

Update on ESTIM-rHTN in France

Pr Patrick Rossignol

Inserm 1433

Clinical Investigation Center

Hypertension and Heart Failure Unit

CHRU Nancy & University of Lorraine, Nancy, France

Association Lorraine pour le Traitement de l'Insuffisance Rénale (ALTIR)

BAROSTIM THERAPY SUMMIT

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Agenda

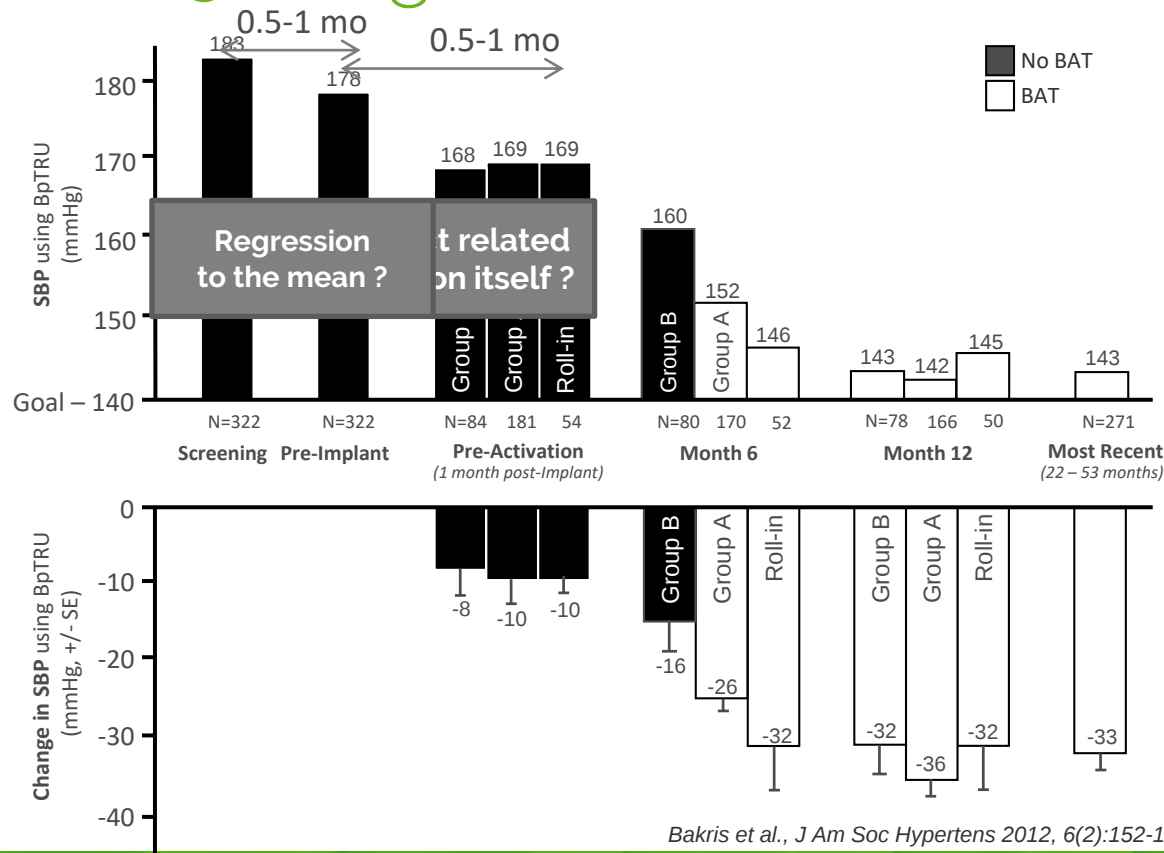
- Background
- Trial Design
- Trial Status



Background

- Rheos double blind pivotal study (Bisognano et al, JACC 2011), preliminary evidence of TOD (LVM) protection (Bisognano, JACC 2011), long-term BP effects (Bakris, JASH, 2012)
- Preliminary evidence of efficacy/safety of the second generation BAROSTIM NEO™ device (Hoppe, JASH 2012)
- **Possible BP-pressure lowering effect of the implantation per se (Bakris, JASH 2012)**

Phase-3 Long-Term Data in Resistant HTN



**IS A « COMPLETE »
SHAM APPROPRIATE
FOR FUTURE
STUDIES NOW?**

Bakris et al., J Am Soc Hypertens 2012, 6(2):152-158

Background

- Rheos double blind pivotal study, preliminary evidence of TOD (LVM) protection, long-term BP effects
- Preliminary evidence of efficacy/safety of the second generation BAROSTIM NEO™ device
- Possible BP-pressure lowering effect of the implantation per se
- **Need for a new RCT with the BAROSTIM NEO™ device, to enable a health economics assessment in the French healthcare system, prior to reimbursement**

