

STS/EACTS Latin America Cardiovascular Surgery Conference

September 21-22, 2017 | Cartagena, Colombia

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www.CardiovascularSurgeryConference.org

LVAD vs ECMO in Latin American Countries: Rapid Fire

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The Society
of Thoracic
Surgeons



EACTS
European Association For Cardio-Thoracic Surgery



Disclosures

- Nothing to disclose

Durable VAD support in LATAM

	HM		HW		
	Implanted	Ongoing	Implanted	Centers	Active
Brazil	16	12	8	7	3
Chile	2	1	16	5	NA
Argentina	0	0	1	1	0
Mexico	3	1	NA	3	0
Colombia	9	8	0	1	1
Caiman islands	2	1	0	1	1
Total	30	21	25	18	5

* Information obtained from manufacturers

LATAM Session, 2017 – 37^o Annual Meeting ISHLT, San Diego - USA

HeartMate II 5
BerlinHeart ExCor 1

HeartMate II 7
HeartMate III 2

HeartMate II 2
HeartWare 16

HeartMate II 16
BerlinHeart InCor 8
HeartWare 8

BerlinHeart ExCor 49
(6 adults; 43 pediatric)
HeartWare 1 (pediatric)

LVAD Latin America



MCS

Nov 2008 – Aug 2017



Hospital de Messejana
Fortaleza – CE - Brazil

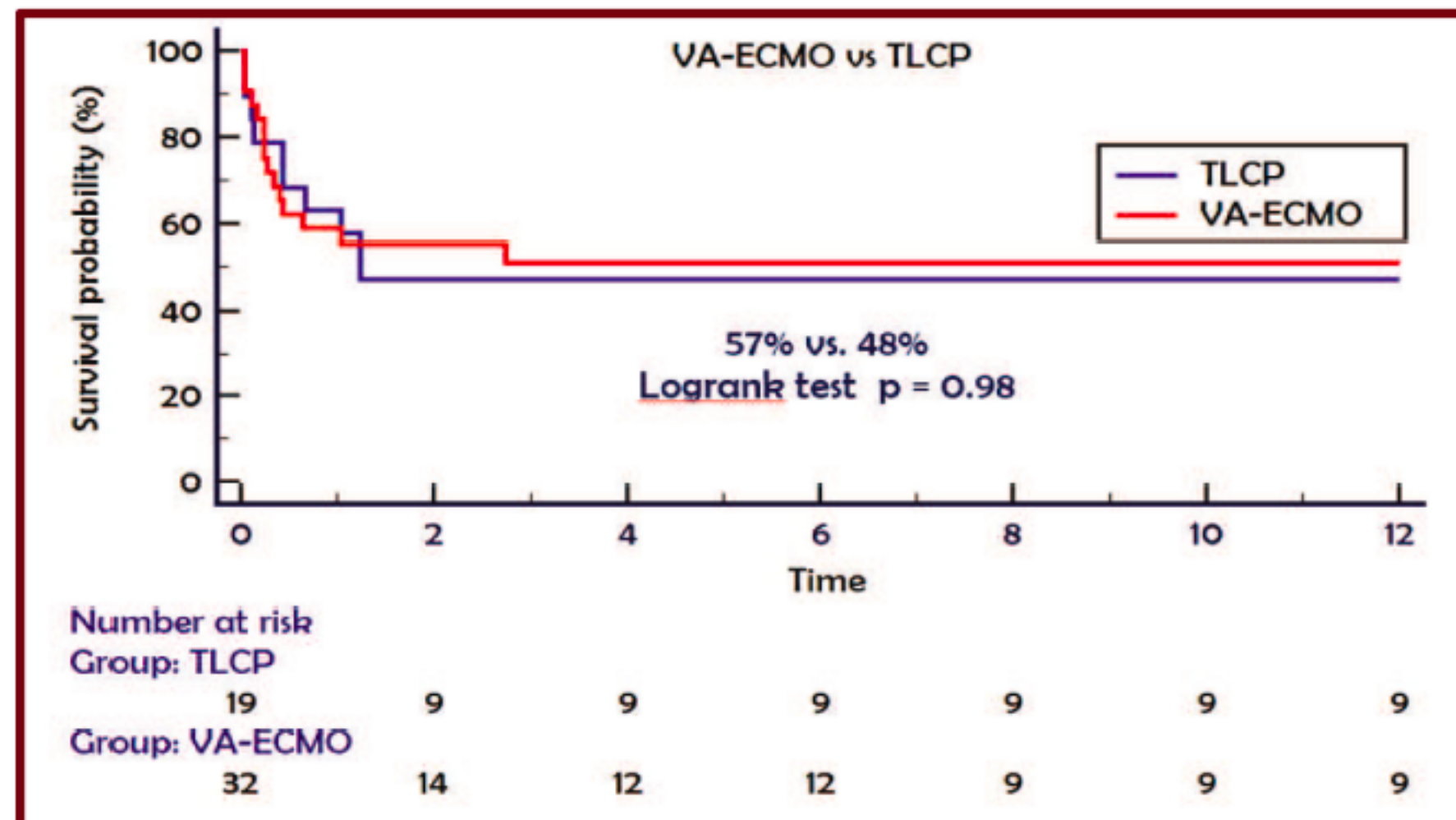
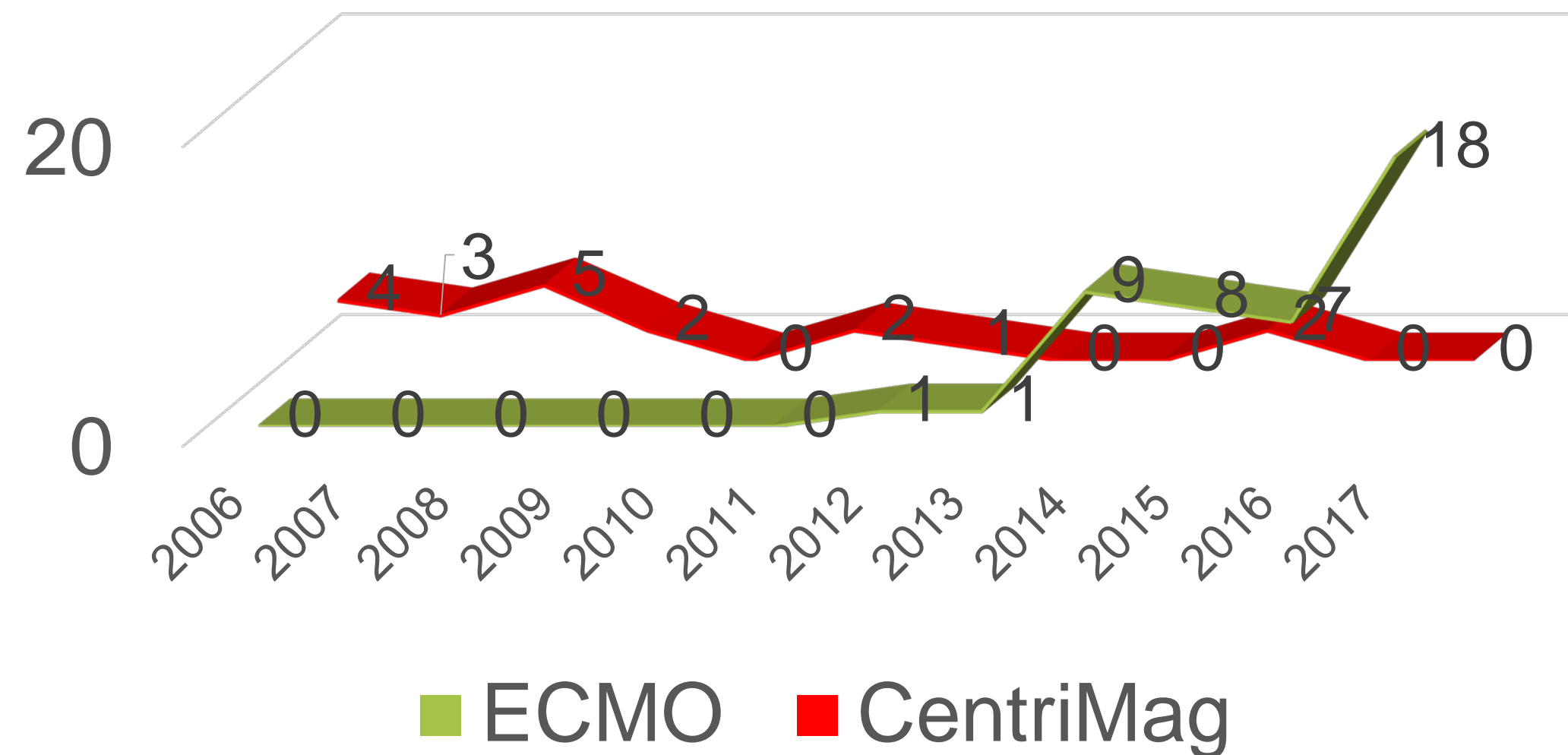
	Model	N	Discharge
Post Cardiotomy	Transcore [®]	02	---
	Centrimag _i [®]	02	---
	ECMO	09	20%
Acute Myocarditis	Transcore [®]	1	---
	Centrimag _i [®]	2	---
Graft Dysfunction after HTx	ECMO	11	80%
BTT	AB 5000 [®]	07	71%
	Centrimag [®]	20	84,6%
	ECMO	06	33%

