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DIABETES AND CVD MANAGEMENT: TRANSLATING SCIENCE INTO PRACTICE

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"TRANSLATING GUIDELINES INTO PRACTICE"

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HIGHLIGHTS FROM 2019 ACC/AHA GUIDELINE ON THE PRIMARY PREVENTION OF CVD

- **A team-based care approach** is an effective strategy for the prevention of cardiovascular disease.
- **Health care providers should evaluate social determinants of health** on individuals to inform treatment decisions.
- Adults who are at least age 40 and are being evaluated for CVD prevention **should undergo 10-year ASCVD risk estimation and have a clinician-patient risk discussion** before starting on pharmacologic therapy
- **Aspirin should infrequently be used in the routine primary prevention of ASCVD**
- **All adults should be assessed at every visit for tobacco use.**
- **All adults should consume a healthy diet**.

Arnett, D., Blumenthal, R., et al. Circulation, 2019.

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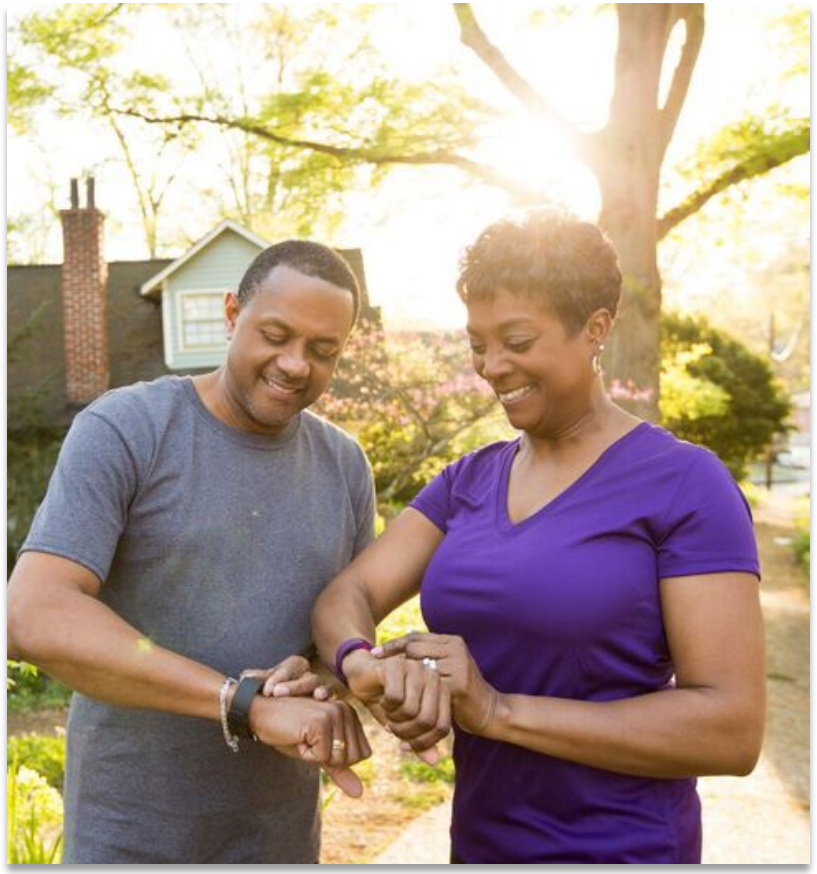
HIGHLIGHTS FROM 2019 ACC/AHA GUIDELINE ON THE PRIMARY PREVENTION OF CVD

- **Adults should engage in at least 150 min. per week of accumulated moderate intensity** or 75 min. per week of vigorous intensity physical activity.
- For adults who have been identified as overweight or obese, **counseling and caloric restriction are recommended** for achieving and maintaining weight loss
- **Nonpharmacological interventions are recommended for all adults with elevated blood pressure or hypertension.**
- **Statin therapy is first-line treatment for primary ASCVD prevention in**:
  - Patients with elevated LDL-C levels (>190 mg/dl),
  - Those with diabetes, who are aged 40-75 years
  - Those at sufficient ASCVD risk following a clinician-patient risk discussion
- **For adults with T2DM, lifestyle changes such as improving dietary habits and achieving exercise recommendations are crucial.** If medication is indicated, metformin is first-line therapy followed by consideration of an SGLT-2 inhibitor or a GLP-1 receptor agonist



Arnett, D., Blumenthal, R., et al. Circulation, 2019.

