




# IMAD 2014

## Local statistical Results

Introduction about  
temperature management

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# Data base

- Retrospective analysis
- From 2007 to 2014
- Circulatory arrest
- Operative data
- 118 patients

# Local activity

Year	All surgery procedures (100%)	Surgery on thoracic aorta (%)	Aortic surgery with Hypothermia (%)	Circulatory arrest (%)
2007	616	46 (7,47%)	21 (3,41%)	11 (1,79%)
2008	583	59 (10,1%)	32 (5,49%)	20 (3,43%)
2009	616	41 (6,66%)	21 (3,41%)	16 (2,60%)
2010	587	50 (8,52%)	27 (4,60%)	15 (2,56%)
2011	590	46 (7,80%)	22 (3,73%)	11 (1,86%)
2012	586	59 (10,1%)	31 (5,29%)	16 (2,73%)
2013	620	52 (8,39%)	27 (4,35%)	19 (3,06%)
2014	340	37 (10,9%)	14 (4,12%)	8 (2,35%)

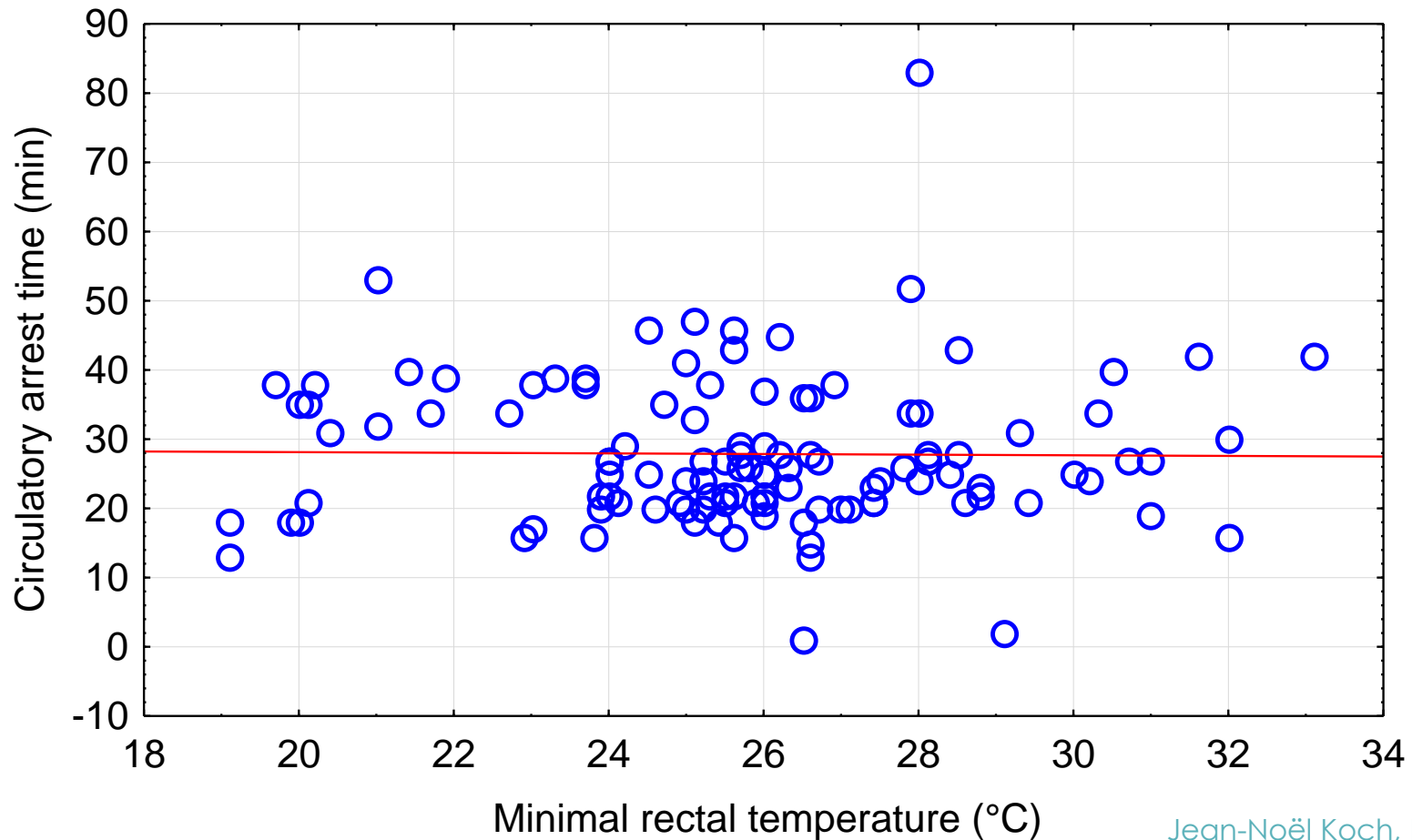
# Neurological complications

- High proportion of emergency
- Due to circulatory arrest ?
- Due to dissection?
- Neurological standardized assessment?

Correlation between circulatory arrest time and minimal rectal temperature with or without selective cerebral perfusion

