بسم الله الرحمن الرحيم

Diabetes Mellitus

سوال اول :

- چه افرادی در جامعه نیاز به غربالگری از نظر دیابت نوع ۲ دارند؟

Table 2.3—Criteria for screening for diabetes or prediabetes in asymptomatic adults

1. Testing should be considered in adults with overweight or obesity (BMI ≥25 kg/m^2 or ≥23 kg/m^2 in Asian Americans) who have one or more of the following risk factors:
   - First-degree relative with diabetes
   - High-risk race/ethnicity (e.g., African American, Latino, Native American, Asian American, Pacific Islander)
   - History of CVD
   - Hypertension (≥140/90 mmHg or on therapy for hypertension)
   - HDL cholesterol level <35 mg/dL (0.90 mmol/L) and/or a triglyceride level >250 mg/dL (2.82 mmol/L)
   - Women with polycystic ovary syndrome
   - Physical inactivity
   - Other clinical conditions associated with insulin resistance (e.g., severe obesity, acanthosis nigricans)
2. Patients with prediabetes (A1C ≥5.7% [39 mmol/mol], IGT, or IFG) should be tested yearly.
3. Women who were diagnosed with GDM should have lifelong testing at least every 3 years.
4. For all other patients, testing should begin at age 35 years.
5. If results are normal, testing should be repeated at a minimum of 3-year intervals, with consideration of more frequent testing depending on initial results and risk status.
6. People with HIV

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معرفی بیمار اول

- آقای ۴۳ ساله بدون سابقه قبلی دیابت
- BMI=34
- آزمایشات :

- FBS = 146 mg/dl
- HbA1C = 6.9 %

سوال دوم :

- آیا این بیمار قطعا مبتلا به دیابت است؟

Table 2.2—Criteria for the diagnosis of diabetes

FPG ≥126 mg/dL (7.0 mmol/L). Fasting is defined as no caloric intake for at least 8 h.*
OR
2-h PG ≥200 mg/dL (11.1 mmol/L) during OGTT. The test should be performed as described by WHO, using a glucose load containing the equivalent of 75 g anhydrous glucose dissolved in water.*
OR
A1C ≥6.5% (48 mmol/mol). The test should be performed in a laboratory using a method that is NGSP certified and standardized to the DCCT assay.*
OR
In a patient with classic symptoms of hyperglycemia or hyperglycemic crisis, a random plasma glucose ≥200 mg/dL (11.1 mmol/L).

DCCT, Diabetes Control and Complications Trial; FPG, fasting plasma glucose; OGTT, oral glucose tolerance test; WHO, World Health Organization; 2-h PG, 2-h plasma glucose. *In the absence of unequivocal hyperglycemia, diagnosis requires two abnormal test results from the same sample or in two separate test samples.

سوال سوم :

- اهداف درمانی شما برای این بیمار چیست ؟

OVERALL GOALS

- The goals of therapy for type 1 or type 2 diabetes mellitus (DM) are to :
- (1) eliminate symptoms related to hyperglycemia,
- (2) reduce or eliminate the long-term microvascular and macrovascular complications of DM
- (3) allow the patient to achieve as normal a lifestyle as possible

TABLE 397-2 Treatment Goals for Adults with Diabetes[a]

INDEX	GOAL
Glycemic control[b]	
HbA_{1c}	<7.0%[c]
Preprandial capillary plasma glucose	4.4–7.2 mmol/L (80–130 mg/dL)
Postprandial capillary plasma glucose[d]	<10.0 mmol/L (<180 mg/dL)
Blood pressure	<140/90 mmHg[e]

سوال چهارم :

- برنامه درمانی شما برای این بیمار چه می باشد؟

TABLE 397-1 Guidelines for Ongoing, Comprehensive Medical Care for Patients with Diabetes

- Individualized glycemic goal and therapeutic plan
- Self-monitoring of blood glucose (individualized frequency)
- HbA_{1c} testing (2–4 times/year)
- Lifestyle management in the care of diabetes, including:
  - Diabetes-self-management education and support
  - Nutrition therapy
  - Physical activity
  - Psychosocial care, including evaluation for depression, anxiety
- Detection, prevention, or management of diabetes-related complications, including:
  - Diabetes-related eye examination (annual or biannual; **Chap. 398**)
  - Diabetes-related foot examination (1–2 times/year by provider; daily by patient; **Chap. 398**)
  - Diabetes-related neuropathy examination (annual; **Chap. 398**)
  - Diabetes-related kidney disease testing (annual; **Chap. 398**)
- Manage or treat diabetes-relevant conditions, including:
  - Blood pressure (assess quarterly; **Chap. 398**)
  - Lipids (annual; **Chap. 398**)
  - Consider antiplatelet therapy **(Chap. 398)**
  - Influenza/pneumococcal/hepatitis B immunizations **(Chap. 4)**

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LIFESTYLE MANAGEMENT IN DIABETES CARE

- The patient with **type 1** or **type 2 DM** should receive education about **nutrition, exercise, psychosocial support, care of diabetes during illness, and medications** to lower the plasma glucose.

LIFESTYLE MANAGEMENT IN DIABETES CARE

- The **ADA** refers to education about the individualized management plan for the patient as **diabetes self-management education (DSME)** and **diabetes self-management support (DSMS).**

- **DSME** and **DSMS** are ways to improve the **patient's knowledge, skills**, and **abilities** necessary for diabetes self-care and should also emphasize psychosocial issues and emotional well-being.

Nutrition

- The goals of **MNT** in **type 2 DM** should **focus on weight loss** and address the greatly increased prevalence of **cardiovascular risk factors** (**hypertension, dyslipidemia, obesity**) and disease in this population.

- **MNT** for **type 2 DM** should emphasize **modest caloric reduction** (**low carbohydrate**) and **increased physical activity**.

سوال پنجم ؟

- چه آزمایشات تکمیلی برای بیمار درخواست می کنید؟

آزمایشات درخواستی شما ؟

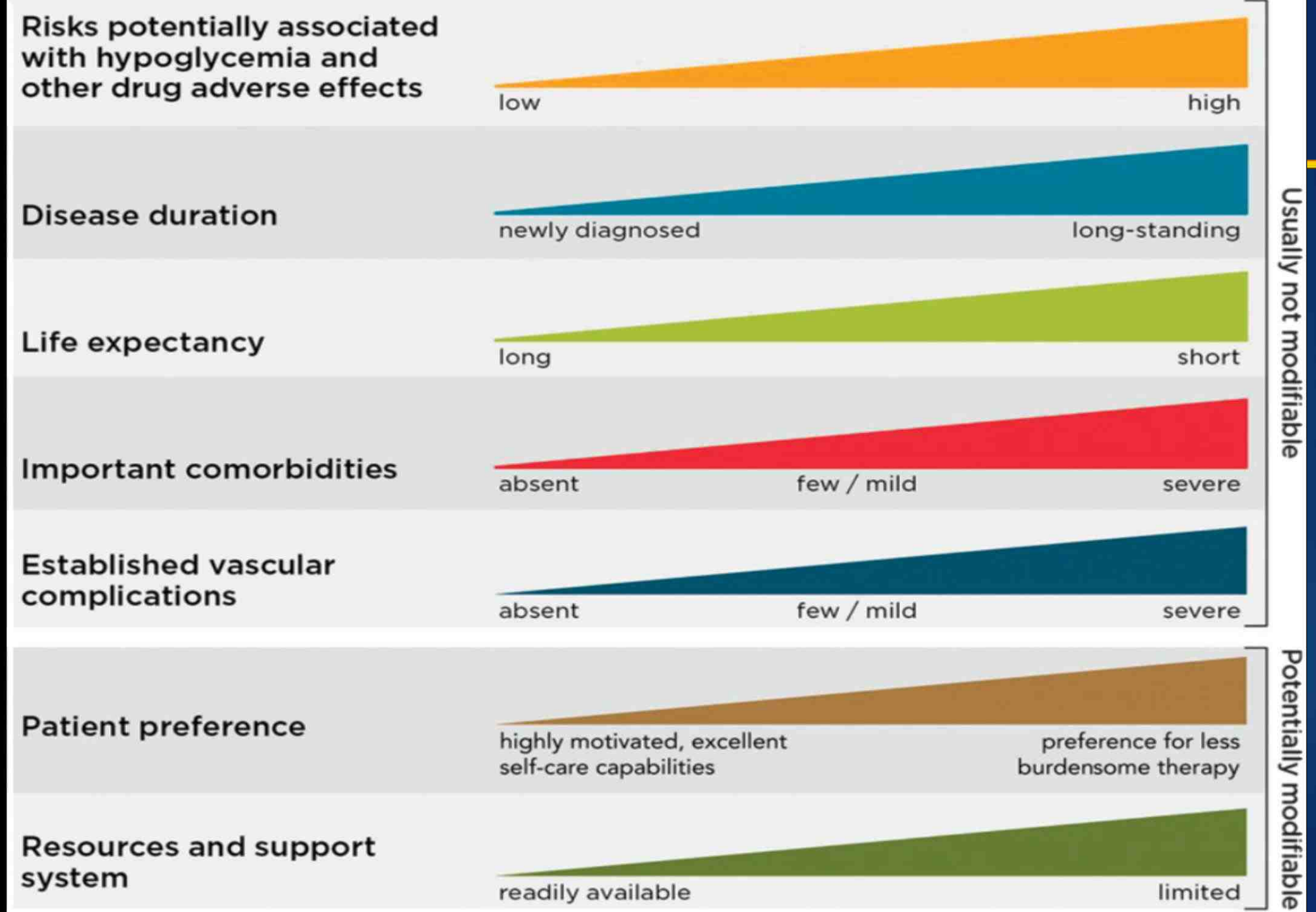
- HbA1C
- TG – Cholesterol (LDL , HDL)
- Cr
- Microalbumin (urine)
- TSH ?
- CBC-diff ?
- AST , ALT , ALK-p ?

