular fold increase and concentration levels of a final PRP solution
- Based on over 8000 data points

Individually Programmable

- Preset reproducible, custom formulations
- Storage of up to 30 user-specific processing logs

Visit AngelApp.Arthrex.com to use the Angel system calculator.

HCT 2% 60 mL Whole Blood*

- 3 mL PRP volume
- 4.6× over baseline platelet concentration in PRP
- 0.3× over baseline neutrophil concentration in PRP

HCT 7% 60 mL Whole Blood*

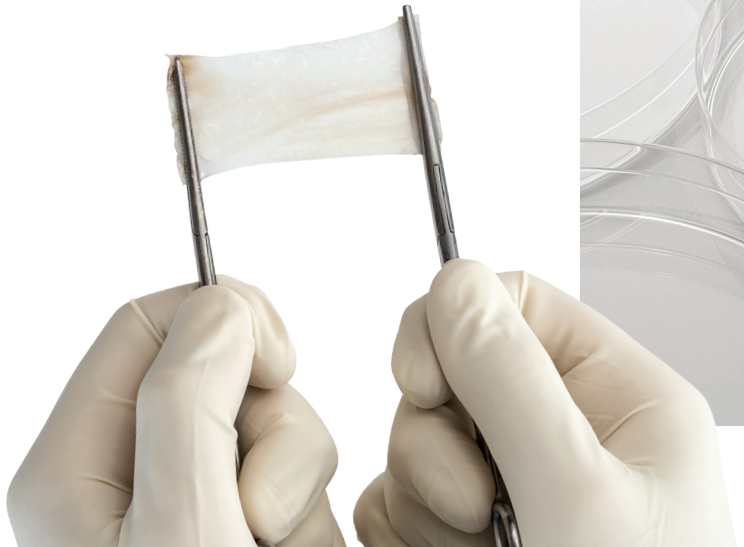
- 3 mL PRP volume
- 6.8× over baseline platelet concentration in PRP
- 1.2× over baseline neutrophil concentration in PRP

*Per estimations provided from the Angel Calculator

Arthrex Amnion™ Matrix

Placental Tissue for Natural Healing

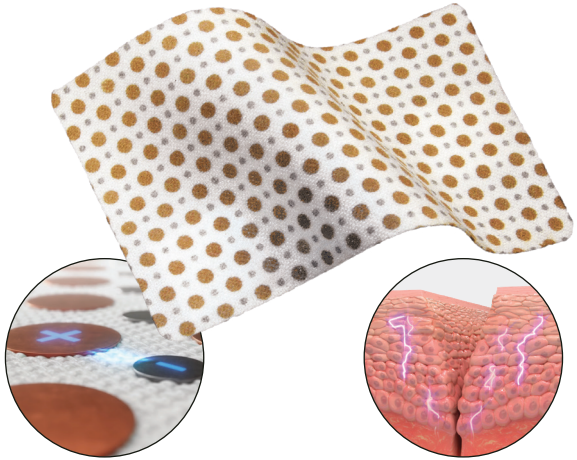
- Supports the healing process with a natural extracellular matrix scaffold and 600+ endogenous growth factors and cytokines[15-18]
- Anatomical barrier helps provide mechanical protection[19] while supporting tissue with nutrient-rich growth factors[20-23]
- Natural properties are preserved during processing, maintaining inherent levels of key extracellular matrix proteins, growth factors, and cytokines[20,23]



JumpStart® Dressings

Accelerated Healing for Any Incision

JumpStart dressings with Advanced Microcurrent Technology® are the only microcurrent-generating bandages that help minimize the risk of wound infection and promote healing by using patients' natural electrical energy.



Embedded microcell batteries generate microcurrents that kill a broad spectrum of bacteria, with a 100% reduction of *C acnes* within 24 hours.[24]

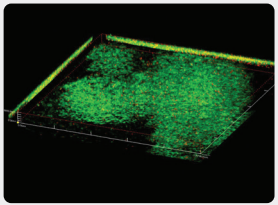
JumpStart dressings mimic the body's physiological electrical energy to accelerate cell migration and re-epithelization.

Immediately following laser resurfacing

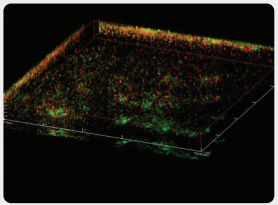
Day 4 postprocedure

The patient received a laser resurfacing procedure and applied JumpStart® antimicrobial wound dressing. By day 4, no signs of redness were visible.

Individual results will vary and not all patients will experience the same outcome.
Courtesy of Vomaris Innovations, Inc.



