

XII Meeting. State of the Art in

HEART FAILURE

CLINICAL PRACTICE AND ORGANIZATIONAL MODELS

Venue: Hotel Meliá María Pita, A Coruña

A Coruña 26-27 September 2025



#ACORUÑAHF2025

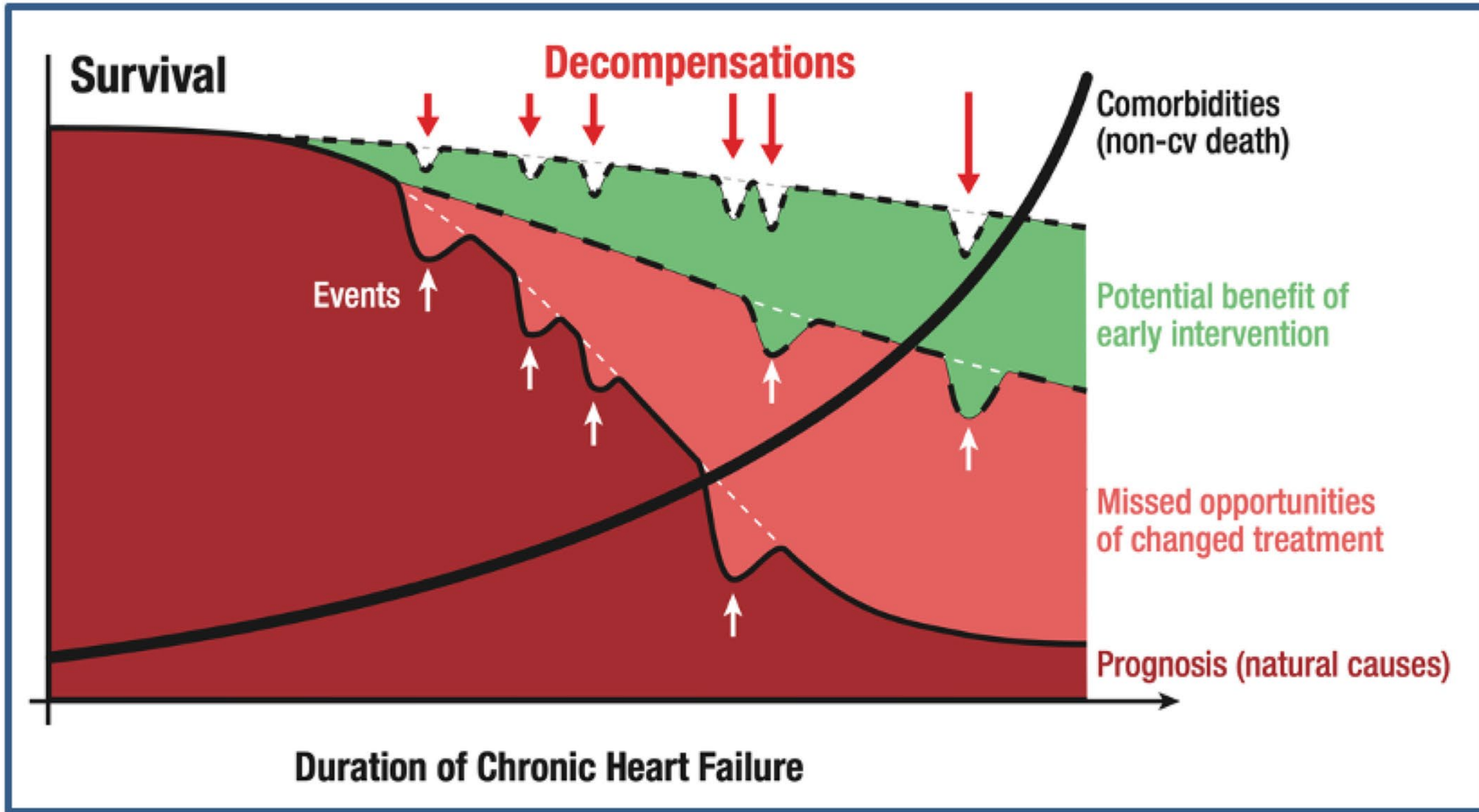


When to refer a patient to an advanced HF center?

¿Cuándo derivar a un paciente para terapias avanzadas de IC?

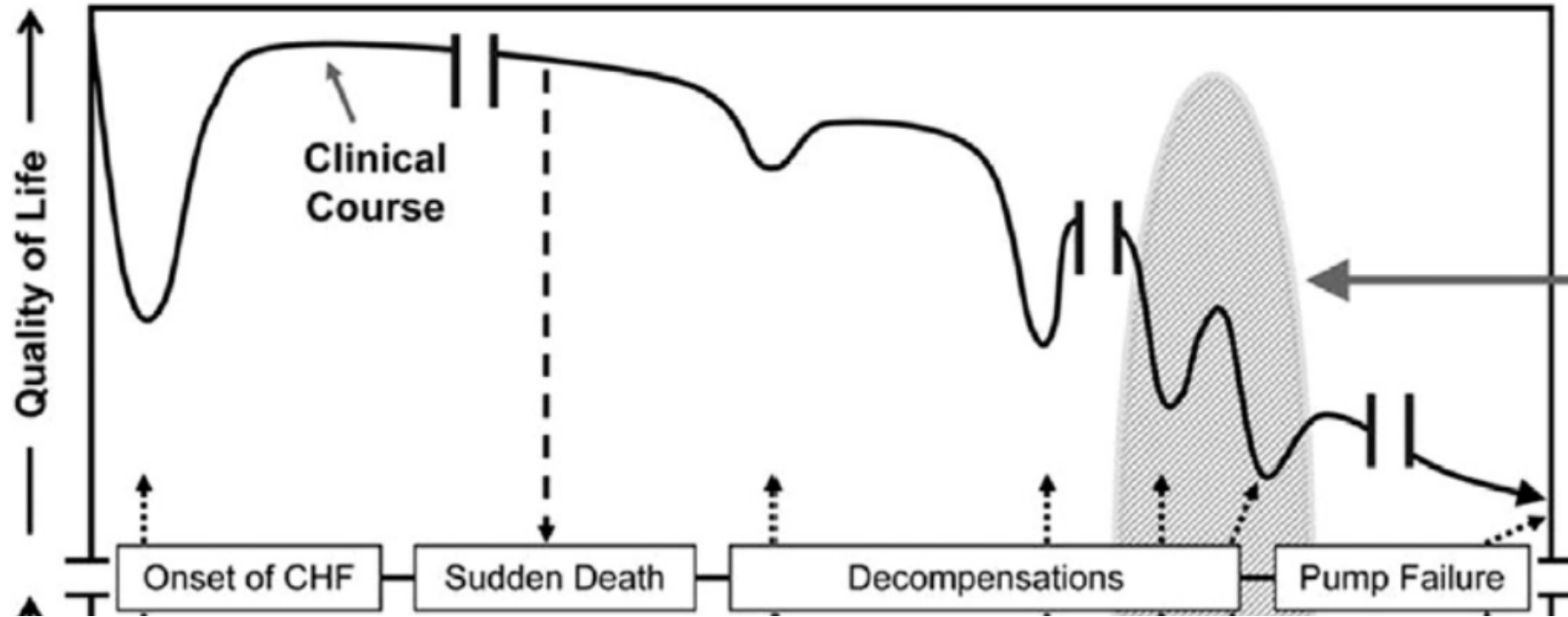
Sonia Mirabet, MD, PhD || Hospital Sant Pau. Barcelona

