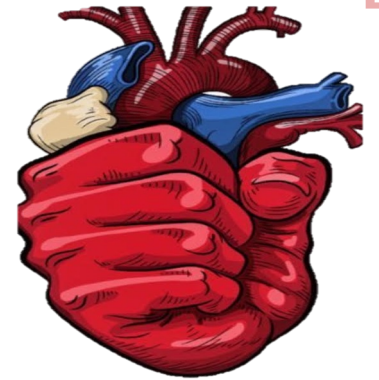


Heart Failure: Treatment Updates

Partnering with **P**alliative care for
best patient outcomes

**Tracey M. Piparo, PA-C, DFAAPA and
Meenal K Patel, MS PA-C**



At the conclusion of this session, the participants should be able to:

1

Recognize the prevalence of Congestive Heart Failure and its implications on patients' and families' quality of life

Identify heart failure disease progression and impact on prognostication

2

3

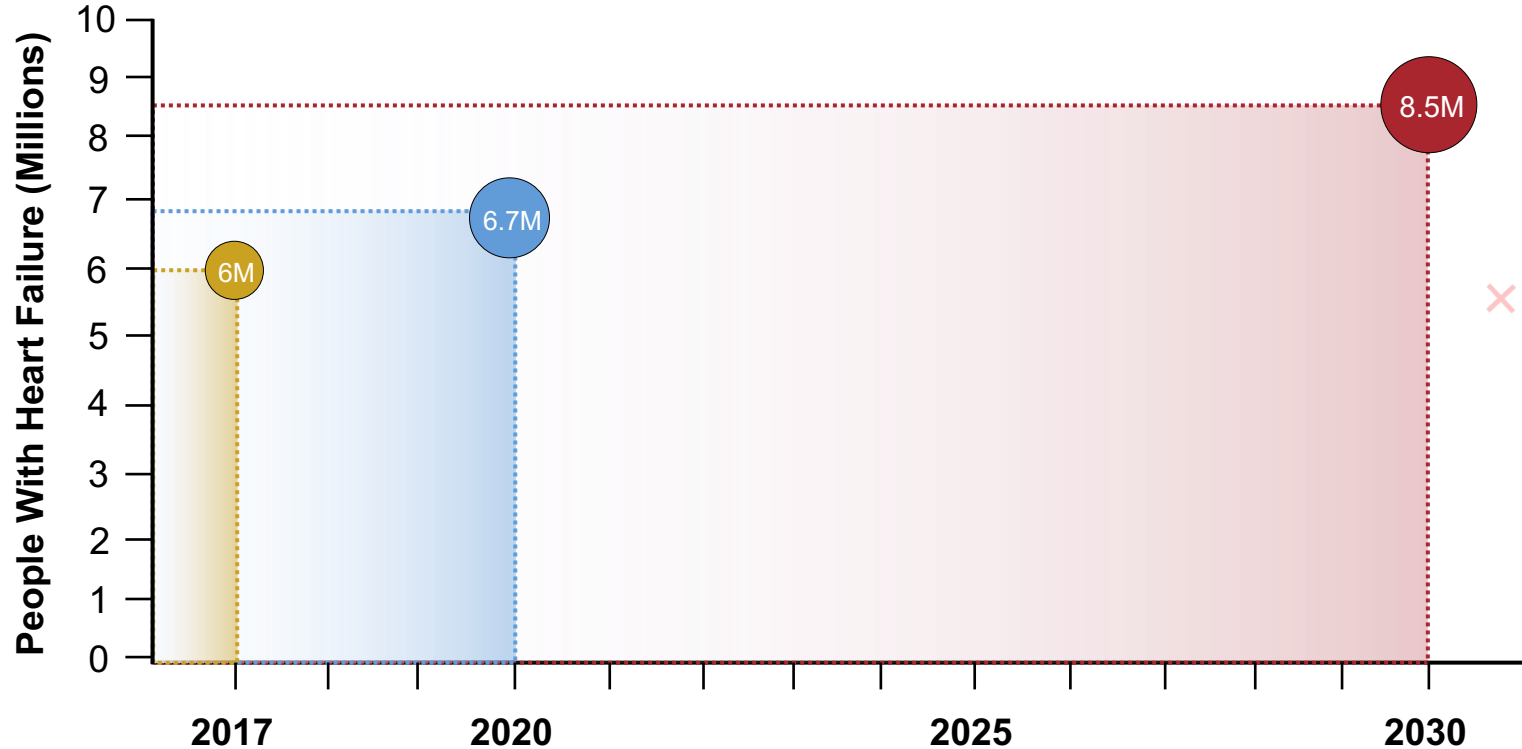
Review ACC/AHA treatment updates for heart failure, including collaboration with palliative care for optimizing outcomes

Summarize the benefits and real-life outcomes of integrated collaborative management between cardiology and palliative care

4



PREVALENCE OF HEART FAILURE AND FUTURE PROJECTION IF CURRENT TRENDS CONTINUE



ACC Heart Fail 2018;6:401-9 and Heidenreich PA, Albert NM, Allen LA, Blumke DA, Butler J, Fonarow GC, et al. Forecasting the impact of heart failure in the United States: a policy statement from the American Heart Association. Circ Heart Fail 2013;6:606-19.

Epidemiology of Heart Failure in the United States



Increase in HF related deaths from 2009 to 2014.



Increase in HF hospitalization from 2013 to 2017.



Decline in overall HF incidence from 2011 to 2014 with declining incidence of HF_rEF but increasing incidence of HF_pEF

Racial and ethnic disparities in death resulting from HF persist.

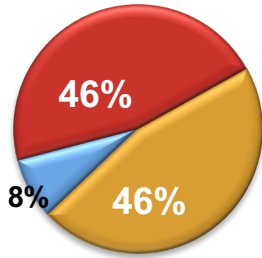
Age-adjusted mortality rates for HF: 92/100,000 for non-Hispanic Black patients
87/100,000 for non-Hispanic White patients
53/100,000 for Hispanic patients

Disparities in racial and ethnic HF outcomes warrant studies and health policy changes to address health inequity.



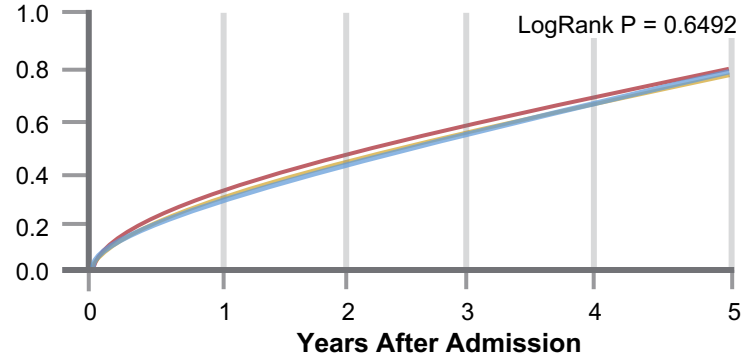
5-YEAR OUTCOMES IN PATIENTS HOSPITALIZED WITH HF WITH PRESERVED, BORDERLINE, AND REDUCED EF

Heart Failure



■ HFrEF (EF ≤40%)
 ■ HFbEF (EF 41-49%)
 ■ HFpEF (EF ≥50%)

