PRODUCT CATALOG

VIVEX BIOLOGICS

PUTTING REGENERATIVE SOLUTIONS IN MOTION

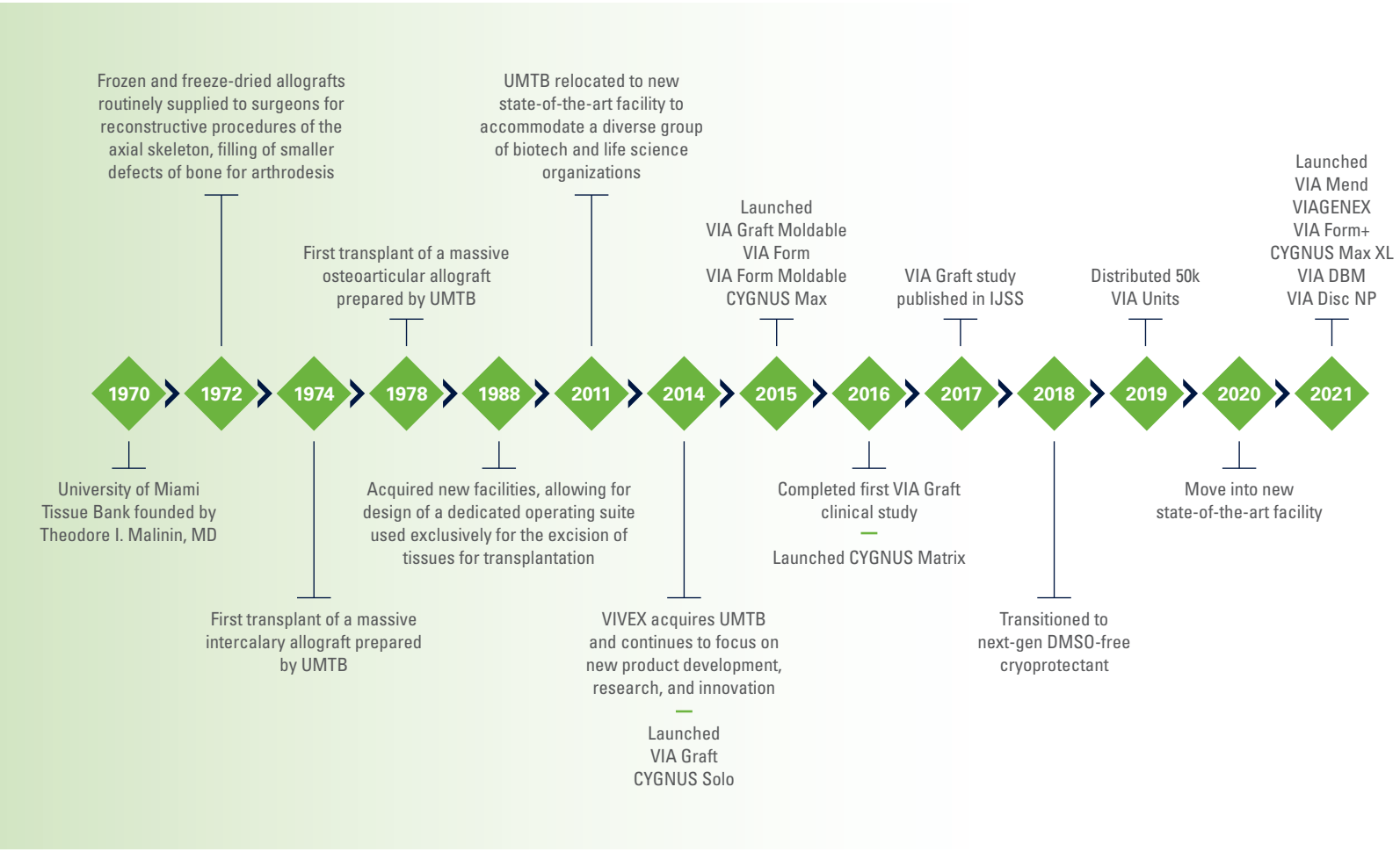
VIVEX® BIOLOGICS

VIVEX BIOLOGICS: THE SCIENCE OF EXTRAORDINARY

VIVEX® Biologics is a commercial stage, regenerative solutions company improving patient care through the innovation of tissue-based therapies. During more than 50 years of safe and effective operations, VIVEX has sourced millions of allograft products throughout the US and eighteen countries worldwide. VIVEX is registered with the Food and Drug Administration (FDA) and accredited by the American Association of Tissue Banks (AATB), continuously since 1992. VIVEX's strong processes, manufacturing expertise, and operational excellence is the result of continuously monitoring and improving its performance and systems.

VIVEX strives to create treatment options and solutions that will improve clinical, surgical, and therapeutic patient outcomes. Under the guidance of experienced and successful health care professionals, VIVEX tasks the brightest minds from the medical and material science industries to explore innovative ways to help others. VIVEX works with partners that are committed to providing care and compassion to donor families while inspiring communities to share life through their donation. Partnering with families in the prospect of regenerative treatments, VIVEX assures appropriate options are available to support translation of their gifts.

At VIVEX, our purpose is to support the body's regenerative potential to help people live better.



THERAPEUTIC PATIENT CARE THROUGH INNOVATION | **50+ YEARS OF SERVICE** | **100,000 ANNUAL RECIPIENTS** | **2,000,000+ ALLOGRAFTS DISTRIBUTED** | **0 CASES OF DISEASE TRANSMISSION**

ORTHO & FUSION THERAPIES

VIA® VIABLE BONE MATRICES

VIA® Graft, VIA® Graft Moldable, and VIA® Form Moldable allografts are viable allogeneic bone matrices that contain three key elements ideal for bone formation:

- An osteoconductive three-dimensional scaffold with cortical and cancellous components.
- A demineralized bone scaffold with osteoinductive potential which provides exposure of signaling molecules and bone morphogenetic proteins.[1]
- Viable allogeneic-derived cells to support osteogenic healing processes.

