Harvard Pilgrim Health Care | TUFTS Health Plan

Medical Necessity Guidelines:

Bioengineered Skin and Soft Tissue Substitutes

Effective: March 1, 2025

Prior Authorization Required If REQUIRED, submit supporting clinical documentation pertinent to service request to the FAX numbers below	Yes ☐ No ☒
Notification Required IF REQUIRED, concurrent review may apply	Yes ☐ No ☒

Applies to:

Commercial Products

☒ Harvard Pilgrim Health Care Commercial products; 800-232-0816

☒ Tufts Health Plan Commercial products; 617-972-9409

CareLink℠ – Refer to CareLink Procedures, Services and Items Requiring Prior Authorization

Public Plans Products

☒ Tufts Health Direct – A Massachusetts Qualified Health Plan (QHP) (a commercial product); 888-415-9055

☐ Tufts Health Together – MassHealth MCO Plan and Accountable Care Partnership Plans; 888-415-9055

☐ Tufts Health RITogether – A Rhode Island Medicaid Plan; 857-304-6404

☐ Tufts Health One Care Plan – A dual-eligible product; 857-304-6304

Senior Products

☐ Harvard Pilgrim Health Care Stride Medicare Advantage; 888-609-0692

☐ Tufts Health Plan Senior Care Options (SCO), (a dual-eligible product); 617-673-0965

☐ Tufts Medicare Preferred HMO, (a Medicare Advantage product); 617-673-0965

☐ Tufts Medicare Preferred PPO, (a Medicare Advantage product); 617-673-0965

Note: While you may not be the provider responsible for obtaining prior authorization or notifying Point32Health, as a condition of payment you will need to ensure that any necessary prior authorization has been obtained and/or Point32Health has received proper notification. If notification is required, providers may additionally be required to provide updated clinical information to qualify for continued service.

Overview

Bioengineered skin and soft tissue substitutes are either cellular or acellular matrices that are used to replace the functionality of the epidermis, dermis or both until the skin barrier repairs itself or a definitive skin replacement is acquired. These products may be derived from allogeneic, xenogeneic (e.g., porcine or bovine), synthetic sources or a combination of any or all of these types of materials. Human skin equivalents or cellular or tissue-based products are classified into the following types:

- Human skin allografts derived from donated human skin (cadavers)
- Allogeneic matrices derived from human tissue (fibroblasts or membrane)
- Composite matrices derived from human keratinocytes, fibroblasts and xenogeneic collagen supported by a scaffold of synthetic mesh or xenogeneic collagen
- Acellular matrices derived from xenogeneic collagen or tissue and provides a bioactive matrix consisting of collagens, elastin. blood vessel channels, and bioactive proteins that support revascularization, cell repopulation, and tissue remodeling.

There are a large number of potential applications for artificial skin and soft tissue products including non-healing diabetic neuropathic ulcers, vascular insufficiency ulcers, and pressure ulcers. These skin substitutes are also used in second-and third-degree burns, specific dermatologic conditions and utilized as a substitute for living skin grafts in post-surgical conditions (e.g., breast reconstruction) and for surgical wounds.

Clinical literature indicates studies comparing the efficacy of bioengineered skin substitute to alternative wound care approaches with patients' autologous skin are limited in number, apply mainly to generally healthy patients, and examine only a small portion of the skin substitute products available in the United States.

Clinical Guideline Coverage Criteria

The following products may be reasonable and medically necessary when used for breast reconstruction in Members who have coverage for breast surgery procedures.

Breast Reconstruction

Allogeneic Acellular Dermal Matrix Products covered when medical necessary	Medical Necessity Criteria
• AlloDerm®* • AlloMend® • Cortiva® (AlloMax™) • DermaMatrix™ • DermACELL™ • FlexHD® • FlexHD® Pliable™ • GraftJacket®	These skin substitutes may be medically necessary when used during a covered medically necessary breast surgery and **One** of the following are met: • Additional graft coverage is required when there is insufficient tissue expander or implant coverage by the pectoralis major muscle; **or** • Following mastectomy, skin flaps are at risk for dehiscence or necrosis; **or** • Inframammary fold and lateral mammary folds have been undermined during mastectomy and reestablishment of these landmarks is needed

The above medical necessity criteria must be met for the following codes to be covered for breast reconstruction surgery:

HCPCS Codes

HCPCS Codes	Description
Q4100	Skin substitute, not otherwise specified**for use with AlloMax™, AlloMend®, DermaMatrix™
Q4100	Cortiva
Q4107	GraftJacket, per sq cm
Q4116	AlloDerm, per sq cm
Q4122	DermACELL, DermACELL AWM or DermACELL AWM Porous, per sq cm
Q4128	FlexHD, or AllopatchHD, per sq cm

Diabetic Foot Ulcer (DFU) and Venous Leg Ulcer (VLU)

Application of a skin substitute graft for lower extremity DFU and VLU may be reasonable and medically necessary when the wound does not exhibit tendon, muscle, joint capsule or exposed bone and the treatment area is without evidence of infection or underlying osteomyelitis. Treatment with the following products will not exceed an 8-application limit per wound per the 12–16-week period of care regardless of wound status. The use of more than one product simultaneously will not be covered. (See Limitations below)