Trajectory of HF



Abdin et al. ESC Heart Fail 2021

Trajectory of HF

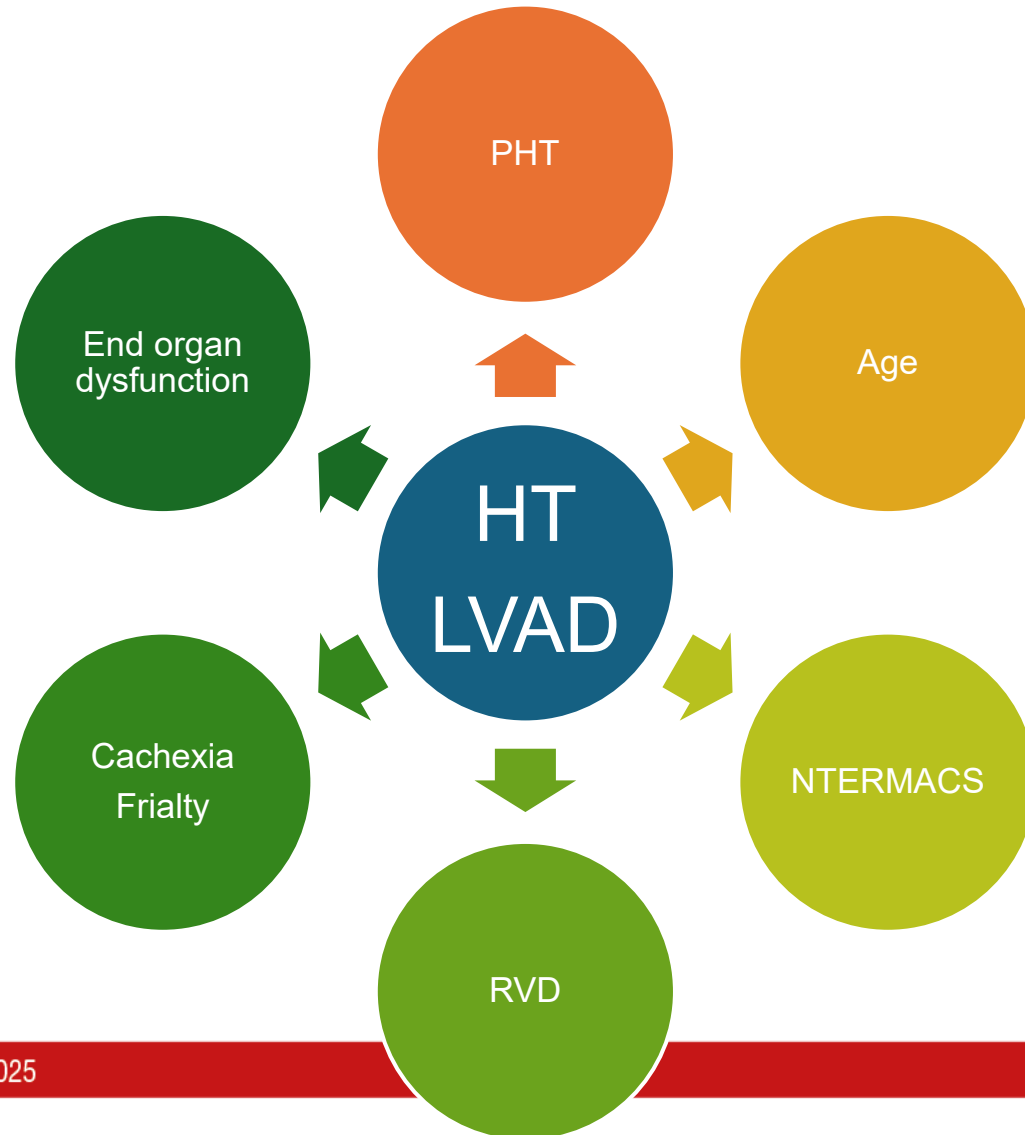


Transition to Advanced Heart Failure:

- Oral therapies failing
- A time for many major decisions
- Consider MCS and/or transplantation, if eligible
- Consider inversion of care plan to one dominated by a palliative approach, which may involve formal hospice

