

Recurrent Pregnancy Loss

Last Review Date: Mar. 12, 2022

Number: MG.MM.ME.52c

Medical Guideline Disclaimer

Property of EmblemHealth. All rights reserved. The treating physician or primary care provider must submit to EmblemHealth the clinical evidence that the patient meets the criteria for the treatment or surgical procedure. Without this documentation and information, EmblemHealth will not be able to properly review the request for prior authorization. The clinical review criteria expressed below reflects how EmblemHealth determines whether certain services or supplies are medically necessary. EmblemHealth established the clinical review criteria based upon a review of currently available clinical information (including clinical outcome studies in the peer reviewed published medical literature, regulatory status of the technology, evidence-based guidelines of public health and health research agencies, evidence-based guidelines and positions of leading national health professional organizations, views of physicians practicing in relevant clinical areas, and other relevant factors). EmblemHealth expressly reserves the right to revise these conclusions as clinical information changes and welcomes further relevant information. Each benefit program defines which services are covered. The conclusion that a particular service or supply is medically necessary does not constitute a representation or warranty that this service or supply is covered and/or paid for by EmblemHealth, as some programs exclude coverage for services or supplies that EmblemHealth considers medically necessary. If there is a discrepancy between this guideline and a member's benefits program, the benefits program will govern. In addition, coverage may be mandated by applicable legal requirements of a state, the Federal Government or the Centers for Medicare & Medicaid Services (CMS) for Medicare and Medicaid members. All coding and web site links are accurate at time of publication. EmblemHealth Services Company LLC, ("EmblemHealth") has adopted the herein policy in providing management, administrative and other services to EmblemHealth Plan, Inc., EmblemHealth Insurance Company, EmblemHealth Services Company, LLC and Health Insurance Plan of Greater New York (HIP) related to health benefit plans offered by these entities. All of the aforementioned entities are affiliated companies under common control of EmblemHealth Inc.

Definitions

Recurrent pregnancy loss (RPL) — aka recurrent spontaneous abortion (RSA) (or miscarriage) — refers to the occurrence of two or more losses of consecutive pregnancies prior to the 20th week of gestation (excluding ectopic, molar or biochemical pregnancies). The loss may be primary (in women has never carried to viability) or secondary (after a previous live birth). Causative factors include anatomic, chromosomal, hormonal or immunological abnormalities, as well as thrombolytic disorders, or underlying factors of unknown etiology.

Guideline

Members are eligible for coverage of the evaluation and treatment of RPL (≥ 2 lost spontaneous miscarriages in < 20 weeks) per the table below.

Medically necessary diagnostic tests/procedures	<ol style="list-style-type: none"> 1. Assessment of thyroid function: <ul style="list-style-type: none"> ▪ Thyroid antibodies ▪ Thyroid stimulating hormone (TSH) 2. Detection of anatomic abnormalities (e.g., ovaries, uterus, uterine cavity): <ul style="list-style-type: none"> ▪ Hysteroscopy/hysterosalpingography ▪ Sonohysteroscopy/sonohysterography ▪ Pelvic ultrasound 3. Detection of chromosomal abnormalities: <ul style="list-style-type: none"> ▪ Karyotype serology ▪ Karyotype of abortus tissue (when ≥ 2 RPL occurrences) ▪ Molecular cytogenetic probe (e.g., FISH) DNA analysis when karyotyping above is not possible (e.g., poor culture, insufficient tissue sample) 4. Detection of antiphospholipid syndrome (APSS) using standard assays: <ul style="list-style-type: none"> ▪ Anticardiolipin antibody detection (IgG, IgM),
---	---

Medically necessary treatment	<ul style="list-style-type: none">▪ Anti-β2-glycoprotein I (IgG or IgM) antibodies▪ Lupus anticoagulant (LA) antibodies
	<ul style="list-style-type: none">5. Prenatal genetic diagnosis:<ul style="list-style-type: none">▪ Couples in which 1 partner has a balanced translocation or inversion

Medically necessary treatment	1. Low-dose heparin and aspirin for antiphospholipid syndrome
	2. Antenatal transvaginal cervical cerclage
	3. Antenatal transabdominal cervical cerclage (if prior transvaginal cerclage is contraindicated or previously failed)
	4. Surgical correction of structural uterine abnormalities

