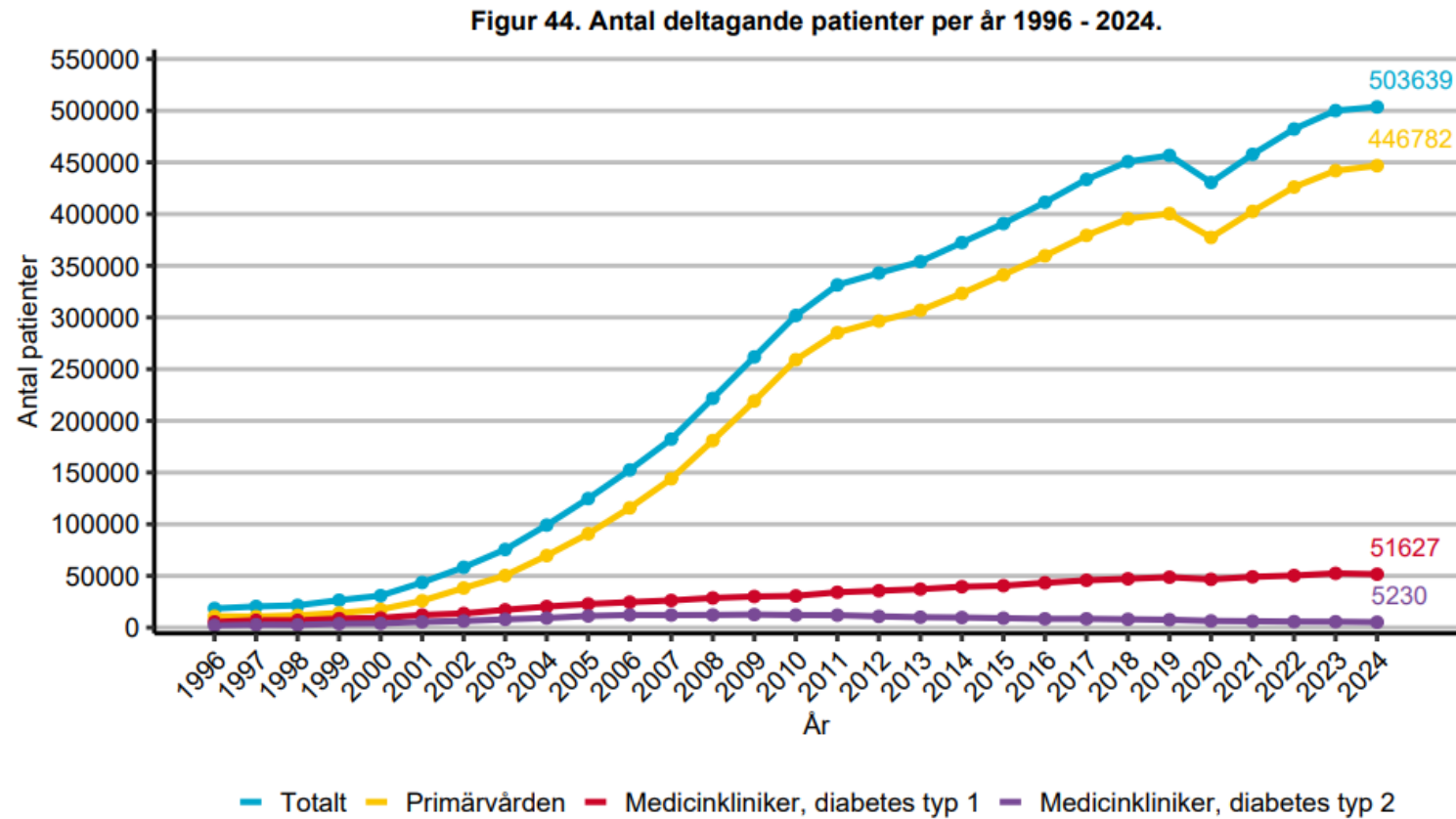


Östergötlands NDR resultat

Och nyheter i vårdprogrammet

Registrerade patienter



Varför registrera i NDR?

Ditt arbete är viktigt!

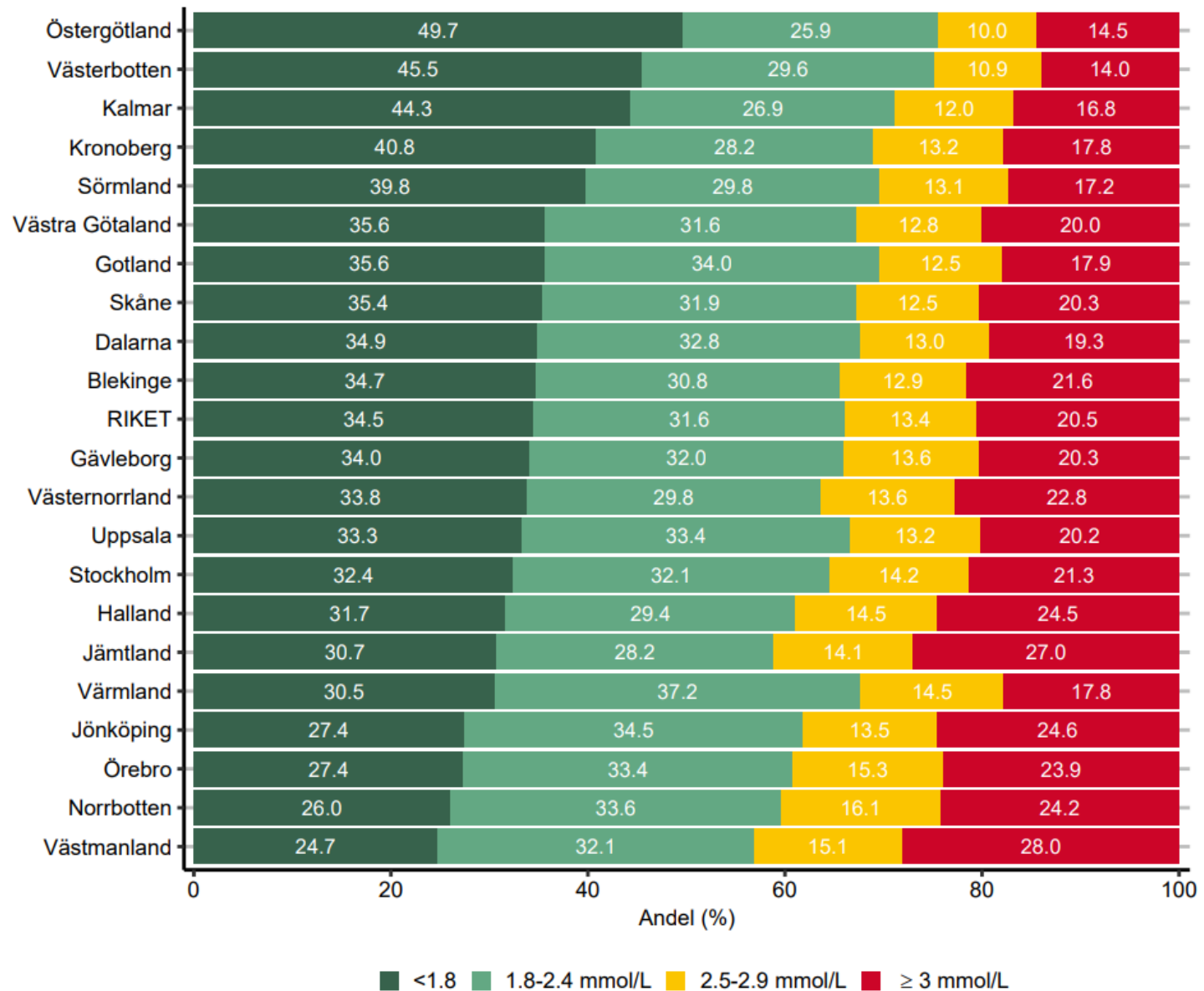
37 publikationer 2024

Hur ligger vi till i jämförelse?

Indikator	Östergötland 2024	Riket 2024
● HbA1c < 52	54 %	60 %
● HbA1c > 70	9 %	8 %
● Blodtryck ≤130/80	49 %	46 %
● Blodtryck <140/85	67 %	62 %
● LDL <2,5	76 %	66 %
● Med lipidsänkande läkemedel	73 %	71 %
● Fysiskt inaktiva	28 %	27 %
● Rökare	12 %	12 %
● Förekomst av albuminuri	20 %	24 %
● Ögonbottenundersökning enligt riktlinjer (utan tidigare diabetesretinopati)	78 %	82 %
● Förekomst av diabetesretinopati	14 %	21 %
● Fotundersökning senaste året	85 %	77 %

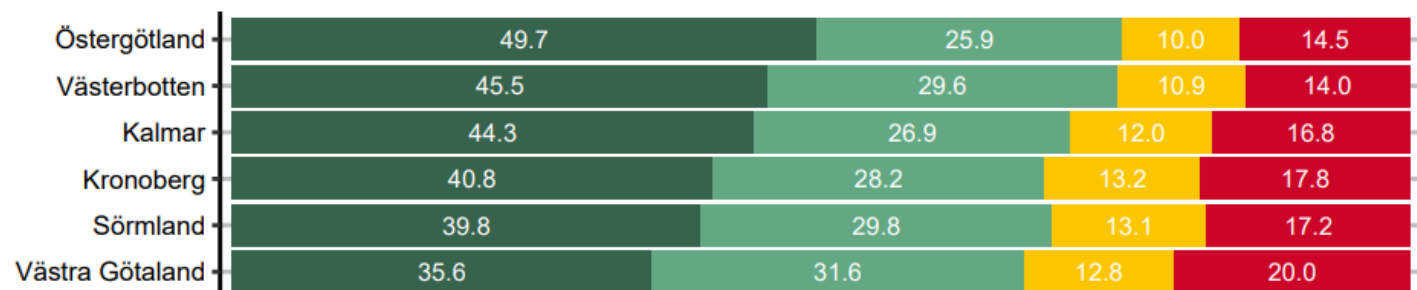
LDL- fördelning

Figur 95. Fördelning av LDL i regionerna. Primärvård, år 2024.



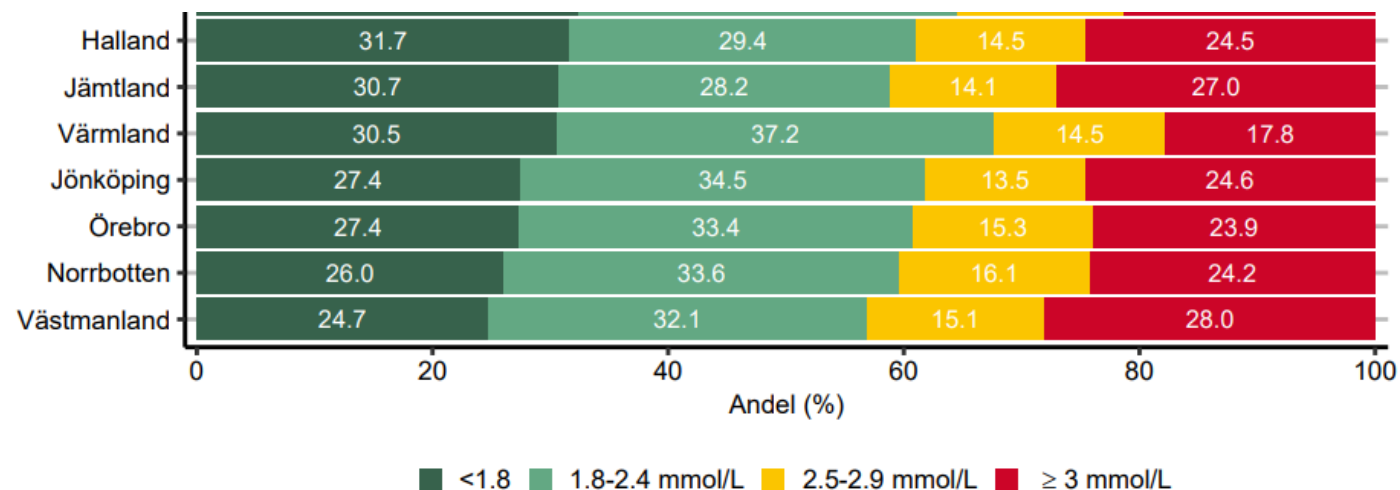
LDL-fördelning

Figur 95. Fördelning av LDL i regionerna. Primärvård, år 2024.



