Medical Coverage Policy | Amniotic Membrane and Amniotic Fluid

EFFECTIVE DATE: 01|01|2020
POLICY LAST UPDATED: 11|19|2019

OVERVIEW
Several commercially available forms of human amniotic membrane (HAM) and amniotic fluid can be administered by patches, topical application, or injection. Amniotic membrane and amniotic fluid are being evaluated for the treatment of a variety of conditions, including chronic full-thickness diabetic lower extremity ulcers, venous ulcers, knee osteoarthritis, plantar fasciitis, and ophthalmic conditions.

MEDICAL CRITERIA
Not applicable

PRIOR AUTHORIZATION
Not applicable

POLICY STATEMENT
BlueCHiP for Medicare and Commercial Products
Treatment of nonhealing diabetic lower-extremity ulcers using human amniotic membrane products may be considered medically necessary when filed with a covered diagnosis identified below.

Human amniotic membrane grafts with or without suture may be considered medically necessary for the treatment of the following ophthalmic indications when filed with a covered diagnosis identified below:

- Neurotrophic keratitis;
- Corneal ulcers and melts;
- Corneal perforation;
- Bullous keratopathy;
- Partial limbal stem cell deficiency with extensive diseased tissue;
- Moderate or severe Stevens-Johnson syndrome;
- Persistent epithelial defects;
- Severe dry eye; or
- Moderate or severe acute ocular chemical burn

Human amniotic membrane grafts with suture or glue may be considered medically necessary for the treatment of the following ophthalmic indications when filed with a covered diagnosis identified below:

- Corneal perforation; or
- Pterygium repair

BlueCHiP for Medicare
Human amniotic membrane grafts with or without suture are not covered for all ophthalmic indications not outlined above as the evidence is insufficient to determine the effects of the technology on health outcomes.

Injection of micronized or particulated human amniotic membrane and injection of human amniotic fluid is not covered for all indications as the evidence is insufficient to determine the effects of the technology on health outcomes.

All other human amniotic membrane products and indications not listed above are not covered, including but not limited to treatment of lower-extremity ulcers due to venous insufficiency, as the evidence is insufficient to determine the effects of the technology on health outcomes.

Commercial Products
Human amniotic membrane grafts with or without suture are not medically necessary for all ophthalmic indications not outlined above as the evidence is insufficient to determine the effects of the technology on health outcomes.

Injection of micronized or particulated human amniotic membrane and injection of human amniotic fluid is considered not medically necessary for all indications as the evidence is insufficient to determine the effects of the technology on health outcomes.

All other human amniotic membrane products and indications not listed above are not medically necessary, including but not limited to treatment of lower-extremity ulcers due to venous insufficiency, as the evidence is insufficient to determine the effects of the technology on health outcomes.

COVERAGE
Benefits may vary between groups and contracts. Please refer to the appropriate section of the Benefit Booklet, Evidence of Coverage or Subscriber Agreement for applicable surgery and not medically necessary/not covered benefits/coverage.

BACKGROUND
HUMAN AMNIOTIC MEMBRANE
Human amniotic membrane (HAM) consists of 2 conjoined layers, the amnion, and chorion, and forms the innermost lining of the amniotic sac or placenta. When prepared for use as an allograft, the membrane is harvested immediately after birth, cleaned, sterilized, and either cryopreserved or dehydrated. Many products available using amnion, chorion, amniotic fluid, and umbilical cord are being studied for the treatment of a variety of conditions, including chronic full-thickness diabetic lower-extremity ulcers, venous ulcers, knee osteoarthritis, plantar fasciitis, and ophthalmic conditions. The products are formulated either as patches, which can be applied as wound covers, or as suspensions or particulates, or connective tissue extractions, which can be injected or applied topically.

The fresh amniotic membrane contains collagen, fibronectin, and hyaluronic acid, along with a combination of growth factors, cytokines, and anti-inflammatory proteins such as interleukin-1 receptor antagonist. There is evidence that the tissue has anti-inflammatory, antifibroblastic, and antimicrobial properties. HAM is considered nonimmunogenic and has not been observed to cause a substantial immune response. It is believed that these properties are retained in cryopreserved HAM and dehydrated HAM products, resulting in a readily available tissue with regenerative potential. In support, 1 dehydrated HAM product has been shown to elute growth factors into saline and stimulate the migration of mesenchymal stem cells, both in vitro and in vivo.

Use of a HAM graft, which is fixated by sutures, is an established treatment for disorders of the corneal surface, including neurotrophic keratitis, corneal ulcers and melts, following pterygium repair, Stevens-Johnson syndrome, and persistent epithelial defects. Amniotic membrane products that are inserted like a contact lens have more recently been investigated for the treatment of corneal and ocular surface disorders. Amniotic membrane patches are also being evaluated for the treatment of various other conditions, including skin wounds, burns, leg ulcers, and prevention of tissue adhesion in surgical procedures. Additional indications studied in preclinical models include tendonitis, tendon repair, and nerve repair. The availability of HAM opens the possibility of regenerative medicine for an array of conditions.

AMNIOTIC FLUID
Amniotic fluid surrounds the fetus during pregnancy and provides protection and nourishment. In the second half of gestation, most of the fluid is a result of micturition and secretion from the respiratory tract and gastrointestinal tract of the fetus, along with urea. The fluid contains proteins, carbohydrates, peptides, fats,

amino acids, enzymes, hormones, pigments, and fetal cells. Use of human and bovine amniotic fluid for orthopedic conditions was first reported in 1927. Amniotic fluid has been compared with synovial fluid, containing hyaluronan, lubricant, cholesterol, and cytokines. Injection of amniotic fluid or amniotic fluid–derived cells is currently being evaluated for the treatment of osteoarthritis and plantar fasciitis.