Standard silver dressing



JumpStart antimicrobial wound dressing

Live/dead fluorescence staining showed effective bacterial killing of *P aeruginosa* within the JumpStart antimicrobial wound dressing, compared to a standard silver-based dressing, at 24 hours (green = alive; red = dead).[25]

NanoNeedle™ Visualization Systems

Ultra-Minimally Invasive Chip-on-Tip Visualization

The NanoNeedle scope is a state-of-the-art, single-use operative imaging device engineered for precision and portability. Utilizing high-quality chip-on-tip technology, it provides exceptional visualization through a needle-sized profile—ideal for accessing delicate and confined anatomical areas. Available in 3 sizes, the NanoNeedle scope is compatible with the NanoScope imaging console and the Synergy Vision™ imaging system.

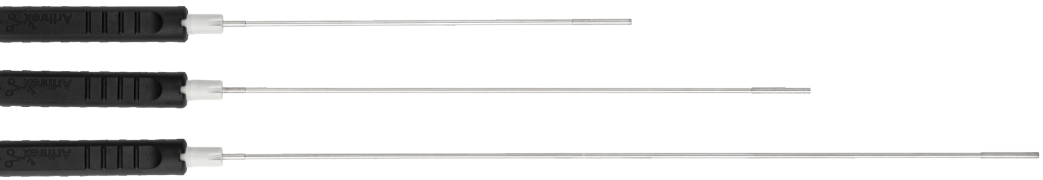
Standard-Length NanoNeedle Scopes

- 125 mm
- 180 mm
- 250 mm

Camera Specifications

- 5-50 mm depth of field
- Sterile, single-use 1.9 mm camera
- Malleable chip-on-tip design
- HD quality*

*With select models when paired with the Synergy Vision system

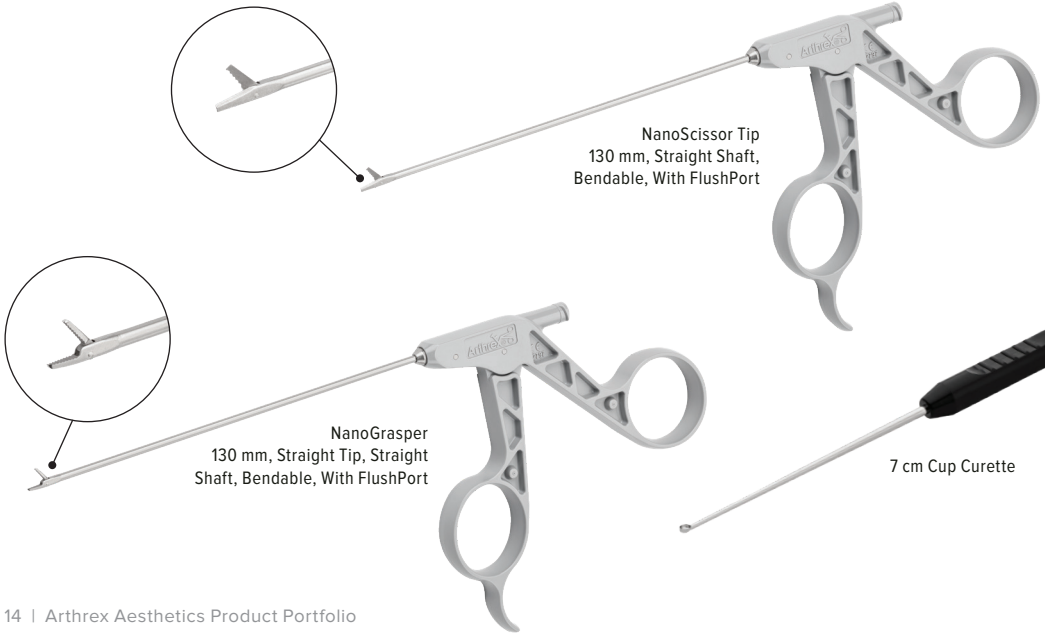


NanoScope Console Cart (height adjustable with power supply and cable-management features)

Nano Instrumentation

Redesigned to Customize Patient Care

Nano instrumentation is suited for aesthetic surgery, offering ultra-small, reusable tools that enable precise, minimally invasive procedures. With enhanced control and visualization, this portfolio is ideal for facial rejuvenation, scar revision, and subdermal sculpting.



NanoScissor Tip
130 mm, Straight Shaft,
Bendable, With FlushPort

NanoGrasper
130 mm, Straight Tip, Straight
Shaft, Bendable, With FlushPort

7 cm Cup Curette

Graduated 2.5 mm
Tip Probe

Synergy Vision™ Imaging System

Revolutionizing Surgical Imaging

The Synergy Vision imaging system is an all-in-one option including high dynamic range (HDR), high-quality visualization supporting the Nano Vision™ feature via the 1.9 mm-diameter NanoNeedle™ scope, ultrawide imaging using the Pano™ scope, and video integration with the Synergy Vision Connect™ system.

