

A YEAR IN REVIEW - CARDIOLOGY

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SODIT Cardiac Awards

- **Most annoying test of the year**
- **Shock of the year**
- **Medical innovation of the year**
- **Drug of the year**
- **Biggest disappointment of the year**
- **Charles Darwin award for progress in evolution**



MOST ANNOYING TEST OF THE YEAR

The winner is...

MOST ANNOYING TEST OF THE YEAR

Troponin

Troponin

Myths

- A raised troponin = heart attack
- The commonest cause of a raised troponin is heart attack
- Troponin is a cardiac enzyme
- A raised troponin in the context of an arrhythmia means the cause is ischaemia
- The higher the troponin – the greater the risk

Facts

It does cause troponinemia

Troponin

- So...
 - Troponin should only be measured in suspected acute coronary syndrome
 - If you cannot see why troponin was measured – pretend it wasn't

SHOCK OF THE YEAR

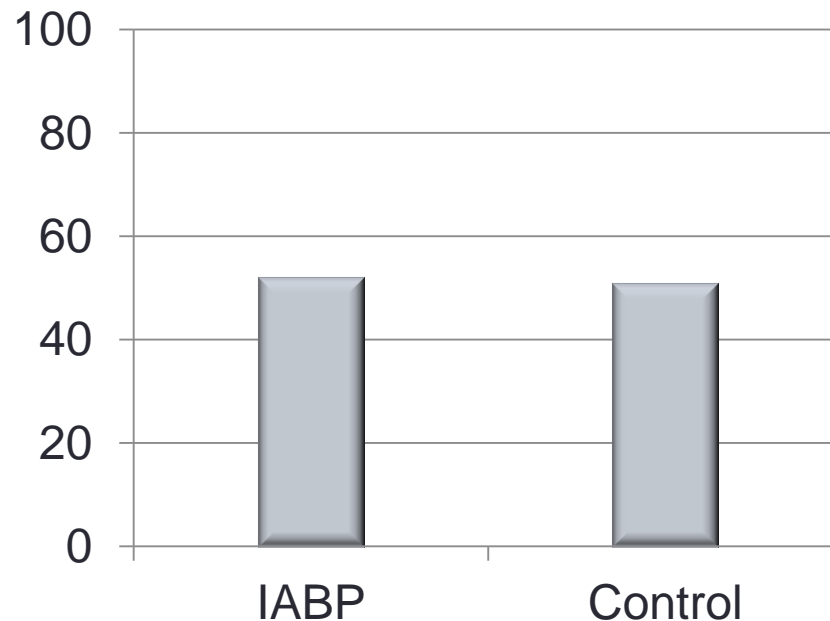
The winner is...

