Séminaire
Winter Arrhythmia
School
Annual Cardiac Arrhythmia Meeting
Division of Cardiology, University of Toronto

ICD in NICM: Con

Arnold Pinter
St. Michael's Hospital

14th Annual
Collingwood, Ontario,
February 10 -12, 2017

Disclosure

- No conflict of interest (I’m a nobody)
- Could not decide which side to be on

Quote of the day

Gen. James Mattis, United States Secretary of Defense: "I come in peace...

...I didn't bring artillery. But I'm pleading with you, with tears in my eyes: If you f@! with me, I'll kill you all."*

No contest

vs.

Canadian Journal of Cardiology 33 (2017) 174–188

Society Guidelines

Canadian Cardiovascular Society/Canadian Heart Rhythm Society 2016 Implantable Cardioverter-Defibrillator Guidelines

Primary Panel: Matthew Bennett, MD (Co-Chair),[a] Ratika Parkash, MD,[b] Pablo Nery, MD,[c] Mario Sénéchal, MD,[d] Blandine Mondesert, MD,[e] David Birnie, MD,[c] Laurence D. Sterns, MD,[f] Claus Rinne, MD,[g] Derek Exner, MD,[h] François Philippon, MD (Co-Chair),[d] **Secondary Panel:** Debra Campbell, RN,[i] Jafna Cox, MD,[b] Paul Dorian, MD,[j] Vidal Essebag, MD,[k] Andrew Krahn, MD,[a] Jaimie Manlucu, MD,[l] Franck Molin, MD,[d] Michael Slawnych, MD,[h] and Mario Talajic, MD[e]

