



# Recognizing the Heart Failure Patient That Needs Escalation

Deirdre Mooney MD MPH FACC

Providence Sacred Heart Medical Center

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# Recognizing the Heart Failure Patient That Needs Escalation

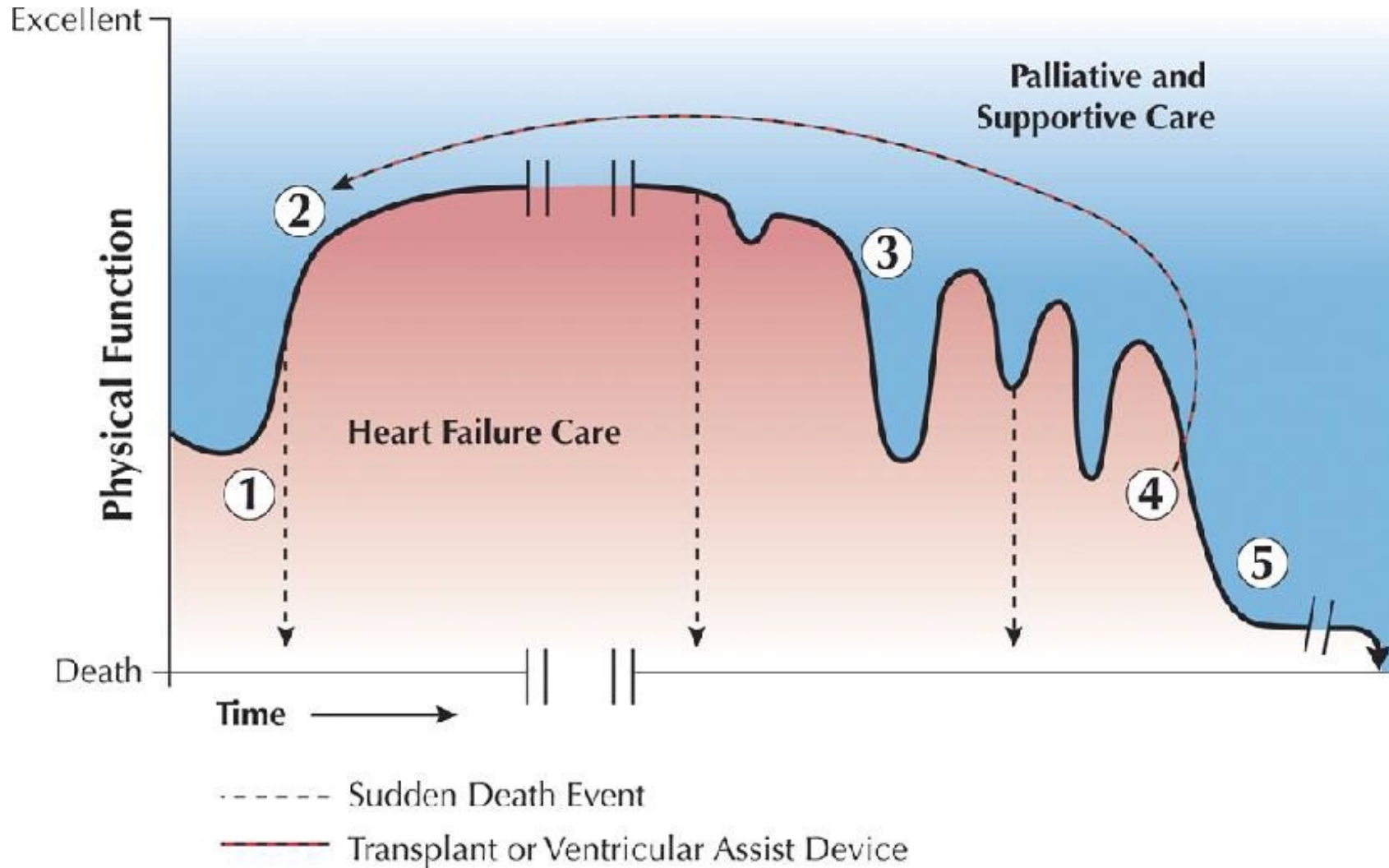
Our objective is to review:

- Staging and classification of HF
- Contemporary statistics on HF
- Common signs and symptoms of clinical decline in HF patients
- Triggers to refer to Advanced Heart Failure specialists
- Options to escalate HF care for sliding patients

