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PERSPECTIVE

A Trans-Atlantic Perspective on the 2025 AHA/ACC Guidelines for the Prevention, Detection, Evaluation, and Management of High Blood Pressure in Adults

Michel Azizi, MD, PhD; Stephen P. Juraschek, MD, PhD

The 2025 joint American Heart Association (AHA)/American College of Cardiology (ACC)/American Association of Nurse Practitioners/American Academy of Physician Assistants/Association of Black Cardiologists/American Association of Colleges of Pharmacy/American College of Preventive Medicine/American Geriatrics Society/American Medical Association/American Society for Preventive Cardiology Guidelines for the Prevention, Detection, Evaluation, and Management of High Blood Pressure in Adults[1] represent the first major update since 2017, incorporating new evidence and offering updated recommendations for high blood pressure (BP) management. These US guidelines closely follow 2 distinct European updates: the 2023 European Society of Hypertension (ESH)[2] and the 2024 European Society of Cardiology (ESC)[3] guidelines. Whereas all 3 aim to reduce hypertension-related morbidity and mortality by recommending evidence-based care, there are important differences.

DIAGNOSTIC THRESHOLDS AND BP CATEGORIES

The AHA/ACC defines stage 1 hypertension as an office systolic BP (SBP) ≥130 or diastolic BP (DBP) ≥80 mm Hg, or both, maintaining its 2017 threshold. Stage 2 hypertension is based on a 140/90 mm Hg cutoff. In contrast, both ESC and ESH guidelines use 140/90 mm Hg as the diagnostic threshold. The ESH adds granularity by categorizing hypertension into grades and clinical phenotypes, whereas the ESC focuses on rapid diagnostic confirmation for higher BP readings. Each guideline also defines an elevated BP or high normal BP category below the hypertension threshold, with differing SBP/DBP cutoffs. Therefore, many individuals labeled stage 1 hypertensive in the United States are considered to have elevated BP by ESC criteria or high normal BP by ESH criteria. Furthermore, definitions of normal BP (AHA and ESH) or nonelevated BP (ESC) also vary (Table). All 3 guidelines recommend accurate office BP measurement using validated oscillometric devices, and recommend confirmation with home BP monitoring or ambulatory BP monitoring to rule out white-coat or masked hypertension.

TREATMENT INITIATION AND RISK STRATIFICATION

All 3 guidelines recommend lifestyle modifications—sodium reduction, increased potassium intake, less than moderate alcohol use, weight reduction, regular physical activity, and stress management—irrespective of BP level. However, office BP thresholds for initiation of drug therapy diverge. The AHA/ACC recommends initiating antihypertensive medication therapy in all patients with BP ≥140/90 mm Hg, regardless of age or cardiovascular risk, and at BP ≥130/80 mm Hg in individuals with established cardiovascular disease (CVD), diabetes, chronic kidney disease (CKD), or

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Correspondence to: Michel Azizi, MD, PhD, Hypertension Department, Hôpital Européen Georges Pompidou, 20-40 rue Leblanc, F-75015 Paris, France. Email michel.azizi@aphp.fr
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Table. Comparison of 2025 American Heart Association/American College of Cardiology Guidelines With Contemporary European Guidelines

