To all beneficiaries enrolled in a Prepaid Health Plan (PHP): for questions about benefits and services available on or after implementation, please contact your PHP.

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Related Clinical Coverage Policies
Refer to https://medicaid.ncdhhs.gov/ for the related coverage policies listed below:
11A-5 Allogeneic Hematopoietic Stem Cell Transplantation for Genetic Diseases and Acquired Anemias

1.0 Description of the Procedure, Product, or Service

Congenital athymia is a rare immune disorder in which a child is born without a thymus – an organ that plays a critical role in helping the body learn to fight infections. Children impacted by this disease typically die within the first two years of life and may have repeated, often life-threatening infections due to the lack of adequate working T cells.

This service addresses thymus tissue implantation (also known as culture thymus tissue [CTT] implantation) using allogeneic processed thymus tissue (allogeneic processed thymus tissue-agdc [RETHYMIC®], Enzyvant Therapeutics, Inc. Cambridge, MA) a regenerative therapy used for immune reconstitution in children with congenital athymia.

Note: RETHYMIC is composed of human allogeneic thymus tissue that is processed and cultured, and then implanted into the beneficiary to help reconstitute immunity. Dosing is patient customized, determined by the surface area of the RETHYMIC slices and the body surface area of the beneficiary.

1.1 Definitions

1.1.1 Allogeneic

Allogeneic refers to the transplantation or transfer of cells, tissues, or organs between individuals of the same species who are genetically different. This process is also known as allograft or allogenic transplantation.

1.1.2 Flow Cytometry

Flow cytometry is a laboratory technique that quantifies the number of cells, live cell percentage, and specific cell characteristics, such as size and shape, in blood, bone marrow, or other tissues. Additionally, it detects the presence of tumor markers, such as antigens, on cell surfaces. During the process, cells are stained with a photosensitive dye, suspended in a fluid, and analyzed individually as they pass through a light beam. The measurements are based on how the stained cells interact with the beam of light. Flow cytometry is a valuable tool for both basic research and the diagnosis and management of various diseases, including cancer.

1.1.3 Hematopoietic Stem Cell Transplant

Hematopoietic stem cell transplant is a medical process in which a beneficiary receives healthy stem cells to replace their own stem cells that have been destroyed by high doses of chemotherapy or radiation treatment. Healthy stem cells may originate from the beneficiary's blood or bone marrow, or they may come from a related or unrelated donor. Depending on the source of the stem cells, the transplant may be categorized as autologous, allogeneic, syngeneic, or cord blood.

1.1.4 Human Leukocyte Antigen (HLA)

Human leukocyte antigen (HLA) is a type of molecule that is present on the surface of most cells in the body. These molecules play a vital role in the immune response of the body against foreign substances. HLAs are responsible for a person's tissue type, which is unique to each individual. Before a stem cell or organ transplant, HLA tests are conducted to determine if there is a match between the donor and the recipient's tissues. Human lymphocyte antigen is another term used to refer to HLAs.

1.1.5 HLA Matching

HLA matching is a procedure that involves analyzing blood or tissue samples to identify human leukocyte antigens (HLAs). HLAs are molecules that are present on the surface of most cells in the body, and they determine a person's unique tissue type. These molecules are crucial for the immune system's response to foreign substances. Before a stem cell or organ transplant, HLA matching is performed to determine if there is compatibility between the donor and the recipient’s tissues. Human lymphocyte antigen matching is another term used to refer to HLA matching.

1.1.6 Immunoprophylaxis

The process of preventing disease through the creation of active or passive immunity.

1.1.7 Phenotype

Phenotype refers to the observable physical, biochemical, and behavioral characteristics that are present in an individual. Some examples of a person's phenotype include their height, eye color, hair color, blood type, behavior, and the presence of certain diseases. Phenotypic traits are determined by a combination of genetic factors and environmental influences, such as diet, exercise, and smoking.

1.1.8 Thymus

The thymus is an organ belonging to the lymphatic system where T lymphocytes grow and multiply. This process is crucial in helping the body develop the ability to fight off infections. Located in the chest behind the breastbone, the thymus plays a vital role in immune function.

1.1.9 T-Cell

T cells, also known as T lymphocytes or thymocytes, are a type of white blood cell that originate from stem cells in the bone marrow and are essential components of the immune system. T cells play a vital role in protecting the body against infections, and they may also assist in fighting cancer.

