

Dynamic Trajectories :
When does chronic heart disease
become terminal

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Assessment

- Who am I?
- Who are you?
- What can't we do?
- What can we do?



The Easy Answer to When (not the correct one)

- Symptoms of HF at rest (NYHA Class IV)
- Optimal treatment
 - ACE / ARB
 - Beta – blockers
 - Diuretics / Nitrates / Digoxin
- EF <20% (helpful but not required)

» NHPCO 1996, modified and implemented by HCFA
FI's

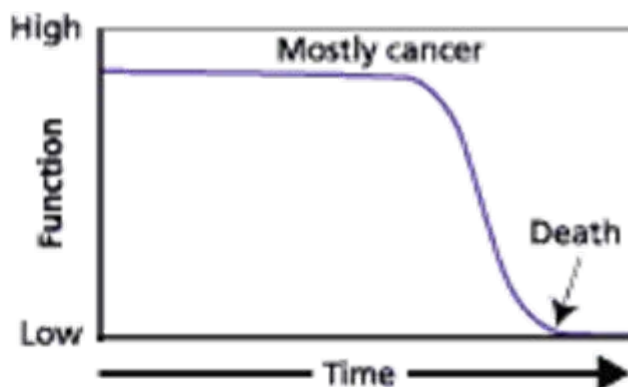
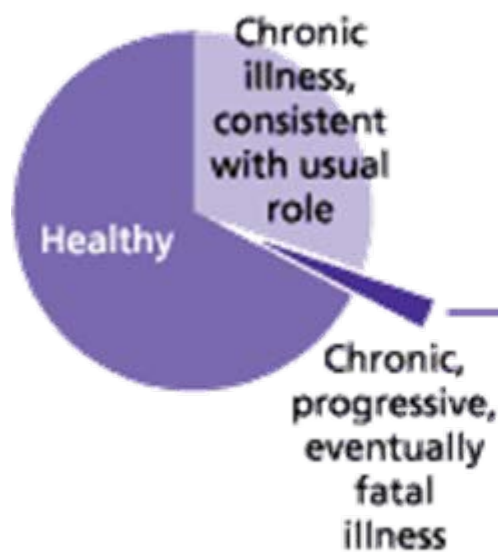


The Problem

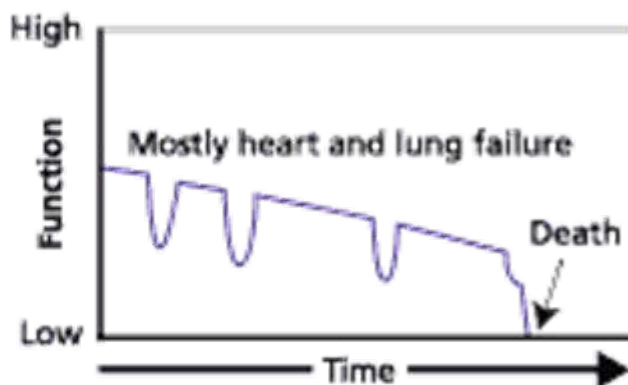
- These criteria are not predictive of 6-12 month prognosis with 50% accuracy
- NYHA Class IV by itself has 1 year mortality of 30-40%



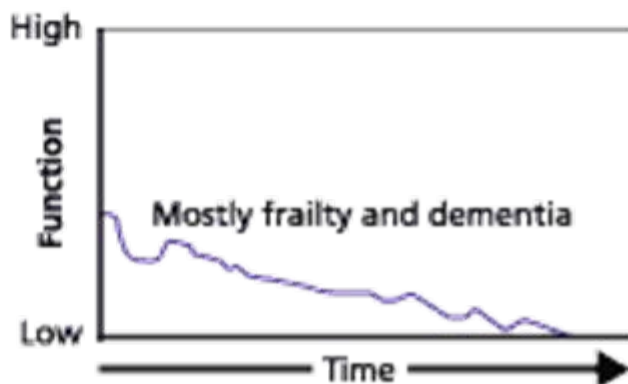
Health Status



Short period of evident decline



Long-term limitations with intermittent serious episodes



Prolonged dwindling

Other Factors Associated with Limited Prognosis

- Recent cardiac hospitalization (triples 1 yr mortality)
- Elevated BUN or Cr ≥ 1.4
- SBP < 100 or Pulse > 100 (each doubles 1 yr mortality)
- LVEF $\leq 45\%$ (linear association with survival)
- Ventricular dysrhythmias
- Anemia (each 1g/dl reduction assoc with 16% inc mort)
- Cachexia
 - Reduced functional capacity
 - Co-morbidities: diabetes, depression, COPD, cirrhosis, cerebralvascular disease, cancer, HIV associated cardiomyopathy