SHOCK OF THE YEAR

SHOCK-IABP study

Shock - IAPB

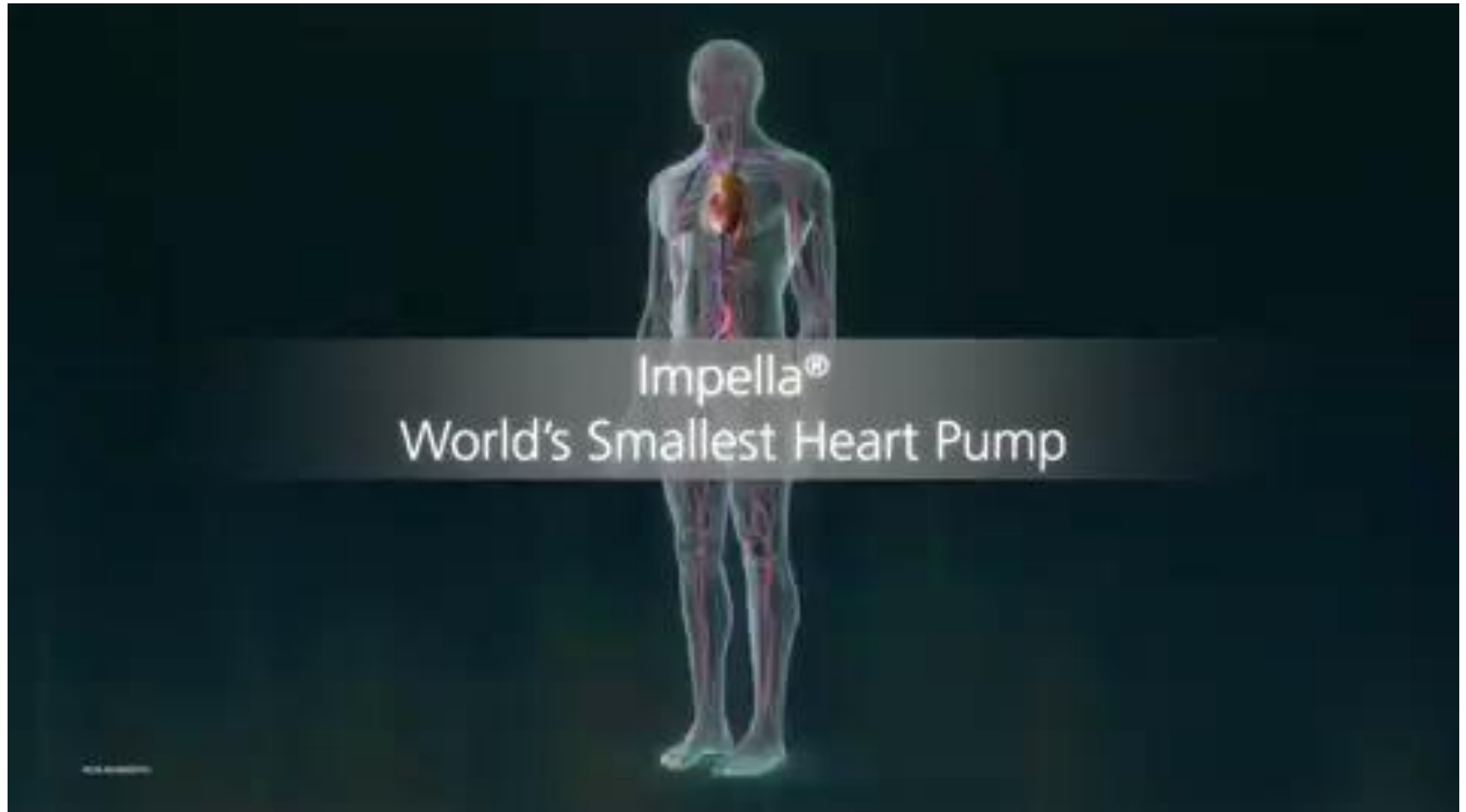
- 600pts with cardiogenic shock
- 1:1 randomisation to IABP or none
- Mortality at 1 year