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COMPREHENSIVE CARDIOMETABOLIC HEALTH MANAGEMENT MODEL FOR PRIMARY CARE

ASCVD RISK CALCULATOR (10-Year & Lifetime Risk)

- Age, sex, race
- Measure blood pressure (systolic blood pressure)
- Measure lipid levels (total cholesterol, LDL cholesterol, HDL cholesterol)
- Blood pressure lowering medication use
- Determine diabetes status
- Assess tobacco use (smoking status)

KnowDiabetesByHeart.org/riskcal

https://professional.heart.org/professional/GuidelinesStatements/ASCVDRiskCalculator/UCM_457698_ASCVD-Risk-Calculator.jsp

COMPREHENSIVE CARDIOMETABOLIC HEALTH MANAGEMENT MODEL FOR PERSONS WITH T2DM

LIFE'S SIMPLE 7 ASSESSMENT

1. Measure height, weight, waist circumference
2. Measure blood pressure
3. Measure A1C
4. Measure lipid levels (total cholesterol, LDL, HDL)
5. Assess tobacco use
6. Assess physical activity level
7. Assess dietary pattern

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Benjamin et al; Circulation 2017

PUTTING THE PATIENT WITH TYPE 2 DIABETES AT THE CENTRE OF CARE

Davies MJ, D'Alessio DA, Fradkin J, et al. Management of hyperglycemia in type 2 diabetes, 2018. A consensus report by the American Diabetes Association (ADA) and the European Association for the Study of Diabetes (EASD). Diabetes Care 2018;**41**:2669–2701

