Maternal Cell-Free Fetal DNA Testing
Medical Necessity Guideline

Medical Necessity Guideline (MNG) Title: Maternal Cell-Free Fetal DNA Testing		
MNG #: 110	**☐ CCA Senior Care Options (HMO D-SNP) (MA)** **☒CCA One Care (Medicare-Medicaid) (MA)**	**Prior Authorization Needed?** **☒ Yes (always required)** **☐ Yes (only in certain situations. See this MNG for details)** **☐ No**
Benefit Type: **☐ Medicare** **☒ Medicaid**	**Original Approval Date:** 9/1/2022	**Effective Date:** 12/24/2022; 11/21/24; 1/1/2025
Last Revised Date: 10/12/2023; 10/10/2024; 11/21/24; 1/1/2025	**Next Annual Review Date:** 9/1/2023; 10/12/2024; 10/10/2025	**Retire Date:**

OVERVIEW:

According to the American College of Obstetricians and Gynecologists (ACOG) and the Society for Maternal Fetal Medicine (SMFM), prenatal genetic screening (serum screening with or without nuchal translucency ultrasound or maternal cell-free DNA) should be offered to all pregnant women regardless of maternal age and the risk of chromosomal abnormality. Screening cell-free DNA (cfDNA) is one of the most sensitive and specific screening tests for common fetal aneuploidies including trisomy 21 (Down syndrome), trisomy 18 (Edwards syndrome), and trisomy 13 (Patau syndrome). Pre-test and post-test genetic counseling by a geneticist or provider with the appropriate clinical expertise is strongly recommended.

DEFINITIONS:

Aneuploidy: The condition of having one or more extra or missing chromosomes leading to an unbalanced chromosome complement, or any chromosome number that is not an exact multiple of the haploid number (23).

Cell-free DNA (cfDNA): In the context of prenatal screening, circulating cell-free DNA is derived from both the mother and fetal-placental unit. The primary source of fetal cfDNA is thought to be from apoptosis of placental cells (syncytiotrophoblast) and the primary source of maternal cfDNA is from maternal hematopoietic cells. Fragments of fetal DNA that cross the placenta and enter the maternal blood can be measured using different DNA testing techniques in the first trimester.

Maternal cfDNA Testing: Screening test that analyzes small fragments of fetal blood (called cell-free DNA) that are circulating in a pregnant person's blood by using different DNA testing techniques (e.g., quantitative polymerase chain reaction, mass spectrometry, digital PCR, massively parallel DNA sequencing, or next-generation sequencing). It is a noninvasive, highly sensitive and specific test used to determine the risk that the fetus has certain genetic abnormalities. This is also known as noninvasive prenatal screening/testing or cell-free DNA testing.

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Microdeletion: A genomic disorder that results from the copy number loss (deletion) of chromosomal/deoxyribonucleic acid (DNA) material.

Quadruple Screen - A blood test during pregnancy that tells you if the fetus is at increased risk for having certain genetic disorders by testing four substances in the blood [i.e., AFP (alpha-fetoprotein), HCG (human chorionic gonadotropin), Estriol (a form of estrogen), and Inhibin-A].

Trisomy: A type of aneuploidy that is characterized by the presence of a single extra chromosome. By yielding three chromosomes (triplicate) of a particular type instead of a pair, trisomy may be indicative of Down syndrome (trisomy 21), Edwards syndrome (trisomy 18), or Patau syndrome (trisomy 13).

DECISION GUIDELINES:

Clinical Coverage Criteria:

CCA may cover maternal cfDNA testing for trisomy 21, 18, and 13 when either of the following criteria are met:

1. Primary screening test for a CCA Member with a singleton or twin pregnancy; or
2. Secondary screening test for a CCA Member with a singleton or twin pregnancy with a positive screening test for an aneuploidy from a first trimester, sequential or integrated screen, or a positive quadruple screen.

LIMITATIONS/EXCLUSIONS:

CCA does not consider maternal cfDNA testing to be medically necessary in any of the following circumstances (including but not limited to):

a. Maternal cfDNA testing performed at laboratories that do not report both positive predictive value (PPV - the risk that a pregnancy will be affected by a chromosome anomaly if the test result is positive) and residual risk (the remaining chance that a patient may have an affected pregnancy despite a negative test) results as numerical risk scores for each trisomy, as recommended by ACOG, SMFM, and the American College of Medical Genetics (ACMG); or
b. Routine cell-free DNA screening for microdeletions; or
c. Applications of maternal cfDNA testing for reasons other than screening for fetal trisomy or other chromosomal disorders not listed in this MNG; or
d. Maternal cfDNA testing for the purpose of determining the sex or gender of the fetus including for the diagnosis of sex-linked genetic disorders.

AUTHORIZATION:

The following list(s) of codes is provided for reference purposes only and may not be all inclusive. Listing a code in this guideline does not signify that the service described by the code is a covered or non-covered health service. Benefit coverage for health services is determined by the member specific benefit plan document and applicable laws that may require coverage for a specific service. The inclusion of a code does not imply any right to reimbursement or guarantee claim payment. This Medical Necessity Guideline is subject to all applicable Plan Policies and Guidelines, including

requirements for prior authorization and other requirements in Provider's agreement with the Plan (including complying with Plan's Provider Manual specifications).