Diabetic Ulcer

Diabetic Ulcer	Medical Necessity Criteria
• AlloPatch® or Flex HD • Amnioband or Guardian • Apligraf® • Dermagraft® • Epicord® • Epifix® • GraftJacket NOW™ • Grafix CORE/Grafix PRIME	**DIABETIC FOOT ULCER** **AlloPatch** AlloPatch may be reasonale and medically necessary when **All** of the following are met: • Full-thickness diabetic foot ulcer of greater than six weeks duration; **and** • Failure to achieve at least 50% ulcer area reduction with standard ulcer therapy (e.g.,

Diabetic Ulcer	Medical Necessity Criteria
• Integra® Dermal Regeneration Template/ Omnigraft Dermal Regeneration Matrix • Oasis™ Wound Matrix • Oasis® Ultra Tri-Layer Matrix • TheraSkin® •	surgical debridement, standard dressing changes, non-weight bearing or off-loading pressure) for a minimum of 4 weeks; **and** • Type 1 or type 2 diabetes mellitus with Optimal glucose control Glycated hemoglobin test (HgA1c) < 12% (within the last 90 days); **and** • No osteomyelitis, soft tissue infection or Charcot arthropathy; **and** • Treated foot has adequate circulation as evidenced by either the presence of a palpable pedal pulse or an ankle-brachial index (ABI) of ≥ 0.70. **AmnioBand** Amnioband may be reasonable and medically necessary when **All** of the following criteria are met: • Partial and full-thickness diabetic foot ulcer of greater than six weeks duration; **and** • Failure to achieve at least 50% ulcer area reduction with standard ulcer therapy (e.g., surgical debridement, standard dressing changes, non-weight bearing or off-loading pressure) for a minimum of 4 weeks; **and** • Type 1 or type 2 diabetes mellitus with Optimal glucose control Glycated hemoglobin test (HgA1c) < 12% (within the last 90 days) ; **and** • No osteomyelitis, soft tissue infection or Charcot arthropathy; **and** • Treated foot has adequate circulation as evidenced by either the presence of a palpable pedal pulse or an ankle-brachial index (ABI) of ≥ 0.70. **Apligraf** Apligraf may be reasonable and medically necessary when **All** of the following criteria are met: • Full-thickness diabetic foot ulcer of at least three weeks duration when used with standard; **and** therapeutic compression • Failure to achieve at least 50% ulcer area reduction with standard ulcer therapy (e.g., surgical debridement, standard dressing changes, non-weight bearing or off-loading pressure) for a minimum of 4 weeks; **and** • Type 1 or type 2 diabetes mellitus with Optimal glucose control Glycated hemoglobin test (HgA1c) < 12% (within the last 90 days); **and** • No osteomyelitis, soft tissue infection or Charcot arthropathy; **and** • Treated foot has adequate circulation as evidenced by either the presence of a palpable pedal pulse or an ankle-brachial index (ABI) of ≥ 0.70. **Dermagraft** Dermagraft may be reasonable and medically necessary when **All** of the following criteria are met: • Full-thickness diabetic foot ulcer of greater than six weeks duration; **and** • Failure to achieve at least 50% ulcer area reduction with standard ulcer therapy (e.g., surgical debridement, standard dressing changes,

Diabetic Ulcer	Medical Necessity Criteria
	non-weight bearing or off-loading pressure) for a minimum of 4 weeks; **and** • Type 1 or type 2 diabetes mellitus with Optimal glucose control Glycated hemoglobin test (HgA1c) < 12% (within the last 90 days); **and** • No osteomyelitis, soft tissue infection or Charcot arthropathy; **and** • Treated foot has adequate circulation as evidenced by either the presence of a palpable pedal pulse or an ankle-brachial index (ABI) of ≥ 0.70. **Epicord** Epicord may be reasonable and medically necessary when all of the following criteria are met: • Partial or full-thickness diabetic foot ulcer of greater than six weeks duration; **and** • Failure to achieve at least 50% ulcer area reduction with standard ulcer therapy (e.g., surgical debridement, standard dressing changes, non-weight bearing or off-loading pressure) for a minimum of 4 weeks; **and** • Type 1 or type 2 diabetes mellitus with Optimal glucose control Glycated hemoglobin test (HgA1c) < 12% (within the last 90 days); **and** • No osteomyelitis, soft tissue infection or Charcot arthropathy; **and** • Treated foot has adequate circulation as evidenced by either the presence of a palpable pedal pulse or an ankle-brachial index (ABI) of ≥ 0.70. **EpiFix Amniotic Membrane** EpiFix may be reasonable and medically necessary when **All** of the following criteria are met: • Partial or full-thickness diabetic foot ulcer of greater than six weeks duration; **and** • Failure to achieve at least 50% ulcer area reduction with standard ulcer therapy (e.g., surgical debridement, standard dressing changes, non-weight bearing or off-loading pressure) for a minimum of 4 weeks; **and** • Type 1 or type 2 diabetes mellitus with Optimal glucose control Glycated hemoglobin test (HgA1c) < 12% (within the last 90 days); **and** • No osteomyelitis, soft tissue infection or Charcot arthropathy; **and** • Treated foot has adequate circulation as evidenced by either the presence of a palpable pedal pulse or an ankle-brachial index (ABI) of ≥ 0.70. **GrafJacket Now** GrafJacket may be reasonable and medically necessary when **All** of the following criteria are met: • Partial and full-thickness diabetic foot ulcer of greater than six weeks duration; **and** • Failure to achieve at least 50% ulcer area reduction with standard ulcer therapy (e.g., surgical debridement, standard dressing changes, non-weight bearing or off-loading pressure) for a minimum of 4 weeks; **and**