MEDICAL INNOVATION OF THE YEAR

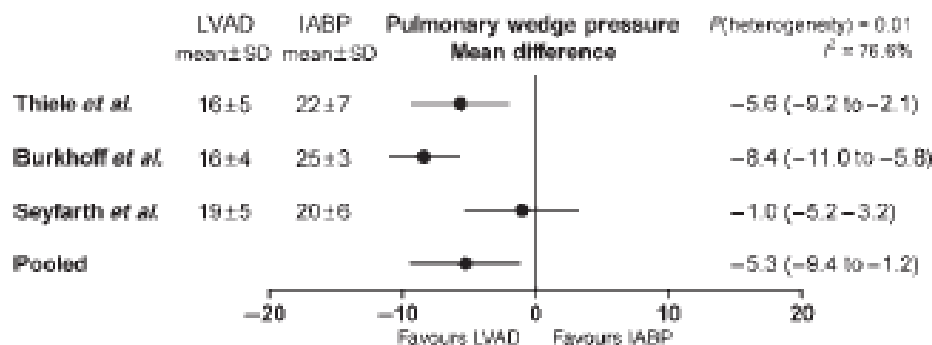
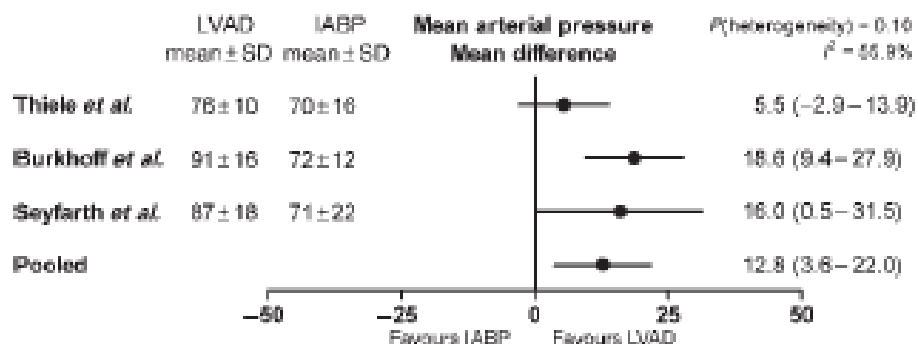
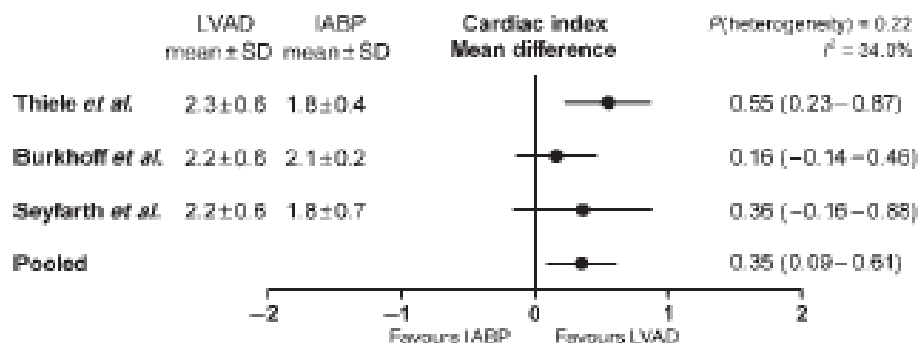
The winner is...