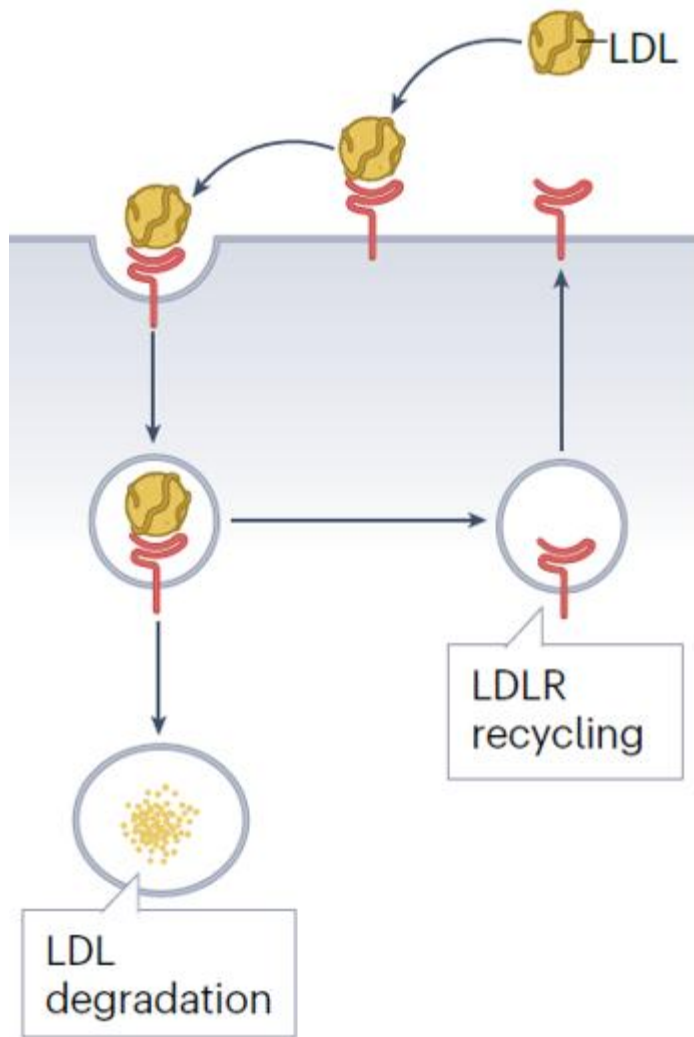
KVALITETSMÅL DYSLIPIDEMI HOS INDIVIDER 40 TILL 75 ÅR

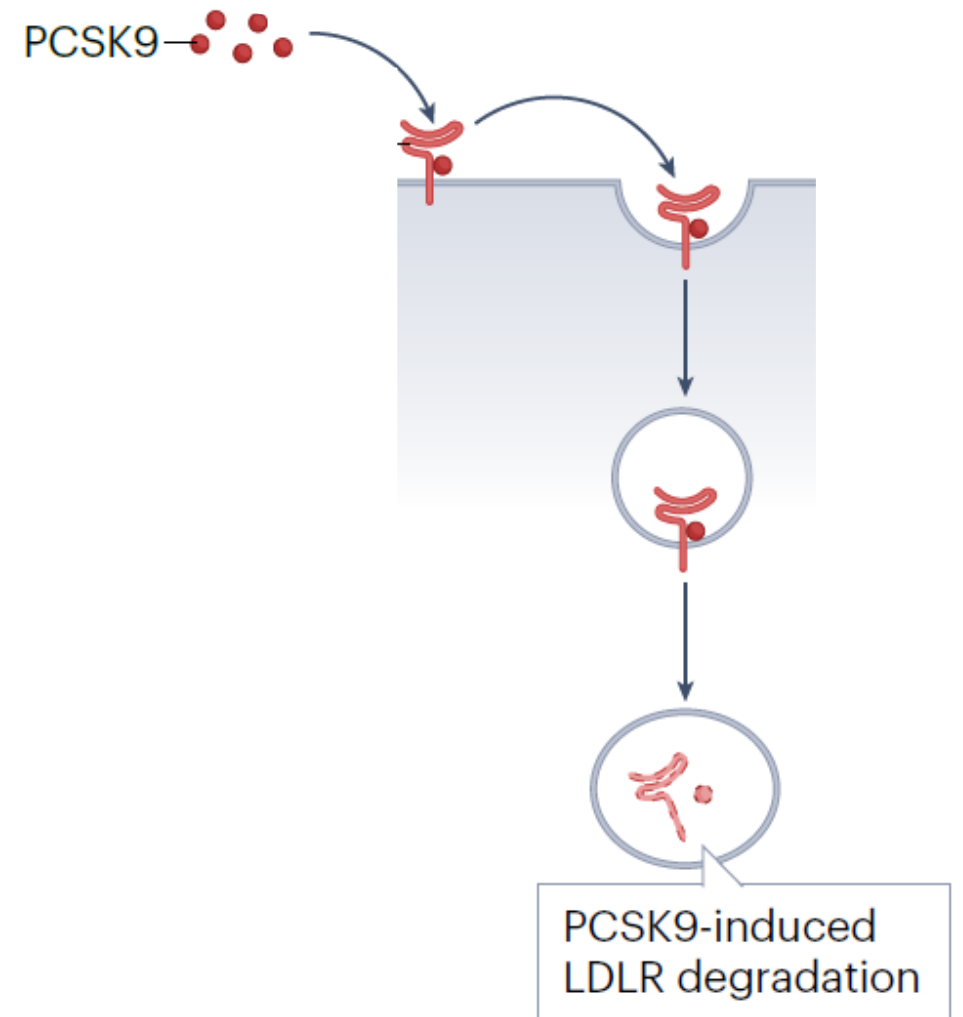
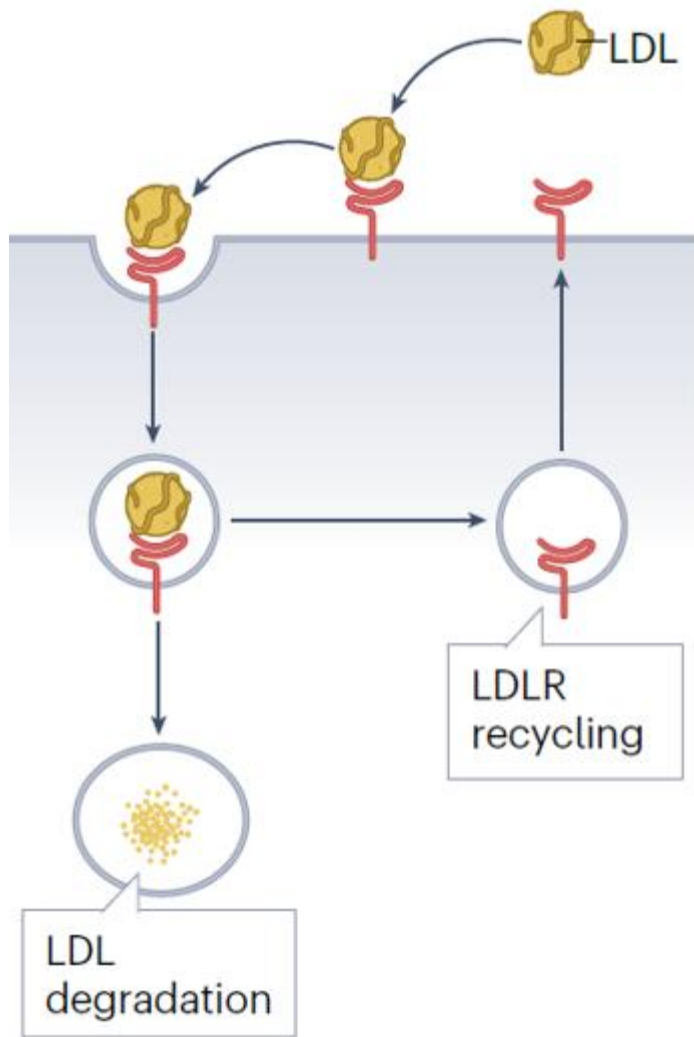
- Vid hög kardiovaskulär risk, andel med LDL under 1,8 mmol/l överstiger 70 %
- Andel med LDL under 2,5 mmol/l överstiger 70 %
- Andel med årlig uppföljning överstiger 90 %