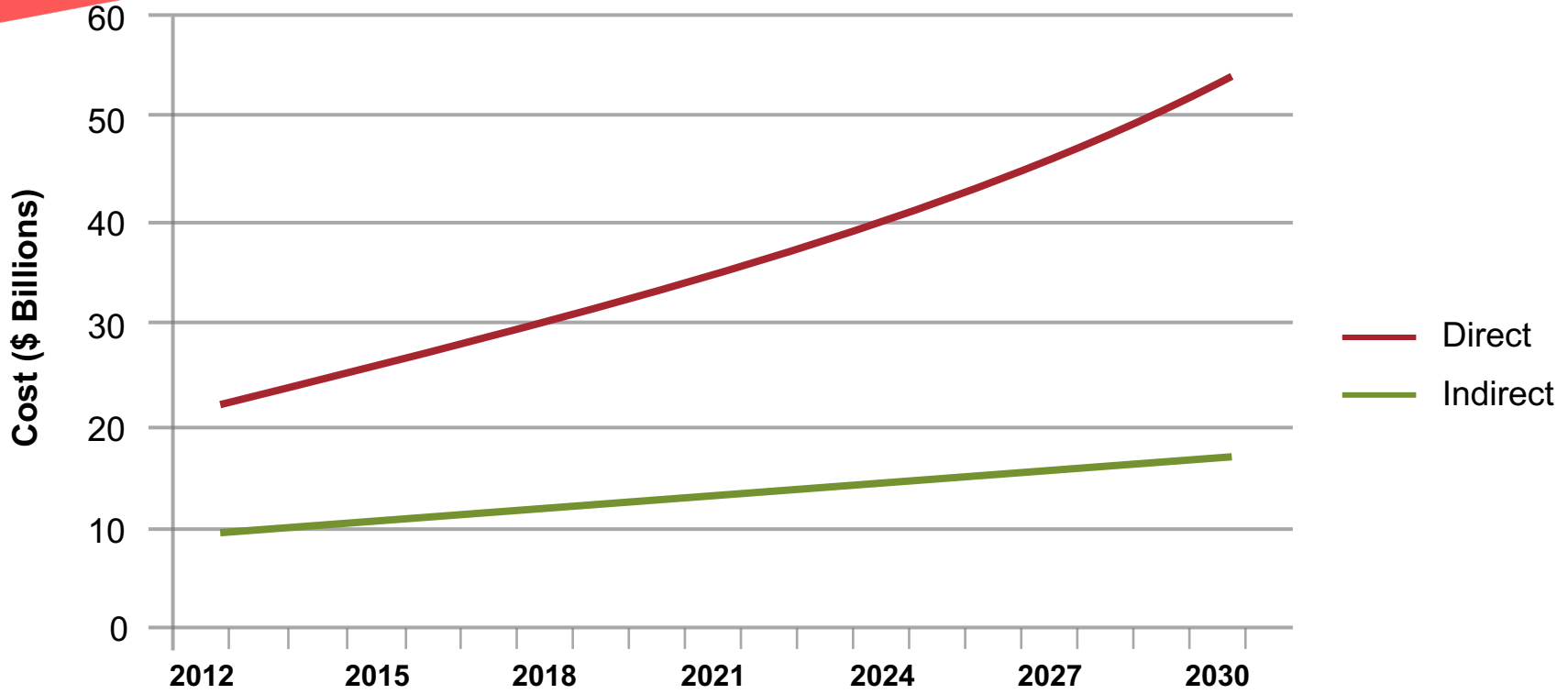
5 – Years Mortality



Outcomes: 5-Year Event Rates (%)

	Mortality	Readmission	CV Readmission	HF readmission	Mortality/Readmission
HFrEF	75.3	82.2	63.9	48.5	96.4
HFbEF	75.7	85.7	63.3	45.2	97.2
HFpEF	75.7	84.0	58.9	40.5	97.3

Chronic Symptomatic HF: Disease dominates overall health and medical care



STAGE A: At-Risk for Heart Failure

Patients at risk for HF but without current or previous symptoms/signs of HF and without structural/ functional heart disease or abnormal biomarkers

Patients with hypertension, CVD, diabetes, obesity, exposure to cardiotoxic agents, genetic variant for cardiomyopathy, or family history of cardiomyopathy

STAGE B: Pre-Heart Failure

Patients without current or previous symptoms/signs of HF but evidence of 1 of the following:

Structural heart disease
Evidence of increased filling pressures

Risk factors and

- increased natriuretic peptide levels or
- persistently elevated cardiac troponin in the absence of competing diagnoses

STAGE C: Symptomatic Heart Failure

Patients with current or previous symptoms/signs of HF

Trajectory of Stage C HF

New Onset/De Novo HF

Resolution of Symptoms

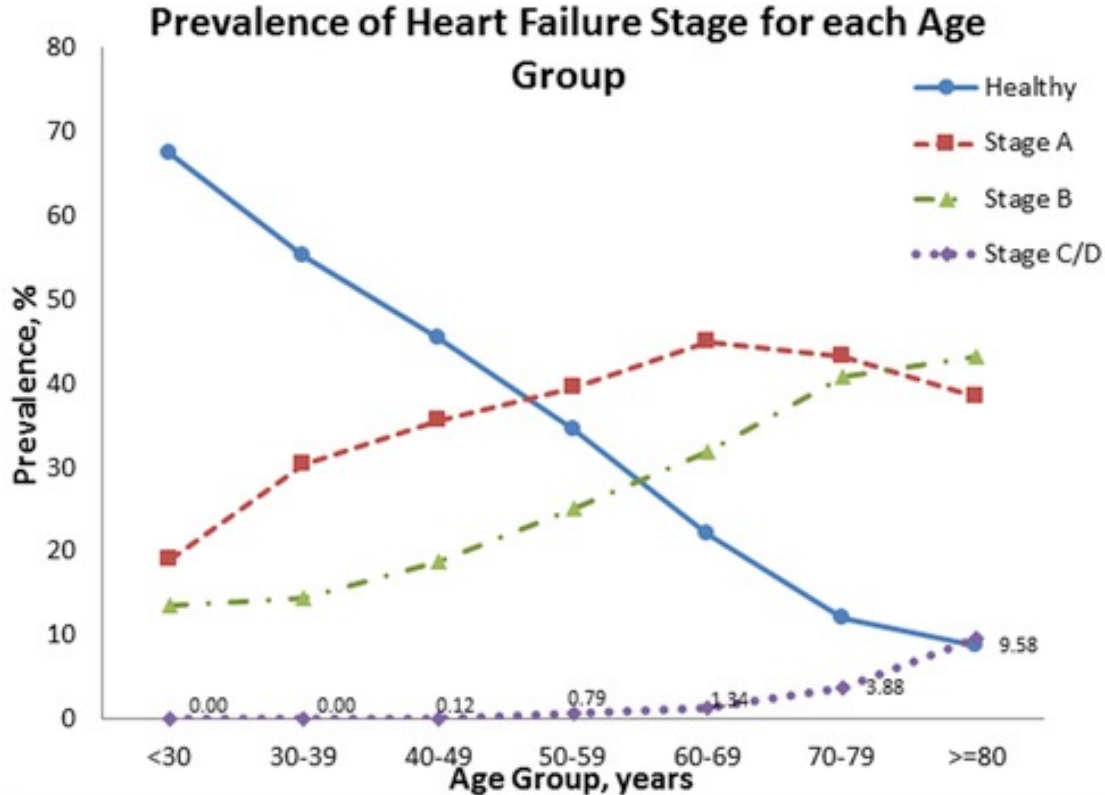
Persistent HF

Worsening HF

STAGE D: Advanced Heart Failure

Marked HF symptoms that interfere with daily life and with recurrent hospitalizations despite attempts to optimize GDMT

PREVALENCE ACROSS HF STAGES



Universal Definition and Classification of Heart Failure (HF)

Definition

HF is a clinical syndrome with current or prior

- Symptoms and or signs caused by a structural and/or functional cardiac

And corroborated by at least one of the following:

- Elevated natriuretic peptide levels
- Objective evidence of cardiogenic pulmonary or systemic congestion

Stages

AT RISK (STAGE A)

Patients at risk for HF, but without current or prior symptoms or signs of HF and without structural cardiac changes or elevated biomarkers of heart disease

PRE-HF (STAGE B)

Patients without current or prior symptoms or signs of HF with evidence of one of the following:

- Structural Heart Disease
- Abnormal cardiac function
- Elevated natriuretic peptide or cardiac troponin levels

HF (STAGE C)

Patients with current or prior symptoms and/or signs of HF caused by a structural and/or functional cardiac abnormality

ADVANCED HF (STAGE D)

Severe symptoms and/or signs of HF at rest, recurrent hospitalizations despite GDMT, refractory or intolerant to GDMT, requiring advanced therapies transplantation, mechanical circulatory support, or palliative care

Classification By EF

HF with reduced EF (HFrEF)

- HF with LVEF < 40%

HF with mildly reduced EF (HFmrEF)

- HF with LVEF 41-49%

HF with preserved EF (HFpEF)

- HF with LVEF >50%

HF with improved EF (HFimpEF)

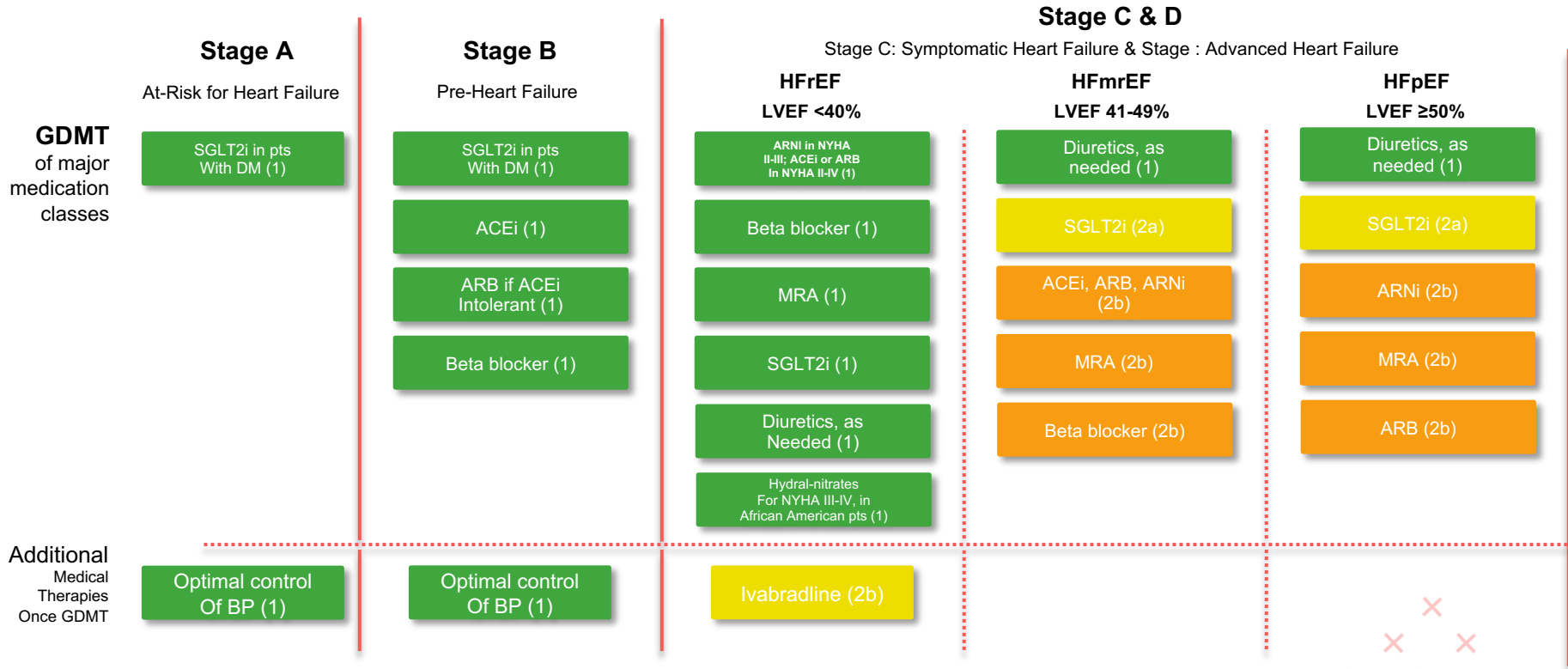
- HF with a baseline LVEF of < 40%, a 10-point increase from baseline LVEF, and a second measurement of LVEF of > 40%

Language matters! The new universal definition offers opportunities for more precise communication and description with terms including **persistent HF** instead of "stable HF," and **HF in remission** rather than "recovered HF."

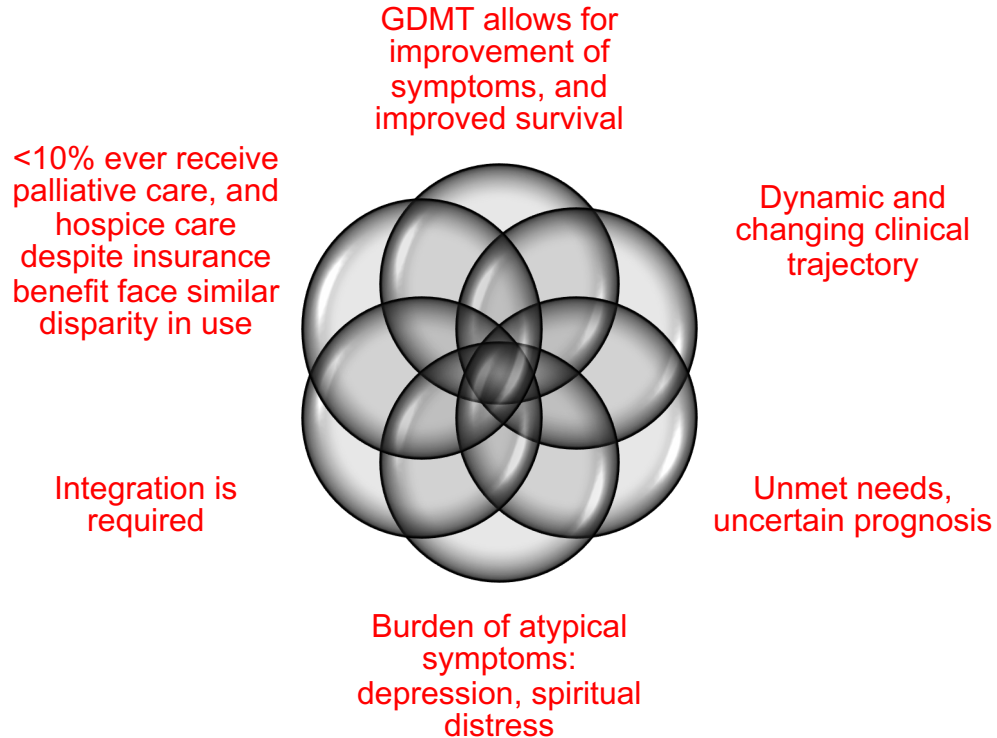
2022 AHA/ACC/HFSA Guideline for the Management of Heart Failure

Guideline Directed Medical Therapy Across Heart Failure Stages

Use this tool to reference guideline directed medical therapy (GMT) across the four ACCA of Heart) the 2022 ANA/ACC/MSA Guide for the Management of Heart failure. See the guideline for specific patient population criteria.



Reality of Heart Failure



Goals of Care

COR RECOMMENDATION

1

For all patients with HF, palliative and supportive care—including high quality communication, **conveyance of prognosis**, clarifying **goals of care**, shared decision-making, **symptom management**, and caregiver support—should be provided to improve QOL and relieve suffering.

1

For patients with HF being considered for, or treated with, life-extending therapies, the option for **discontinuation should be anticipated** and discussed through the continuum of care, including at the time of initiation, and reassessed with changing medical conditions and shifting goals of care.

2a

For patients with HF, **execution of advance care directives** can be useful to improve documentation of treatment preference, delivery of patient-centered care, and dying in preferred place.