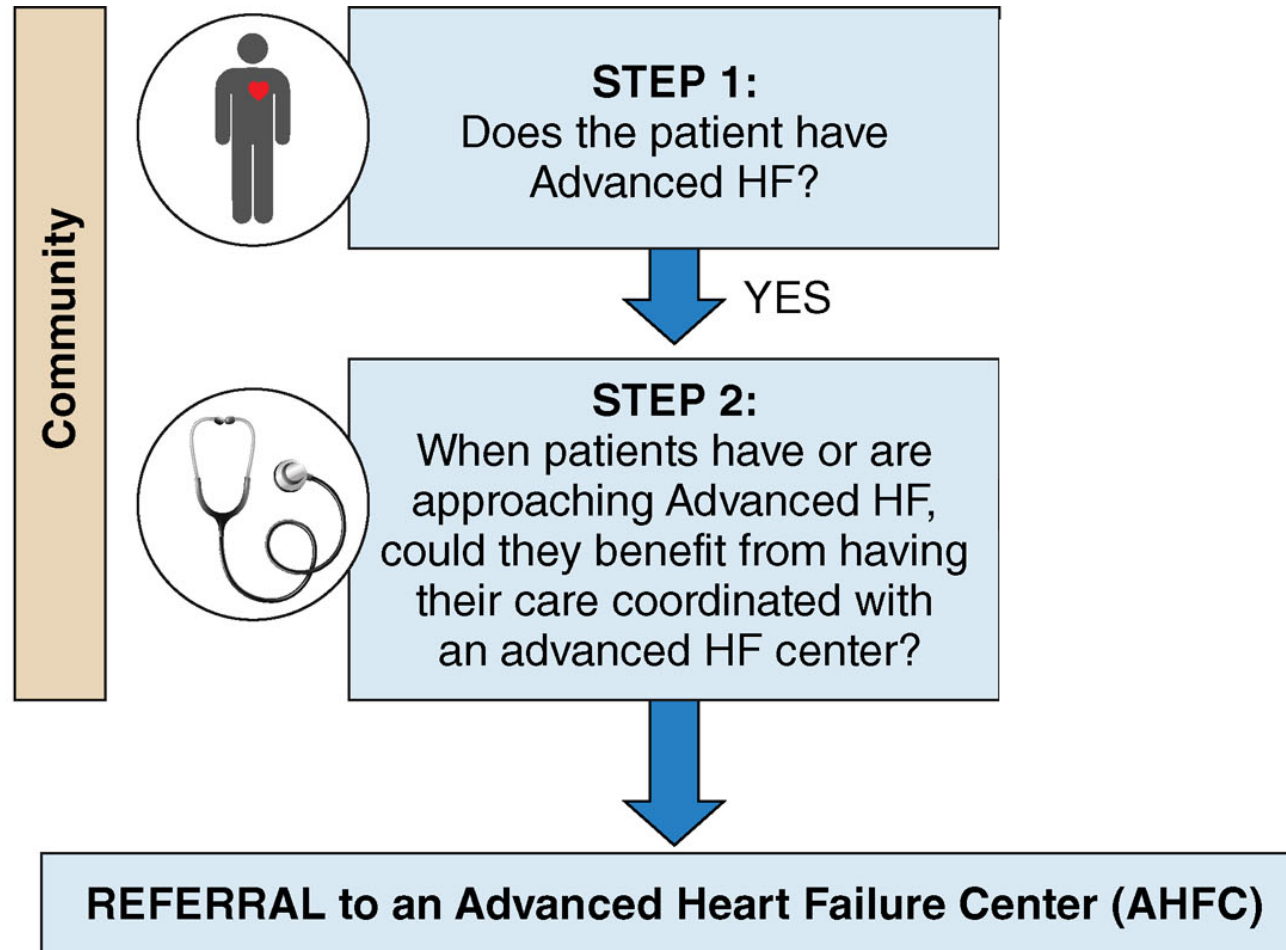
Chaundry et al . Heart Fail Clin 2016

Therapeutic opportunities for patients with AHF



- **Candidacy**
- **Morbidity**
- **Mortality**

When to refer a patient to an advanced HF center?



Morris AA et al. Circulation 2021

Why should a patient be referred to an advanced HF center?

Characteristics of AHF

- High mortality
- Debilitating symptoms
- Poor quality of life

Opportunities for AHF

- Heart Transplantation
- MCS

Why should a patient be referred to an advanced HF center?

	1-year survival	2-year survival	Functional status	Patients' quality of life	Caregivers burden	Sexual activity	Employment and productivity
Medically Managed Advanced HF 	 ~50-60%	 ~30-40%	+	+	++++	+	+
Long-term MCS 	 ~85-90%	 ~80%	++ to +++	++ to +++	++ to +++	++ to +++	++ to +++
Heart transplant 	 ~90%	 ~80-85%	++ to ++++	++ to ++++	++ to +++	++ to ++++	++ to +++

Baudry et al. Eur J Heart Fail 2025

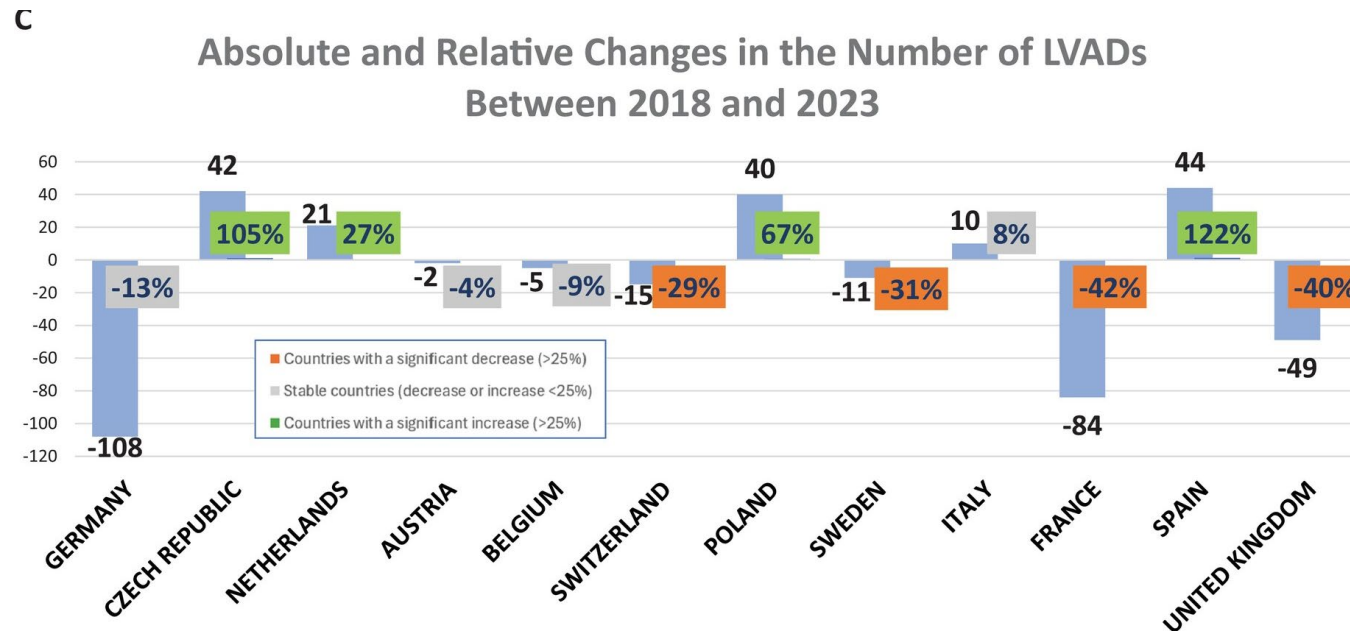
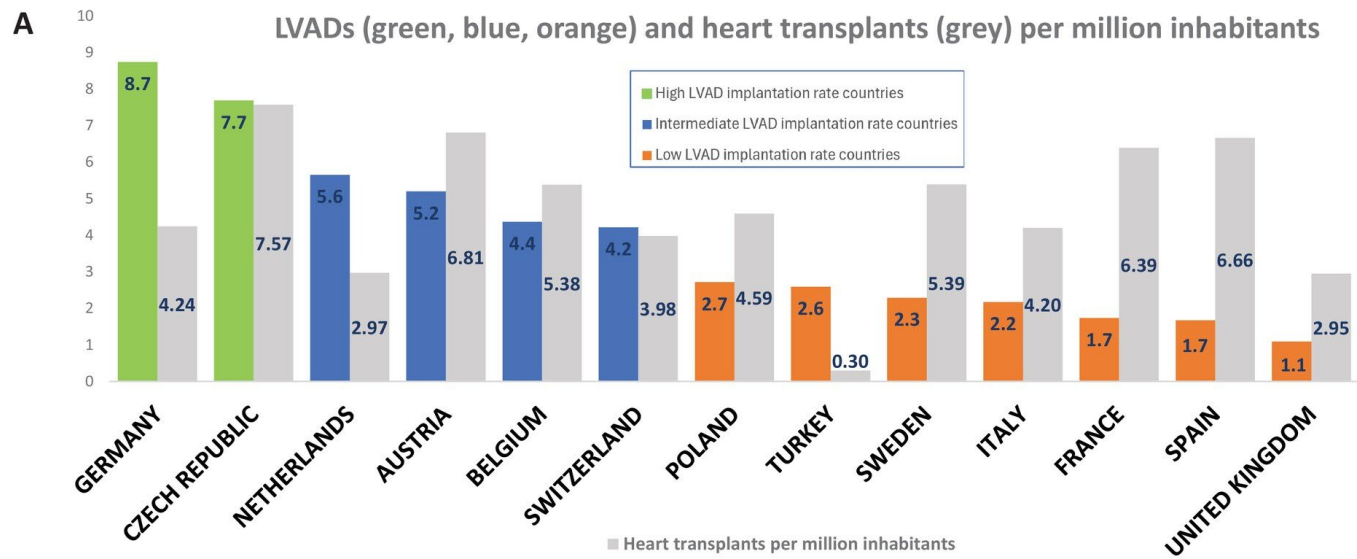
Who is considered to have advanced heart failure?