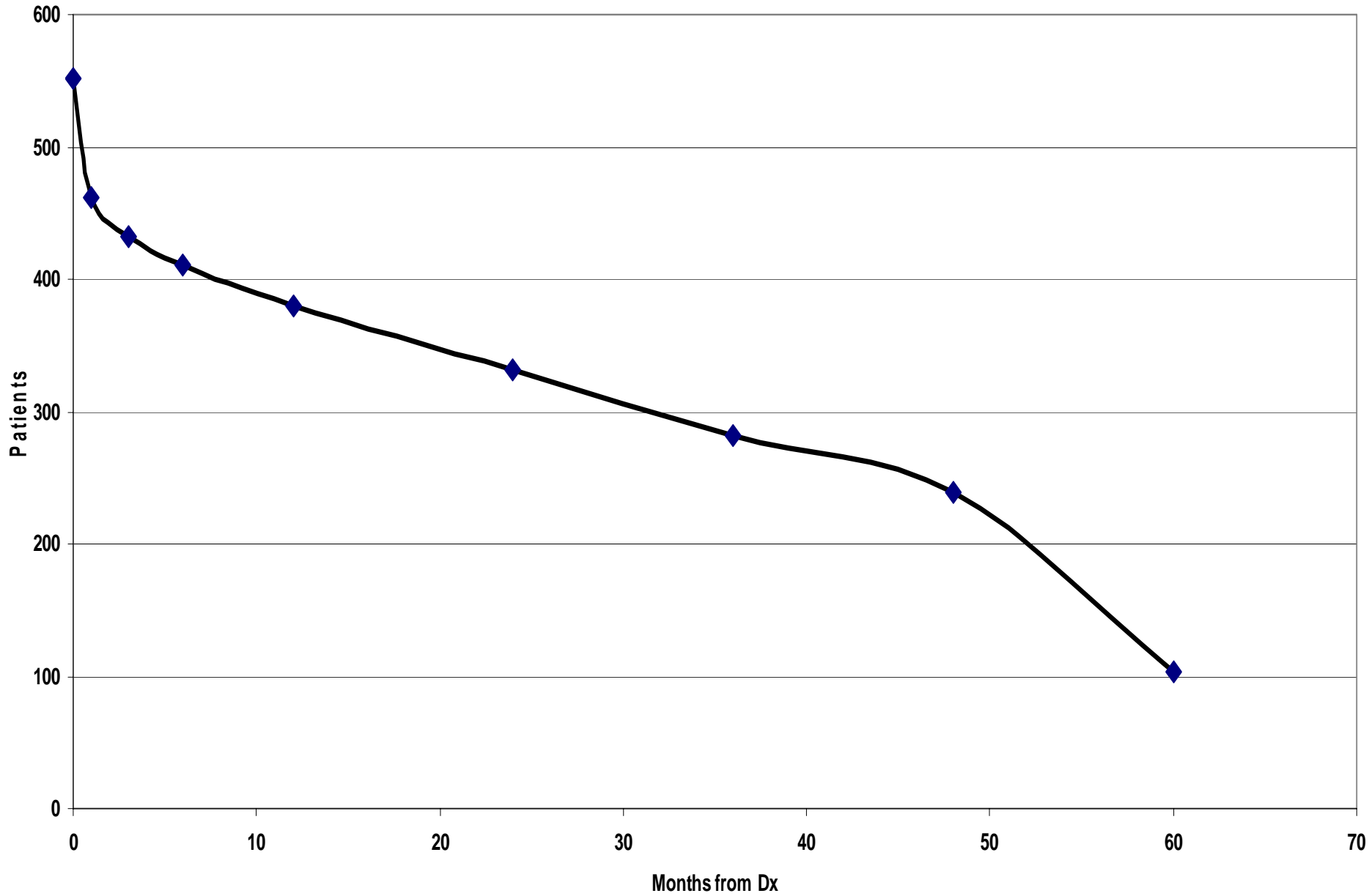


CHF Mortality Data

- 50-70% 5 year Mortality from diagnosis
- Medicare '86-'92 less than 25% of women and 20% of men survived 6 years following hospital discharge for CHF
- 12.7% annual incidence of death
- Comparable to most of the more lethal cancers for 1 year survival



CHF Mortality



SEATTLE HEART FAILURE MODEL™

* Please click here for technical details.

* If your browser is configured for Java, the SHFM calculator will appear below shortly. If not, please configure your browser to support Java applets.