$$r = -0,01$$

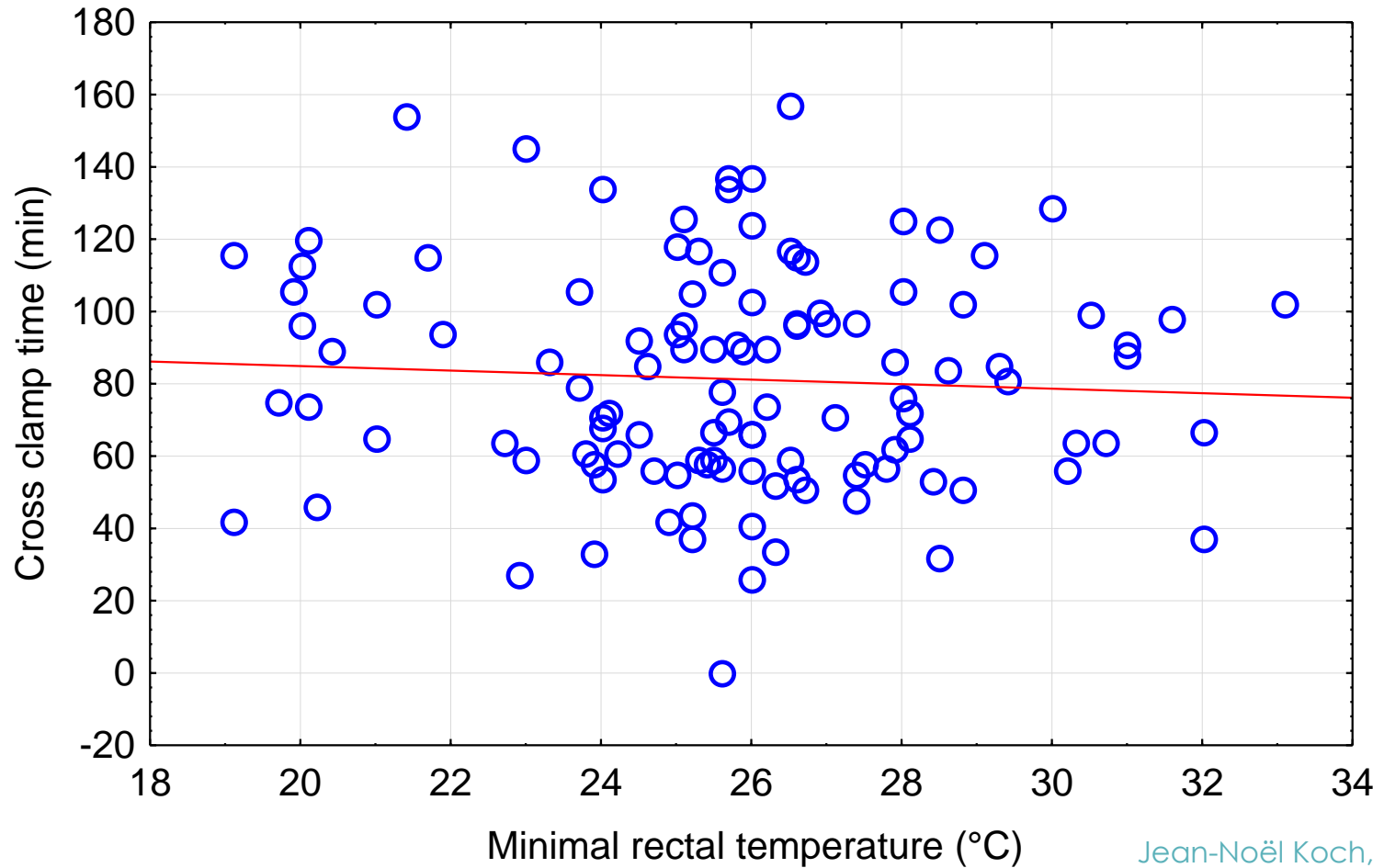
$$p = 0,89$$



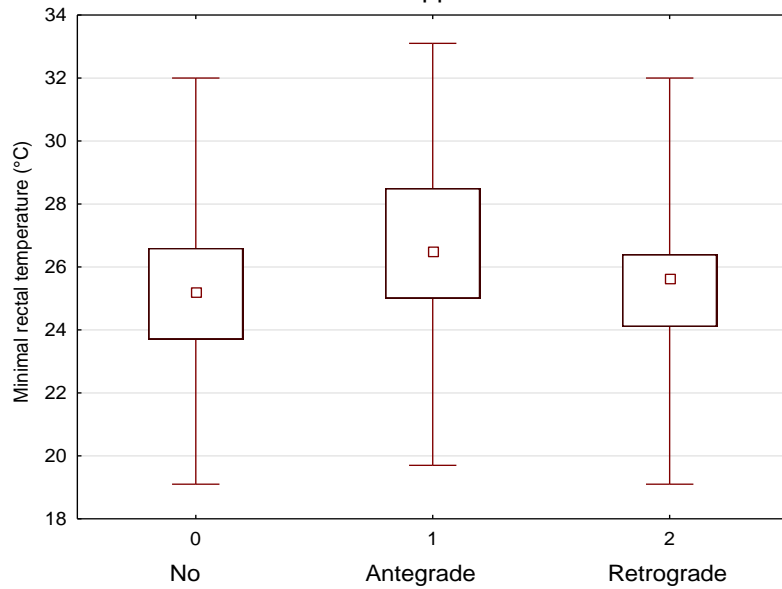
## Correlation between cross clamp time and minimal rectal temperature