Perú: INCOR Experience CentriMag 2016 – 2017



	Model	N	
Acute Myocarditis	Centrimag®	1	
Graft Dysfunction after HTx (ACRej at 7 months)	Centrimag®	1	
BTT	Centrimag®	2	53 and 55 days

Favaloro Foundation Experience March 2006 – July 2017



Etiology	Model	N
Post Cardiotomy	Centrimag®	3
	VA ECMO	13
Acute Myocarditis	Centrimag®	2
	VA ECMO	6
Graft Dysfunction after HTx	Centrimag®	2
	VA ECMO	11
Decompensated Chronic HF	Berlin Heart Excor	6
	Centrimag®	8
	VA ECMO	4
Strategy		
BTT	Centrimag®	12
	VA ECMO	10
BTR	Centrimag®	1
	VA ECMO	30

MCS

746 Heart Transplant in Argentina Jan 2010 – July 2017:

3 Active Heart TX

Centers :

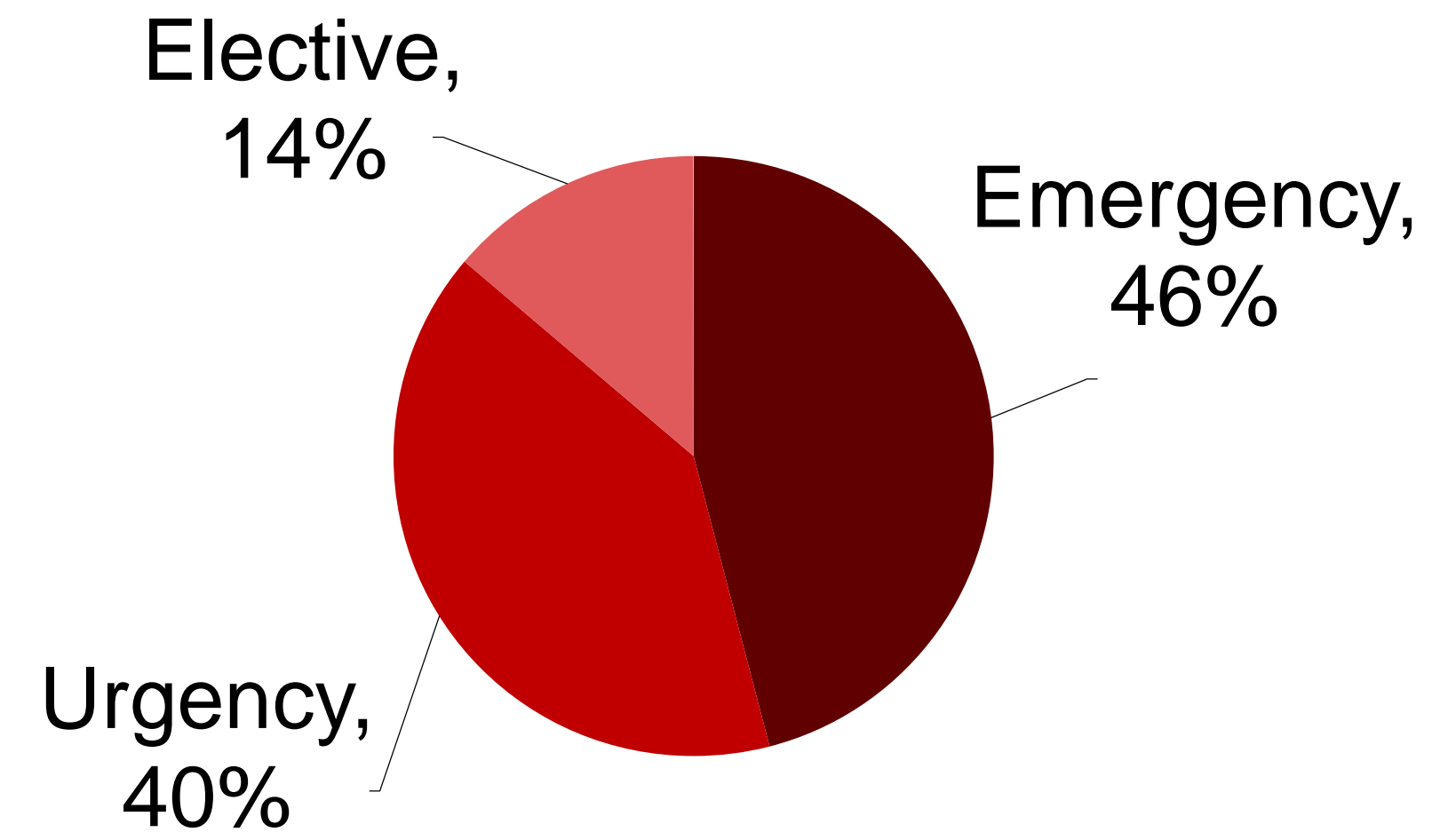
ICBA; HIBA; FF

399 Heart Tx

BTT VA ECMO
30 patients

Heart Tx
25 patients

Survival
(Discharge)
60% (15/25 p)