ABOUT VIA VIABLE BONE MATRICES

The VIA Series of Viable Allogeneic Bone Matrices all incorporate VIA Coat™, our proprietary dimethyl sulfoxide (DMSO)-free cryoprotectant that eliminates the need for rinsing and decanting steps prior to use, decreasing handling and preparation time in the OR to less than 20 minutes.[2] VIA Coat™ is designed to protect and sustain the inherent regenerative properties of our allografts while enhancing their bioactivity.[2] Our solutions that incorporate VIA Coat™ technology feature a 4-hour working window for implantation after thaw without the loss of cell viability.[2]

VIACOAT™

KEY FEATURES OF VIA PRODUCT LINE

- Three unique scaffold blends for optimal handling characteristics: VIA Graft, VIA Graft Moldable, and VIA Form Moldable
- Proprietary, optimized bone microparticulate size range of 100-300µm.[3] Average cell viability consistently exceeds 80% post-thaw[2]
- Minimum of 150,000 viable cells per cc of allograft post-thaw[2]
- Three-year shelf life with storage at -65°C or colder

POTENTIAL CLINICAL APPLICATIONS

- Spine
- Upper Extremity
- Foot and Ankle
- Oral and Maxillofacial
- Orthopedic Oncology

ORDERING INFORMATION

VIA® GRAFT

CODE	DESCRIPTION	SIZE
VCAX-010000	VIA® Graft	1.0cc
VCAX-025000	VIA® Graft	2.5cc
VCAX-050000	VIA® Graft	5.0cc
VCAX-100000	VIA® Graft	10.0cc

VIA® GRAFT MOLDABLE

CODE	DESCRIPTION	SIZE
VCAMX-025000	VIA® Graft Moldable	2.5cc
VCAMX-050000	VIA® Graft Moldable	5.0cc
VCAMX-100000	VIA® Graft Moldable	10.0cc

VIA® FORM MOLDABLE

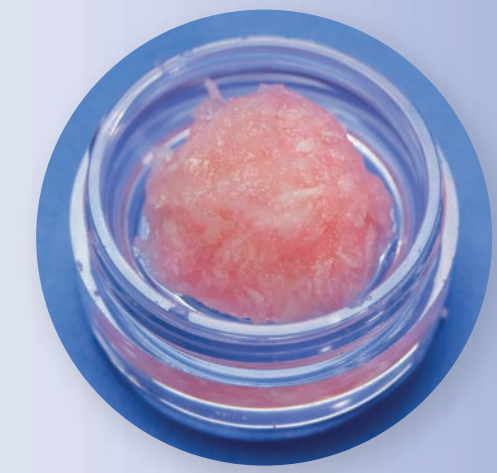
CODE	DESCRIPTION	SIZE
VCAFMX-025000	VIA® Form Moldable	2.5cc
VCAFMX-050000	VIA® Form Moldable	5.0cc
VCAFMX-100000	VIA® Form Moldable	10.0cc

VIA® GRAFT

VIA® GRAFT MOLDABLE

- The bone scaffold component combines a proprietary mixture of 100-300 µm demineralized cortical bone and mineralized cortical and cancellous bone.
- Final preparation of VIA Graft allows for tight packing of a defect with a cohesive wet sand consistency.
- VIA Graft Moldable facilitates a cohesive allograft with hydrophobic properties that resists lavage.

VIA® FORM MOLDABLE



- The bone scaffold component is a proprietary mixture of cortical shavings, crushed cancellous chips, and 100–300 µm demineralized cortical bone microparticulate.
- VIA Form Moldable allows for a cohesive, fibrous, moldable allograft with hydrophobic properties that is resistant to lavage.

1. *Gruskin, E. et.al., Demineralized bone matrix in bone repair: history and use. Advanced Drug Delivery Reviews, 2012. 64:1063-1077.*
2. *Data on file at Vivex Biologics, Inc.*
3. *Malinin, T.I., et. al., Particulate bone allograft incorporation in regeneration of osseous defects; importance of particle sizes. The Open Orthopaedics Journal, 2007. 1:19-24.*

LAUNCHING IN Q1 2022

VIA® FORM+

VIA Form+™ allograft is the next generation solution for bone formation to support a variety of potential clinical applications. The allograft is delivered in an easy-to-use syringe with minimal preparation time of under 15 minutes. VIVEX preserves the native bone cells in a DMSO-free cryoprotectant, VIA Coat™, requiring no rinsing or decanting — just thaw and use!

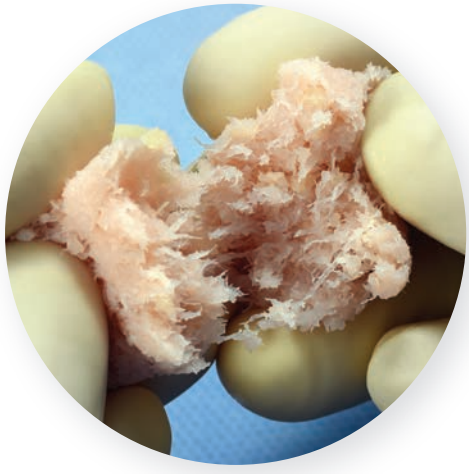
ABOUT VIA FORM+

VIA FORM+ PROVIDES THE THREE KEY ELEMENTS IDEAL FOR BONE FORMATION

- An osteoconductive three-dimensional scaffold with cortical and cancellous components.
- A demineralized cortical bone scaffold. Demineralized cortical bone has been identified to have osteoinductive potential.[1]
- Viable endogenous bone cells to support osteogenic healing processes.

KEY FEATURES OF VIA PRODUCT LINE

VIA Form+ provides an osteoconductive bone scaffold composed of mineralized cancellous bone along with demineralized cortical fibers. Bone fibers offer superior osteoconductivity when compared to powder due to the increased ability for cells to migrate along fibers, creating "cellular highways" for bone formation.[3] In contrast, particulate-based demineralized bone matrices (DBMs) have gaps between the particles that osteoblasts cannot always bridge across.[3] The demineralized cortical fibers are supplemented with cancellous chips to deliver a 100% human-derived product that mimics the particulate structure of native bone.



CELLS PROTECTED BY PROPRIETARY VIA COAT™ CRYOPROTECTANT

- Protective coating preserves allograft and prevents crack propagation and membrane lysis[2]
- Retains over 80% cell viability after thaw[2]
- Non-cytotoxic, non-DMSO
  - Reduces concerns about cytotoxicity and negative effects on cell differentiation[4,5,6]
  - Does not require rinsing or decanting

OPERATING ROOM EASE OF USE

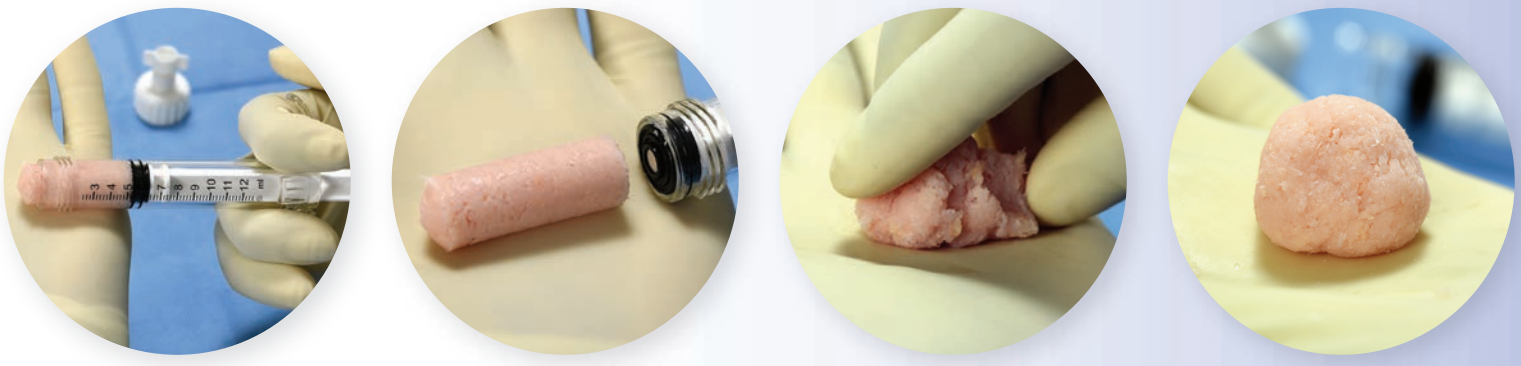
- No rinsing or decanting steps required
- Average cell viability exceeds 80% post-thaw[2]
- Minimum of 150,000 viable cells per cc of allograft[2]
- Four-hour working window for implantation after thaw without loss of cell viability

