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COMMENT

Advancing evidence-based blood pressure targets in JSH2025

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Blood pressure targets in major international guidelines

Hypertension is a key modifiable risk factor for cardiovascular morbidity and mortality worldwide and continues to pose a critical public health challenge [1]. International hypertension guidelines have recently been revised and implemented in clinical practice [2–5]. Both the Japanese Society of Hypertension (JSH) [2] and the American Heart Association (AHA)/American College of Cardiology (ACC) [3] published revised guidelines in 2025. A convergence across leading international societies, including the European Society of Cardiology (ESC) [4], has led to a common recommendation of a treatment target of <130/80 mmHg for most adults with hypertension. This alignment is based on randomized controlled trials (RCTs) and systematic reviews demonstrating the cardiovascular benefits of more aggressive BP control [2–5]. The treatment target of <130/80 mmHg recommended by these major guidelines [2–4] is lower than that of the 2023 European Society of Hypertension (ESH) guidelines [5] (Table 1).

Within this global context, the JSH Guidelines for the Management of Elevated Blood Pressure and Hypertension 2025 (JSH2025) [2] introduce several advancements aimed at enhancing hypertension care in Japan. Particularly, BP target recommendations were formulated through a transparent and rigorous process based on Clinical Questions (CQs) derived from systematic reviews and meta-analyses. This methodology, previously adopted in only two major guidelines (the 2017 AHA/ACC guidelines [6] and JSH 2019 [7]), ensures that recommendations are fully evidence-based and aligned with contemporary best practice.

The JSH2025 also highlights practical strategies for specific patient populations, including older adults, women, and cancer survivors. This report summarizes the revised BP targets and the key concepts incorporated into JSH2025.

Evidence-based framework for BP target recommendations

The JSH2025 employs two complementary formats: a CQ-based structure, where evidence directly informs recommendations, and a narrative descriptive format for clinical reference. Seven CQs specifically addressed BP treatment targets. Eligible studies were systematically identified and evaluated for methodological quality, and the data were synthesized into structured summaries. Both the anticipated benefits and potential harms were assessed when determining the strength and direction of each recommendation. A consensus was achieved using a modified Delphi approach with three rounds of online voting, and agreement levels were documented to ensure transparency. The draft recommendations underwent internal, external, and public consultations before the final approval. This robust process enhances the validity and credibility of the BP targets in JSH2025 and reflects growing international emphasis on transparency in guideline development and stakeholder engagement.

Simplified BP targets in JSH2025

Systematic reviews conducted for JSH2025 support an office BP target of <130/80 mmHg in most adults with

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Table 1 Summary of treatment targets of hypertension in major guidelines

Guidelines	Target BP
JSH2025	• General treatment target: office BP < 130/80 mmHg; home BP < 125/75 mmHg
	• No separate BP targets by age or comorbidity; apply clinical judgment to avoid adverse events
	• Individualized BP treatment targets when clinically appropriate
2025 AHA/ACC	• General treatment target: office/home BP < 130/80 mmHg, with encouragement to achieve SBP < 120 mmHg when feasible
	• No separate BP targets by age, comorbidity, or frailty; apply clinical judgment to avoid adverse events
2024 ESC	• General treatment target: office/home BP 120–129/70–79 mmHg
	• Age ≥85 years with moderate to severe frailty, orthostatic hypotension, or limited life expectancy (<3 years): SBP < 140 mmHg or ALARA
2023 ESH	• General treatment target: office BP < 140/80 mmHg
	• Age-related treatment targets:
	- 18–64 years: 120–129/70–79 mmHg
	- 65–79 years: <140/80 mmHg, but 120–129/70–79 mmHg may be considered if well tolerated
	- ≥80 years: SBP of 140–150, but SBP of 130–139 mmHg may be considered if well tolerated
	• Frailty: individualized treatment target

ACC American College of Cardiology, *AHA* American Heart Association, *ALARA* as low as reasonably achievable, *BP* blood pressure, *ESC* European Society of Cardiology, *ESH* European Society of Hypertension, *JSH* Japanese Society of Hypertension, *SBP* systolic blood pressure

hypertension [8]. The evidence includes high-risk subgroups, such as adults aged ≥75 years [9], those with a history of stroke [10], diabetes mellitus [11], heart failure with preserved ejection fraction [12], or chronic kidney disease [13]. Notably, no significant increase in serious adverse events was identified in these populations when the BP target was reduced to <130/80 mmHg. The findings were consistent across the subgroups, sustaining a universal treatment target regardless of age or multimorbidity [8–13].

