



LVAD Update

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Advanced Heart Failure and Transplant Cardiology

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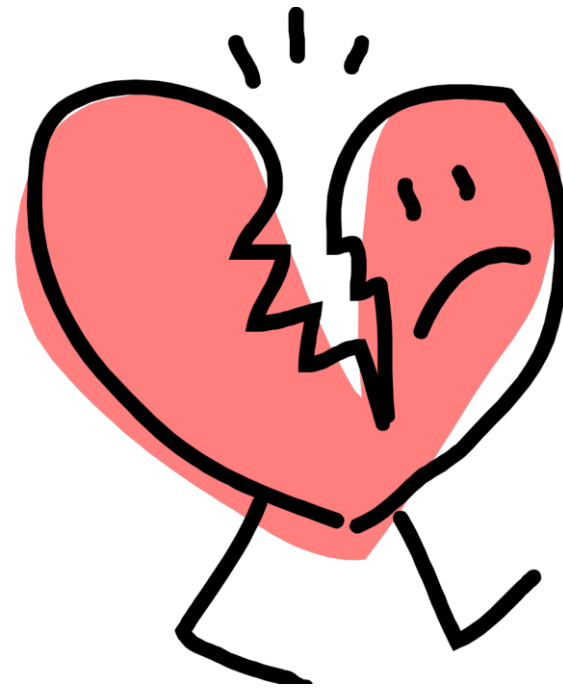
Advocate Christ Medical Center