2.0 Eligibility Requirements

2.1 Provisions

2.1.1 General

(***The term "General" found throughout this policy applies to all Medicaid***)

a. An eligible beneficiary shall be enrolled in the NC Medicaid Program (Medicaid is NC Medicaid program, unless context clearly indicates otherwise).
b. Provider(s) shall verify each Medicaid beneficiary's eligibility each time a service is rendered.
c. The Medicaid beneficiary may have service restrictions due to their eligibility category that would make them ineligible for this service.

2.1.2 Specific

(***The term "Specific" found throughout this policy only applies to this policy***)

a. Medicaid
None Apply.

2.2 Special Provisions

2.2.1 EPSDT Special Provision: Exception to Policy Limitations for a Medicaid Beneficiary under 21 Years of Age

a. **42 U.S.C. § 1396d(r) [1905(r) of the Social Security Act]**

Early and Periodic Screening, Diagnostic, and Treatment (EPSDT) is a federal Medicaid requirement that requires the state Medicaid agency to cover services, products, or procedures for Medicaid beneficiary under 21 years of age **if** the service is **medically necessary health care** to correct or ameliorate a defect, physical or mental illness, or a condition [health problem] identified through a screening examination (includes any evaluation by a physician or other licensed practitioner).

This means EPSDT covers most of the medical or remedial care a child needs to improve or maintain his or her health in the best condition possible, compensate for a health problem, prevent it from worsening, or prevent the development of additional health problems.

Medically necessary services will be provided in the most economic mode, as long as the treatment made available is similarly efficacious to the service requested by the beneficiary's physician, therapist, or other licensed practitioner; the determination process does not delay the delivery of the needed service; and the determination does not limit the beneficiary's right to a free choice of providers.

EPSDT does not require the state Medicaid agency to provide any service, product or procedure:

1. that is unsafe, ineffective, or experimental or investigational.
2. that is not medical in nature or not generally recognized as an accepted method of medical practice or treatment.

Service limitations on scope, amount, duration, frequency, location of service, and other specific criteria described in clinical coverage policies may be exceeded or may not apply as long as the provider's documentation shows that the requested service is medically necessary "to correct or ameliorate a defect, physical or mental illness, or a condition" [health problem]; that is, provider documentation shows how the service, product, or procedure meets all EPSDT criteria, including to correct or improve or maintain the beneficiary's health in the best condition possible, compensate for a health problem, prevent it from worsening, or prevent the development of additional health problems.

b. **EPSDT and Prior Approval Requirements**

1. If the service, product, or procedure requires prior approval, the fact that the beneficiary is under 21 years of age does **NOT** eliminate the requirement for prior approval.
2. **IMPORTANT ADDITIONAL INFORMATION** about EPSDT and prior approval is found in the *NCTracks Provider Claims and Billing Assistance Guide,* and on the EPSDT provider page. The Web addresses are specified below.

   NCTracks Provider Claims and Billing Assistance Guide: https://www.nctracks.nc.gov/content/public/providers/provider-manuals.html

   EPSDT provider page: https://medicaid.ncdhhs.gov/

3.0 When the Procedure, Product, or Service Is Covered

Note: Refer to Subsection 2.2.1 regarding EPSDT Exception to Policy Limitations for a Medicaid Beneficiary under 21 Years of Age.

3.1 General Criteria Covered

Medicaid shall cover the procedure, product, or service related to this policy when medically necessary, and:

a. the procedure, product, or service is individualized, specific, and consistent with symptoms or confirmed diagnosis of the illness or injury under treatment, and not in excess of the beneficiary's needs;
b. the procedure, product, or service can be safely furnished, and no equally effective and more conservative or less costly treatment is available statewide; and
c. the procedure, product, or service is furnished in a manner not primarily intended for the convenience of the beneficiary, the beneficiary's caretaker, or the provider.