IT ALL ADDS UP

- Improved storage container streamlines preparation: thaw product in provided syringe and use
- A natural, 100% tissue scaffold of demineralized cortical bone fibers coupled with chips rich with endogenous bone cells provides an optimal microenvironment for osteogenesis and excellent handling
- A proprietary DMSO-free cryoprotectant, VIA Coat, that protects and allows for consistent delivery of viable allograft to the patient
- A viable cell population for osteogenic supplementation as a viable structural allograft

ORDERING INFORMATION

CODE	DESCRIPTION	SIZE
VCAFX-010000	VIA Form+™	1.0cc
VCAFX-025000	VIA Form+™	2.5cc
VCAFX-050000	VIA Form+™	5.0cc
VCAFX-100000	VIA Form+™	10.0cc



1. Gruskin, E. et.al., Demineralized bone matrix in bone repair: history and use. Advanced Drug Delivery Reviews, 2012. 64:1063-1077
2. Data on file at Vivex Biologics, Inc.
3. Martin GJ Jr, Boden SD, Titus L, Scarborough NL, "New formulations of demineralized bone matrix as a more effective graft alternative in experimental posterolateral lumbar spine arthrodesis.", Spine. 1999 Apr 1;24(7):637-45.
4. Best, Benjamin. P. Cryoprotectant Toxicity: Facts, Issues, and Questions. Rejuvenation Research, 2015. Vol. 18, No. 5.
5. Renzi, S., et al., Mesenchymal stromal cell cryopreservation. Biopreservation and Biobanking, 2012. 10(3): p. 276-281.
6. Asghar, W., et al., Preserving human cells for regenerative, reproductive, and transfusion medicine. Biotechnology Journal, 2014. 9: p. 895-903.

GENERAL ORTHOPEDICS

VIA DBM™ PUTTY

VIA DBM™ PLUS

VIA DBM Putty™ is a demineralized bone matrix putty engineered for superior performance.[1] The graft does not adhere to gloves, yet maintains its placement in the surgical environment. Osteoinductivity of sterile final product is assessed in vivo. In this challenging model, every lot tested to date has consistently demonstrated an osteoinductive response.

For surgeons looking for a DBM putty containing bone chips, VIA DBM Plus™ delivers with superior handling.[1] Combining demineralized cortical chips (1-4mm) with the proven formulation of VIA DBM Putty™, VIA DBM Plus eliminates the need for cumbersome intra-operative mixing. Utilizing demineralized instead of mineralized cortical chips ensures that the additional graft material does not diminish osteoinductivity.

ABOUT VIA DBM PUTTY AND VIA DBM PLUS

FEATURES AND BENEFITS

- Equivalent to iliac crest autograft proven in a preclinical spinal fusion model[2]
- Assured osteoinductivity via validated processing
- Cohesive handling that resists irrigation due to robust biocompatible carrier
- Patient safety assured through terminal sterilization and viral inactivation

INDICATIONS FOR USE

- Indicated for use as a bone void filler for voids or gaps in the extremities and pelvis that are not intrinsic to the stability of the bony structure.
- Indicated for treatment of surgically created osseous defects or osseous defects from traumatic injury to the bone.
- Can be used as follows:
  - Extremities
  - Posterolateral spine
  - Pelvis

ORDERING INFORMATION

CODE	DESCRIPTION	SIZE	CODE	DESCRIPTION	SIZE
DBM001	VIA DBM Putty™	1.0cc	VX-EP3	VIA DBM Plus™	3.0cc
DBM002	VIA DBM Putty™	2.0cc	VX-EP5	VIA DBM Plus™	5.0cc
DBM005	VIA DBM Putty™	5.0cc	VX-EP10	VIA DBM Plus™	10.0cc
DBM010	VIA DBM Putty™	10.0cc			

VIA DBM Putty is FDA cleared (K130498 and K091321). VIA DBM Plus is FDA cleared (K150621).

1. Data on file at Xtantt Medical.
2. Kiely, P.D. et al., (2014) Evaluation of a new formulation of demineralized bone matrix putty in a rabbit posterolateral spinal fusion model. The Spine Journal. September 14(9): 2155-2163

FENFLEX®

FENFLEX® is a fenestrated demineralized cortical graft that serves as a construct offering flexible support. Demineralization and increased surface area allow for increased exposure of native growth factors and proteins inherent to cortical bone. Unique production methods yield a fenestrated pattern that results in increased moldability of the graft. Due to the demineralization process, fenestrated pattern, and varying product dimensions, FenFlex offers a wide range of orthopedic applications.

ABOUT FENFLEX

FEATURES AND BENEFITS

- 100% demineralized cortical bone
- Osteoinductive and osteoconductive
- Lot-by-lot OI testing
- Radiolucent to allow for easy follow-up assessment of bone formation
- Fenestrated to create a surface on and through which bone can grow
- Rehydrates quickly for ease of use
- Optimal handling characteristics
- Available in multiple sizes
- Ambient temperature storage with 5-year shelf life

POTENTIAL CLINICAL APPLICATIONS

- Orthopedic
  - – Acetabular reconstruction
  - – Repair of fracture or non-unions
  - – Biologic plate
- Spine
  - – Posterolateral fusions

ORDERING INFORMATION

CODE	DESCRIPTION	SIZE
FCO-002500	FENFLEX®	15x25 mm
FCO-005000	FENFLEX®	15x50 mm
FCO-010000	FENFLEX®	15x100 mm
FCO-015000	FENFLEX®	15x150 mm

VEGA® GRAFT

VEGA® Graft demineralized cancellous sponges and strips are intended for use in a variety of different bone grafting applications. Once hydrated, VEGA Graft can compress to precisely fill voids and irregularly shaped defects. When compressed and packed into a void, VEGA Graft offers maximum surface contact with the surrounding host structures and does not migrate from the surgical site. Demineralization of VEGA Graft revolutionizes its bone handling properties while preserving natural growth factors. The available bone morphogenic proteins (BMPs) in the scaffold provide osteoinductive potential while the three-dimensional lattice's open structure and large surface area provide an optimal, natural scaffold for osteoblast proliferation and new bone formation.