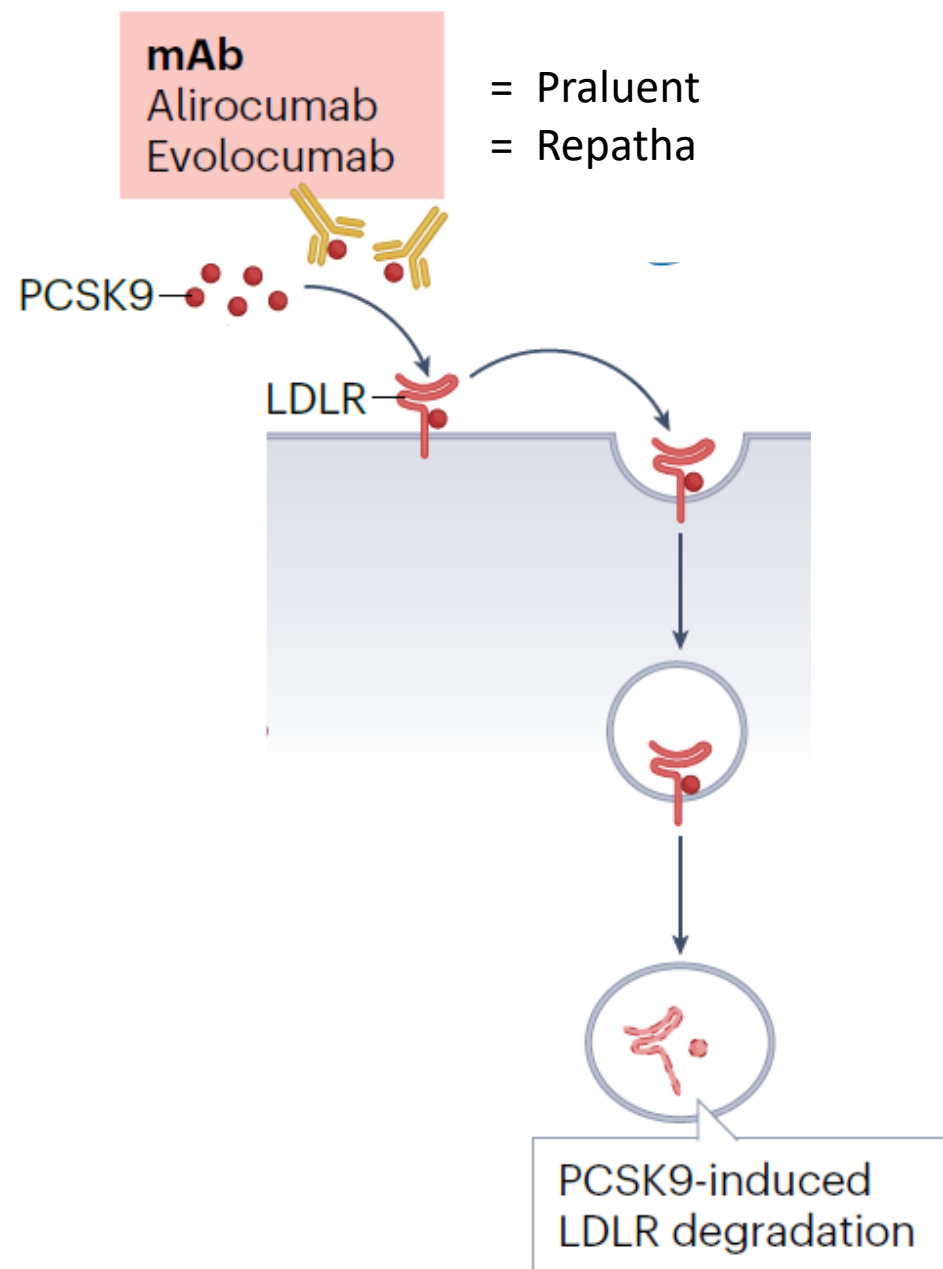
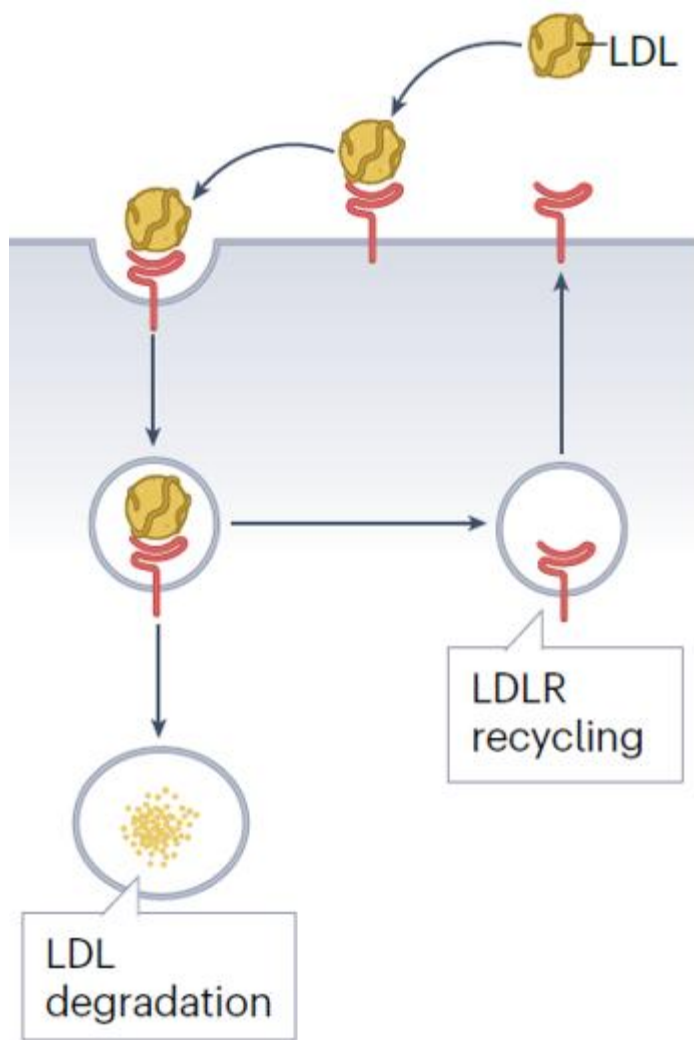


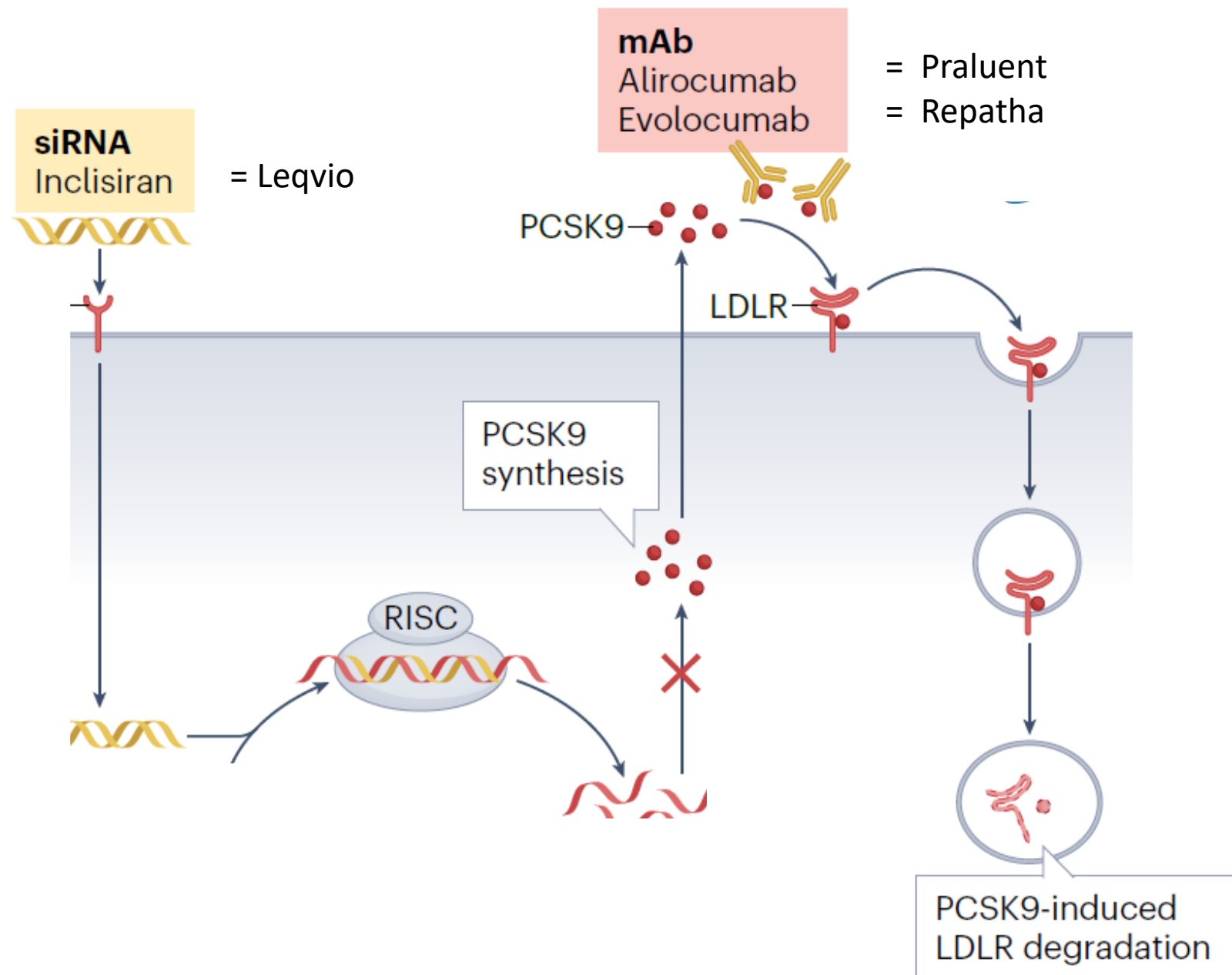
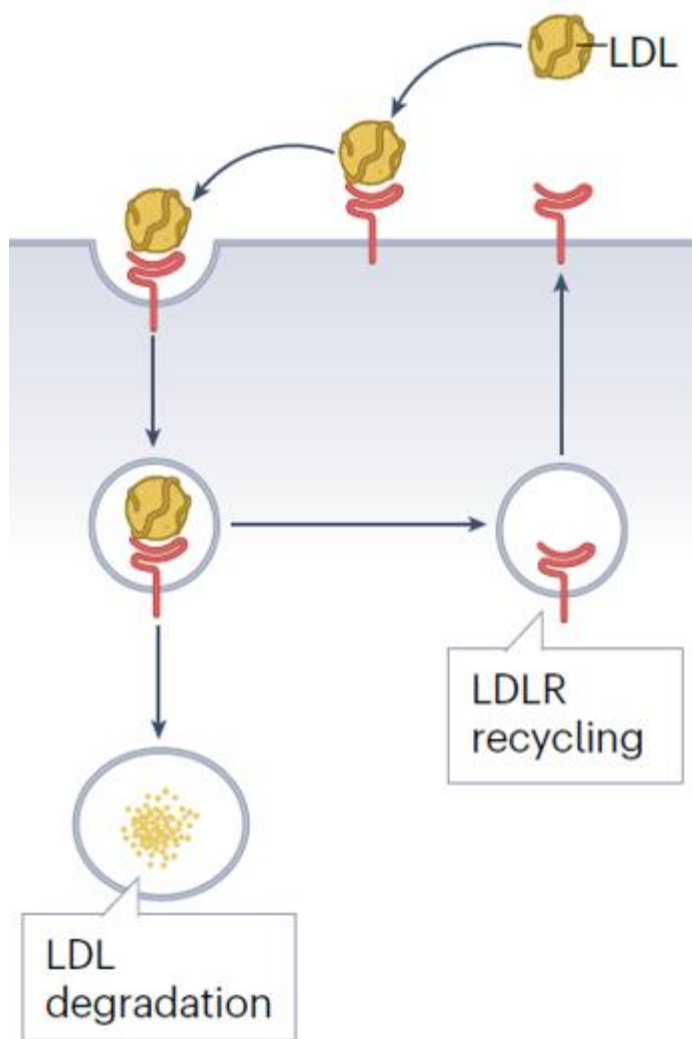
Utökad subvention av PCSK9-hämmare

- Patienter med diagnosticerad homozygot familjär hyperkolesterolemi.
- Patienter med diagnostiserad heterozygot familjär hyperkolesterolemi som trots maximal tolererbar behandling med statin och ezetimib har kvarstående LDL-kolesterol på 2,6 mmol/l eller högre.
- Patienter med diagnostiserad aterosklerotisk hjärt- och kärlsjukdom som trots maximal tolererbar behandling med statin och ezetimib har kvarstående LDL-kolesterol på 1,8 mmol/l eller högre.
- Patienter med diagnostiserad diabetes mellitus och målorganskada (mikroalbuminuri, retinopati eller neuropati), eller minst tre viktiga riskfaktorer, eller tidig debut av typ 1 diabetes mellitus med lång duration, som trots maximal tolererbar behandling med statin och ezetimib har kvarstående LDL-kolesterol på 2,6 mmol/l eller högre.









PCSK9-hämmare som primärprevention vid diabetes

- Patienter med diabetes mellitus i primärprevention har stor nytta av statiner.
- Evidensen är dock begränsad kring nyttan av tilläggsbehandling med PCSK9-hämmare till denna patientgrupp, varför en återhållsam förskrivning rekommenderas i nuläget.
- Subvention: LDL $\geq 2,6$ trots maximal tolererbar behandling med statin och ezetimib och
 - ✓ målorganskada (mikroalbuminuri, retinopati eller neuropati), eller
 - ✓ minst tre viktiga riskfaktorer, eller
 - ✓ tidig debut av typ 1 diabetes mellitus med lång duration
- Följande ytterligare faktorer kan tala för en potentiellt större nytta av tilläggsbehandling med PCSK9-hämmare:
 - ❖ Kronisk njursjukdom (CKD) med
 - ✓ eGFR < 45 ml/min, eGFR 45–59 ml/min plus mikroalbuminuri
 - ✓ makroalbuminuri (oberoende av eGFR)
 - ❖ LDLC ≥ 3.4 mmol/L (på optimerad basbehandling).