Diabetic Ulcer	Medical Necessity Criteria
	• Type 1 or type 2 diabetes mellitus with Optimal glucose control Glycated hemoglobin test (HgA1c) < 12% (within the last 90 days) ; **and** • No osteomyelitis, soft tissue infection or Charcot arthropathy; **and** • Treated foot has adequate circulation as evidenced by either the presence of a palpable pedal pulse or an ankle-brachial index (ABI) of ≥ 0.70. **Note:** GraftJacket is supplied as a single-use, per patient package and intended for use as only once per procedure. When above criteria is met, one application is considered medically necessary **Grafix CORE / Grafix PRIME** Grafix may be reasonable and medically necessary when **All** of the following criteria are met: • Partial or full-thickness diabetic foot ulcer of greater than four weeks duration; **and** • Failure to achieve at least 50% ulcer area reduction with standard ulcer therapy (e.g., surgical debridement, standard dressing changes, non-weight bearing or off-loading pressure) for a minimum of 4 weeks; **and** • Type 1 or type 2 diabetes mellitus with Optimal glucose control Glycated hemoglobin test (HgA1c) < 12% (within the last 90 days); **and** • No osteomyelitis, soft tissue infection or Charcot arthropathy; **and** • Treated foot has adequate circulation as evidenced by either the presence of a palpable pedal pulse or an ankle-brachial index (ABI) of ≥ 0.70. **Integra Dermal Regeneration Template/Integra Omnigraft Dermal Regeneration Matrix** Integra Dermal Regeneration Template / Omnigraft Dermal Regeneration Matrix may be reasonable and medically necessary medically necessary when **All** of the following criteria are met: • Partial or full-thickness diabetic foot ulcer of greater than six weeks duration; **and** • Failure to achieve at least 50% ulcer area reduction with standard ulcer therapy (e.g., surgical debridement, standard dressing changes, non-weight bearing or off-loading pressure) for a minimum of 4 weeks; **and** • Type 1 or type 2 diabetes mellitus with Optimal glucose control Glycated hemoglobin test (HgA1c) < 12% (within the last 90 days); **and** • No osteomyelitis, soft tissue infection or Charcot arthropathy; **and** • Treated foot has adequate circulation as evidenced by either the presence of a palpable pedal pulse or an ankle-brachial index (ABI) of ≥ 0.70. **Oasis Wound Matrix and Oasis® Ultra Tri-Layer Matrix** Oasis Wound Matrix and Oasis® Ultra Tri-Layer Matrix may be reasonable and medically necessary when **All** of the following criteria are met: • Partial or full-thickness diabetic foot ulcer of greater than four weeks; **and**

Diabetic Ulcer	Medical Necessity Criteria
	• Failure to achieve at least 50% ulcer area reduction with standard ulcer therapy (e.g., surgical debridement, standard dressing changes, non-weight bearing or off-loading pressure) for a minimum of 4 weeks; **and** • Type 1 or type 2 diabetes mellitus with Optimal glucose control Glycated hemoglobin test (HgA1c) < 12% (within the last 90 days); **and** • No osteomyelitis, soft tissue infection or Charcot arthropathy; **and** • Treated foot has adequate circulation as evidenced by either the presence of a palpable pedal pulse or an ankle-brachial index (ABI) of ≥ 0.70. **TheraSkin** TheraSkin may be reasonable and medically necessary when **All** of the following criteria are met: • Partial or full-thickness diabetic foot ulcer of greater than four weeks duration; **and** • Failure to achieve at least 50% ulcer area reduction with standard ulcer therapy (e.g., surgical debridement, standard dressing changes, non-weight bearing or off-loading pressure) for a minimum of 4 weeks; **and** • Type 1 or type 2 diabetes mellitus with Optimal glucose control Glycated hemoglobin test (HgA1c) < 12% (within the last 90 days); **and** • No osteomyelitis, soft tissue infection or Charcot arthropathy; **and** • Treated foot has adequate circulation as evidenced by either the presence of a palpable pedal pulse or an ankle-brachial index (ABI) of ≥ 0.70.

The above medical necessity criteria must be met for the following codes to be covered for diabetic foot ulcers:

HCPCS Codes

HCPCS Codes	Description
Q4101	Apligraf, per sq cm
Q4102	Oasis wound matrix, per sq cm
Q4105	Integra dermal regeneration template (DRT) or Integra Omnigraft dermal regeneration matrix, per sq cm
Q4106	Dermagraft, per sq cm
Q4107	Graftjacket, per square centimeter
Q4121	TheraSkin, per square centimeter
Q4124	Oasis tri-layer wound matrix
Q4128	FlexHD, or AllopatchHD, per sq cm
Q4132	Grafix Core and GrafixPL Core, per sq cm
Q4133	Grafix prime and GrafixPL prime, stravix and stravixpl, per square centimeter
Q4151	AmnioBand or Guardian, per sq cm
Q4168	AmnioBand, 1 mg
Q4186	Epifix, per square centimeter
Q4187	Epicord 1 sq cm

Venous insufficiency ulcers	Medical Necessity Criteria
Amnioband® or Guardian® **Apligraf®** **Epifix®** **TheraSkin®** **PriMatrix™** **Oasis Wound Matrix®** **Oasis® Ultra Tri-Layer Matrix**	Products may be considered medically necessary for treatment of venous insufficiency ulcers when **All** of the following criteria are met: • Partial or full-thickness lower extremity venous stasis skin ulcer of greater than four weeks duration; **and** • Failed at least four weeks of standard ulcer therapy (e.g., dressing changes, therapeutic compression therapy); **and** • No osteomyelitis or soft tissue infection; **and** • Treated lower extremity has adequate blood supply as evidenced by a vascular assessment (e.g., presence of a palpable pedal pulse or an ankle-brachial index (ABI) of ≥ 0.70.