The Impella LVAD/RVAD



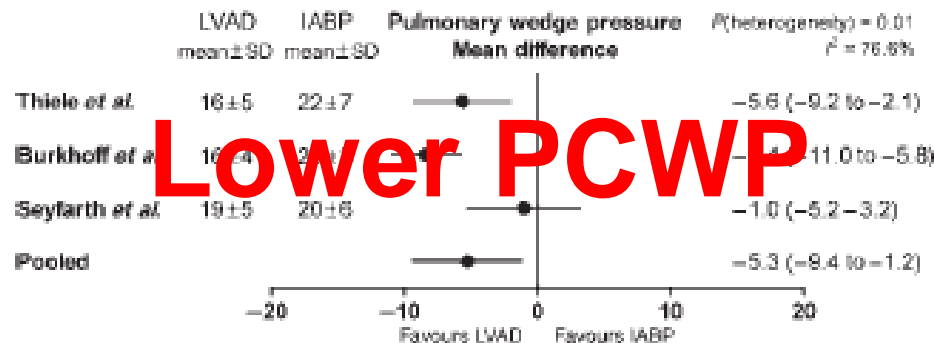
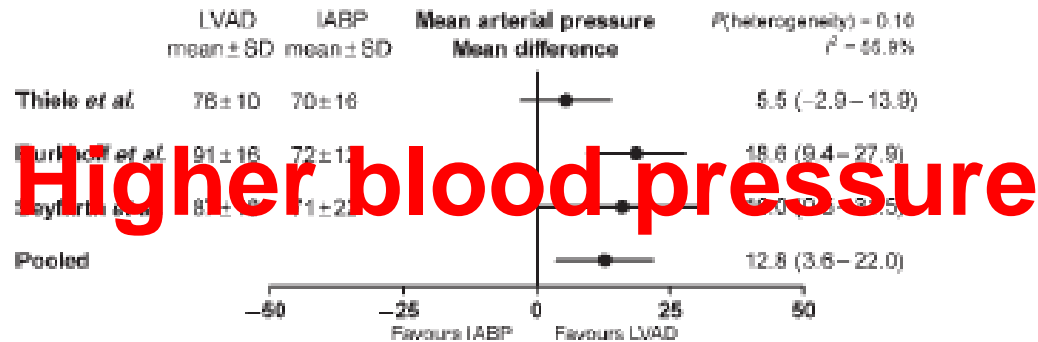
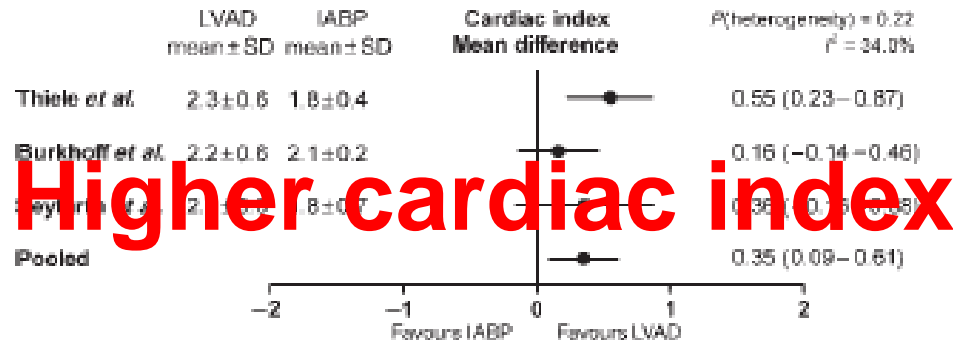
LVAD vs IABP