2a

For patients with HF—particularly stage D HF patients being evaluated for advanced therapies, patients requiring inotropic support or temporary mechanical support, patients experiencing uncontrolled symptoms, major medical decisions, or multimorbidity, frailty, and cognitive impairment—**specialist palliative care consultation** can be useful to improve QOL and relieve suffering.

2a

In patients with advanced HF with expected survival <6 months, timely **referral to hospice** can be useful to improve QOL.

Does Integrated PC Work?

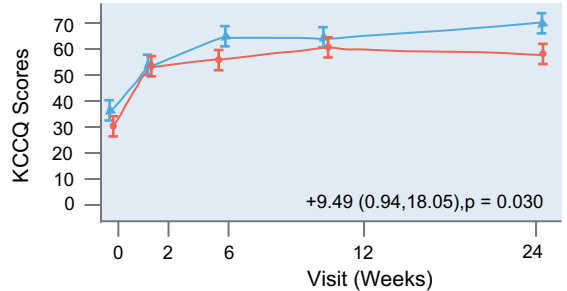
PAL-HF study (2012-15)

The diagram features two large, rounded hexagonal shapes. The left hexagon is blue and contains text about palliative care principles. The right hexagon is red and contains text about an interdisciplinary palliative care intervention. Two black arrows point from the red hexagon to the blue one, and two black arrows point from the blue hexagon to the red one, indicating a reciprocal relationship. The background includes decorative elements: a wireframe cube on the left, a starburst on the right, a grid of 'x' marks on the far left, and a grid of dots on the far right.

Addition of palliative care principles in this vulnerable population improved physical, psychosocial (anxiety/depression), and spiritual quality-of-life measures assessed by the KCCQ, and the palliative care domains assessed by facit-pa

An interdisciplinary palliative care intervention in advanced HF patients showed consistently greater benefits in quality of life, anxiety, depression, and spiritual well-being compared with UC alone.

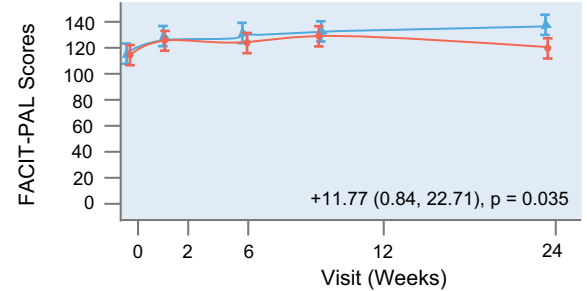
The PAL-HF Study Randomized 150 Patients With Advanced Heart Failure to Usual Care or Usual Care + a Multidimensional Palliative Care Intervention



UC +PAL (N)	73	63	53	47	41
UC Alone (N)	74	60	57	43	40

Mixed Model (adjusted for age and sex)
 9.14 (95% CI 0.56-17.72), $P = 0.037$

— UC Alone



UC +PAL (N)	71	61	53	46	41
UC Alone (N)	74	59	57	43	40

Mixed Model (adjusted for age and sex)
 11.09 (95% CI 0.19-21.99), $P = 0.046$

— UC + PAL

Disease Prognostication

Ideally prognosticate annually

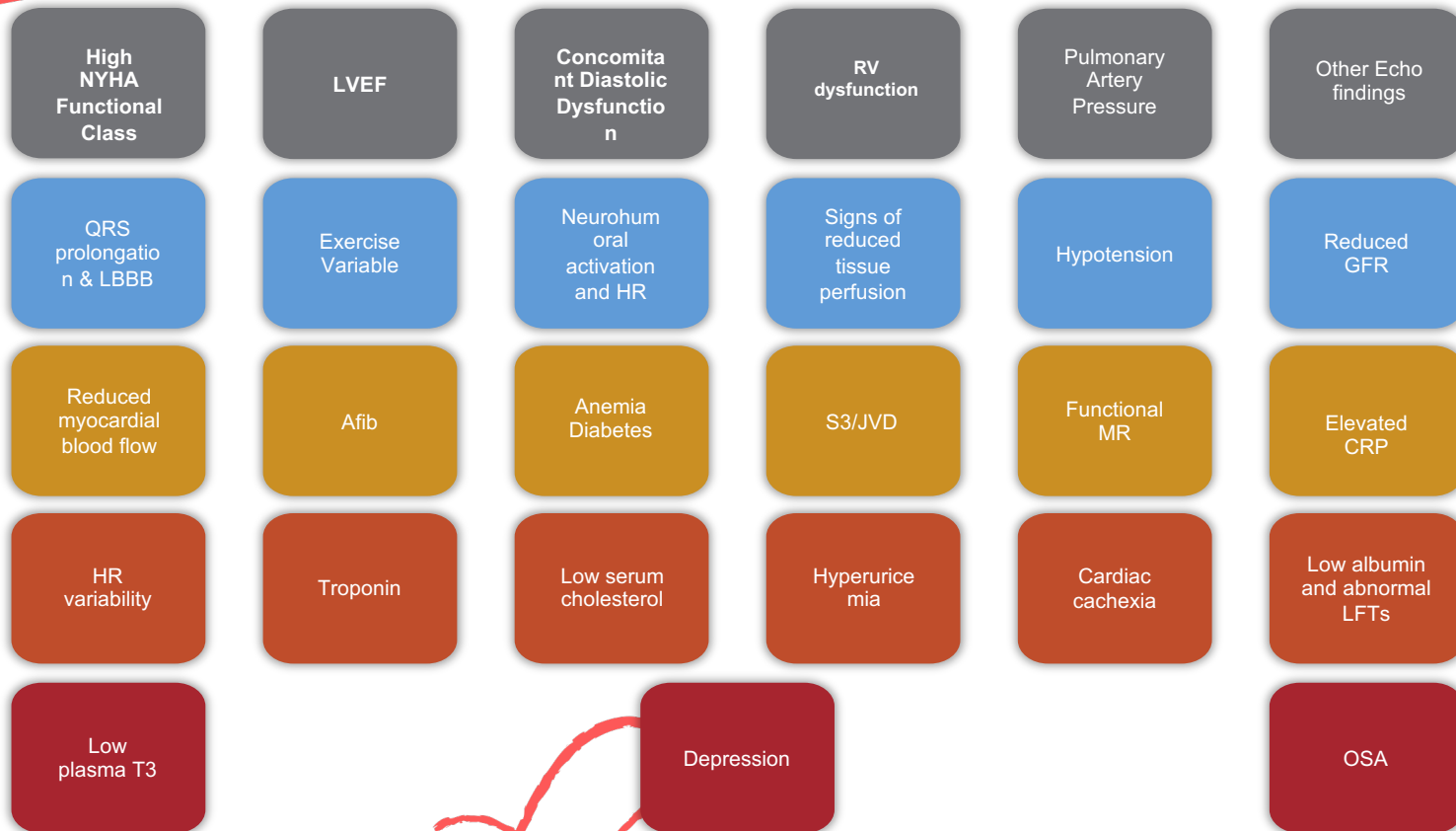
- Review critical changes/"milestone" events: ie hospital admissions
- Once a person hospitalized, median life expectancy is < 5 years
- Chronic symptomatic heart failure dominates overall health and medical care