The above medical necessity criteria must be met for the following codes to be covered for venous insufficiency ulcers:

HCPCS Codes

HCPCS Codes	Description
Q4101	Apligraf, per sq cm
Q4102	Oasis wound matrix, per sq cm
Q4110	PriMatrix
Q4121	TheraSkin, per square centimeter
Q4124	Oasis® Ultra Tri-Layer Matrix
Q4151	Amnioband or Guardian, per sq cm
Q4186	Epifix, per square centimeter

Burns

Burns	Medical Necessity Criteria
Biobrane™/ Biobrane L™ **Epicel®** **Integra® Dermal Regeneration Template** **Integra™ Bilayer Matrix Wound Dressing** **Integra™ Matrix Wound Dressing** **Integra™ Meshed Bilayer Wound Matrix** **Transcyte®**	**Biobrane** The use of Biobrane may be reasonable and medically necessary for use as a temporary wound covering for surgically excised or debrided partial-thickness burn wound **Biobrane L** The use of Biobrane L may be reasonable and medically necessary for use as a temporary wound covering for surgically excised or debrided partial-thickness burn wound or Biobrane L may be used as an adjunct to mesh autograft. **EpiCel** Epicel may be reasonable and medically necessary for deep dermal or full-thickness burns comprising a total body surface area (TBSA) greater than or equal to 30% and provided in accordance with the humanitarian device exemption (HDE) specifications of the US Food and Drug Administration (FDA)

	Integra® Dermal Regeneration Template, Integra™ Bilayer Matrix Wound Dressing Integra™, Matrix Wound Dressing Integra™, Meshed Bilayer Wound Matrix These products may be reasonable and medically necessary for the treatment of full-thickness or deep partial-thickness burns. The **Integra Dermal Regeneration Template** is used in the treatment of life-threatening burn injuries and may be reasonable and medically necessary when **Both** of the following are met: • Post-excisional treatment of a full-thickness or deep partial-thickness burn; **and** • Sufficient autograft is not available at the time of excision or contraindicated. **TransCyte** TransCyte may be reasonable and medically necessary for use as a temporary wound covering for surgically excised full-thickness and deep partial-thickness thermal burn wounds in members who require such a covering prior to autograft placement.

The above medical necessity criteria must be met for the following codes to be covered for second and third-degree burns:

HCPCS Codes

HCPCS Codes	Description
C9363	Skin substitute, Integra meshed bilayer wound matrix, per square cm
Q4100	Skin substitute, not otherwise specified**for use with Epicel®, Biobrane™/ Biobrane L
Q4104	Integra Bilayer Matrix wound dressing (BMWD), per square centimeter
Q4105	Integra dermal regeneration template (DRT) or Integra Omnigraft dermal regeneration matrix, per sq cm
Q4108	Integra matrix, per square centimeter
Q4182	Transcyte, per sq cm

Dystrophic Epidermolysis Bullosa

Dystrophic epidermolysis bullosa (Mitten-hand deformity)	Medical Necessity Criteria
OrCel™	Orcel may be reasonable and medically necessary in the treatment of mitten-hand deformity surgery of epidermolysis bullosa when standard wound therapy has failed and when provided in accordance with the humanitarian device exemption (HDE) specifications of the US Food and Drug Administration (FDA).

The above medical necessity criteria must be met for the following code to be covered for Dystrophic epidermolysis bullosa:

HCPCS Codes

HCPCS Codes	Description
Q4100	Skin substitute, not otherwise specified for use with OrCel

Limitations

1. For DFU and VLU;
    - Skin and soft tissue substitutes are not covered in Members with uncontrolled diabetes, active Charcot arthropathy of the affected extremity, and/or vasculitis
    - Skin and soft tissue substitutes are not covered when the application site is infected or member has an allergy to the product
    - Repeat or alternative applications of skin soft tissue substitutes are not considered medically reasonable and necessary when a previously full course of applications were unsuccessful as defined by both of the following:
        - Increase in size and depth of ulcer
        - Ulcer showed no signs of healing or indication that improvement is likely such as granulation tissue, epithelialization or progress towards closing for a period of 1 month past start of therapy
    - The use of more than one product to treat a wound simultaneously is not covered. A wound care product may be changed in the treatment of the wound, but should not exceed the 8-application limit per wound per 12-16 week period of care
2. All other skin and soft tissue substitutes not listed above are considered investigational, including, but not limited to the following:

ACell® UBM Hydrated/Lyophilized Wound Dressing	MatriDerm®
Aongen™ Collagen Matrix	Matrix HD™
CollaCare®	Miroderm®
CollaCare® Dental	Microderm® biologic wound matrix
Collagen Wound Dressing	Ologen™ Collagen Matrix
CollaWound™	Puracol® and Puracol® Plus Collagen Wound Dressings
Collexa®	Puros® Dermis
Collieva®	RegenePro™
Conexa™	Repliform®
Coreleader Colla-Pad	ReCell®
CorMatrix®	SkinTE™
Dermadapt ™ Wound Dressing	StrataGraft®
DressSkin	TheraForm™ Standard/Sheet
Durepair Regeneration Matrix®	XenMatrix™ AB
Endoform Dermal Template™	
ENDURAgen™	
ExpressGraft™	
FlexiGraft®	
Geistlich Derma-Gide™	
Hyalomatrix® PA	
InteguPly®	
Keramatrix®	
Keroxx™	

