Clinical Policy: Nifurtimox (Lampit)

Reference Number: PA.CP.PMN.256
Effective Date: 10/2020
Last Review Date: 10/2024

Description
Nifurtimox (Lampit®) is a nitrofuran antiprotozoal.

FDA Approved Indication(s)
Lampit indicated in pediatric patients (birth to less than 18 years of age and weighing at least 2.5 kg) for the treatment of Chagas disease (American trypanosomiasis), caused by *Trypanosoma cruzi (T. cruzi)*.

Policy/Criteria
Provider must submit documentation (such as office chart notes, lab results or other clinical information) supporting that member has met all approval criteria.

It is the policy of PA Health & Wellness® that Lampit is **medically necessary** when the following criteria are met:

I. Initial Approval Criteria

A. Chagas Disease (must meet all)**:**

1. Diagnosis of Chagas disease confirmed by one of the following (a, b, or c) (*see Appendix D*):
   a. Detection of circulating *T. cruzi* trypomastigotes on microscopy;
   b. Detection of *T. cruzi* DNA by polymerase chain reaction assay;
   c. Two positive diagnostic serologic tests showing IgG antibodies to *T. cruzi* and meeting both of the following (i and ii):
      i. The two tests use different techniques (e.g., enzyme-linked immunosorbent assay [ELISA], immunofluorescent antibody test [IFA]);
      ii. The two tests use different antigens (e.g., whole-parasite lysate, recombinant antigens);
2. Prescribed by or in consultation with an infectious disease specialist;
3. Weight ≥ 2.5kg;
4. Member has not yet received 60 days of Lampit therapy for the current infection;
5. Dose (weight-based) does not exceed 300 mg per day (*see Appendix D for off-label dosing requests*).

Approval duration: 60 days total

B. Other diagnoses/indications

1. Refer to the off-label use policy if diagnosis is NOT specifically listed under section III (Diagnoses/Indications for which coverage is NOT authorized): PA.CP.PMN.53

II. Continued Therapy

A. Chagas Disease (must meet all)**:**

1. Currently receiving medication via PA Health & Wellness benefit and documentation supports positive response to therapy or the Continuity of Care policy (PA.PHARM.01) applies;
2. Member has not yet received 60 days of Lampit therapy for the current infection;
3. If request is for a dose increase, new dose (weight-based) does not exceed 300 mg per day (*see Appendix D for off-label dosing requests*).

Approval duration: 60 days total

B. Other diagnoses/indications (must meet 1 or 2)**:**

1. Currently receiving medication via PA Health & Wellness benefit and documentation supports positive response to therapy or the Continuity of Care policy (PA.PHARM.01) applies.
   Approval duration: Duration of request or 60 days (whichever is less); or
2. Refer to the off-label use policy if diagnosis is NOT specifically listed under section III (Diagnoses/Indications for which coverage is NOT authorized): PA.CP.PMN.53

III. Diagnoses/Indications for which coverage is NOT authorized:

A. Non-FDA approved indications, which are not addressed in this policy, unless there is sufficient documentation of efficacy and safety according to the off label use policies – PA.CP.PMN.53

IV. Appendices/General Information

Appendix A: Abbreviation/Acronym Key

CDC: Centers for Disease Control and Prevention
FDA: Food and Drug Administration
IgG: immunoglobulin G
T cruzi: Trypanosoma cruzi
WHO: World Health Organization

Appendix B: Therapeutic Alternatives

Not applicable

Appendix C: Contraindications/Boxed Warnings

- Contraindication(s):
  - Known hypersensitivity to nifurtimox or to any of the excipients in Lampit
  - Alcohol consumption during treatment
- Boxed warning(s): none reported

Appendix D: General Information

- Diagnostic tests:
  - Laboratories offering testing for Chagas disease include ARUP Laboratories, Mayo Clinic Laboratories, and Quest Diagnostics. IgG serology is performed in the majority of cases. After obtaining initial serologic IgG test results, providers should consult their state health department and the CDC for guidance on serologic confirmation. If two results are discordant, a third assay may be needed. Donor screening tests and Immunoglobulin M (IgM) serology tests are not considered diagnostic tests.
- Off-label dosing requests for Chagas disease:

- Dosing for populations outside FDA-approved age ranges or for longer than 60 days may be appropriate and should be reviewed on a case-by-case basis. See CDC consultation resources below for questions.

- State reporting requirements:
  - According to the CDC (https://www.cdc.gov/mmwr/volumes/67/wr/mm6726a2.htm), in 2017 Chagas disease was reportable in six states: Arizona, Arkansas, Louisiana, Mississippi, Tennessee, and Texas.
- Consultation resources:
  - Centers for Disease Control and Prevention (CDC)
    - Parasitic Diseases: https://www.cdc.gov/parasites/chagas/ - 404-718-4745, chagas@cdc.gov
      - CDC recommended guidance document: Bern C, Montgomery SP, Herwaldt BL, et al. Evaluation and treatment of Chagas disease in the United States: a systematic review. JAMA 2007; 298:2171.
    - CDC Drug Service: 404-639-3670
    - CDC Emergency Operations Center: 770-488-7100
  - World Health Organization (WHO)
    - Outside the US:
    - https://www.who.int/health-topics/chagas-disease
    -
  - American Society of Tropical Medicine and Hygiene
    - Directory of consultants: http://www.astmh.org/education-resources/clinical-consultants-directory