Oak Lawn, Illinois

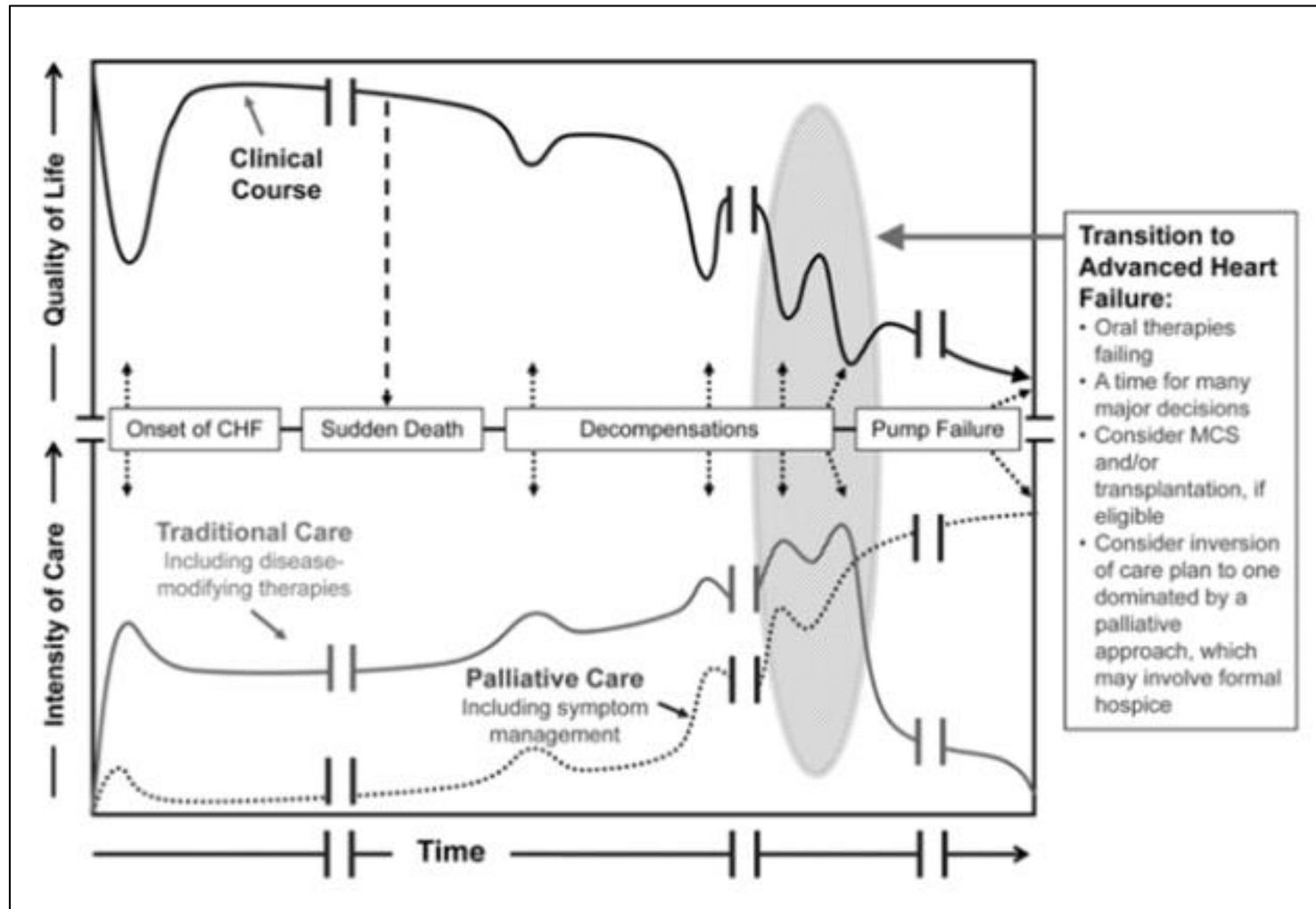
Disclosures

- No affiliations with pharmaceutical or device companies

What to do when medicine fails?



Clinical Course of HF



Definition of Advanced HF

- *NYHA III or IV symptoms*
- Episodes of fluid retention and/or reduced cardiac output at rest
- Objective evidence of severe cardiac dysfunction shown by at least one of the following:
 - LVEF < 30%
 - Pseudonormal or restrictive mitral inflow pattern
 - Mean PCWP > 16 mmHg and/or RAP > 12 mmHg by PA catheterization
 - High BNP or NT-proBNP in absence of non cardiac causes
- Severe impairment of functional capacity as shown by 1 of the following:
 - Inability to exercise
 - 6MWT ≤ 300 m
 - *Peak VO₂ < 12-14 mL/kg/min*
- History of *≥ 1 hospitalization in past 6 months*
- *All the above despite “attempts to optimize” therapy*

Putting it into perspective

NYHA	METs	VO ₂	Bruce Stage
I	7.5	26.3	≈ 2
II	6	21	1-2
III	4.5	15.8	≈ 1.5
IV	3	10.5	< 1

1 MET = 3.5 cc O₂ / min / kg

Thinking
advanced HF

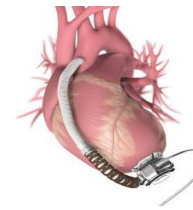
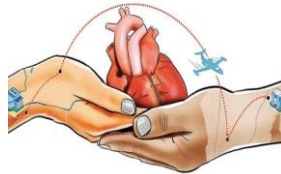
Refer to Advanced HF Cardiologist

- Educate Pt and family about HF
- Review/adjust meds
- If needed, further evaluate patient to determine if Stage D
- Resume follow up with PCP and Cardiologist