Codes

The codes included below for informational purposes only; this is not an all-inclusive list

List of Medically Necessary ICD-10 Codes

CPT Codes / HCPCS Codes / ICD Codes

CPT® Codes	Description
15271	Application of skin substitute graft to trunk, arms, legs, total wound surface area up to 100 sq cm; first 25 sq cm or less wound surface area
15272	Application of skin substitute graft to trunk, arms, legs, total wound surface area up to 100 sq cm; each additional 25 sq cm wound surface area, or part thereof (List separately in addition to code for primary procedure)
15273	Application of skin substitute graft to trunk, arms, legs, total wound surface area greater than or equal to 100 sq cm; first 100 sq cm wound surface area, or 1% of body area of infants and children
15274	Application of skin substitute graft to trunk, arms, legs, total wound surface area greater than or equal to 100 sq cm; each additional 100 sq cm wound surface area, or part thereof, or each

CPT® Codes	Description
	additional 1% of body area of infants and children, or part thereof (List separately in addition to code for primary procedure)
15275	Application of skin substitute graft to face, scalp, eyelids, mouth, neck, ears, orbits, genitalia, hands, feet, and/or multiple digits, total wound surface area up to 100 sq cm; first 25 sq cm or less wound surface area
15276	Application of skin substitute graft to face, scalp, eyelids, mouth, neck, ears, orbits, genitalia, hands, feet, and/or multiple digits, total wound surface area up to 100 sq cm; each additional 25 sq cm wound surface area, or part thereof (List separately in addition to code for primary procedure)
15277	Application of skin substitute graft to face, scalp, eyelids, mouth, neck, ears, orbits, genitalia, hands, feet, and/or multiple digits, total wound surface area greater than or equal to 100 sq cm; first 100 sq cm wound surface area, or 1% of body area of infants and children
15278	Application of skin substitute graft to face, scalp, eyelids, mouth, neck, ears, orbits, genitalia, hands, feet, and/or multiple digits, total wound surface area greater than or equal to 100 sq cm; each additional 100 sq cm wound surface area, or part thereof, or each additional 1% of body area of infants and children, or part thereof (List separately in addition to code for primary procedure)
15777	Implantation of biologic implant (e.g., acellular dermal matrix) for soft tissue reinforcement (e.g., breast, trunk) (List separately in addition to code for primary procedure)

HCPCS Codes	Description
C5271	Application of low cost skin substitute graft to trunk, arms, legs, total wound surface area up to 100 sq cm; first 25 sq cm or less wound surface area
C5272	Application of low cost skin substitute graft to trunk, arms, legs, total wound surface area up to 100 sq cm; each additional 25 sq cm wound surface area, or part thereof (list separately in addition to code for primary procedure)
C5273	Application of low cost skin substitute graft to trunk, arms, legs, total wound surface area greater than or equal to 100 sq cm; first 100 sq cm wound surface area, or 1% of body area of infants and children
C5274	Application of low cost skin substitute graft to trunk, arms, legs, total wound surface area greater than or equal to 100 sq cm; each additional 100 sq cm wound surface area, or part thereof, or each additional 1% of body area of infants and children, or part thereof (list separately in addition to code for primary procedure)
C5275	Application of low cost skin substitute graft to face, scalp, eyelids, mouth, neck, ears, orbits, genitalia, hands, feet, and/or multiple digits, total wound surface area up to 100 sq cm; first 25 sq cm or less wound surface area
C5276	Application of low cost skin substitute graft to face, scalp, eyelids, mouth, neck, ears, orbits, genitalia, hands, feet, and/or multiple digits, total wound surface area up to 100 sq cm; each additional 25 sq cm wound surface area, or part thereof (list separately in addition to code for primary procedure)
C5277	Application of low cost skin substitute graft to face, scalp, eyelids, mouth, neck, ears, orbits, genitalia, hands, feet, and/or multiple digits, total wound surface area greater than or equal to 100 sq cm; first 100 sq cm wound surface area, or 1% of body area of infants and children
C5278	Application of low cost skin substitute graft to face, scalp, eyelids, mouth, neck, ears, orbits, genitalia, hands, feet, and/or multiple digits, total wound surface area greater than or equal to 100 sq cm; each additional 100 sq cm wound surface area, or part thereof, or each additional 1% of body area of infants and children, or part thereof (list separately in addition to code for primary procedure)

The following codes are considered investigational

HCPCS Codes	Description
A2001	Innovamatrix ac, per sq cm
A2002	Mirragen advanced wound matrix, per square centimet
A2004	Xcellistem, per square centimeter
A2005	Microlyte matrix, per square centimeter
A2006	Novosorb synpath dermal matrix, per square centimeter
A2007	Restrata per square centimeter A2007 R
A2008	Theragenesis, per square centimeter
A2009	Symphony, per square centimeter

