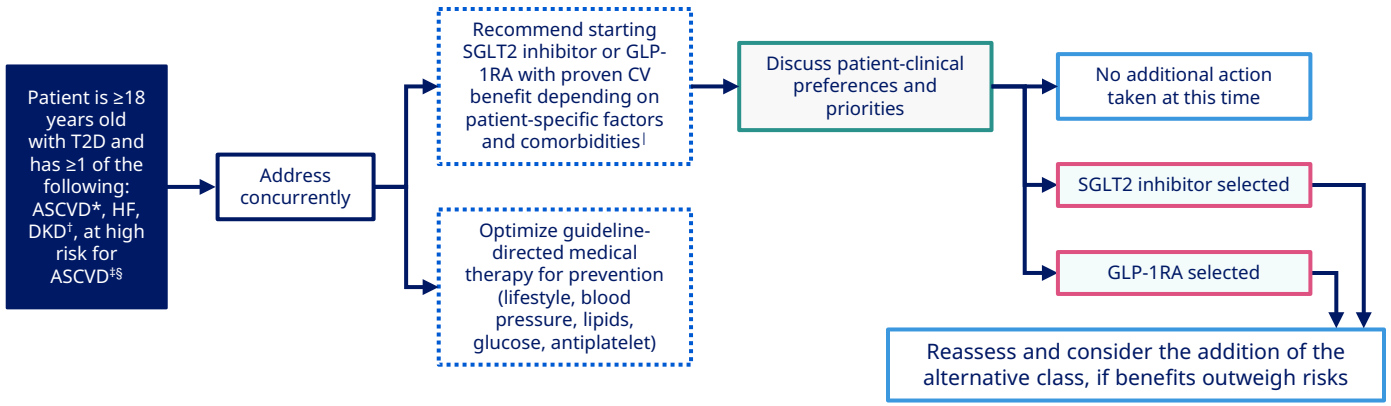
ACC and AHA/ASA Guidelines
Cardiovascular Risk Reduction and Primary Prevention Recommendations

2020 ACC Expert Consensus Decision Pathway



*ASCVD is defined as a history of an acute coronary syndrome or MI, stable or unstable angina, coronary heart disease with or without revascularization, other arterial revascularization, stroke, or peripheral artery disease assumed to be atherosclerotic in origin.
†DKD is a clinical diagnosis marked by reduced eGFR, the presence of albuminuria, or both.
‡Consider an SGLT2 inhibitor when your patient has established ASCVD, HF, DKD or is at high risk for ASCVD. Consider a GLP-1RA when your patient has established ASCVD or is at high risk for ASCVD
§Patients at high risk for ASCVD include those with end organ damage such as left ventricular hypertrophy or retinopathy or with multiple CV risk factors (e.g., age, hypertension, smoking, dyslipidemia, obesity)
|Most patients enrolled in the relevant trials were on metformin at baseline as glucose-lowering therapy

Patient and clinician preferences and priorities for considering SGLT2is/GLP-1 RAs with demonstrated CV benefit

Preference or Priority	Consider Using an SGLT2is First When Patient and Clinician Priorities Include:	Consider Using a GLP-1 RA First When Patient and Clinician Priorities Include:
MACE prevention	+++	+++
HF prevention	+++	
Weight loss	+	+++
Renal disease progression prevention	+++	+
Mode of administration	Oral	Subcutaneous
Considerations that may prompt use of an alternative class	• The patient is considering pregnancy • Severely reduced kidney function*,† • History of fracture (caution with canagliflozin) • History of recurrent genital candidiasis • History of diabetic ketoacidosis • The patient is breast feeding • History of prior amputation, severe peripheral arterial disease, or active diabetic foot ulcers (caution with canagliflozin)	• The patient is considering pregnancy • History of gastroparesis • Active gallbladder disease • History of proliferative retinopathy (caution with semaglutide or dulaglutide) • Persistent nausea, despite appropriate dietary education and low doses • The patient is breast feeding • History of MEN2 or medullary thyroid cancer

*eGFR <45 ml/min/1.73 m2 is currently a caution due to a decrease in glycemic efficacy (not due to safety), but ongoing studies are testing whether SGLT2 inhibitors offer renal benefits in these patients. The FDA label for canagliflozin allows use of canagliflozin to an eGFR of 30 ml/min/1.73m2 specifically for patients with DKD.
†Use clinical judgement when initiating an SGLT2 inhibitor in a patient who will be starting or up-titrating an ACE inhibitor or ARB if the patient's renal function is impaired.

2021 AHA/ASA Guidelines: Prevention of Stroke in Patients with Stroke and Transient Ischemic Attack

Recommendations for Glucose

1. In patients with an ischemic stroke or TIA who also have diabetes, the goal for glycemic control should be individualized based on the risk for adverse events, patient characteristics and preferences, and, for most patients, especially those <65 years of age and without life-limiting comorbid illness, achieving a goal HbA1c ≤7% is recommended to reduce risk for microvascular complications.
2. In patients with an ischemic stroke or TIA who also have diabetes, treatment of diabetes should include glucose-lowering agents with proven cardiovascular benefit to reduce the risk for future major cardiovascular events (i.e., stroke, MI, cardiovascular death).
3. In patients with an ischemic stroke or TIA who also have diabetes, multidimensional care (i.e., lifestyle counseling, medical nutritional therapy, diabetes self-management education, support, and medication) is indicated to achieve glycemic goals and to improve risk factors.
4. In patients with prediabetes and ischemic stroke or TIA, lifestyle optimization (i.e., healthy diet, regular physical activity, and smoking cessation) can be beneficial for the prevention of progression to diabetes.
5. In patients with TIA or ischemic stroke, it is reasonable to screen for prediabetes/diabetes using HbA1c which, among available methods (HbA1c, fasting plasma glucose, oral glucose tolerance), has the advantage of convenience because it does not require fasting and is measured in a single blood sample.
6. In patients with an ischemic stroke or TIA who also have diabetes, the usefulness of achieving intensive glucose control (i.e., HbA1c ≤7%) beyond the acute phase of the ischemic event for prevention of recurrent stroke is unknown.
7. In patients with prediabetes and ischemic stroke or TIA, particularly those with a body mass index (BMI) ≥35 kg/mP^2, ≥35 kg/m^2 those <60 years of age, or women with a history of gestational diabetes, metformin may be beneficial to control blood sugar and to prevent progression to diabetes.
8. In patients ≤6 months after TIA or ischemic stroke with insulin resistance, HbA1c <7% and without heart failure or bladder cancer, treatment with pioglitazone may be considered to prevent recurrent stroke.

Recent clinical trials demonstrated that at least 1 drug in each of the 3 classes of glucose-lowering medications can reduce risk for MACEs in patients with T2D and established atherosclerotic vascular disease, including ischemic stroke or high risk: thiazolidinediones, glucagon-like protein 1 (GLP-1) receptor agonist, and sodium-glucose cotransporter 2 inhibitor. Unlike the data for the thiazolidinedione pioglitazone and some GLP-1 receptor agonists, the cardiovascular outcome trials of sodium-glucose cotransporter 2 inhibitors do not suggest a specific effect on stroke but rather on cardiovascular death, MI, and heart failure.

Please see full manuscript for complete details/considerations.
ASA, American Stroke Association; AHA, American Heart Association; CVD, cardiovascular disease; GLP-1 RA, glucagon-like peptide-1 receptor agonist; HbA_{1c}, glycated hemoglobin; SGLT-2i, sodium-glucose cotransporter 2 inhibitor; T2D, type 2 diabetes

References:
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Das SR et al. J Am Coll Cardiol 2020;76(9):1117-1145.

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