Choice™
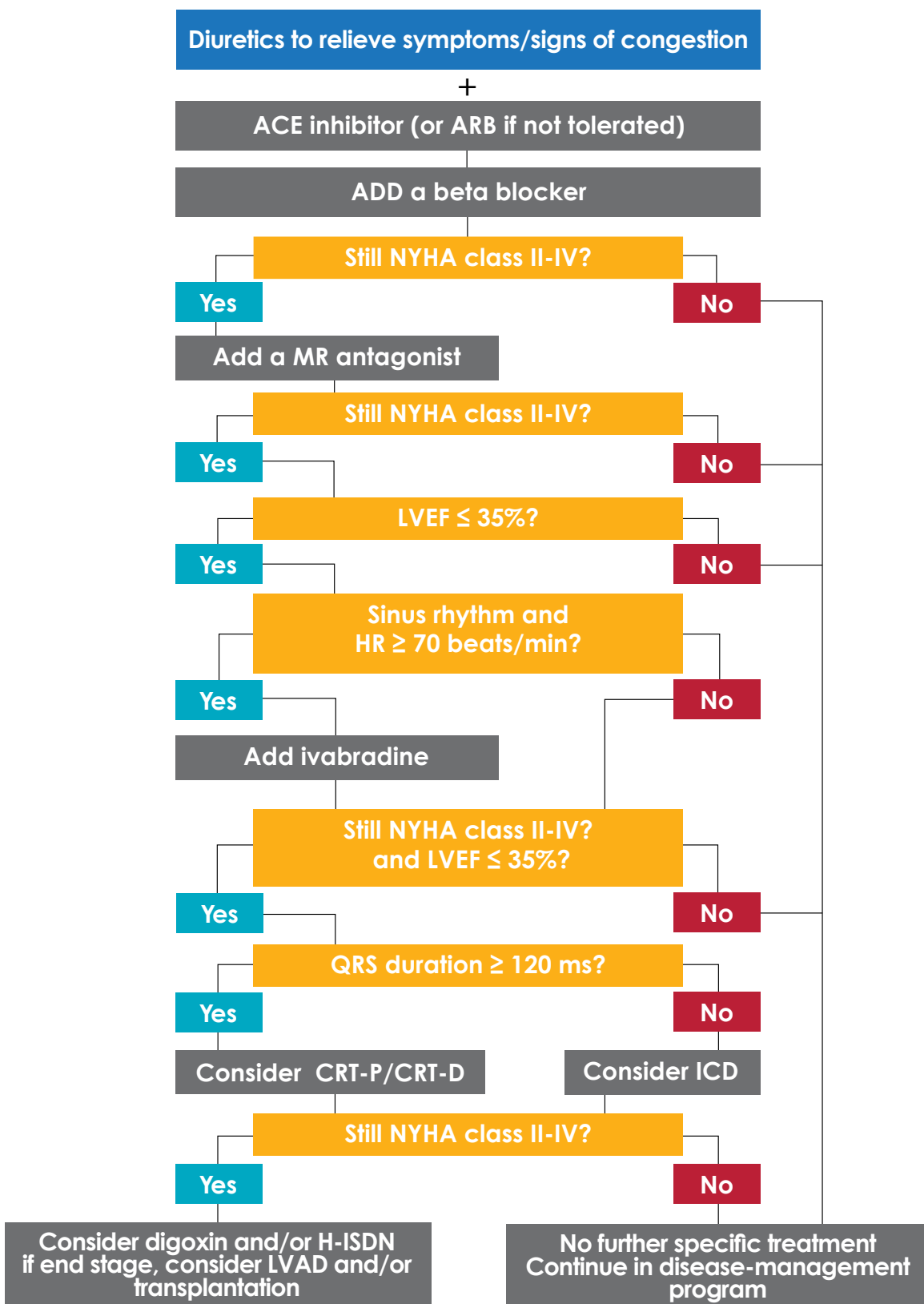
VAD Therapy Changing the Treatment for Heart Failure.

Decision Tree For Heart Failure Treatments[1]
(Consistent with ESC Guidelines)

Diuretics to relieve symptoms/signs of congestion

+

ACE inhibitor (or ARB if not tolerated)

ADD a beta blocker

Still NYHA class II-IV?

Yes — No

Add a MR antagonist

Still NYHA class II-IV?

Yes — No

LVEF ≤ 35%?

Yes — No

Sinus rhythm and HR ≥ 70 beats/min?

Yes — No

Add ivabradine

Still NYHA class II-IV? and LVEF ≤ 35%?

Yes — No

QRS duration ≥ 120 ms?

Yes — No

Consider CRT-P/CRT-D | **Consider ICD**

Still NYHA class II-IV?

Yes — No

Consider digoxin and/or H-ISDN if end stage, consider LVAD and/or transplantation | **No further specific treatment Continue in disease-management program**

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American Heart Association:
Recommendations for the Use of Mechanical Circulatory Support:
Device Strategies and Patient Selection[2]

1. MCS for BTT indication should be considered for transplant-eligible patients with end-stage heart failure who are failing optimal medical, surgical, and/or device therapies and at high risk of dying before receiving a heart transplantation.	**Class I; Level of Evidence B**
2. Implantation of MCS in patients before the development of advanced heart failure (ie, hyponatremia, hypotension, renal dysfunction, and recurrent hospitalizations) is associated with better outcomes. Therefore, early referral of advanced heart failure patients is reasonable.	**Class IIa; Level of Evidence B**

New York Heart Association (NYHA) Functional Classification[3]

Class	Patient Symptoms
I	No limitation of physical activity. Ordinary physical activity does not cause undue fatigue, palpitation, dyspnea (shortness of breath).
II	Slight limitation of physical activity. Comfortable at rest. Ordinary physical activity results in fatigue, palpitation, dyspnea (shortness of breath).
III	Marked limitation of physical activity. Comfortable at rest. Less than ordinary activity causes fatigue, palpitation, or dyspnea.
IV	Unable to carry on any physical activity without discomfort. Symptoms of heart failure at rest. If any physical activity is undertaken, discomfort increases.

INTERMACS Classifications[4]
Defining the progression of advanced heart failure to better determine timing for LVAD referral.

	Definition	Description	Timescale for Intervention
1	Critical cardiogenic shock	"Crash and burn"	Hours
2	Progressive decline	"Sliding fast"	Hours to days
3	Stable but inotrope dependent	"Stable but dependent"	Weeks
4	Recurrent advanced heart failure	"Frequent flyer"	Weeks to months
5	Exertion intolerant	"Housebound"	Variable
6	Exertion limited	"Walking wounded"	Variable
7	Advanced NYHA class III	"Advanced NYHA class III "	Not indicated

1. McMurray, J, et al. ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure 2012 European Heart Journal . 2012;33:1787-847.
2. Peura, JL. et al. AHA. Recommendations for the use of mechanical circulatory support: device strategies and patient selection.2012;126:2653.
3. http://www.heart.org/HEARTORG/Conditions/HeartFailure/AboutHeartFailure/Classes-of-Heart-Failure_UCM_306328_Article.jsp#.Vnr3fmfnncc. Accessed December 23, 2015.
4. Miller L, Guglin M. Patient selection for ventricular assist devices: A moving target. J Am Coll Cardiol. 2013;61:1209-1221.

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