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ESTIM-rHTN has been granted by the French Ministry of Health & is sponsored by Nancy University Hospital, France

ESTIM-rHTN:

medicoEconomic evaluation of baroreceptor STIMulation
for the treatment of resistant HyperInsioN

A multicenter, randomized, PROBE design trial of baroreceptor stimulation with BAROSTIM NEO™ vs. usual care

ClinicalTrials.gov Identifier:
NCT02364310

P. Rossignol, PI
M. Azizi, co-PI

Main Inclusion Criteria

- 18-85 year-old men or women
- Resistant hypertension on 4 medications including thiazide or thiazide-like at appropriate doses + spironolactone (unless spiro intolerance)
- Essential hypertension
- $\text{eGFR} \geq 30 \text{ ml/min/1,73 m}^2$
- No carotid condition associated with a contra-indication to use BAROSTIM NEO™

Primary Objective

- Medico-economic assessment:
cost-effectiveness

Main Evaluation Criteria

Medico-economic assessment:

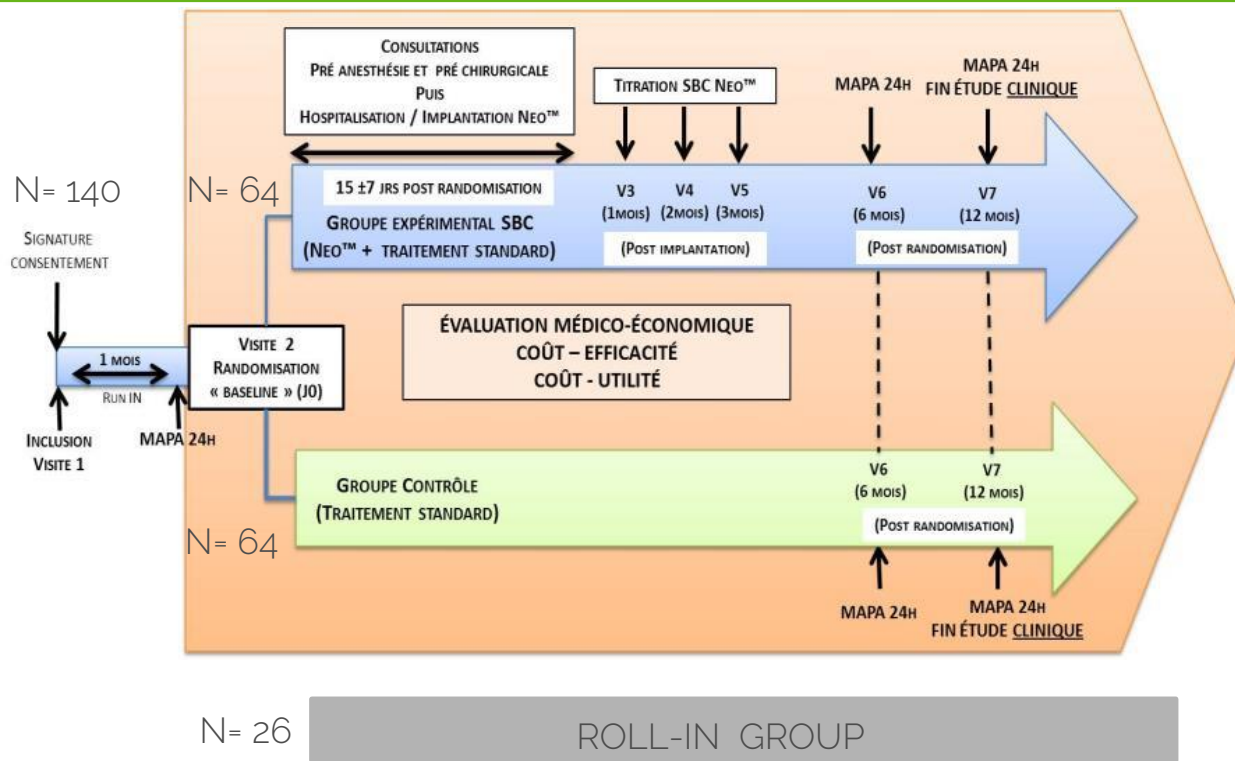
Mechanism	Criteria	Unit
Clinical Trial	ICER	Cost / Diurnal SBP mm Hg on ABPM after 12 months
Modeling	Incremental ratio	Cost / Living year saved

Secondary Outcome Criteria

Comparison
with usual
care:

Criteria	6 months	12 months
SBP, DBP, mean BP 24 h, diurnal, nocturnal on ABPM	X	X
Casual BP, PWV, PPc, LVM, LV function on echocardiography	X	X
Evolution of eGFR (MDRD) and of microalbuminuria	X	X
Antihypertensive regimen	X	X
EuroQol5D	X	X
Global cardiovascular risk	X	X
Compliance		
Cardiovascular, cerebrovascular events		
Tolerance : morbidity at 1 month post surgery		