ABOUT VEGA GRAFT

FEATURES AND BENEFITS

- 100% demineralized
- Elastic and compressible strips and blocks
- Osteoconductive and osteoinductive potential[1]
- Ambient temperature storage with 5-year shelf life

POTENTIAL CLINICAL APPLICATIONS

- Spine
  - – Intervertebral cages
  - – Posterolateral fusion
- Orthopedics
  - – Arthrodesis
  - – Fracture sites

ORDERING INFORMATION

CODE	DESCRIPTION	SIZE
VX-3116S	VEGA® Graft	12mm x 12mm x 12mm
VX-2814S	VEGA® Graft	14mm x 14mm x 14mm
VX-3115S	VEGA® Graft	22mm x 15mm x 05mm
VX-2850S	VEGA® Graft	50mm x 20mm x 05mm
VX-2857S	VEGA® Graft	50mm x 20mm x 07mm

1. Data on file at Vivex Biologics, Inc.

VIAFILL™

VIA Fill™ demineralized moldable bone fibers are designed to provide superior handling characteristics and were developed utilizing VIVEX's proprietary Integrity Processing,™ where cortical bone fibers are demineralized, exposing the natural BMPs needed for bone formation.[1] VIA Fill is moldable and comprised of 100% demineralized cortical bone, using an optimized selection of bone fibers of various lengths, without the need of an additional carrier.

VIA Fill has osteoinductive potential[2] and offers improved osteoconductivity to maximize bone forming ability. Bone fibers offer superior osteoconductivity when compared to powder due to the increased ability for cells to migrate along fibers, creating "Cellular Highways" for bone formation.[3] In contrast, particulate based demineralized bone matrices (DBMs) have gaps between the particles that osteoblasts cannot always bridge across.[3]

The product is supplied in a ready-to-use container and is easily rehydrated with saline. VIA Fill's moldability allows fibers to be shaped into a ball or strip.

ABOUT VIA FILL

FEATURES AND BENEFITS

- Composed of 100% cortical bone
- Supplied in a ready-to-use container and can be molded into a ball or strip when rehydrated with saline
- Lyophilized and terminally sterilized sterility assurance level (SAL) of 10^{-6} by e-beam irradiation in final packaging
- Five-year shelf life when stored in ambient temperature

POTENTIAL CLINICAL APPLICATIONS

- Spine
- Cranio-maxillofacial
- Orthopedics

ORDERING INFORMATION

CODE	DESCRIPTION	SIZE
VFB001	VIA Fill™ Demineralized Bone Fibers	1cc
VFB003	VIA Fill™ Demineralized Bone Fibers	3cc
VFB006	VIA Fill™ Demineralized Bone Fibers	6cc
VFB012	VIA Fill™ Demineralized Bone Fibers	12cc

1. Urist MR. Bone: formation by autoinduction. Science. 1965;150(3698):893-899
2. Data on file at Vivex Biologics, Inc.
3. Martin GJ Jr, Boden SD, Titus L, Scarborough NL, "New formulations of demineralized bone matrix as a more effective graft alternative in experimental posterolateral lumbar spine arthrodesis.", Spine. 1999 Apr 1;24(7):637-45.

VIA MEND™ BIOACTIVE STRIP

VIA Mend™ Bioactive Strip can be molded to fit the bone defect. It is an osteoconductive, bioactive, porous implant that allows for bony ingrowth across the graft site. The bone graft matrix is slowly resorbed and replaced by new bone tissue during the natural healing process.

Our bioactive composite bone graft matrices are a combination of three components: carbonate apatite anorganic bovine bone mineral, 45S5 bioactive glass, and Type I Collagen. When combined, they provide an optimal scaffold to support the body's natural ability to regenerate new bone.

WHY VIA MEND BIOACTIVE STRIP?

A PERFECT TRIO OF COMPONENTS:

- 50% Carbonate Apatite anorganic bone mineral
- 30% 45S5 Bioactive Glass
- 20% Type I Collagen

MOLDABLE ADVANTAGE

- 2 for 1 versatility—upon hydration, the strip conformation can be used in its original shape or optionally molded into alternative shapes to address the unique contours of each defect
- Can be combined with either autogenous bone marrow or autograft with saline
- Can also be used with autograft as a bone graft extender
- Moldable, flexible, absorbent, resists migration upon irrigation

ORDERING INFORMATION

CODE	DESCRIPTION	QUANTITY	SIZE
VMB0010	VIA Mend™ Bioactive Strip	10 cc (1 Strip)	6.25cm x 2cm x 0.8cm
VMB0020	VIA Mend™ Bioactive Strip	20 cc (1 Strip)	12.5cm x 2cm x 0.8cm

VIA Mend Bioactive Strip is FDA cleared (K182074).

VIA MEND™ PUTTY

VIA Mend™ Putty, a highly absorbent moldable biocomposite putty, is available in cylinder shaped pucks and when hydrated with autogenous bone marrow can be molded. It maintains its integrity upon post-surgical irrigation and is fully resorbed during bone formation and remodeling. It is osteoconductive and when mixed with autogenous bone marrow becomes osteoinductive and osteogenic.

ABOUT VIA MEND PUTTY

FEATURES AND BENEFITS

- Robust & cohesive handling
- Highly moldable to fit defect sites
- Resistant to irrigation, does not wash away

MOLDABLE ADVANTAGE

- 2 for 1 versatility — upon hydration, the strip conformation can be used in its original shape or optionally molded into alternative shapes to address the unique contours of each defect
- Can be combined with either autogenous bone marrow or autograft with saline
- Can also be used with autograft as a bone graft extender
- Moldable, flexible, absorbent, resists migration upon irrigation

ORDERING INFORMATION

CODE	DESCRIPTION	QUANTITY
VMP0025	VIA Mend™ Putty	1 Jar (2.5cc Putty)
VMP0050	VIA Mend™ Putty	1 Jar (5.0cc Putty)

VIA Mend Putty is FDA cleared (K052812).