3.2 Specific Criteria Covered

3.2.1 Specific criteria covered by Medicaid

Medicaid shall cover a single administration of allogeneic processed thymus tissue for immune reconstitution in a beneficiary who is 17 years of age and younger with congenital athymia when **ALL** of the following criteria are met:

a. Congenital athymia is confirmed via a circulating T-cell count on flow cytometry demonstrating fewer than 50 naïve T cells/mm^3 (CD45RA+,

CD62L+) in the peripheral blood **or** less than 5 percent of total T cells being naïve in phenotype;
b. Documentation that infection control measures, consisting of immunoprophylaxis and withholding of immunizations, can reasonably be maintained until the development of thymic function is established;
c. Absence of comorbidities, in the opinion of the treating clinician, that are reasonably likely to result in severe complications, including death from administration of allogeneic processed thymus tissue (such as pre-existing renal impairment, or cytomegalovirus or Epstein-Barr virus infection); and
d. HLA matching is required, performed and documented in a beneficiary who has received a prior hematopoietic cell transplantation (HCT) or a solid organ transplant.

3.2.2 Medicaid Additional Criteria Covered

None Apply.

4.0 When the Procedure, Product, or Service Is Not Covered

Note: Refer to Subsection 2.2.1 regarding EPSDT Exception to Policy Limitations for a Medicaid Beneficiary under 21 Years of Age.

4.1 General Criteria Not Covered

Medicaid shall not cover the procedure, product, or service related to this policy when:
a. the beneficiary does not meet the eligibility requirements listed in **Section 2.0;**
b. the beneficiary does not meet the criteria listed in **Section 3.0;**
c. the procedure, product, or service duplicates another provider's procedure, product, or service; or
d. the procedure, product, or service is experimental, investigational, or part of a clinical trial.

4.2 Specific Criteria Not Covered

4.2.1 Specific Criteria Not Covered by Medicaid

Medicaid shall not cover the use of allogeneic processed thymus tissue for administration of all other uses, including:
a. Immune reconstitution in a beneficiary with severe combined immunodeficiency (SCID); and
b. Repeat administration in a beneficiary who has previously received allogeneic processed thymus tissue.

4.2.2 Medicaid Additional Criteria Not Covered

None Apply.

5.0 Requirements for and Limitations on Coverage

Note: Refer to Subsection 2.2.1 regarding EPSDT Exception to Policy Limitations for a Medicaid Beneficiary under 21 Years of Age.

5.1 Prior Approval

Medicaid shall require prior approval for Thymus Tissue Implantation. The provider shall obtain prior approval before rendering Thymus Tissue Implantation. The provider shall use CPT code 60699 in NCTracks when entering PA for Thymus Tissue Implantation.

Continued therapy is not authorized as it is to be dosed one time only. Thymus Tissue Implantation is once per lifetime.

5.2 Prior Approval Requirements

5.2.1 General

The provider(s) shall submit to the Department of Health and Human Services (DHHS) Utilization Review Contractor the following:

a. The prior approval request; and
b. All heath records and any other records that support the beneficiary has met the specific criteria in **Subsection 3.2** of this policy.

5.2.2 Specific

The provider(s) shall submit the following to the DHHS Utilization Review Contractor:

a. Letter of medical necessity **signed by the attending physician**, which documents the beneficiary's medical history, absence of significant comorbidities, and indications for treatment with Thymus Tissue Implantation;
b. Lab results confirming congenital athymia as described in **Subsection 3.2.1** of this policy;
c. Documentation that infection control measures, consisting of immunoprophylaxis and withholding of immunizations, can reasonably be maintained until the development of thymic function is established; and
d. Documentation that HLA matching has been performed in a beneficiary who has received a prior hematopoietic cell transplantation (HCT) or a solid organ transplant.

5.3 Additional Limitations or Requirements

None Apply.

6.0 Provider(s) Eligible to Bill for the Procedure, Product, or Service

To be eligible to bill for the procedure, product, or service related to this policy, the provider(s) shall:

a. meet Medicaid qualifications for participation;
b. have a current and signed Department of Health and Human Services (DHHS) Provider Administrative Participation Agreement; and
c. bill only for procedures, products, and services that are within the scope of their clinical practice, as defined by the appropriate licensing entity.

6.1 Provider Qualifications and Occupational Licensing Entity Regulations

None Apply.

6.2 Provider Certifications

None Apply.

7.0 Additional Requirements

Note: Refer to Subsection 2.2.1 regarding EPSDT Exception to Policy Limitations for a Medicaid Beneficiary under 21 Years of Age.

