VIVEX'S PROPRIETARY INTEGRITY PROCESSING™ PRESERVES UPTO 600+ SIGNALING PROTEINS IN CYGNUS MATRIX, SOLO, AND MAX[12]

VIVEX's Integrity Processing™ is a gentle process that removes blood remnants, while preserving the allograft composition without compromising structural integrity.

KNOWN GROWTH FACTORS AND EXTRACELLULAR MATRIX (ECM) PROTEINS IN AMNIOTIC ALLOGRAFTS AND THEIR CORRESPONDING ROLE[13,14]

GROWTH FACTORS	ROLE
MCP-1[15], IL1-RA[16], TGF-β1&2[17], IL6[16]	Immune Modulation / Anti-Inflammatory
TNF-α[18], GRO-α[19], HGF[20], IGF1&2[21,22], VEGF[23], βFGF[24], PDGFα&β[25], Ang[26]	Angiogenesis
EGF[27], FGF[24], TGFβ[17], TIMP(1-4)[28], HGF[29]	Cell Growth
PDGFα&β[25], EGF[27], TIMP-2&-3[28], HGF[29], Ang[26], KGF[30]	Cell Migration
PDGFα&β[25], EGF[27], FGF[24], TGF-β1&2[17], IGF1&2[31], Ang[26], KGF[30]	Cell Proliferation
PDGFα&β[25], EGF[27], TIMP-2& -3[28], TGF-β1&2[17]	Cell Differentiation

ECM PROTEINS	ROLE
Collagen, type I-VII	Main structural protein component in the body
Fibronectin	Binding protein agent, supports initial cell attachment
Hyaluronic Acid	Lubricating hydrophilic protein that coats cells and aids in hydrodynamic movements
Laminin	High molecular weight protein to which cells easily bind and migrate across
Proteoglycans	Connective proteins that fill the spaces between cells in tissue and affect the stability of the proteins and growth factors

SAFE AND TRUSTED PARTNER

VIVEX Biologics is a regenerative solutions company focused on patient care through the innovation of tissue-based therapies in Wound Care, Ortho-Fusion, and Interventional Pain. With more than 50 years of highly safe and effective operations, VIVEX aims to provide advanced regenerative solutions.

50 years of regeneration

- Amniotic tissue is recovered from healthy mothers at live births.
- Amniotic tissue is handled and processed in accordance with both FDA regulations and AATB standards.
- VIVEX maintains the trend of safely delivering over 2 million allografts with no disease transmission.

ORDERING INFORMATION

Product HCPCS Code: Q4170 (CYGNUS) per square centimeter

CYGNUS® MATRIX

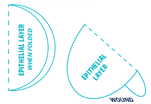
CODE	DESCRIPTION	SIZE	SQ. CM.
CAP020200S	CYGNUS® Matrix Amnion Allograft	2x2cm	4
CAP020300S	CYGNUS® Matrix Amnion Allograft	2x3cm	6
CAP030300S	CYGNUS® Matrix Amnion Allograft	3x3cm	9
CAP040400S	CYGNUS® Matrix Amnion Allograft	4x4cm	16
CAP040600S	CYGNUS® Matrix Amnion Allograft	4x6cm	24
CAP070700S	CYGNUS®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

CYGNUS Matrix/Solo/Max Orientation

CYGNUS® SOLO

CODE	DESCRIPTION	SIZE	SQ. CM.
CAS020200S	CYGNUS® Solo Amnion Allograft	2×2cm	2
CAS020300S	CYGNUS® Solo Amnion Allograft	2×3cm	6
CAS030300S	CYGNUS® Solo Amnion Allograft	3×3cm	9
CAS040400S	CYGNUS® Solo Amnion Allograft	4×4cm	16
CAS040600S	CYGNUS® Solo Amnion Allograft	4×6cm	24
CAS040800S	CYGNUS® Solo Amnion Allograft	4×8cm	32
CAS070700S	CYGNUS® Solo Amnion Allograft	7×7cm	49

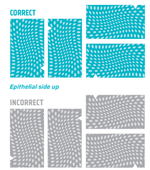
CYGNUS Matrix Circular-Shaped Graft Orientation