Table 2 'I NEED HELP' criteria

I	Inotropes	Previous or ongoing requirement for inotropes
N	NYHA class/NPs	Persisting NYHA class III–IV/persistently high NPs
E	End-organ dysfunction	Worsening liver or renal dysfunction in the setting of HF
E	EF	EF <20%
D	Defibrillator shocks	Recurrent appropriate defibrillator shocks
H	HF hospitalization	>1 HF hospitalization within 12 months
E	Edema/Escalating diuretics	Persisting fluid overload and/or increasing diuretic requirement
L	Low blood pressure	Consistently SBP <100 mmHg
P	Prognostic medication	Inability to up-titrate (or need to decrease/cease) GDMT

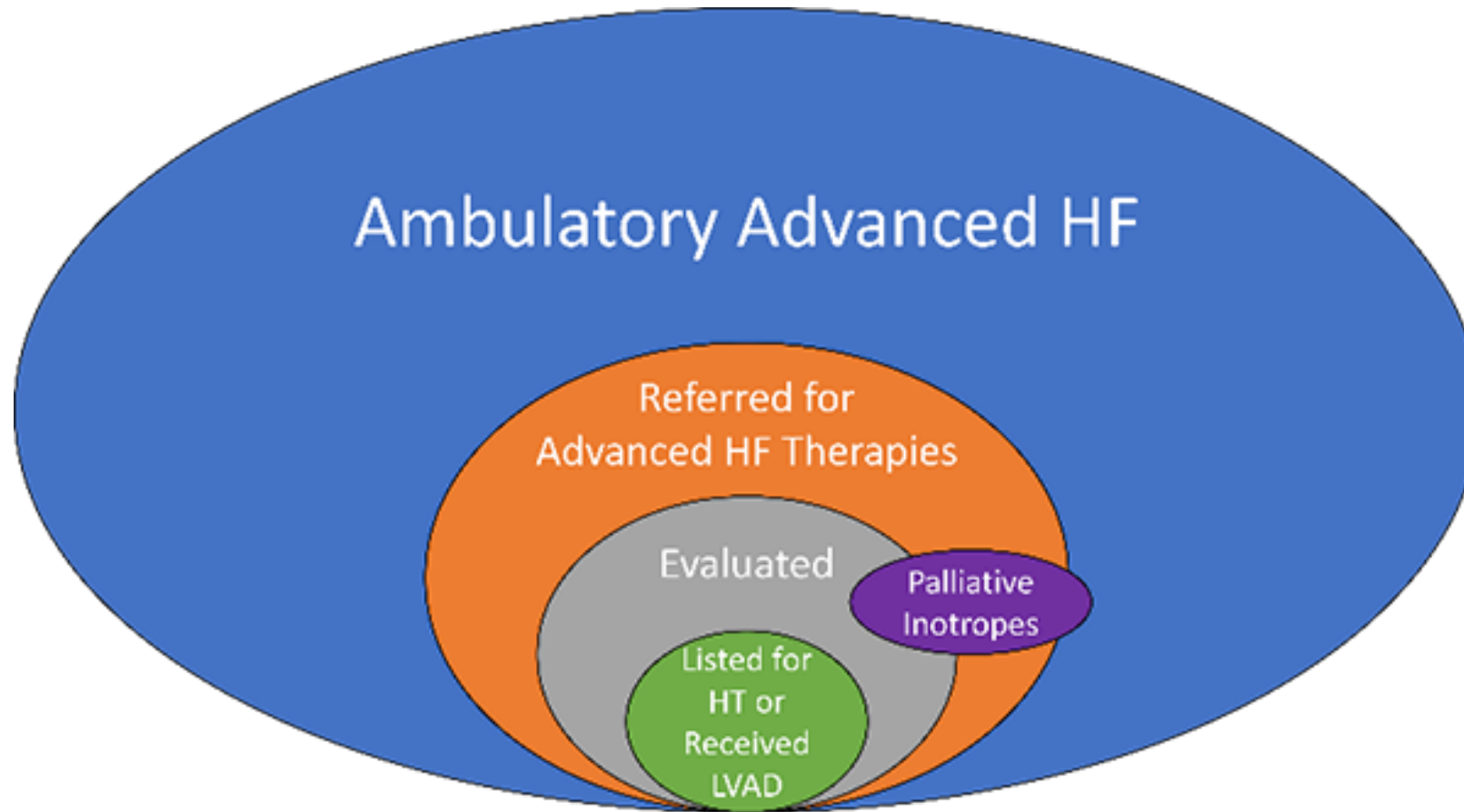
EF, ejection fraction; GDMT, guideline-directed medical therapy; HF, heart failure; NYHA, New York Heart Association; NP, natriuretic peptide; NT-proBNP, N-terminal pro-B-type natriuretic peptide; SBP, systolic blood pressure.

