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Cardiovascular Research 2015; 188: 270-276  
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### CIRCUS: a kiss of death for cardioprotection?

Gerd Heusch\*

\*These data\* are clearly as solid as they are surprising and they challenge the clinical use of cyclosporine and cardioprotection\*

\*Circus: NEJM, 2015

**Potential Mechanisms**

- <12 hours of symptoms
- Administration of platelet inhibiting P2Y12 antagonists which are cardioprotective
- Cyclosporine A dissolved in intralipid <sup>Powerful cardioprotective agent</sup>  
<sub>Vehicle also used for propofol</sub>

Kottenberg: Acha Anesth Scand, 2012



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European Heart Journal Advance Access published October 27, 2015  
VIEWPOINT

### ERICCA and RIPHeart: two nails in the coffin for cardioprotection by remote ischemic conditioning? Probably not!

Gerd Heusch\* and Bernard J. Gersh\*

"The most plausible explanation for a lack of protection is the use of propofol anaesthesia in more than 90% of patients in ERICCA and all patients per-protocol in RIPHeart"

"Propofol specifically abrogated protection (↓ TnI release) by remote ischemic preconditioning in patients undergoing elective CABG"

Protection demonstrated during CABG with isoflurane but not with propofol anaesthesia – a clinical trial

Kottenberg: Acha Anesth Scand, 2012



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### Remote Ischemic Preconditioning in Patients with STEMI

333 pt

PPCI + remote preconditioning (intermittent arm ischemia)

Final infarct size (% LV)

Relation Between Final Infarct Size and Area at Risk

Area at risk (% of LV)

Median Salvage Index

112 pt

0.50 0.75

Bar Bar: Lancet, 2010









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