Table 4.1 – Components of the comprehensive diabetes medical evaluation at initial, follow-up, and annual visits

		INITIAL VISIT	EVERY FOLLOW-UP VISIT	ANNUAL VISIT
LABORATORY EVALUATION	▪ A1C, if the results are not available within the past 3 months	✓	✓	✓
	▪ If not performed/available within the past year	✓		✓
	• Lipid profile, including total, LDL and HDL cholesterol and triglycerides[#]	✓		✓*
	• Liver function tests[#]	✓		✓
	• Spot urinary albumin-to-creatinine ratio	✓		✓
	• Serum creatinine and estimated glomerular filtration rate[‡]	✓		✓
	• Thyroid-stimulating hormone in patients with type 1 diabetes[#]	✓		✓
	• Vitamin B12 if on metformin (when indicated)	✓		✓
	• Serum potassium levels in patients on ACE inhibitors, ARBs, or diuretics[#]	✓		✓

MONITORING THE LEVEL OF GLYCEMIC CONTROL

- Optimal monitoring of glycemic control involves plasma glucose measurements by the patient and an assessment of long-term control by the physician (measurement of hemoglobin A1c and review of the patient's self-measurements of plasma glucose):
  - **Self-Monitoring of Blood Glucose**
  - **HbA1c**


Risks potentially associated with hypoglycemia and other drug adverse effects
low
high
Disease duration
newly diagnosed
long-standing
Life expectancy
long
short
Important comorbidities
absent
few / mild
severe
Established vascular complications
absent
few / mild
severe
Usually not modifiable
Patient preference
highly motivated, excellent self-care capabilities
preference for less burdensome therapy
Resources and support system
readily available
limited
Potentially modifiable

معرفی بیمار دوم

- آقای ۵۳ ساله بدون سابقه قبلی دیابت
- BMI=36
- سابقه فامیلی دیابت در برادر
- BP=150/95 mmHg
- مصرف سیگار: 7 pack years
- آزمایشات :

- FBS = 246 mg/dl
- GTT = 287 mg/dl

سایر آزمایشات :

- HbAIc = 8.9 %
- Total cholesterol = 230 mg/dl
- LDL = 140 mg/dl HDL = 35 mg/dl
- TG = 290 mg/dl
- Cr = 1.5 mg/dl
- TSH = 5.2 mu/l (normal : 0.5-5)
- Microalbumin (urine) = 57 mg/gr

سوال اول :

- چه درمان دارویی برای این بیمار انتخاب می کنید؟

- Metformin
- Sulfonylureas
- GLP-1 RA
- SGLT2 inhibitor
- DPP-4 inhibitor
- Thiazolidinediones
- Insulin

Choice of initial glucose-lowering agent

- patients with mild to moderate hyperglycemia (FPG <200–250 mg/dL) often respond well to a single, oral glucose-lowering agent.
- Patients with more severe hyperglycemia (FPG >250 mg/dL) may respond partially but are unlikely to achieve normoglycemia with oral monotherapy.
- Insulin can be used as initial therapy in individuals with severe hyperglycemia (FPG > 250–300 mg/dL) or in those who are symptomatic from the hyperglycemia.

Table 4.2—Assessment and treatment plan*

Assessing risk of diabetes complications

- ASCVD and heart failure history
- ASCVD risk factors and 10-year ASCVD risk assessment
- Staging of chronic kidney disease (see **Table 11.1**)
- Hypoglycemia risk (see **Table 4.3**)

