A Comparison of Challenges faced by Palliative Medicine with Heart Failure and Cancer Patients

Palliative Care ECHO Presentation

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Heart Failure (HF) Introduction

- Chronic, progressive disease that affects more than 6 million American adults[1,2]
- Prevalence projected to increase 46% from 2012 to 2030, which will affect more than 8 million American adults[3]
- HF patients increasingly face greater symptom burden, as advances in HF therapies prolong survival[4]
- HF patients typically experience a diverse array of distressing symptoms, which are associated with depression and decrease in QOL[4,5]

Palliative Care (PC) Introduction

- Interventions focused on reducing suffering and improving the QOL of patients and their families
- Associated with improvements in QOL, symptom burden, and depression in HF patients[7-10]
- Appropriate for any patient in the advanced stages of illness, including patients with HF

PC in HF Patients

- Increased symptom burden in HF patient comparable to the number of symptoms reported by terminal cancer patients in PC populations
- PC approaches that are often utilized in cancer patients also recommended for HF patients for improving quality of life and reducing pain
- **BUT**, utilization of PC for HF patients continues to be underutilized[11-14]

Challenges to the Implementation of PC in HF Patients

- PC evidence base not as robust as it is in oncology
- Limited number of studies examining which PC interventions are effective in HF
- Most funding for PC research is focused on oncology
- Most traditional models for PC designed for cancer patients with strong basis on prognostication
  - Prognostication in end-stage HF difficult due to variable trajectory
- Need for PC in the outpatient setting for patients with HF, as most is provided in the hospital setting

Case presentation: Heart Failure Patient

- Ms. G
- 56 yo woman with PMH of NICM (EF 20) s/p LVAD in 2017
- Not a candidate for heart transplant due to history of pulmonary sarcoidosis
- PMH: Stage D HF, CKD III, chronic driveline infection on meropenem, pulmonary sarcoidosis, HLD, hyperthyroidism, DM2, iron deficiency anemia
- On warfarin
- Follows up with Sentara's Palliative Medicine Clinic alongside the Advanced Heart Failure Clinic

Social History

- Avoids public places as she's embarrassed by her LVAD alarm going off frequently
- Recurrent low blood pressure
- Primary caretaker of 7 yo grandson
- Daughter passed away by drug overdose
- QoL: taking care of her grandson and supervising him while playing sports
  - She cannot participate due to fatigue
- 2 sons in their late 30s who refuse to talk to her regarding her medical condition as it is too difficult
- Sister is mPOA and attends most appointments
- Understands time is limited with her condition but she wants to live with her grandson
- She has had multiple code discussions before

å

Snapshot of most recent encounters

She was admitted on 9/4/2018 with low flow alarms due to nausea and vomiting hypovolemia. She had continued drainage from her driveline. Culture grew S marcessans. Ciprofloxacin was added to doxycycline

She was admitted on 9/21/2018 with subtherapeutic anticoagulation and hypoglycemia.

She was admitted on 1/15/2019 with low flow alarms. She was found to be significantly hypertensive due to noncompliance. Glucose was in excess of 600. Low flow alarms were presumed due to hypertension and volume depletion due to osmotic diuresis.

Her medical regimen was restored. Diabetes was controlled. Flows improved and she was discharged on 1/18/2019.

Prednisone weaned to 2.5mg daily on 4/1/19.

Hospitalized 9/5/19-9/9/19 for acute on chronic DL infection (+serratia marcescens) and uncontrolled hypertension w/ recurrent low flow, and uncontrolled DM. She was d/c'd on IV rocpehin x 1 week. She was in ED on 9/16/19 for AKI, scr 1.6 and loss of IV.

Seen in ID clini on 9/18/19, was switched from IV ceftriaxone (d/t malfunctioning midline) to cefuroxime 500mg BID x 7 days. She was to also switch to cutimed sorbact for her dressing changes.

She was admitted on 10/10/2020 with hypovolemia and low flow alarms. MAP was high. Blood pressure was controlled.

She was admitted on 2/5/2021 with volume overload. She was treated with intravenous furosemide. Hydralazine was discontinued and she was discharged on a higher dose of diuretic.