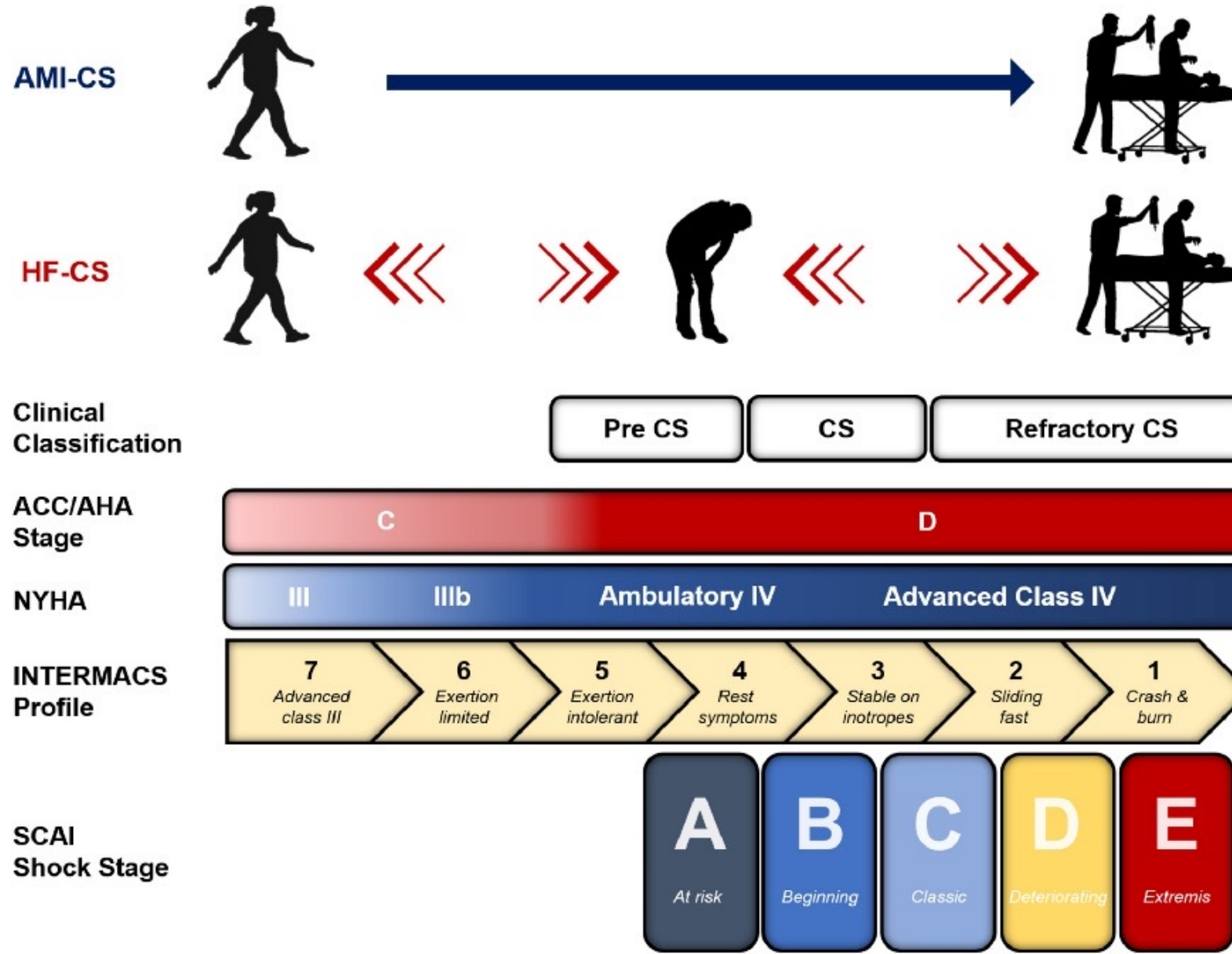
# Heart Failure Staging & Classification

ACCF/AHA Stages of HF <sup>38</sup>		NYHA Functional Classification <sup>48</sup>	
A	At high risk for HF but without structural heart disease or symptoms of HF	None	
B	Structural heart disease but without signs or symptoms of HF	I	No limitation of physical activity. Ordinary physical activity does not cause symptoms of HF.
C	Structural heart disease with prior or current symptoms of HF	I	No limitation of physical activity. Ordinary physical activity does not cause symptoms of HF.
		II	Slight limitation of physical activity. Comfortable at rest, but ordinary physical activity results in symptoms of HF.
		III	Marked limitation of physical activity. Comfortable at rest, but less than ordinary activity causes symptoms of HF.
		IV	Unable to carry on any physical activity without symptoms of HF, or symptoms of HF at rest.
D	Refractory HF requiring specialized interventions	IV	Unable to carry on any physical activity without symptoms of HF, or symptoms of HF at rest.

