

05-86000-24

Original Effective Date: 03/15/05

Reviewed: 04/28/22

Revised: 05/15/22

Subject: Laboratory Tests Post Transplant and for Heart Failure

THIS MEDICAL COVERAGE GUIDELINE IS NOT AN AUTHORIZATION, CERTIFICATION, EXPLANATION OF BENEFITS, OR A GUARANTEE OF PAYMENT, NOR DOES IT SUBSTITUTE FOR OR CONSTITUTE MEDICAL ADVICE. ALL MEDICAL DECISIONS ARE SOLELY THE RESPONSIBILITY OF THE PATIENT AND PHYSICIAN. BENEFITS ARE DETERMINED BY THE GROUP CONTRACT, MEMBER BENEFIT BOOKLET, AND/OR INDIVIDUAL SUBSCRIBER CERTIFICATE IN EFFECT AT THE TIME SERVICES WERE RENDERED. THIS MEDICAL COVERAGE GUIDELINE APPLIES TO ALL LINES OF BUSINESS UNLESS OTHERWISE NOTED IN THE PROGRAM EXCEPTIONS SECTION.

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DESCRIPTION:

Clinical assessment and noninvasive imaging of chronic heart failure can be limited in accurately diagnosing patients with heart failure because symptoms and signs can poorly correlate with objective methods of assessing cardiac dysfunction. For management of heart failure, clinical signs and symptoms (eg, shortness of breath) are relatively crude markers of decompensation and occur late in the course of an exacerbation. A number of objective disease biomarkers have been investigated to diagnose and assess heart failure patient prognosis, manage patients diagnosed with chronic heart failure and to guide therapy.

In transplant recipients, despite the progress in immunosuppressant therapy, risk of rejection remains. Diagnosis of allograft rejection continues to rely on clinical monitoring and histologic confirmation by tissue biopsy. However, due to limitations of tissue biopsy, including a high degree of interobserver variability in the grading of results and its potential complications, less invasive alternatives have been investigated. Several laboratory-tested biomarkers of transplant rejection have been evaluated and are commercially available for use.

POSITION STATEMENT:

AlloMap[®] molecular expression testing **meets the definition of medical necessity** as a non-invasive method of determining the risk of rejection in heart transplant recipients (15 years or older) who are between 6 months and 5 years post-transplant.

AlloMap molecular expression testing is considered **experimental or investigational** for all other indications. The evidence is insufficient to determine the effects of the technology on health outcomes.

The use of all other molecular expression and biomarker blood tests in the management of members after transplantation is considered **experimental or investigational**. The evidence is insufficient to determine the effects of the technology on health outcomes.

The measurement of volatile organic compounds (e.g. Heartsbreath[®] test) to assist in the detection of moderate grade 2R (formerly grade 3) heart transplant rejection is considered **experimental or investigational**. The evidence is insufficient to determine the effects of the technology on health outcomes.

The use of peripheral blood gene expression profile tests alone or in combination with peripheral blood measurement of donor-derived cell-free DNA (e.g. AlloSure[®] Kidney, AlloSure[®] Heart, AlloSure[®] Lung) in the management of members after transplantation, including but not limited to the detection of acute transplant rejection or transplant graft dysfunction is considered **experimental or investigational**. The evidence is insufficient to determine the effects of the technology on health outcomes.

The use of the Presage[®] ST2 assay is considered **experimental or investigational** for all indications including, but not limited to:

- predicting prognosis and predicting acute cellular rejection in the post cardiac transplantation period
- evaluating the prognosis of members diagnosed with chronic heart failure
- guiding management (eg, pharmacologic, device-based, exercise) of members diagnosed with chronic heart failure.

The evidence is insufficient to determine the effects of the technology on health outcomes.

The use of the myTAI_{HEART}[®] assay in the post cardiac transplantation period, including but not limited to predicting prognosis and predicting acute cellular rejection, is considered **experimental or investigational**. The evidence is insufficient to determine the effects of the technology on health outcomes.