$$r = -0,06$$

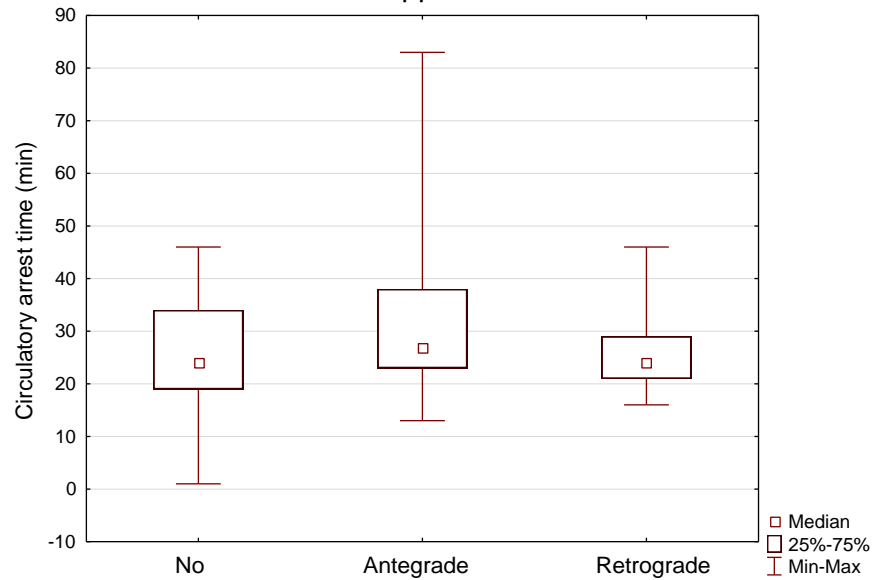
$$p = 0,52$$



Minimal rectal temperature according to selective cerebral perfusion approach