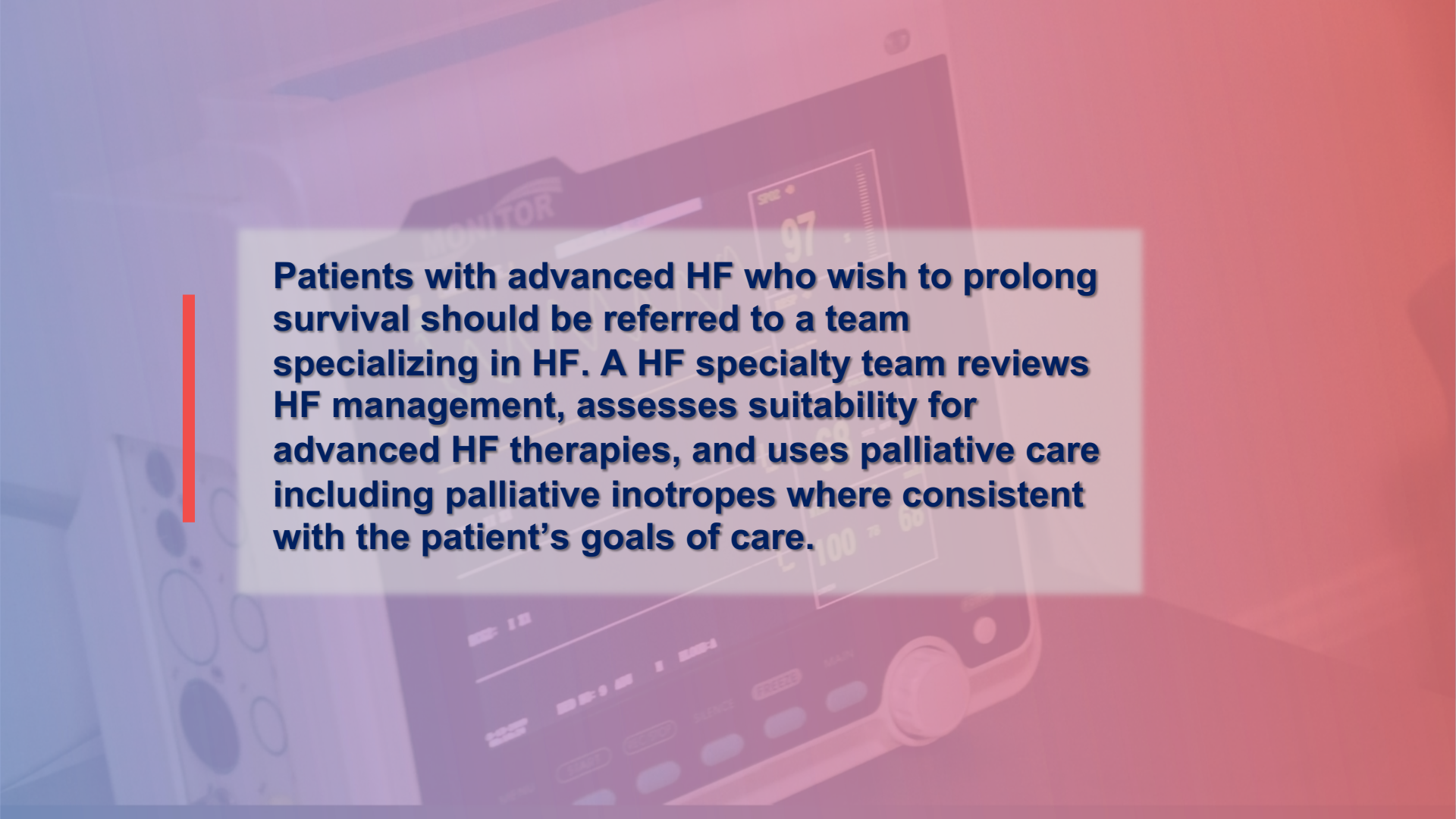


Challenges:

- **Variations:** Wide range of time from onset of symptoms to death: die within a month or live for decades
- **Comorbidities:** average patient has 4 or more diagnoses: increase in meds, worsening of symptoms, polypharmacy
- **Undulating disease:** GDMT increases QOL; Good days vs bad days (contrasts with those with metastatic cancer)
- **Contrasting modes of death:** unexpected sudden death vs lingering death with symptoms.

Major Predictors of Reduced Survival in HFrEF



A medical monitor is visible in the background, displaying various vital signs. The word 'MONITOR' is printed at the top. A large yellow number '97' is prominent, likely representing oxygen saturation. Other smaller numbers like '100' and '60' are also visible. The monitor has several buttons and a dial at the bottom.

Patients with advanced HF who wish to prolong survival should be referred to a team specializing in HF. A HF specialty team reviews HF management, assesses suitability for advanced HF therapies, and uses palliative care including palliative inotropes where consistent with the patient's goals of care.



Recommendation for Specialty Referral to Advanced HF

COR	RECOMMENDATIONS
1	1. In patients with advanced HF, when consistent with the patient's goals of care, timely referral for HF specialty care is recommended to review HF management and assess suitability for advanced HF therapies (e.g., LVAD, cardiac transplantation, palliative care, and palliative inotropes).

Consider if “I-Need-Help” to aid with recognition of patients with advanced HF:

- Complete assessment is not required before referral
- After patients develop end-organ dysfunction or cardiogenic shock, they may no longer qualify for advanced therapies



I Intravenous inotropes



E EF \leq 35%



E Edema despite escalating diuretics



N New York Heart Association class III/IV, or persistently elevated natriuretic peptides



D Defibrillator shocks



L Low systolic BP \leq 90mmHg



E End-organ dysfunction



H Hospitalizations >1

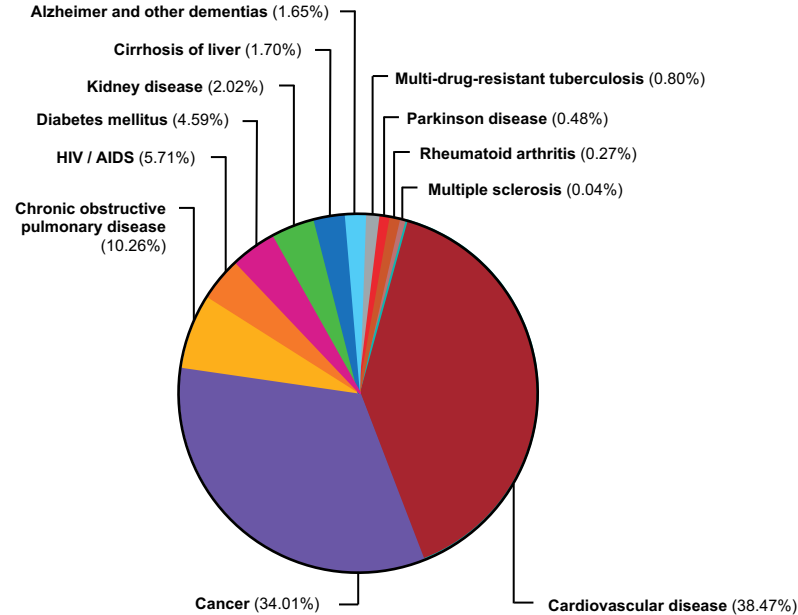


P Prognostic medication; intolerance of GDMT



Abbreviations: BP indicates blood pressure; EF, ejection fraction; GDMT, guideline-directed medical therapy; and LVAD, left ventricular assist device.

Distribution of adults in need of palliative care at the end of life by disease groups



N = 19,228,760.

