2017 Guideline for Management of Patients With Ventricular Arrhythmias and the Prevention of Sudden Cardiac Death

GUIDELINES MADE SIMPLE

A Selection of Tables and Figures

AMERICAN COLLEGE *of* CARDIOLOGY

2017 Guideline for Management of Patients With Ventricular Arrhythmias and the Prevention of Sudden Cardiac Death

A report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines and the Heart Rhythm Society

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The purpose of the guideline is to provide a contemporary guideline for the management of adults who have ventricular arrhythmias (VA) or who are at risk for sudden cardiac death (SCD), including diseases and syndromes associated with a risk of SCD from VA. The 2017 guideline supersedes three guidelines; the entire ACC/AHA/ESC 2006 Guidelines for Management of Patients With Ventricular Arrhythmias and the Prevention of Sudden Cardiac Death, and selected sections of the ACC/AHA/HRS 2008 Guidelines for Device-Based Therapy of Cardiac Rhythm Abnormalities and selected sections of the 2011 ACCF/AHA Guideline for the Diagnosis and Treatment of Hypertrophic Cardiomyopathy.

The following resource contains selected Figures and Tables from the 2017 AHA/ACC/HRS Guideline for Management of Patients With Ventricular Arrhythmias and the Prevention of Sudden Cardiac Death. The resource is only an excerpt from the Guideline and the full publication should be reviewed for more figures and tables as well as important context.

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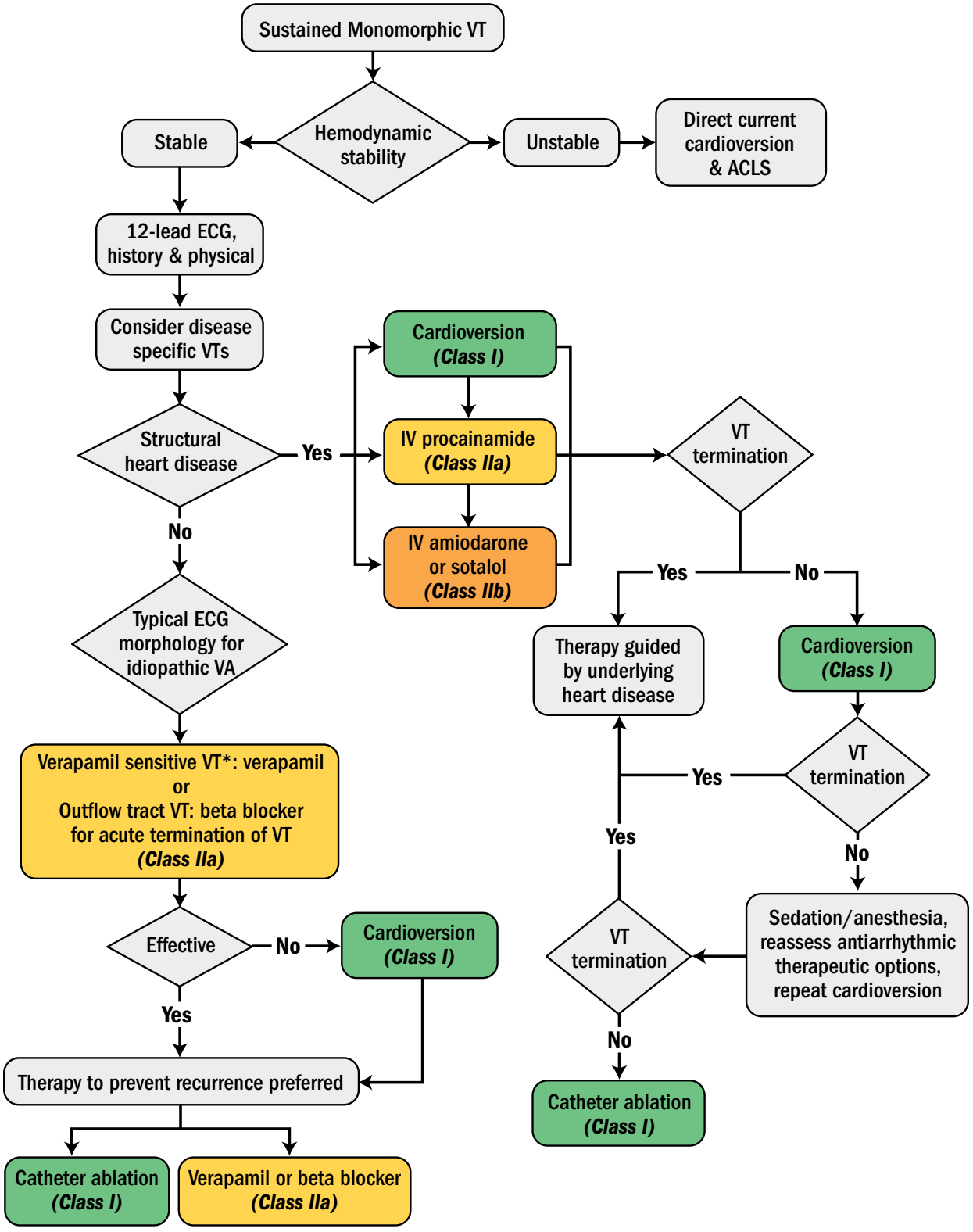
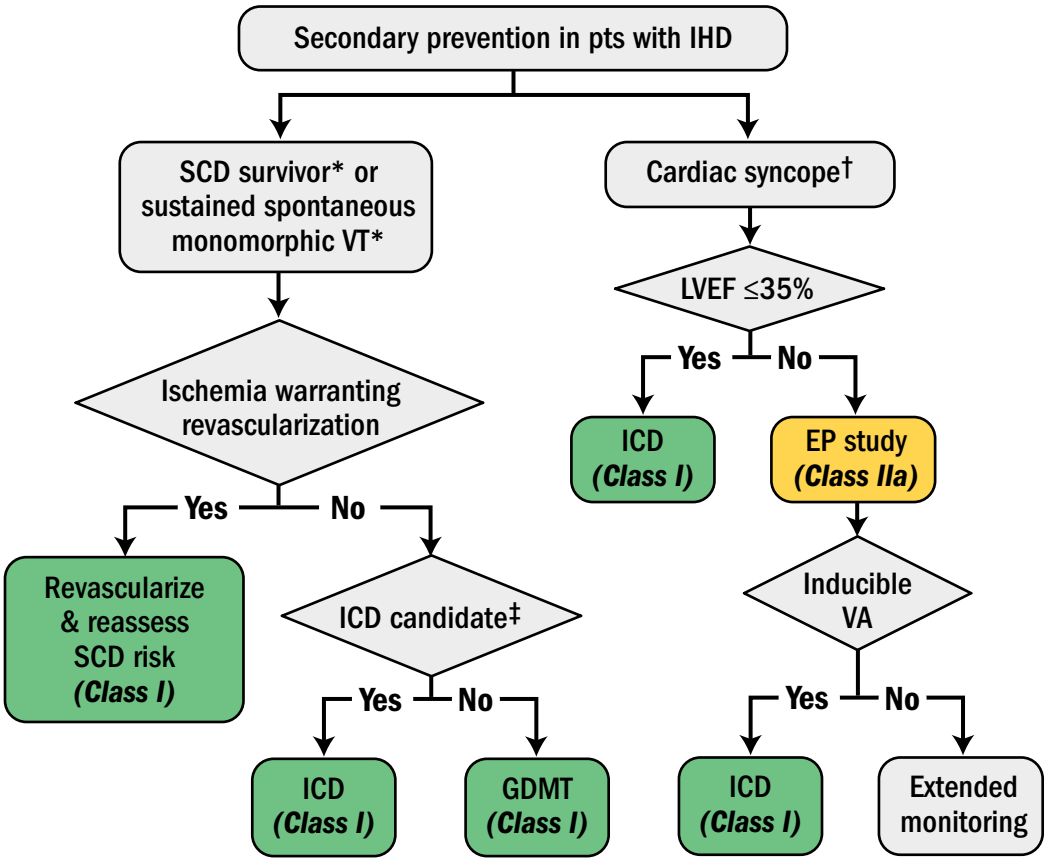
Management of Sustained Monomorphic VT