Limitations/Exclusions

A. The following evaluative tests are not considered medically necessary for RPL, as clinical utility has not been established:

1. Angiotensin converting enzyme (ACE) and plasminogen activator inhibitor-1 (PAI-1) gene polymorphisms testing
2. Antibodies to phosphatidylserine, phosphatidylethanolamine or phospholipids (except anti-cardiolipin and lupus anticoagulant, as depicted in table above)
3. Cytokine polymorphisms analysis (Th1/Th2 intra-cellular cytokine ratio)
4. Embryo toxicity assay (ETA)
5. Genetic association studies of inflammatory cytokine polymorphisms
6. Inter- α trypsin inhibitor-heavy chain 4 (ITI-H4) (as a biomarker for recurrent pregnancy loss)
7. Maternal antiparental antibodies
8. Methylenetetrahydrofolate reductase (MTHFR) testing
9. Molecular cytogenetic testing (serological or on products of conception) using comparative genomic hybridization (CGH)
10. Molecular genetic testing for highly skewed X-inactivation patterns
11. Natural killer (NK) testing to determinat circulating-cell % or status of NK-like cells through luteal phase biopsy
12. Parental human leukocyte antigen (HLA) status
13. Pre-implantation genetic screening (PGS) (See [Assisted Reproductive Technologies](#) [ART] to determine whether members pursuing ART services meet PGS criteria)
14. Reproductive immunophenotype (CD3+, CD4+, CD5+, CD8+, CD16+, CD19+, CD56+)
15. Routine preimplantation embryo aneuploidy screening
16. Tests for embryotoxic factor
17. Tests for inherited thrombophilic disorders: factor V Leiden (genetic testing), prothrombin G20210A mutation, serum homocysteine, and deficiencies of the anticoagulants protein C, protein S, and antithrombin II
18. Tests for maternal antileukocytic antibodies to paternal leukocytes
19. Tests for serum “blocking factor”
20. X-chromosome inactivation study

B. The following medical procedures are not considered medically necessary for the prevention/treatment of RPL due to insufficient evidence of therapeutic value:

1. Donor leukocytes/ infusion

2. Immunoglobulin (IVIG) therapy
3. Intralipid therapy
4. Low-molecular-weight heparin (unless thrombophilic disorder is present and member is undergoing active treatment for venous thromboembolism)
5. Paternal leukocyte immunization
6. Trophoblast membrane infusion

Revision History

Mar. 11, 2022	Removed tissue analysis for luteal phase defect as a medically necessary procedure
Mar. 12, 2021	Updated recurrent pregnancy loss definition — changed “three” or more consecutive pregnancy losses to “two” or more

Applicable Procedure Codes

58100	Endometrial sampling (biopsy) with or without endocervical sampling (biopsy), without cervical dilation, any method (separate procedure)
58340	Catheterization and introduction of saline or contrast material for saline infusion sonohysterography (SIS) or hysterosalpingography
58555	Hysteroscopy, diagnostic (separate procedure)
58558	Hysteroscopy, surgical; with sampling (biopsy) of endometrium and/or polypectomy, with or without D & C
58559	Hysteroscopy, surgical; with lysis of intrauterine adhesions (any method)
58560	Hysteroscopy, surgical; with division or resection of intrauterine septum (any method)
58561	Hysteroscopy, surgical; with removal of leiomyomata
58562	Hysteroscopy, surgical; with removal of impacted foreign body
58563	Hysteroscopy, surgical; with endometrial ablation (eg, endometrial resection, electrosurgical ablation, thermoablation)
58565	Hysteroscopy, surgical; with bilateral fallopian tube cannulation to induce occlusion by placement of permanent implants
59320	Cerclage of cervix, during pregnancy; vaginal
59325	Cerclage of cervix, during pregnancy; abdominal
74740	Hysterosalpingography, radiological supervision and interpretation
76831	Saline infusion sonohysterography (SIS), including color flow Doppler, when performed
76856	Ultrasound, pelvic (nonobstetric), real time with image documentation; complete
81403	Molecular pathology procedure, Level 4 (eg, analysis of single exon by DNA sequence analysis, analysis of 10 amplicons using multiplex PCR in 2 or more independent reactions, mutation scanning or duplication/deletion variants of 2-5 exons)
81404	Molecular pathology procedure, Level 5 (eg, analysis of 2-5 exons by DNA sequence analysis, mutation scanning or duplication/ deletion variants of 6-10 exons, or characterization of a dynamic mutation disorder/triplet repeat by Southern blot analysis)
81405	Molecular pathology procedure, Level 6 (eg, analysis of 6-10 exons by DNA sequence analysis, mutation scanning or duplication/deletion variants of 11-25 exons, regionally targeted cytogenomic array analysis) CPOX (coproporphyrinogen oxidase) (eg, hereditary coproporphyruria), full gene sequence CTSC (chymotrypsin C) (eg, hereditary pancreatitis), full gene sequence PKLR (pyruvate kinase, liver and RBC) (eg, pyruvate kinase deficiency), full gene sequence