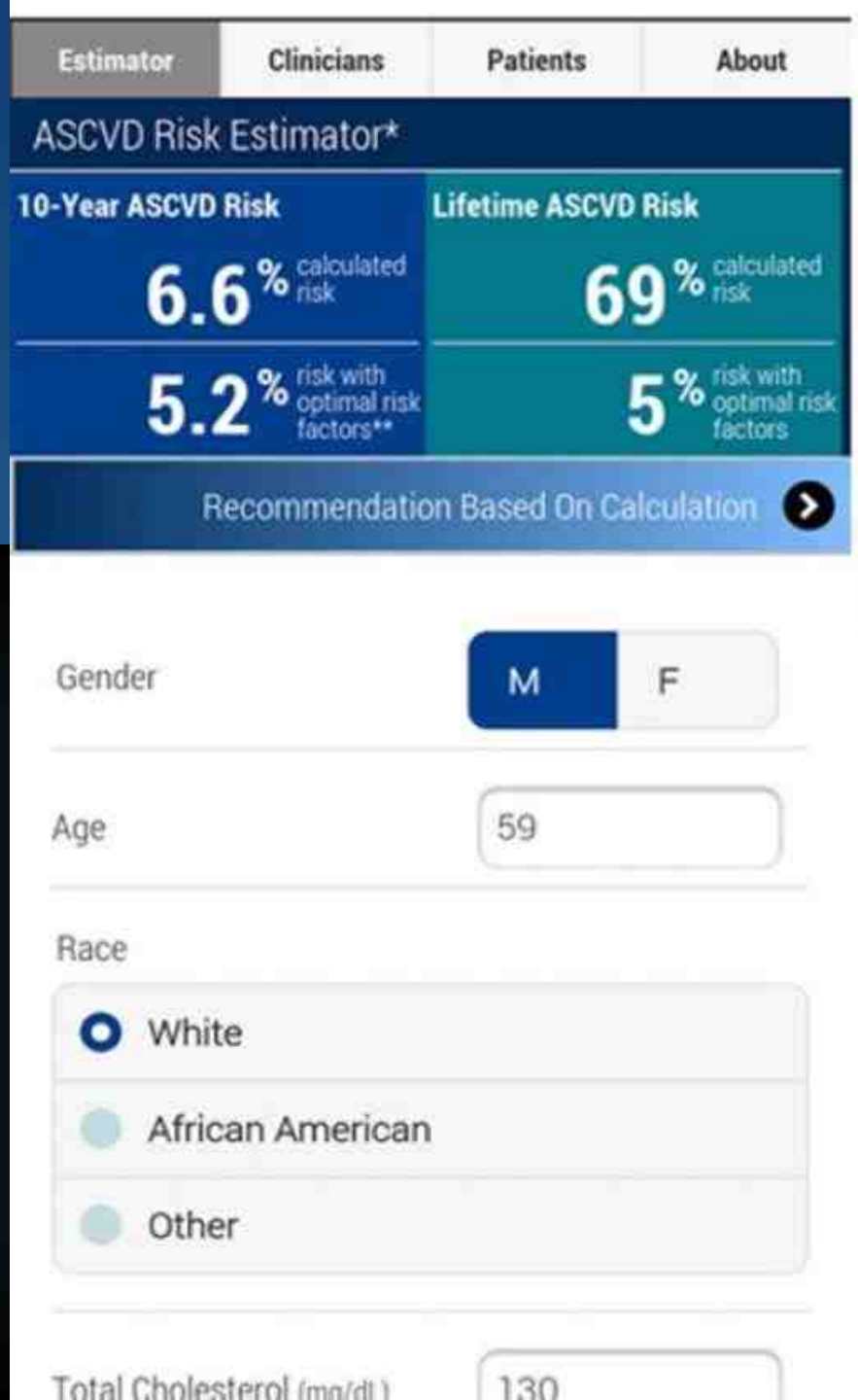
Goal setting

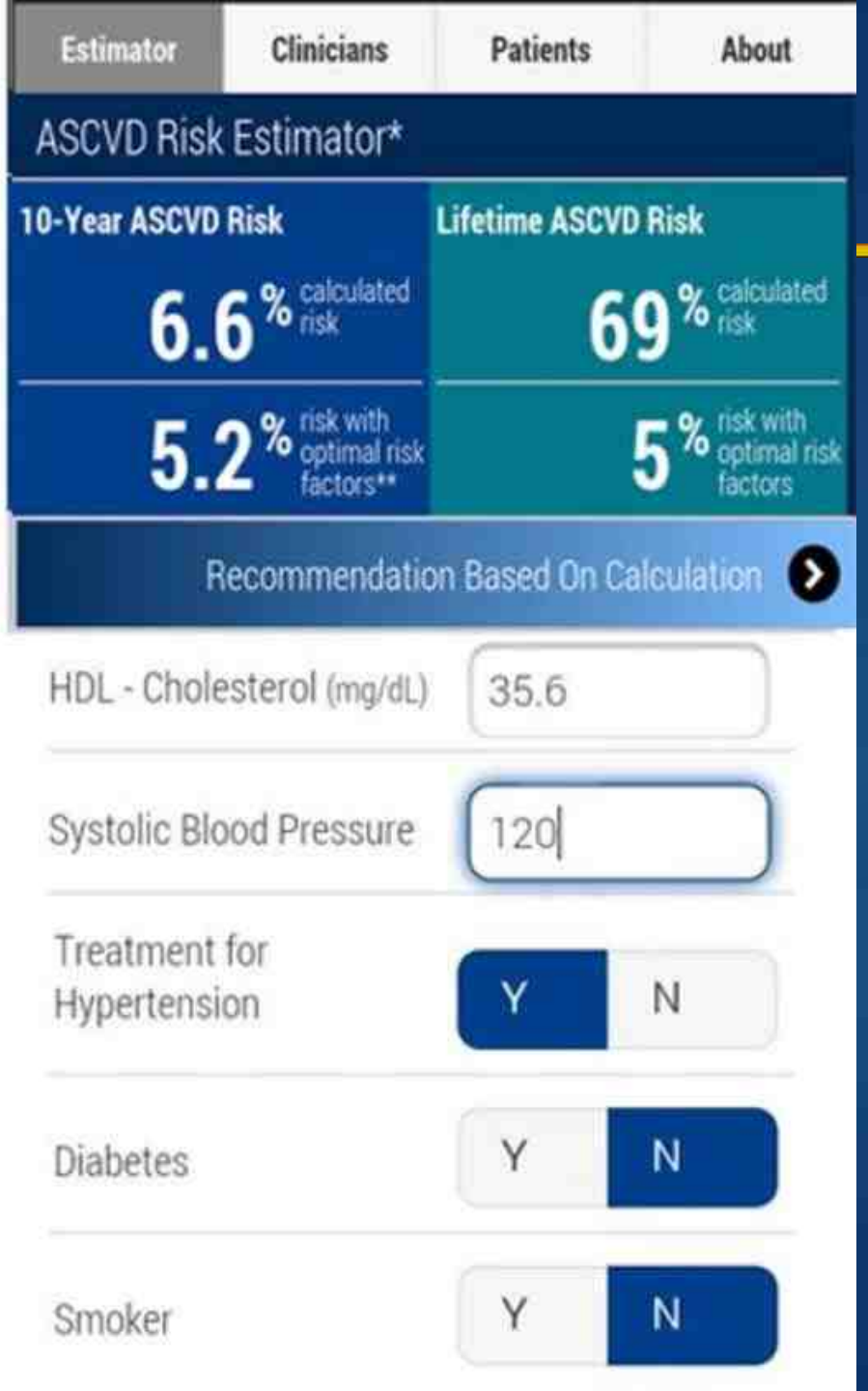
- Set A1C/blood glucose target
- If hypertension is present, establish blood pressure target
- Diabetes self-management goals

Therapeutic treatment plans

- Lifestyle management
- Pharmacologic therapy: glucose lowering
- Pharmacologic therapy: cardiovascular disease risk factors and renal
- Use of glucose monitoring and insulin delivery devices
- Referral to diabetes education and medical specialists (as needed)

ASCVD, atherosclerotic cardiovascular disease. *Assessment and treatment planning are essential components of initial and all follow-up visits.


Estimator
Clinicians
Patients
About
ASCVD Risk Estimator*
10-Year ASCVD Risk
6.6 % calculated risk
5.2 % risk with optimal risk factors**
Lifetime ASCVD Risk
69 % calculated risk
5 % risk with optimal risk factors
Recommendation Based On Calculation
Gender
M
F
Age
59
Race
White
African American
Other
Total Cholesterol (mg/dL)
130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5 % risk with optimal risk factors
Recommendation Based On Calculation
HDL - Cholesterol (mg/dL)
35.6
Systolic Blood Pressure
120
Treatment for Hypertension
Y
N
Diabetes
Y
N
Smoker
Y
N

ASCVD Risk :

10-year risk for ASCVD is categorized as:

- **Low-risk (<5%)**
- **Borderline risk (5% to 7.4%)**
- **Intermediate risk (7.5% to 19.9%)**
- **High risk (≥20%)**

ASCVD Risk Score

- **Current 10-Year ASCVD Risk:**
  - ✓ >33.8%
- **Risk Category :**
  - ✓ High Risk