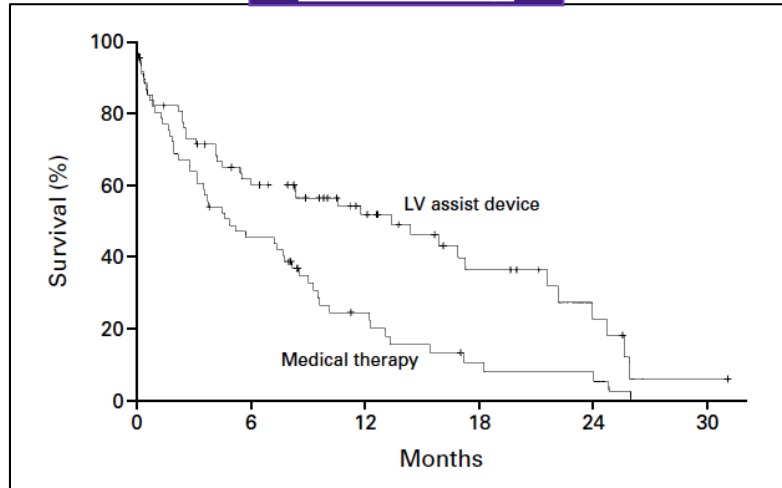
Not Stage D

Stage D

Cont to monitor

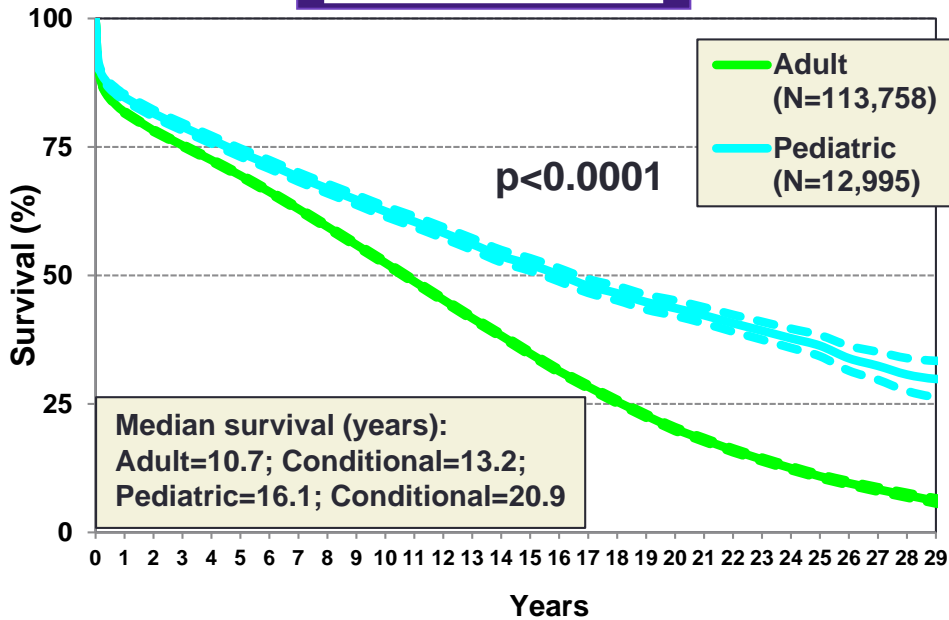


Meds Only



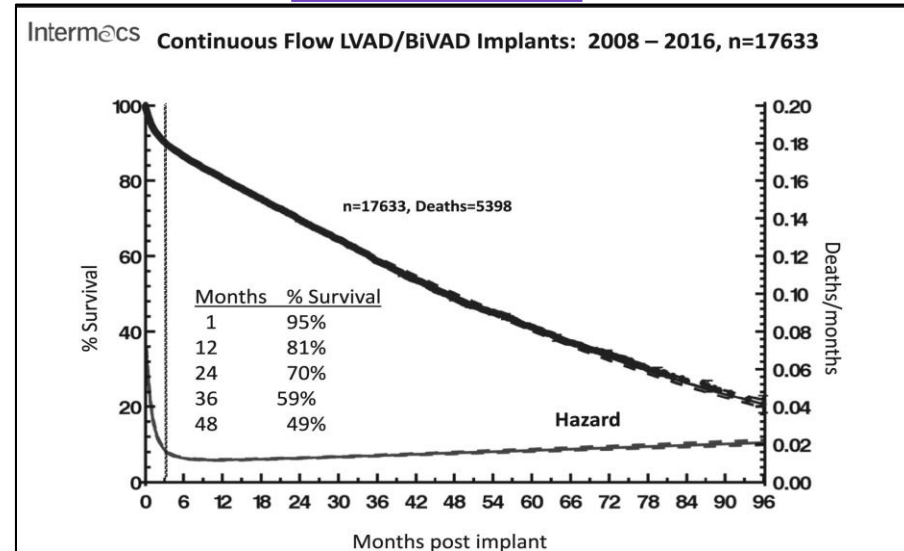