# Heart Failure Trajectory



# Heart Failure Staging & Classification





# Defining Advanced Heart Failure

## ESC Definition of Advanced Heart failure 2018

All criteria must be present despite optimal guideline-directed treatment

1. Severe and persistent symptoms of HF (NYHA class III [advanced] or IV)
2. Severe cardiac dysfunction defined by $\geq 1$ of these:  LVEF $\leq 30\%$ Isolated RV failure Nonoperable severe valve abnormalities Nonoperable severe congenital heart disease EF $\geq 40\%$ , elevated natriuretic peptide levels and evidence of significant diastolic dysfunction
3. Hospitalizations or unplanned visits in the past 12 mo for episodes of:  Congestion requiring high-dose intravenous diuretics or diuretic combinations Low output requiring inotropes or vasoactive medications Malignant arrhythmias
4. Severe impairment of exercise capacity with inability to exercise or low 6-minute walk test distance ( $< 300$ m) or peak $VO_2$ ( $< 12-14$ mL/kg/min) estimated to be of cardiac origin

# Advanced Heart failure statistics

HF is associated with:

- Poor QOL
- High risk of death
- Leading cause of hospitalization

Advanced HF prevalence

- Increasing as the population ages
- 1–10% of patients with HF progress to an advanced stage of the disease
- In the US, ~ 250,000–300,000 patients under the age of 75 years have advanced HF

Adv HF prognosis is poor

- 1-year mortality 25–50%

Heart transplantation

- Gold standard for severe refractory HF
- 1-year survival ~ 90%

Durable LVAD

- Survival and QoL continues to improve
- MOMENTUM3 trial 1-year survival 86.6%, 5 year 58.4%