WOUND CARE & AMNION THERAPIES

CYGNUS®

CYGNUS® is a family of small-sized amniotic allografts that may be used as a soft tissue barrier and wound covering in numerous clinical applications in wound care centers and physician offices. The inherent properties of amniotic tissue help provide mechanical protection to damaged tissue, while VIVEX's Integrity Processing™ retains nutrient-rich growth factors essential for signaling.[1,2]

ABOUT CYGNUS

- Amniotic membrane is a semi-transparent and resilient membrane that lines the upper cavity of the placenta
- Amniotic tissue acts as an immune-privileged protective barrier during fetal development[1]
- CYGNUS is applied as a soft tissue barrier and wound covering that helps provide mechanical protection while retaining endogenous growth factors[1,3]
- VIVEX's Integrity Processing™ retains the intermediate (spongy) layer and preserves the inherent properties of amniotic tissues, maintaining key extracellular matrix molecules, proteins, carbohydrates, collagen, growth factors, and cytokines.[1,4]

CYGNUS is available in 5 configurations. CYGNUS Solo is derived from the amnion layer of the amniotic membrane. CYGNUS Matrix is derived from the amnion and chorion layers of the amniotic membrane. CYGNUS Max, CYGNUS Max XL, and CYGNUS Cryopreserved Max are derived from the umbilical cord membrane. CYGNUS Solo, Matrix, Max, and Max XL are available dehydrated. CYGNUS Cryopreserved Max is available cryopreserved.

- Requires no up-front preparation
- Hydrates rapidly in the surgical site
- CYGNUS Solo, Matrix, and Max have a 5-year shelf life when stored in ambient temperature
- CYGNUS Cryopreserved Max has a 9-month shelf life when stored at -65°C or colder
- Notch and orientation stickers on CYGNUS Matrix rectangular shaped allografts to indicate the epithelial layer of the allograft
- Circular-shaped allografts are folded to indicate the epithelial layer of the allograft. When opened, the allograft will remain slightly folded with a crease, in a tent form, with the epithelial layer on the outside.
- E-Beam sterilization on CYGNUS Solo, Matrix, and Max provides sterility assurance level (SAL) of 10^{-6}

POTENTIAL CLINICAL APPLICATIONS

- Wounds
- Pressure wounds
- Burns
- Hard-to-heal wounds
- Diabetic foot ulcers
- Surgical wound dehiscence
- Venous leg ulcers

1. *Delcroix GJ, et al. Preserving the natural regenerative potential of amniotic membrane, VIVEX Biomedical.*
2. *Temple, HT, Malinin, TI. Orthobiologics in the Foot and Ankle. Foot Ankle Clin N Am 21 (2016) 809-823.*
3. *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.*
4. *Gupta A, et.al. "Amnion and Chorion Membranes: Potential Stem Cell Reservoir with Wide Applications in Periodontics" Int J Biomater, 2015; 2015:274082.*
5. *Volk SW, et al. "Diminished Type III Collagen Promotes Myofibroblast Differentiation and Increases Scar Deposition in Cutaneous Wound Healing", Cells Tissues Organs, 2011 Jun; 194(1): 25-37.*

CYGNUS® MATRIX

Multi-layer membrane allograft maintaining the amnion layer, its intermediate/spongy layer, and the chorion layer of the amniotic sac, containing inherent growth factors, collagen, cytokines, and extracellular matrix.[4,5]

- Multi-layer amniotic membrane allograft, ~400µm (0.4mm) thick, up to 4X thicker than the single amnion layer
- The intermediate/spongy layer contains a meshwork of mostly type III collagen which plays a prominent role is cutaneous wound repair[4,5]
- 5-year shelf life at room temperature storage
- No upfront preparation – hydrates rapidly in surgical site
- Ideal for both internal and external application
- Available in a variety of sizes and shapes to meet clinical needs and allow use throughout the course of wound repairs
- Available circular shape saves time by reducing the need to trim and associated potential to waste tissue

CYGNUS® SOLO

Single layer membrane allograft, featuring the amnion layer of the amniotic sac, offering inherent growth factors, cytokines, chemokines, and extracellular matrix of the amnion layer.[1,3]

- Thin amniotic membrane allograft, ~100µm (0.1mm) thick
- 5-year shelf life at room temperature storage
- No upfront preparation – hydrates rapidly in surgical site
- Ideal for superficial wounds and topical application
- Burn treatment, acute wounds, non-healing/chronic wounds, diabetic ulcers

CYGNUS® MAX

Comprised of the umbilical cord membrane, this tissue is the thickest of the VIVEX dehydrated amniotic allograft products and is robust enough to be sutured in place.

- Thick umbilical cord membrane, ~400µm (0.4mm) thick, up to 4X thicker than the single amnion layer
- 5-year shelf life at room temperature storage
- No upfront preparation – hydrates rapidly in surgical site
- Tissue can be sutured into place
- Excellent handling properties

CYGNUS® MAX XL

Comprised of fenestrated umbilical cord membrane, increasing the available allograft size to cover a larger wound while also allowing the wound to drain.

- Thick umbilical cord membrane, 400µm (0.4mm) thick, up to 4X thicker than the single amnion layer
- 5-year shelf life at room temperature storage
- No upfront preparation – hydrates rapidly in surgical site
- Tissue can be sutured into place
- Excellent handling properties
- Fenestrated to allow for wound drainage and increases the size of the umbilical cord membrane

CYGNUS® CRYO MAX

Comprised of the cryopreserved umbilical cord membrane, this tissue is the thickest amniotic allograft of the VIVEX products and is robust enough to be sutured in place.

- Thick umbilical cord membrane, ~800–2,000µm (0.8-2.0mm) thick, up to 8X thicker than the single amnion layer
- 9-month shelf life at temperature of -65°C or colder
- Thaws quickly in 3-5 minutes
- Tissue can be sutured into place
- Aseptically processed

ORDERING INFORMATION

Product HCPCS Code: Q4170 (CYGNUS) per square centimeter

CYGNUS® MATRIX

CODE	DESCRIPTION	SIZE	SQ. CM.
CAP020200S	CYGNUS® Matrix Amnion Allograft	2x2cm	4
CAP020300S	CYGNUS® Matrix Amnion Allograft	2x3cm	6
CAP030300S	CYGNUS® Matrix Amnion Allograft	3x3cm	9
CAP040400S	CYGNUS® Matrix Amnion Allograft	4x4cm	16
CAP040600S	CYGNUS® Matrix Amnion Allograft	4x6cm	24
CAP070700S	CYGNUS® Matrix Amnion Allograft	7x7cm	49
CAP015000S	CYGNUS® Matrix Amnion Allograft	15mm Disk	2
CAP025000S	CYGNUS® Matrix Amnion Allograft	25mm Disk	5
CAP035000S	CYGNUS® Matrix Amnion Allograft	35mm Disk	10
CAP045000S	CYGNUS® Matrix Amnion Allograft	45mm Disk	16
CAP055000S	CYGNUS® Matrix Amnion Allograft	55mm Disk	24
CAP065000S	CYGNUS® Matrix Amnion Allograft	65mm Disk	33