Meta-analysis 100pts post MI cardiogenic shock



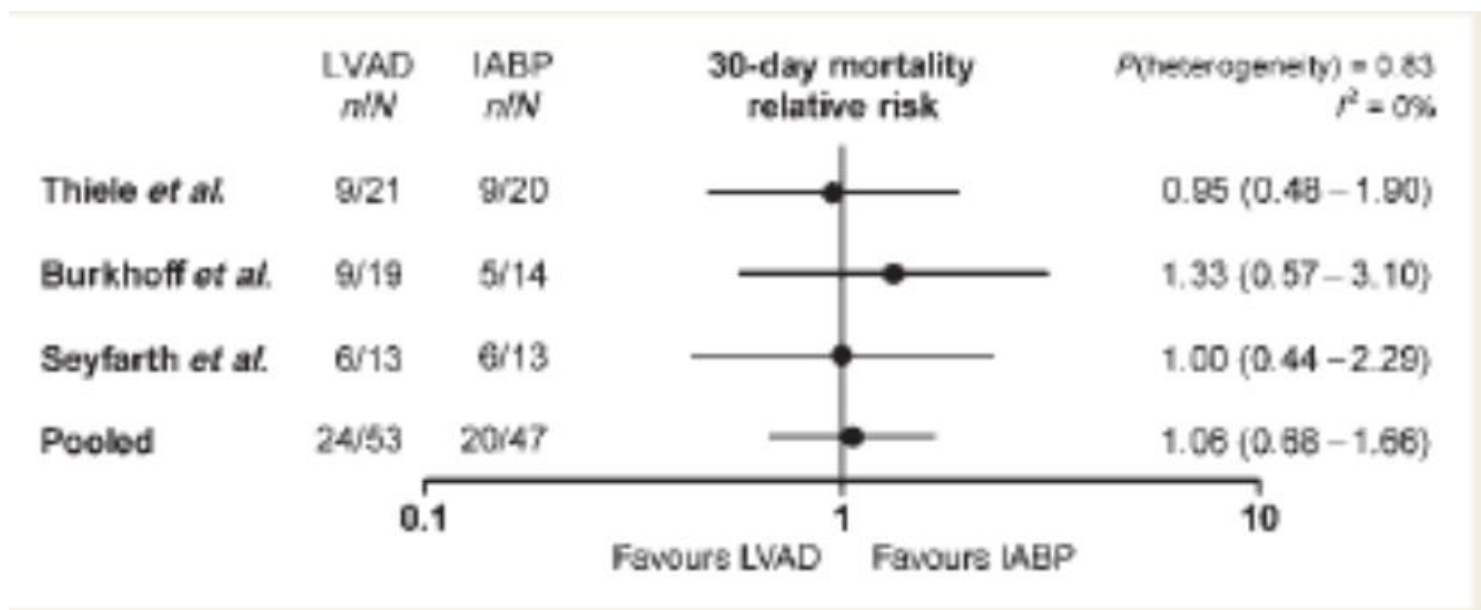
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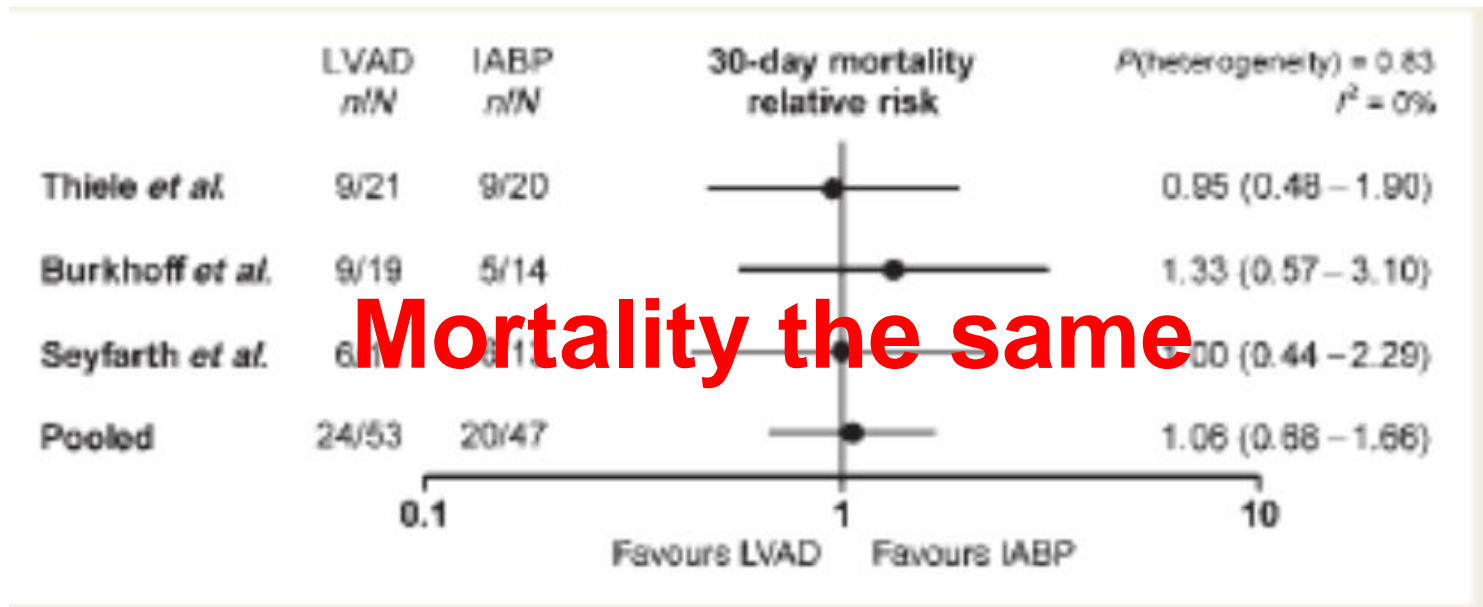