BILLING/CODING INFORMATION:

CPT Coding:

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|-------|---|
| 81595 | Cardiology (heart transplant), mRNA, gene expression profiling by real-time quantitative PCR of 20 genes (11 content and 9 housekeeping), utilizing subfraction of peripheral blood, algorithm reported as a rejection risk score |
| 83006 | Growth stimulation expressed gene 2 (ST2, Interleukin 1 receptor like-1) (Investigational) |
| 0018M | Transplantation medicine (allograft rejection, renal), measurement of donor and third-party-induced CD154+T-cytotoxic memory cells, utilizing whole peripheral blood, algorithm reported as a rejection risk score (Investigational) |
| 0055U | Cardiology (heart transplant), cell-free DNA, PCR assay of 96 DNA target sequences (94 single nucleotide polymorphism targets and two control targets), plasma (Investigational) |

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|-------|--|
| 0087U | Cardiology (heart transplant), mRNA gene expression profiling by microarray of 1283 genes, transplant biopsy tissue, allograft rejection and injury algorithm reported as a probability score (Investigational) |
| 0088U | Transplantation medicine (kidney allograft rejection) microarray gene expression profiling of 1494 genes, utilizing transplant biopsy tissue, algorithm reported as a probability score for rejection (Investigational) |
| 0118U | Transplantation medicine, quantification of donor-derived cell-free DNA using whole genome next-generation sequencing, plasma, reported as percentage of donor-derived cell-free DNA in the total cell-free DNA (Investigational) |
| 0221U | Red cell antigen (ABO blood group) genotyping (ABO), gene analysis, next-generation sequencing, ABO (ABO, alpha 1-3-N-acetylgalactosaminyltransferase and alpha 1-3-galactosyltransferase) gene (Investigational) |
| 0320U | Nephrology (renal transplant), RNA expression by select transcriptome sequencing, using posttransplant peripheral blood, algorithm reported as a risk score for acute cellular rejection (Investigational) |

ICD-10 Diagnosis Codes That Support Medical Necessity for 81595:

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|----------------|--|
| T86.20-T86.298 | Complications of heart transplant |
| Z48.21 | Encounter for aftercare following heart transplant |
| Z94.1 | Heart transplant status |

REIMBURSEMENT INFORMATION:

Refer to section entitled [POSITION STATEMENT](#).

PROGRAM EXCEPTIONS:

Federal Employee Program (FEP): Follow FEP guidelines.

State Account Organization (SAO): Follow SAO guidelines.

Medicare Advantage Products:

The following National Coverage Determination (NCD) was reviewed on the last guideline reviewed date: Heartsbreath Test for Heart Transplant Rejection (260.10) located at cms.gov.

The following was reviewed on the last guideline reviewed date and located at palmettogba.com:

- Local Coverage Article: Billing and Coding: MoIDX: Molecular Testing for Solid Organ Allograft Rejection (A58019)
- Local Coverage Determination (LCD): MoIDX: Molecular Testing for Solid Organ Allograft Rejection (L38568).

DEFINITIONS:

None.

RELATED GUIDELINES:

None.

OTHER:

None.

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COMMITTEE APPROVAL:

This Medical Coverage Guideline (MCG) was approved by the Florida Blue Medical Policy and Coverage Committee on 04/28/22.

GUIDELINE UPDATE INFORMATION:

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| 03/15/04 | New Medical Coverage Guideline. |
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| 03/15/06 | Annual review; continue investigational status. |
| 03/15/07 | Scheduled review; no change in coverage statement; references. |
| 06/15/07 | Reformatted guideline. |
| 11/15/07 | Revision: title changed, description section updated, position statement updated, Medicare Advantage section updated, references updated. |
| 02/15/08 | Annual review: position statements maintained; description section updated; references updated. |
| 02/15/09 | Annual review: position statements maintained; description section and references updated. |
| 12/15/09 | Annual review: position statements maintained; description section and references updated. |
| 09/15/12 | Review; position statements maintained; program exceptions section and references updated. |
| 06/15/13 | Annual review; position statements maintained and references updated. |
| 06/15/14 | Annual review; position statements maintained, program exception and reference updated. |
| 06/15/15 | Annual review; position statements maintained and references updated. |
| 01/01/16 | Annual HCPCS/CPT update; code 81595 added. |
| 07/15/16 | Annual review; revise the position statement section, coding, program exception, and references. |
| 12/15/17 | Annual review; investigational position maintained; description, position statements, and references updated. |
| 12/15/18 | Annual review; Investigational position maintained; investigational statement for AlloSure test added; title, description, coding, and references updated. |
| 07/01/19 | Quarterly CPT/HCPCS update. Added codes 0087U & 0088U. |
| 01/15/20 | Review; position statements, coding, description, and references updated. |
| 12/15/20 | Review; position statements and references updated. |
| 01/01/21 | Annual CPT/HCPCS update. Code 0085T deleted. |
| 01/15/21 | Program Exception section updated. |
| 07/15/21 | Review; Position statements and references updated. |
| 10/01/21 | Quarterly CPT/HCPCS update. Code 0018M added. |
| 04/01/22 | Quarterly CPT/HCPCS update. Code 0320U added. |
| 05/15/22 | Review: Position statements and references updated. |