Domain	AHA/ACC 2025	ESC 2024	ESH 2023
Hypertension definition (office BP threshold)	SBP ≥130 or DBP ≥80, or both; further stratified into stages: Stage 1: 130–139 or 80–89 Stage 2: ≥140 or ≥90 Uncontrolled hypertension: ≥130 or ≥80	SBP ≥140 or DBP ≥ 90, or both; no formal BP stage/grade: 140–159 or 90–99: confirm by HBPM/ABPM 160–179 or 100–109: confirm by HBPM/ABPM within 1 mo ≥180 or ≥110: exclude hypertensive emergency Uncontrolled hypertension: ≥140 or ≥90	SBP ≥140 or DBP ≥ 90, or both; further stratified into grades for severity: Grade 1: 140–159 or 90–99 Grade 2: 160–179 or 100–109 Grade 3: ≥180 or ≥110 Additional staging: Stage 1: uncomplicated, without HMOD, diabetes, CVD, or CKD ≥3 Stage 2: HMOD, diabetes, or CKD 3 Stage 3: CVD or CKD 4 or 5 Uncontrolled hypertension: ≥140 or ≥90 (varies by age-specific goal)
BP categories below threshold	Elevated: 120–129 and <80 Normal: <120 and <80	Elevated: 120–139 or 70–89 Nonelevated: <120 and <70 (no "normal" defined)	High normal: 130–139 or 85–89 Normal: 120–129 and 80–84 Optimal: <120 and <80
When to initiate lifestyle measures	Always (elevated BP and above)	Always (elevated BP and above)	Always (high normal BP and above)
When to initiate drug therapy	Immediate treatment: BP ≥140 or ≥90, regardless of age and cardiovascular risk; or Stage 1: 130–139 or 80–89 with high risk (previous CVD event, diabetes, CKD, or 10-y CVD risk of ≥7.5%) Delayed treatment: Stage 1: 130–139 or 80–89 with low risk (without CVD and with estimated 10-y CVD risk <7.5%) After 3–6 mo of lifestyle intervention if BP remains ≥130 or ≥80 Age ≥80 y: BP ≥130 or ≥ 80 after individualized consideration	Immediate treatment: BP ≥140 or ≥90, regardless of age and cardiovascular risk Delayed treatment: Elevated BP: 130–139 or 80–89 with high risk (previous CVD event, diabetes, CKD, HMOD, or 10-y CVD risk of ≥10%, or 10-y CVD risk of 5%–10% with risk modifier) After 3 mo of lifestyle intervention if BP remains ≥130 or 80 Elevated SBP 130–139 with high low risk and 10-y CVD risk <10% and no risk modifier; lifestyle measures only; monitor BP and CVD risk yearly Elevated BP 120–129; lifestyle measures only; monitor BP and CVD risk yearly Age ≤85 y: similar to younger patients for hypertension and elevated BP Age ≥85 y, or orthostatic hypotension, frailty, or limited lifespan (<3 y): BP ≥140 or ≥ 90 after individualized consideration	Immediate treatment: Grade 2 or 3: regardless of age and cardiovascular risk; or Grade 1: BP level 140–159 or 90–99 with high risk; BP level 150–159 or 95–99 with low risk; or high normal BP ≥130 or ≥80 with established CVD (CAD) Delayed treatment: BP level 140–149 or 90–94: after 3–6 mo of lifestyle intervention if BP remains ≥140 or ≥90 Age ≥80 y: SBP ≥160 or SBP 140–159 after individualized consideration
Risk assessment tool	PREVENT	SCORE2 for age 40–69 y; SCORE2–OP for age 70–89 y)	SCORE2 for age 40–69 y; SCORE2– OP for age 70–89 y
Initial medication choices	First-line: ACEi, ARB, CCB, thiazide or thiazide-like diuretic; β-blockers: not first-line unless compelling indication (eg, heart failure, after MI, angina, heart rate control) Dual fixed-dose single pill combination for stage 2 hypertension or non-frail with BP ≥20/10 mm Hg above goal Preferential combinations: ACEi or ARB+CCB or diuretic	First-line: ACEi, ARB, CCB, thiazide or thiazide-like diuretic; β-blockers: not first-line unless compelling indication (eg, heart failure, after MI, angina, heart rate control) Dual fixed-dose single pill combination for most patients with BP ≥140 or ≥90 Preferential combinations: ACEi or ARB+CCB or diuretic	First-line: ACEi, ARB, CCB, thiazide or thiazide-like diuretic; β-blockers: included as a first-line agent (especially if compelling indication) Dual fixed-dose single pill combination for most patients with BP ≥140 or ≥90 Preferential combinations: ACEi or ARB+CCB or diuretic
Initial treatment strategy	Initial monotherapy for patients with stage 1 hypertension	Initial monotherapy for patients with elevated BP, frailty, age ≥85 y, or symptomatic orthostatic hypotension	Initial monotherapy for patients with grade 1 hypertension (<150/95) and low cardiovascular risk, high normal BP and high cardiovascular risk, or frailty or advanced age

(*Continued*)

Table. Continued

Domain	AHA/ACC 2025	ESC 2024	ESH 2023
BP treatment targets	General target: <130 and <80 with encouragement to achieve SBP <120; no different target for elderly or frail patients but use clinical judgment (avoid side effects; individualize higher if needed)	General target: 120–129 and 70–79; age ≥85 y with moderate to severe frailty, orthostatic hypotension, or a life expectancy <3 y: SBP <140 or ALARA	General target: <140 and 80 mm Hg in most patients 18 to 64 y: 120–129 and 70–79 65 to 79 y: <140 and <80, but a lower BP target of 120–129 and 70–79 may be considered if well-tolerated ≥80 y: SBP of 140–150; a lower SBP target of 130–139 may be considered if well tolerated Frailty: individualize treatment target