She was admitted on 6/10/2021 with cough and right middle lobe pneumonia.

She was admitted on 9/29/2021 with dehydration and low flow alarms.

She was admitted on 10/18/2021 with PICC line complication. She underwent placement of a tunneled central line.

She was admitted on 12/27/2021 with low flow alarms, nausea, vomiting, abdominal pain and anorexia. Symptoms resolved without specific treatment.

Case presentation: Oncology Patient

- Mr. L
- 60yo man with PMH of astrocytoma, HTN, HLD
- has had falls, seizures, speech issues, and weakness due to tumor progression
- Does not have capacity, unable to communicate
- unmarried, no children, lives with beloved dog at home
- prior to illness was a high functioning accountant, volunteer at Church
- family conference with brother and friend who are in agreement to focus on patient's comfort
- Palliative medicine is able to assist with symptom management
- Admitted to hospice where he dies 5 days later

Snapshot of recent encounters

- last hospitalization was ~6 months ago
  - presented to ED for visual hallucinations
  - s/p craniotomy where he was discharged to Rehab
  - noted to be aggressive to others and felt like he was a burden
- followed up with his outpatient neurosurgery and radiation oncology appointments

Trajectory of Decline

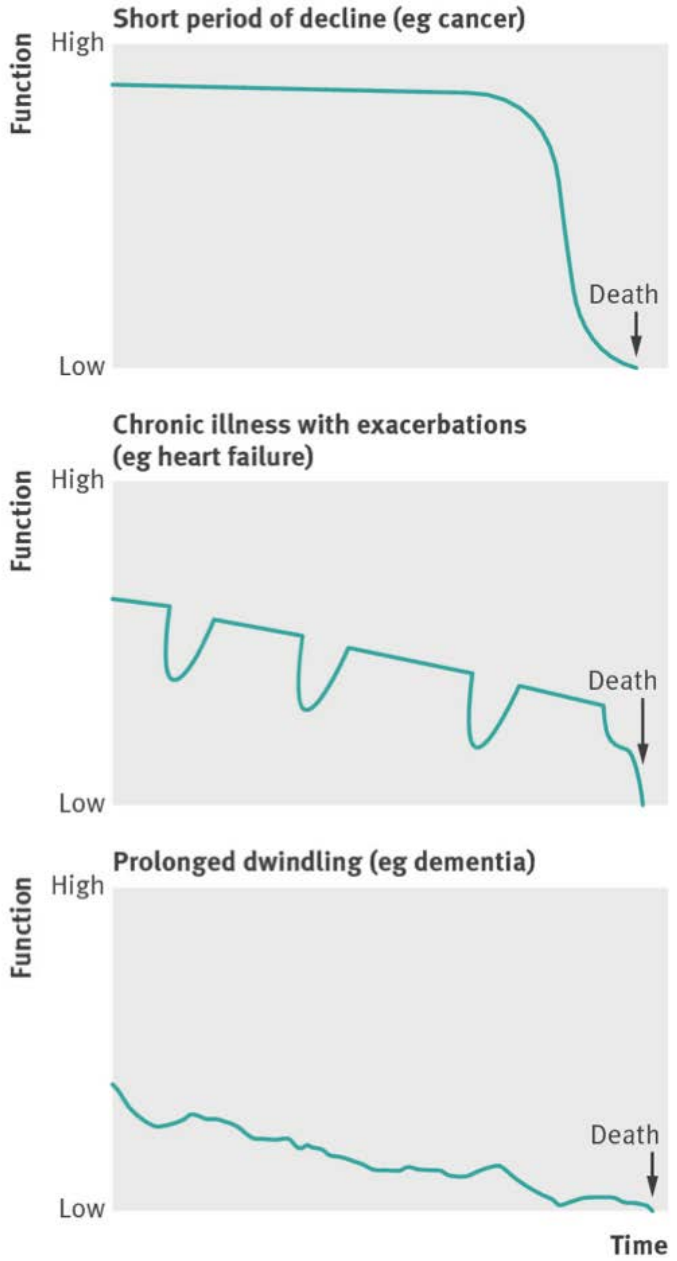


Fig 1 Trajectories of chronic illness[1 2]