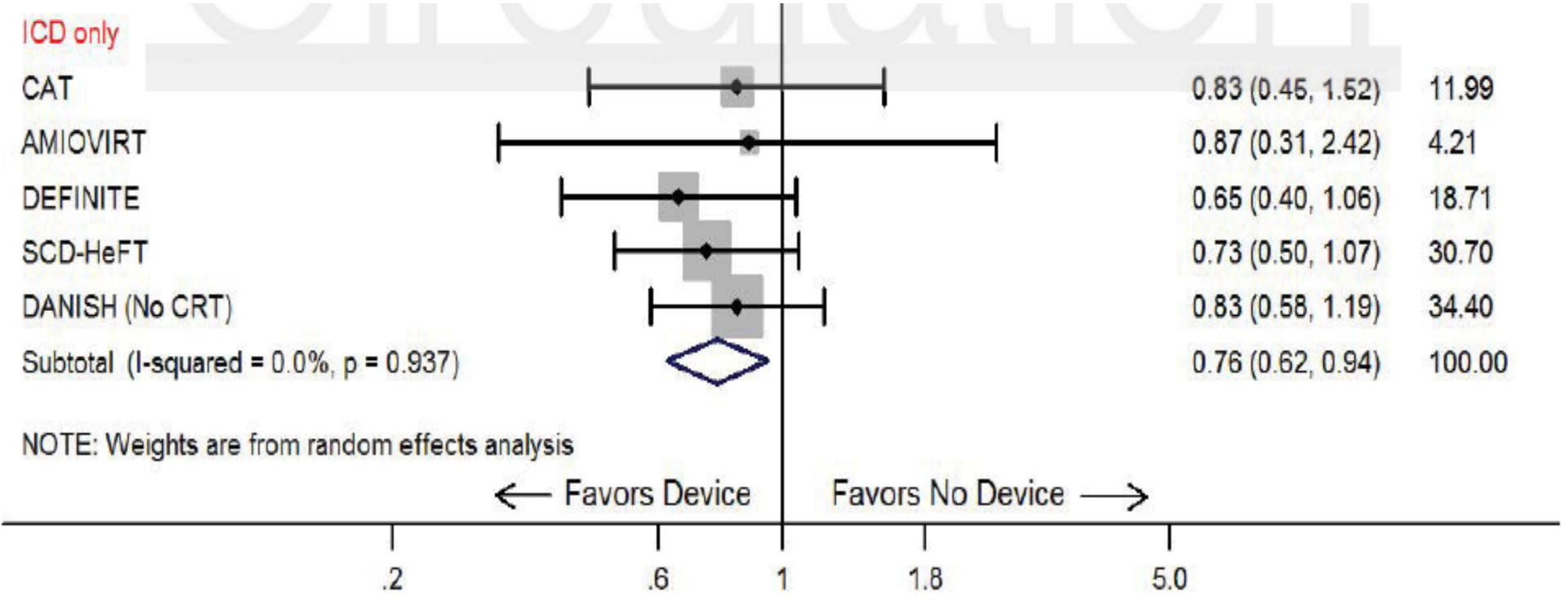
CCS/CHRS 2016 guidelines

RECOMMENDATION

1. We recommend that patients with persistent left ventricular dysfunction due to either ischemic or NICM and ejection fraction $\leq$ 30% receive an ICD, when persistent refers to at least 3 months of OMT in all patients and, in patients with ischemic heart disease, at least 3 months after revascularization and at least 40 days after an MI (Strong Recommendation; High-Quality Evidence).

Nonischemic cardiomyopathy. The data for ICD benefit in nonischemic cardiomyopathy (NICM) is less clear-cut. Before

The 5 trials the CCS/CHRS guidelines are based on



Golwala et al. Circulation. 2017 Jan 10;135(2):201-203

Interpretation of the evidence

Five strikes and you are in?

- CAT: **negative**
- AMIOVIRT: **negative**
- DEFINITE: **negative** (p=0.08)
- SCD-HeFT*: **negative*** (p=0.06)

  (*SCD-HeFT nonisch+isch: positive*)
- DANISH*: **negative***

- Metaanalysis: positive

  Meta-analysis is to analysis as metaphysics is to physics

Where have I seen this pattern before?

- **MAVERIC: negative** (EP-guided, only 31 ICD in 214 pts)
- **Dutch: negative** (crossover rate >50%)
- **AVID: positive**
- **CIDS: negative (*p= 0.142!*)**
- **CASH: negative** (1-sided p= 0.08)

- Metaanalysis: positive

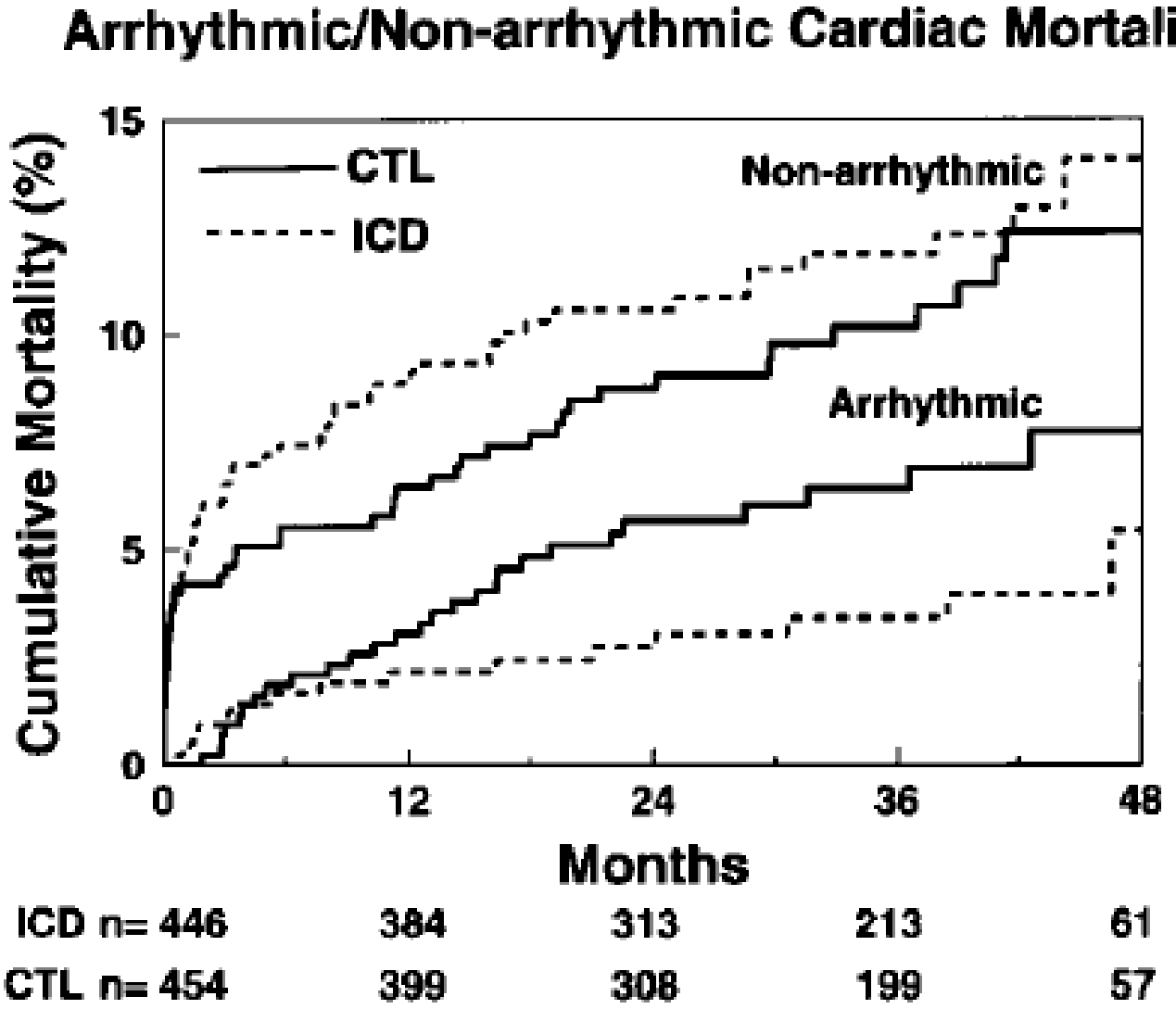
Guidelines: Strong recommendation; High quality evidence