CYGNUS® SOLO

CODE	DESCRIPTION	SIZE	
CAS020200S	CYGNUS® Solo Amnion Allograft	2x2cm	4
CAS020300S	CYGNUS® Solo Amnion Allograft	2x3cm	6
CAS030300S	CYGNUS® Solo Amnion Allograft	3x3cm	9
CAS040400S	CYGNUS® Solo Amnion Allograft	4x4cm	16
CAS040600S	CYGNUS® Solo Amnion Allograft	4x6cm	24
CAS040800S	CYGNUS® Solo Amnion Allograft	4x8cm	32
CAS070700S	CYGNUS® Solo Amnion Allograft	7x7cm	49

CYGNUS® MAX

CODE	DESCRIPTION	SIZE	
CAM020200S	CYGNUS® Max Umbilical Cord Membrane	2x2cm	4
CAM020300S	CYGNUS® Max Umbilical Cord Membrane	2x3cm	6
CAM020400S	CYGNUS® Max Umbilical Cord Membrane	2x4cm	8

CYGNUS® MAX XL

CODE	DESCRIPTION	SIZE	
CAX020300S	CYGNUS® Max XL Fenestrated Umbilical Cord Membrane	2x3cm	6
CAX030300S	CYGNUS® Max XL Fenestrated Umbilical Cord Membrane	3x3cm	9
CAX030800S	CYGNUS® Max XL Fenestrated Umbilical Cord Membrane	3x8cm	24
CAX040400S	CYGNUS® Max XL Fenestrated Umbilical Cord Membrane	4x4cm	16
CAX040600S	CYGNUS® Max XL Fenestrated Umbilical Cord Membrane	4x6cm	24
CAX040800S	CYGNUS® Max XL Fenestrated Umbilical Cord Membrane	4x8cm	32
CAX050700S	CYGNUS® Max XL Fenestrated Umbilical Cord Membrane	5x7cm	35

CYGNUS® CRYOPRESERVED MAX

CODE	DESCRIPTION	SIZE	
CUC020200	CYGNUS® Cryopreserved Max Umbilical Cord Membrane	2x2cm	4
CUC020400	CYGNUS® Cryopreserved Max Umbilical Cord Membrane	2x4cm	8
CUC030400	CYGNUS® Cryopreserved Max Umbilical Cord Membrane	3x4cm	12

VIAGENEX™

VIAGENEX™ is a family of medium and large-sized amniotic allografts that may be used as a barrier in numerous clinical applications in the hospital setting. The inherent properties of amniotic tissue help provide mechanical protection to damaged tissue, while VIVEX's Integrity Processing™ retains nutrient-rich growth factors essential for signaling.[1, 2]

ABOUT VIAGENEX

- Amniotic membrane is a semi-transparent and resilient membrane that lines the upper cavity of the placenta
- Amniotic tissue acts as an immune-privileged protective barrier during fetal development[1]
- VIAGENEX is applied as a soft tissue barrier and wound covering that helps provide mechanical protection while retaining endogenous growth factors[1-3]
- VIVEX's Integrity Processing™ retains the intermediate (spongy) layer and preserves the inherent properties of amniotic tissues, maintaining key extracellular matrix molecules, proteins, carbohydrates, growth factors and cytokines.[1,4]

VIAGENEX is available in 3 configurations. VIAGENEX Matrix is derived from the amnion and chorion layers of the amniotic membrane and is available dehydrated. VIAGENEX Max and VIAGENEX Cryopreserved Max are derived from the umbilical cord membrane and are available dehydrated or cryopreserved.

- Requires no up-front preparation
- Hydrates rapidly in the surgical site
- VIAGENEX Matrix and VIAGENEX Max have a 5-year shelf life when stored in ambient temperature
- VIAGENEX Cryopreserved Max has a 9-month shelf life when stored at -65°C or colder
- Notch and orientation stickers on VIAGENEX Matrix and VIAGENEX Max to designate placement of the epithelial side upwards
- E-Beam sterilization on VIAGENEX Matrix and VIAGENEX Max provides sterility assurance level (SAL) of 10^{-6}

POTENTIAL CLINICAL APPLICATIONS

- Spine & neurosurgery
- Wound care
- Burn care
- Oral surgery
- Shoulder
- Nerves
- Knees
- Tendons
- OB/GYN
- Urology

1. *Delcroix GJ, et al. Preserving the natural regenerative potential of amniotic membrane, VIVEX Biomedical.*
2. *Temple, HT, Malinin, TI. Orthobiologics in the Foot and Ankle. Foot Ankle Clin N Am 21 (2016) 809-823.*
3. *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.*
4. *Gupta A, et.al. "Amnion and Chorion Membranes: Potential Stem Cell Reservoir with Wide Applications in Periodontics" Int J Biomater, 2015; 2015:274082.*

VIAGENEX™ MATRIX

- Flexible multilayer allograft
- Derived from the amnion and chorion layers of the placental membrane
- Approximately 4X thicker than traditional single layer amnion
- Improved handling and increased workability when compared to single layer allografts

PROVIDING MECHANICAL PROTECTION

VIAGENEX™ MAX

- Maximum natural thickness allograft
- Derived from the umbilical cord
- Approximately 8X thicker than traditional single layer amnion
- Offers excellent handling characteristics and the ability to be sutured

PRESERVING AN ARRAY OF ENDOGENOUS GROWTH FACTORS

VIAGENEX™ CRYO MAX

- Maximum natural thickness allograft
- Derived from the umbilical cord
- No rinsing or decanting steps required during preparation
- Approximately 8X thicker than the single layer amnion
- Aseptically processed

RETAINING THE INHERENT PROPERTIES OF PLACENTAL TISSUE

ORDERING INFORMATION

Product HCPCS Code: Q4100 (skin substitute, not otherwise specified) per square centimeter

VIAGENEX™ MATRIX

CODE	DESCRIPTION	SIZE	SQ. CM.
VGM020600S	VIAGENEX™ Matrix Amnion Allograft	2x6cm	12
VGM040400S	VIAGENEX™ Matrix Amnion Allograft	4x4cm	16
VGM040600S	VIAGENEX™ Matrix Amnion Allograft	4x6cm	24
VGM040800S	VIAGENEX™ Matrix Amnion Allograft	4x8cm	32
VGM021200S	VIAGENEX™ Matrix Amnion Allograft	2x12cm	24
VGM070600S	VIAGENEX™ Matrix Amnion Allograft	7x6cm	42

VIAGENEX™ MAX

CODE	DESCRIPTION	SIZE	SQ. CM.
VGC020300S	VIAGENEX™ Max Umbilical Cord Membrane	2x3cm	6
VGC030300S	VIAGENEX™ Max Umbilical Cord Membrane	3x3cm	9
VGC030400S	VIAGENEX™ Max Umbilical Cord Membrane	3x4cm	12
VGC030500S	VIAGENEX™ Max Umbilical Cord Membrane	3x5cm	15
VGC030600S	VIAGENEX™ Max Umbilical Cord Membrane	3x6cm	18
VGC030800S	VIAGENEX™ Max Umbilical Cord Membrane	3x8cm	24