Source: Creutzfeldt et al.[16]

PC and Symptom Management

- Clear distinction between curative therapies and palliative therapies for oncology patients in PC (e.g., chemotherapy)
  - Different for patients with HF…
  - Therapies considered "curative" may also be essential to maximizing palliation and promoting QOL (e.g., inotropes)

Table 1. Differences Between the Traditional Model of Palliative Care That Was Developed for Oncology Patients vs. the Optimal Model of Palliative Care for Patients With Advanced Heart Failure

	Traditional Model for Oncology/Hospice	Optimal Model for Advanced Heart Failure
Timing of Referral	When curative treatments have been exhausted, often during the last 6 months of life	When patient develops NYHA Class III or IV symptoms or ACC/AHA Stage D disease
Prognosis and Disease Trajectory	Onset of functional decline strongly correlated with 6-month prognosis, regardless of cancer type	Prognosis with advanced heart failure can be quite variable, with many patients living beyond one year and illness trajectory marked by exacerbations and remissions
Care Settings	Prognosis > 6 months • Palliative care clinic • Palliative home care • Inpatient palliative care consults Prognosis < 6 months • Hospice care after curative therapies have been stopped (most common setting)	Palliative care clinic, home care, and inpatient palliative care consults, as well as palliative care in skilled nursing facilities since many patients lose functional decline early and lose the ability to live at home Hospice care when patients decide to forego readmission; many patients live for longer than 6 months on hospice and need to be recertified
Medications and Therapies	Most curative treatments are discontinued when goals of care shift towards palliation because most cancer therapies are given with a curative intent, and side effects from these medications often adversely affect quality of life	Many therapies are continued throughout the course of illness as they continue to impact quality of life even if they no longer impact quantity of life
Role of Caregiver Burden and Psychosocial Stressors	Can be significant during the last 6 months of life, and caregiver and psychosocial support is often provided as a part of the hospice benefit	Patients require more caregiver support for a longer period of time due to early loss of functional status and inability to continue working, often well before patients and caregivers can benefit from the support provided by the hospice benefit Psychosocial support must be outside of the standard benefit structure in the form of innovative community-based programs funded by payers and providers

Source: American College of Cardiology[15]

Table 3. Unanswered Research Questions in the Field of Palliative Care for Patients With Heart Failure

Components of Palliative Care Interventions for HF	Symptom Management for Patients With HF	Communication and Advance Care Planning

• What interventions should be a part of palliative care for HF (i.e., improved communication, psychosocial and spiritual support, advance care planning, symptom management, care coordination)
• How do we assess impact of these interventions?
• What are the appropriate outcome measures to use in the assessment of above?
	• Which symptoms are most prominent for patients with HF
	  • Symptoms directly related to HF (i.e., fatigue, dyspnea) that are refractory to standard HF therapies
	  • Symptoms related to co-morbid conditions (i.e., pain from osteoarthritis or diabetic neuropathy, anxiety and depression)
	• What are effective methods for managing these symptoms?
		• What is the optimal timing of advance care planning for patients with HF?
		• What are barriers to effective provider-patient conversations about goals of care and advance care planning?
		• How effective is communication training for cardiologists in ensuring that the care HF patients receive is in alignment with their goals and values?

Source: American College of Cardiology[15]

Table 2: Indication for Referral to Palliative Care for Patients With Heart Failure

Symptoms

- NYHA class III/IV symptoms
- Frequent heart failure readmissions
- Recurrent ICD shocks
- Refractory angina
- Anxiety or depression adversely affecting patient's quality of life or ability to best manage illness

Milestones

- Referral
- VAD
- Transplant
- TAVR
- Home inotropic therapy

Caregiver distress

ICD = implantable cardioverter defibrillator; NYHA = New York Heart Association; TAVR = transcatheter aortic valve replacement; VAD = ventricular assist device

Source: American College of Cardiology[15]

Hospice Eligibility for Heart Failure Patients

- What is terminal disease?

Patients are considered to be in the terminal stage of cardiac disease if they meet the criteria below. Criteria 1 and 2 MUST be present; factors from 3 lend supporting documentation, but are not required.