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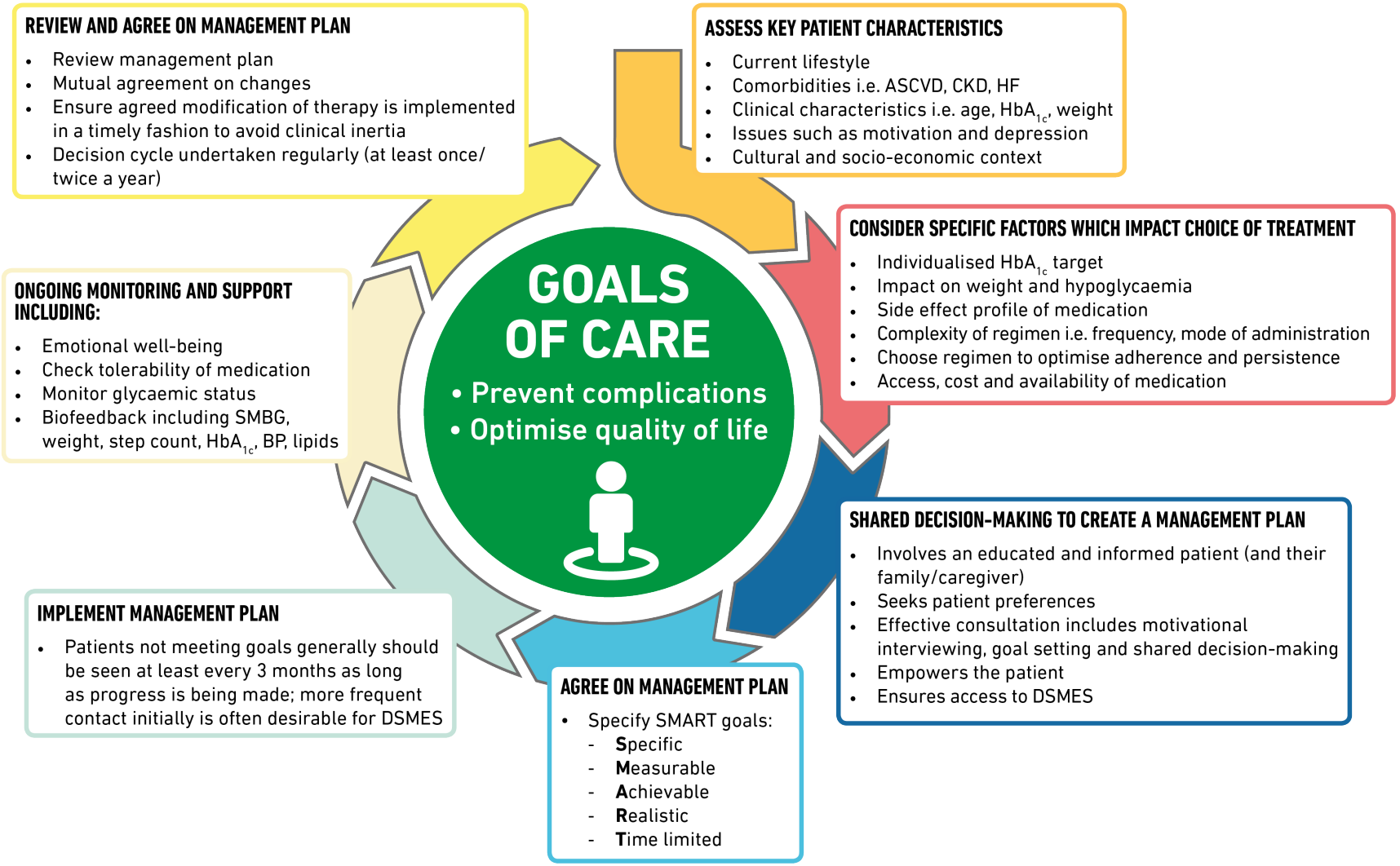
DECISION CYCLE FOR PATIENT-CENTRED GLYCAEMIC MANAGEMENT IN TYPE 2 DIABETES



ASCVD = Atherosclerotic Cardiovascular Disease
CKD = Chronic Kidney Disease
HF = Heart Failure
DSMES = Diabetes Self-Management Education and Support
SMBG = Self-Monitored Blood Glucose

Davies MJ, D'Alessio DA, Fradkin J, et al. Management of hyperglycemia in type 2 diabetes, 2018. A consensus report by the American Diabetes Association (ADA) and the European Association for the Study of Diabetes (EASD). Diabetes Care 2018;41:2669–2701

STEP 1:
ASSESS CARDIOVASCULAR DISEASE

PRESENCE OF CARDIOVASCULAR DISEASE IS COMPELLING INDICATION

ASCVD predominates

HF or CKD predominates

Davies MJ, D'Alessio DA, Fradkin J, et al. Management of hyperglycemia in type 2 diabetes, 2018. A consensus report by the American Diabetes Association (ADA) and the European Association for the Study of Diabetes (EASD). Diabetes Care 2018;41:2669–2701