VIAGENEX™ CRYOPRESERVED MAX

CODE	DESCRIPTION	SIZE	SQ. CM.
VGF030600	VIAGENEX™ Cryopreserved Max Umbilical Cord Membrane	3x6cm	18
VGF030800	VIAGENEX™ Cryopreserved Max Umbilical Cord Membrane	3x8cm	24

MIAMNION®

MIAMNION® is a family of large amniotic allografts that may be used as a soft tissue barrier and wound covering in numerous clinical applications. The inherent properties of amniotic tissue help provide mechanical protection to damaged tissue, while VIVEX's Integrity Processing™ retains nutrient-rich growth factors essential for signaling.[1, 2]

ABOUT MIAMNION

- Amniotic membrane is a semi-transparent and resilient membrane that lines the upper cavity of the placenta
- Amniotic tissue acts as an immune-privileged protective barrier during fetal development[1]
- MIAMNION is applied as a soft tissue barrier and wound covering that helps provide mechanical protection while retaining endogenous growth factors[1,3]
- MIAMNION is processed using VIVEX's Integrity Processing,™ which preserves the inherent properties of amniotic tissue, maintaining inherent levels of key extracellular matrix molecules, including proteins, carbohydrates, growth factors, and cytokines[1,4]

MIAMNION is available in 3 thicknesses. MIAMNION Single and MIAMNION Dual are derived from the amnion layer of the amniotic membrane, while MIAMNION Matrix is derived from the amnion and chorion layers of the amniotic membrane.

- Requires no up-front preparation
- Hydrates rapidly in the surgical site
- Ambient temperature storage with a 5-year shelf life
- Notch and orientation stickers to designate placement of the epithelial side upwards
- E-Beam sterilization provides sterility assurance level (SAL) of 10^{-6}

POTENTIAL CLINICAL APPLICATIONS

- Spine & neurosurgery
- Wound care
- Burn care
- Dermatology

ORDERING INFORMATION

Product HCPCS Code: Q4100 (skin substitute, not otherwise specified) per square centimeter

CODE	DESCRIPTION	SIZE	SQ. CM.
MIA101000S	MIAMNION® Single Layer Amnion Allograft	10x10cm	100
MIA071500S	MIAMNION® Dual Layer Amnion Allograft	7x15cm	105
MIA101100SS	MIAMNION® Matrix Amnion Allograft	10x11cm	110

1. *Delcroix GJ, et al. Preserving the natural regenerative potential of amniotic membrane, VIVEX Biomedical.*
2. *Temple, HT, Malinin, TI. Orthobiologics in the Foot and Ankle. Foot Ankle Clin N Am 21 (2016) 809-823.*
3. *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.*
4. *Gupta A, et.al. "Amnion and Chorion Membranes: Potential Stem Cell Reservoir with Wide Applications in Periodontics" Int J Biomater, 2015; 2015:274082.*

MIAMNION® SINGLE

- Derived from the amnion layer of the amniotic sac
- Offered in large sizes to meet physician needs
- Ideal for numerous surgical and soft tissue applications

IMMUNE PRIVILEGED ANATOMICAL BARRIER[1]

MIAMNION® DUAL

- Derived from the amnion layer of the amniotic sac
- Approximately 2X thicker than the single layer amnion layer
- Available in large sizes for a wide variety of applications

PROPRIETARY DUAL LAYER TECHNOLOGY

MIAMNION® MATRIX

- Flexible multilayer allograft
- Derived from the amnion and chorion layers of the amniotic sac
- Approximately 4X thicker than the single layer amnion layer
- Improved handling and increased workability when compared to single and dual layer allografts

PROVIDING MECHANICAL PROTECTION

VIA DERMIS™

VIA DERMIS™ is a minimally manipulated, biocompatible, and acellular dermal matrix allograft that allows for supplemental support, protection, reinforcement, or covering of a tendon or soft tissue.

VIA DERMIS Non-fenestrated

FEATURES AND BENEFITS[1]

Applied as reinforcement to help provide protection and extracellular matrix (ECM)/collagen framework while retaining intact vascular channels

- Biologically versatile and flexible scaffold that can hold a suture
- Biocompatibility study demonstrated attachment and proliferation of:
  - Fibroblast cells
  - Marrow-isolated adult multilineage inducible (MIAMI) cells
  - Primary chondrocytes
- Variety of sizes and thicknesses

VIA DERMIS Fenestrated

VIA DERMIS PREPARATION

VIA DERMIS is produced using VIVEX's Integrity Processing™, which reduces DNA and cellular material while preserving the inherent properties of dermal matrices, maintaining key extracellular matrix molecules, including collagen and elastin.[1] The extracellular matrix supports cellular infiltration, attachment, and proliferation.

The unique processing technique preserves the collagen and elastic tissue fibers while maintaining the open channels through which cells can migrate, proliferate, and form new blood vessels. This biologic process is crucial to the integration and remodeling of the allograft by host cells.

POTENTIAL CLINICAL APPLICATIONS

Dermal allografts have been reported as a useful healing aid in many surgical and topical applications that include:

- Burns
- Wound dehiscence
- Oral reconstruction
- Full thickness skin defects
- Surgical repairs
- Hernia repairs
- Deep voids
- Post-mastectomy
- Bladder sling
- Amputations
- ACL reconstruction
- Rotator cuff reconstruction

ORDERING INFORMATION

Product HCPCS Code: Q4100 (skin substitute, not otherwise specified) per square centimeter

CODE	DESCRIPTION	SIZE	THICKNESS
VDMF-THN-040400	VIA DERMIS™, Fenestrated	4x4cm	Thin (0.4-0.8mm)
VDMF-THN-040800	VIA DERMIS™, Fenestrated	4x8cm	Thin (0.4-0.8mm)
VDM-THN-040400	VIA DERMIS™	4x4cm	Thin (0.4-0.8mm)
VDM-THN-040800	VIA DERMIS™	4x8cm	Thin (0.4-0.8mm)
VDM-MED-040400	VIA DERMIS™	4x4cm	Medium (1.0-2.0mm)
VDM-MED-040800	VIA DERMIS™	4x8cm	Medium (1.0-2.0mm)
VDM-THK-040400	VIA DERMIS™	4x4cm	Thick (2.2-3.5mm)
VDM-THK-040800	VIA DERMIS™	4x8cm	Thick (2.2-3.5mm)

1. *Data on file at Vivex Biologics, Inc.*

INTERVENTIONAL PAIN THERAPIES

VIADISC® NP

VIA Disc NP® is a non-surgical, off-the-shelf, processed human nucleus pulposus (NP) allograft intended to supplement degenerated intervertebral discs.

VIA DISC NP KEY FEATURES

NON-SURGICAL

A non-surgical option that can be delivered through a 22G spine needle.