HCPCS Codes	Description
A2010	Apis, per square centimeter
A2011	Supra sdrm, per square centimeter
A2012	Suprathel, per square centimeter
A2013	Innovamatrix fs, per sq cm
A2014	Omeza collag per 100 mg
A2015	Phoenix wnd mtrx, per sq cm
A2016	Permeaderm b, per sq cm
A2018	Permeaderm c, per sq cm
A2019	Kerecis omega3 marigen shield, per square centimet
A2020	Ac5 advanced wound system (ac5)
A2021	Neomatrix, per square centimeter
A2022	Innovaburn or innovamatrix xl, per square centimeter
A2023	Innovamatrix pd, 1 mg
A2024	Resolve matrix, per square centimeter
C9358	Dermal substitute, native, non-denatured collagen, fetal bovine origin (surgimend collagen matrix), per 0.5 square centimeters
Q4134	hMatrix, per square centimeter
Q4135	Mediskin, per square centimeter
Q4136	E-Z Derm, per square centimeter
Q4138	BioDFence Dryflex, per square centimeter
Q4139	Amniomatrix or BioDMatrix, injectable, 1 cc
Q4140	BioDFence, per square centimeter
Q4148	Neox Cord 1K, Neox Cord RT, or CLarix Cord, per square centimeter
Q4150	AlloWrap ds or dry, per square centimeter
Q4152	DermaPure, per square centimeter
Q4153	Dermavest and Plurivest, per square centimeter
Q4154	BioVance, per square centimeter
Q4155	Neoxflo or Clarixflo, 1 mg
Q4156	NEOX 100 or Clarix 100, per square centimeter
Q4157	Revitalon, per square centimeter
Q4158	Kerecis Omega3, per square centimeter
Q4159	Affinity, per square centimeter
Q4160	NuShield, per square centimeter
Q4161	Bio-ConneKt Wound Matrix, per square centimeter
Q4162	Woundex Flow, Bioskin flow, 0.5 cc
Q4163	Woundex, Bioskin, per square centimeter
Q4164	Helicoll, per square centimeter
Q4165	Keramatrix, per square centimeter
Q4166	Cytal, per square centimeter
Q4167	TruSkin, per square centimeter
Q4169	Artacent Wound, per square centimeter
Q4170	CYGNUS, per square centimeter
Q4171	Interfyl, 1 mg
Q4173	PaliGen or PaliGen XPlus, per square centimeter
Q4174	PalinGen or ProMatrx, 0.36 mg per 0.25 cc
Q4175	MIRODERM, per square centimeter
Q4176	NeoPatch, per square centimeter
Q4177	Floweramnioflo, 0.1 cc
Q4178	Floweramniopatch, per square centimeter
Q4179	FlowerDerm, per square centimeter
Q4180	Revita, per square centimeter
Q4181	Amnio Wound, per square centimeter
Q4183	Surgigraft, per square centimeter
Q4184	Cellesta, per square centimeter
Q4185	Cellesta flowable amnion (25 mg per cc); per 0.5 cc
Q4188	Amnioarmor, per square centimeter
Q4189	Artacent ac, 1 mg
Q4190	Artacent ac, per square centimeter

HCPCS Codes	Description
Q4191	Restorigin, per square centimeter
Q4192	Restorigin, 1 cc
Q4193	Coll-e-derm, per square centimeter
Q4194	Novachor, per square centimeter
Q4195	Puraply, per square centimeter
Q4196	Puraply AM, per square centimeter
Q4197	Puraply xt, per square centimeter
Q4198	Genesis amniotic membrane, per square centimeter
Q4199	Cygnus matrix, per sq cm
Q4200	Skin te, per square centimeter
Q4201	Matrion, per square centimeter
Q4202	Keroxx (2.5g/cc), 1cc
Q4203	Derma-gide, per square centimeter
Q4204	Xwrap, per square centimeter
Q4205	Membrane graft or Membrane wrap, per sq cm
Q4206	Fluid Flow or Fluid GF, 1 cc
Q4208	Novafix, per sq cm
Q4209	Surgraft per sq cm
Q4211	Amnion bio or axobio sq cm
Q4212	AlloGen, per cc
Q4213	Ascent, 0.5 mg
Q4214	Cellesta Cord, per sq cm
Q4215	Axolotl Ambient or Axolotl Cryo, 0.1 mg
Q4216	Artacent Cord, per sq cm
Q4217	WoundFix, BioWound, WoundFix Plus, BioWound Plus, WoundFix Xplus or BioWound Xplus, per sq cm
Q4218	SurgiCORD, per sq cm
Q4219	Surgigraft dual per sq cm
Q4220	BellaCell HD or Surederm, per sq cm
Q4221	Amniowrap2 per sq cm
Q4222	ProgenaMatrix, per sq cm
Q4224	Human Health Factor 10 Amniotic Patch (HHF10-P), per sq cm
Q4225	Amnio or derma tl, per sq cm
Q4226	MyOwn skin, includes harvesting and preparation procedures, per square centimet
Q4227	Amniocore per sq cm
Q4229	Cogenex amnio memb per sq cm
Q4230	Cogenex flow amnion 0.5 cc
Q4231	Corplex p, per cc
Q4232	Corplex, per sq cm
Q4233	Surfactor /nudyn per 0.5 cc
Q4234	Xcellerate, per sq cm
Q4235	Amniorepair or altiply sq cm
Q4236	Carepatch per sq cm
Q4237	Cryo-cord, per sq cm
Q4238	Derm-maxx, per sq cm
Q4239	Amnio-maxx or lite per sq cm
Q4240	Corecyte topical only 0.5 cc
Q4241	Polycyte, topical only 0.5cc
Q4242	Amniocyte plus, per 0.5 cc
Q4245	Amniotext, per cc
Q4246	Coretext or protext, per cc
Q4247	Amniotext patch, per sq cm
Q4248	Dermacyte amn mem allo sq cm
Q4249	Amniply, for topical use only, per square centimeter
Q4250	Amnioamp-mp, per square centimeter
Q4251	Vim, per square centimeter
Q4252	Vendaje, per square centimet
Q4253	Zenith amniotic membrane psc