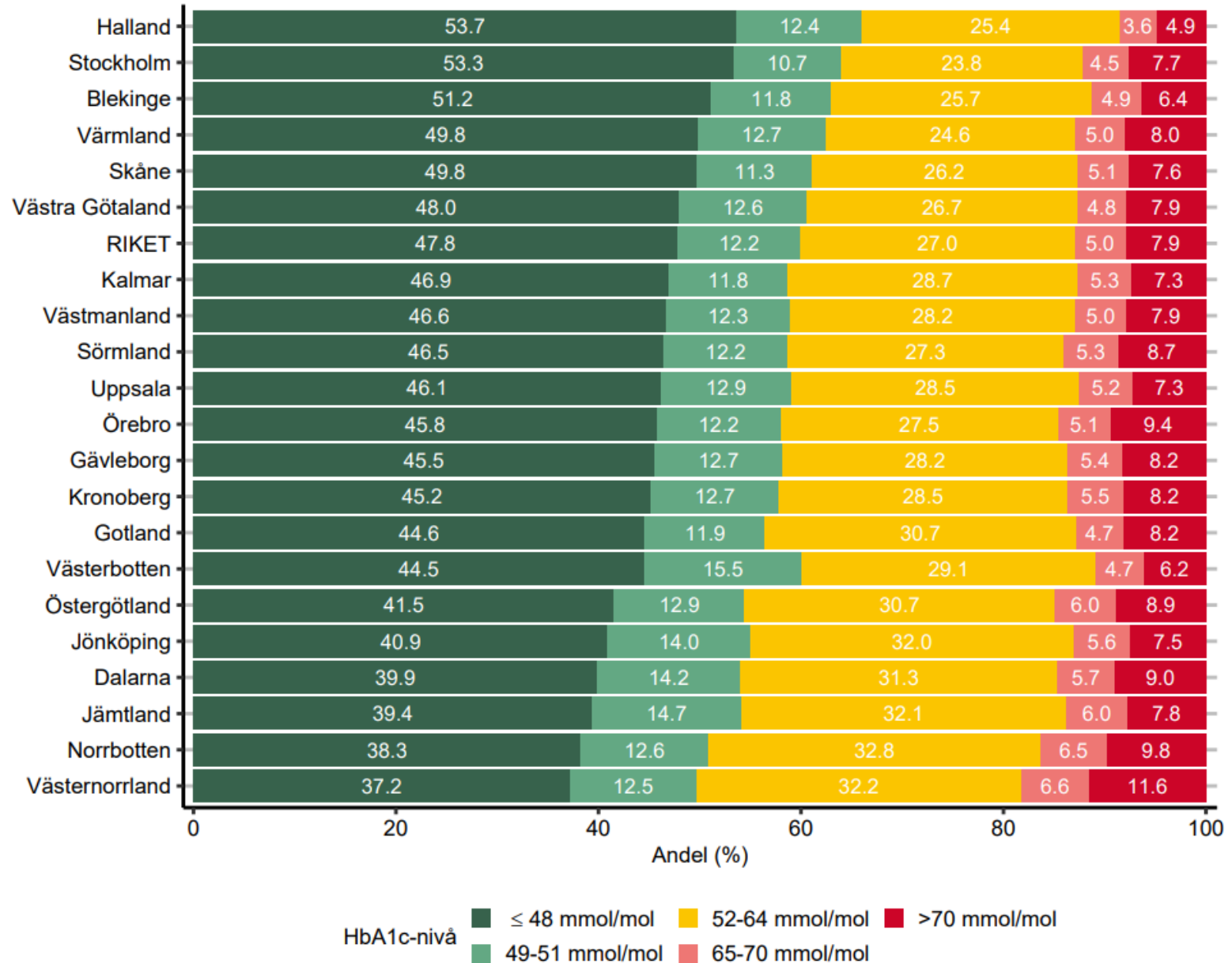
PCSK9-hämmare som primärprevention vid diabetes

- Använd ej vid begränsad förväntad överlevnad / komorbiditet eller andra förhållanden där LDL-sänkning inte anses kliniskt motiverat.
- Basal statinterapi + ezetimib måste vara optimerad
 - Atorvastatin 80 mg 1*1 eller rosuvastatin 40 mg 1*1
 - Vid intolerans ska minst 3 statiner provats, inklusive minst 1 i lägsta dos (t ex atorvastatin 10 mg, 2 ggr/v eller rosuvastatin 5 mg 2 ggr/v)
- Bristande följsamhet till statin + ezetimib är ej indikation
- Övriga riskfaktorer måste vara optimerade



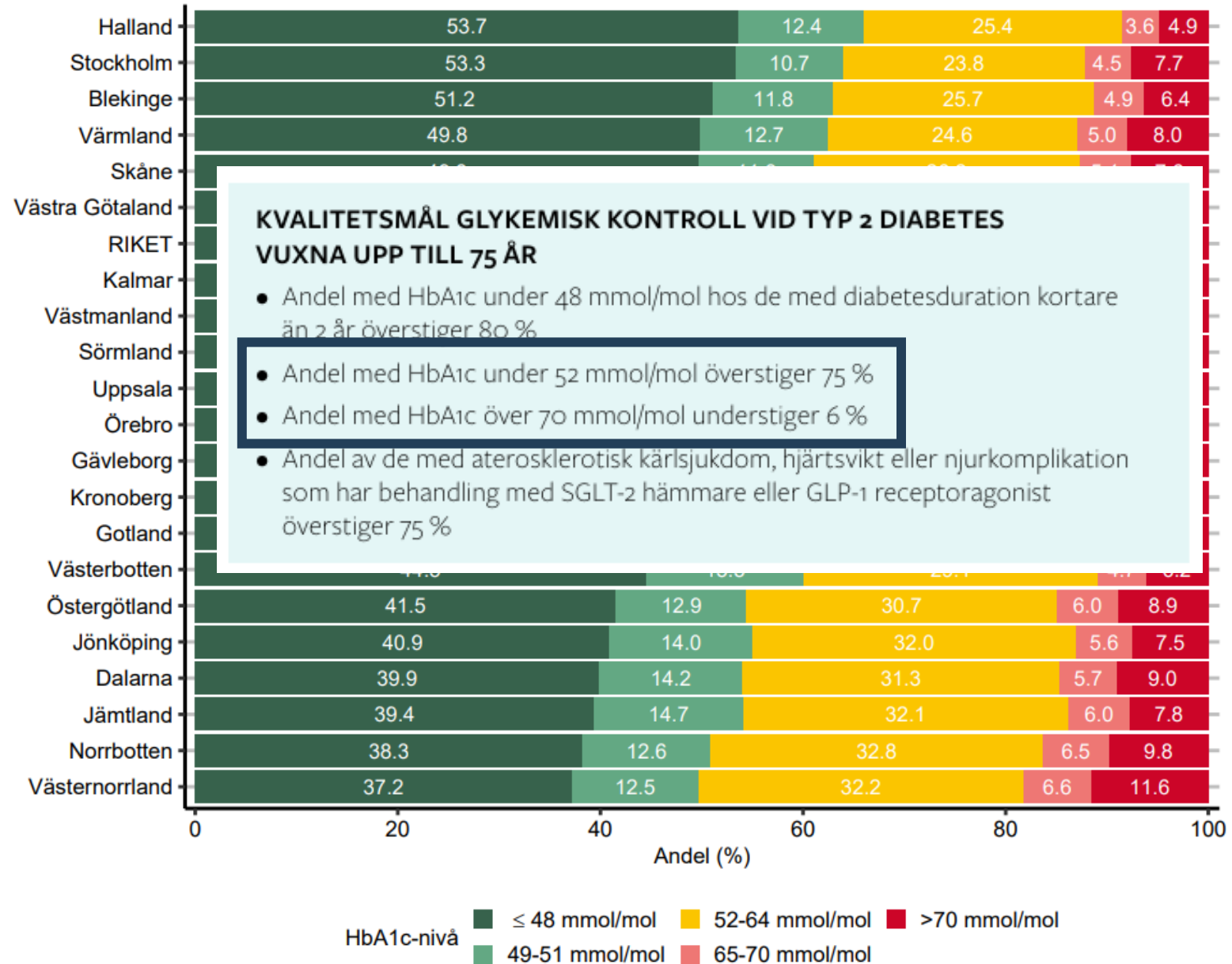
HbA1c

Figur 65. Fördelning av HbA1c (mmol/mol) i regionerna.
Primärvård, år 2024.



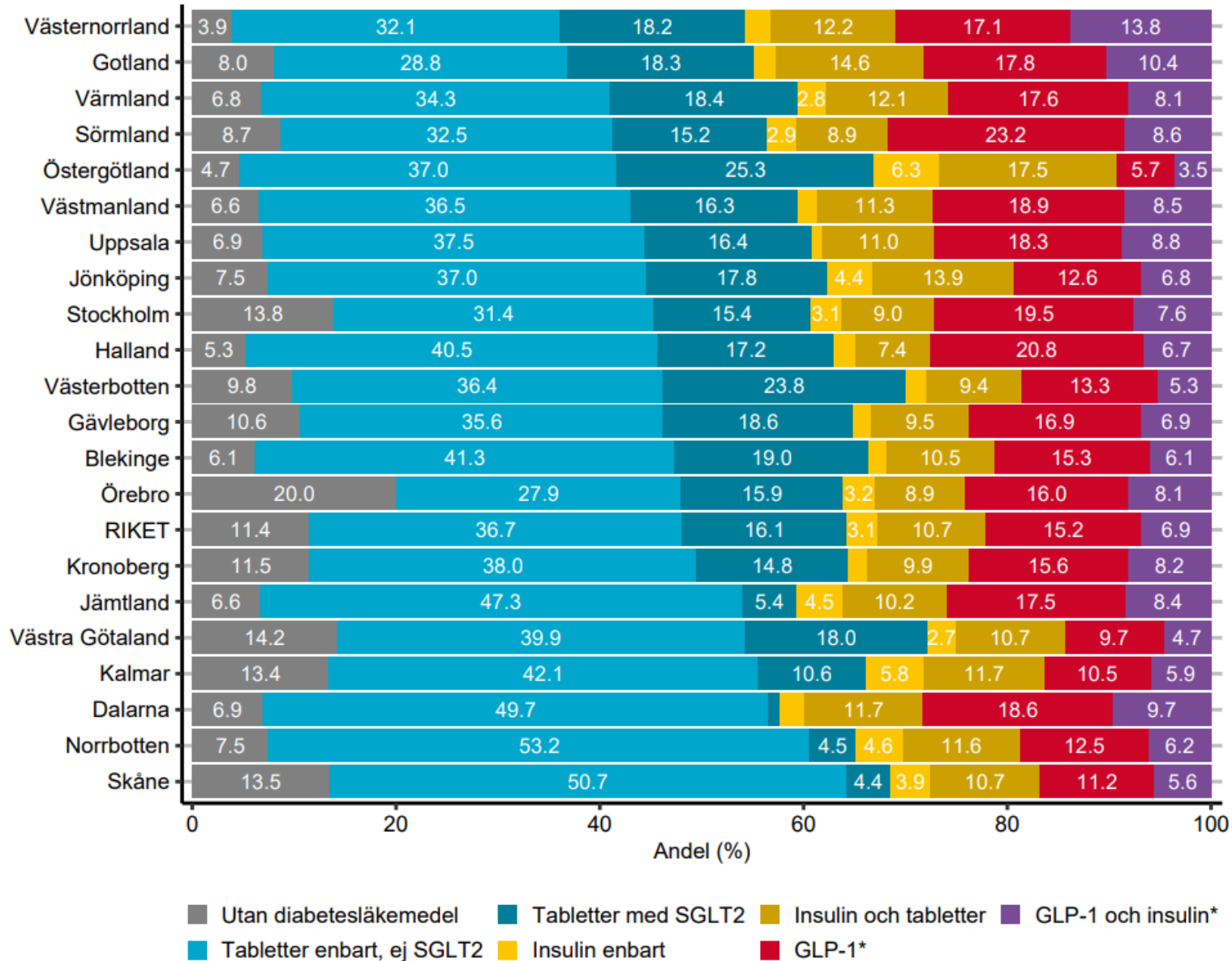
HbA1c

Figur 65. Fördelning av HbA1c (mmol/mol) i regionerna.
Primärvård, år 2024.