Baumwol J et al. J Heart Lung Transplant 2017

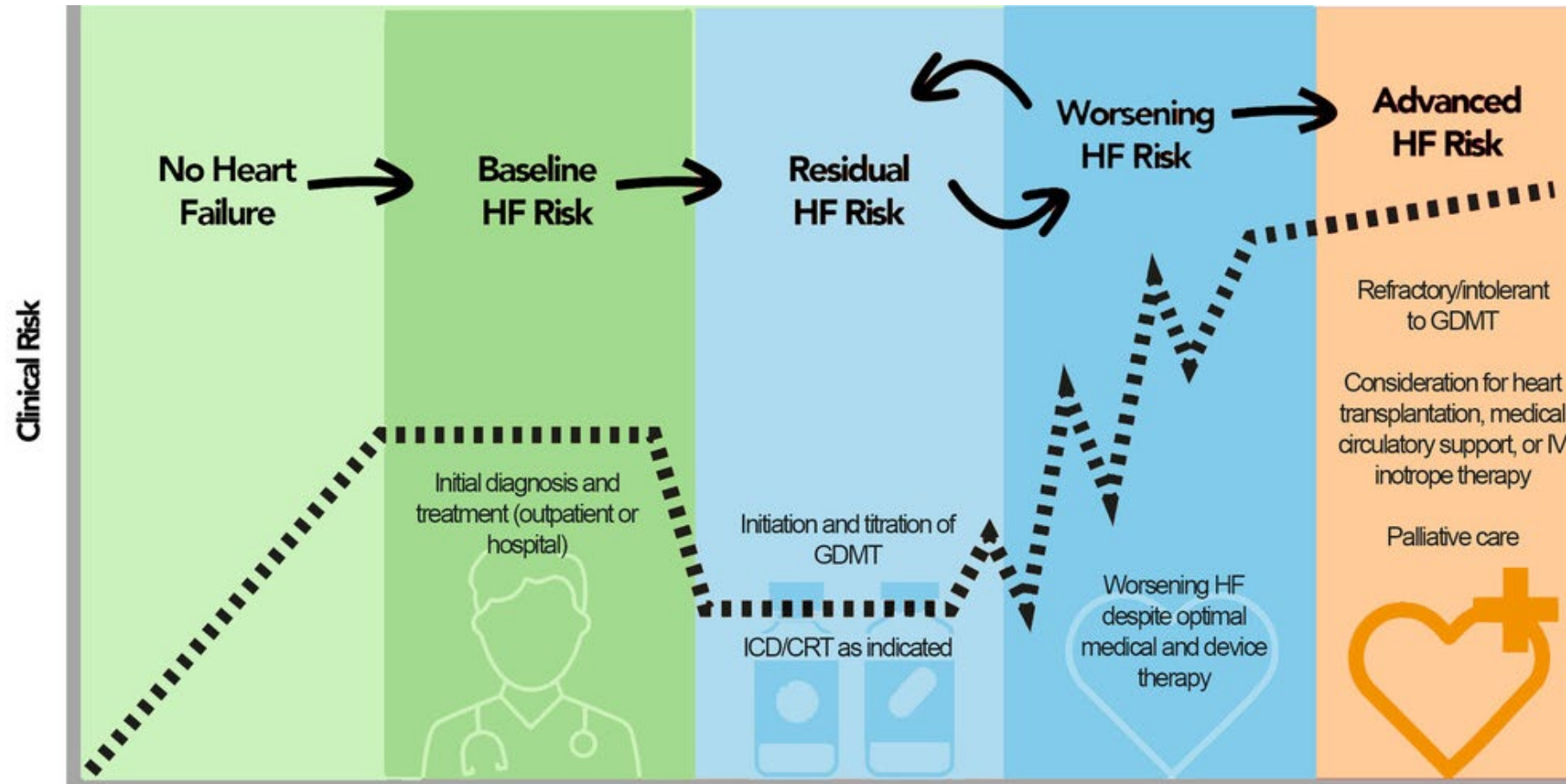


Baudry et al. Eur J Heart Fail 2024

When to refer a patient to an advanced HF center?



A Shift in Perspective on Advanced Heart Failure: From End-Stage Irreversibility to Treatment Opportunity



Baudry, Crespo-Liero et al. Eur J Heart Fail 2025

Worsening HF

Clinical

- Worsening signs/symptoms
- Severity of congestion
- Decreased exercise capacity