NEJM. 2001 Nov; 345(20): 1435-1443

Heart Transplant



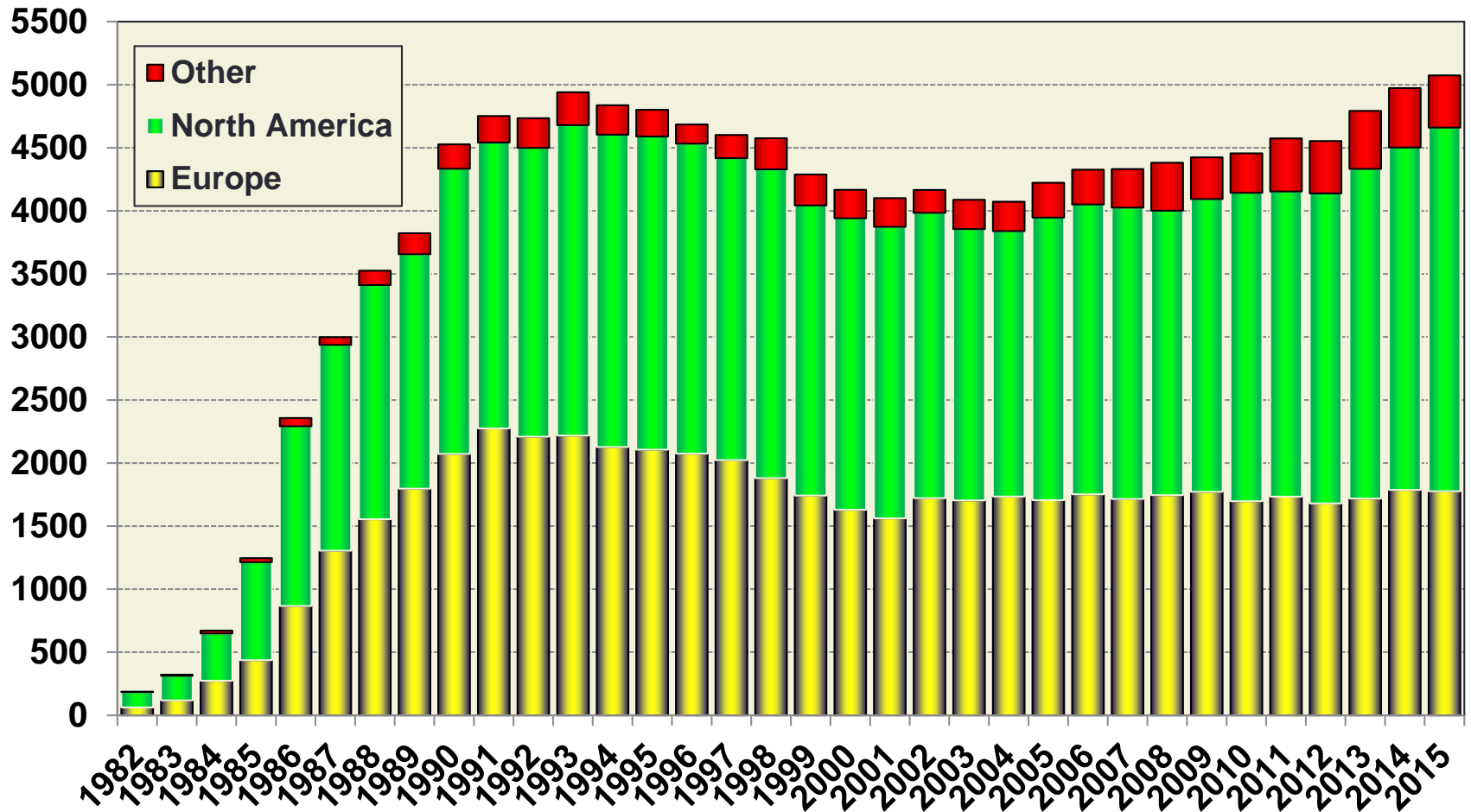
JHLT. 2017 Oct; 36(10): 1037-1079

cfLVAD