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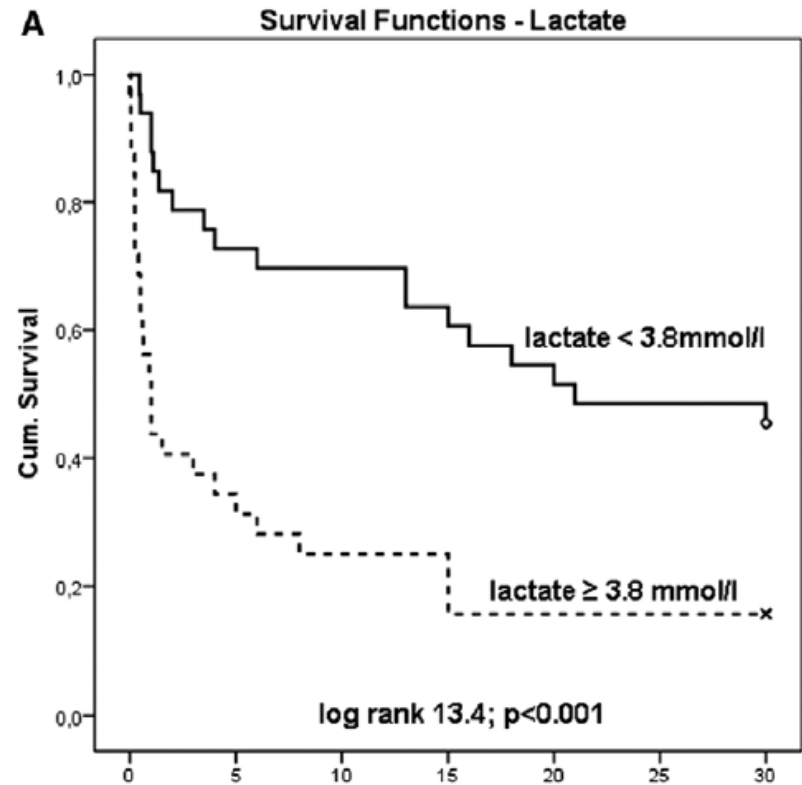
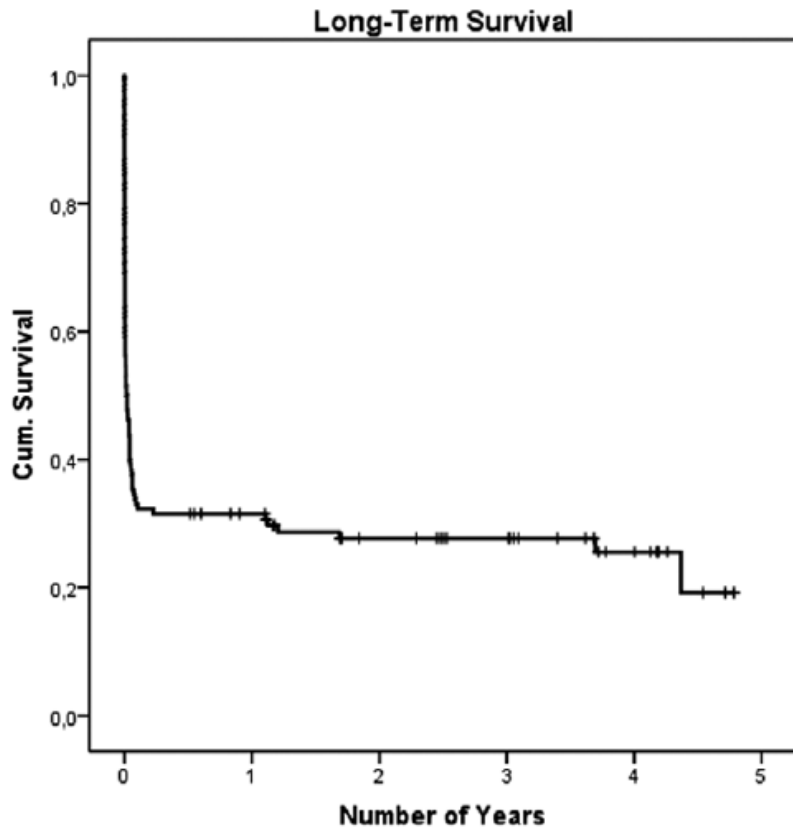
LVAD vs IABP