Sub-clinical

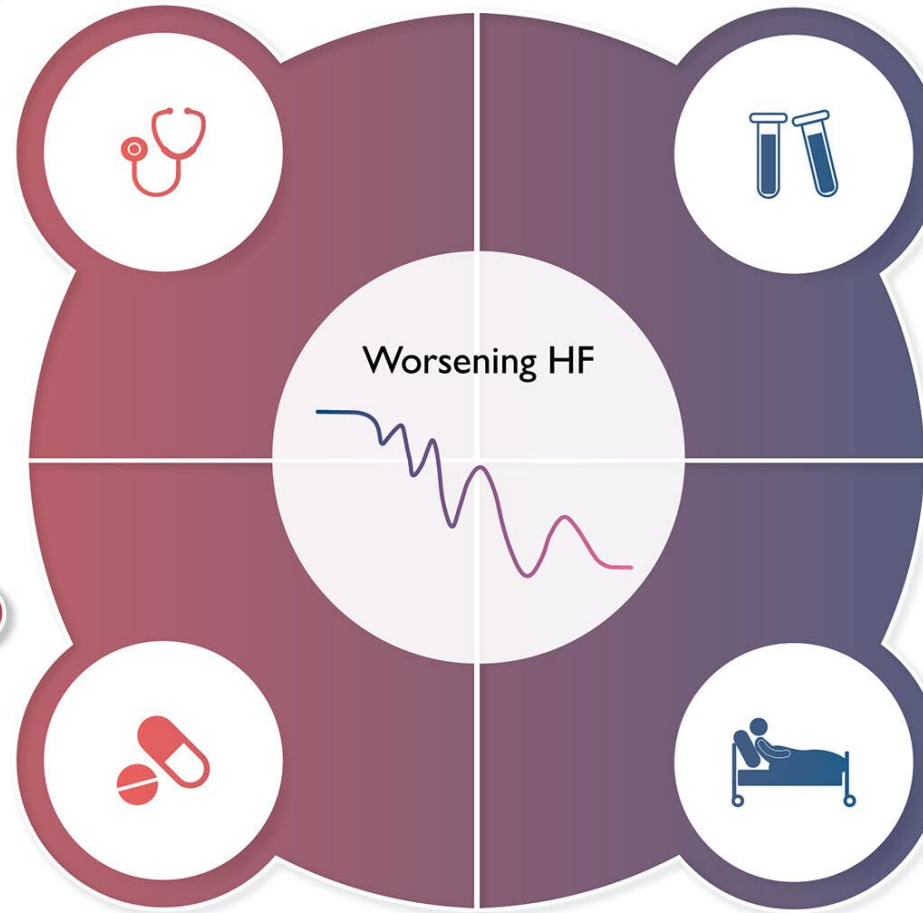
- Biomarkers
- Imaging
- Devices (PAP monitoring)

Events

- Hospitalization
- ED visits
- Outpatient (IV therapy/
oral therapy escalation)

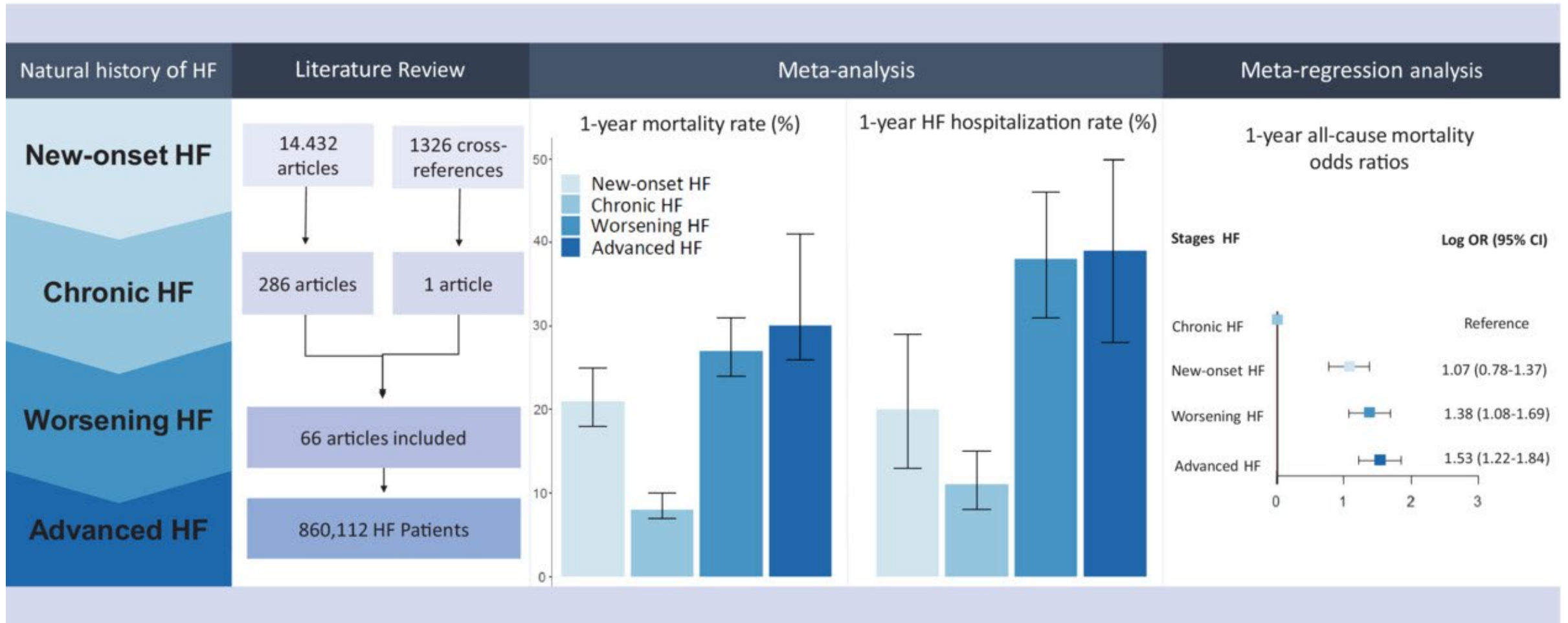
Outcome

- Increased risk of subsequent mortality and rehospitalizations
- Poor health status and QoL
- Need of HT or VAD



Metra et al. Eur J Heart Fail 2023

Worsening HF risk



Shakoor et al. Eur J Heart Fail 2024

High-Risk Situations Requiring Systematic Assessment for Advanced Therapies in Age-Eligible Patients: Criteria for Urgent and Elective Referral

CARDIOGENIC SHOCK



ELECTRICAL STORM



HOSPITALIZED HEART FAILURE



AMBULATORY WORSENING HF



LOW CARDIAC OUTPUT SYNDROME



Urgent referral

- Inotrope dependence
- Short-term MCS

Elective referral

- All prior cardiogenic shocks

Urgent referral

- Electrical Storm
- Hemodynamic instability induced by arrhythmia

Elective referral

- Prior defibrillator shock
- History of VT unrelated to an acute ischemic event

Urgent referral

- End organ dysfunction

Elective referral

- ≥ 2 HF hospitalization within 1 Y
- Persistent congestion
- "Ambulatory Worsening HF" criteria at discharge