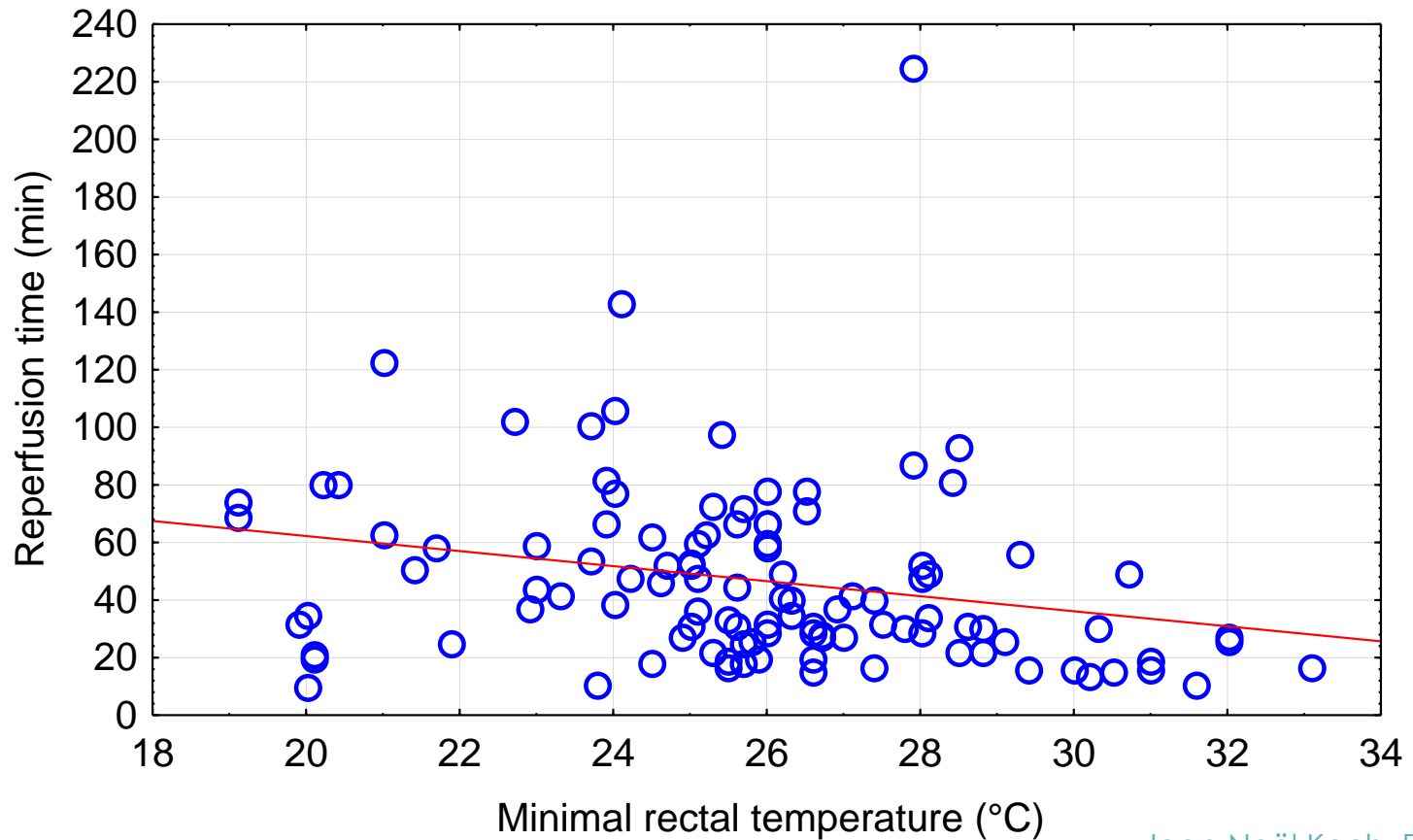
Circulatory arrest time according to selective cerebral perfusion approach