1. At the time of initial certification or recertification for hospice:

- Patient is already optimally treated with diuretics and vasodilators, which may include Angiotensin-converting enzyme (ACE) inhibitors or the combination of hydralazine and nitrates. If side effects, such as hypotension or hyperkalemia, prohibit the use of ACE inhibitors or the combination of hydralazine and nitrates, this must be documented in the medical records;
- OR
- Patients having angina pectoris, at rest, resistant to standard nitrate therapy and are either not candidates or decline invasive procedures.

And

2. The patient has significant symptoms of recurrent congestive heart failure (CHF) at rest, and is classified as a New York Heart Association (NYHA) Class IV.

- Unable to carry on any physical activity without symptoms;
- Symptoms are present even at rest;
- If any physical activity is undertaken, symptoms are increased.

3. Documentation of the following factors may provide additional support for determining prognosis in end stage heart disease:

- Treatment resistant symptomatic supraventricular or ventricular arrhythmias;
- History of cardiac arrest or resuscitation;
- History of unexplained syncope;
- Brain embolism of cardiac origin;
- Concomitant HIV disease;
- Documentation of ejection fraction of 20% or less (only if available)

If a patient meets the medical criteria above, they are by definition eligible to receive hospice services.

Utilization of Hospice

- Compared with patients with cancer, patients dying of refractory HF in the United States are also less likely to be receive hospice services and are more likely to die in the hospital.[17]

HF Patients - Approaches to Treating

- EVMS Fellows Clinic
  - Establishing relationships early on
  - Limitations on symptom management
- Resources
  - I.e. Promedica (formerly known as Heartland) Hospice
  - Admission to hospice
    - Decline in function, cognition, sleeping more, eating less
    - Less focus on weight loss as most patients will have weight gain due to fluid retention
  - Allow for both Milrinone and dobutamine drip for symptom management
    - Currently not many hospices that will take dual inotropes
  - Pick up copays for expensive medications
  - Specialized training with nursing and with select patients
  - Connected well within Sentara's ICU & heart clinic
- Research Project

Study Aims

Assess the characteristics, referral patterns, utilization of palliative care interventions, symptom burden, functionality, and spiritual well-being of heart failure patients compared to cancer patients who are referred to a community-based palliative care center

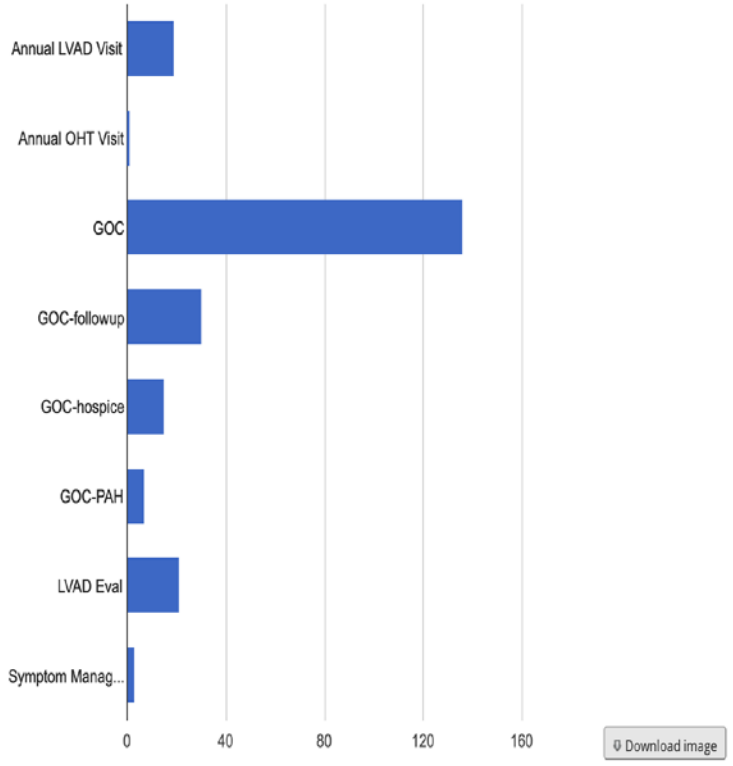
Data points to be collected: demographics, physician specialty referral, purpose of visit, zip code, income level, education, marriage status, primary health insurance status, diagnosis, number of hospitalizations within 6 months prior to first PC visit, length of time between first consult and death, Palliative Performance Scale, ACP completed, ACP available, code status, changes in goals of care, hospice utilization, pain management, ESAS, ADLs, FACIT-Sp-12, Caregiver Self-Assessment, Distress Thermometer