Elective referral

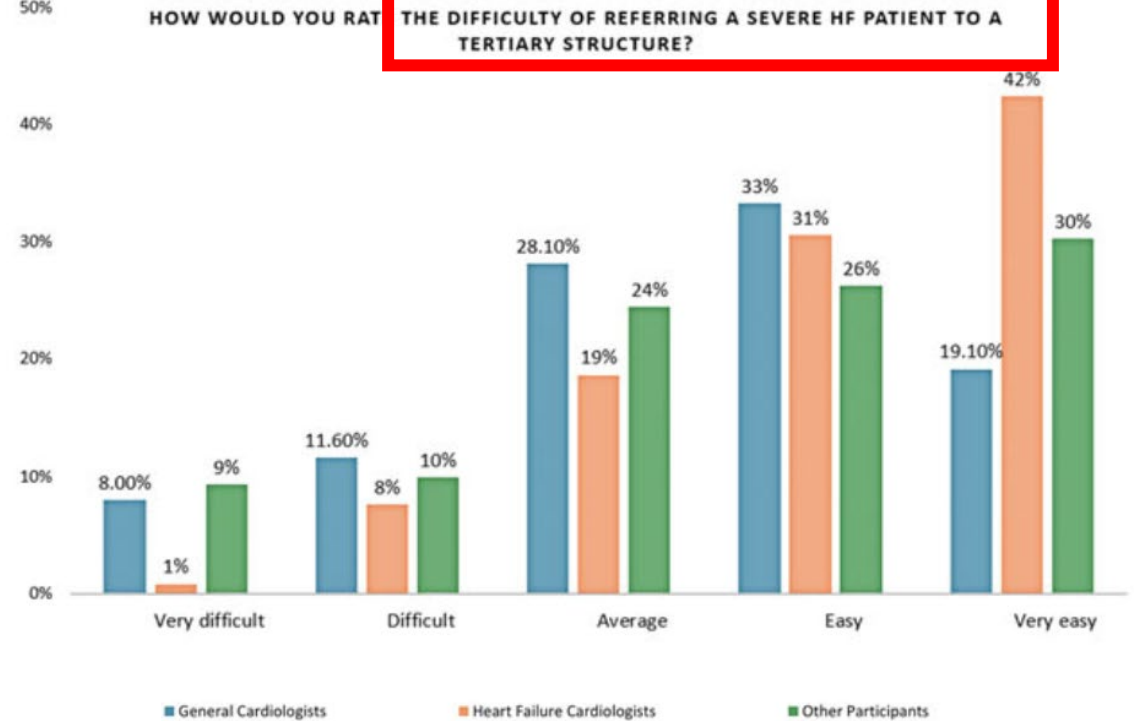
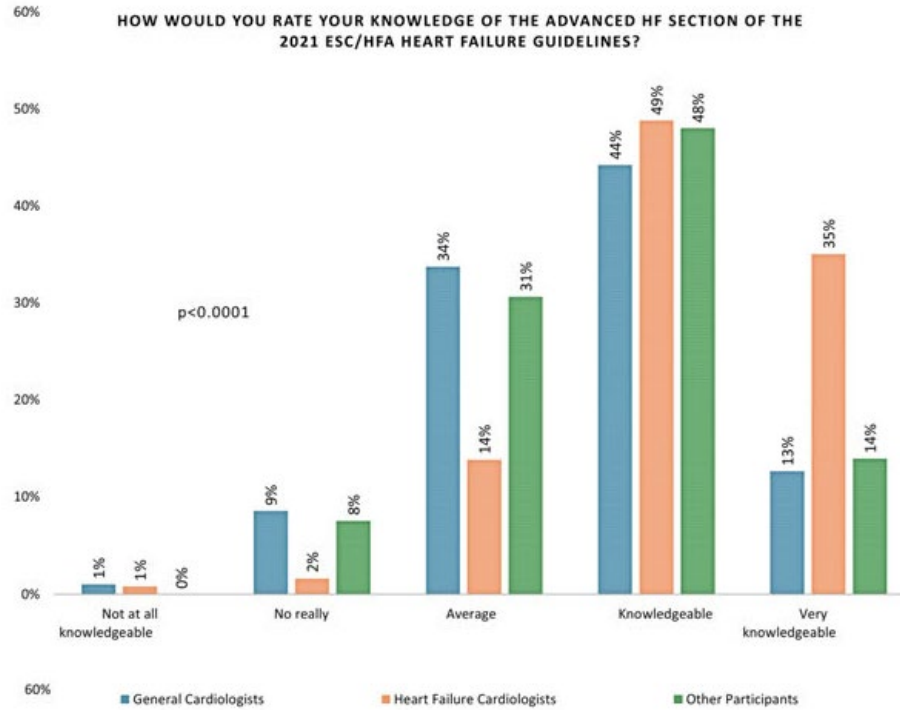
- Persistent congestion
- Elevated diuretic doses
- NYHA III or IV
- GDMT intolerance
- Cachexia, unintentional weight loss
- SBP ≤ 90 , PAP ≥ 50 mmHg
- Worsening renal and/or hepatic function
- Home inotropes
- Progressive genetic cardiomyopathies

Elective referral

- NYHA III or IV
- Intolerant of optimal dose of any GDMT
- Cachexia, unintentional weight loss
- SBP ≤ 90 mmHg
- Worsening renal and/or hepatic function
- Home inotropes