7.1 Compliance

Provider(s) shall comply with the following in effect at the time the service is rendered:

a. All applicable agreements, federal, state and local laws and regulations including the Health Insurance Portability and Accountability Act (HIPAA) and record retention requirements;
b. All NC Medicaid's clinical (medical) coverage policies, guidelines, policies, provider manuals, implementation updates, and bulletins published by the Centers for Medicare and Medicaid Services (CMS), DHHS, DHHS division(s) or fiscal contractor(s); and
c. All U.S Food and Drug Administration (FDA) guidelines regarding indications and usage, dosage and administration, dosage forms and strengths, contraindications, and warnings and precautions.

8.0 Policy Implementation and History

Original Effective Date: June 1, 2023

History:

Date	Section or Subsection Amended	Change
06/01/2023	All Sections and Attachment(s)	New policy created for Thymus Tissue Implantation.
08/15/2023	Attachment A, Section H	Added reimbursement information for inpatient claims.

Attachment A: Claims-Related Information

Provider(s) shall comply with the *NCTracks Provider Claims and Billing Assistance Guide*, Medicaid bulletins, fee schedules, NC Medicaid's clinical coverage policies and any other relevant documents for specific coverage and reimbursement for Medicaid:

A. Claim Type

Institutional (UB-04/837I transaction)

Unless directed otherwise, Institutional Claims must be billed according to the National Uniform Billing Guidelines. All claims must comply with National Coding Guidelines.

B. International Classification of Diseases and Related Health Problems, Tenth Revisions, Clinical Modification (ICD-10-CM) and Procedural Coding System (PCS)

Provider(s) shall report the ICD-10-CM and Procedural Coding System (PCS) to the highest level of specificity that supports medical necessity. Provider(s) shall use the current ICD-10 edition and any subsequent editions in effect at the time of service. Provider(s) shall refer to the applicable edition for code description, as it is no longer documented in the policy.

ICD-10-PCS Code(s)
XW020D8 (INTRODUCTION OF ENGINEERED ALLOGENEIC THYMUS TISSUE INTO MUSCLE, OPEN APPROACH, NEW TECHNOLOGY GROUP 8)

C. Code(s)

Provider(s) shall report the most specific billing code that accurately and completely describes the procedure, product or service provided. Provider(s) shall use the Current Procedural Terminology (CPT), Health Care Procedure Coding System (HCPCS), and UB-04 Data Specifications Manual (for a complete listing of valid revenue codes) and any subsequent editions in effect at the time of service. Provider(s) shall refer to the applicable edition for the code description, as it is no longer documented in the policy.

If no such specific CPT or HCPCS code exists, then the provider(s) shall report the procedure, product or service using the appropriate unlisted procedure or service code.

Unlisted Procedure or Service
CPT: The provider(s) shall refer to and comply with the Instructions for Use of the CPT Codebook, Unlisted Procedure or Service, and Special Report as documented in the current CPT in effect at the time of service.

HCPCS: The provider(s) shall refer to and comply with the Instructions for Use of HCPCS National Level II codes, Unlisted Procedure or Service and Special Report as documented in the current HCPCS edition in effect at the time of service.

D. Modifiers

Provider(s) shall follow applicable modifier guidelines.

E. Billing Units

Provider(s) shall report the appropriate code(s) used which determines the billing unit(s).

F. Place of Service

Inpatient Hospital

G. Co-payments

For Medicaid refer to Medicaid State Plan:
https://medicaid.ncdhhs.gov/meetings-notices/medicaid-state-plan-public-notices

H. Reimbursement

Provider(s) shall bill their usual and customary charges.
For a schedule of rates, refer to: https://medicaid.ncdhhs.gov/

Inpatient Hospital Services: Institutional Claim (UB-04 form/837I transaction)

1. In accordance with the State Plan, the inpatient stay, surgical procedure, and other appropriate inpatient services for Thymus Tissue Implantation will be reimbursed using the existing diagnosis-related group (DRG) payment methodology and will be based on the primary diagnosis code and grouped to the appropriate DRG. The PA number should be included on the claim.
2. The product itself (Rethymic) should not be submitted on the inpatient claim, but submitted via invoice with the required PA number and will be reimbursed at cost (no markup) just as we adjudicate other manually priced services.