*Known history of verapamil sensitive or classical electrocardiographic presentation.

Figure 2

Secondary Prevention of Sudden Cardiac Death in Patients with Ischemic Heart Disease



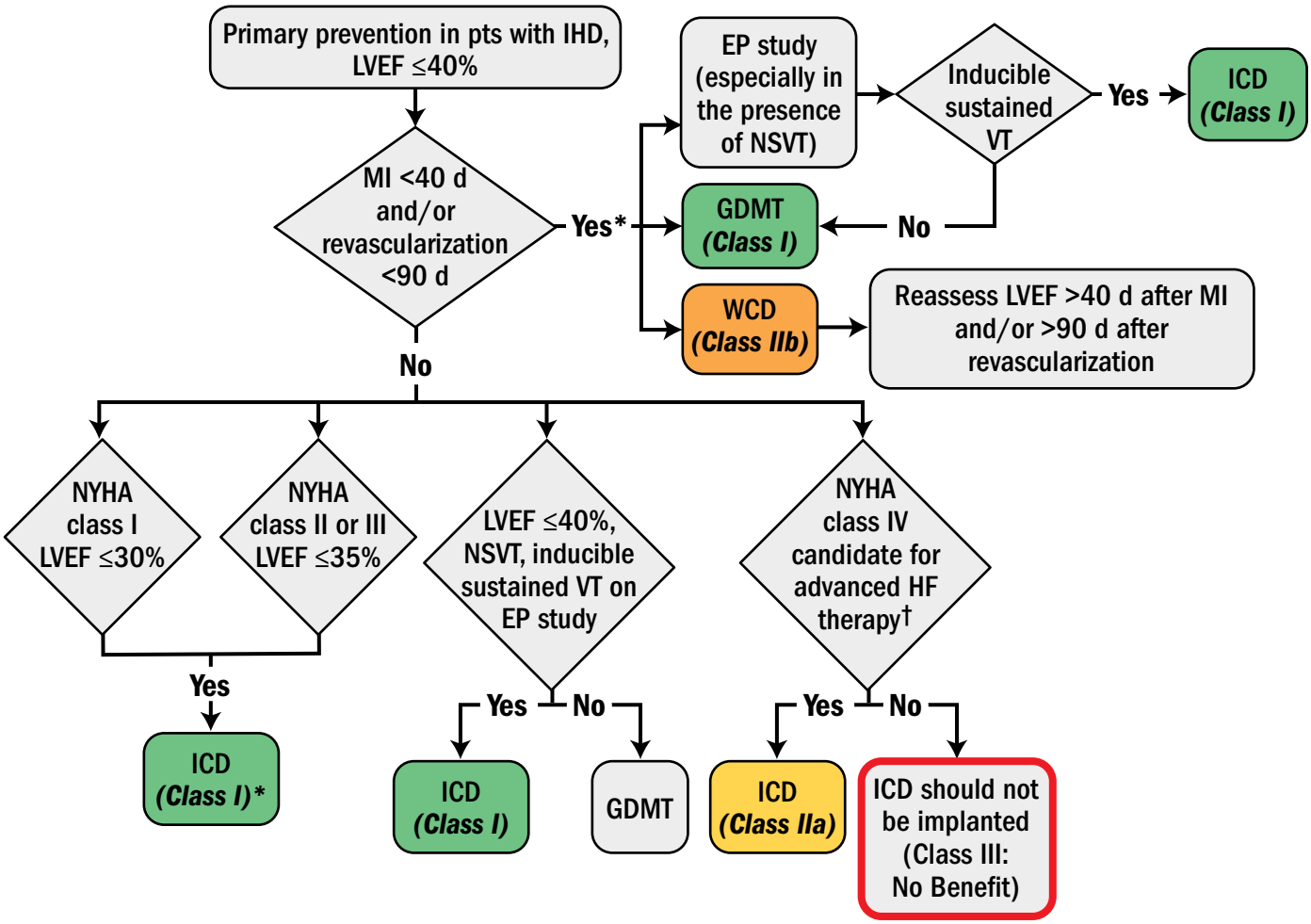
*Exclude reversible causes.

†History consistent with an arrhythmic etiology for syncope.

‡ICD candidacy as determined by functional status, life expectancy, or patient preference.

Figure 3

Primary Prevention of Sudden Cardiac Death in Patients with Ischemic Heart Disease