Integrating Palliative Care Across the HF Experience

After heart failure (HF) diagnosis, initiate in tandem:

Traditional HF Management



Patient assessments: Medical and family histories, physical exam, diagnostic tests, patient-reported outcomes



Predict and communicate prognosis



Choose therapy



Manage "trigger" events



Monitor progress as physical function and quality of life declines

Primary Palliative Care



Control pain and other symptoms



Assist with medical decision-making and advance care planning



Assess and reduce emotional distress and burden to patient and family



Coordination of care across patient's care team



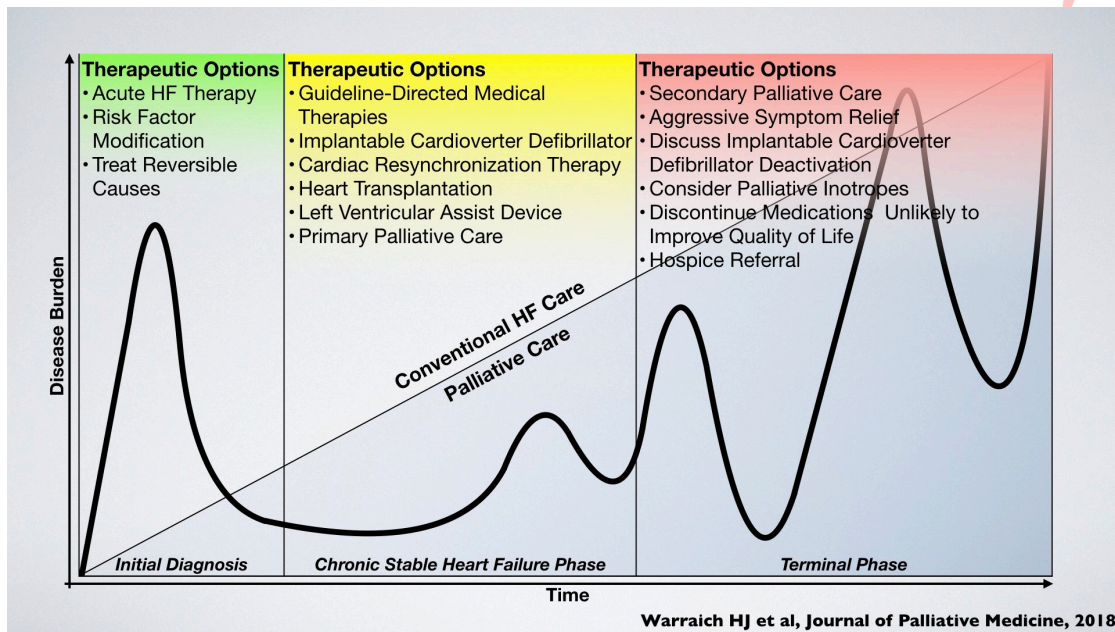
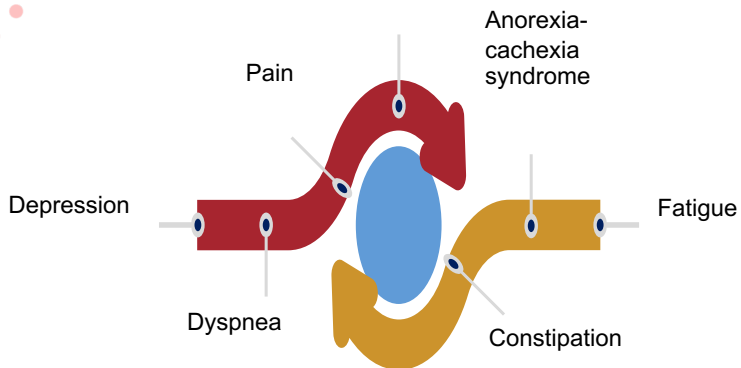
Promote improved quality of life for patient and caregiver

Specialist Palliative Care



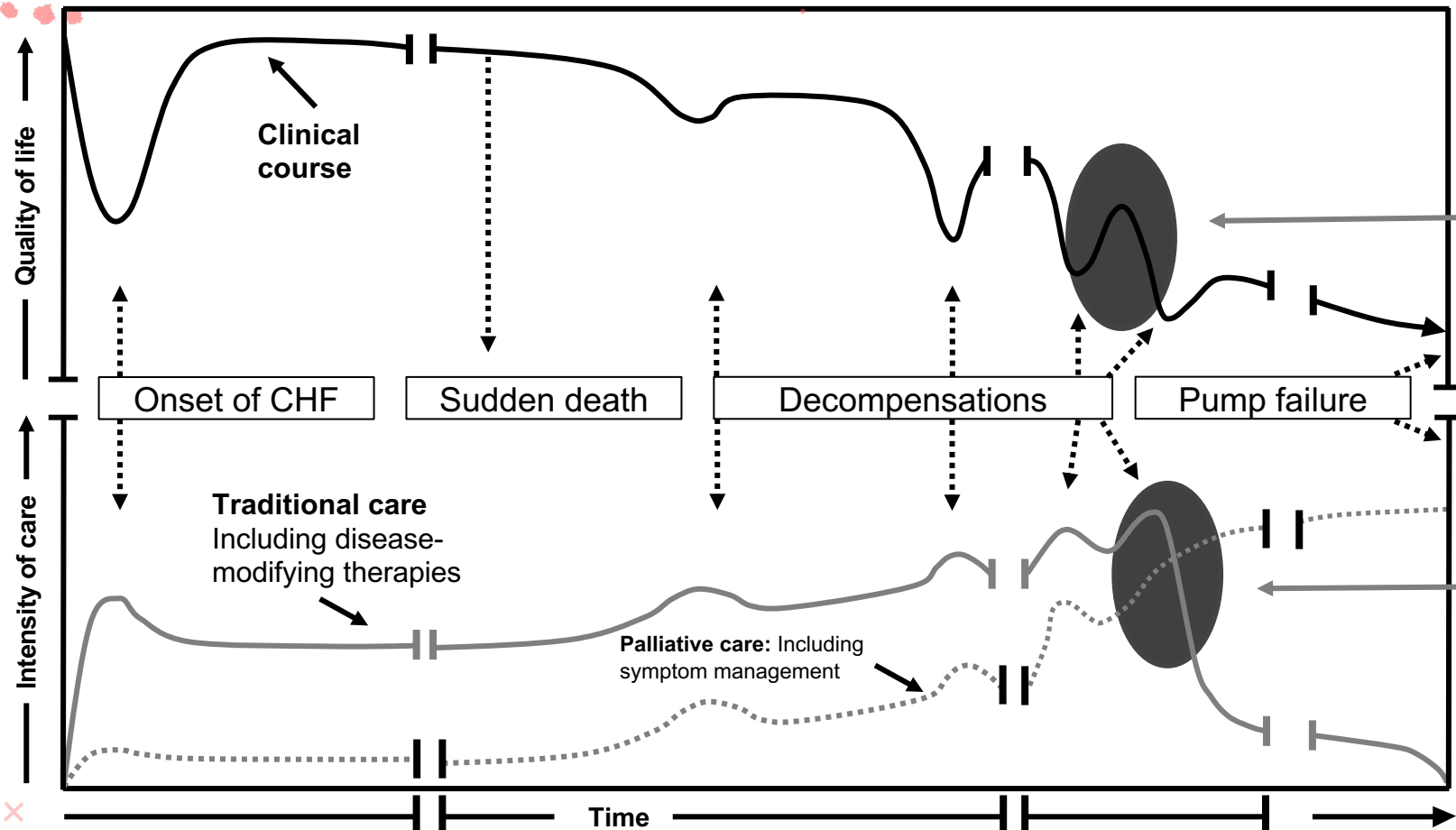
Consider specialist involvement when problems are especially complex or severe (includes hospice care)