81406	Molecular pathology procedure, Level 7 (eg, analysis of 11-25 exons by DNA sequence analysis, mutation scanning or duplication/deletion variants of 26-50 exons, cytogenomic array analysis for neoplasia) ANOS1 (anosmin-1) (eg, Kallmann syndrome 1), full gene sequence HMBS (hydroxymethylbilane synthase) (eg, acute intermittent porphyria), full gene sequence PPOX (protoporphyrinogen oxidase) (eg, variegate porphyria), full gene sequence
81407	Molecular pathology procedure, Level 8 (eg, analysis of 26-50 exons by DNA sequence analysis, mutation scanning or duplication/deletion variants of >50 exons, sequence analysis of multiple genes on one platform)
81408	Molecular pathology procedure, Level 9 (eg, analysis of >50 exons in a single gene by DNA sequence analysis)
84443	Thyroid stimulating hormone (TSH)
85307	Activated Protein C (APC) resistance assay
85335	Factor inhibitor test
85337	Thrombomodulin
85705	Thromboplastin inhibition, tissue
86146	Beta 2 Glycoprotein I antibody, each [IgG or IgM]
86147	Cardiolipin (phospholipid) antibody, each Ig class
86800	Thyroglobulin antibody
88230	Tissue culture for non-neoplastic disorders; lymphocyte
88233	Tissue culture for non-neoplastic disorders; skin or other solid tissue biopsy
88235	Tissue culture for non-neoplastic disorders; amniotic fluid or chorionic villus cells
88237	Tissue culture for neoplastic disorders; bone marrow, blood cells
88239	Tissue culture for neoplastic disorders; solid tumor
88245	Chromosome analysis for breakage syndromes; baseline Sister Chromatid Exchange (SCE), 20-25 cells
88248	Chromosome analysis for breakage syndromes; baseline breakage, score 50-100 cells, count 20 cells, 2 karyotypes (eg, for ataxia telangiectasia, Fanconi anemia, fragile X)
88249	Chromosome analysis for breakage syndromes; score 100 cells, clastogen stress (eg, diepoxybutane, mitomycin C, ionizing radiation, UV radiation)
88261	Chromosome analysis; count 5 cells, 1 karyotype, with banding
88262	Chromosome analysis; count 15-20 cells, 2 karyotypes, with banding
88263	Chromosome analysis; count 45 cells for mosaicism, 2 karyotypes, with banding
88264	Chromosome analysis; analyze 20-25 cells
88267	Chromosome analysis, amniotic fluid or chorionic villus, count 15 cells, 1 karyotype, with banding
88269	Chromosome analysis, in situ for amniotic fluid cells, count cells from 6-12 colonies, 1 karyotype, with banding
88271	Molecular cytogenetics; DNA probe, each (eg, FISH)
88272	Molecular cytogenetics; chromosomal in situ hybridization, analyze 3-5 cells (eg, for derivatives and markers)
88273	Molecular cytogenetics; chromosomal in situ hybridization, analyze 10-30 cells (eg, for microdeletions)
88274	Molecular cytogenetics; interphase in situ hybridization, analyze 25-99 cells
88275	Molecular cytogenetics; interphase in situ hybridization, analyze 100-300 cells
88280	Chromosome analysis; additional karyotypes, each study
88283	Chromosome analysis; additional specialized banding technique (eg, NOR, C-banding)
88285	Chromosome analysis; additional cells counted, each study