CYGNUS® MAX

CODE	DESCRIPTION	SIZE	SQ. CM.
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 Orientation



CYGNUS® MAX XL

CODE	DESCRIPTION	SIZE	SQ. CM.
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	SQ. CM.
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

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VIVEX BIOLOGICS

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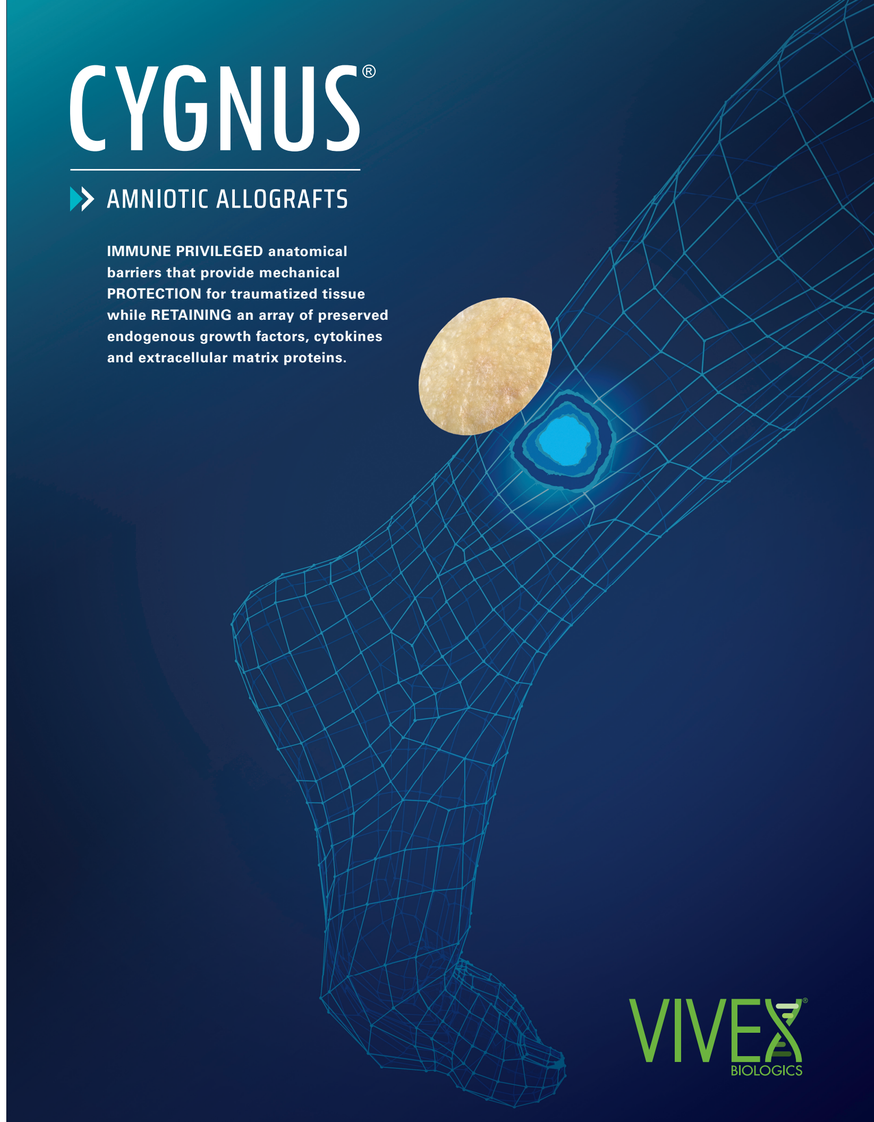
MKG-AWC-31
Rev. 02

CYGNUS®

AMNIOTIC ALLOGRAFTS

IMMUNE PRIVILEGED anatomical barriers that provide mechanical PROTECTION for traumatized tissue while RETAINING an array of preserved endogenous growth factors, cytokines and extracellular matrix proteins.