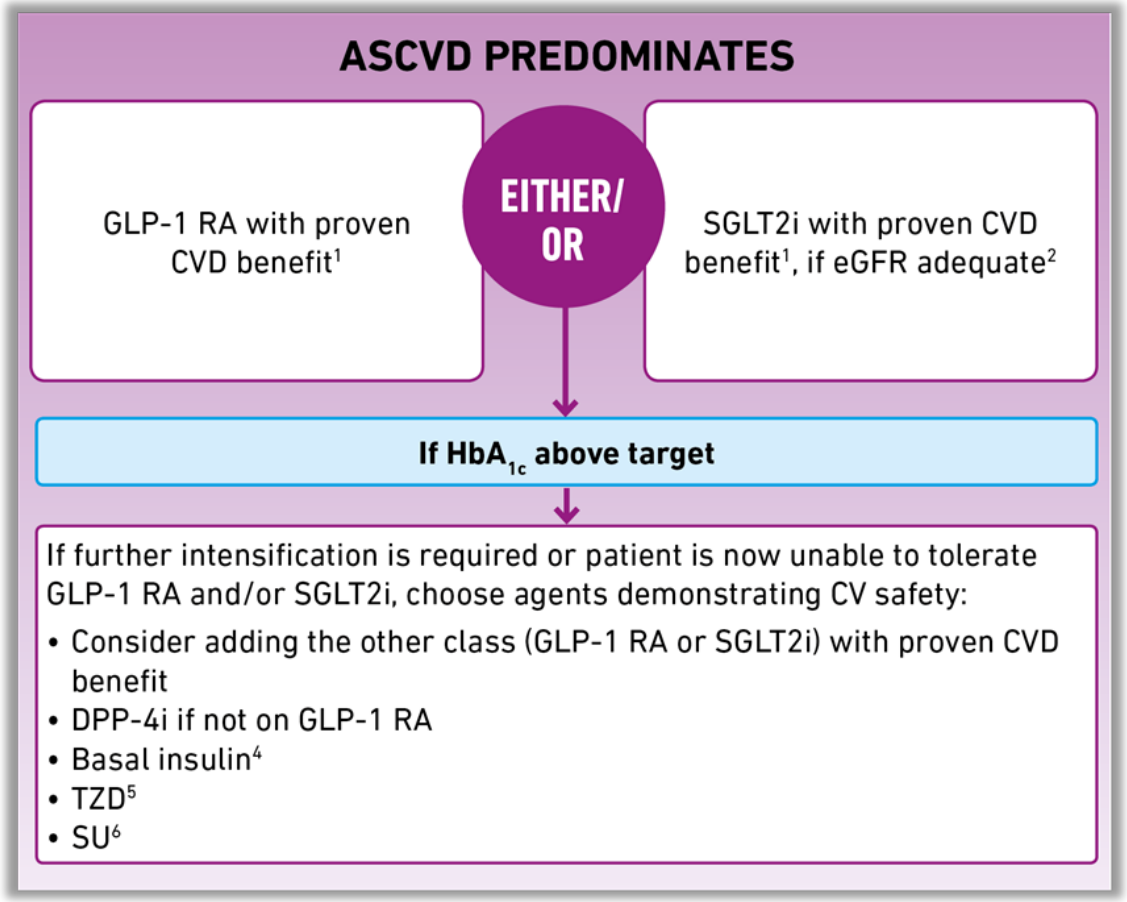
IF ASCVD PREDOMINATES

GLP-1 receptor agonist with proven *cardiovascular benefit*

- Liraglutide > semaglutide > exenatide LAR

SGLT2 inhibitor with proven cardiovascular benefit