Baudry, Crespo-Leiro et al. Eur J Heart Fail 2025

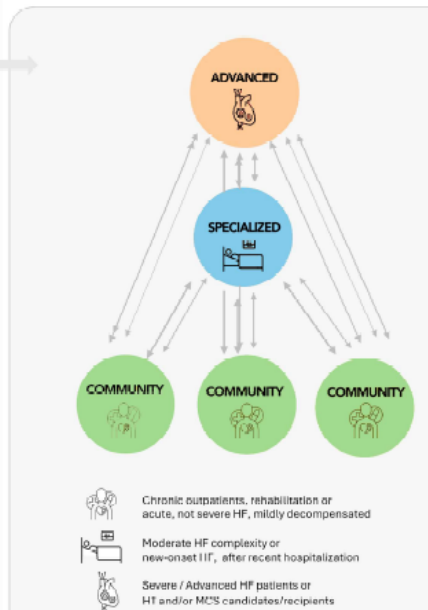
Barriers to referral to AHF centres



Baudry et al. Eur J Heart Fail 2025

Barriers to referral to AHF centres

97 HF units in 2024

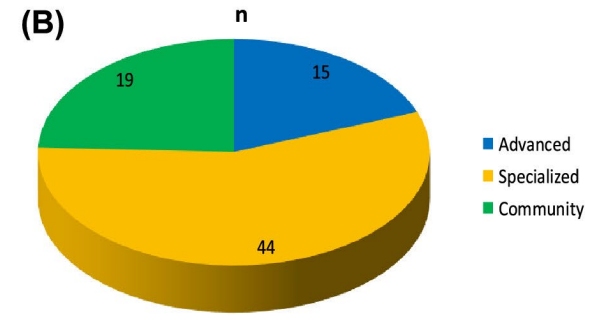


	COMMUNITY Center	SPECIALIZED HF Center	ADVANCED HF Center
TARGET PATIENTS	Chronic outpatients / rehabilitation Acute, not severe HF / mildly decompensated	Moderate I I F complexity, New-onset HF / after recent hospitalization	Severe / Advanced I I F patients HT and/or MCS candidates/ recipients
SETTINGS	Primary care Cardiology / rehabilitation Community hospital	CCU / ICU / chest pain unit and specialized wards in district hospitals	As in specialized QCC + Heart Surgery
ACCESSIBILITY	Elective Prompt (<24h) access if needed	On-Duty cardiologist 24/7 CCU/ICU dedicated beds	As in specialized QCC + Cardiac surgery in a heart team + ICU dedicated beds
SERVICE / EQUIPMENT	Therapeutic optimization Patient & caregiver education Rehabilitation ECG, TTE, 24h ECG/BP Holter, laboratory tests Referral to higher level centers	Etiology assessment, Therapeutic optimization, Cardiac catheterization, Arrhythmia ablation, ICD/CRT implantation TOE, CMR, CPET Renal replacement therapy	As in specialized QCC + Circulatory Support Perform HT and/or MCS and/or provide support Cardiac surgery Valve intervention EMB, genetic testing
HUMAN RESOURCES	Internists / Cardiologists Primary care Nurses	HF Cardiologist 24/7, HF nurses, Other specialties	Advanced HF cardiologist Cardiac surgeons 24/7 Heart team

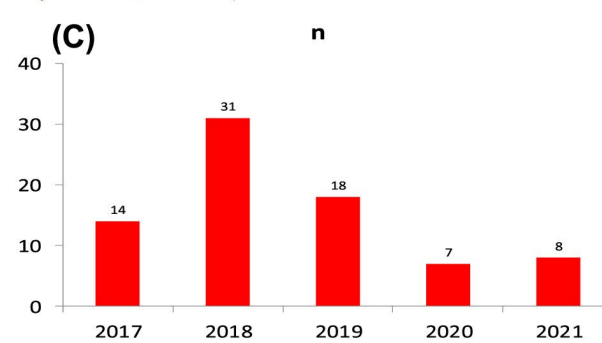
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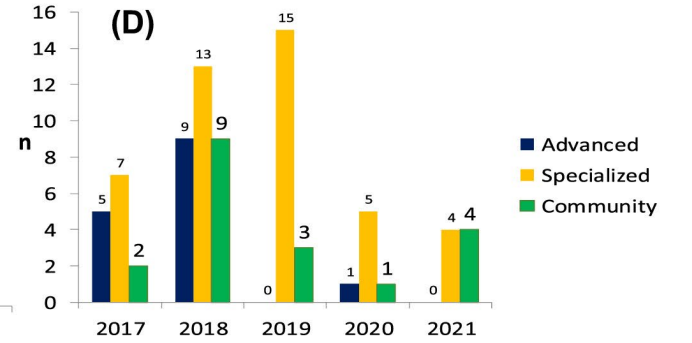
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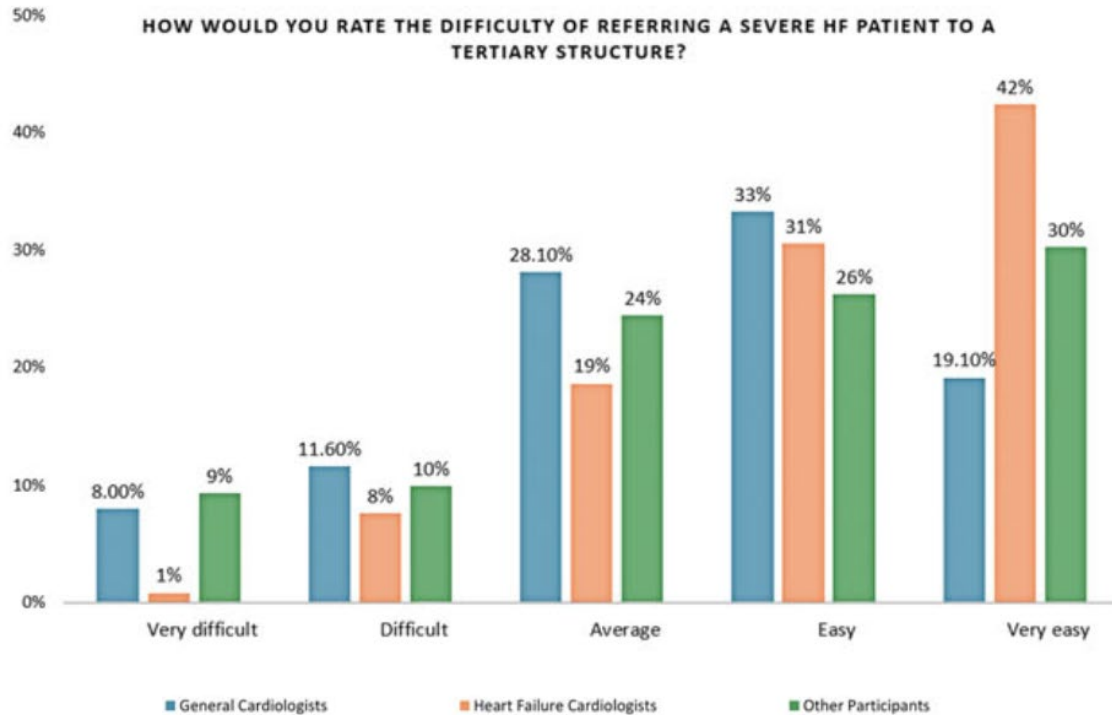
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Baudry et al. Eur J Heart Fail 2025

Anguita et al. ESC Heart Fail 2022

Barriers to referral to AHF centres: opportunities



- **Regular hub & spoke meetings**
- **Interactive workshops and seminars**
Facilitating real-time discussions to deepen understanding and support practical application
- **Continuing medical education programs**
Ensuring ongoing professional development and up-to-date clinical expertise

Baudry et al. Eur J Heart Fail 2025

When to refer a patient to an advanced HF center?

All cardiologist managing patients with HF

- Integrate HTx and LVAD into their therapeutic decision-making algorithm, whether or not these options are available at their hospital
- Early recognition, timely referral

All advanced heart failure cardiologists

- Facilitate patient referrals, coordinate comprehensive support, share clinical expertise, and contribute to medical education programs