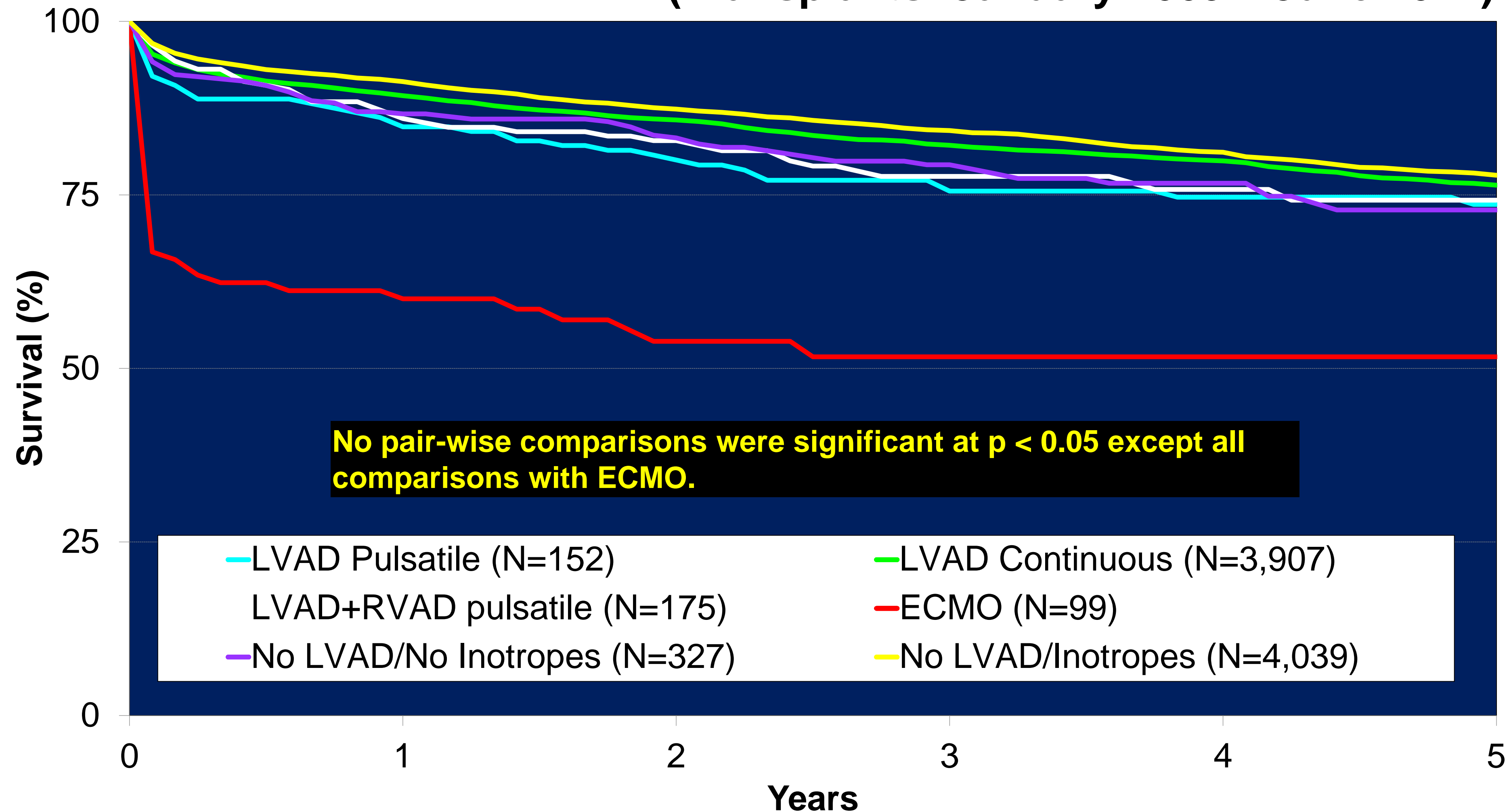
Time on Waiting List

CLINICAL STATUS	ELECTIVE	URGENCY	EMERGENCY
N	421	470	544
Median (Days)	201	47	18
95% CI	168-234	34-55	15-22

Adult Heart Transplants

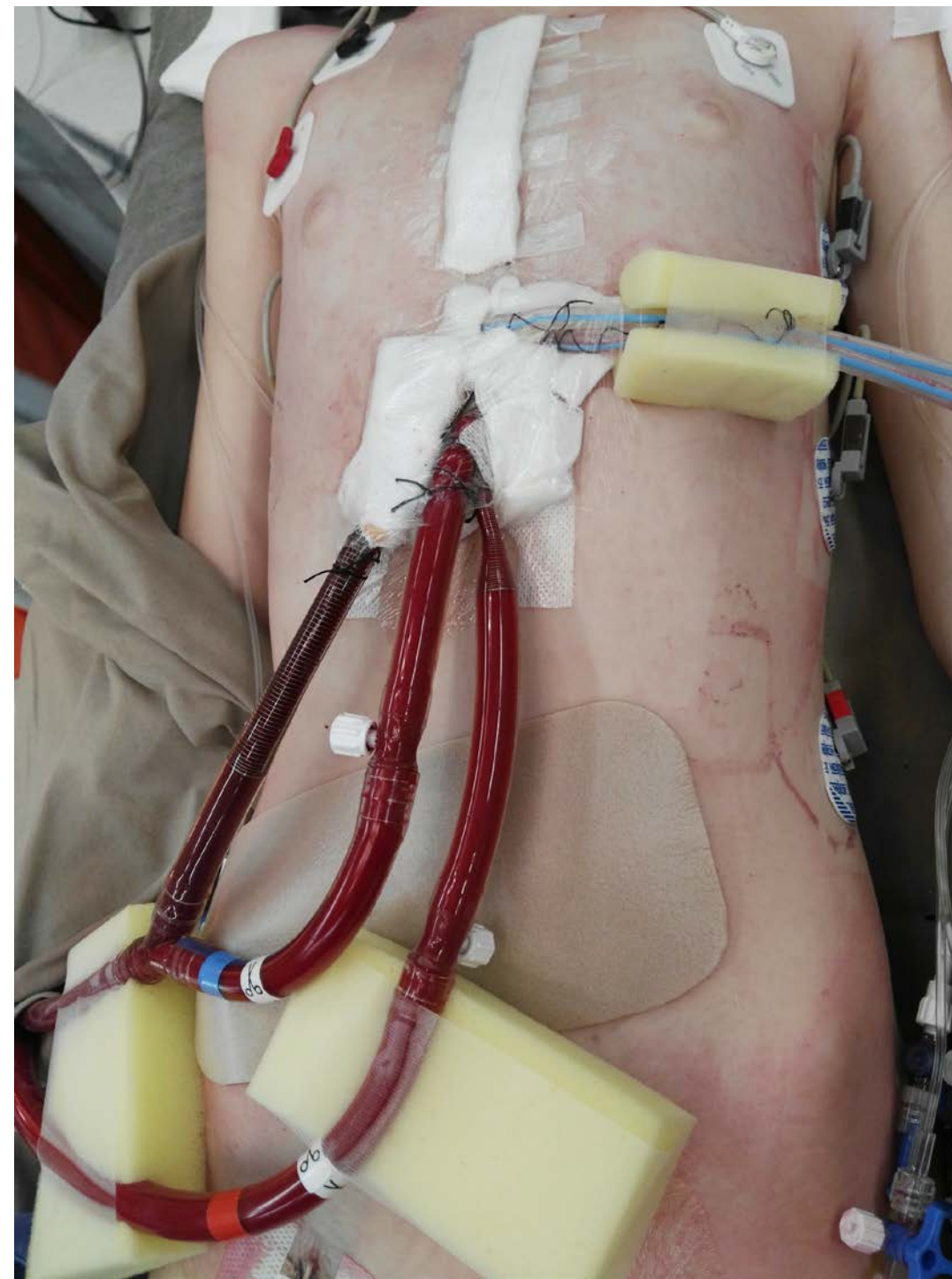
Kaplan-Meier Survival by Pre-Transplant Mechanical Circulatory Support Use

(Transplants: January 2009 – June 2014)



Central Canulation: The “durable” MCS when LVADs are not an option...

RA + LA → Aorta



The Costs...

* Values obtained from manufacturers

	USA	EUROPE	BRAZIL	ARGENTINA
HeartMate II®	U\$ 100 K	---	U\$ 238 K	U\$ 170 / 180 K
HeartWare®		---	---	U\$ 170 / 180 K
BerlinHeart InCor®	---	U\$ 110 K	U\$ 220 K	

ARGENTINA: estimated costs		
ECMO VA	Surgical procedure, 3 weeks on support	U\$ 10 K
Heart Transplantation	Surgical procedure, LOS until 3 weeks. IMS therapy not included	U\$ 50 K
LVAD (HW / HM II)	Device cost only. Surgical procedure & follow up not included	U\$ 170 / 180 K



Pan American Workshop
Mechanical Circulatory Support
& Heart Transplant

December 2015, Tampa - Florida

Conclusions



- ✓ Long term support devices are still used in a short amount
- ✓ The high cost of devices hinders the VAD program
- ✓ Only around 25% centers that started continues as active centers
- ✓ No real information about outcomes and follow up
- ✓ Some places in Latin America the intermediate support devices (CentriMag®) and short term devices (VA ECMO) are used as direct BTT
- ✓ There are no local MCS registries in LA

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Thank You



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