## Correlation between reperfusion time and minimal rectal temperature

$$r = -0,25$$

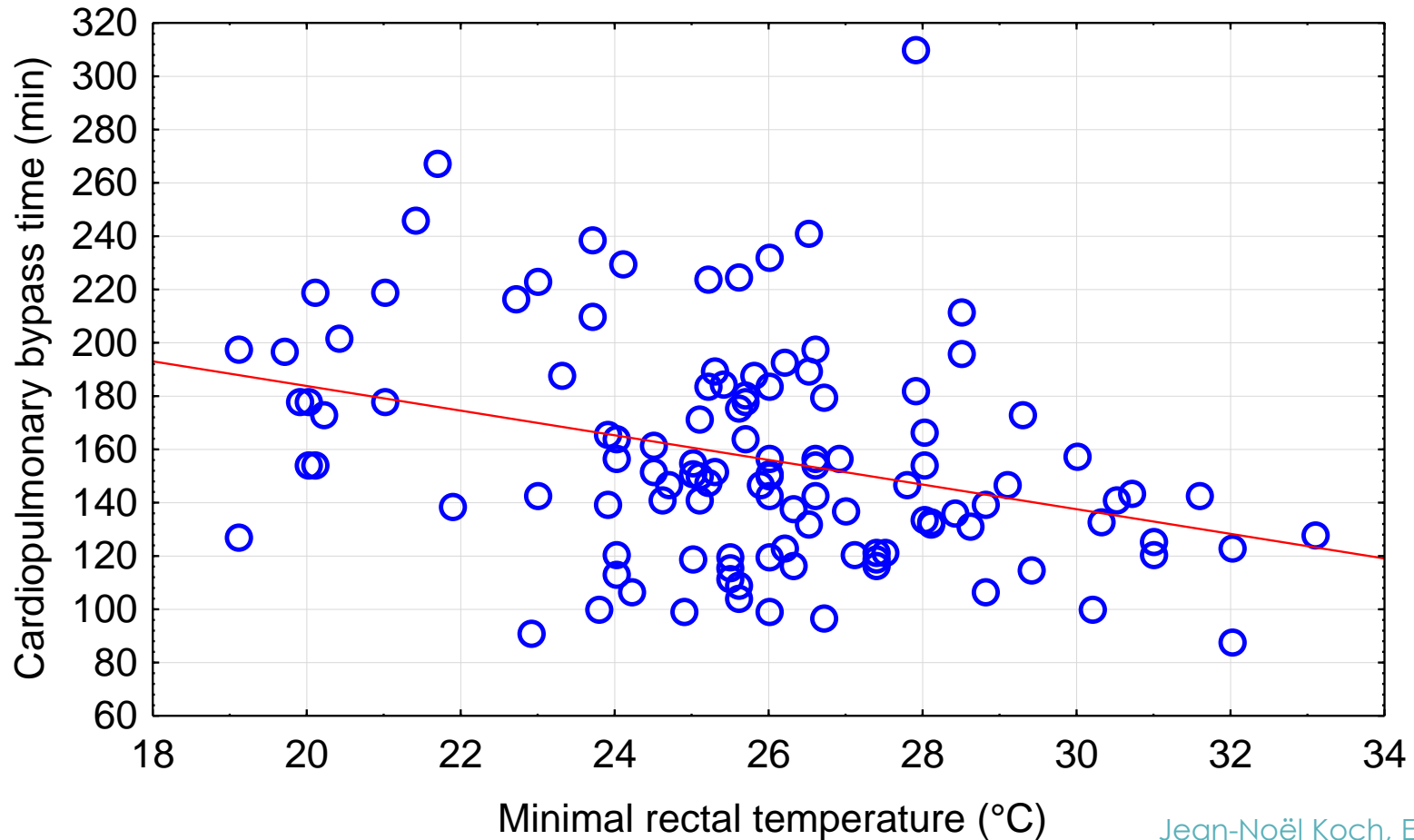
$$p < 0,01$$



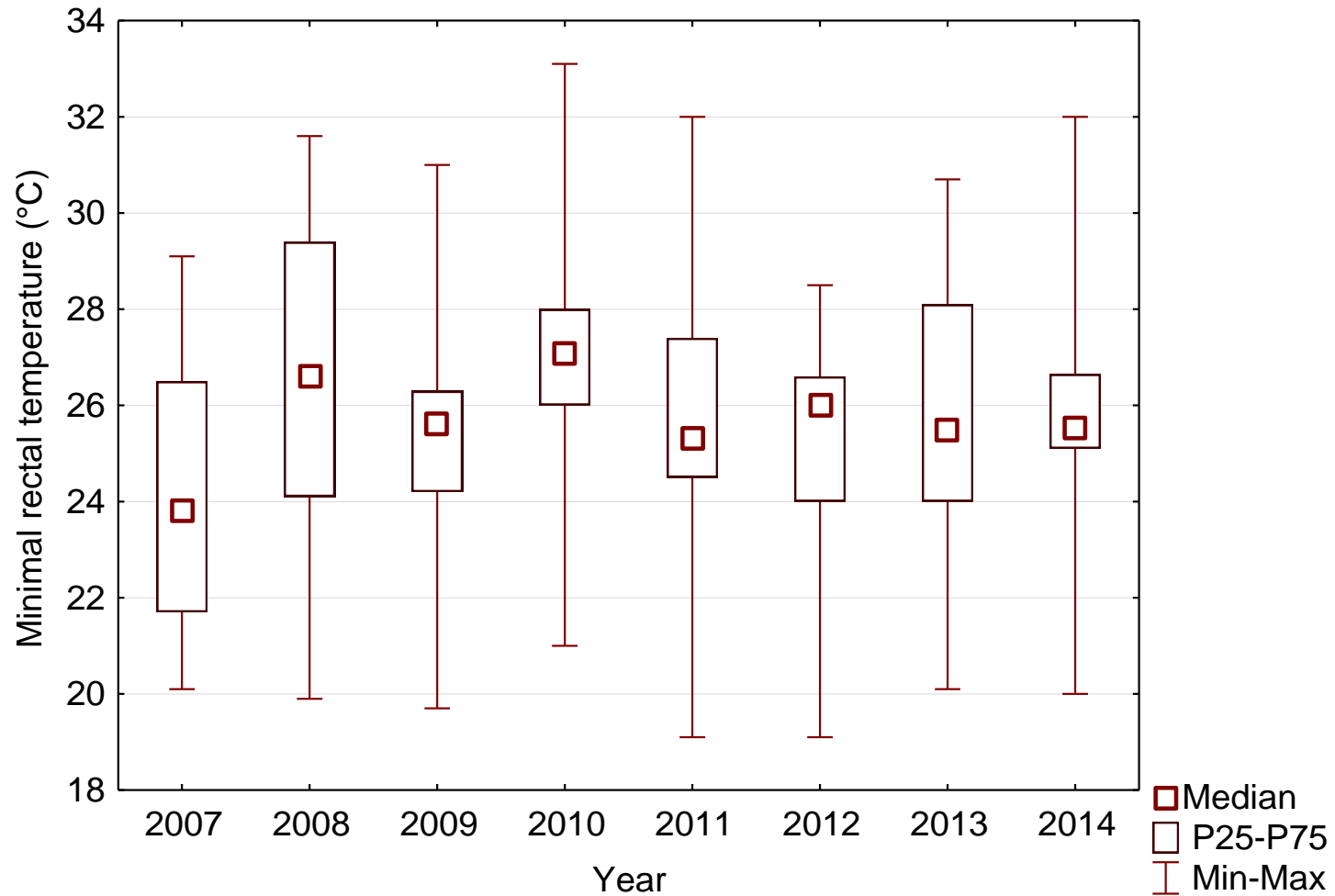


## Correlation between Cardiopulmonary bypass time and minimal rectal temperature

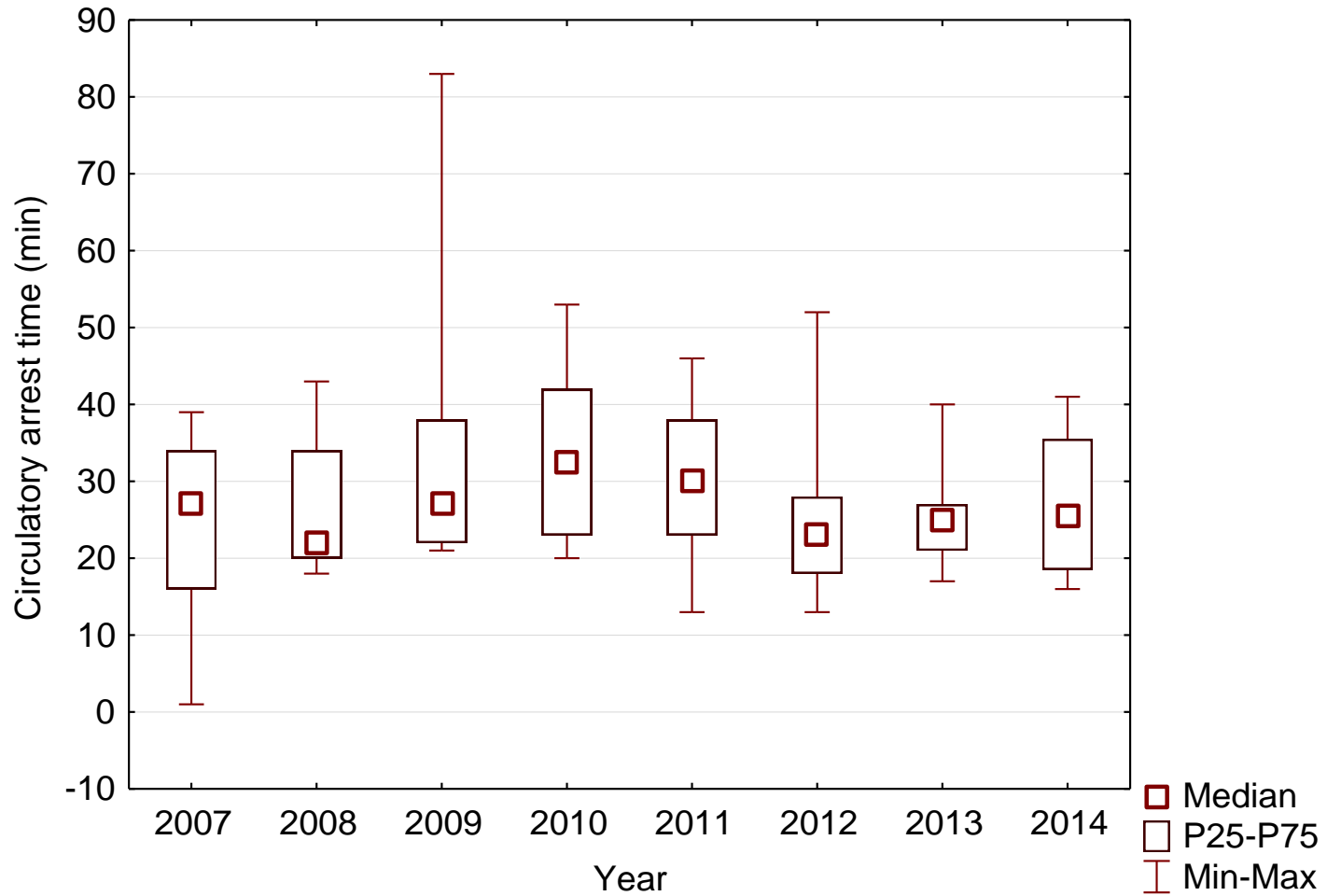
$$r = -0,3349$$
$$p < 0,001$$



### Evolution of minimal rectal temperature during circulatory arrest over the eight last years



## Evolution of circulatory arrest time during the eight last years

 $p = 0,16$ 

# Conclusions

- Hypothermia concerns 50% of surgery on ascending aorta
- Circulatory arrest for 30,3% of cases
- No relation between arrest time, selective perfusion and temperature
- Temperature influence pump time



How to select appropriate temperature?

Thank you for your  
attention