Guidelines for Heart Failure

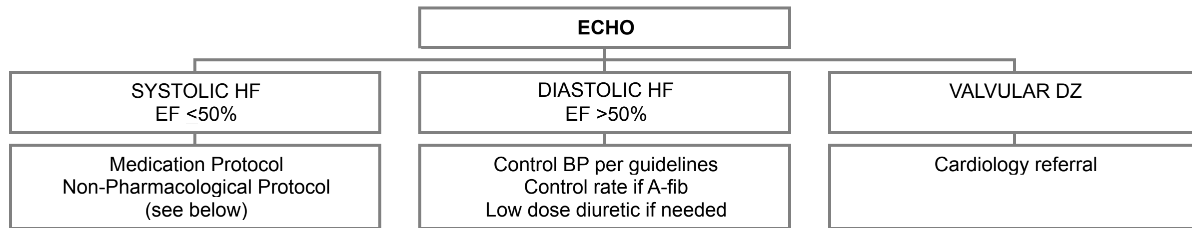
CARILION CLINIC

CONSIDER POSSIBLE CAUSES AND RISK FACTORS

Cardiovascular Factors	Systemic Factors	Patient-Related Factors
1. CAD (most common cause) 2. Hypertension 3. Valvular disease (AS and MR) 4. Right sided HF – (Pulm HTN and PE) 5. A-fib, A-tach consider cardioversion	1. Infection 2. Thyroid disorder 3. Diabetes 4. Electrolyte imbalance 5. Med-related: NSAIDs, Ca++ Ch Blockers	1. ETOH abuse 2. Excessive salt intake 3. Medication noncompliance 4. Obesity 5. Smoking

RECOMMENDED INITIAL WORKUP

History and Physical	Clarify shortness of breath, fatigue, edema, jugular venous pulsations
Laboratory Testing	CBC, CMP, TSH, BNP, Iron panel (Serum iron, Ferritin, Transferrin Saturation) Note: BNP results <100 HF unlikely, >500 HF likely, values between generate "indeterminant" results.
Diagnostic Testing	EKG, ECHO (consider Stress Testing if at risk for active CAD) Note: ECHO to classify Systolic, Diastolic or Valvular disease. Repeat ECHO for change in clinical status.



MEDICATION PROTOCOL (SYSTOLIC HF) Note: Titrate dose up every 2-4 weeks to max goal dose (or symptomatic hypotensive)

Which Patients	Drug Class	Specific Rx	Starting Dose	Maximum Goal Dose
Everyone	ACE	Prinvil, Zestril (lisinopril)	2.5-5 mg daily	20-40 mg daily
Everyone	ß-Blocker	Coreg (carvedilol)	3.125 mg BID	25 mg BID
		Toprol XL (metoprolol succinate) ß-1 selective, so is better for lung disease	25 mg daily	200 mg daily
If cough with ACE	ARB	Atacand (candesartan)	4-8 mg daily	32 mg daily
		Diovan (valsartan)	40 mg BID	160 mg BID
If HTN, Renal Failure, or African American	Vasodilator	Apresoline (hydralazine)	25 mg TID	75 mg TID
		Isordil (isosorbide dinitrate)	10-20 mg TID	40 mg TID
If more severe sx (NYHA Class III or IV)	K+ sparing diuretic	Aldactone (spironolactone)	25 mg daily	Contraindicated Cr >2.0 or K+ >5 Need to check K+ 1 wk, 1 mo, then q 3 mo If K+ >4, stop supplemental K+
Anyone for edema/ symptom control	Loop Diuretic	Lasix (furosemide)	Equivalent doses: Lasix 40 mg = Bumex 1 mg = Demadex 20 mg Often need to supplement with K+ Consider dose BID-TID and not change mg for non-responders	
		Bumex (bumetanide)		
		Demadex (torsemide)		

NON-PHARMACOLOGICAL PROTOCOL (SYSTOLIC HF)

Which Patients	Intervention
Everyone	Diet – focus on Low Salt <2-3 g/day (most common cause of Acute-on-Chronic HF exacerbation)
	Daily Weight Monitoring – call if >2 lb gain overnight or >5 lb gain in 1 week
	Exercise – low intensity walking program improves functional status and symptoms
EF <35	Consider AICD as primary prevention of sudden cardiac death. Note: NOT INDICATED if multiple comorbidities such that quality of life is judged to be poor over the next 12 months. Note: Wait to reassess EF 3 months after revascularization or 40 days after acute MI.
EF <35, QRS >120, NYHA Class III or IV	Consider Biventricular Pacing–has been shown to give improvement in survival, EF and symptoms
EF <35, freq. admits, failing std. therapies	Consider referral to Carilion CHF Clinic

These clinical guidelines are adapted from "2009 Focused Update: ACCF/AHA Guidelines for the Diagnosis and Management of Heart Failure in Adults" (March 2009) published by the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines. They are designed to assist physicians in managing heart failure patients and are not intended to replace a clinician's judgment or establish a protocol for all patients with a particular condition.