All values reflect an office blood pressure (BP) measurement in mm Hg. ABPM indicates ambulatory blood pressure monitoring; ACC, American College of Cardiology; ACEi, angiotensin converting enzyme inhibitor; AHA, American Heart Association; ALARA, as low as reasonably achievable; ARB, angiotensin receptor blocker; BP, blood pressure; CAD, coronary artery disease; CCB, calcium channel blocker; CKD, chronic kidney disease; CVD, cardiovascular disease; DBP, diastolic blood pressure; ESC, European Society of Cardiology; ESH, European Society of Hypertension; HBPM, home blood pressure monitoring; HMOD, hypertension-mediated organ damage; PREVENT, Predicting Risk of Cardiovascular Disease Events; SBP, systolic blood pressure; SCORE2, Systematic Coronary Risk Evaluation 2; and SCORE2-OP, Systematic Coronary Risk Evaluation 2–Older Persons.

≥7.5% 10-year CVD risk from the PREVENT (Predicting Risk of Cardiovascular Disease Events) metric.[4,5] The ESC recommends pharmacotherapy in all individuals age <85 years with BP ≥140/90 mm Hg but allows treatment at 130–139/80–89 mm Hg in high-risk patients, defined by the presence of established CVD or high-risk comorbidities (diabetes, CKD, or hypertension-mediated organ damage), 10-year risk ≥10% on the basis of SCORE2 (Systematic Coronary Risk Evaluation 2) for patients age 40 to 69 years or SCORE2-OP (Systematic Coronary Risk Evaluation 2–Older Persons) for patients age 70 to 89 years, or a combination of 10-year risk (5%–10%) with risk modifiers after 3 months of lifestyle intervention if BP remains ≥130 or 80 mm Hg. The ESH recommends immediate treatment in grade 2 or 3 hypertension and in grade 1 cases with high risk (eg, symptomatic, hypertension-mediated organ damage, CKD stage 3, CVD) or with BP ≥150/95 mm Hg at low risk. For patients with BP <150/95 mm Hg and low cardiovascular risk, antihypertensive therapy is deferred pending a 3- to 6-month lifestyle trial with pharmacotherapy initiated if BP remains uncontrolled (≥140/90 mm Hg). The ESH adopts a more conservative approach in the high normal BP range (130–139/80–89 mm Hg), recommending immediate initiation of antihypertensive therapy only for patients with established CVD, primarily coronary artery disease. For low to moderate risk individuals in this BP range, the ESH advises initial lifestyle intervention alone without pharmacologic treatment, combined with regular BP monitoring. In patients age ≥80 years, the ESH recommends antihypertensive treatment initiation when SBP is ≥160 mm Hg, although treatment may also be considered for SBP in the 140 to 159 mm Hg range based on clinical judgment.

INITIAL MEDICATION CHOICES AND STRATEGIES

All guidelines endorse the same first-line classes: angiotensin-converting enzyme inhibitors (ACEis) or angiotensin receptor blockers (ARBs), calcium channel blockers (CCBs), and thiazide or thiazide-like diuretics. However, the AHA/ACC and ESC reserve β-blockers for compelling indications (eg, angina, after myocardial infarction, heart failure with reduced ejection fraction, heart rate control), whereas the ESH includes β-blockers among first-line options. In most patients with BP ≥140/90 mm Hg, all 3 guidelines recommend initiating therapy with a dual fixed-dose single-pill combination instead of separate pills to reduce pill burden and improve adherence (Table).

TREATMENT TARGETS

The AHA/ACC uses a uniform target of <130/<80 mm Hg, regardless of age or comorbidity. The ESC recommends a range of 120–129/70–79 mm Hg for patients <85 years of age, allowing more flexibility in the very old (> 85 years) or frail (<140 mm Hg). The ESH recommends that the first objective of antihypertensive treatment should be to lower BP to <140/80 mm Hg in most patients but adds granularity according to age. ESH recommends a target range of 120–129/70–79 mm Hg for adults age 18–64 years, but of 130–139 mm Hg for those age 65 to 79 years, and 140 to 150 mm Hg for those age ≥80 or frail, with optional tighter targets if well-tolerated. The AHA/ACC also recommends treating to a target of <130 mm Hg to prevent cognitive decline and dementia.