Dr. Duh at ESC 2016 (heart*wire*)

- "ICDs were never supposed to reduce overall mortality. They reduce sudden cardiac death, that's their mechanism."

- *Translation: Let's prevent sudden, unexpected death and let patients die slowly, painfully and hopelessly.*

CABG-Patch



Bigger Jr, JT et al. Circulation 1999;99:1416-21

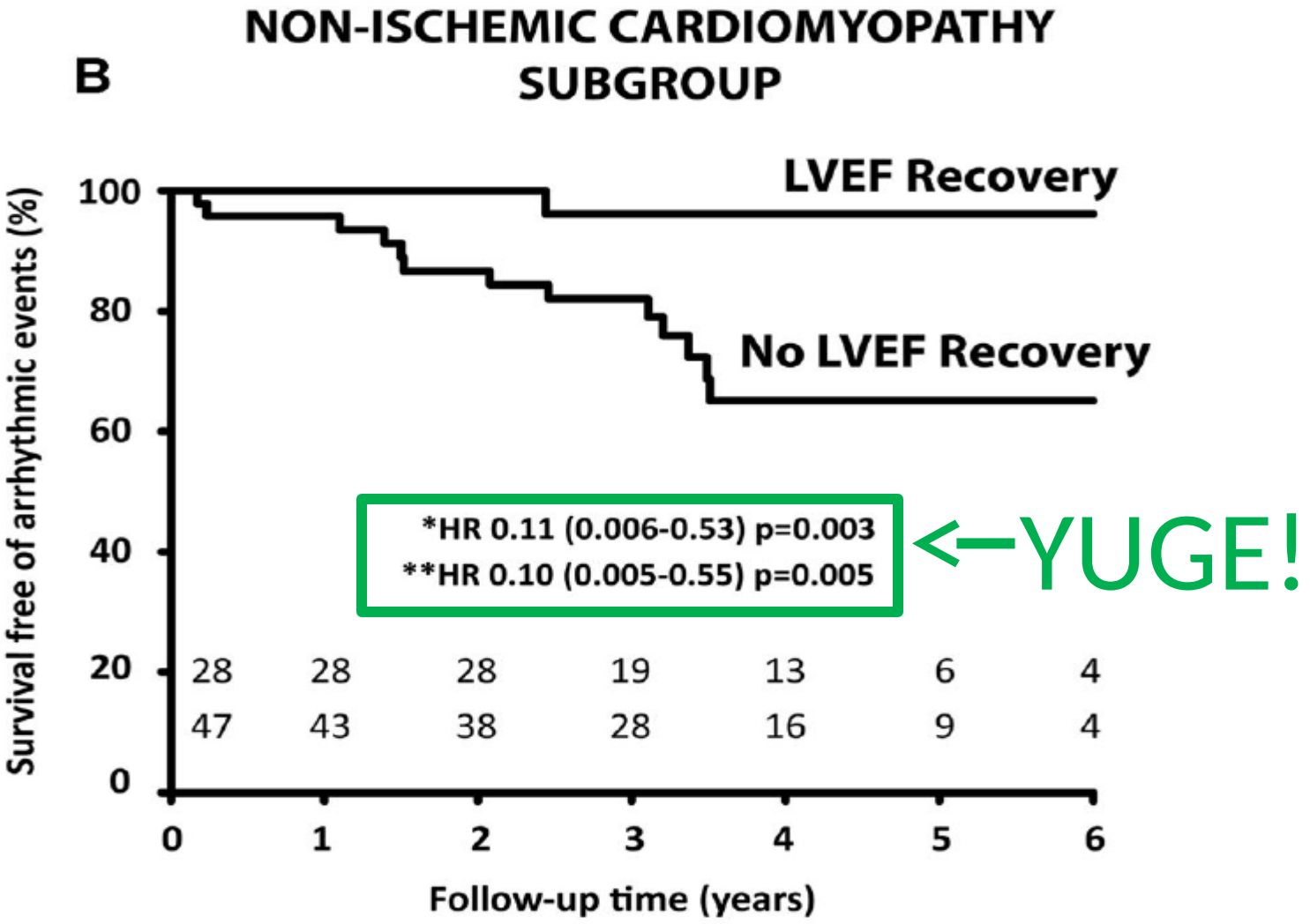
Want to prevent death in NICM?
Give me a C, give me an R, give me a T!