VIVEX BIOLOGICS

CYGNUS®

CYGNUS® is a family of amniotic tissue allografts processed to retain the inherent mechanical properties of amniotic tissue and rich supply of extracellular matrix, growth factors, and cytokines.[1,2]

CYGNUS AMNIOTIC ALLOGRAFT FEATURES AND BENEFITS

Amniotic-derived tissues may be used as a soft tissue barrier and wound covering that retains endogenous extracellular matrix (ECM), growth factors, and cytokines[2-5] essential for signaling. The properties of amniotic tissue help provide mechanical protection[6] to damaged tissue while maintaining nutrient-rich growth factors.[7,8]

WHY CYGNUS AMNIOTIC ALLOGRAFTS

- Amniotic tissue acts as a mechanical barrier between mother and fetus as well as an immune-privileged protective barrier during fetal development.[1]
- CYGNUS applied as a soft tissue and wound covering helps provide the same mechanical protection to support the damaged tissue.[5]
- 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.[7]
- No upfront preparation — hydrates in site
- 5-year shelf life for room temperature storage

CYGNUS Matrix: Multi-layer membrane allograft maintaining the amnion layer, its intermediate/spongy layer, and the chorion layer of the amniotic sac, and up to 4X thicker than the single amnion layer

CYGNUS Solo: Single layer membrane allograft, featuring the amnion layer of the amniotic sac

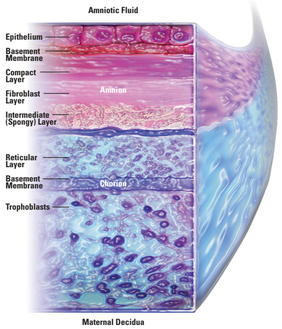


Figure 1: The Layers of Amniotic Sac

WHY CYGNUS MAX UMBILICAL CORD MEMBRANE ALLOGRAFT

- Thickest dehydrated amniotic membrane allograft, ~400µm (0.4mm)
- Retains inherent extracellular matrix molecules, growth factors and cytokines
- Robust enough to be sutured in place
- Excellent handling properties
- No upfront preparation — hydrates in site
- 5-year shelf life for room temperature storage

CYGNUS Max and CYGNUS Cryopreserved Max: Umbilical cord membrane that is up to 4X thicker than the single amnion layer (also available cryopreserved with a 9-month shelf life at storage of -65°C or colder, with minimal preparation required)

CYGNUS Max XL: Umbilical cord membrane fenestrated to allow for wound drainage and increases the size of the available allograft

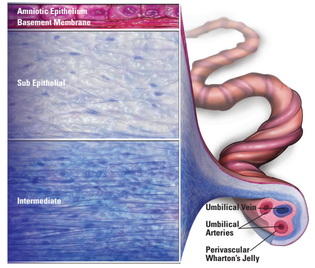


Figure 2: The Layers of the Umbilical Cord Membrane

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.[1,2]

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[9,10]

5-year shelf life at room temperature storage

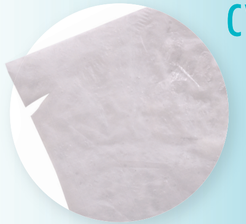
No upfront preparation – hydrates rapidly in surgical site

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.[1,2]

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

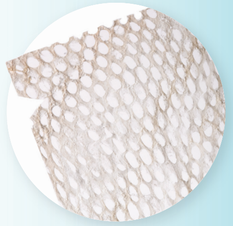
5-year shelf life at room temperature storage

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

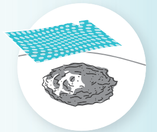
Thaws quickly in 3-5 minutes

Tissue can be sutured into place

POTENTIAL CLINICAL APPLICATIONS

In general wound care, such as diabetic foot ulcers, venous leg ulcers, pressure wounds, hard-to-heal wounds, and surgical wound dehiscence, CYGNUS has been used as a protective barrier to provide essential mechanical protection for wounds. Other potential clinical applications include general orthopedics, arthroplasty, hand and wrist, and foot and ankle procedures.

- Wounds
- Burns
- Diabetic Foot Ulcers
- Venous Leg Ulcers
- Pressure Wounds
- Hard-to-Heal Wounds
- Surgical Wound Dehiscence



WOUND

BURN

WOUND DEHISCENCE

ULCER