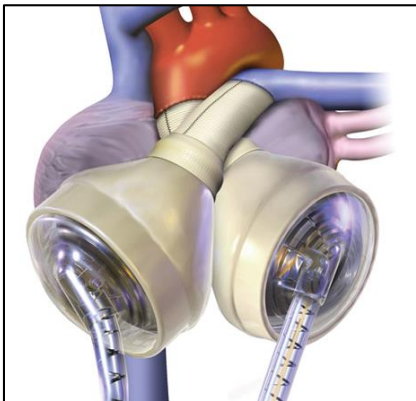
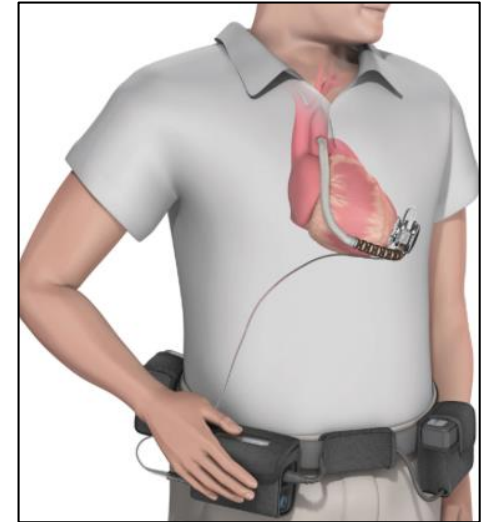
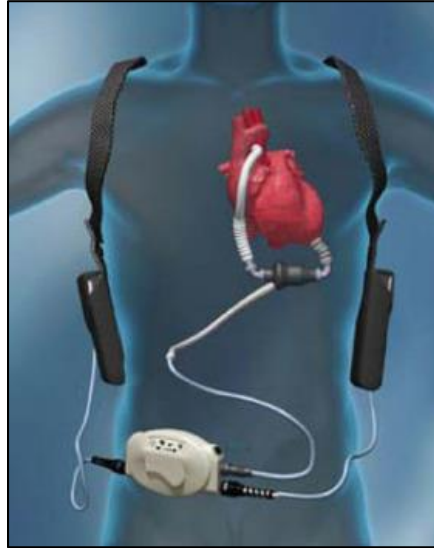
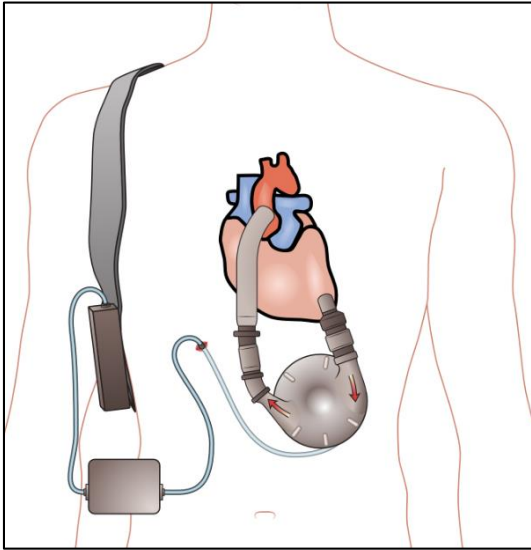