SUPPLEMENTS THE DISC

In-vitro testing of the NP particulate demonstrates the ability of dehydrated NP to absorb water similar to original nucleus pulposus tissue.[1] Transplanted NP tissue may support biomechanical function of the supplemented disc.

EASE OF USE

Ambient temperature, off-the-shelf allograft.

PROPRIETARY SYSTEM FOR PREPARING ALLOGRAFT

Consistent mixing with a fully-closed system to reduce contamination risk.

ORDERING INFORMATION

CODE	DESCRIPTION	SIZE
VCAD-00100	VIA Disc NP®	100mg

1. *Data on file at Vivex Biologics, Inc.*


SPORTS
MEDICINE

VIVEX provides a diverse series of ligament and tendon allograft options for use in a number of joint and sports medicine clinical applications. Non-bone tendons (tibialis, peroneus, semitendinosus, gracilis), patella ligaments (whole, hemi) and achilles tendons are all available for ankle, wrist, shoulder, and ACL/PCL knee reconstruction. All grafts are aseptically processed using minimalist technologies.

ORDERING INFORMATION

CODE	DESCRIPTION
0009	Achilles Tendon w/ Bone Block
0765	Achilles Tendon w/ Bone Block Irradiated
1288	Achilles Tendon w/o Bone Block
0332	Anterior Tibialis Tendon
1198	Anterior Tibialis Tendon Irradiated
0333	Posterior Tibialis Tendon
1199	Posterior Tibialis Tendon Irradiated
0336	Peroneus Longus Tendon
1201	Peroneus Longus Tendon Irradiated
1746	Gracilis Tendon
1748	Gracilis Tendon Irradiated
1745	Semitendinosus Tendon
1747	Semitendinosus Tendon Irradiated
0783	Semitendinosus/Gracilis Tendon Combo
1200	Semitendinosus/Gracilis Tendon Combo Irradiated
1866	Palmaris Longus Tendon
0008	Patella Tendon w/ Bone Block Half
0414	Patella Tendon w/ Bone Black Half Irradiated
0263	RT Patella Tendon w/ Bone Block
0767	RT Patella Tendon w/ Strut Irradiated
0264	LT Patella Tendon w/ Bone Block
0551	LT Patella Tendon w/ Strut Irradiated

ACHILLES TENDON

SEMITENDINOSUS & GRACILIS TENDONS

TIBIALIS & PERONEUS TENDONS

PATELLA TENDON (HEMI BTB)

OTHER ALLOGRAFTS

BONE PARTICULATE

CODE	DESCRIPTION	SIZE
1612	Cancellous Crushed	05cc
1615	Cancellous Crushed	05cc Irradiated
1404	Cancellous Crushed	15cc
1592	Cancellous Crushed	15cc Irradiated
1405	Cancellous Crushed	30cc
1481	Cancellous Crushed	30cc Irradiated
1521	Cancellous Cubes	05cc
1625	Cancellous Cubes	05cc Irradiated
0560	Cancellous Cubes	15cc
1545	Cancellous Cubes	15cc Irradiated
0559	Cancellous Cubes	30cc
1549	Cancellous Cubes	30cc Irradiated
3039	Cancellous Mors	05cc
3039r	Cancellous Mors	05cc Irradiated
1842	Cancellous Mors	15cc
1783	Cancellous Mors	15cc Irradiated
1843	Cancellous Mors	30cc
1844	Cancellous Mors	30cc Irradiated
1809	Cortical Cancellous Mors	05cc
1809r	Cortical Cancellous Mors	05cc Irradiated
3047	Cortical Cancellous Mors	15cc
3047r	Cortical Cancellous Mors	15cc Irradiated
1258	Cortical Cancellous Mors	30cc
1376	Cortical Cancellous Mors	30cc Irradiated
1257	Cortical Cancellous Mors	60cc
1377	Cortical Cancellous Mors	60cc Irradiated
1810	Cortical Mors	05cc
1812	Cortical Mors	15cc
1718	Cortical Mors	30cc
1631	Cortical Pdr 100-200µm	05cc
1620	Cortical Pdr 100-200µm	15cc
1622	Cortical Pdr 100-200µm	30cc

BONE ALLOGRAFT

CODE	DESCRIPTION
0527	Bone Plug 10mm
0023	Bone Plug 12mm
0024	Bone Plug 14mm
0025	Bone Plug 16mm
0039	Femur Head
0138	Femur Plate Med >=15cm <20cm
0035	Femur Segment <15cm
0037	Femur Shaft >=15cm
0519	Femur Plate Large >=20cm
0038	FF Femur Head
0191	FF Femur Plate Med >=15cm <20cm
0245	FF RT Femur Shaft
0246	FF LT Femur Shaft
0049	Fibula Shaft >=15cm
0047	Fibula Segment 5.0cm - 9.9cm
3030	Fibula Segment 10.0cm - 14.9cm
0048	FF Fibula Shaft >=15cm
1799	FF LT Prox Humerus w/ Ligaments
1800	FF RT Prox Humerus w/ Ligaments
0064	Iliac Crest Block
0055	Iliac Crest Strip Small
0473	Iliac Crest Strip Medium
0056	Iliac Crest Strip Large
0054	Iliac Crest Wedge
0779	Osteotomy Wedge
0809	Osteotomy Wedge (2 PIECE)
0324	FF RT Hemi-Pelvis
0325	FF LT Hemi-Pelvis
0158	Rib
0074	Tibia Shaft >=15cm
0251	FF RT Tibia Shaft
0476	FF LT Prox Tibia w/ Patella
0477	FF RT Prox Tibia w/ Patella

SKIN

CODE	DESCRIPTION	SIZE
2153	Cryo-Skin Meshed (2:1)	250 cm^2
2154	Cryo-Skin Meshed (2:1)	300 cm^2
2155	Cryo-Skin Meshed (2:1)	350 cm^2
2158	Cryo-Skin Meshed (1:1)	250 cm^2
2159	Cryo-Skin Meshed (1:1)	300 cm^2
2160	Cryo-Skin Meshed (1:1)	350 cm^2
2167	Cryo-Skin Meshed 2 Piece (1:1)	250 cm^2
2168	Cryo-Skin Meshed 2 Piece (1:1)	300 cm^2
2169	Cryo-Skin Meshed 2 Piece (1:1)	350 cm^2
3027NP	Cryo-Skin	75cm^2
3028NP	Cryo-Skin	50cm^2

SOFT TISSUE

CODE	DESCRIPTION
0006	Fascia Lata
0154	FF Fascia Lata
3109	FF Iliotibial Band

VIVEX has used reasonable efforts to provide accurate and complete information herein, but this information should not be construed as providing clinical advice, dictating reimbursement policy, or as a substitute for the judgment of a health care provider. It is the health care provider's responsibility to determine the appropriate treatment, codes, charges for services, and use of modifiers for services rendered and to submit coverage or reimbursement-related documentation.

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MKG-3 Rev. 01
2021