Features

- Increased visualization of anatomical features
- Enhanced clinical decision-making ability
- Possible portal negation
- Dual-viewing capabilities with the NanoNeedle and Pano scopes

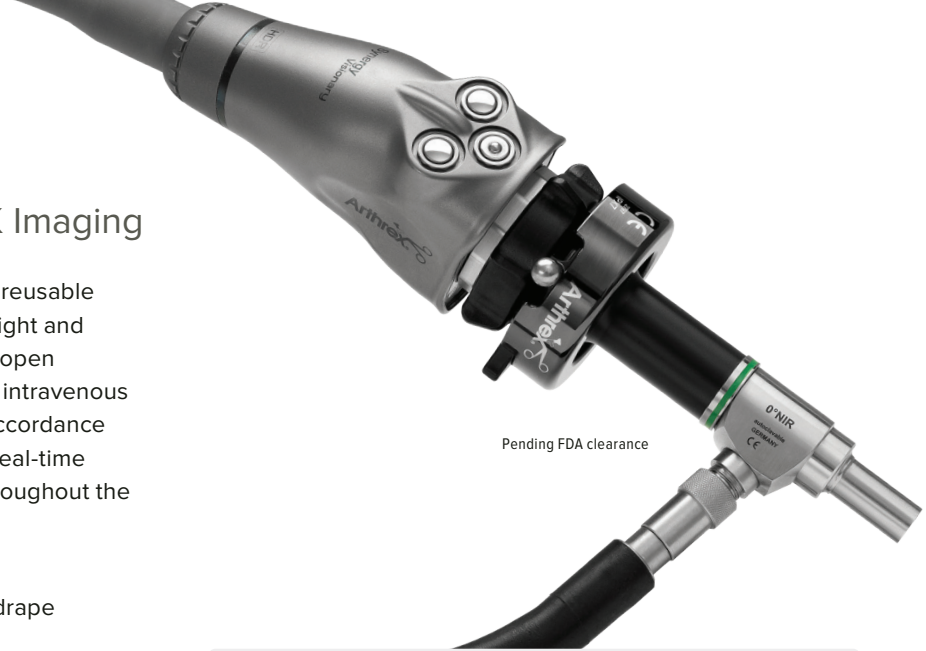
Synergy Exoscope

Near-Infrared Fluorescence 4K Imaging

The Synergy exoscope is an autoclavable and reusable 0° 4K scope used to provide real-time visible light and near-infrared (NIR) fluorescent imaging during open diagnostic and surgical procedures. Following intravenous administration of indocyanine green (ICG) in accordance with its approved label, the system facilitates real-time visualization of blood flow, tissue perfusion throughout the body, and lymphatic structures.

Features and Benefits

- Able to be used in the sterile field without a drape
- Flexible working distance of up to 30 cm
- Small, lightweight, easy attachment to the camera head
- Can be handheld with a pistol-grip attachment or with a TRIMANO FORTIS® camera holder
- Autoclavable



Pending FDA clearance

Following intravenous administration of ICG, fluorescence imaging of blood flow and tissue perfusion is utilized before, during, and after procedures in plastic and reconstructive surgery.