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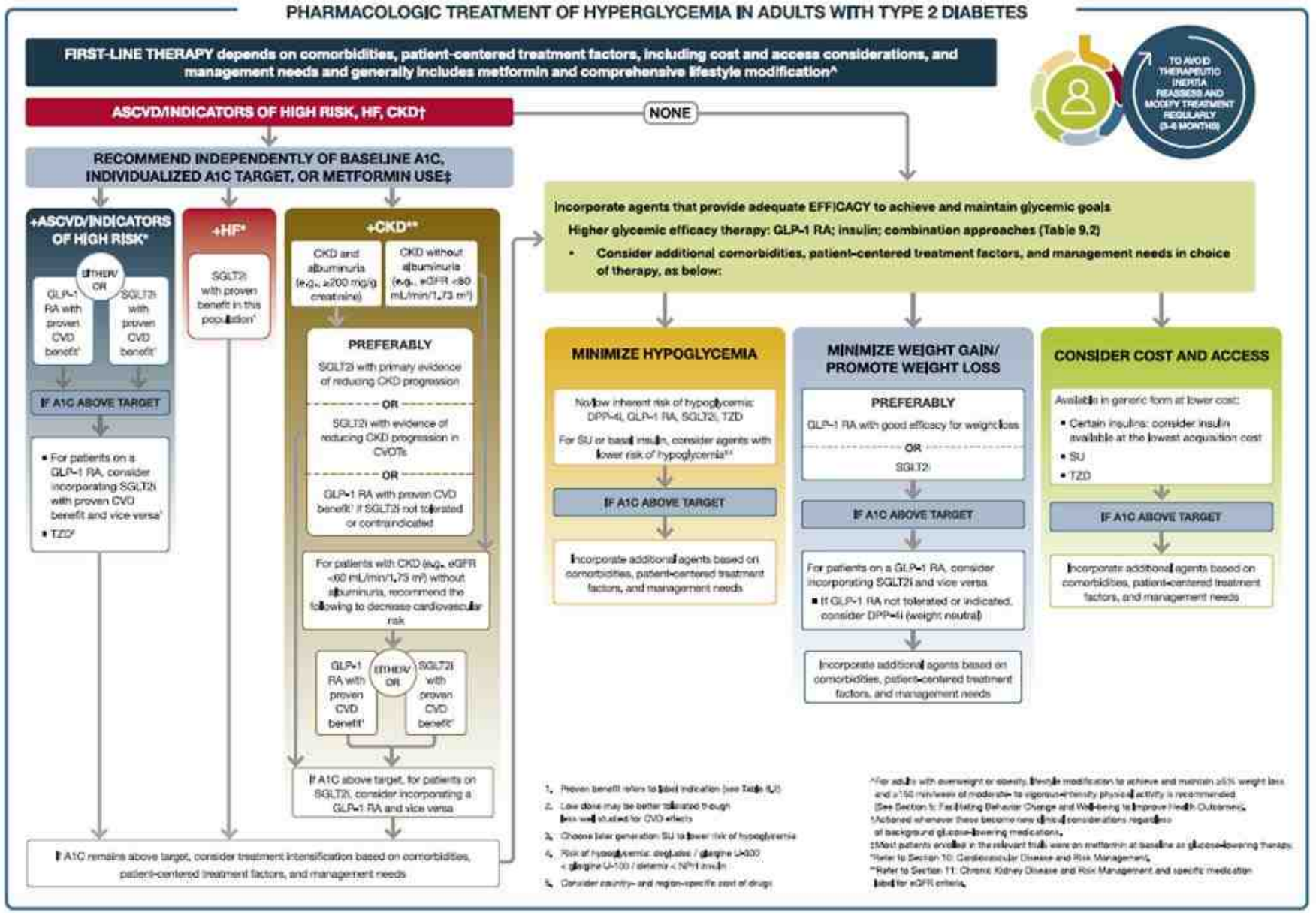
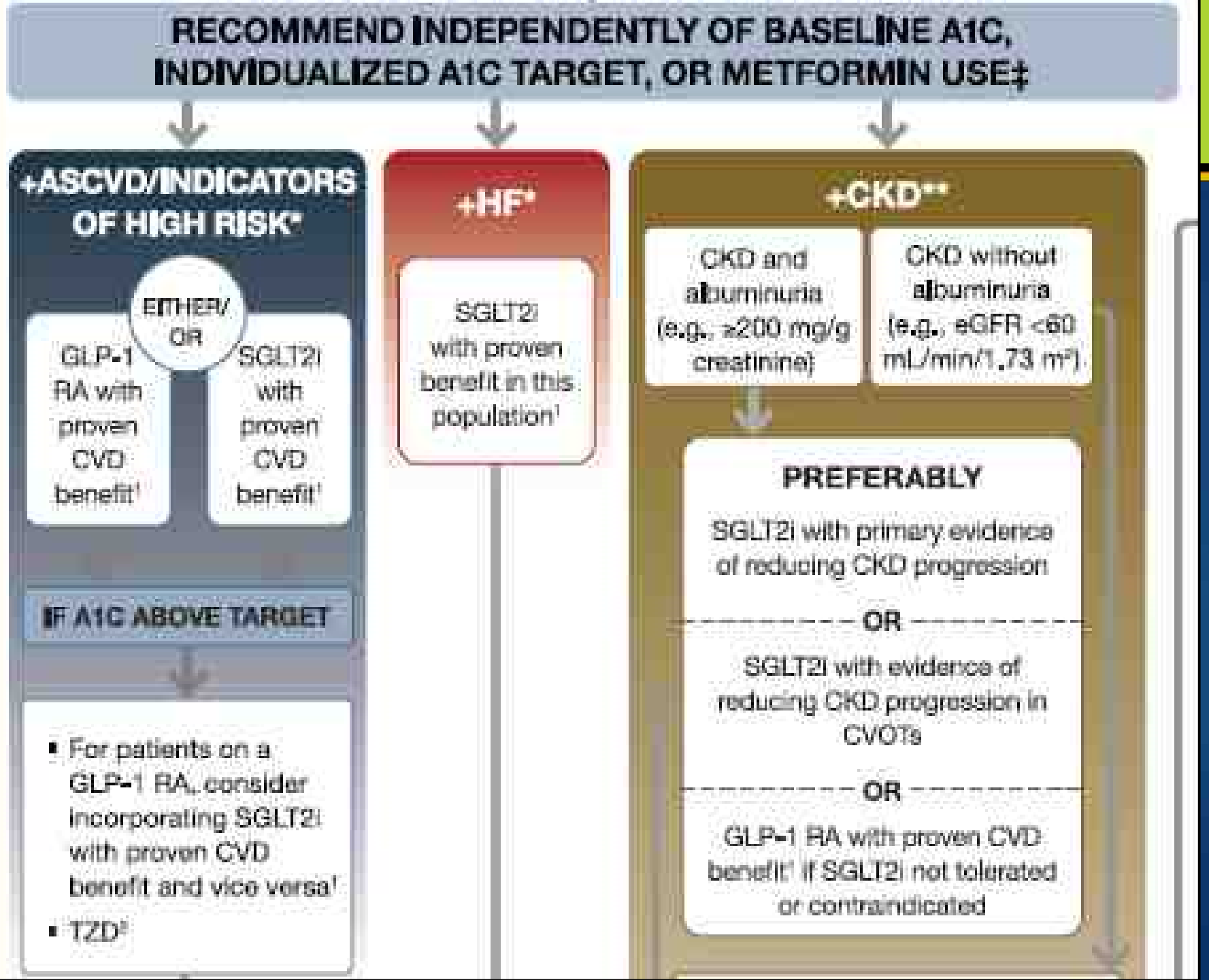


Figure 9.3—Pharmacologic treatment of hyperglycemia in adults with type 2 diabetes. 2022 ADA Professional Practice Committee (PPC) adaptation of Davies et al. (43) and Buse et al. (44). For appropriate context, see **Fig. 4.1**. The 2022 ADA PPC adaptation emphasizes incorporation of therapy rather than sequential add-on, which may require adjustment of current therapies. Therapeutic regimen should be tailored to comorbidities, patient-centered treatment factors, and management needs. ASCVD, atherosclerotic cardiovascular disease; CKD, chronic kidney disease; CVD, cardiovascular disease; CVOTs, cardiovascular outcomes trials; DPP-4i, dipeptidyl peptidase 4 inhibitor; eGFR, estimated glomerular filtration rate; GLP-1 RA, glucagon-like peptide 1 receptor agonist; HF, heart failure; SGLT2i, sodium–glucose cotransporter 2 inhibitor; SU, sulfonylurea; T2D, type 2 diabetes; TZD, thiazolidinedione.


RECOMMEND INDEPENDENTLY OF BASELINE A1C, INDIVIDUALIZED A1C TARGET, OR METFORMIN USE‡
+ASCVD/INDICATORS OF HIGH RISK*
EITHER/ OR
GLP-1 RA with proven CVD benefit†
SGLT2i with proven CVD benefit†
IF A1C ABOVE TARGET
For patients on a GLP-1 RA, consider incorporating SGLT2i with proven CVD benefit and vice versa†
T2D§
+HF*
SGLT2i with proven benefit in this population†
+CKD**
CKD and albuminuria (e.g., ≥200 mg/g creatinine)
CKD without albuminuria (e.g., eGFR <60 mL/min/1.73 m²)
PREFERABLY
SGLT2i with primary evidence of reducing CKD progression
OR
SGLT2i with evidence of reducing CKD progression in CVOTs
OR
GLP-1 RA with proven CVD benefit† if SGLT2i not tolerated or contraindicated

Incorporate agents that provide adequate EFFICACY to achieve and maintain glycemic goals

Higher glycemic efficacy therapy: GLP-1 RA; insulin; combination approaches (Table 9.2)

- **Consider additional comorbidities, patient-centered treatment factors, and management needs in choice of therapy, as below:**

MINIMIZE HYPOGLYCEMIA

No/low inherent risk of hypoglycemia: DPP-4i, GLP-1 RA, SGLT2i, TZD

For SU or basal insulin, consider agents with lower risk of hypoglycemia[b,f]

IF A1C ABOVE TARGET

Incorporate additional agents based on comorbidities, patient-centered treatment factors, and management needs