JHLT. 2017 36, 1080-1086DOI

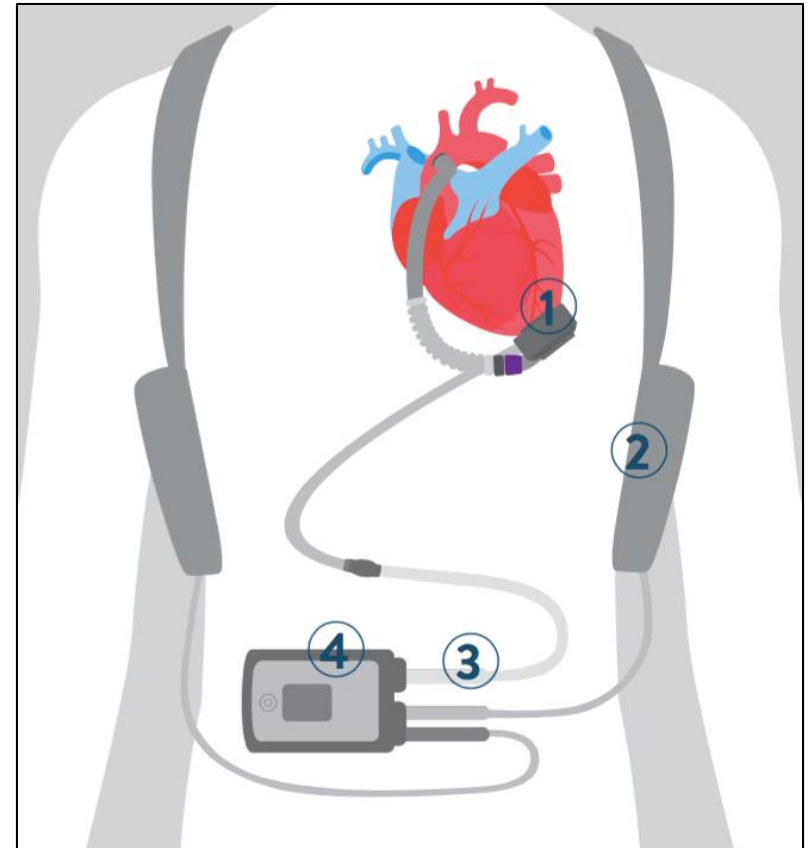
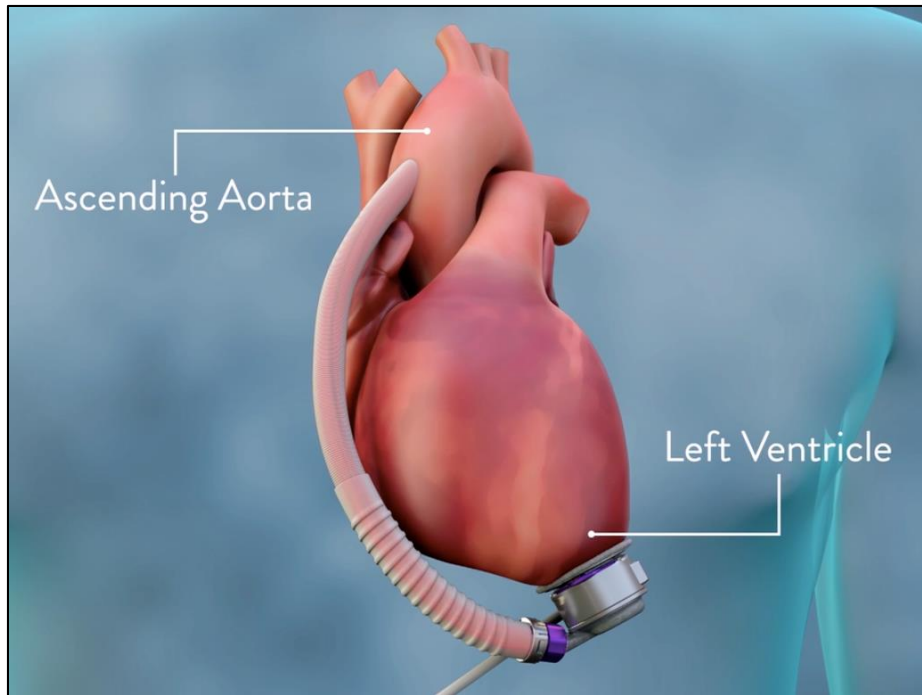
So what's new?