V. Dosage and Administration

Indication	Dosing Regimen					Maximum Dose
Chagas disease	Body Weight Range (kg)	Dose (mg)	Tablet # -- 30 mg	Tablet # -- 120 mg	Duration / Frequency	300 mg/day
	2.5 to 4.5 kg	15 mg	½ T	—	PO TID for 60 days	
	4.6 to < 9 kg	30 mg	1 T	—		
	9 to < 13 kg	45 mg	1 ½ T	—		
	13 to < 18 kg	60 mg	2 T	½ T		
	18 to < 22 kg	75 mg	2 ½ T	—		
	22 to < 27 kg	90 mg	3 T	—		
	27 to < 35 kg	120 mg	4 T	1 T		
	35 to < 41 kg	180 mg	—	1 ½ T		
	41 to < 51 kg	120 mg	—	1 T		
	51 to < 71 kg	180 mg	—	1 ½ T		
	71 to < 91 kg	240 mg	—	2 T		
	≥ 91 kg	300 mg	—	2 ½ T		

VI. Product Availability

Tablets: 30 mg, 120 mg

VII. References

1. Lampit Prescribing Information. Whippany, NJ: Bayer HealthCare Pharmaceuticals, Inc.; June 2023. Available at www.lampit.com. Accessed July 25, 2024.

Pivotal Trial

2. Prospective Study of a Pediatric Nifurtimox Formulation for Chagas' Disease (CHICO) - NCT02625974. Available at https://classic.clinicaltrials.gov/ct2/show/NCT02625974. Accessed July 25, 2024.
3. Altcheh J, Castro L, Dib JC, et al; CHICO Study Group. Prospective, historically controlled study to evaluate the efficacy and safety of a new paediatric formulation of nifurtimox in children aged 0 to 17 years with Chagas disease one year after treatment (CHICO). PLoS Negl Trop Dis. 2021 Jan 7;15(1):e0008912. doi: 10.1371/journal.pntd.0008912.
4. Altcheh J, Sierra V, Ramirez T, et al. Efficacy and Safety of Nifurtimox in Pediatric Patients with Chagas Disease: Results at 4-Year Follow-Up in a Prospective, Historically Controlled Study (CHICO SECURE). Antimicrob Agents Chemother. 2023 Apr 18;67(4):e0119322. doi: 10.1128/aac.01193-22. Epub 2023 Mar 28.
5. Rivero R, Esteva MI, Huang E, et al; CHICO and CHICO SECURE Study Groups. ELISA F29 -A therapeutic efficacy biomarker in Chagas disease: Evaluation in pediatric patients treated with nifurtimox and followed for 4 years post-treatment. PLoS Negl Trop Dis. 2023 Jun 23;17(6):e0011440. doi: 10.1371/journal.pntd.0011440.

Centers for Disease Control (CDC)

6. American Trypanosomiasis. DPDx - Laboratory identification of parasitic diseases of public health concern. Centers for Disease Control and Prevention. Available at: https://www.cdc.gov/dpdx/trypanosomiasisamerican/index.html. Last updated July 16 2021 Accessed July 25, 2024.
7. Formulary (nifurtimox): Infectious Diseases Laboratory. Centers for Disease Control and Prevention. Available at: https://www.cdc.gov/laboratory/drugservice/formulary.html#tnifurtimox. Last updated May 29, 2024. Accessed July 25, 2024.

Compendia, Guidelines, Review Articles

8. Nifurtimox Drug Monograph. Clinical Pharmacology [database online]. Tampa, FL: Elsevier, Inc.; 2024. Available at: https://www.clinicalkey.com/pharmacology/. Accessed July 25, 2024..
9. Bern C, Messenger LA, Whitman JD, Maguire JH. Chagas Disease in the United States: a Public Health Approach. American Society for Microbiology. Clinical Microbiology Reviews. January 2020; 33(1): 1-42.
10. Guidelines for the diagnosis and treatment of Chagas disease. Joint publication of Pan-American Health Organization (PAHO) and World Health Organization (WHO), 2019, Washington D.C. Available at https://iris.paho.org/bitstream/handle/10665.2/49653/9789275120439_eng.pdf. Accessed July 25, 2024..
11. Chagas Cardiomyopathy: An Update of Current Clinical Knowledge and Management: A Scientific Statement From the American Heart Association. Circulation. Volume 138, Issue 12, 18 September 2018; Pages e169-e209. https://doi.org/10.1161/CIR.0000000000000599.
12. Crespillo-Andujar C, Chamorro-Tojeiro S, Norman F, et al. Toxicity of nifurtimox as second-line treatment after benznidazole intolerance in patients with chronic Chagas disease:

when available options fail. Clinical Microbiology and Infection 24 (2018) 1344.e1e1344.e4. https://doi.org/10.1016/j.cmi.2018.06.006
13. Perez-Molina JA, Molina I. Chagas disease: Seminar. Lancet. June 30, 2017. http://dx.doi.org/10.1016/S0140-6736(17)31612-4.
14. Bern C. Chagas disease. N Engl J Med 2015; 373: 456-66. doi: 10.1056/NEJMra1410150.
15. Perez-Molina JA, Sojo-Dorado J, Norman F, et al. Nifurtimox therapy for Chagas disease does not cause hypersensitivity reactions in patients with such previous adverse reactions during benznidazole treatment. Acta Tropica 127 (2013) 101–104.
16. Bern C, Montgomery SP, Herwaldt BL, et al. Evaluation and treatment of Chagas disease in the United States: A systematic review. JAMA 2007; 298:2171.

Reviews, Revisions, and Approvals	Date
Policy created	10/2020
4Q 2021 annual review: no significant changes; references reviewed and updated.	10/2021
4Q 2022 annual review: no significant changes; references reviewed and updated.	10/2022
4Q 2023 annual review: updated indication from accelerated approval to traditional full approval; for Appendix D, updated previous WHO link to current link; references reviewed and updated.	10/2023
4Q 2024 annual review: added minimum weight per PI; references reviewed and updated.	10/2024