MINIMIZE WEIGHT GAIN/ PROMOTE WEIGHT LOSS

PREFERABLY

GLP-1 RA with good efficacy for weight loss

OR

SGLT2i

IF A1C ABOVE TARGET

For patients on a GLP-1 RA, consider incorporating SGLT2i and vice versa

- If GLP-1 RA not tolerated or indicated, consider DPP-4i (weight neutral)

Incorporate additional agents based on comorbidities, patient-centered treatment factors, and management needs

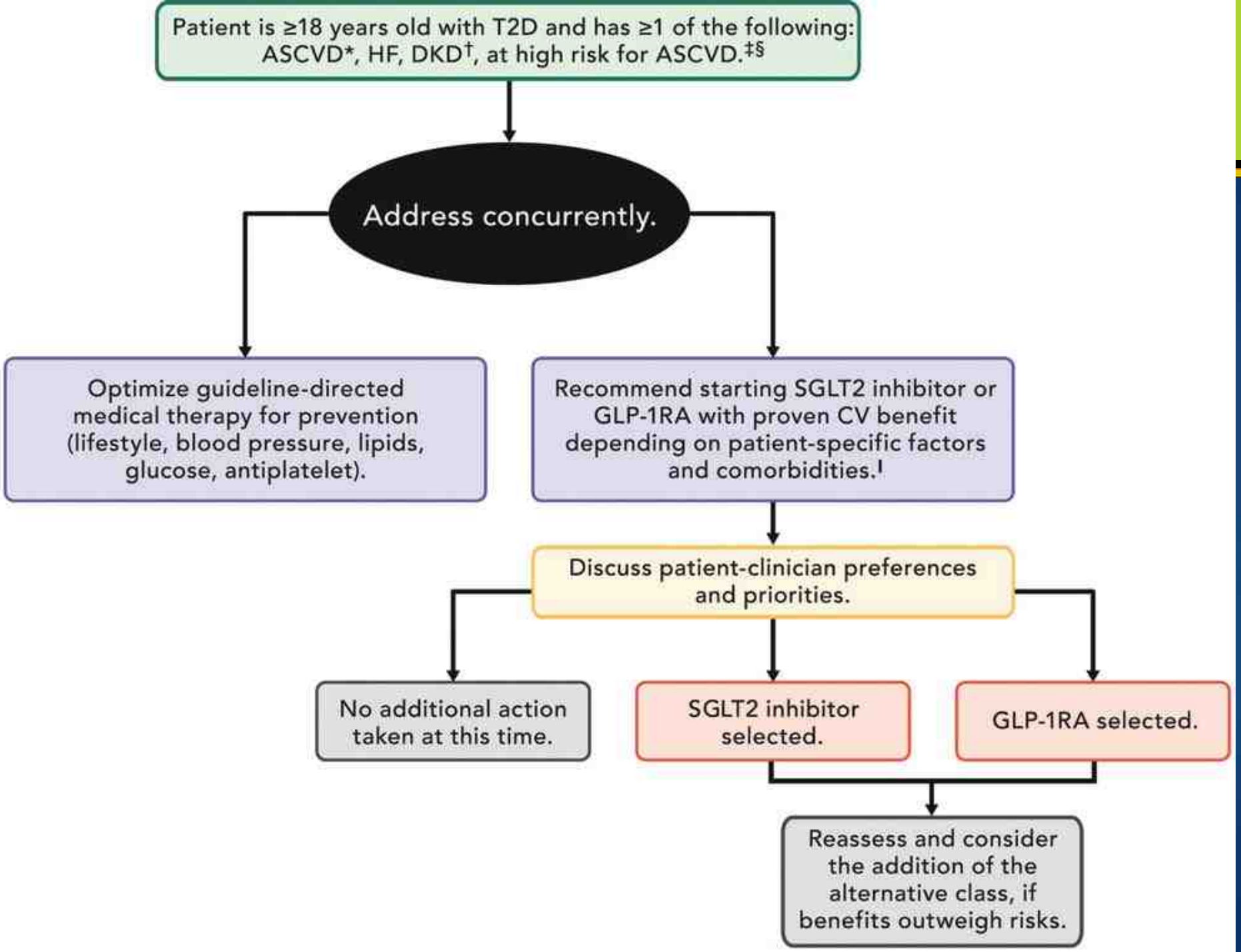
CONSIDER COST AND ACCESS

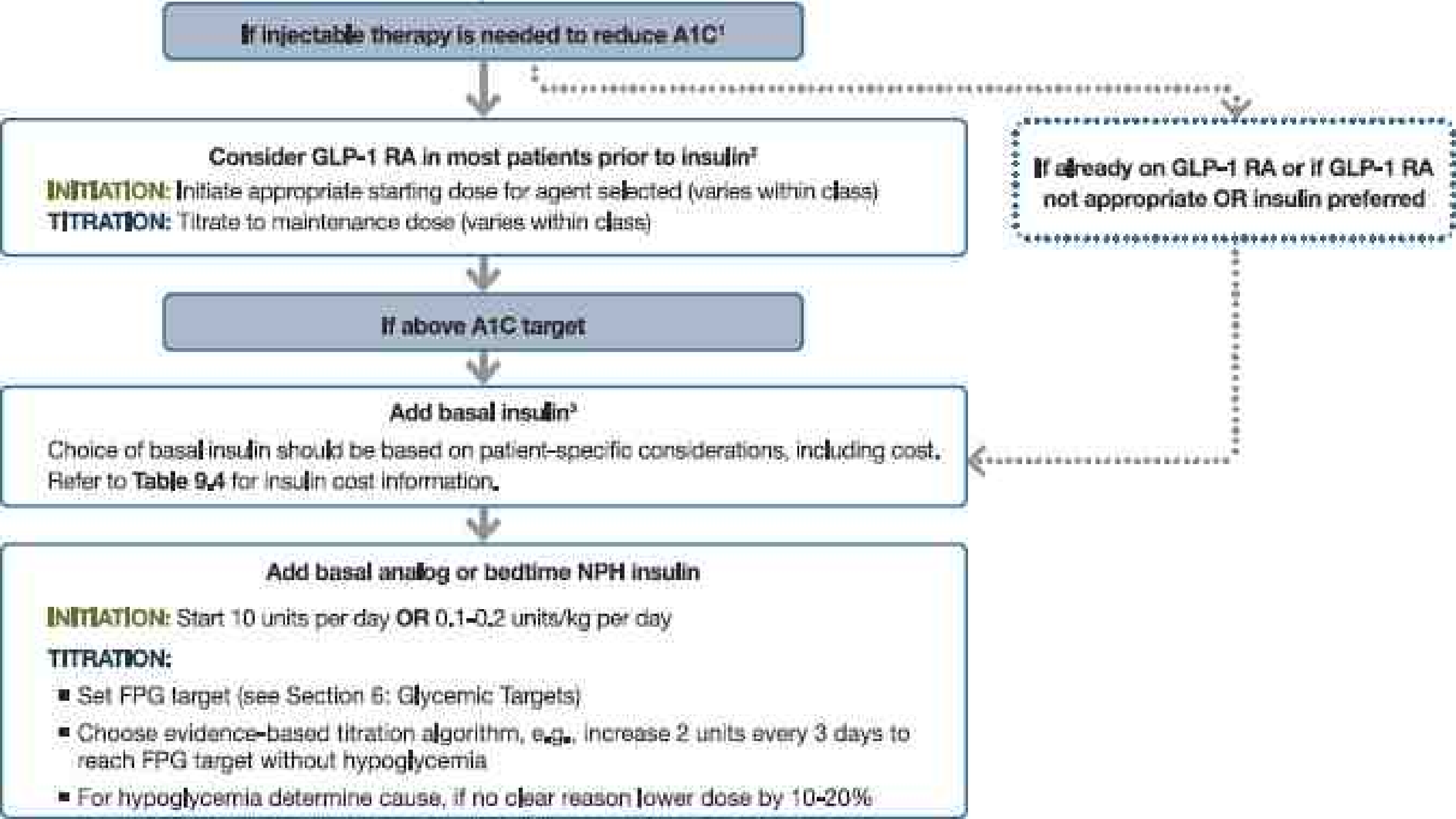
Available in generic form at lower cost:

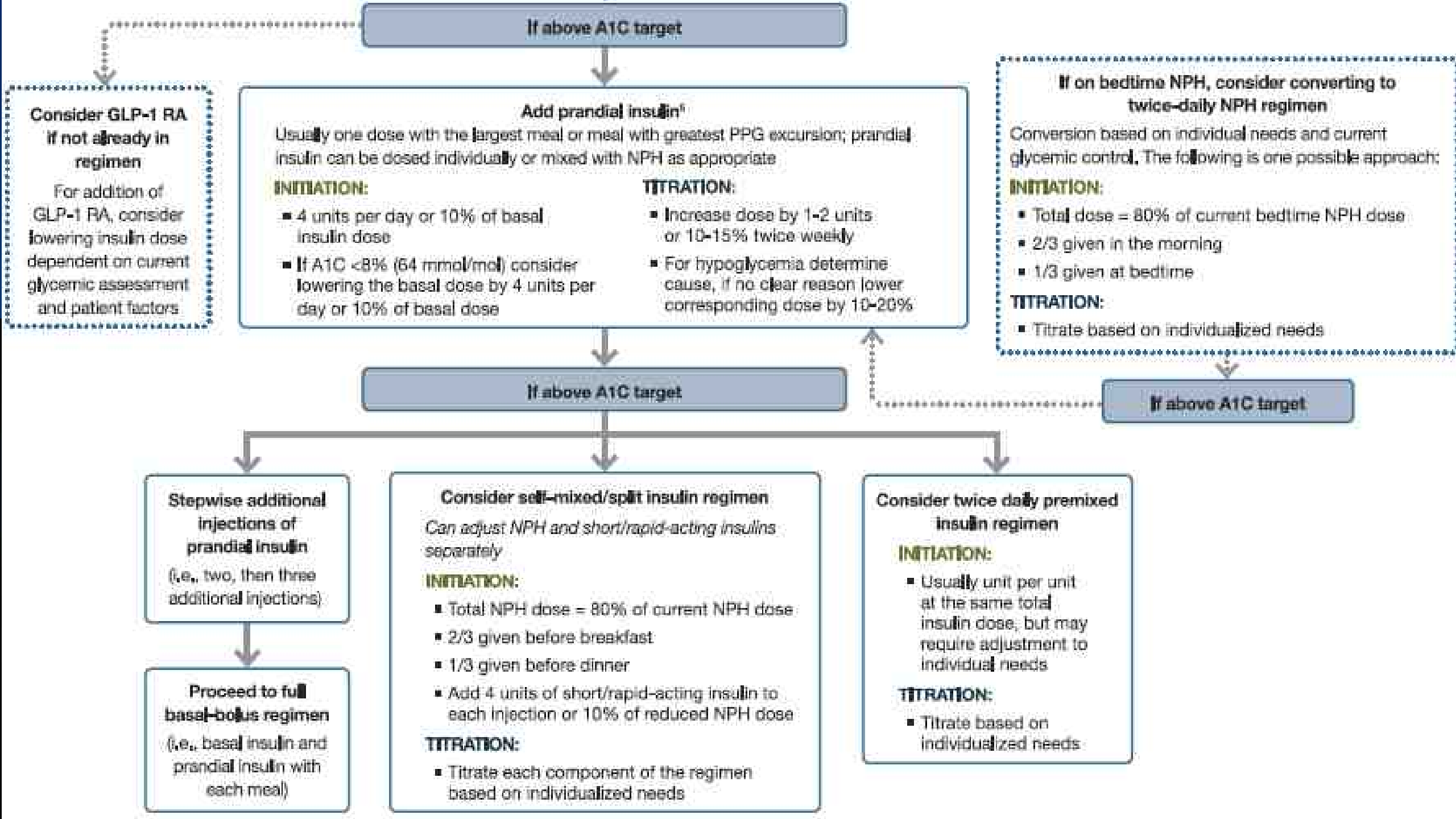
- Certain insulins: consider insulin available at the lowest acquisition cost
- SU
- TZD

IF A1C ABOVE TARGET

Incorporate additional agents based on comorbidities, patient-centered treatment factors, and management needs


Patient is ≥18 years old with T2D and has ≥1 of the following: ASCVD*, HF, DKD†, at high risk for ASCVD.‡§
Address concurrently.
Optimize guideline-directed medical therapy for prevention (lifestyle, blood pressure, lipids, glucose, antiplatelet).
Recommend starting SGLT2 inhibitor or GLP-1RA with proven CV benefit depending on patient-specific factors and comorbidities.‖
Discuss patient-clinician preferences and priorities.
No additional action taken at this time.
SGLT2 inhibitor selected.
GLP-1RA selected.
Reassess and consider the addition of the alternative class, if benefits outweigh risks.


If injectable therapy is needed to reduce A1C[1]
Consider GLP-1 RA in most patients prior to insulin[2]
INITIATION: Initiate appropriate starting dose for agent selected (varies within class)
TITRATION: Titrate to maintenance dose (varies within class)
If already on GLP-1 RA or if GLP-1 RA not appropriate OR insulin preferred
If above A1C target
Add basal insulin[3]
Choice of basal insulin should be based on patient-specific considerations, including cost. Refer to Table 9.4 for insulin cost information.
Add basal analog or bedtime NPH insulin
INITIATION: Start 10 units per day OR 0.1-0.2 units/kg per day
TITRATION:
Set FPG target (see Section 6: Glycemic Targets)
Choose evidence-based titration algorithm, e.g., increase 2 units every 3 days to reach FPG target without hypoglycemia
For hypoglycemia determine cause, if no clear reason lower dose by 10-20%


If above A1C target
Consider GLP-1 RA if not already in regimen
For addition of GLP-1 RA, consider lowering insulin dose dependent on current glycemic assessment and patient factors
Add prandial insulin[h]
Usually one dose with the largest meal or meal with greatest PPG excursion; prandial insulin can be dosed individually or mixed with NPH as appropriate
INITIATION:
4 units per day or 10% of basal insulin dose
If A1C <8% (64 mmol/mol) consider lowering the basal dose by 4 units per day or 10% of basal dose
TITRATION:
Increase dose by 1-2 units or 10-15% twice weekly
For hypoglycemia determine cause, if no clear reason lower corresponding dose by 10-20%
If on bedtime NPH, consider converting to twice-daily NPH regimen
Conversion based on individual needs and current glycemic control. The following is one possible approach:
INITIATION:
Total dose = 80% of current bedtime NPH dose
2/3 given in the morning
1/3 given at bedtime
TITRATION:
Titrate based on individualized needs
If above A1C target
If above A1C target
Stepwise additional injections of prandial insulin
(i.e., two, then three additional injections)
Proceed to full basal-bolus regimen
(i.e., basal insulin and prandial insulin with each meal)
Consider self-mixed/split insulin regimen
Can adjust NPH and short/rapid-acting insulins separately
INITIATION:
Total NPH dose = 80% of current NPH dose
2/3 given before breakfast
1/3 given before dinner
Add 4 units of short/rapid-acting insulin to each injection or 10% of reduced NPH dose
TITRATION:
Titrate each component of the regimen based on individualized needs
Consider twice daily premixed insulin regimen
INITIATION:
Usually unit per unit at the same total insulin dose, but may require adjustment to individual needs
TITRATION:
Titrate based on individualized needs