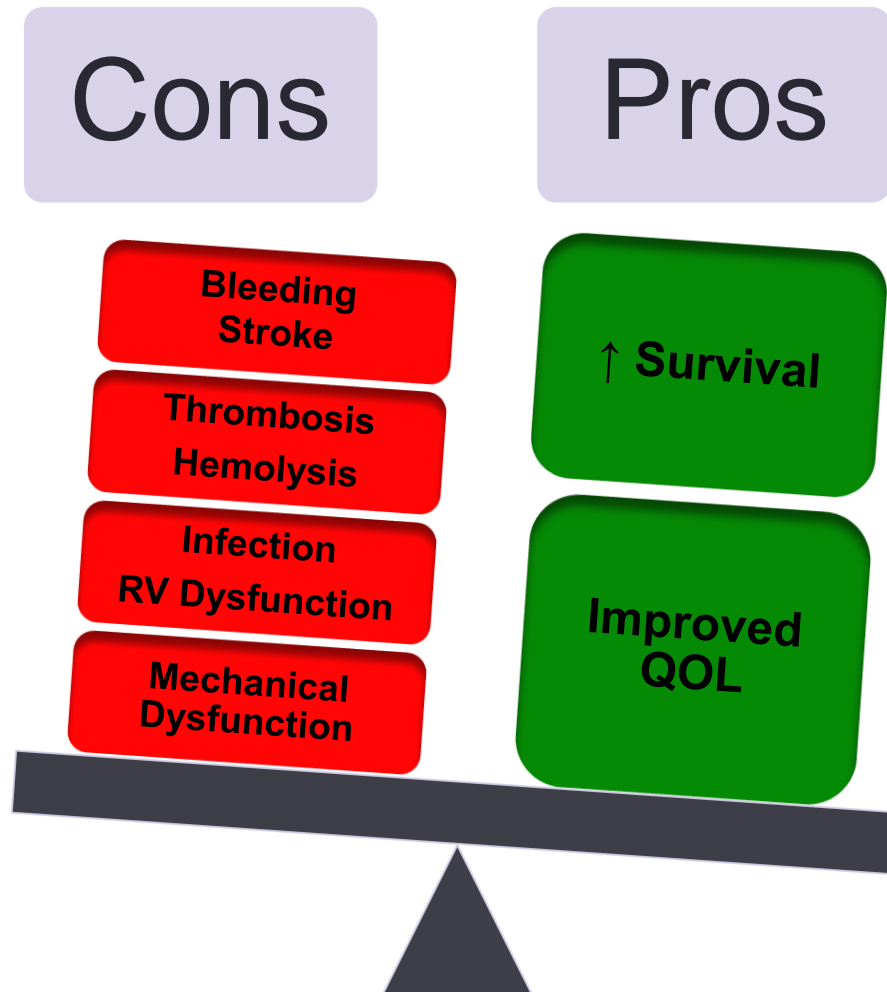
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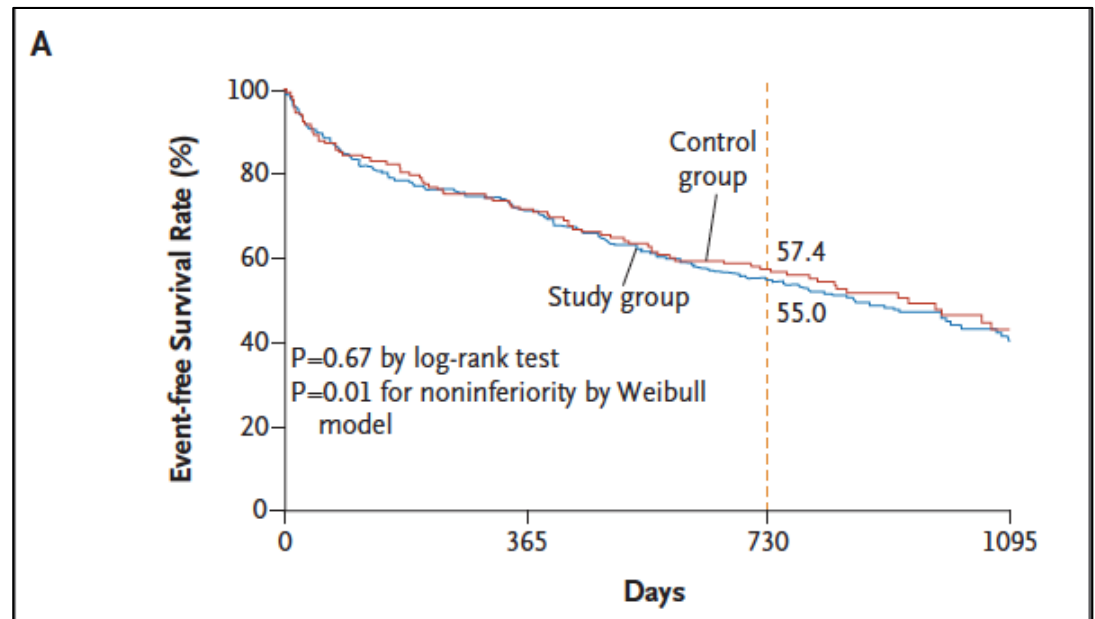
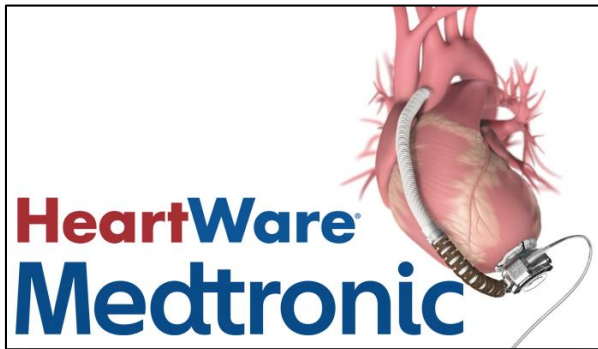
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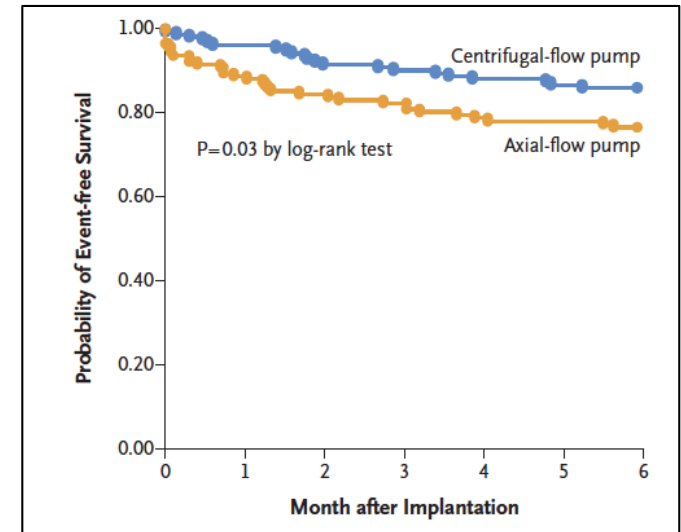