Meta-analysis
100pts post MI cardiogenic shock



Impella

Impella Euroshock Registry 120pts post MI cardiogenic shock



DRUG OF THE YEAR

The winner is...

DRUG OF THE YEAR

NOACS

NOACs

- **Dabigatran**
 - Direct thrombin inhibitor
- **Rivaroxaban**
 - Direct factor 10a inhibitor
- **Apixaban**
 - Direct factor 10a inhibitor

NOACs

Advantages

- **Fixed daily dose**
- **No monitoring**
- **Rapid onset**
- **Short half life**
- **Fewer drug and food interactions vs warfarin**

- **Reduced risk of intracranial haemorrhage vs warfarin**

NOACs

Disadvantages



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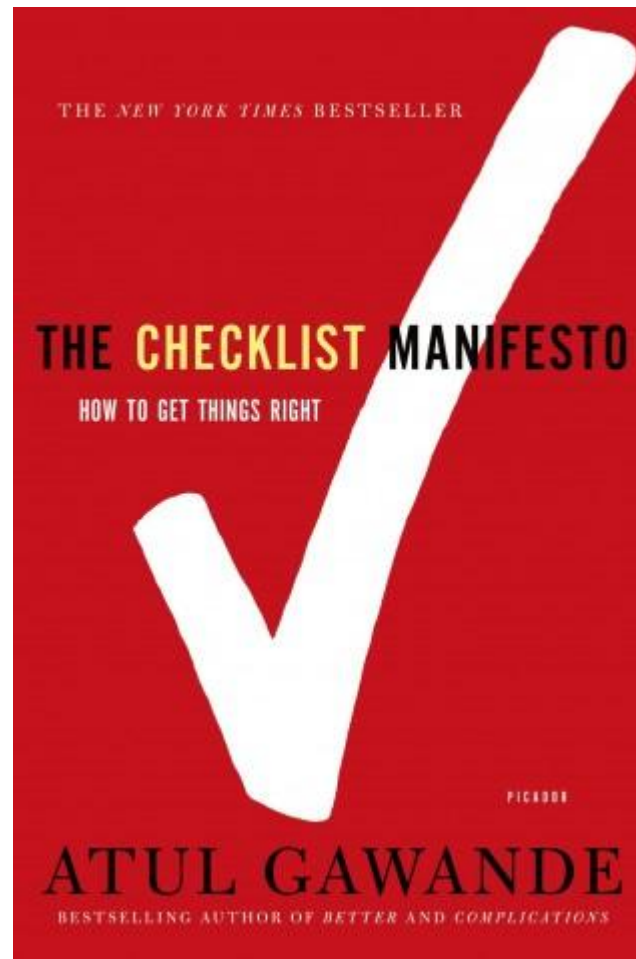
NOACS

Disadvantages



NOACS

Disadvantages



DISAPPOINTMENT OF THE YEAR

The winner is ...

DISAPPOINTMENT OF THE YEAR

The treatment of acute
heart failure

Acute heart failure

- **Levosimendan** (Ca facilitator) – REVIVE II, SURVIVE
- **Nesiritide** (BNP) – ASCEND-HF
- **Rolofylline** (adenosine receptor antagonist) - PROTECT
- **Tezosentan** (endothelin receptor antagonist) –TACTICS
- **Tolvaptan** (vasopressin receptor antagonist) - EVEREST
- **Omecamtiv mecarbil** (myosin activator) – ATOMIC-AHF
- **Ultrafiltration** - CARRESS-HF