Insulin therapy in type 2 DM

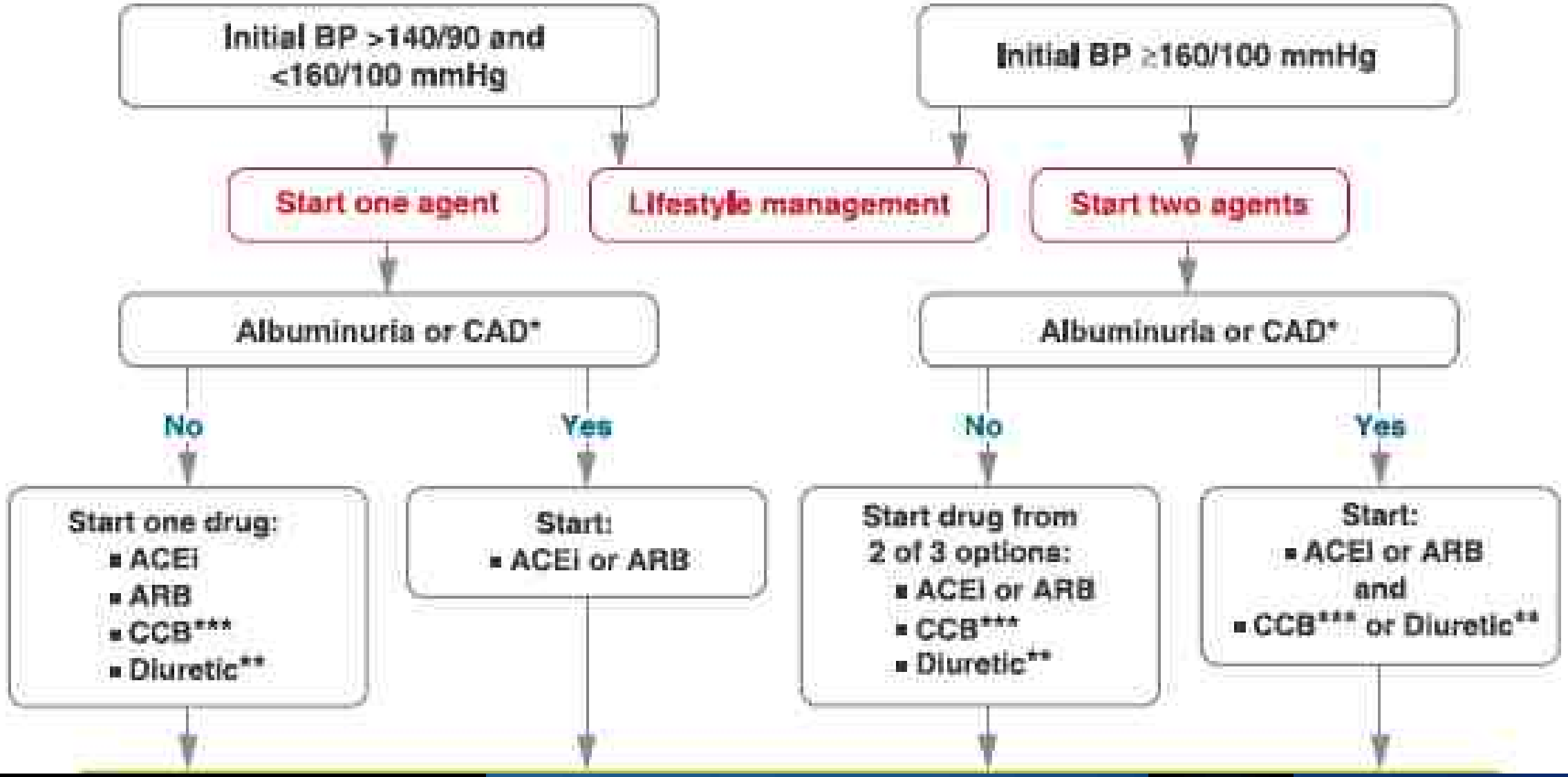
- **Insulin** should be considered as the initial therapy **in type 2 DM**, particularly in :
- **lean individuals or those with severe weight loss**
- **in individuals with underlying renal or hepatic disease that precludes oral glucose-lowering agents**
- **in individuals who are hospitalized or acutely ill.**

سوال دوم :

- برای فشار خون بیمار چه توصیه ای دارید؟

(BP=150/95 mmHg)

Recommendations for the Treatment of Confirmed Hypertension in People With Diabetes



سوال سوم :

- برای اختلالات لیپید بیمار چه توصیه ای دارید؟

- ✓ Total cholesterol = 230 mg/dl
- ✓ LDL = 140 mg/dl
- ✓ HDL = 35 mg/dl
- ✓ TG = 290 mg/dl

Dyslipidemia

- According to guidelines of the ADA, the target lipid values in diabetic individuals (age >40 years) without CVD should be as follows:
  - LDL <100 mg/dL
  - HDL >40 mg/ dL in men and >50 mg/dL in women
  - triglycerides 150 mg/dL
- If the patient is known to have CHD, the ADA recommends an LDL goal of <70 mg/dL.

Table 9.2—Recommendations for statin and combination treatment in adults with diabetes

Age	ASCVD	Recommended statin intensity^ and combination treatment*
<40 years	No	None†
	Yes	High • If LDL cholesterol ≥70 mg/dL despite maximally tolerated statin dose, consider adding additional LDL-lowering therapy (such as ezetimibe or PCSK9 inhibitor)#
≥40 years	No	Moderate‡
	Yes	High • If LDL cholesterol ≥70 mg/dL despite maximally tolerated statin dose, consider adding additional LDL-lowering therapy (such as ezetimibe or PCSK9 inhibitor)

*In addition to lifestyle therapy. ^For patients who do not tolerate the intended intensity of statin, the maximally tolerated statin dose should be used. †Moderate-intensity statin may be considered based on risk-benefit profile and presence of ASCVD risk factors. ASCVD risk factors include LDL cholesterol ≥100 mg/dL (2.6 mmol/L), high blood pressure, smoking, chronic kidney disease, albuminuria, and family history of premature ASCVD. ‡High-intensity statin may be considered based on risk-benefit profile and presence of ASCVD risk factors. #Adults aged <40 years with prevalent ASCVD were not well represented in clinical trials of non-statin–based LDL reduction. Before initiating combination lipid-lowering therapy, consider the potential for further ASCVD risk reduction, drug-specific adverse effects, and patient preferences.

سوال چهارم :

- آیا به این بیمار مصرف آسپرین را توصیه می کنید؟

Aspirin therapy

- **Aspirin therapy** (75–162 mg/day) may be considered as a primary prevention strategy in those with type 1 or type 2 diabetes who are at increased cardiovascular risk.

- This includes most men and women with diabetes **aged > 50 years** who have at least one additional major risk factor (**family history of premature atherosclerotic cardiovascular disease, hypertension, dyslipidemia, smoking, or albuminuria**) and are not at increased risk of bleeding.

سوال پنجم :

- چه زمانی نیاز است که عوارض میکروواسکولار مثل رتینوپاتی را در این بیمار بررسی کنیم؟

OPHTHALMOLOGIC COMPLICATIONS OF DM

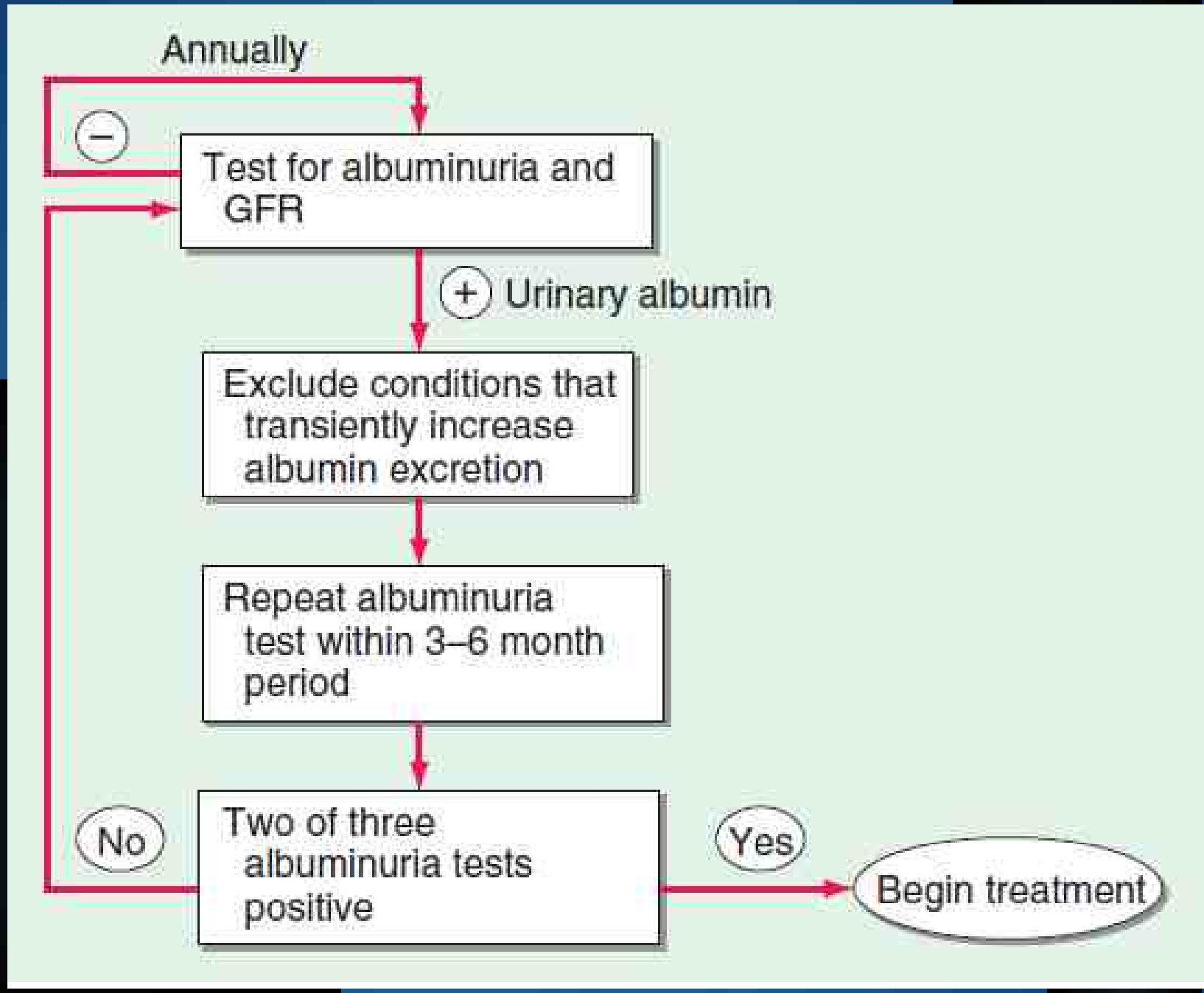
- American Diabetes Association (ADA) recommends the following **ophthalmologic examination** schedule:
- (1) individuals with **type 1 DM** should have an initial eye examination within 5 years of diagnosis.
- (2) individuals with **type 2 DM** should have an initial eye examination at the time of diabetes diagnosis.
- (3) **women with DM who are pregnant** or contemplating pregnancy should have an eye examination prior to conception and during the first trimester.
- (4) if eye exam is normal, repeat examination in 2–3 years is appropriate.