- Empagliflozin > canagliflozin



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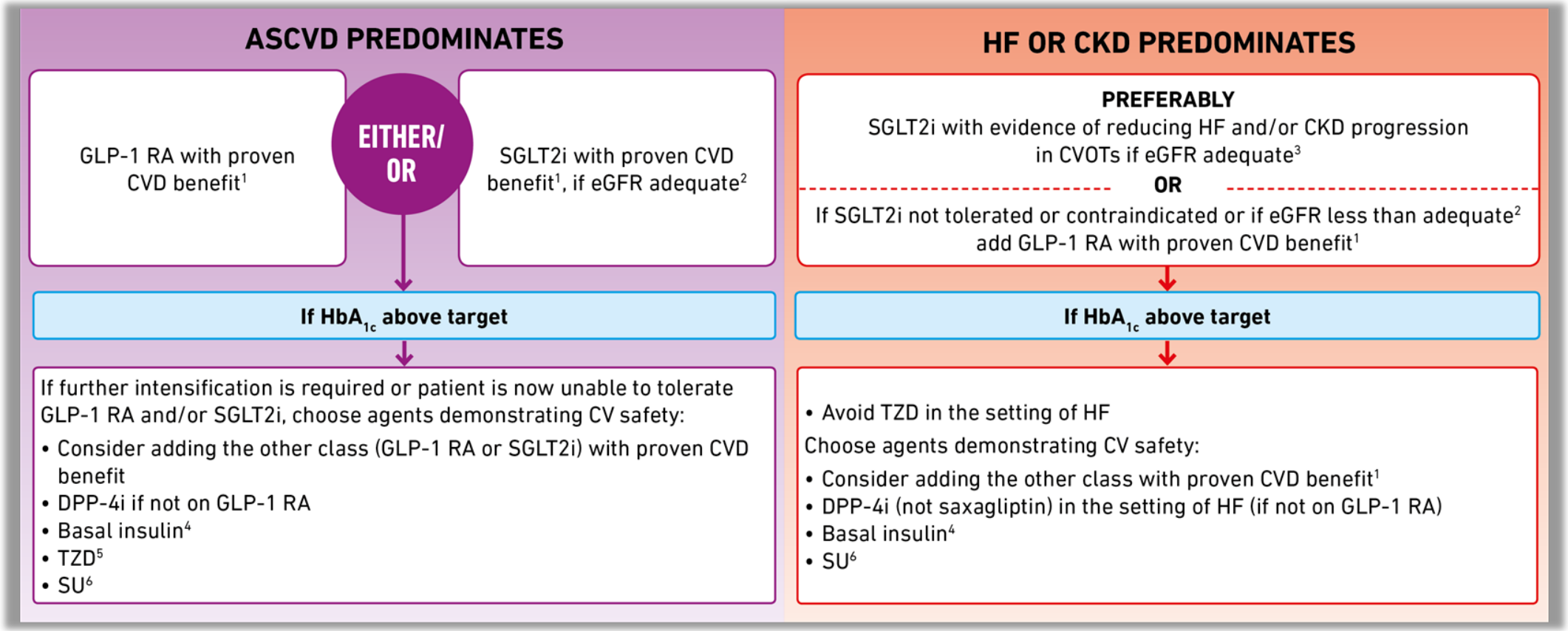
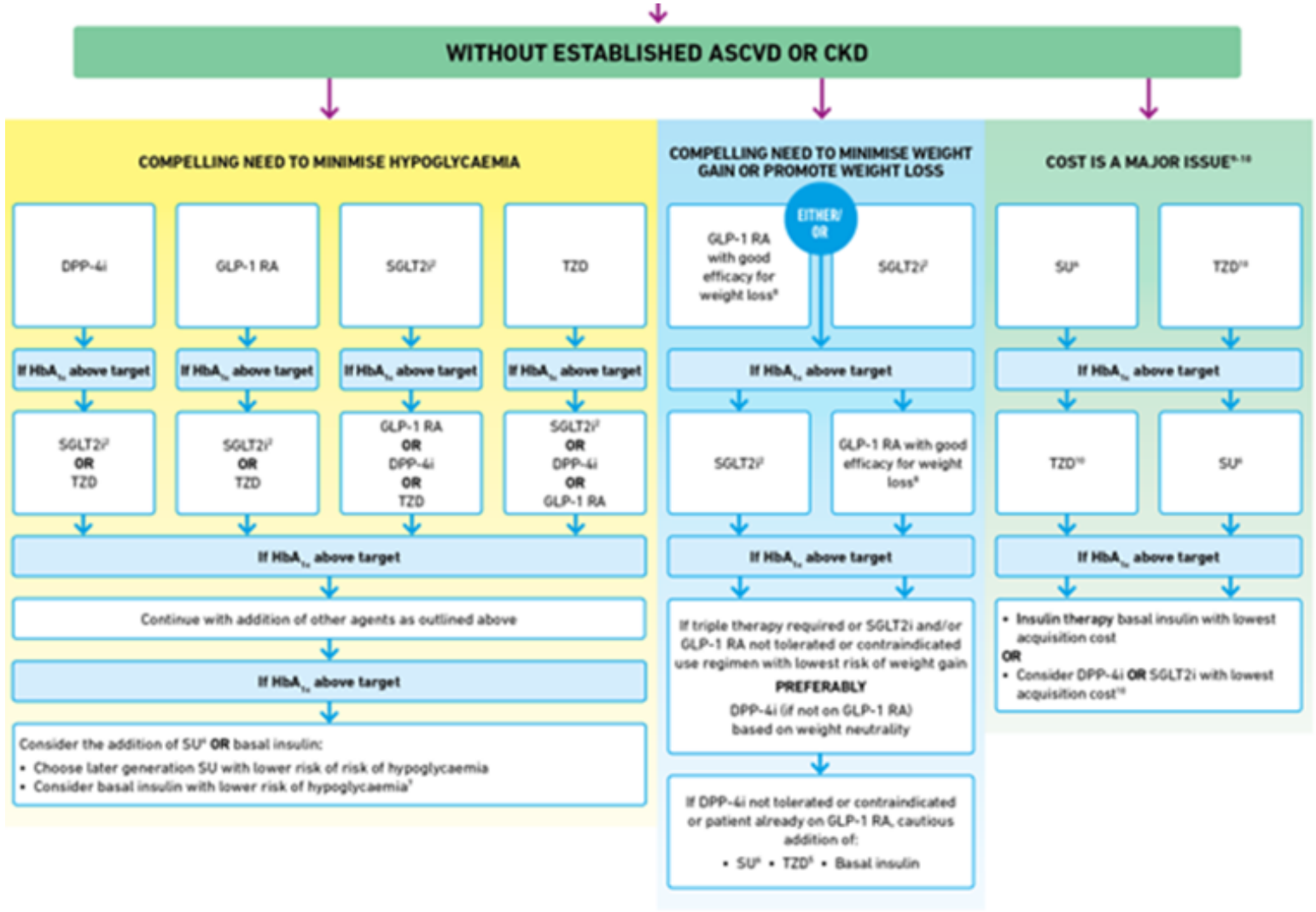
CHOOSING GLUCOSE-LOWERING MEDICATION IN THOSE WITH ESTABLISHED ASCVD OR CKD