88289	Chromosome analysis; additional high resolution study
88291	Cytogenetics and molecular cytogenetics, interpretation and report [not covered for preimplantation genetic screening]
89325	Sperm antibodies
J1644	Injection, Heparin sodium, per 1000 units

Applicable ICD-10 Diagnosis Codes

N96	Recurrent pregnancy loss
O03.9	Complete or unspecified spontaneous abortion without complication
O09.291	Supervision of pregnancy with other poor reproductive or obstetric history, first trimester
O09.292	Supervision of pregnancy with other poor reproductive or obstetric history, second trimester
O09.293	Supervision of pregnancy with other poor reproductive or obstetric history, third trimester
O09.299	Supervision of pregnancy with other poor reproductive or obstetric history, unspecified trimester
O26.20	Pregnancy care for patient with recurrent pregnancy loss, unspecified trimester
Z31.441	Encounter for testing of male partner of patient with recurrent pregnancy loss

References

- American Congress of Obstetricians and Gynecologists (ACOG). ACOG Committee Opinion No. 430: Preimplantation genetic screening for Aneuploidy. *Obstet Gynecol.* 2009 Mar;113(3):766-7.
- American Congress of Obstetricians and Gynecologists (ACOG). Antiphospholipid syndrome. *ACOG Practice Bulletin No. 118.* Washington, DC: ACOG; January 2011.
- American Congress of Obstetricians and Gynecologists (ACOG). Cervical Insufficiency. *Practice Bulletin No. 48.* American College of Obstetricians and Gynecologists. August 2003, reaffirmed 2008.
- American Congress of Obstetricians and Gynecologists (ACOG). Inherited thrombophilias in pregnancy. *Practice Bulletin No. 124* American College of Obstetricians and Gynecologists. *Obstet Gynecol* 2011;118:730-40.
- American Congress of Obstetricians and Gynecologists (ACOG). Management of recurrent early pregnancy loss. *ACOG practice bulletin no. 24.* Washington, DC: American College of Obstetricians and Gynecologists (ACOG); 2001 Feb 12.
- American Congress of Obstetricians and Gynecologists (ACOG)/The Society for Maternal-Fetal Medicine. ACOG Committee Opinion 581: The use of chromosomal microarray analysis in prenatal diagnosis. December 2013.
- American Society of Reproductive Medicine (ASRM). Practice Committee Report. Definitions of infertility and recurrent pregnancy loss. 2020 [http://www.fertstert.org/article/S0015-0282\(12\)02242-X/pdf](http://www.fertstert.org/article/S0015-0282(12)02242-X/pdf). Accessed March 17, 2022.
- American Society of Reproductive Medicine (ASRM). Practice Committee. Intravenous immunoglobulin (IVIG) and recurrent spontaneous pregnancy loss. 2006. [http://www.fertstert.org/article/S0015-0282\(06\)03297-3/fulltext](http://www.fertstert.org/article/S0015-0282(06)03297-3/fulltext). Accessed March 17, 2022.
- American Society of Reproductive Medicine. Evaluation and treatment of recurrent pregnancy loss: a committee opinion. 2012. [http://www.fertstert.org/article/S0015-0282\(12\)00701-7/fulltext](http://www.fertstert.org/article/S0015-0282(12)00701-7/fulltext). Accessed March 17, 2022.
- Martini AE, Jasulaitis S, Fogg LF, Uhler ML, Hirshfeld-Cytron JE. Evaluating the Utility of Intralipid Infusion to Improve Live Birth Rates in Patients with Recurrent Pregnancy Loss or Recurrent Implantation Failure. *J Hum Reprod Sci.* 2018;11(3):261–268. doi:10.4103/jhrs.JHRS_28_18.
- Recurrent Spontaneous Miscarriage: a Comparison of International Guidelines. Vomstein K, Aulitzky A, Strobel L, Bohlmann M, Feil K, Rudnik-Schöneborn S, Zschocke J, Toth B. *Geburtshilfe Frauenheilkd.* 2021 Jul;81(7):769-779. Specialty-matched clinical peer review.