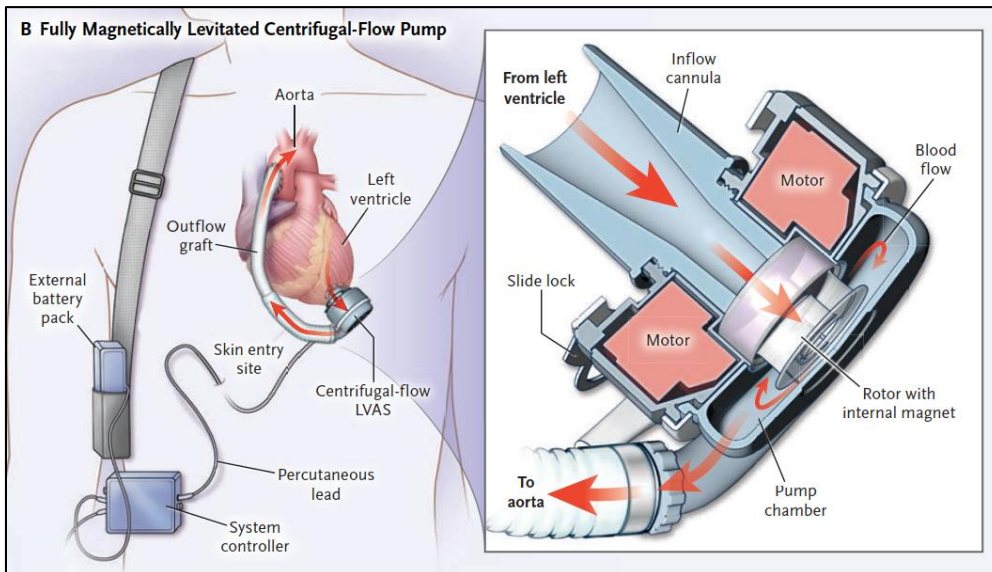
So what's new?



So what's new?



So what's new?



No thrombosis at 6 months!



In this world, with great power
there must also come —
great responsibility!

-Stan Lee. *Amazing Fantasy* #15