Home BP monitoring is a key component of hypertension management. This approach is supported by recent systematic reviews demonstrating that home BP-based antihypertensive treatment is superior to office BP–based treatment in improving clinical outcomes, including ambulatory BP levels, in adult patients with essential hypertension [14]. Based on this evidence, JSH2025 proposes a home BP treatment target of <125/75 mmHg [1]. Strengthening routine home BP measurements is expected to enhance earlier detection, treatment adherence, and BP control rates.

An important conceptual shift in JSH2025 is the transition from age-based to condition-based recommendations. In managing blood pressure in older adults with hypertension, the guidelines emphasize functional status, frailty, cognitive function, and life expectancy. Adults aged ≥75 years who are functionally independent and tolerate therapy well are recommended to pursue a systolic blood pressure target of <130 mmHg. For those with frailty, dementia, or a high risk of falls, individualized treatment is essential to balance clinical benefits against potential harms [9].

For individuals with high-normal BP (130–139/80–89 mmHg) who are at low to moderate cardiovascular risk and lack diabetes or target organ damage, intensive lifestyle modification may serve as the initial management strategy, with decisions guided by the clinical context and cost-effectiveness [1].

In hypertensive disorders of pregnancy, evidence is insufficient to confirm whether pharmacological treatment targeting BP levels <130/80 mmHg improves maternal and fetal outcomes. As a result, JSH2025 refrains from providing specific recommendations regarding BP treatment targets for this population [15].

Safety considerations in intensive BP management

Although intensive systolic BP lowering, particularly to <120 mmHg, has demonstrated cardiovascular benefits in RCTs, it may increase the risk of adverse events, including symptomatic hypotension and acute kidney injury [7, 16, 17]. However, the absolute risks remain relatively low in controlled settings. Therefore, JSH2025 [2] recommends careful clinical monitoring to mitigate the risks associated with overtreatment, including orthostatic hypotension, renal function deterioration, and electrolyte abnormalities such as hyperkalemia. Similar cautionary guidelines are reflected in the 2025 AHA/ACC guidelines [3]. These recommendations underscore the necessity for

individualized treatment planning, especially in older adults and patients with multimorbidity.

Implementation challenges and future directions

Hypertension remains the most prevalent modifiable risk factor for cardiovascular morbidity and mortality worldwide [1]. Reducing the number of individuals with uncontrolled BP is a critical global challenge. Despite universal healthcare coverage in Japan, approximately 4.5 million individuals remain untreated despite awareness of their hypertension status, and an estimated 12.5 million remain uncontrolled despite treatment [2]. This gap between clinical potential and real-world outcomes highlights the urgent need to improve the implementation of guidelines. The simplified BP targets in JSH2025 are expected to enhance primary care usability and support uniform applications in clinical practice.

The adoption of home BP monitoring is another significant opportunity to enhance BP control. The broader deployment of digital health tools, patient education programs, and team-based hypertension management can further optimize the outcomes [2–5]. Furthermore, the global harmonization of BP targets across major guidelines may promote more consistent clinical communication and patient engagement.

The ongoing evaluation of the impact of JSH2025 guidelines on treatment intensification, safety outcomes, and BP control rates is crucial. Continuous updating of evidence and adaptive implementation strategies will ensure that the guidelines remain responsive to changing demographics, emerging technologies, and evolving scientific knowledge.

JSH2025 guidelines mark an important milestone in the advancement of evidence-based management of elevated BP and hypertension. Through a rigorous systematic review methodology, simplified BP targets, and a condition-based approach to treatment recommendations, the guidelines are expected to improve clinical adoption and enhance BP control nationwide. Continued efforts to translate these recommendations into clinical practice hold promise for substantial cardiovascular benefits in Japan and will contribute to international progress in hypertension care.

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Compliance with ethical standards

Conflict of interest The authors declare no competing interests.

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