# Update on Clinical Trials on Chagas Disease

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### **DIAGNOSIS AND TREATMENT**





## Chagas Disease – Target Product Profile 2015

	Acceptable	Ideal	
Target population	Chronic indeterminate	Chronic indeterminate and Acute	
Geographic Distribution	All regions	All regions	
Efficacy	Non-inferior to benznidazole standard dose* in all parasitological areas	Superior to benznidazole standard dose in different phases of disease (acute and chronic) (parasitological)	
Safety	Superior to benznidazole* in the frequency of definitive treatment discontinuations due to medical indication (clinical and laboratory)**	Superior to benznidazole* in the frequency of definitive treatment discontinuations due to medical indication (clinical and laboratory)**	
Contraindications	Pregnancy	No contraindications	
Precautions	No genotoxicity**; no pro-arrythmic potential	No genotoxicity; no teratogenicity; no pro-arrythmic potential	
Interactions	No clinically significant interaction with anti- arrythmic and anticoagulant drugs	No clinically significant interaction with other drugs	
Presentation	Oral/Parenteral (short POC)*** Age-adapted	Oral Age-adapted	
Stability	3 years, climatic zone IV	5 years, climatic zone IV	
Dosing regimen	Oral - any duration Parenteral - <7 days	<30days	
Cost	Lowest possible	≤ current treatment cost	

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\* As per WHO recommendation; \*\* No genotoxicity is a condition only for NCEs; \*\*\* Need for parenteral treatment for severe disease

## **TRIAZOLES x BZN**

Phase II Clinical Trials	CHAGASAZOL Molina I et al. NEJM 2014;370:1899	STOP-CHAGAS Morillo C. et al J Am Coll Cardiol. 2017 ; 69(8)	PROOF-OF- CONCEPT of E1224	
Number of patients	78 (3 groups of 26 patients)	120 (4 groups of 30 patients)	230 (5 groups of 46 patients)	
Inclusion criteria	Age ≥ 18; two positive serologic tests; positive rt- PCR	Age 18-50; ≥ 2 positive serologic tests; positive rt- PCR; normal ECG & echo	Age 18-50; ≥ 2 positive serologic tests; positive rt- PCR; normal ECG	
Study treatments	-BZN: 150 mg BID -POS: 100 mg BID (low dose) -POS: 400 mg BID (high dose) For 60 days	-PCBpos: 10 ml BID -POS: 400 mg (10 ml) BID -BZN 200 mg + PCBpos 10 ml BID -BZN 200 mg + POS 400 mg (10 ml) BID For 60 days	-PCB (8w) -E1224 low dose (8w) -E1224 high dose (8w) -E1224 (4w) followed by PCB (4w): short dose -BZN (5mg/kg/d/60d)	
Primary end point	Consistently negative results of rt-PCR over the entirely FU period (8, 16, 24, and 40 weeks after EOT)	Consistently negative results of rt-PCR over the entirely FU period (4, 8, 12, and 16 weeks after EOT)	Consistently negative results of rt-PCR at EOT and until 12 months of FU (4, 6 and 12 months)	
Population	Patients from Bolivia living in Spain	Patients from ARG (77%), CHILE or LA living in Spain	Patients from Bolivia (Tarija & Cochabamba)	



## CHAGASAZOL & STOP-CHAGAS

#### Randomized Trial of Posaconazole and Benznidazole for Chronic Chagas' Disease

Israel Molina, M.D., Jordi Gómez i Prat, M.D., Fernando Salvador, M.D., Begoña Treviño, M.D., Elena Sulleiro, M.D., Núria Serre, M.D., Diana Pou, M.D., Sílvia Roure, M.D., Juan Cabezos, M.D., Lluís Valerio, Ph.D., Albert Blanco-Grau, M.D., Adrián Sánchez-Montalvá, M.D., Xavier Vidal, Ph.D., and Albert Pahissa, Ph.D. Benznidazole and Posaconazole in Eliminating Parasites in Asymptomatic *T. Cruzi* Carriers The STOP-CHAGAS Trial





• E1224, Phase 2, Proof of concept

#### E1224: DNDi Proof of Concept for a Safe, Effective and Affordable New Therapy for Chagas Disease







• Phase 2, Proof of concept:

Fexnidazole Phase II

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#### Proof-of-Concept Dose Ranging Study Evaluation of Dose and duration







## NEW SCHEME INTERMITTENT BZN

- Pilot study to assess an intermittent scheme of BZN
- 5mg/kg/day, two daily doses every 5 days, 60 days





#### New Scheme of Intermittent Benznidazole Administration in Patients Chronically Infected with *Trypanosoma cruzi*: a Pilot Short-Term Follow-Up Study with Adult Patients

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## BERENICE





## SUMMARY OF RECENT RCTs

- Posaconazole (monotherapy or in combination) and E1224 (monotherapy) were effective during treatment and relapsed after EOT (demonstrated by PCR Positive)
- Fexinidazole (suspended for safety issues) was effective during treatment with sustained response (100%) at 12 months FUP
- Benznidazole was effective during treatment with sustained response (~ 80%) at 12 months FUP
- PCR proved useful for assessing treatment response to antitrypanosomal drugs



## **THANK YOU**







### https://www.dndi.org/



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