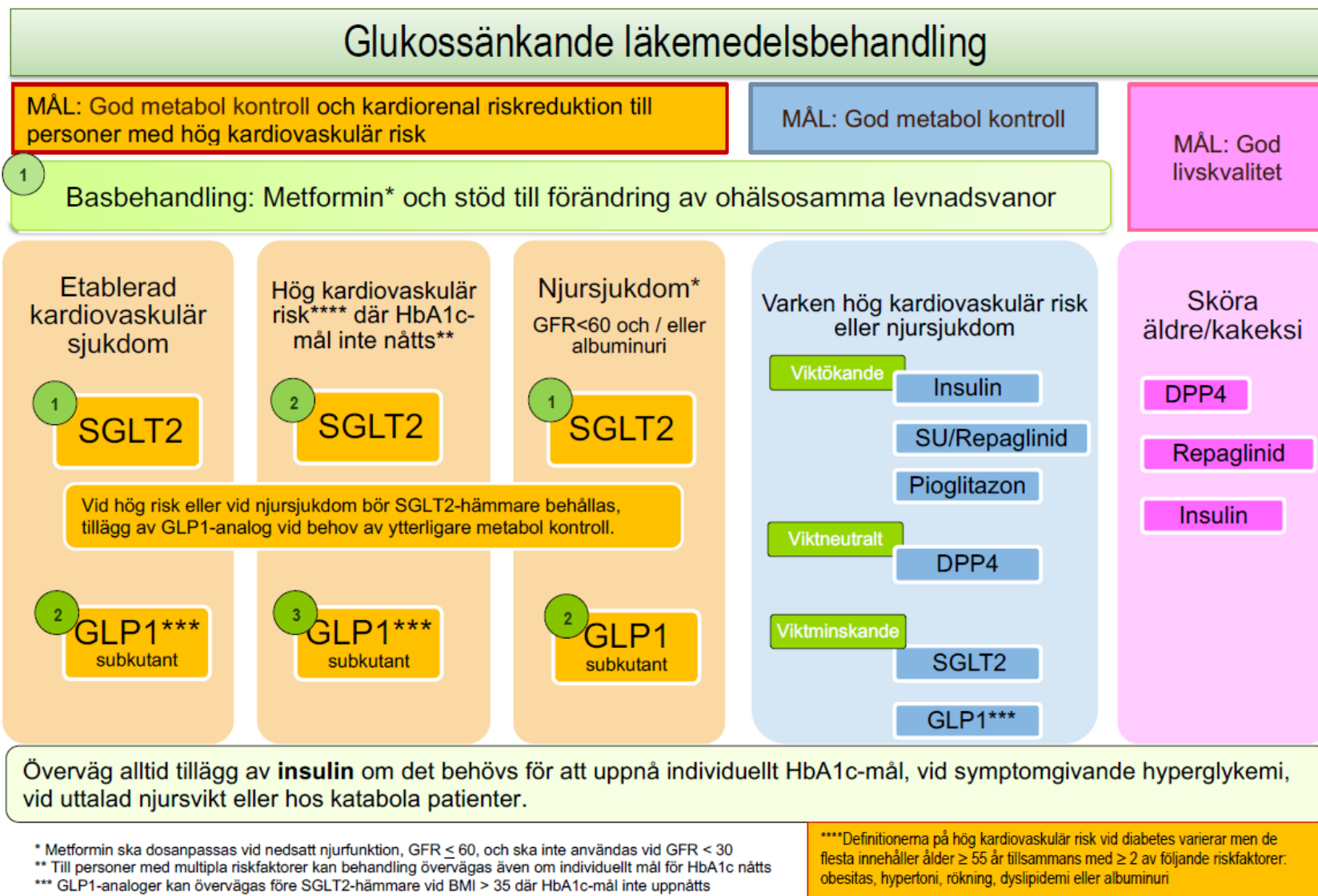


Behandling

Figur 69. Fördelning av diabetesbehandling i regionerna. Primärvård.



Kunskapsstyrning hälso- och sjukvård



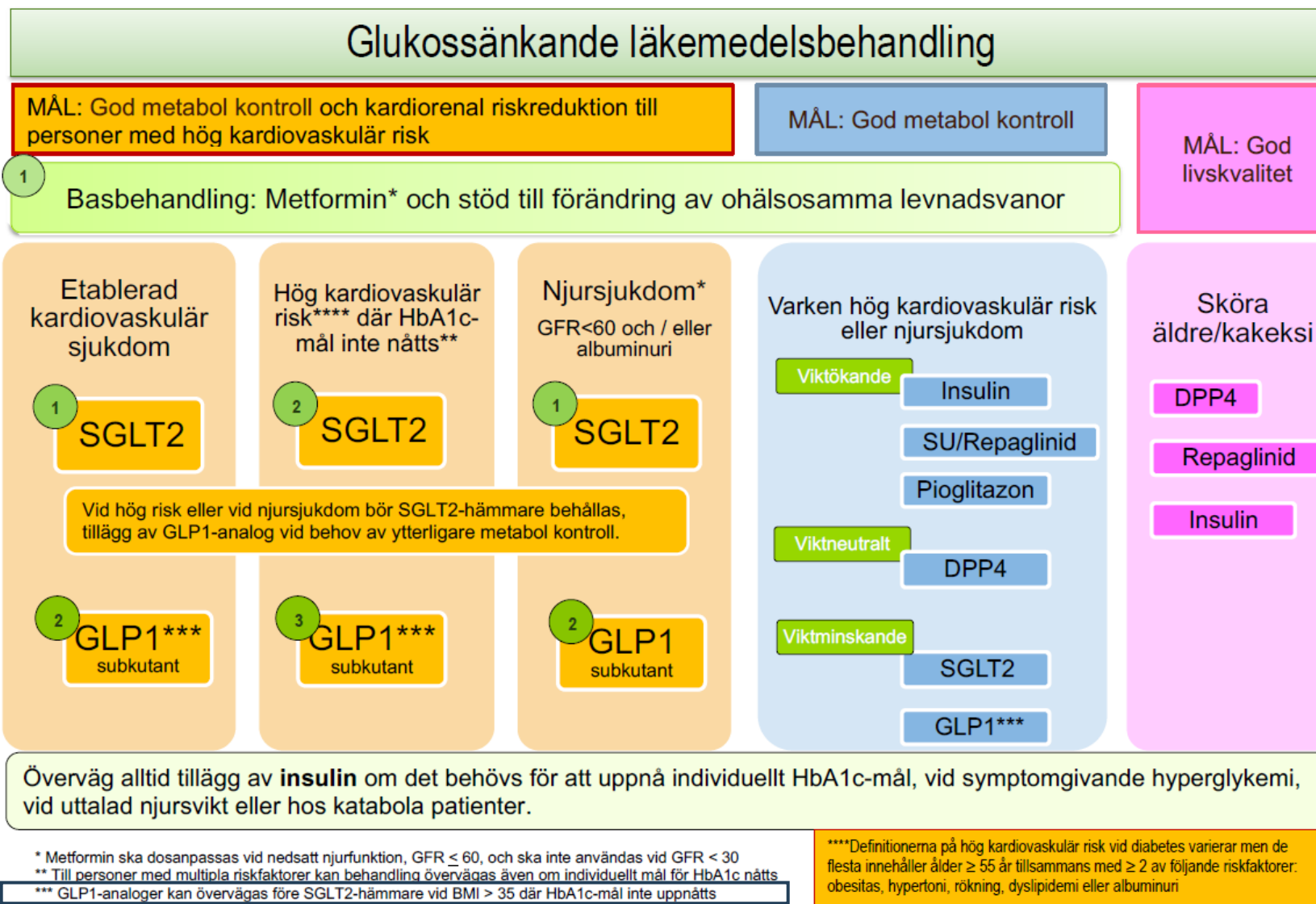
* Metformin ska dosanpassas vid nedsatt njurfunktion, GFR ≤ 60, och ska inte användas vid GFR < 30

** Till personer med multipla riskfaktorer kan behandling övervägas även om individuellt mål för HbA1c nåtts

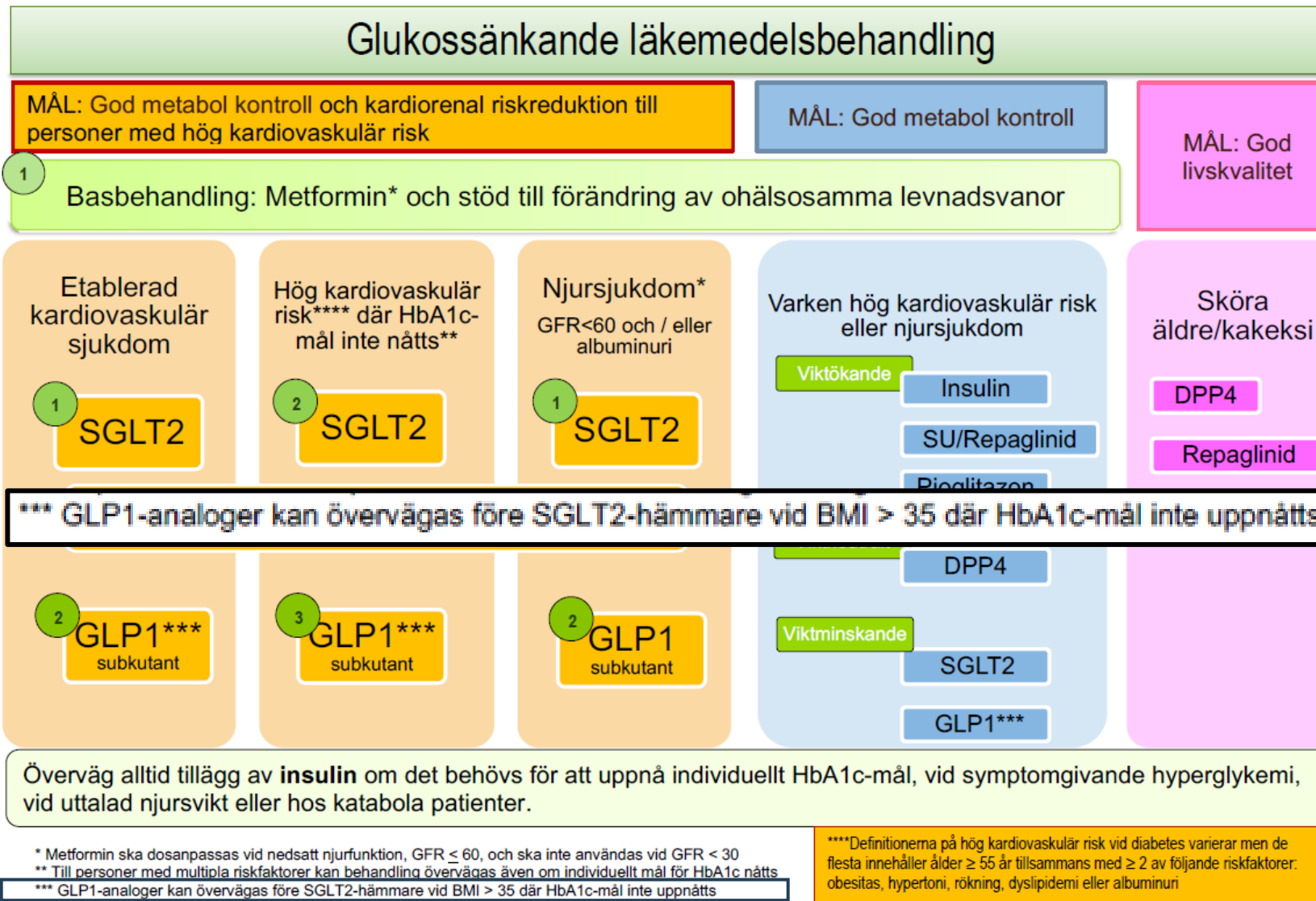
*** GLP1-analoger kan övervägas före SGLT2-hämmare vid BMI > 35 där HbA1c-mål inte uppnåtts