	SCD-HeFT*	CARE-HF
	NEJM 2005	NEJM 2005
	NYHA II-III	NYHA III
	EF 25%	EF 25%
	792 pts	813 pts
	ICD vs. placebo	**CRT** vs. placebo
	HR 0.73 (0.50-1.07)	HR 0.64 (0.48-0.85)
	p = 0.06	**p < 0.002**

What if patient responds to CRT therapy?

PACE 2016;39(7):680-9. **Arrhythmic Risk Following Recovery of Left Ventricular Ejection Fraction in Patients with Primary Prevention ICD.**

Berthelot-Richer M[1], Bonenfant F[2], Clavel MA[3], Farand P[2], Philippon F[3], Ayala-Paredes F[2], Essadiqi B[2], Badra-Verdu MG[2], Roux JF[2].



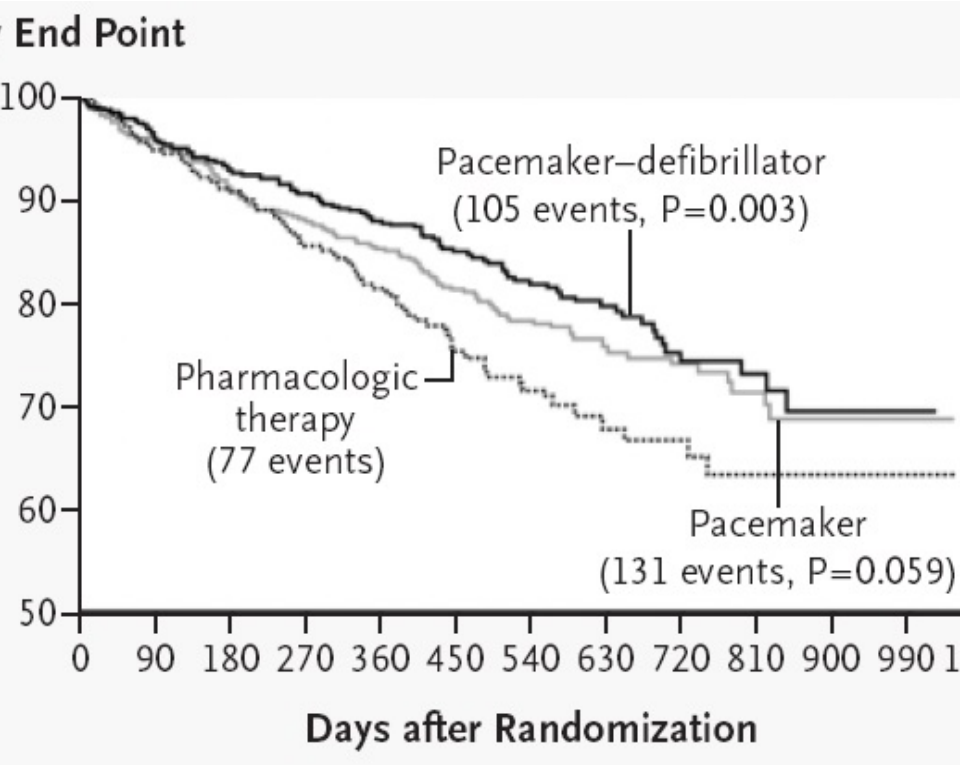
Should we ask different questions?