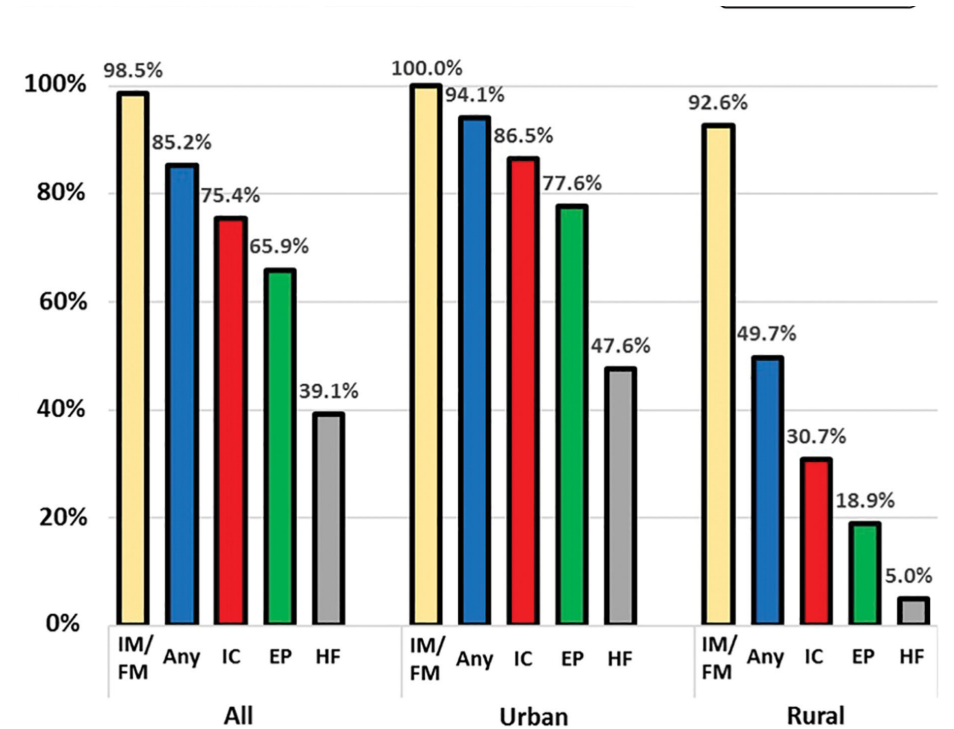
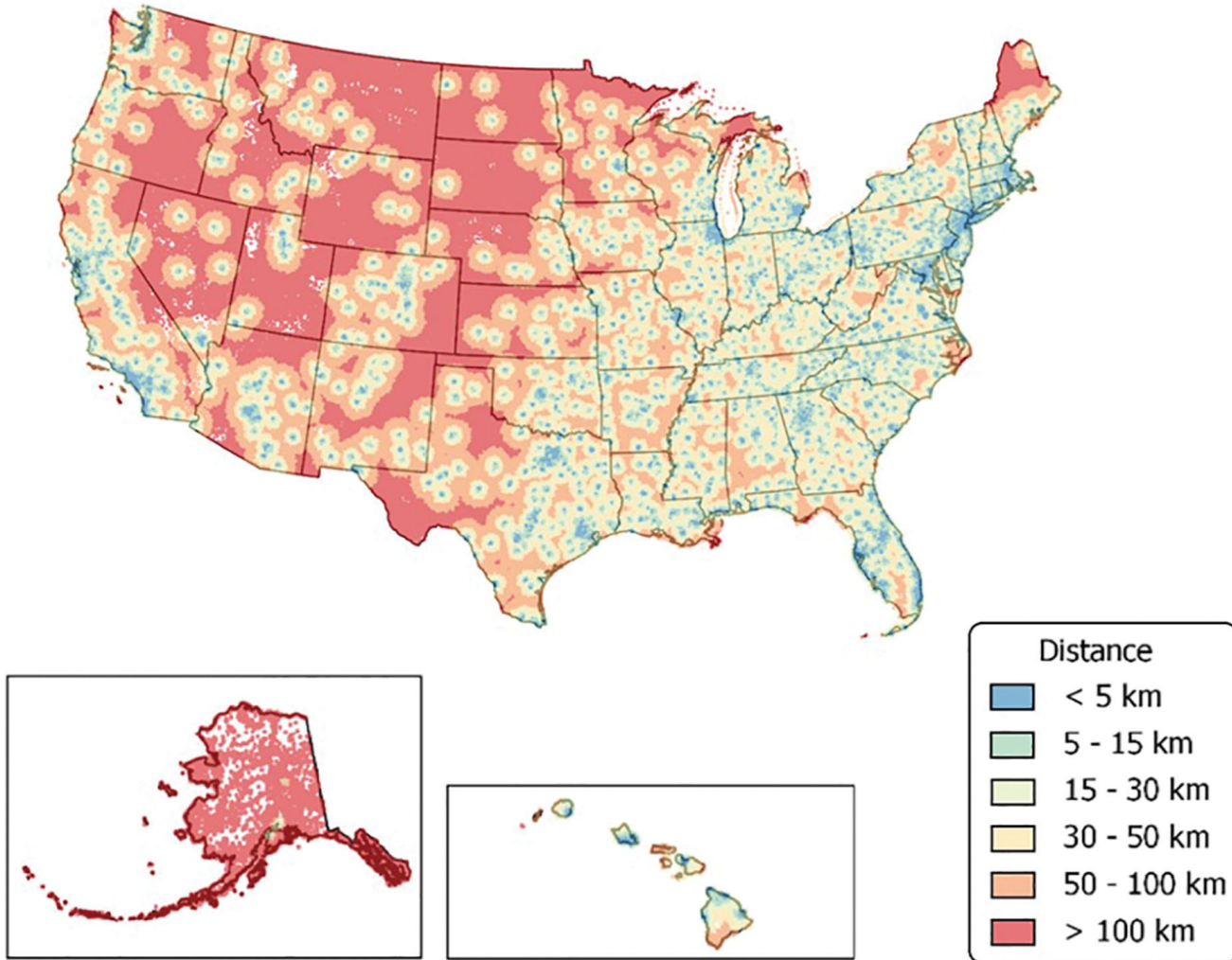
RX: Advanced Heart Failure referral