Lower-Extremity Ulcers due to Venous Insufficiency
For individuals who have lower-extremity ulcers due to venous insufficiency who receive a patch or flowable formulation of HAM, the evidence is insufficient to determine the effects of the technology on health outcomes. Well-designed and well-conducted random controlled trials that compare HAM with the standard of care for venous insufficiency ulcers are needed.

Osteoarthritis
For individuals who have knee osteoarthritis who receive an injection of suspension or particulate formulation of HAM or amniotic fluid, the evidence is insufficient to determine the effects of the technology on health outcomes.

Plantar Fasciitis
For individuals who have plantar fasciitis who receive an injection of suspension or particulate formulation of HAM or amniotic fluid, the evidence is insufficient to determine the effects of the technology on health outcomes.

CODING

BlueCHiP for Medicare and Commercial Products
The following HCPCS codes are considered medically necessary when filed with the ICD-10 diagnosis codes listed below.
Q4132 Grafix core and GrafixPL core, per square centimeter
Q4133 Grafix prime and GrafixPL prime, per square centimeter
Q4137 Amnioexcel or BioDExCel, per square centimeter
Q4138 Biodfence Dryflex, per square centimeter
Q4139 AmnioMatrix or BioDMatrix, injectable, 1 cc
Q4140 Biodfence, per square centimeter
Q4145 Epifix, injectable, 1 mg
Q4148 Neox cord 1k, Neox cord RT, or Clarix cord 1K, per square centimeter
Q4150 AlloWrap DS or dry, per square centimeter
Q4151 AmnioBand or Guardian, 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
Q4159 Affinity, per square centimeter
Q4160 NuShield, per square centimeter
Q4162 WoundEx Flow, BioSkin Flow, 0.5 cc
Q4163 WoundEx, BioSkin, per square centimeter
Q4168 Amnioband, 1 mg
Q4169 Artacent wound, per square centimeter
Q4170 Cygnus, per square centimeter
Q4171 Interfyl, 1 mg
Q4173 PalinGen or PalinGen XPlus, per square centimeter
Q4174 PalinGen or ProMatrX, 0.36 mg per 0.25 cc
Q4183 Surgigraft, per square centimeter
Q4184 Cellesta or Cellesta duo, per square centimeter
Q4185 Cellesta flowable amnion (25 mg per cc); per 0.5 cc
Q4186 Epifix, per square centimeter

Q4187 Epicord, per square centimeter
Q4188 Amnioarmor, per square centimeter
Q4189 Artacent ac, 1 mg
Q4190 Artacent ac, per square centimeter
Q4191 Restorigin, per square centimeter
Q4192 Restorigin, 1 cc
Q4194 Novachor, per square centimeter
Q4198 Genesis amniotic membrane, per square centimeter
Q4201 Matrion, per square centimeter
Q4204 Xwrap, per square centimeter
Q4205 Membrane graft or membrane wrap, per square centimeter (New Code Effective 10/1/2019)
Q4206 Fluid flow or fluid GF, 1 cc (New Code Effective 10/1/2019)
Q4208 Novafix, per square centimeter (New Code Effective 10/1/2019)
Q4209 Surgraft, per square centimeter (New Code Effective 10/1/2019)
Q4210 Axolotl graft or axolotl dualgraft, per square centimeter (New Code Effective 10/1/2019)
Q4211 Amnion bio or Axobiomembrane, per square centimeter (New Code Effective 10/1/2019)
Q4212 Allogen, per cc (New Code Effective 10/1/2019)
Q4213 Ascent, 0.5 mg (New Code Effective 10/1/2019)
Q4214 Cellesta cord, per square centimeter (New Code Effective 10/1/2019)
Q4215 Axolotl ambient or axolotl cryo, 0.1 mg (New Code Effective 10/1/2019)
Q4216 Artacent cord, per square centimeter (New Code Effective 10/1/2019)
Q4217 Woundfix, BioWound, Woundfix Plus, BioWound Plus, Woundfix Xplus or BioWound Xplus, per square centimeter (New Code Effective 10/1/2019)
Q4218 Surgicord, per square centimeter (New Code Effective 10/1/2019)
Q4219 Surgigraft-dual, per square centimeter (New Code Effective 10/1/2019)
Q4221 Amniowrap2, per square centimeter (New Code Effective 10/1/2019)

If no specific HCPCS code exists for a product (e.g AmnioFix or OrthoFlo), an appropriate unlisted code, such as Q4100, would be used.

ICD-10 Diagnosis Codes that may support medical necessity:

E08.621 - E08.622	H11.001 - H11.069	H18.59
E09.621 - E09.622	H16.001 - H16.079	H18.831 - H18.839
E10.621 - E10.622	H16.231 - H16.239	H18.891 - H18.899
E11.621 - E11.622	H18.10 - H18.13	L51.1
E13.621 - E13.622	H18.30	T26.10 - T26.12
H04.121 - H04.129	H18.52	T26.50 - T26.52

RELATED POLICIES
Not applicable

PUBLISHED
Provider Update, January 2020
Provider Update, July 2018

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