- 1. If patient is a candidate for CRT:
  - Should we **add** ICD to CRT?

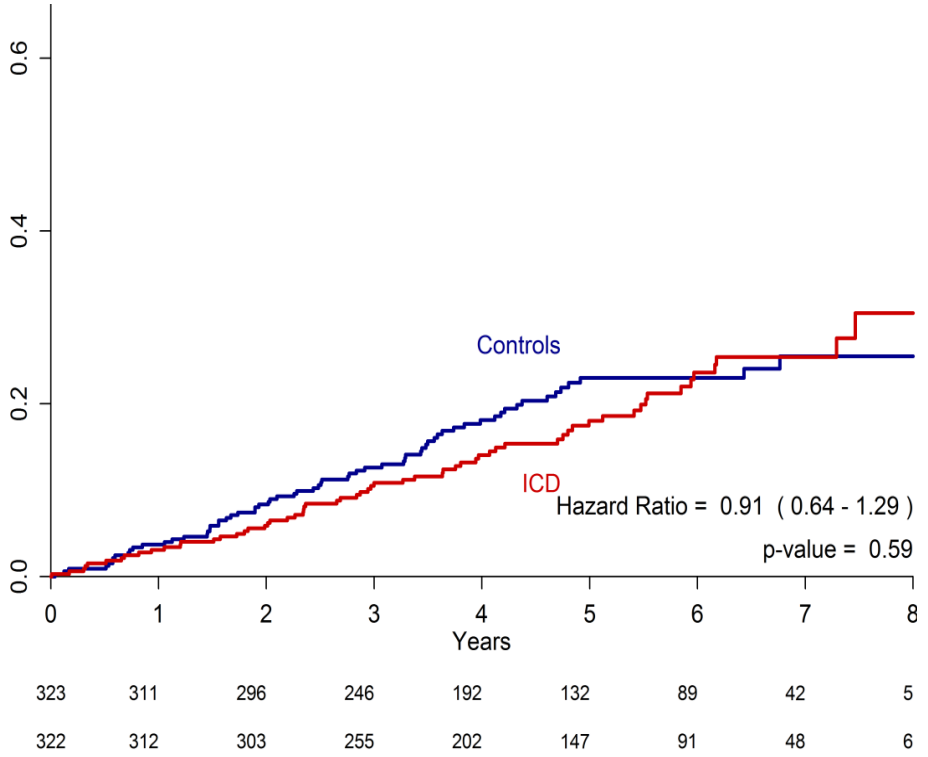
- 2. If patient is *NOT* a candidate for CRT (no CHF, narrow QRS):
  - Should we use ICD?
  - Does the patient want to prolong the suffering?

1. CRT-D vs CRT-P

COMPANION: Mortality



DANISH: CRT patients



RECOMMENDATION

1. We recommend that the prescription of CRT and the choice of platform (CRT-P vs CRT-D) should take into account clinical factors that would affect the overall goals of care (Strong Recommendation, Moderate-Quality Evidence).