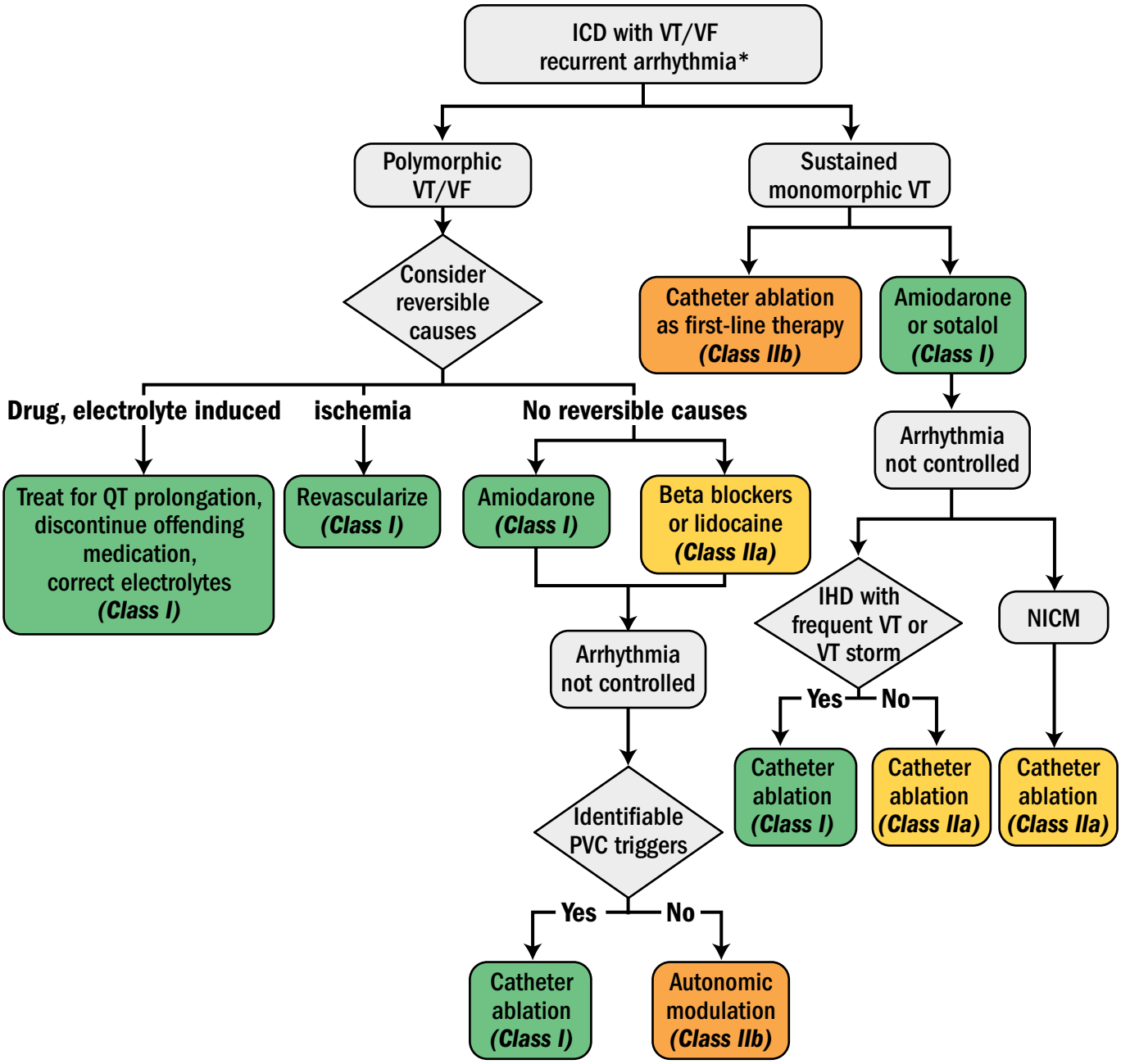


*Scenarios exist for early ICD placement in select circumstances such as patients with a pacing indication or syncope.

†Advanced HF therapy includes CRT, cardiac transplant, and LVAD.

Figure 4

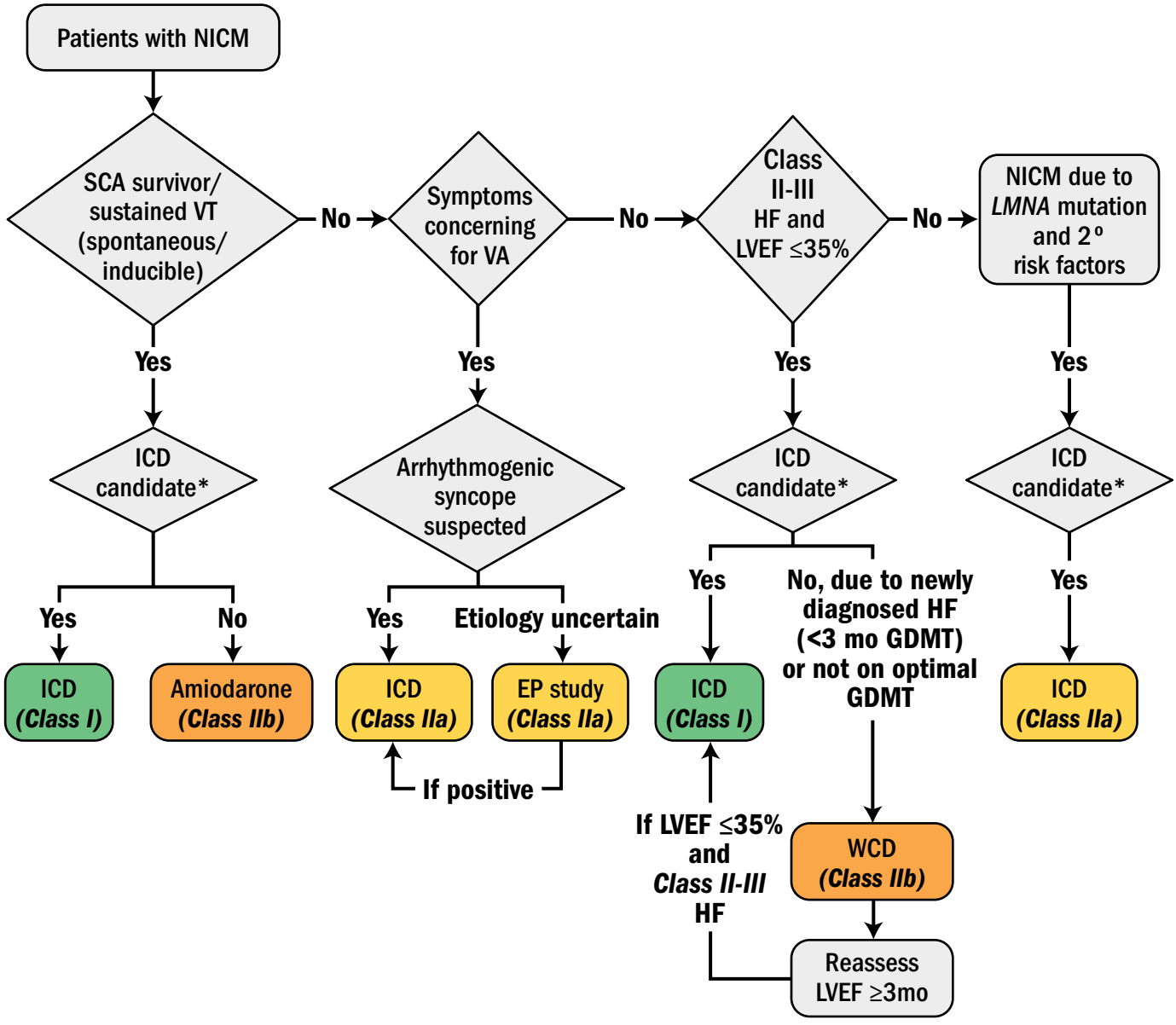
Treatment of Recurrent Ventricular Arrhythmias in Patients with Ischemic Heart Disease or Nonischemic Cardiomyopathy