****Definitionerna på hög kardiovaskulär risk vid diabetes varierar men de flesta innehåller ålder ≥ 55 år tillsammans med ≥ 2 av följande riskfaktorer: obesitas, hypertoni, rökning, dyslipidemi eller albuminuri

Kunskapsstyrning hälso- och sjukvård



Kunskapsstyrning hälso- och sjukvård

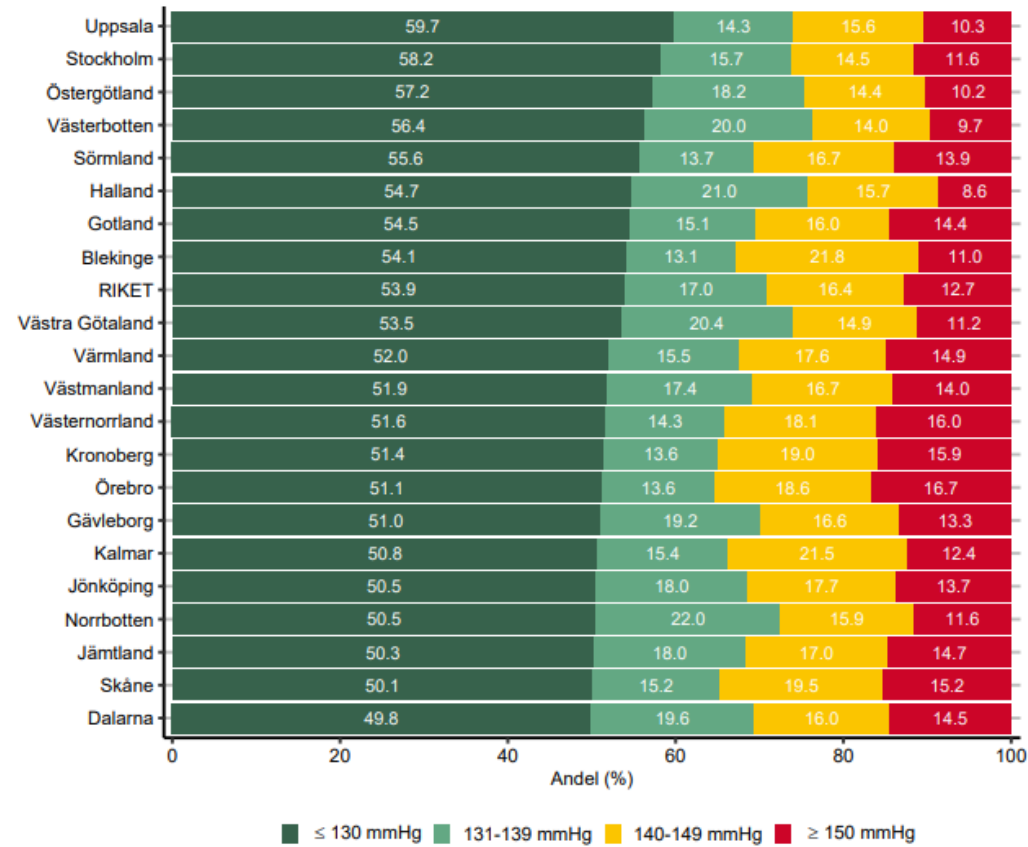


Vilka personer med typ 2-diabetes rekommenderas SGLT2-hämmare / GLP-1-receptoragonister?

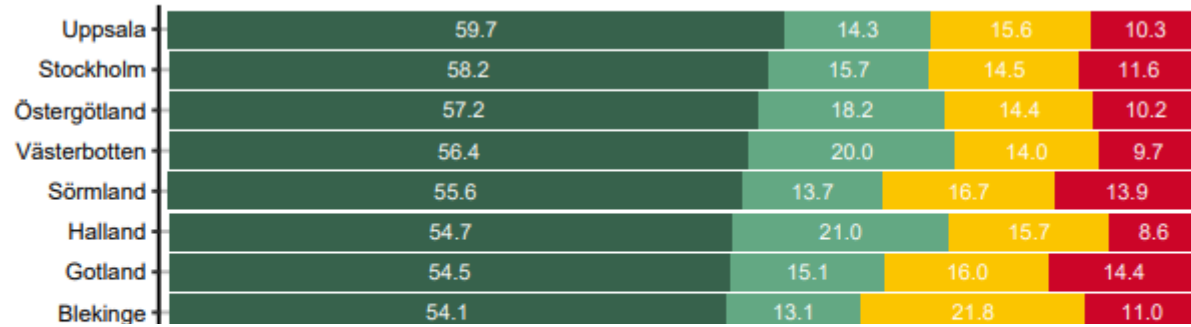
- Hos personer med etablerad kardiovaskulär sjukdom eller njursjukdom
 - ✓ rekommenderas tillägg av en SGLT2-hämmare oavsett HbA1c-nivå.
 - ✓ Om SGLT2-hämmare inte tolereras eller är olämpliga eller otillräckliga bör de ersättas av långverkande injicerbar GLP-1-receptoragonist.
- Hos personer som varken har etablerad kardiovaskulär sjukdom eller njursjukdom, men som har flera kardiovaskulära riskfaktorer
 - ✓ rekommenderas SGLT2-hämmare som tillägg till metformin om HbA1c-målet inte uppnås.
 - ✓ Om SGLT2-hämmare inte tolereras eller är olämpliga eller är otillräckliga bör de ersättas av långverkande injicerbar GLP-1-receptoragonist.
- Hos personer med BMI > 35 kg/m² och som ej når HbA1c-målet med enbart metformin
 - ✓ kan GLP-1-receptoragonist ges som tillägg till metformin före SGLT-2-hämmare.

Blodtryck

Figur 87. Fördelning av systoliskt blodtryck i regionerna. Primärvård år 2024.

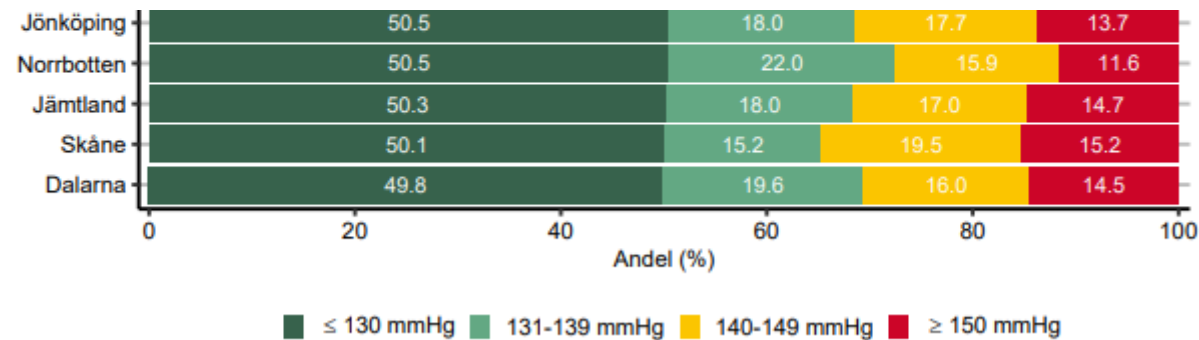


Figur 87. Fördelning av systoliskt blodtryck i regionerna. Primärvård år 2024.



KVALITETSMÅL BLODTRYCK HOS INDIVIDER MELLAN 18 OCH 75 ÅR

- Andel med blodtryck under 140/85 mm Hg överstiger 70 %.
- Vid etablerad njursjukdom eller förhöjd kardiovaskulär risk, blodtryck under 130/80 mm Hg överstiger 80 %.
- Andel med årlig dokumenterad blodtryckskontroll överstiger 90 %.



Vad säger aktuella riktlinjer om blodtrycksmål?



<130/80 mmHg



120-129/70-79 mmHg



<140/85 mmHg

<130/80 mmHg vid njursjukdom eller förhöjd kardiovaskulär risk



<130/80 mmHg

Diabetes Care 2025; **48**: S207–S238

European Heart Journal 2024; **45**: 3912–4018

Dagens Diabetes 2025; **38**: 1-28

<https://reklista.regionostergotland.se>

Varifrån kommer <130/80 mmHg?

10. Cardiovascular Disease and Risk Management: Standards of Care in Diabetes—2025

Glycemic Treatment,” and Section 11, “Chronic Kidney Disease and Risk Management,” for a comprehensive review of pharmacological management of hyperglycemia and kidney benefit from SGLT2 inhibitors and GLP-1 RAs.

HYPERTENSION AND BLOOD PRESSURE MANAGEMENT

An elevated blood pressure is defined as a systolic blood pressure 120–129 mmHg and a diastolic blood pressure <80 mmHg (20). Hypertension is defined as a systolic blood pressure ≥130 mmHg or a diastolic blood pressure ≥80 mmHg (20). This is in agreement with the definition of hypertension by the American College of Cardiology and American Heart Association (20). Hypertension is common among people with either type 1 or type 2 diabetes. Hypertension is a major risk factor for ASCVD, heart failure, and microvascular complications. Moreover, numerous studies have shown that antihypertensive therapy reduces ASCVD events, heart failure, and microvascular complications. Please refer to the ADA position statement “Diabetes and Hypertension” for a detailed review of the epidemiology, diagnosis, and treatment of hypertension (21) and hypertension guideline recommendations (22–25).

Screening and Diagnosis

Recommendations

10.1 Blood pressure should be measured at every routine clinical visit, or at least every 6 months. Individuals found to have elevated blood pressure without a diagnosis of hypertension (systolic blood pressure 120–129 mmHg and diastolic blood pressure <80 mmHg) should have blood pressure confirmed using multiple readings, including measurements on a separate day, to diagnose hypertension. A Hypertension is defined as a systolic blood pressure ≥130 mmHg or a diastolic blood pressure ≥80 mmHg based on an average of two or more measurements obtained on two or more occasions. A Individuals with blood pressure ≥180/110 mmHg and cardiovascular disease could be diagnosed with hypertension at a single visit. E

10.2 Counsel all people with hypertension and diabetes to monitor their

blood pressure at home after appropriate education. A

Blood pressure should be measured at every routine clinical visit by a trained individual who should follow the guidelines established for the general population: measurement in the seated position, with feet on the floor and arm supported at heart level, after 5 min of rest. Cuff size should be appropriate for the upper-arm circumference (26). Individuals identified to have elevated blood pressure or hypertension should have blood pressure confirmed using multiple readings, including measurements on a separate day, to diagnose hypertension. However, in individuals with cardiovascular disease and blood pressure ≥180/110 mmHg, it is reasonable to diagnose hypertension at a single visit (22). Postural changes in blood pressure and pulse may be evidence of autonomic neuropathy and therefore require adjustment of blood pressure goals. Orthostatic blood pressure measurements should be checked on initial visit and as indicated.

Home blood pressure self-monitoring and 24-h ambulatory blood pressure monitoring may provide evidence of white coat hypertension, masked hypertension, or other discrepancies between office and true blood pressure (27,28). In addition to confirming or refuting a diagnosis of hypertension, home blood pressure assessment may be useful to monitor antihypertensive treatment. A systematic review and meta-analysis of prospective studies concluded that blood pressure measurements from either 24-h ambulatory or home blood pressure measurements can predict cardiovascular risk (27–29). Moreover, home blood pressure monitoring may improve medication-taking behavior and thus help reduce cardiovascular risk (30).

