chronic renal failure, poor vision, older age, and higher HbA1c (372–379).

Foot ulcer increases amputation risk and utilization of medical care (380–383). However, further research is necessary to confirm trends in amputation rates and to establish whether a program of comprehensive foot care or specific management strategies for established foot complications may reduce the risk for amputation among older persons with diabetes (263, 330, 384–392). We endorse the standard of care concerning foot care as expressed by the ADA, which recommends patient self-care education, specifies the content and frequency of periodic comprehensive foot evaluations, recommends a multidisciplinary approach for foot ulcers and high-risk feet, and presents indications for referral for further vascular assessment, ongoing preventive care, and lifelong surveillance by foot care specialists (300). Examiners should identify any history of foot ulcer, poorly fitted footwear, loss of protective sensation, vascular insufficiency, foot deformity, or preulcerative lesion. For patients with altered gait due to neuropathy, local foot deformity, or unhealed ulcers, exercise programs may need to focus on non–weight-bearing activities (393). Furthermore, specialty care may be required to determine the appropriateness of off-loading devices, monitoring of foot skin temperature, use of therapeutic footwear, and need for vascular or podiatric surgical interventions (382, 394, 395).

Lower extremity amputation is associated with reduced survival and a reduction in physical health-related quality of life, as well as delayed recovery and impaired return to baseline function among nursing home residents (1, 396, 397).

The risk factor of vascular insufficiency must be considered among persons with diabetic foot ulcers (398, 399). The goals of lower extremity revascularization in older patients include maintenance of functional capacity and independent living status. Observational studies suggested similar limb salvage rates but less short-term mortality and morbidity after endovascular surgical revascularization (400, 401).

Chronic kidney disease in older adults with diabetes

GFR gradually decreases by ~0.75 to 1 mL/min/1.73 m^2 per year (402). The rate of GFR decline is accelerated in the 20% to 40% of older patients with diabetes and diabetic CKD (403). Notably, the decline in GFR reduces the clearance of insulin and many diabetes medications (404) and increases the risk of hypoglycemia (405, 406).

5.14 In patients aged 65 years and older with diabetes who are not on dialysis, we recommend annual screening for CKD with an eGFR and urine albumin-to-creatinine ratio. (1|⊕⊕⊕⊕)

5.15 In patients aged 65 years and older with diabetes who are in group 3 (poor health, see Table 3) of the framework and have a previous albumin-to-creatinine ratio of <30 mg/g, we suggest against additional annual albumin-to-creatinine ratio measurements. (2|⊕⊕OO)

Evidence

The general recommendation for annual measurement of urinary albumin-to-creatinine ratio and eGFR should also be carried out in older adults (300). However, progressive loss of GFR can occur in the absence of albuminuria (407).

In patients with an estimated limited lifespan who have normal urinary albumin excretion, the prognostic value of annual measurement of urinary albumin excretion over and above indicating an increased risk of CVD is likely minimal (408). Regardless, because a decrease in eGFR affects drug dosing and other aspects of care, at least annual testing should be performed, with more frequent testing if the eGFR is <60 mL/min/1.73 m^2.

5.16 In patients aged 65 years and older with diabetes and decreased eGFR, we recommend limiting the use or dosage of many classes of diabetes medications to minimize the side effects and complications associated with CKD. (1|⊕⊕OO)
Technical remark: Specific use/dosing guidance on each class of diabetes medication is provided in Table 7.

Evidence

Insulin. Reduced kidney function results in a prolongation of insulin half-life and a decrease in insulin requirements (409). All insulin preparations can be used in patients with CKD, and no specific reductions in dosing are necessary for patients. Patients with stages 4 to 5 CKD (eGFR <30 mL/min/1.73 m^2) often have delayed gastric emptying; administering rapid-acting insulin after the meal may be helpful for matching the insulin peak with the time of the postprandial blood glucose peak. Postprandial rapid-acting insulin with a dose adjustment for the amount eaten may help patients with varying food intakes.

Metformin. Because of drug accumulation with decreased clearance and therefore a potential risk for lactic acidosis, metformin can be used without dosage reduction down to an eGFR >45 mL/min/1.73 m^2 and with a reduction to 1000 mg daily if the eGFR is ≥30 to 44 mL/min/1.73 m^2. The drug should be stopped when