- **Serelaxin** (human relaxin-2) – RELAX-AHF

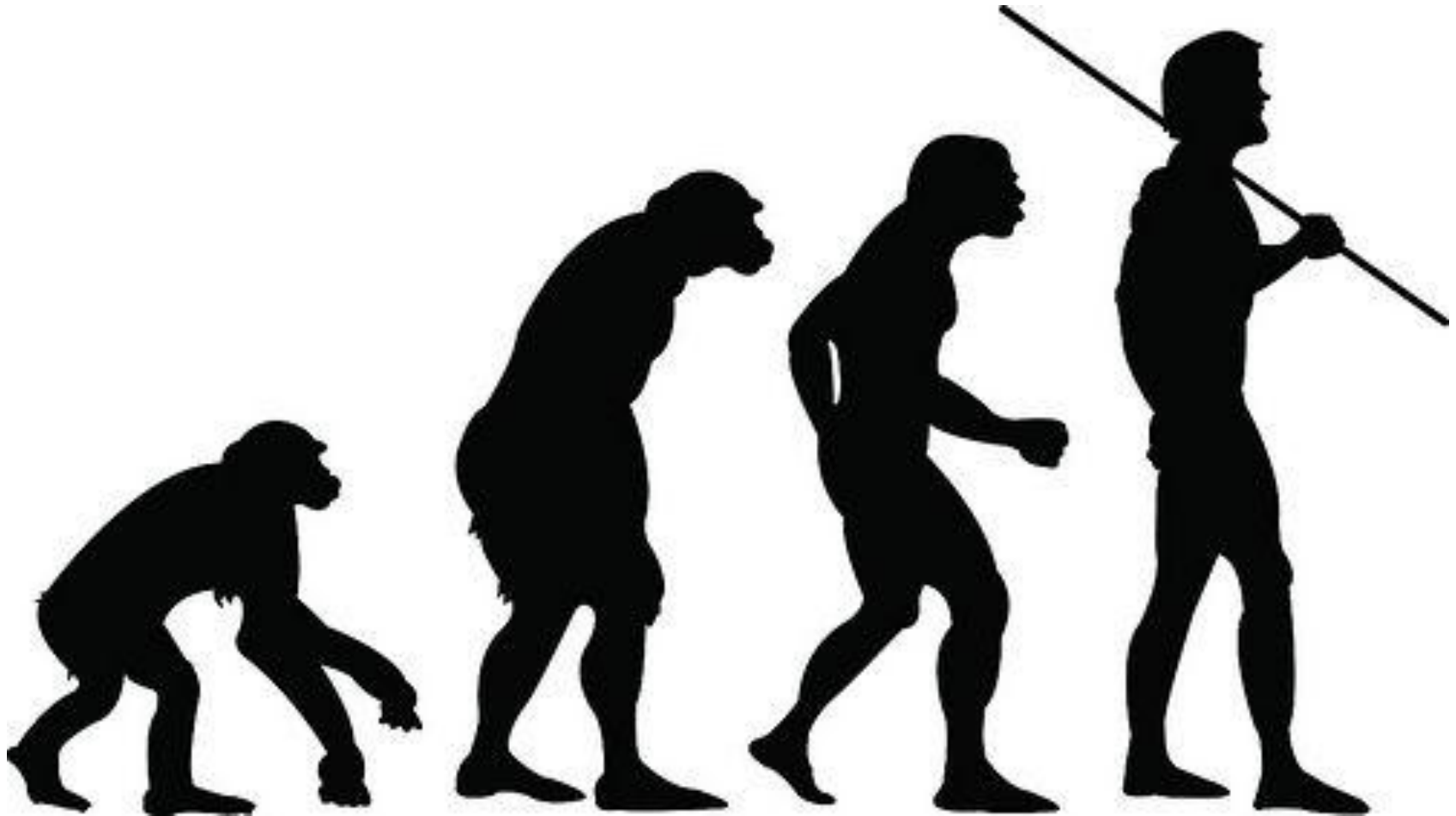
EVOLUTION OF THE YEAR

The winner is...

EVOLUTION OF THE YEAR

Dissolvable stents

Drug eluting stents: what next?



Balloon

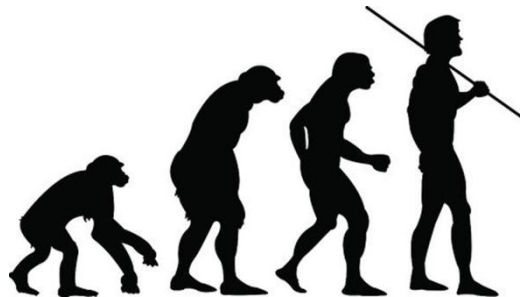
Stent

Drug eluting stent

?

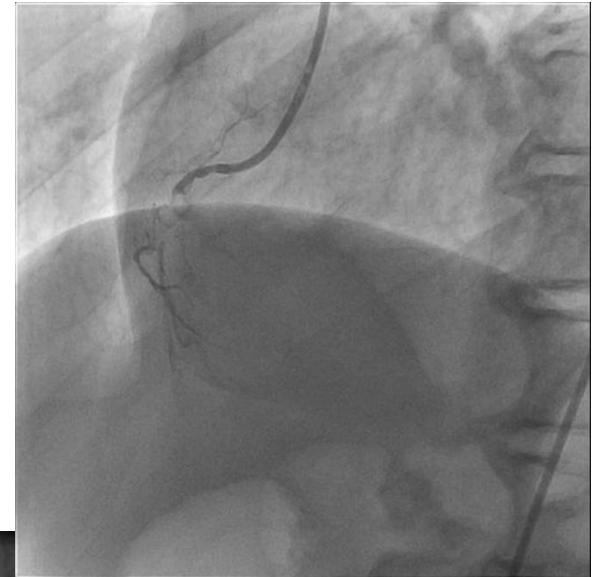
PCI evolution

	Restenosis	Complications	Late thrombosis
Balloon only	50%	High	No
Bare metal stent	30%	Low	No
Drug eluting stent	5%	Low	1%



The Achilles heel(s) of PCI & stents

- **Chronic Total Occlusions**



- **Bifurcation lesions**



The Achilles heel(s) of PCI & stents

- **Foreign body permanently in coronary artery**
- **Bioresorbable vascular scaffolds “...may be the next quantum leap in how interventional cardiologists treat symptomatic coronary artery disease.”**
 - **No risk of late stent thrombosis**
 - **Normal vascular architecture at 2 years**
 - **MACE comparable to metallic stents**

The Achilles heel(s) of PCI & stents

- **But...**
- **Cost at present prohibitive**
- **Reduced arterial lumen at 2 years**