Home
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Survival

Baseline
1 year 2 year 5 year

50 % 25 % 3 %

Mortality

50 % 75 % 97 %

Mean life expectancy

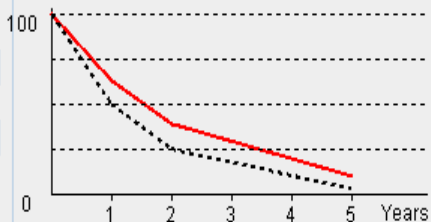
1.4 years

Post-intervention
1 year 2 year 5 year

63 % 39 % 10 %

37 % 61 % 90 %

2.1 years



Baseline Characteristics

Clinical

Age

Gender

NYHA Class

Weight (kg)

EF

Syst BP

Ischemic

Medications

ACE-I

Beta-blocker

ARB

Statin

Allopurinol

Aldosterone blocker

Diuretics

Furosemide

Bumetanide

Torsemide

Metolazone

HCTZ

Lab Data

Hgb

Lymphocyte%

Uric Acid

Total Chol

Sodium

QRS >120 msec

Devices

None

BIV Pacer

ICD

BIV ICD

Defaults

Interventions

ACE-I

ARB

Beta-blocker

Statin

Aldosterone Blocker

Devices

None

BIV Pacer

BIV ICD

ICD

LVAD

Note: Some devices may be disabled if CMS clinical criteria are not met. See below.

Terminality

- Yesterday you weren't – today you are
- Not a dichotomy
- A process
- All heart disease has a chronic component
- Not all heart disease will become terminal
- As regards patient care, terminality is probably the wrong target



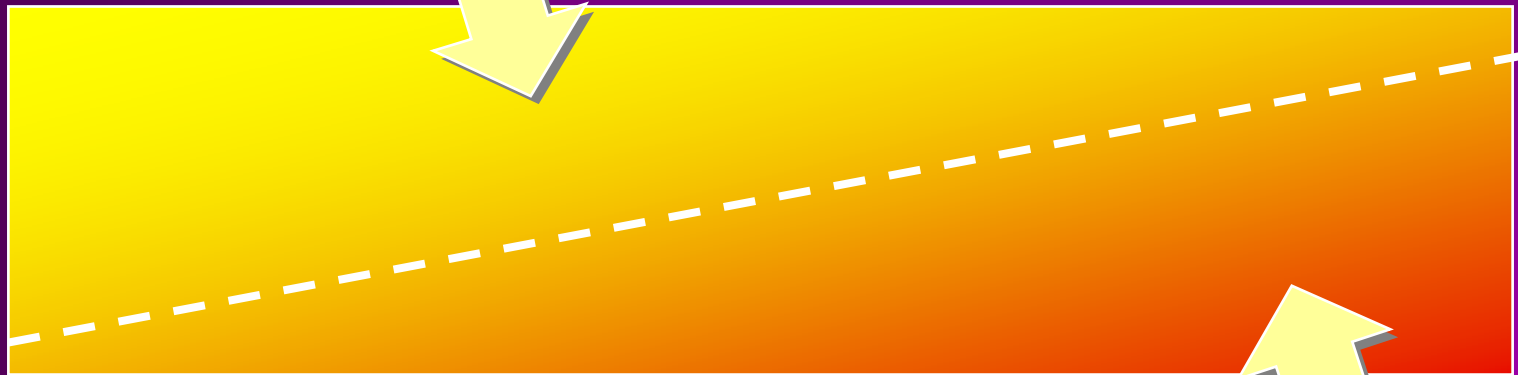
Palliation vs. Prognosis

- When does a patient with chronic heart disease become chronically ill?
- When should a person with chronic heart disease receive palliative care?



The interrelationship of therapies with curative and palliative intent

Curative / life-prolonging therapy



Presentation

Death

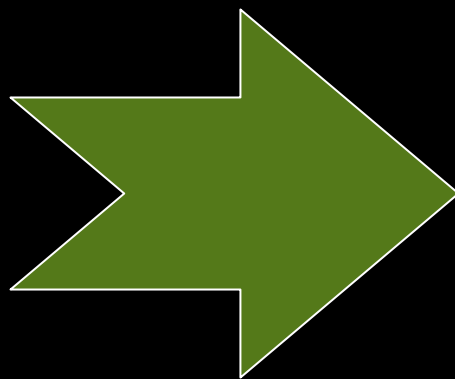
Relieve suffering (palliative care)

Why?

Disease Focused
Management

+

Subdued realism
about prognosis
and achievable
goals



Frustrated
Patients

Frustrated
Families

Irresolvable
Grief Issues

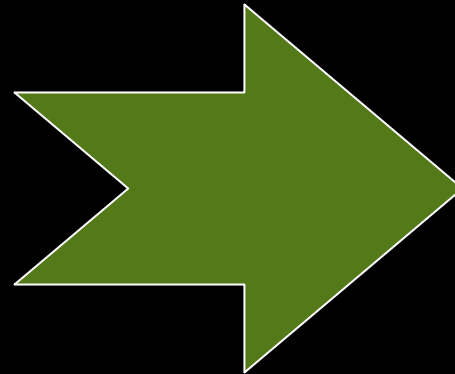
Lost
Opportunities

Why?

Whole Person
Management

+

Appropriate
(Realistic)
Patient
Determined
Goals



Improved
Quality of Life

High
Satisfaction
Ratings
Good Deaths
Healthy
Bereavement