# Geography Matters

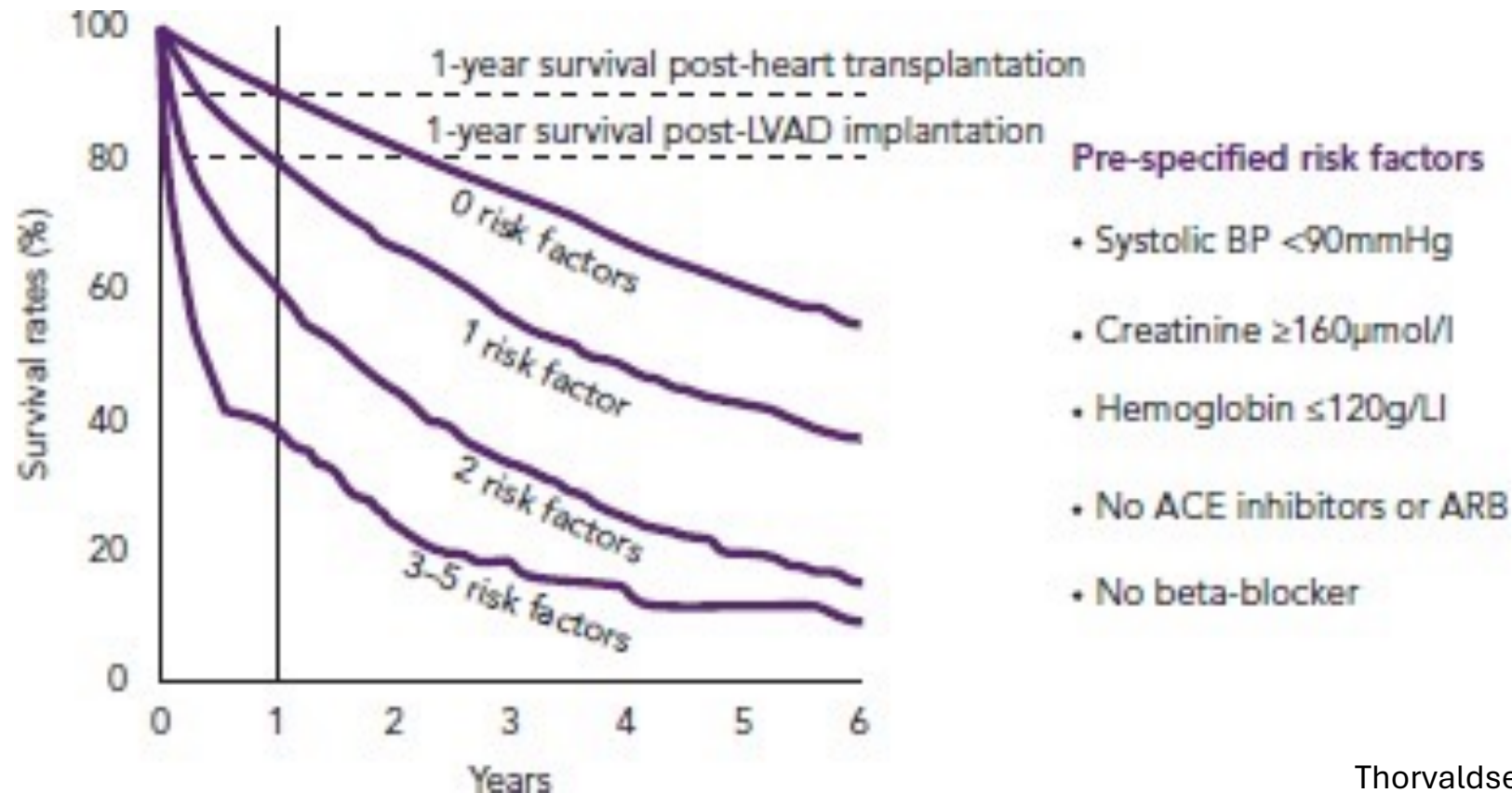
A



Motairek I. et al. Circ: CV Qual & Outcome. 2023

# Indications to refer to Advanced Heart Failure: Swedish Heart Failure Registry

Adults  $\leq 80$ yr, NYHA III-IV, LV EF  $<40\%$



# Triggers to refer to Advanced Heart Failure

<b>I</b>	<b>I</b> notropes	Previous or ongoing requirement for dobutamine, milrinone, dopamine or levosimendan
<b>N</b>	<b>N</b> YHA class/ <b>N</b> atriuretic peptides	Persisting NYHA Class III or IV and/or persistently high BNP or NT-pro-BNP
<b>E</b>	<b>E</b> nd-Organ Dysfunction	Worsening renal or liver dysfunction in the setting of heart failure
<b>E</b>	<b>E</b> jection Fraction	Very low ejection fraction <20%
<b>D</b>	<b>D</b> efibrillator shocks	Recurrent appropriate defibrillator shocks
<b>H</b>	<b>H</b> ospitalizations	More than 1 hospitalization with heart failure in the last 12 months
<b>E</b>	<b>E</b> dema/ <b>E</b> scalating diuretics	Persisting fluid overload and/or Increasing diuretic requirement
<b>L</b>	<b>L</b> ow blood pressure	Consistently low BP with systolic <90 to 100 mm Hg
<b>P</b>	<b>P</b> rognostic medication	Inability to up-titrate (or need to decrease/cease) ACEI, B-blockers, ARNIs or MRAs

Baumwol, Jay. J Heart Lung Transplant. 2017.