CPT Code	Description	Coverage		
		One Care	SCO	Medicare Advantage
81507	Fetal aneuploidy (trisomy 21, 18, and 13) DNA sequence analysis of selected regions using maternal plasma, algorithm reported as a risk score for each trisomy	✓		

Disclaimer:
Commonwealth Care Alliance (CCA) follows applicable Medicare and Medicaid regulations and uses evidence based InterQual© criteria, when available, to review prior authorization requests for medical necessity. This Medical Necessity Guideline (MNG) applies to all CCA Products unless a more expansive and applicable CMS National Coverage Determinations (NCDs), Local Coverage Determinations (LCDs), or state-specific medical necessity guideline exists. Medical Necessity Guidelines are published to provide a better understanding of the basis upon which coverage decisions are made. CCA makes coverage decisions on a case-by-case basis by considering the individual member's health care needs. If at any time an applicable CMS LCD or NCD or state-specific MNG is more expansive than the criteria set forth herein, the NCD, LCD, or state-specific MNG criteria shall supersede these criteria.

Benefit coverage for health services is determined by the member specific benefit plan document and applicable laws that may require coverage for a specific service. This Medical Necessity Guideline is subject to all applicable Plan Policies and Guidelines, including requirements for prior authorization and other requirements in Provider's agreement with the Plan (including complying with Plan's Provider Manual specifications).

This Medical Necessity Guideline is not a rigid rule. As with all CCA's criteria, the fact that a member does not meet these criteria does not, in and of itself, indicate that no coverage can be issued for these services. Providers are advised, however, that if they request services for any member who they know does not meet our criteria, the request should be accompanied by clear and convincing documentation of medical necessity. The preferred type of documentation is the letter of medical necessity, indicating that a request should be covered either because there is supporting science indicating medical necessity [(supporting literature (full text preferred) should be attached to the request)], or describing the member's unique clinical circumstances, and describing why this service or supply will be more effective and/or less costly than another service which would otherwise be covered. Note that both supporting scientific evidence and a description of the member's unique clinical circumstances will generally be required.

REGULATORY NOTES/REFERENCES:
This MNG references the specific regulations, coverage, limitations, service conditions, and/or prior authorization requirements in the following:

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1. Medicare Claims Processing Manual, Publication 100-04, Chapter 16, Section 70
2. National Correct Coding Initiative Policy Manual for Medicare Services, Chapter X Pathology/Laboratory Services, CPT Codes 80000-89999, Section F
3. Center for Medicare & Medicaid Services. (2022). Local Coverage Article (A56199): Billing and Coding – Molecular Pathology Procedures. Accessed 8/19/2024. https://www.cms.gov/medicare-coverage-database/view/article.aspx?articleid=56199
4. National Government Services. Molecular Pathology Procedures Reminder. Posted 3/29/2022. Accessed 8/19/2024. https://www.ngsmedicare.com/web/ngs/news-article-details?lob=93617&state=97227&rgion=93623&selectedArticleId=4163073
4. MassHealth, Guidelines for Medical Necessity Determination for Maternal Cell-Free Fetal DNA Testing for Aneuploidy https://www.mass.gov/guides/masshealth-guidelines-for-medical-necessity-determination-for-maternal-cell-free-dna-testing
5. MassHealth, 130 CMR 401.000: Independent Laboratory Services, Subchapter 4
6. MassHealth, 101 CMR 320.000, Rates for Clinical Laboratory Services
7. U.S. Food and Drug Administration. (2022). Genetic non-invasive prenatal screening tests may have false results: FDA safety communication. Retrieved from https://www.fda.gov/medical-devices/safety-communications/genetic-non-invasive-prenatal-screening-tests-may-have-false-results-fda-safety-communication#:~:text=Date%20Issued%3A%20April%2019%2C%202022&text=The%20accuracy%20and%20performance%20of,does%20not%20actually%20have%20one

RELATED REFERENCES:

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3. Lackey AE, Muzio MR. National Library of Medicine, National Center for Biotechnology Information. StatPearls. Last Update: August 8, 2023. Accessed 8/20/2024. https://www.ncbi.nlm.nih.gov/books/NBK549798/
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   https://assets.noviams.com/novi-file-uploads/smfm/Publications_and_Guidelines/Choosing_Wisely_Eighteen_Things_Physicians_and_Patients_Should_Question.pdf
5. American College of Medical Genetics and Genomics. (2022). ACMG systematic evidence review: The application of noninvasive prenatal screening using cell-free DNA in general-risk pregnancies. Genetics in Medicine (2022), 24: 1379-1391. https://www.gimjournal.org/article/S1098-3600(22)00714-6/fulltext

6. American College of Obstetricians and Gynecologists. (2022). Current ACOG guidance: NIPT summary of recommendations. Accessed 8/19/2024. Retrieved from https://www.acog.org/advocacy/policy-priorities/non-invasive-prenatal-testing/current-acog-guidance
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8. National Cancer Institute. (2022). NCI dictionary of Genetic Terms: Aneuploidy. Retrieved from https://www.cancer.gov/publications/dictionaries/genetics-dictionary/def/aneuploidy
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REVISION LOG:

REVISION DATE	DESCRIPTION
1/1/2025	CCA products update
12/17/2024	Utilization Management Committee Approval
12/12/2024	For effective date 11/21/24, CPT 81420 no longer requires prior authorization.
10/15/2024	Utilization Management Committee Approval
10/10/2024	Removed applicability to SCO; Removed fetal chromosomal microdeletions from clinical coverage language, added Limitation/Exclusion for routine cell-free DNA screening for microdeletions, and removed correlating CPT code 81422 from coding grid; Expounded upon laboratory reporting criteria in Limitations section; Added definition and references, and updated template language/formatting.
10.12.2023	No changes

APPROVALS:

David Mello, MD, MD — **CCA Senior Clinical Lead [Print]**

Senior Medical Director, Utilization Review and Medical Policy — **Title [Print]**

Signature

1/9/2025 — **Date**

Nazlim Hagmann, MD — Chief Medical Officer

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CCA CMO or Designee [Print]	Title [Print]
Nazlim Hagmann	1/9/2025
Signature	**Date**