*Management should start with ensuring that the ICD is programmed appropriately and that potential precipitating causes, including heart failure exacerbation, are addressed. For information regarding optimal ICD programming, refer to the 2015 HRS/EHRA/APHRS/SOLAECE expert consensus statement ("Wilkoff BL, Fauchier L, Stiles MK, et al. 2015 HRS/EHRA/APHRS/SOLAECE expert consensus statement on optimal implantable cardioverter-defibrillator programming and testing. J Arrhythm. 2016;32:1-28).

Figure 5

Secondary and Primary Prevention of Sudden Cardiac Death in Patients with a Nonischemic Cardiomyopathy



*ICD candidacy as determined by functional status, life expectancy or patient preference.

Figure 6

Major Clinical Features Associated with Increased Risk of Sudden Cardiac Death in Patients with Hypertrophic Cardiomyopathy

Established Risk Factors*
• Survival from a cardiac arrest due to VT or VF
• Spontaneous sustained VT causing syncope or hemodynamic compromise
• Family history of SCD associated with HCM
• LV wall thickness ≥30 mm
• Unexplained syncope within 6 mo
• NSVT ≥3 beats
• Abnormal blood pressure response during exercise†
Potential Risk Modifiers‡
• <30 y
• Delayed hyperenhancement on cardiac MRI
• LVOT obstruction
• Syncope >5 y ago
High-risk Subsets§‡
• LV aneurysm
• LVEF <50%

*There is general agreement in the literature that these factors independently convey an increased risk for SCD in patients with HCM.

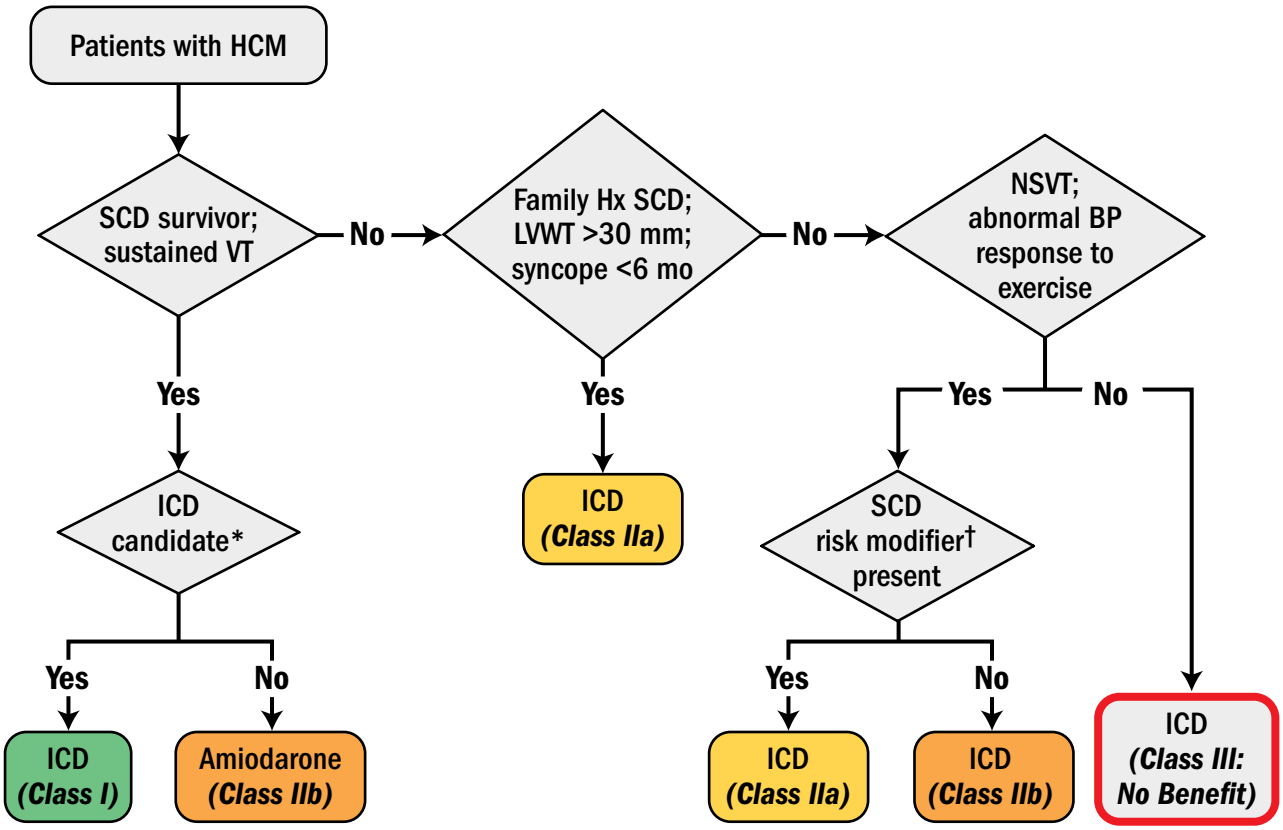
†Decrease in blood pressure of 20 mm Hg or failure to increase systolic blood pressure >20 mm Hg during exertion.