High Symptom Burden for HF Patients



Warrach HJ et al, Journal of Palliative Medicine, 2018

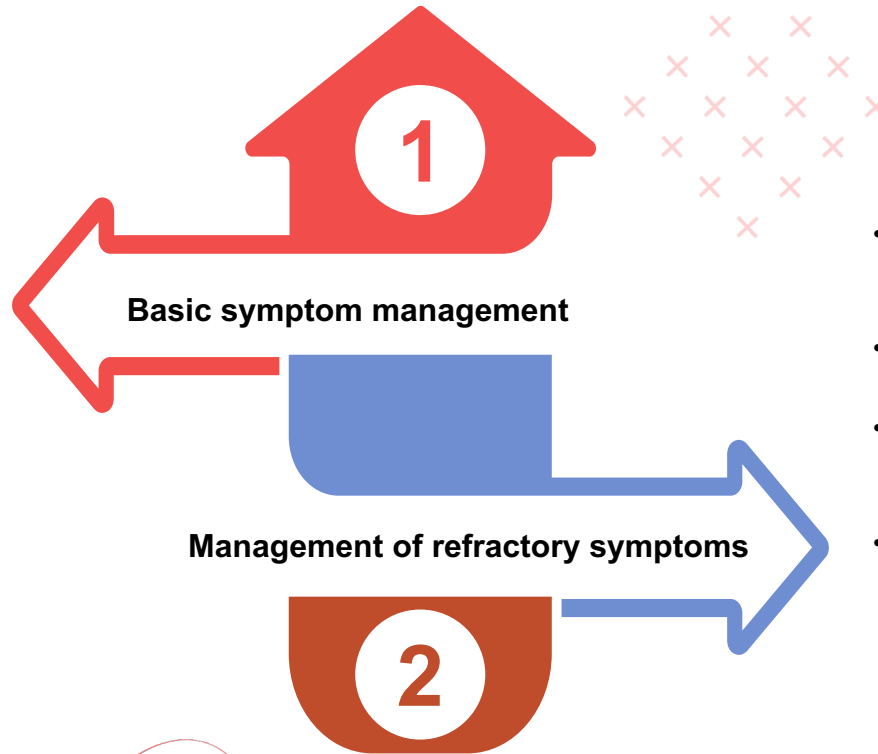




Primary vs Specialty Palliative Care in HF



- HCP and code status discussions
- Referral to social supports
- Basic care coordination



- Assistance with complex decision-making
- Conflict resolution
- Complex care coordination, difficult hospice referrals
- MAID discussions

Indications for Specialty Palliative Care



1

Persistent NYHA Stage IV symptoms

Major ongoing decisions for advanced therapies: ie LVAD, Heart transplant


- High risk of stroke, bleeding, infection
- 2013 US Joint Commission: All accredited LVAD programs need to have palliative care specialists on health care team: also a medicare requirement

3



2

Comorbidities:
Oxygen-dependent lung disease, renal failure, metastatic cancer, progressive frailty, dementia

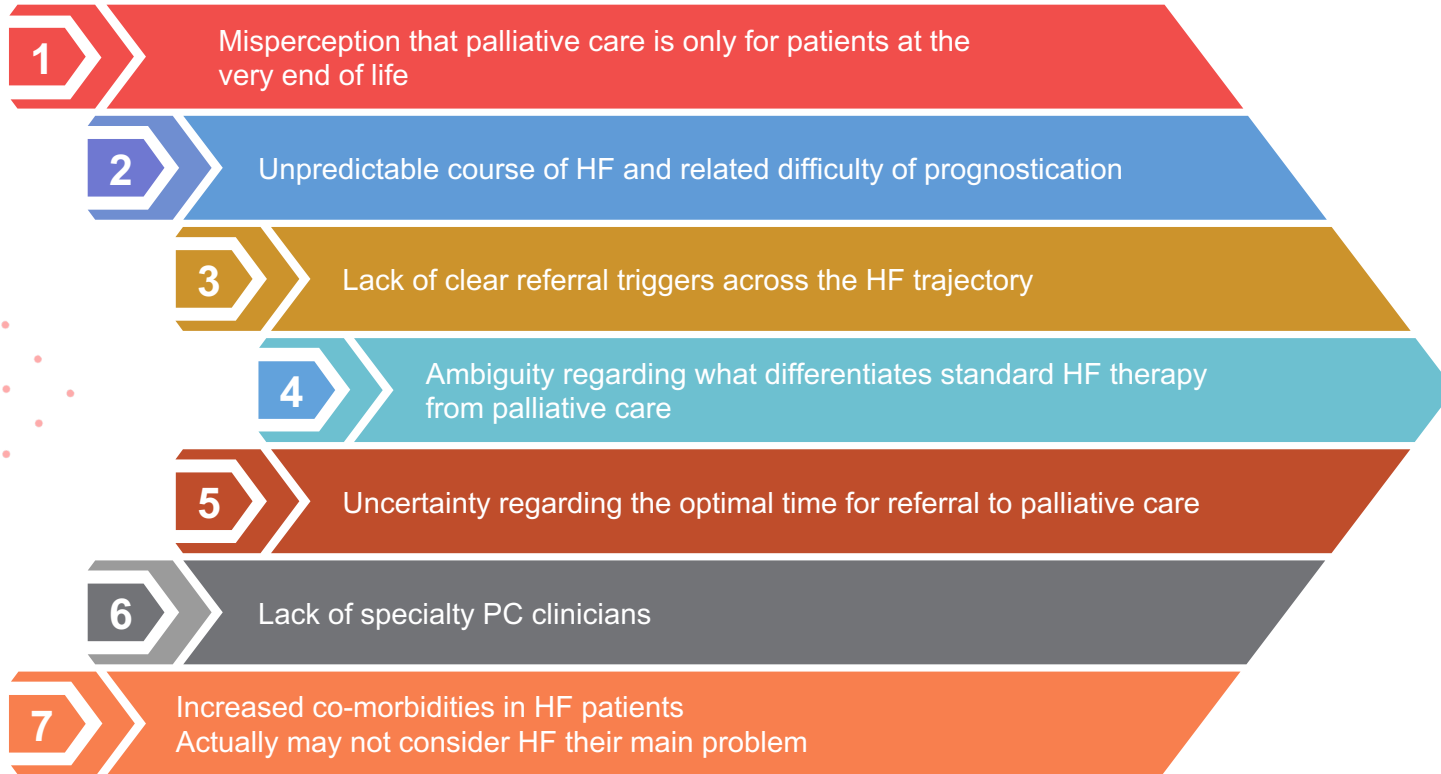


Switching goals of care to quality of life

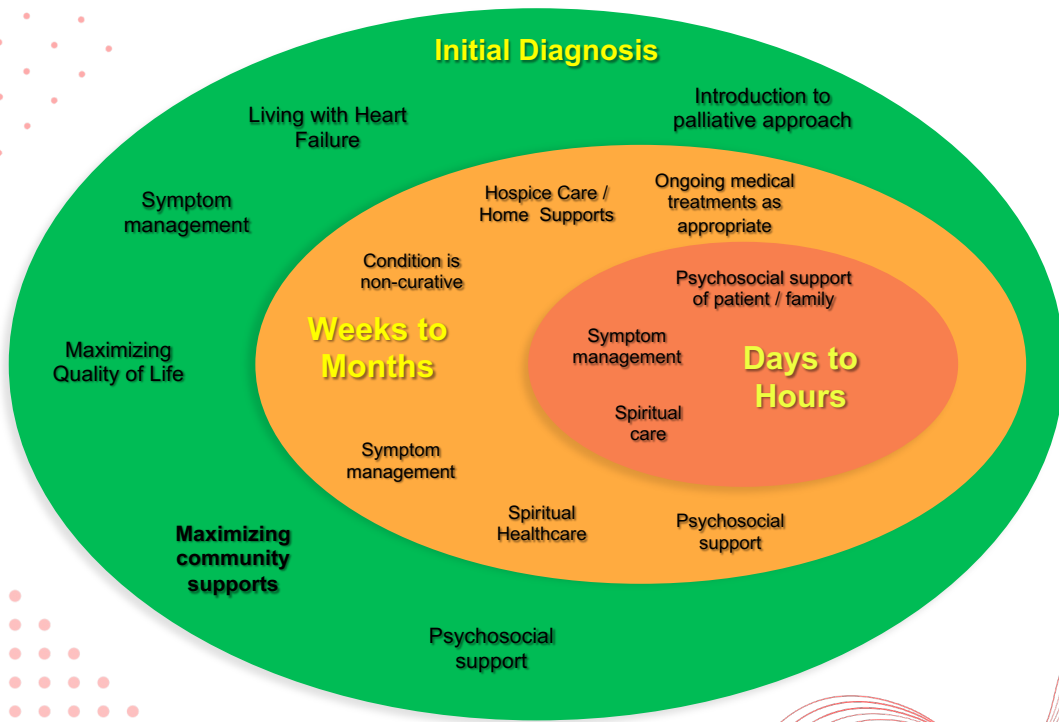
4



✘ Barriers to Palliative Care for HF Patients



Layers of Palliative Care for patients with Heart Failure



Initial Dx:

- Facilitate conversations about decision making
- Advanced care planning
- Hcp
- Use of devices

1

Weeks to Months

- Consider deactivation of devices
- POLST
- Hospice support: comfort focused care

2

Days to Hours

- Aggressive symptom management
- Support for loved ones
- Life reflection

3



Palliative Care Tips

1

Prognosis is unpredictable

- Survival commonly overestimated
- EF does not predict survival in older patients

Thorough discussions concerning ICDs

- 1/3 patients are shocked in last weeks of life

2

Aggressive and creative diuresis

3

4

High symptom burden

- Greater than patients with cancer
- Not just dyspnea

5

High risk for hospital admission even with hospice support

- Realistic expectations for patients and caregivers

Short survival on hospice = sub optimal EOL care and late referral

6

Graphical Abstract. Integration of Palliative Care in the 2021 ESC and the 2022 AHA/ACC/HFSA Heart Failure Guideline

2021 ESC Guideline

2022 AHA/ACC/HFSA Guideline

Definition of palliative care

- Multidisciplinary approach to alleviate physical, psychological and spiritual distress of patients and caregivers

Timing of palliative care

- Early integration, important across all stages of HF

Components of palliative care

- Conveyance of prognosis
- Advance care planning
- Discussions about life-sustaining therapies
- Symptom management

- Detailed guidance on assessment and treatment of symptoms

- Clarifying goals and values
- Hospice care
- Caregiver support

Primary vs secondary palliative care

- Not addressed

- Primary palliative care: provided by primary care team
- Secondary palliative care: provided by specialists

Referral to palliative care

- Based on unmet needs and poor estimated prognosis.

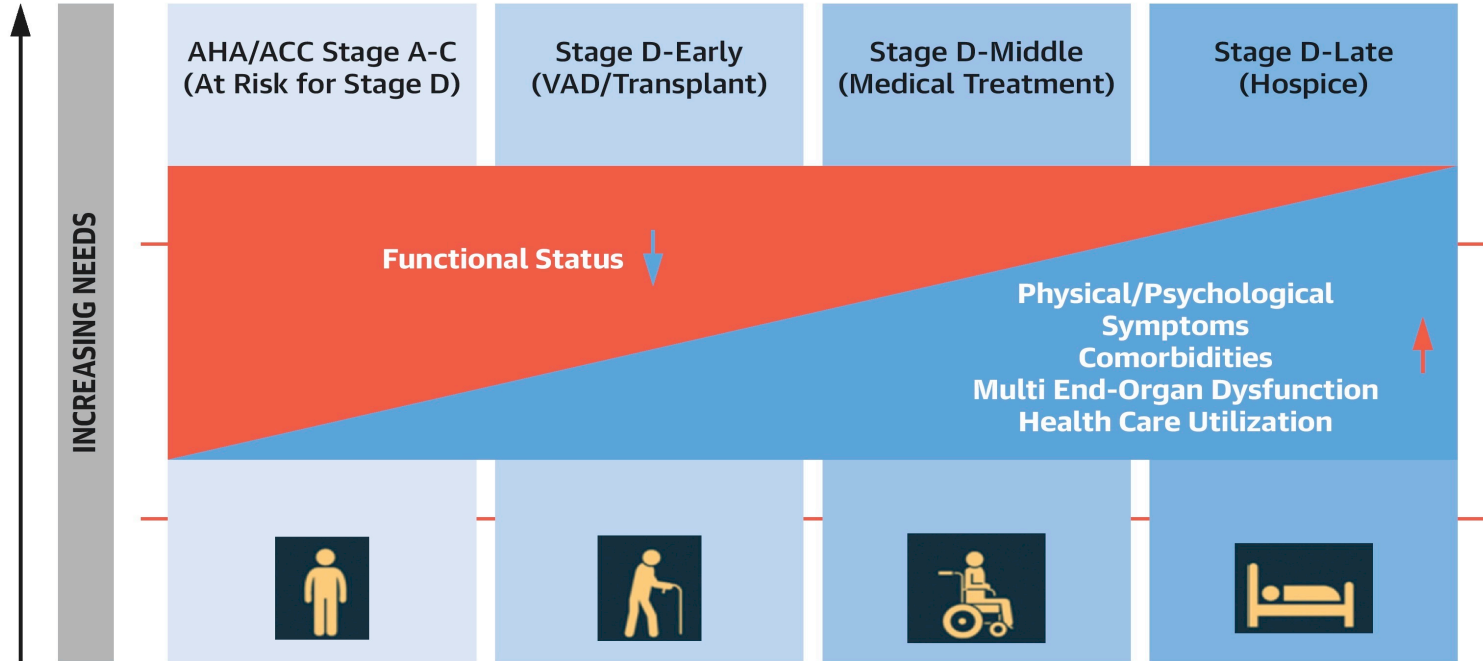
- Based on unmet needs

Official Recommendations

- None

- Primary palliative care for all HF patients (Class 1. C-LD)
- Discussions about the option for discontinuation for all HF patients considered for, or treated with, life-extending therapies, (Class LC-LD)
- Specialist palliative care for selected patients with HF (Class 2a, B-R)
- Advance directives for all patients with HF (Class 2a, C-LD)
- Hospice referral for patients with expected survival <6 months (Class 2a, C-LD)

CENTRAL ILLUSTRATION: Opportunities for Integrating Palliative Care Across the Spectrum of Patients With Heart Failure (Palliative Care for Patients With Heart Failure)



References :

1. Warraich, H. J., Rogers, J. G., Dunlay, S. M., Hummel, E., & Mentz, R. J. (2018). Top Ten Tips for Palliative Care Clinicians Caring for Heart Failure Patients. *Journal of palliative medicine*, 21(11), 1646–1650. <https://doi.org/10.1089/jpm.2018.0453>
2. Stuart B. (2007). Palliative care and hospice in advanced heart failure. *Journal of palliative medicine*, 10(1), 210–228. <https://doi.org/10.1089/jpm.2006.9988>
3. Lowey S. E. (2018). Palliative Care in the Management of Patients with Advanced Heart Failure. *Advances in experimental medicine and biology*, 1067, 295–311. https://doi.org/10.1007/5584_2017_115
4. Gelfman, L. P., Kavalieratos, D., Teuteberg, W. G., Lala, A., & Goldstein, N. E. (2017). Primary palliative care for heart failure: what is it? How do we implement it?. *Heart failure reviews*, 22(5), 611–620. <https://doi.org/10.1007/s10741-017-9604-9>
5. Latimer, A., Knoepke, C. E., & Winters, R. (2023). Integrating Palliative Care into the Management of Heart Failure with Reduced Ejection Fraction: A Practice Pearl. *Heart international*, 17(1), 5–7. <https://doi.org/10.17925/HI.2023.17.1.5>
6. Rogers, J, Patel, C, Mentz, R. et al. Palliative Care in Heart Failure: The PAL-HF Randomized, Controlled Clinical Trial. *J Am Coll Cardiol*. 2017 Jul, 70 (3) 331–341. <https://doi.org/10.1016/j.jacc.2017.05.030>
7. Adapted from the 2022 AHA/ACC/HFSA Guideline for the Management of Heart Failure. Published online ahead of print April 1, 2022, available at: Circulation. <https://www.ahajournals.org/doi/10.1161/CIR.0000000000001063> And Journal of the American College of Cardiology published online ahead of print April 1, 2022. *J Am Coll Cardiol*. <https://www.jacc.org/doi/10.1016/j.jacc.2021.12.012>





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