RESISTANT HYPERTENSION

All guidelines define resistant hypertension as failure to reach target BP despite ≥3 agents (including a diuretic) at optimal doses—typically combination of an ACEi/ARB, a CCB, and a thiazide/thiazide-like diuretic. The AHA/ACC uses a lower BP threshold (130/80 mm Hg) for defining uncontrolled hypertension, whereas both the ESC and ESH use ≥140/90 mm Hg. AHA/ACC guidelines

also include patients needing ≥4 medications to maintain BP control. Management aligns across all 3 guidelines: confirm true resistant hypertension with ambulatory BP monitoring or home BP monitoring, exclude pseudoresistance (eg, poor adherence, therapeutic inertia) and secondary causes (especially primary aldosteronism), reinforce lifestyle changes, optimize diuretic use, and add spironolactone (or other mineralocorticoid receptor antagonist) if estimated glomerular filtration rate is ≥45 mL·min·1.73 m^2 (AHA/ACC) or ≥30 mL·min·1.73 m^2 (ESH) and serum K^+ is ≤4.5 mmol/L. Referral to a hypertension specialist is advised for persistent uncontrolled BP.

RENAL DENERVATION

Catheter-based renal denervation (RDN) by radiofrequency or ultrasound ablation is incorporated into all 3 guidelines for the first time. Approved by the Food and Drug Administration for uncontrolled hypertension in late 2023, RDN is now considered for carefully selected patients with resistant hypertension and estimated glomerular filtration rate ≥40 mL·min·1.73 m^2 and suitable renal anatomy. The AHA/ACC restricts RDN to patients with SBP of 140 to 180 mm Hg and DBP ≥90 mm Hg despite 4 drugs (including an mineralocorticoid receptor antagonist), or in patients with uncontrolled hypertension intolerant to drug escalation. Both the ESC and ESH position RDN as a fourth-line option in resistant hypertension (≥140/90 mm Hg), with the ESC also allowing its use in high-risk patients with uncontrolled BP on <3 antihypertensive medications without requiring mineralocorticoid receptor antagonist therapy. All 3 guidelines consider RDN as class IIB and emphasize that RDN should be performed by trained specialists in the context of shared decision-making by the patient, health care team, and multidisciplinary assessment.

CONCLUSIONS AND COMMENTARY

All 3 guidelines globally converge to provide high quality of care to patients with hypertension. However, the AHA/ACC guidelines remain more aggressive than European guidelines. The European stratified approach maintains alignment with physiologic heterogeneity but may delay intervention in early disease. The more aggressive thresholds and universal targets proposed by the AHA/ACC align well with payment incentives in US primary care settings that reward practices for achieving population-wide benchmarks. Given the inherent variability in BP measurement, if a practice is aiming to have 75% of its population <140 mm Hg/<90 mm Hg (ie, the Healthcare Effectiveness Data and Information Set benchmark for hypertension; https://www.ncqa.org/hedis), it will need to target a lower individual treatment goal to ensure that at any given visit, the majority of patients are below the benchmark goal. Thus, the AHA/ACC guidelines reflect underlying regional health care realities—physician practice patterns, reimbursement frameworks, and system-level priorities—while sharing a commitment to personalized care, multidimensional risk assessment, and increasingly patient-centered models.

For clinicians navigating guidelines, the opportunity lies not in choosing one guideline over the other, but in harmonizing strengths to deliver contextually appropriate, high-quality, patient-centered care. Implementation of all these guidelines, however, poses considerable challenges. Success depends not only on clinician awareness and training, but also on the availability of a multidisciplinary team (eg, physicians, nurses, pharmacists) and system-level support for long-term follow-up.

Beyond the clinical and logistical aspects of implementation, all 3 guidelines bring to light a major public health challenge: how to manage millions of individuals with hypertension, with numbers increasing, within overburdened care systems already constrained by limited health care provider availability. Team-based care led by pharmacists, advanced practice providers (such as physician associates or nurse practitioners), and community health workers may be essential, as this approach has been shown to effectively facilitate BP control. Whereas this model is recommended in both AHA/ACC and European guidelines, it may not be universally accessible across European countries. Moreover, a coordinated public health policy is crucial to reduce the incidence and burden of hypertension. This includes nationwide initiatives to lower sodium content in processed foods, promote healthy diet and physical activity, reduce overweight and obesity, and curb tobacco use, as promoted by the AHA in its Life's Essential 8 program. Without structural changes and preventive strategies embedded in food, urban, and educational policies, medical interventions alone will be insufficient to meaningfully affect population-level cardiovascular risk. Public awareness campaigns, policy-level food reformulation, and support for community-based lifestyle interventions must complement medical care in achieving the ambitious targets set by these guidelines.

ARTICLE INFORMATION

Affiliations

Université Paris Cité, INSERM CIC1418, France (M.A.). Hypertension Department, AP-HP, Hôpital Européen Georges Pompidou, Paris, France (M.A.). Department of Medicine, Division of General Medicine, Beth Israel Deaconess Medical Center & Harvard Medical School, Boston, MA (S.P.J.).

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