1. Proven CVD benefit means it has label indication of reducing CVD events. For GLP-1 RA strongest evidence of liraglutide > semaglutide > exenatide. For SGLT2i evidence modestly stronger for empagliflozin > canagliflozin.
2. Be aware that SGLT2i vary by region and individual agent with regard to indicated level of eGFR for initiation and continued use
3. Both empagliflozin and canagliflozin have shown reduction in HF and reduction in CKD progression in CVOTs
4. Degludec or U100 glargine have demonstrated CVD safety
5. Low dose may be better tolerated though less well studied for CVD effects
6. Choose later generation SU with lower risk of hypoglycaemia

Davies MJ, D'Alessio DA, Fradkin J, et al. Management of hyperglycemia in type 2 diabetes, 2018. A consensus report by the American Diabetes Association (ADA) and the European Association for the Study of Diabetes (EASD). Diabetes Care 2018;41:2669–2701

WITHOUT ESTABLISHED ASCVD OR CKD



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SUMMARY

CONSIDER THE PRESENCE OR ABSENCE OF ASCVD, CKD AND HF

START WITH METFORMIN IF TOLERATED, THEN:

- In patients with ASCVD a GLP-1 RA or SGLT2-i is recommended
- In patients with ASCVD and HF SGLT2-i is recommended
- In patients with CKD, with or without ASCVD consider an SGLT2-i
- Agents with proven benefit are preferred
- ASCVD, CKD and HF affects choice of additional glucose lowering medication

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