Canadian Journal of Cardiology 29 (2013) 1346–1360

Society Guidelines

Canadian Cardiovascular Society Guidelines on the Use of Cardiac Resynchronization Therapy: Implementation

Ratika Parkash, MD, MSc,[a] François Philippon, MD,[b] Miriam Shanks, MD,[c] Bernard Thibault, MD,[d] Jafna Cox, MD,[a] Aaron Low, MD,[e] Vidal Essebag, MD, PhD,[f] Jamil Bashir, MD,[g] Gordon Moe, MD,[h] David H. Birnie, MD,[i] Éric Larose, MD,[b] Raymond Yee, MD,[j] Elizabeth Swiggum, MD,[k] Padma Kaul, PhD,[l] Damian Redfearn, MD,[m] Anthony S. Tang, MD,[k] and Derek V. Exner, MD, MPH[n]

1. CRT-P and CRT-D utilization

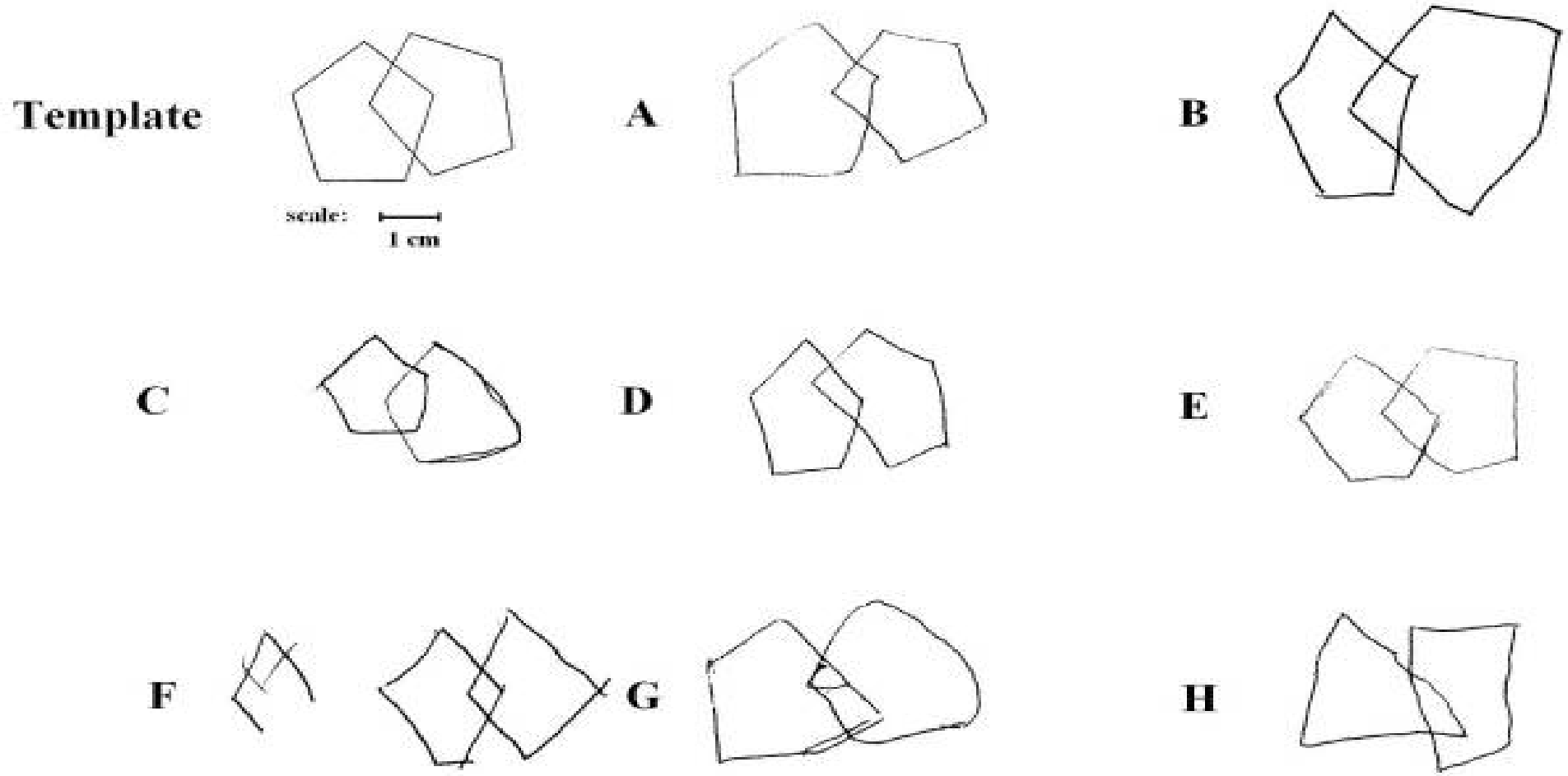
- Ontario, December 2016:
  - CRT-D: 114 implant
  - CRT-P: 8 implant