References

1. Smith PA. Intra-articular autologous conditioned plasma injections provide safe and efficacious treatment for knee osteoarthritis: an FDA-sanctioned, randomized, double-blind, placebo-controlled clinical trial. *Am J Sports Med*. 2016;44(4):884-891. doi:10.1177/0363546515624678
2. Wang X, Yang Y, Zhang Y, Miron RJ. Fluid platelet-rich fibrin stimulates greater dermal skin fibroblast cell migration, proliferation, and collagen synthesis when compared to platelet-rich plasma [published correction appears in *J Cosmet Dermatol*. 2024. doi:10.1111/jocd.16445]. *J Cosmet Dermatol*. 2019;18(6):2004-2010. doi:10.1111/jocd.12955
3. Scott A, Khan KM, Roberts CR, Cook JL, Duronio V. What do we mean by the term "inflammation"? A contemporary basic science update for sports medicine. *Br J Sports Med*. 2004;38(3):372-380. doi:10.1136/ bjsm.2004.011312
4. Arthrex, Inc. Data on file (LA0810). Naples, FL; 2019.
5. Borzini P, Mazzucco L. Tissue regeneration and in loco administration of platelet derivates: clinical out-comes, heterogeneous products, and heterogeneity of effector mechanisms. *Transfusion*. 2005;45:1759-1767. doi:10.1111/j.1537-2995.2005.00600.x
6. Edwards D, Murphy G, Reynolds JJ, et al. Transforming growth factor beta modulates the expression of collagenase and metalloproteinase inhibitor. *EMBO J*. 1987;6(7):1899-1904.
7. Lynch SE, Nixon JC, Colvin RB, Antoniades HN. Role of platelet-derived growth factor in wound healing: synergistic effects with other growth factors. *Proc Natl Acad Sci USA*. 1987;84:7696-7700. doi:10.1073/pnas.84.21.769
8. Arthrex, Inc. Data on file (APT-04153). Naples, FL; 2019.
9. Aust M, Pototschnig H, Jamchi S, Busch KH. Platelet-rich plasma for skin rejuvenation and treatment of actinic elastosis in the lower eyelid area. *Cureus*. 2018;10(7):e2999. doi:10.7759/cureus.2999
10. Loibl M, Lang S, Brockhoff G, et al. The effect of leukocyte-reduced platelet-rich plasma on the proliferation of autologous adipose-tissue derived mesenchymal stem cells. *Clin Hemorheol Microcirc*. 2016;61(4):599-614. doi:10.3233/CH-141920
11. Arthrex, Inc. Data on file (APT-05368). Naples, FL; 2021.
12. Arthrex, Inc. Data on file (APT-05535). Naples, FL; 2022.
13. Arthrex, Inc. Data on file (APT-05756). Naples, FL; 2022.
14. Torreggiani E, Perut F, Roncuzzi L, Zini N, Baglìo SR, Baldini N. Exosomes: novel effectors of human platelet lysate activity. *Eur Cell Mater*. 2014;28:137-151. doi:10.22203/ecm.v028a11
15. Coolen NA, Schouten KC, Middelkoop E, Ulrich MM. Comparison between human fetal and adult skin. *Arch Dermatol Res*. 2010;302(1):47-55. doi:10.1007/s00403-009-0989-8
16. Coolen NA, Schouten KC, Boekema BK, Middelkoop E, Ulrich MM. Wound healing in a fetal, adult, and scar tissue model: a comparative study. *Wound Repair Regen*. 2010;18(3):291-301. doi:10.1111/j.1524-475X.2010.00585.x
17. Tseng SC, Espana EM, Kawakita T, et al. How does amniotic membrane work? *Ocul Surf*. 2004;2(3):177-187. doi:10.1016/s1542-0124(12)70059-9
18. Riordan NH, George BA, Chandler TB, McKenna RW. Case report of non-healing surgical wound treated with dehydrated human amniotic membrane. *J Transl Med*. 2015;13:242. doi:10.1186/s12967-015-0608-8
19. Kim SS, Sohn SK, Lee KY, et al. Use of human amniotic membrane wrap in reducing perineural adhesions in a rabbit model of ulnar nerve neurorrhaphy. *J Hand Surg Eur Vol*. 2010;35(3):214-219. doi:10.1177/1753193409352410
20. Delcroix GJ, Namin S, D'Ippolito G, Temple HT, Marshall R. Preserving the natural regenerative potential of amniotic membrane. *Vivex Biologics*. Miami, FL; 2017.
21. Niknejad H, Peirovi H, Jorjani M, et al. Properties of the amniotic membrane for potential use in tissue engineering. *Eur Cell Mater*. 2008;15:88-89. doi:10.22203/ecm.v015a07
22. Koob TJ, Lim JJ, Massee M, Zabek N, Denoizièr G. Properties of dehydrated human amnion/chorion composite grafts: implications for wound repair and soft tissue regeneration. *J Biomed Mater Res B Appl Biomater*. 2014;102(6):1353-1362. doi:10.1002/jbm.b.33141
23. Arthrex Amnion™ Matrix Thin and Cord [Instructions for Use (80-166)]. Naples, FL: Arthrex, Inc. 2016.
24. Pacific BioLabs Inc. Data on file (Report #K6D109G). Hercules, CA; 2006.
25. Banerjee J, Das Ghatak P, Roy S, et al. Silver-zinc redox-coupled electroceutical wound dressing disrupts bacterial biofilm. *PLoS One*. 2015;10(3):e0119531. doi:10.1371/journal.pone.0119531

Notes

Notes

The information contained in this brochure is provided as an educational tool and clinical aid to assist properly licensed medical professionals in the usage of specific Arthrex products. As part of this professional usage, the medical professional must use their professional judgment in making any final determinations in product usage and technique. In doing so, the medical professional should rely on their own training and experience, and should conduct a thorough review of pertinent medical literature and the product's directions for use. Postoperative management is patient-specific and dependent on the treating professional's assessment. Individual results will vary and not all patients will experience the same postoperative activity level or outcomes.

Arthrex manufacturer, authorized representative, and importer information (Arthrex eIFUs)

US patent information

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