سوال ششم :

- چه زمانی نیاز است که عارضه کلیوی را در این بیمار بررسی کنیم؟

سایر آزمایشات :

- HbAIc = 8.9 %
- Total cholesterol = 230 mg/dl
- LDL = 140 mg/dl HDL = 35 mg/dl
- TG = 290 mg/dl
- Cr = 1.5 mg/dl
- Microalbumin (urine) = 57 mg/gr


Annually
−
Test for albuminuria and GFR
+ Urinary albumin
Exclude conditions that transiently increase albumin excretion
Repeat albuminuria test within 3–6 month period
Two of three albuminuria tests positive
No
Yes
Begin treatment

سوال هفتم :

- چه زمانی نیاز است که عارضه نروپاتی را در این بیمار بررسی کنیم؟

سوال هشتم :

- برای پیشگیری و یا جلوگیری از تشدید عوارض میکروواسکولار چه اقداماتی انجام دهیم؟

سوال نهم :

- برای پیشگیری و تشخیص عوارض ماکروواسکولار بویژه عارضه قلبی عروقی در این بیمار چه اقداماتی لازم است؟

CARDIOVASCULAR MORBIDITY AND MORTALITY

- The screening of asymptomatic individuals with diabetes for CHD, even with a risk-factor scale, is not recommended because recent studies have not shown a clinical benefit.

CARDIOVASCULAR MORBIDITY AND MORTALITY

- Risk factors for macrovascular disease in diabetic individuals include:
  - dyslipidemia
  - hypertension
  - obesity
  - reduced physical activity
  - cigarette smoking.
- Additional risk factors more prevalent in the diabetic population include microalbuminuria, macroalbuminuria, an elevation of serum creatinine, abnormal platelet function and endothelial dysfunction.

CARDIOVASCULAR MORBIDITY AND MORTALITY

- Current recommendations by the ADA include the use of aspirin for primary prevention of coronary events in diabetic individuals with an increased 10-year cardiovascular risk >10%
- at least one risk factor such as :
  - hypertension,
  - smoking,
  - family history,
  - albuminuria, or
  - dyslipidemia in men >50 years or women >60 years of age.

معرفی بیمار دوم

- آقای ۵۳ ساله بدون سابقه قبلی دیابت
- BMI=36
- سابقه فامیلی دیابت در برادر
- BP=150/95 mmHg
- مصرف سیگار: 7 pack years
- آزمایشات :

- FBS = 246 mg/dl
- GTT = 287 mg/dl

سایر آزمایشات :

- HbAIc = 8.9 %
- Total cholesterol = 230 mg/dl
- LDL = 140 mg/dl HDL = 35 mg/dl
- TG = 290 mg/dl
- Cr = 1.5 mg/dl
- TSH = 5.2 mu/l (normal : 0.5-5)
- Microalbumin (urine) = 57 mg/gr

Standards of Care ADA

- آنچه که به عنوان مدرک (شواهد علمی) ارائه می شود، تنها یکی از بخش های کار طبابت است.
- ما به عنوان طبیب، از **"یک انسان"** مراقبت می کنیم. در این کار همه هم و غم ما چاره اندیشی برای حفظ و ارتقای سلامتی **"یک انسان"** است.
- اگرچه **سلامت جامعه** هم یکی از دل مشغولی های پر اهمیت ماست، لیکن در هنگام رویاروئی با **"یک بیمار دیابتی"**، توجه اصلی ما باید همین **"فردی"** باشد که روبروی ما نشسته است.

Standards of Care ADA

- رنجوری و بیماری، سن، تحصیلات، معلولیت، و مهم تر و بالاتر از همه، ارزش ها و علاقمندی های خود **"همین بیمار"** باید در مدنظر باشد؛
- در این صورت هدف ها و برنامه درمان برای این یا آن بیمار، بسیار دگرگون می شود.

Standards of Care ADA

- **پایبندی "خُشک" به دستورالعمل ها، مثلا اجرای انعطاف ناپذیر همین دستورالعمل انجمن دیابت آمریکا، ما را از "روح" طبابت دور می کند.**
- گرچه اکنون پشتیبان بسیاری از یافته ها، نتایج کارآزمائی های بسیار دقیق است، لیکن همه چیز سیاه یا سفید نیست. هنوز بسیاری از مسائل در محدوده خاکستری است.
- می دانیم باید چند "عامل خطر" را چاره کنیم. لیکن هنوز نمی دانیم چاره کدام خطر در اولویت است. راه چاره مناسب این عامل های خطر کدام است.
- گام گذاشتن در این وادی پُر پیچ و خم و پُر از ابهام، کار ساده ای نیست.

Thanks for your attention.

Table 4.6—Management of patients with nonalcoholic fatty liver disease and nonalcoholic steatohepatitis

Variable	Lifestyle intervention[a]	Liver-directed pharmacotherapy	Diabetes care (in individuals with diabetes)	Cardiovascular risk reduction
NAFLD	Yes	No	Standard of care	Yes
NASH with fibrosis stage 0 or 1 (F0, F1)	Yes	No	Standard of care	Yes
NASH with fibrosis stage 2 or 3 (F2, F3)	Yes	Yes	Pioglitazone, GLP-1 receptor agonists[b]	Yes
NASH cirrhosis (F4)	Yes	Yes	Individualize[c]	Yes

Table 6.4—Classification of hypoglycemia

	Glycemic criteria/description
Level 1	Glucose <70 mg/dL (3.9 mmol/L) and ≥54 mg/dL (3.0 mmol/L)
Level 2	Glucose <54 mg/dL (3.0 mmol/L)
Level 3	A severe event characterized by altered mental and/or physical status requiring assistance for treatment of hypoglycemia

Reprinted from Agiostratidou et al. (72).

Table 8.1—Treatment options for overweight and obesity in type 2 diabetes

Treatment	BMI category (kg/m^2)		
	25.0–26.9 (or 23.0–24.9*)	27.0–29.9 (or 25.0–27.4*)	≥30.0 (or ≥27.5*)
Diet, physical activity, and behavioral counseling	†	†	†
Pharmacotherapy		†	†
Metabolic surgery			†

*Recommended cutpoints for Asian American individuals (expert opinion). †Treatment may be indicated for select motivated patients.