‡There is a lack of agreement in the literature that these modifiers independently convey an increase risk of SCD in patients with HCM; however, a risk modifier when combined with a risk factor often identifies a patient with HCM at increased risk for SCD beyond the risk conveyed by the risk factor alone.

§A small subset of patients with an LVEF <50% (end-stage disease) or an LV aneurysm warrant consideration for ICD implantation.

Table 8

Prevention of Sudden Cardiac Death in Patients with Hypertrophic Cardiomyopathy

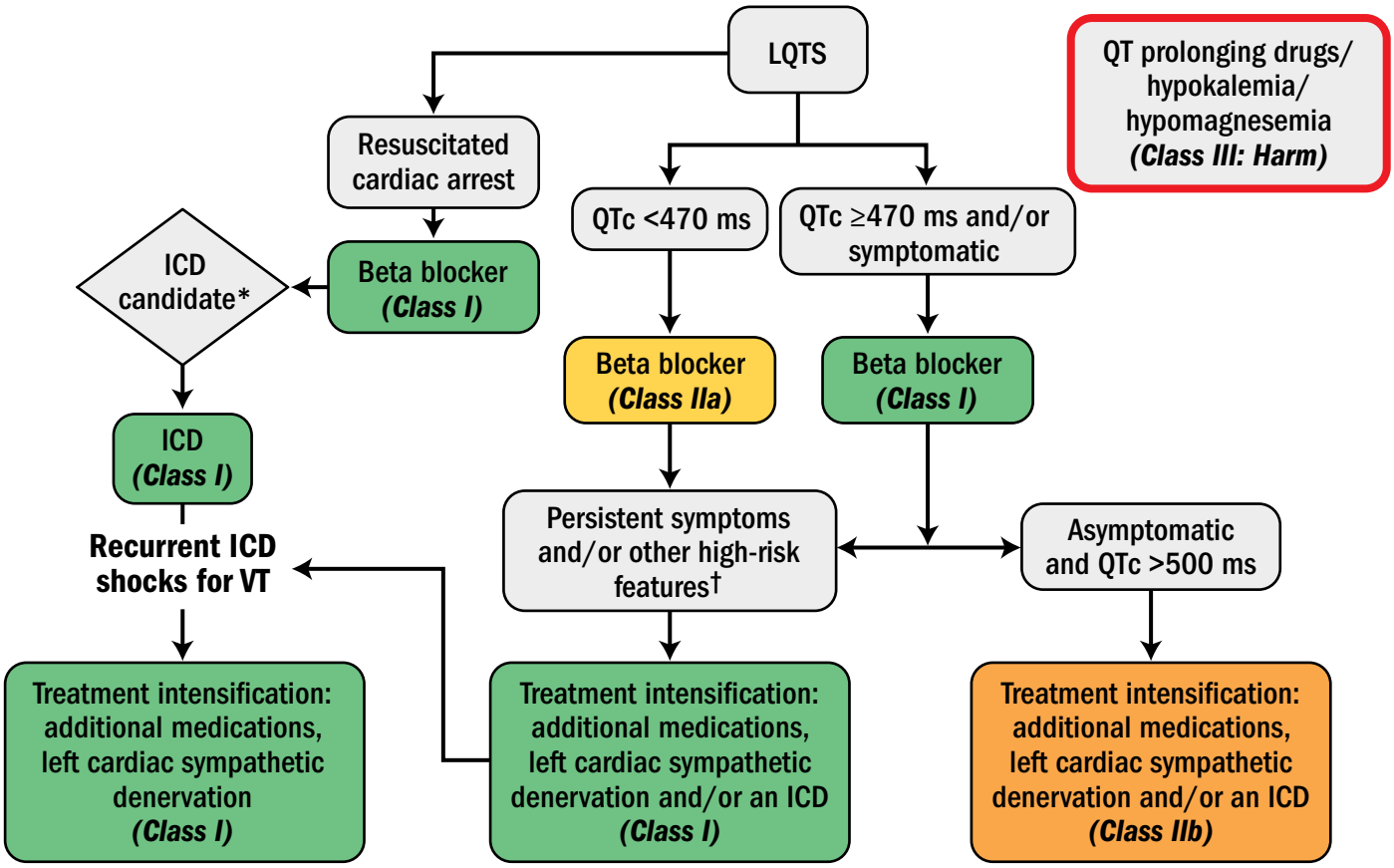


*ICD candidacy as determined by functional status, life expectancy, or patient preference.

†Risk modifiers: Age <30 y, late gadolinium enhancement on cardiac MRI, LVOT obstruction, LV aneurysm, syncope >5 y.

Figure 7

Prevention of Sudden Cardiac Death in Patients with Long QT Syndrome

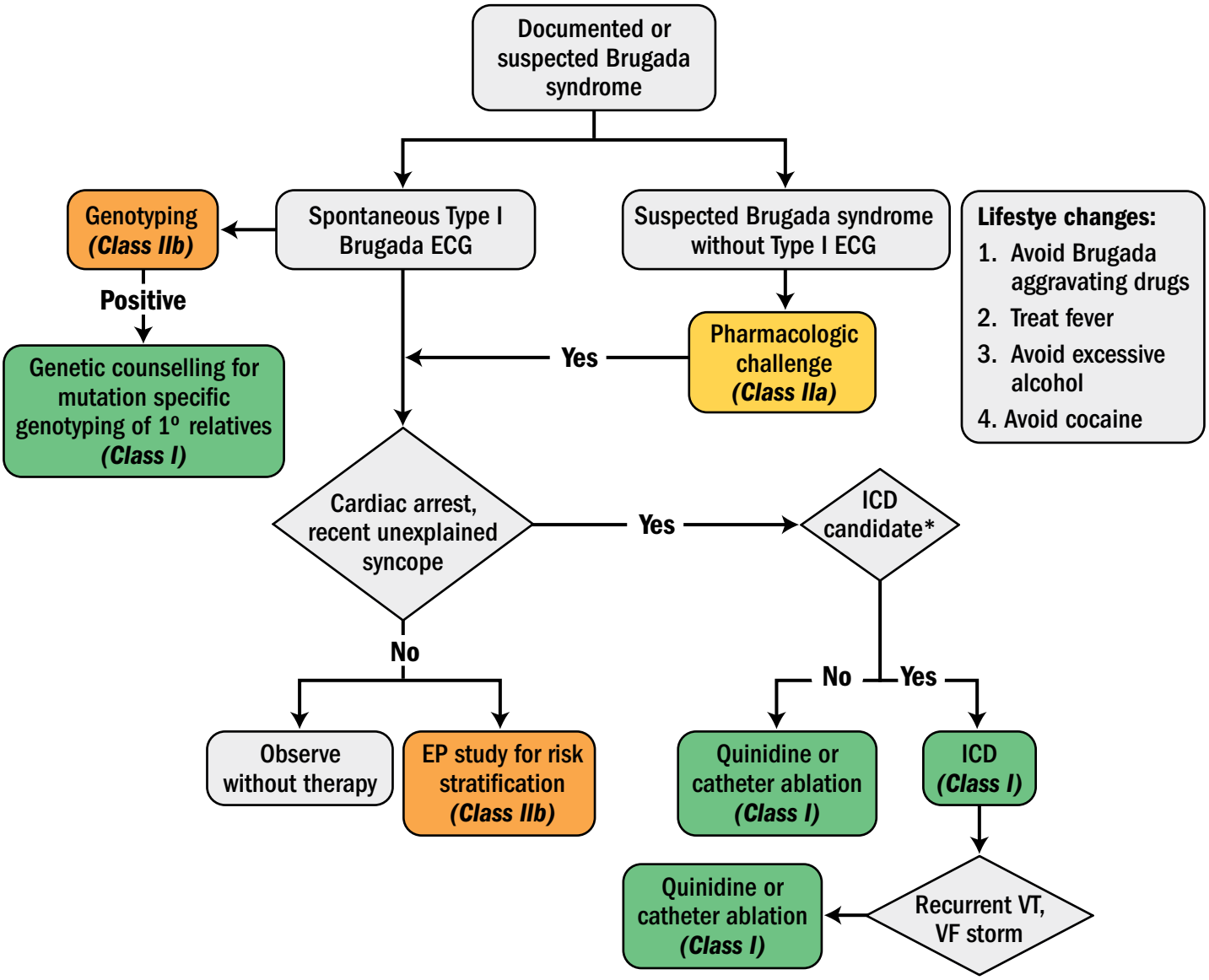


*ICD candidacy as determined by functional status, life expectancy, or patient preference.