Treatment Goals

Recommendations

10.3 For people with diabetes and hypertension, blood pressure goals should be individualized through a shared decision-making process that addresses cardiovascular risk, potential adverse effects of antihypertensive medications, and individual preferences. B

10.4 The on-treatment blood pressure goal is <130/80 mmHg, if it can be safely attained. A

10.5 In pregnant individuals with diabetes and chronic hypertension, a blood pressure threshold of 140/90 mmHg for initiation or titration of therapy is associated with better pregnancy outcomes than reserving treatment for severe hypertension, with no increase in risk of small-for-gestational-age birth weight. A There are limited data on the optimal lower limit, but therapy should be deintensified for blood pressure <90/60 mmHg. E A blood pressure goal of 110–135/85 mmHg is suggested in the interest of reducing the risk for accelerated maternal hypertension. A

Randomized clinical trials have demonstrated unequivocally that treatment of hypertension reduces cardiovascular events as well as microvascular complications (31–37). There has been controversy on the recommendation of a specific blood pressure goal in people with diabetes.

The committee recognizes that there has been no randomized controlled trial to specifically demonstrate a decreased incidence of cardiovascular events in people with diabetes by achieving a blood pressure <130/80 mmHg. The recommendation to support a blood pressure goal of <130/80 mmHg in people with diabetes is consistent with guidelines from the American College of Cardiology and American Heart Association (21), the International Society of Hypertension, and Europe European Society of Cardiology/European Society of Hypertension Blood Pressure/Hypertension Guidelines (24). The committee's recommendation for the blood pressure goal of <130/80 mmHg derives primarily from the collective evidence of the following randomized controlled trials. The Systolic Blood Pressure Intervention Trial (SPRINT) demonstrated that treatment to a goal systolic blood pressure of <120 mmHg decreases cardiovascular event rates by 25% in high-risk individuals, although people with diabetes were excluded from this trial (38). The Strategy of Blood Pressure Intervention in the Elderly Hypertensive Patients (STEP) trial included nearly 20% of people with diabetes and noted decreased cardiovascular events with treatment of hypertension to a systolic blood pressure goal of <130 mmHg (39). While the ACCORD (Action to Control Cardiovascular Risk in Diabetes) blood pressure trial

pressure goal in people with diabetes.

The committee recognizes that there has been no randomized controlled trial to specifically demonstrate a decreased incidence of cardiovascular events in people with diabetes by achieving a blood pressure <130/80 mmHg. The recommendation to support a blood pressure goal of

BPROAD

Ännu ej publicerad när ADA uppdaterade Standards of Care 2025



BPROAD: Sprinting down the BP Road in Diabetes

This week, we will discuss hopefully the final story of intensive BP lowering. BPROAD is a larger version of ACCORD without the glycemic control arm. Dive in.

Dec 2, 2024

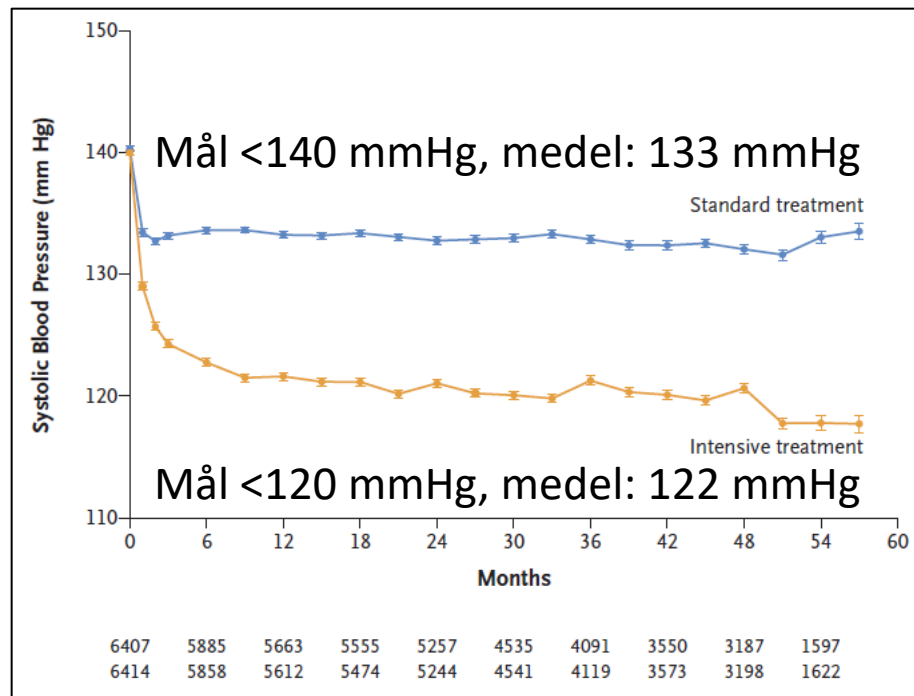
<https://www.nephjc.com/news/bpoad>

BPROAD — End of the Road for Debate on Systolic Blood-Pressure Goals in Type 2 Diabetes?

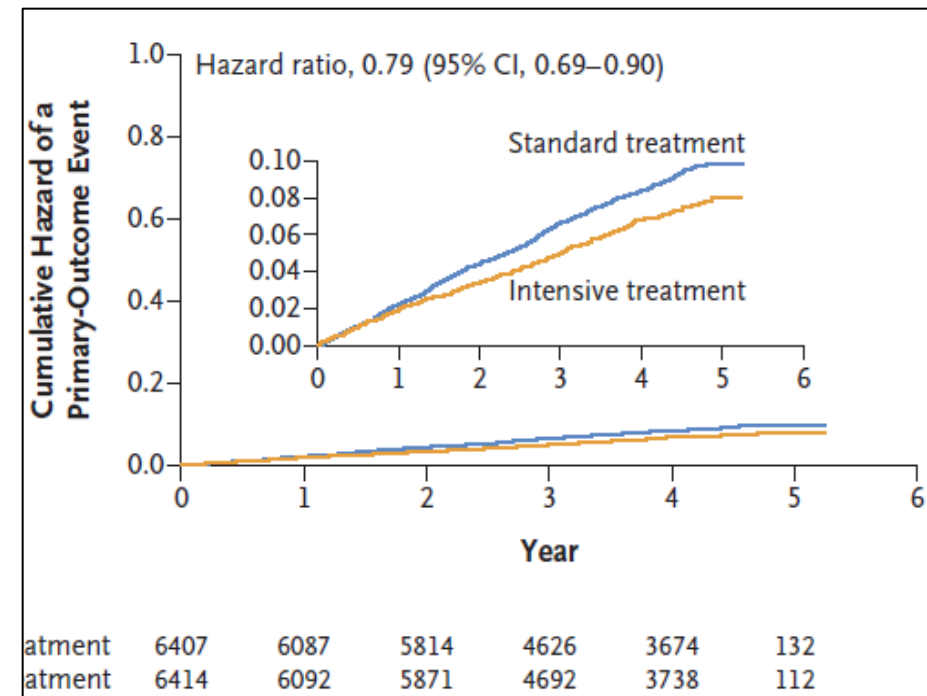
Shuchi Anand, M.D.,¹ and Srinivasan Beddhu, M.D.²⁻⁴

N Engl J Med 2025; **392**:1230-1232

Lägre BT-mål => lägre risk för hjärtskärlsjukdom



SBP 122 mmHg vs. 133 mmHg



21% lägre risk för CVD

Och vad gäller vid typ 1-diabetes?

10. Cardiovascular Disease and Risk Management: Standards of Care in Diabetes—2025

(ACCORD BP) did not confirm that aiming for a systolic blood pressure <130 mmHg in people with diabetes results in decreased cardiovascular event rates, the prespecified secondary outcome of stroke was reduced by 41% with intensive treatment (40). The Action in Diabetes and Vascular Disease: Preterax and Diamicon MR Controlled Evaluation (ADVANCE) trial revealed that treatment with perindopril and indapamide to an achieved systolic blood pressure of ~135 mmHg significantly decreased cardiovascular event rates compared with a placebo treatment with an achieved blood pressure of 140 mmHg (41). Therefore, it is recommended that people with diabetes who have hypertension should be treated to blood pressure goals of <130/80 mmHg. **Notably, there is an absence of high-quality data available to guide blood pressure goals in people with type 1 diabetes, but a similar blood pressure goal of <130/80 mmHg is recommended in people with type 1 diabetes.** As discussed below, treatment should be individualized, and treatment goals should not be set to achieve <120/80 mmHg, as a mean achieved blood pressure <120/80 mmHg is associated with adverse events. For more information on individualized blood pressure goals in older individuals, please see Section 13, "Older Adults."

Randomized Controlled Trials of Intensive Versus Standard Blood Pressure Management SPRINT provides the strongest evidence to support lower blood pressure goals in individuals at increased cardiovascular risk, although this trial excluded people with diabetes (38). The trial enrolled 9,361 individuals with a systolic blood pressure of ≥130 mmHg and increased cardiovascular risk and treated to a systolic blood pressure goal of <120 mmHg (intensive treatment) versus a goal of <140 mmHg (standard treatment). The primary composite outcome of MI, coronary syndromes, stroke, heart failure, or death from cardiovascular causes was reduced by 25% in the intensive treatment group. The achieved systolic blood pressures in the trial were 121 mmHg and 136 mmHg in the intensive versus standard treatment group, respectively. Adverse outcomes, including hypotension, syncope, electrolyte abnormality and acute kidney injury (AKI), were more common in the intensive treatment arm; risk

of adverse outcomes needs to be weighed against the cardiovascular benefit of more intensive blood pressure lowering.

ACCORD BP provides the strongest direct assessment of the benefits and risks of intensive blood pressure management in people with type 2 diabetes (40). In the study, a total of 4,733 individuals with type 2 diabetes were assigned to intensive therapy (aiming for a systolic blood pressure <120 mmHg) or standard therapy (aiming for a systolic blood pressure <140 mmHg). The mean achieved systolic blood pressures were 119 mmHg and 133 mmHg in the intensive and standard groups, respectively. The primary composite outcome of nonfatal MI, nonfatal stroke, or death from cardiovascular causes was not significantly reduced in the intensive treatment group. The prespecified secondary outcome of stroke was reduced by 41% in the intensive treatment group. Adverse events attributed to blood pressure treatment, including hypotension, syncope, bradycardia, hyperkalemia, and elevations in serum creatinine, occurred more frequently in the intensive treatment arm than in the standard therapy arm.

Of note, the ACCORD BP and SPRINT trials aimed for a similar systolic blood pressure <120 mmHg, but in contrast to SPRINT, the primary composite cardiovascular end point was nonsignificantly reduced in ACCORD BP. The results have been interpreted to be generally consistent between the two trials, but ACCORD BP was viewed as underpowered due to the composite primary end point being less sensitive to blood pressure regulation (38,40).

The more recent STEP trial assigned 8,511 individuals aged 60–80 years with hypertension to a systolic blood pressure goal of 110 to <130 mmHg (intensive treatment) or a goal of 130 to <150 mmHg (37). In this trial, the primary composite outcome of stroke, acute coronary syndrome, acute decompensated heart failure, coronary revascularization, atrial fibrillation, or death from cardiovascular causes occurred in 3.5% of individuals in the intensive treatment group versus 4.6% in the standard treatment group (hazard ratio [HR] 0.74 [95% CI 0.60–0.92]; $P = 0.007$). In this trial, 18.9% of individuals in the intensive treatment arm and 19.4% in the standard treatment arm had a diagnosis of type 2 diabetes. Hypotension

occurred more frequently in the intensive treatment group (3.4%) compared with the standard treatment group (2.6%) without significant differences in other adverse events, including dizziness, syncope, or fractures. For more information on hypotensive events in older adults, please see Section 13, "Older Adults."

In ADVANCE, 11,140 people with type 2 diabetes were randomized to receive either treatment with a fixed combination of perindopril and indapamide or matching placebo (41). The primary end point, a composite of cardiovascular death, nonfatal stroke or MI, or new or worsening renal or eye disease, was reduced by 9% in the combination treatment. The achieved systolic blood pressure was ~135 mmHg in the treatment group.