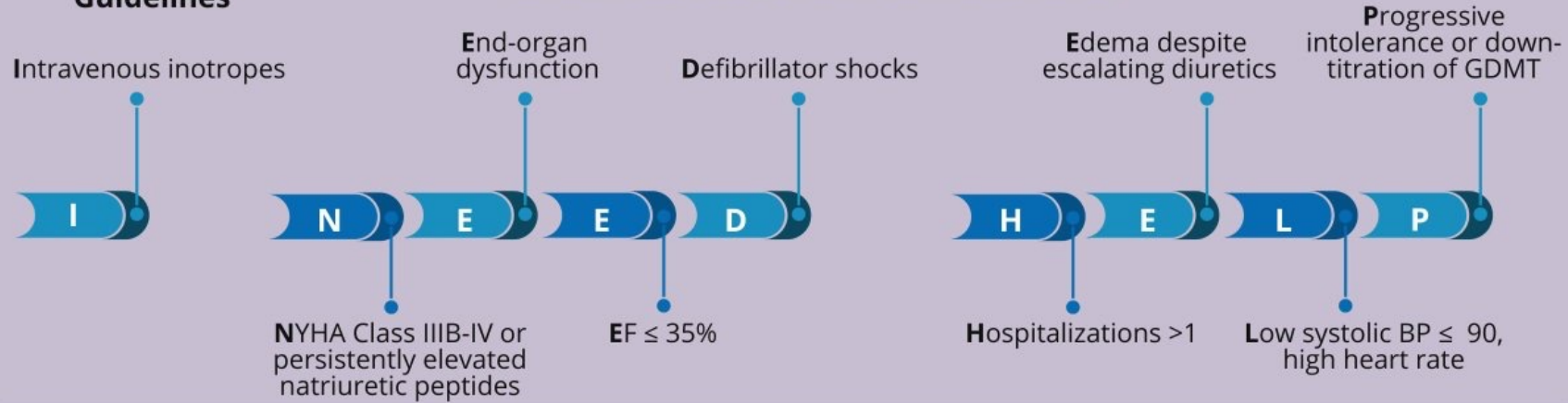
Pagnesi, Matteo, et al. Circ Heart Fail. . 2023



# Stage D (Advanced) Heart Failure



## Indicators of Advanced Heart Failure



**Class 1,  
LOE C-LD**

**In patients with advanced HF, timely referral for HF specialty care is recommended to review management & suitability for advanced therapies**

## Therapeutic Considerations



### Inotropes

**Class 2a,  
LOE B-NR**

In advanced HF refractory to GDMT/ devices & eligible for or , continuous IV are reasonable as "bridge therapy"

**Class 2b,  
LOE B-NR**

In advanced HF despite optimal GDMT/devices & ineligible for or , consider continuous IV as palliative therapy for symptom control & to improve functional status

**Class 3,  
LOE B-R**

Long-term use of IV for reasons other than palliative care or bridge to advanced therapies is potentially harmful



### MCS

**Class 1,  
LOE A**

In select pts with advanced HFrEF, NYHA Class IV & dependent on continuous IV or temporary , durable LVAD is effective to improve functional status, QOL, & survival

**Class 2a,  
LOE B-R**

In select pts with advanced HFrEF, NYHA Class IV despite GDMT, durable can be beneficial to improve symptoms/functional class &  $\downarrow$  mortality

**Class 2a,  
LOE B-NR**

In advanced HFrEF & hemodynamic compromise/shock, temporary are reasonable as "bridge to recovery" or "bridge to decision"



### Transplant

**Class 1,  
LOE C-LD**

For select pts with advanced HF despite GDMT, is indicated to improve survival & QOL



Early referrals offer benefits such as enhanced understanding, access to specialized resources, and an opportunity to plan.

[Deirdre.Mooney@providence.org](mailto:Deirdre.Mooney@providence.org)