†High-risk patients with LQTS include those with QTc >500 ms, genotypes LQT2 and LQT3, females with genotype LQT2, <40 years of age, onset of symptoms at <10 years of age, and patients with recurrent syncope.

Figure 9

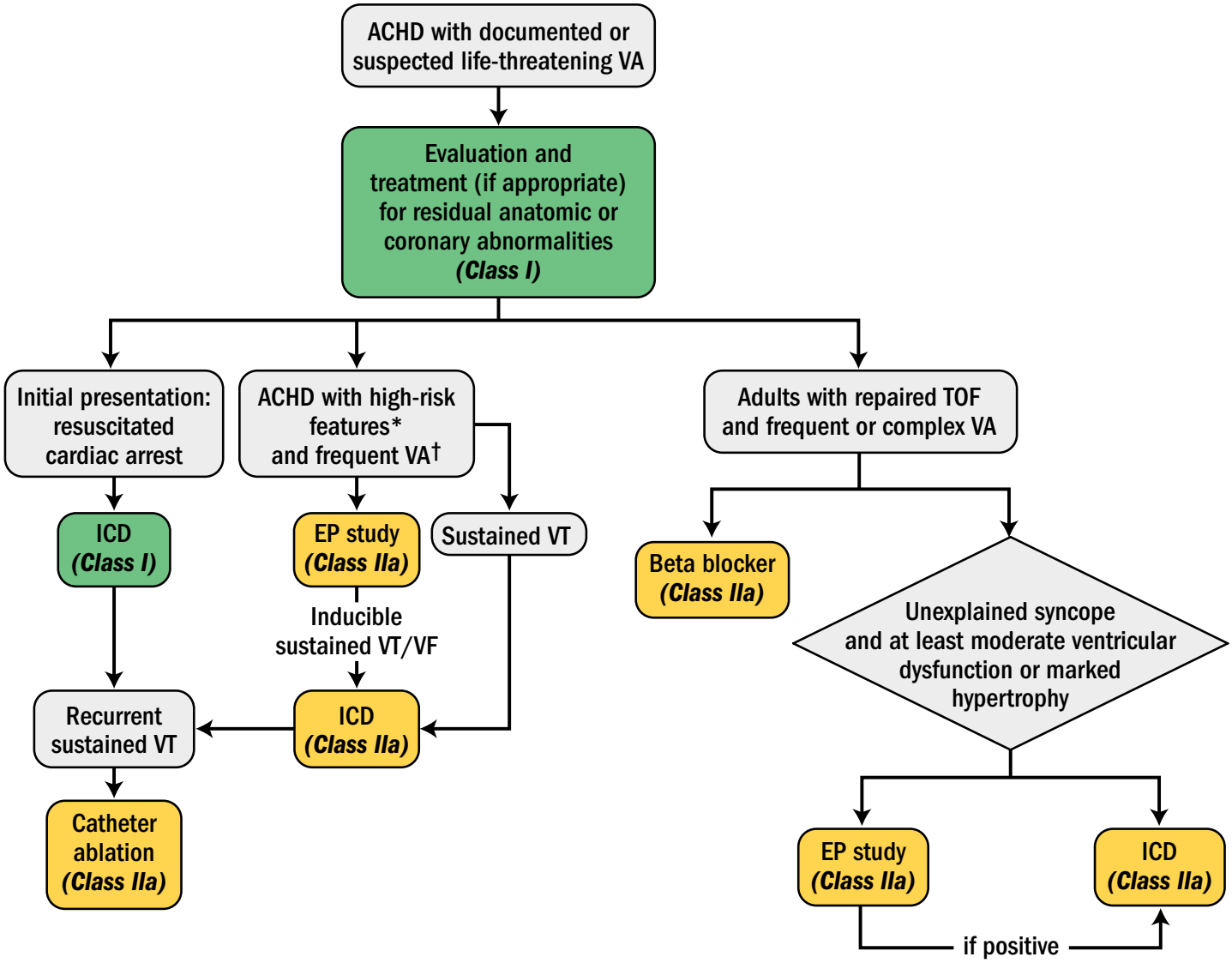
Prevention of Sudden Cardiac Death in Patients with Brugada Syndrome



*ICD candidacy as determined by functional status, life expectancy, or patient preference.

Figure 14

Prevention of Sudden Cardiac Death in Patients with Adult Congenital Heart Disease



*High-risk features: prior palliative systemic to pulmonary shunts, unexplained syncope, frequent PVC, atrial tachycardia, QRS duration ≥180 ms, decreased LVEF or diastolic dysfunction, dilated right ventricle, severe pulmonary regurgitation or stenosis, or elevated levels of BNP.

†Frequent VA refers to frequent PVCs and/or nonsustained VT.

Figure 16