The Systolic Blood Pressure Intervention Trial (SPRINT) Hypertension Optimal Treatment (HOT) trial enrolled 18,790 individuals and aimed for a diastolic blood pressure <90 mmHg <85 mmHg, or <80 mmHg (42). The cardiovascular event rates, defined as fatal or nonfatal MI, fatal and nonfatal strokes, and all other cardiovascular events, were not significantly different between diastolic blood pressure goals (≤90 mmHg, ≤85 mmHg, and ≤80 mmHg), although the lowest incidence of cardiovascular events occurred with an achieved diastolic blood pressure of 82 mmHg. However, in people with diabetes, there was a significant 51% reduction in the treatment group with a goal diastolic blood pressure of <80 mmHg compared with a goal diastolic blood pressure of <90 mmHg.

Meta-analyses of Trials

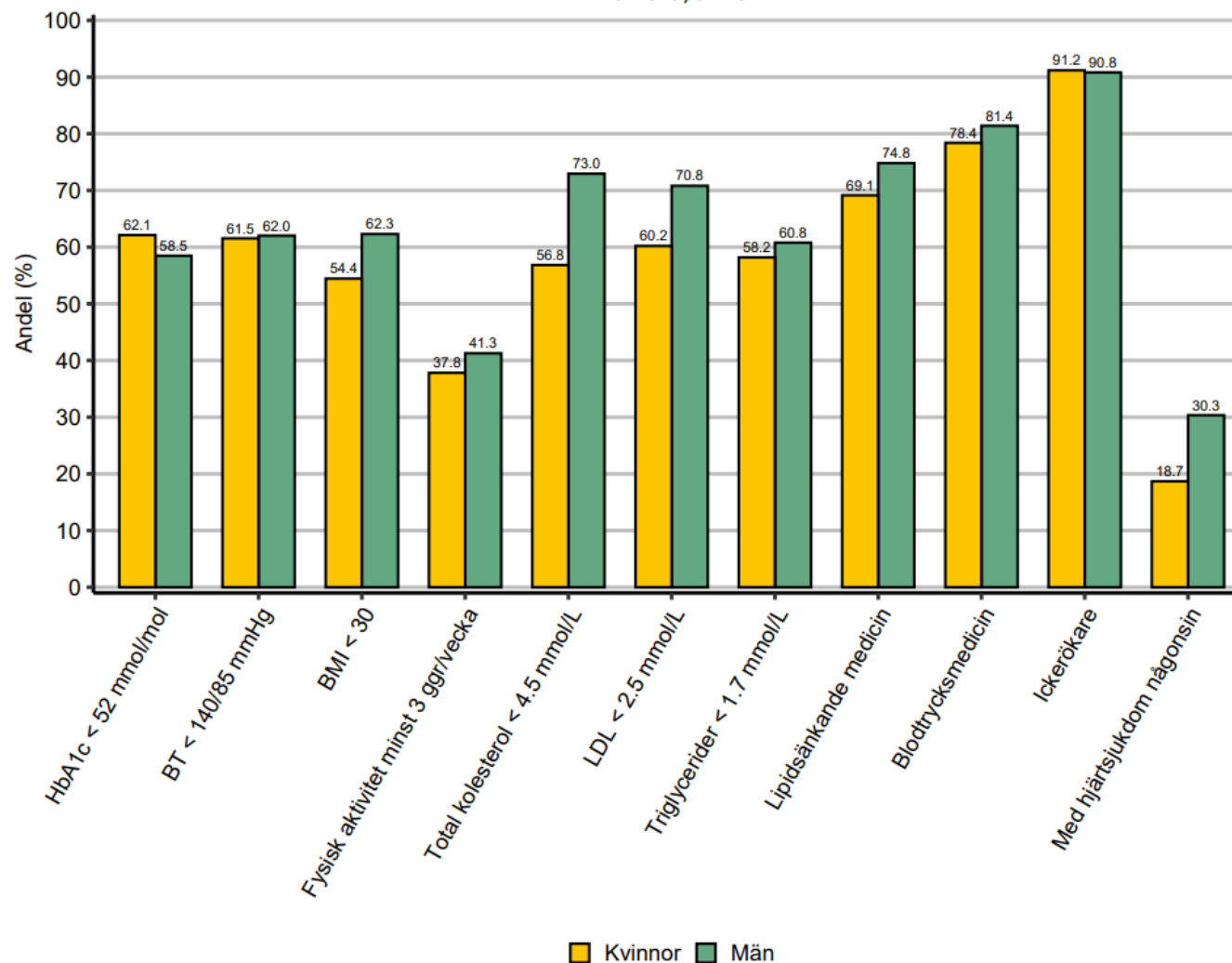
To clarify optimal blood pressure goals in people with diabetes, multiple meta-analyses have been performed. One of the largest meta-analyses included 73,913 people with diabetes. Compared with a less intensive blood pressure management, allocation to a tighter blood pressure management significantly reduced the risk of stroke by 31% but did not reduce the risk of MI (43). Another meta-analysis of 19 trials that included 44,989 individuals showed that a mean blood pressure of 133/76 mmHg is associated with a 14% risk reduction for major cardiovascular events compared with a mean blood pressure of 140/81 mmHg (37). This benefit was greatest in people with diabetes. An analysis of trials including people with type 2 diabetes and

to blood pressure goals of <130/80 mmHg.

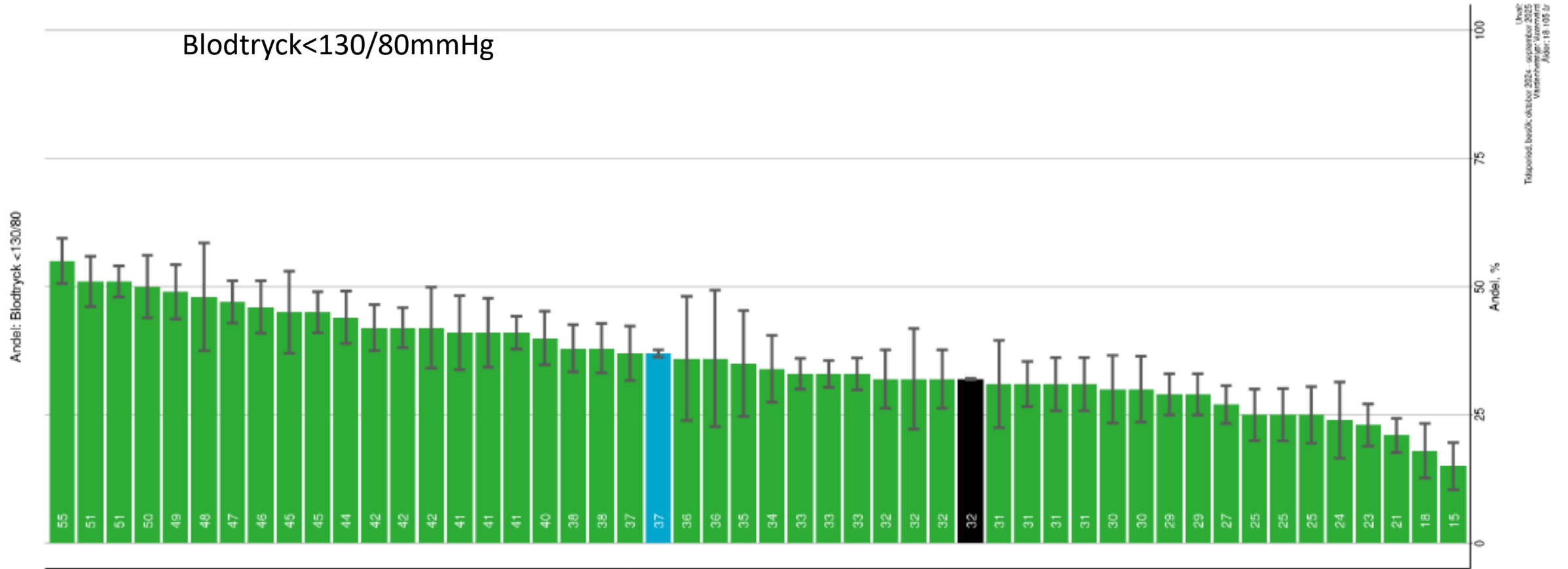
Notably, there is an absence of high-quality data available to guide blood pressure goals in people with type 1 diabetes, but a similar blood pressure goal of <130/80 mmHg is recommended in people with type 1 diabetes. As discussed below, treatment should be in-

Uppnådda målvärden

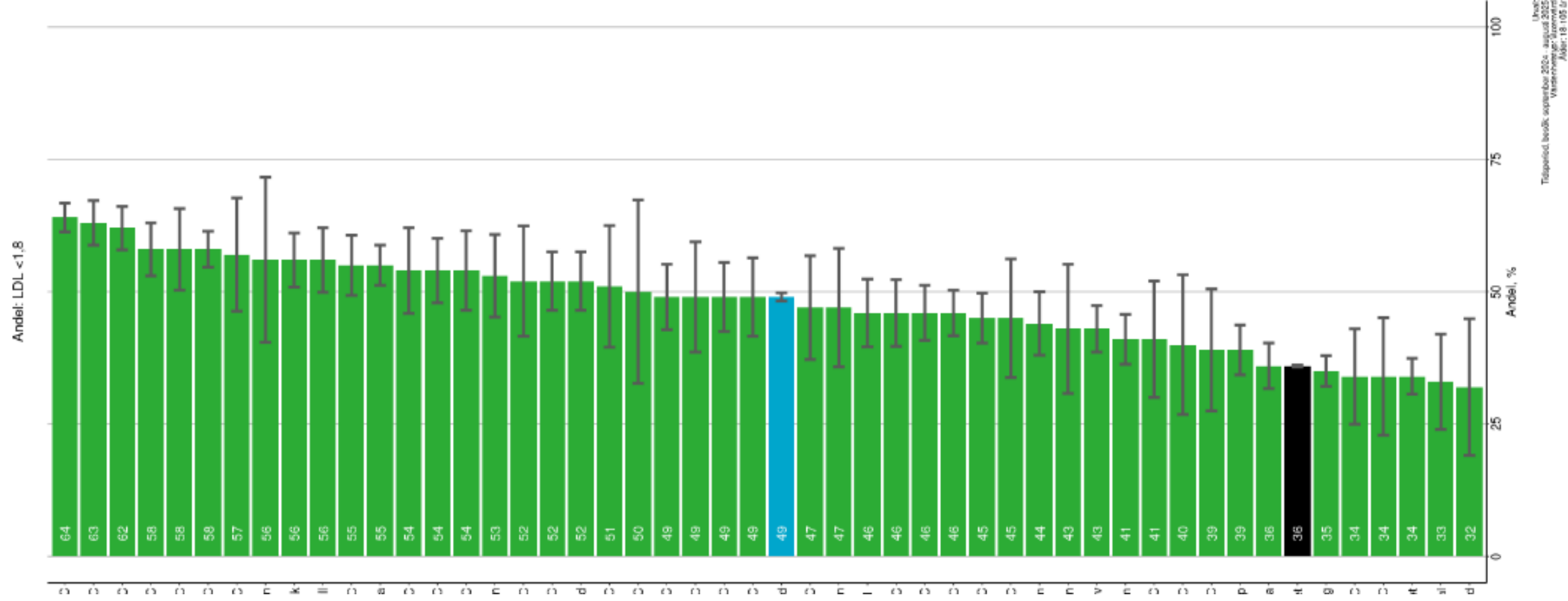
Figur 111. Andel uppnådda målvärden, behandling och tidigare hjärtkärlsjukdom*. Primärvård, år 2024.



Stora skillnader inom regionen



LDL<1,8



Blodtryck <130/80