HCPCS Codes	Description
Q4254	Novafix dl per sq cm
Q4255	Reguard, topical use per sq
Q4256	Mlg complet, per sq cm
Q4257	Relese, per sq cm
Q4258	Enverse, per sq cm
Q4259	Celera per sq cm
Q4260	Signature apatch, per sq cm
Q4261	Tag, per square centimeter
Q4262	Dual layer impax, per sq cm
Q4263	Surgraft tl, per sq cm
Q4264	Cocoon membrane, per sq cm
Q4265	Neostim tl per sq cm
Q4266	Neostim per sq cm
Q4267	Neostim dl per sq cm
Q4268	Surgraft ft per sq cm
Q4269	Surgraft xt per sq cm
Q4270	Complete sl per sq cm
Q4271	Complete ft per sq cm
Q4272	Esano a, per sq cm
Q4273	Esano aaa, per sq cm
Q4274	Esano ac, per sq cm
Q4275	Esano aca, per sq cm
Q4276	Orion, per sq cm
Q4278	Epieffect, per sq cm
Q4279	Vendaje ac, per sq cm
Q4280	Xcell amnio matrix per sq cm
Q4281	Barrera slor dl per sq cm
Q4282	Cygnus dual per sq cm
Q4283	Biovance tri or 3l, sq cm
Q4284	Dermabind sl, per sq cm
Q4285	Nudyn dl or dl mesh pr sq cm
Q4286	Nudyn sl or slw, per sq cm
Q4288	Dermabind ch, per sq cm
Q4289	Revoshield+ amnio, per sq cm
Q4290	Membrane wrap hydr per sq cm
Q4291	Lamellas xt, per sq cm
Q4292	Lamellas, per sq cm
Q4294	Amnio quad-core, per sq cm
Q4295	Amnio tri-core, per sq cm
Q4296	Rebound matrix, per sq cm
Q4297	Emerge matrix, per sq cm
Q4298	Amnicore pro, per sq cm
Q4299	Amnicore pro+, per sq cm
Q4300	Acesso tl, per sq cm
Q4301	Activate matrix, per sq cm
Q4302	Complete aca, per sq cm
Q4303	Complete aa, per sq cm
Q4304	Grafix plus, per sq cm
Q4305	Amer am ac tri-lay per sq cm
Q4306	Americ amnion ac per sq cm
Q4307	American amnion, per sq cm
Q4308	Sanopellis, per sq cm
Q4309	Via matrix, per sq cm
Q4310	Procenta, per 100 mg
Q4311	Acesso, per sq cm
Q4312	Acesso AC, per sq cm
Q4313	DermaBind FM, per sq c
Q4314	Reeva FT, per sq cm

HCPCS Codes	Description
Q4315	RegeneLink Amniotic Membrane Allograft, per sq cm
Q4316	AmchoPlast, per sq cm
Q4317	VitoGraft, per sq cm
Q4318	E-Graft, per sq cm
Q4319	SanoGraft, per sq cm
Q4320	PelloGraft, per sq cm
Q4321	RenoGraft, per sq cm
Q4322	CaregraFT, per sq cm
Q4323	alloPLY, per sq cm
Q4324	AmnioTX, per sq cm
Q4325	ACApatch, per sq cm
Q4326	WoundPlus, per sq cm
Q4327	DuoAmnion, per sq cm
Q4328	MOST, per sq cm
Q4329	Singlay, per sq
Q4330	TOTAL, per sq cm
Q4331	Axolotl Graft, per sq cm
Q4332	Axolotl DualGraft, per sq cm
Q4333	ArdeoGraft, per sq cm
Q4334	AmnioPlast 1, per sq cm I
Q4335	AmnioPlast 2, per sq cm
Q4336	Artacent C, per sq cm
Q4337	Artacent Trident, per sq cm
Q4338	Artacent Velos, per sq cm
Q4339	Artacent Vericlen, per sq cm
Q4340	SimpliGraft, per sq cm
Q4341	SimpliMax, per sq cm
Q4342	TheraMend, per sq cm
Q4343	Dermacyte AC Matrix Amniotic Membrane Allograft, per sq cm
Q4344	Tri-Membrane Wrap, per sq cm
Q4345	Matrix HD Allograft Dermis, per sq

References:

1. Acellular Skin Substitutes for Chronic Foot Ulcers in Adults with Diabetes Mellitus. Hayesinc.com/login [via subscription only]. Published May 6, 2022. Updated May 10, 2023. Accessed April 10, 2024.
2. Agency for Healthcare Research and Quality (AHRQ). https://www.ahrq.gov/sites/default/files/wysiwyg/research/findings/ta/skinsubs/HCPR0610_skinsubst-final.pdf. Published 2012. Accessed June 10, 2020.
3. Application of Bioengineered Skin Substitutes to Lower Extremity Chronic Non-Healing Wounds (L35041). Accessed June 10, 2020.
4. Biological Tissue-Engineered Skin Substitutes for Wound Healing. Hayesinc.com/login [via subscription only]. Accessed June 10, 2020.
5. Cellular Skin Substitutes for Chronic Foot Ulcers in Adults with Diabetes Mellitus. Hayesinc.com/login [via subscription only]. Published March 26, 2020. Published April 24, 2023. Accessed April 7, 2024.
6. Grafix Cryopreserved Placental Membrane (Osiris Technologies Inc.) for Treatment of Chronic Foot Ulcers in Patients with Diabetes Mellitus. Hayesinc.com/login [via subscription only]. Published September 3, 2019. Updated October 25, 2022. Accessed April 7, 2024.
7. Guo X, Mu D, Gao F. Efficacy and safety of acellular dermal matrix in diabetic foot ulcer treatment: A systematic review and meta-analysis. Int J Surg. 2017;40:1-7. doi:10.1016/j.ijsu.2017.02.008.
8. Integra Template and Matrix Wound Skin Substitutes (Integra LifeSciences Corp) for Treating Chronic Wounds. ECRI.org/login [via subscription only]. Accessed June 3, 2020.
9. Khalil HH, Kalkat M, Malahias MN, et al. Chest Wall Reconstruction with Porcine Acellular Dermal Matrix (Strattice) and Autologous Tissue Transfer for High Risk Patients with Chest Wall Tumors. Plast Reconstr Surg Glob Open. 2018;6(5):e1703. Published 2018 May 18. doi:10.1097/GOX.0000000000001703.
10. Lee KT, Mun GH. A Meta-analysis of Studies Comparing Outcomes of Diverse Acellular Dermal Matrices for Implant-Based Breast Reconstruction. Ann Plast Surg. 2017;79(1):115-123. doi:10.1097/SAP.0000000000001085.
11. Petrie K, Cox CT, Becker BC, MacKay BJ. Clinical applications of acellular dermal matrices: A review. Scars Burn Heal. 2022;8:20595131211038313. Published 2022 Jan 19. doi:10.1177/205951312110383.
12. Skin Grafting and Skin Substitutes. UpToDate.com/login [via subscription only]. Accessed June 3, 2020.

13. Pittman TA, Fan KL, Knapp A, Frantz S, Spear SL. Comparison of Different Acellular Dermal Matrices in Breast Reconstruction: The 50/50 Study. *Plast Reconstr Surg*. 2017;139(3):521-528. doi:10.1097/PRS.0000000000003048
14. PuraPly Antimicrobial (AM) Wound Matrix (Organogenesis Inc.) for Treatment of Wounds. Hayesinc.com/login [via subscription only]. Published December 12, 2022. Updated December 20, 2023. Accessed April 7, 2024.
15. Samuels K, Millet E, Wong L. Efficacy of Acellular Dermal Matrix Type in Treatment of Capsular Contracture in Breast Augmentation: A Systematic Review and Meta-Analysis. Aesthet Surg J. 2023;44(1):26-35. doi:10.1093/asj/sjad265
16. Skin Substitutes for Venous Leg Ulcers in Adults. Hayesinc.com/login [via subscription only]. Published July 23, 2000. Updated July 11, 2023. Accessed 4/7/2024.
17. Surgical Management of the Burn Wound and Use of Skin Substitutes. http://www.oc.lm.ehu.es/Fundamentos/fundamentos/Textos/American%20Burn%20Association.pdf. Published 2009. Accessed June 5, 2020.
18. Treadwell T, Sabolinski M, Skornicki M, Parsons N. Comparative Effectiveness of a Bioengineered Living Cellular Construct and Cryopreserved Cadaveric Skin Allograft for the Treatment of Venous Leg Ulcers in a Real-World Setting. Adv Wound Care (New Rochelle). 2018;7(3):69-76. doi:10.1089/wound.2017.0738.
19. United States Food and Drug Administration (FDA) Products used in implant-based breast reconstruction differ in complication rates: FDA safety communication. March 31, 2021. Available at: FDA In Brief: FDA Warns About Differing Complication Rates for Acellular Dermal Matrix, a Type of Surgical Mesh, Used in Implant-Based Breast Reconstruction | FDA Accessed April 10, 2024.

Approval And Revision History

December 18, 2024: Reviewed by the Medical Policy Approval Committee (MPAC); new Medical Necessity Guideline (MNG) to address bioengineered skin and soft tissue skin substitutes, effective March 1, 2025

Background, Product and Disclaimer Information

Medical Necessity Guidelines are developed to determine coverage for benefits and are published to provide a better understanding of the basis upon which coverage decisions are made. We make coverage decisions using these guidelines, along with the Member's benefit document, and in coordination with the Member's physician(s) on a case-by-case basis considering the individual Member's health care needs.

Medical Necessity Guidelines are developed for selected therapeutic or diagnostic services found to be safe and proven effective in a limited, defined population of patients or clinical circumstances. They include concise clinical coverage criteria based on current literature review, consultation with practicing physicians in our service area who are medical experts in the particular field, FDA and other government agency policies, and standards adopted by national accreditation organizations. We revise and update Medical Necessity Guidelines annually, or more frequently if new evidence becomes available that suggests needed revisions.

For self-insured plans, coverage may vary depending on the terms of the benefit document. If a discrepancy exists between a Medical Necessity Guideline and a self-insured Member's benefit document, the provisions of the benefit document will govern. For Tufts Health Together (Medicaid), coverage may be available beyond these guidelines for pediatric members under age 21 under the Early and Periodic Screening, Diagnostic and Treatment (EPSDT) benefits of the plan in accordance with 130 CMR 450.140 and 130 CMR 447.000, and with prior authorization.

Treating providers are solely responsible for the medical advice and treatment of Members. The use of this guideline is not a guarantee of payment or a final prediction of how specific claim(s) will be adjudicated. Claims payment is subject to eligibility and benefits on the date of service, coordination of benefits, referral/authorization, utilization management guidelines when applicable, and adherence to plan policies, plan procedures, and claims editing logic.