Experimental Design: Probe



Trial Organisation

Steering Committee:

- **Chair:** Pr Patrick Rossignol, Nancy
- **Co-chair:** Pr Michel Azizi, Paris
- **Methodologist, statistician:** Pr Gilles Chatellier, Paris
- **Medico-economic assessment:** Dr Karine Chevreul (URC-Eco, Paris)
- **Vascular surgeon:** Dr Jean-Marc Alsac, Paris
- **Cardiologist, HF specialist:** Pr Faiez Zannad, Nancy
- **Advisor:** Pr George Bakris, Chicago, USA

DSMB:

- **Pr Pascal Desgranges:** Vascular surgeon, Hôpital Henry Mondor, Créteil
- **Pr Pascal Bousquet:** Cardiologist, Pharmacologist, Université de Strasbourg
- **Dr Catherine Cornu:** Methodologist, CIC, CHU de Lyon



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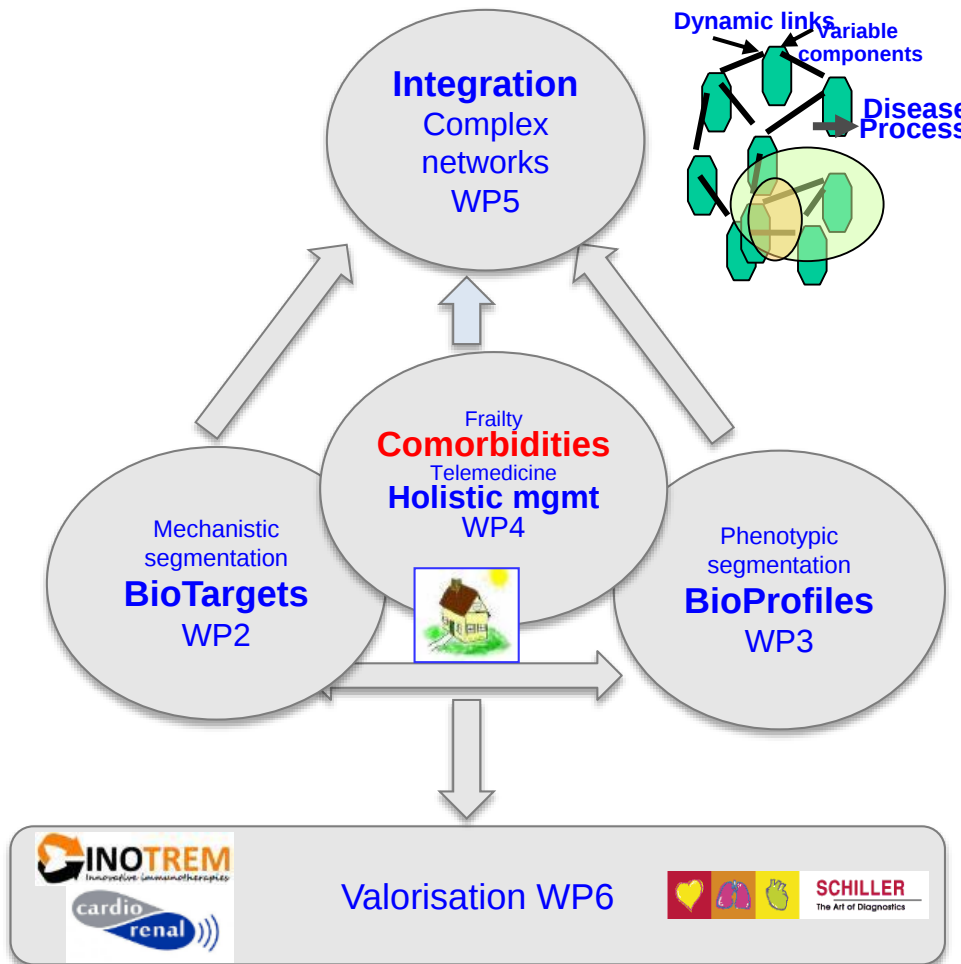
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All 16 study sites are activated and can randomise patients





The double challenge of resistant hypertension and chronic kidney disease

Patrick Rossignol, Ziad A Massy, Michel Azizi, George Bakris, Eberhard Ritz, Adrian Covic, David Goldsmith, Gunnar H Heine, Kitty J Jager, Mehmet Kanbay, Francesca Mallamaci, Alberto Ortiz, Raymond Vanholder, Andrzej Wiecek, Carmine Zoccali, Gérard Michel London, Bénédicte Stengel, Denis Fouque, for the ERA-EDTA EURECA-m working group, Red de Investigación Renal (REDINREN) network, and Cardiovascular and Renal Clinical Trialists (F-CRIN INI-CRCT) network



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Thank you.



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