Current Project at Sentara Norfolk General

Purpose of Visit *(ptpurpose)* Refresh Plot | View as Bar Chart

Total Count (N)	Missing*	Unique
232	42 (15.3%)	8

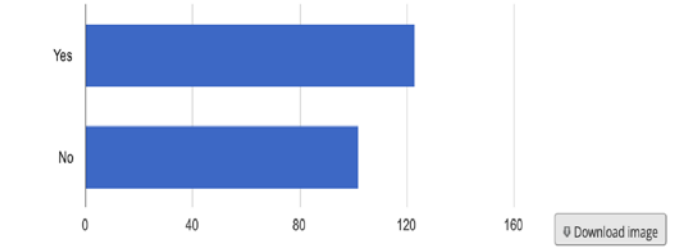
Counts/frequency: Annual LVAD Visit (19, 8.2%), Annual OHT Visit (1, 0.4%), GOC (136, 58.6%), GOC-followup (30, 12.9%), GOC-hospice (15, 6.5%), GOC-PAH (7, 3.0%), LVAD Eval (21, 9.1%), Symptom Management (3, 1.3%)



Advanced Care Plan Available *(acpavailable)* Refresh Plot | View as Bar Chart

Total Count (N)	Missing*	Unique
225	49 (17.9%)	2

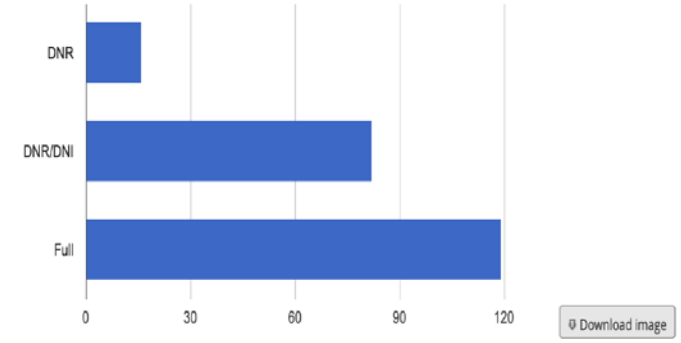
Counts/frequency: Yes (123, 54.7%), No (102, 45.3%)



Code Status *(ptcodestatus)* Refresh Plot | View as Bar Chart

Total Count (N)	Missing*	Unique
217	57 (20.8%)	3

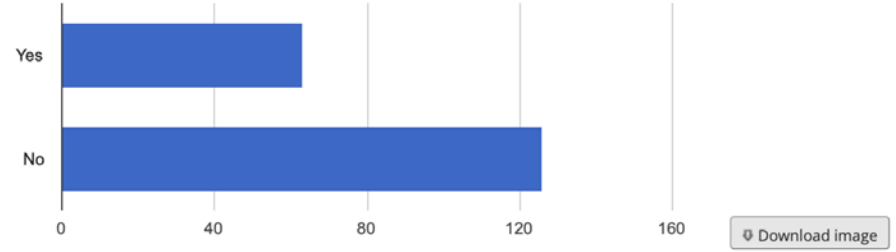
Counts/frequency: DNR (16, 7.4%), DNR/DNI (82, 37.8%), Full (119, 54.8%)



Change in Code *(codechange)* Refresh Plot | View as Bar Chart

Total Count (N)	Missing*	Unique
189	85 (31.0%)	2

Counts/frequency: Yes (63, 33.3%), No (126, 66.7%)



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Discussion

- Common thread among providers?
- Provider’s stance on patient advocacy and perspectives
- Ideas for the future?

Thank you!

Resources

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