- Hungary:
  - 50-50%

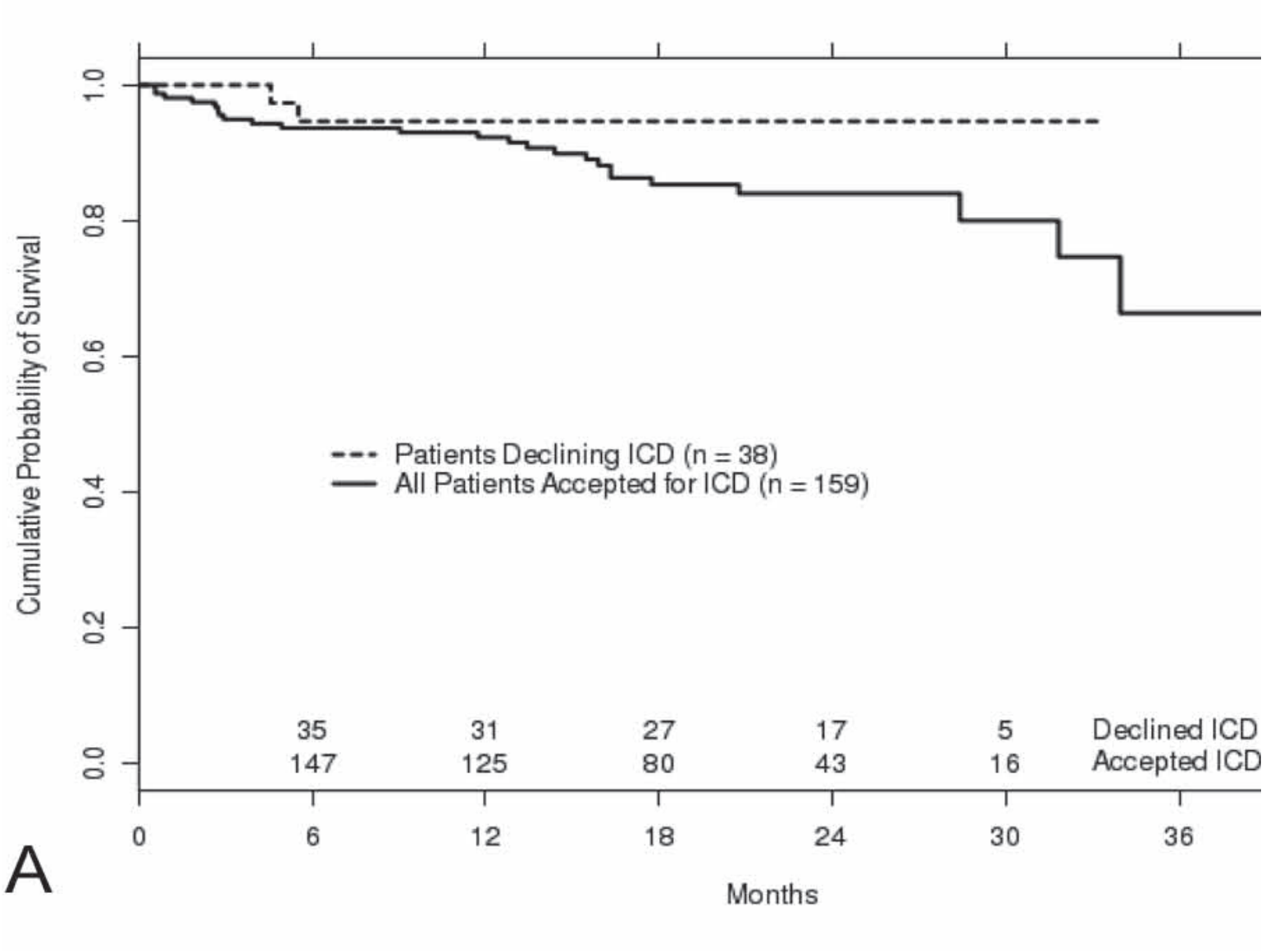
Strive or strife?

2. Patient knows best?

- “Don’t just do something, stand there!”
- We want to save lives: if we can’t make them feel better, the very least we can do is make them live longer



2. Patient knows best?



Ghosh N et al. Can J Cardiol 2009;25:e342-6