EDITORIAL

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New guidance on primary aldosteronism: Rethinking screening in hypertension

For decades, primary aldosteronism has occupied a unique position in hypertension management—recognized as a treatable cause of secondary hypertension, yet persistently underdiagnosed. In this issue, Sureshkumar and colleagues[1] review the 2025 Endocrine Society clinical practice guideline on primary aldosteronism,[2] highlighting one of its most consequential recommendations: consideration of screening all adults with hypertension for primary aldosteronism.

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Although this is a conditional recommendation based on low-certainty evidence, it represents an important shift in thinking—from viewing primary aldosteronism as a relatively uncommon endocrine disorder requiring selective case finding to recognizing it as a common, treatable, and often overlooked contributor to cardiovascular risk. This approach differs from the 2025 American Heart Association and American College of Cardiology[3] and 2024 European Society of Cardiology[4] hypertension guidelines, which continue to recommend targeted screening. Whether broader screening should replace risk-based case finding remains an area of active debate, balancing improved case detection against feasibility and the current evidence base.

UNIVERSAL SCREENING COULD OFFER BENEFITS, BUT IS IT FEASIBLE?

The rationale for broader screening is straightforward. Over the past decade, studies have shown that primary aldosteronism is far more common than previously appreciated and extends well beyond patients with resistant hypertension or hypokalemia. At the same time, untreated primary aldosteronism carries cardiovascular and renal risks that exceed those expected from blood pressure elevation alone. If the goal of hypertension care is to identify and treat the underlying cause whenever possible, and not to simply lower blood pressure, then broader screening becomes an attractive strategy. Earlier diagnosis allows treatment to target the underlying biology rather than relying solely on escalation of antihypertensive therapy. Testing earlier in the course of hypertension, before multiple antihypertensive medications are introduced, may also reduce medication-related interference with interpretation of aldosterone and renin levels.

Yet the recommendation raises an important practical question: can healthcare systems realistically screen all patients with hypertension? The logistical challenge is substantial. More than 1 billion people worldwide have hypertension. Screening every patient would increase demand for aldosterone-to-renin ratio testing, aldosterone suppression testing, adrenal imaging, adrenal venous sampling, and specialist consultation.

Flack et al[5] have highlighted the magnitude of this challenge in the United States. Even if screening were limited to adults with stage 2 hypertension, an estimated 9.5 million individuals in the United States could have primary aldosteronism, compared with a workforce of only approximately 1,180 hypertension specialists and 8,909 board-certified endocrinologists. Put differently, there could be nearly 1,000 patients with primary aldosteronism for every clinician with expertise in its evaluation.

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TOWARD TIMELY RECOGNITION OF PRIMARY ALDOSTERONISM

Recognizing these practical limitations, the guideline adopts a pragmatic approach to diagnosis.[2] Rather than insisting on a rigid diagnostic sequence, it acknowledges that initial screening can often be performed while patients remain on commonly prescribed antihypertensive medications. It also encourages clinicians to use a probability-based approach that prioritizes timely recognition of primary aldosteronism over strict adherence to complex diagnostic pathways. The message is not that every patient with hypertension requires an exhaustive endocrine evaluation; rather, it is that primary aldosteronism is common enough to justify lowering the threshold for considering the diagnosis.

At present, persistent underrecognition appears to be a greater concern than overdiagnosis. Current practice patterns illustrate the magnitude of the problem. In a population-based study of patients with hypertension and hypokalemia, only about 4% of those with severe hypokalemia (defined as a serum potassium level < 3.0 mEq/L) underwent screening for primary aldosteronism.[6] Even among older adults receiving 4 or more antihypertensive medications, which highly suggests that they have resistant hypertension, only 1.0% were screened. Against this backdrop, the debate surrounding universal vs targeted screening reflects a shared goal of reducing the persistent underrecognition of primary aldosteronism while determining the most practical approach to achieving it.

The guideline also highlights how much remains unknown. Notably, nearly all major recommendations are supported by evidence of low or very low certainty. This should not be viewed as a weakness of the guideline development process, but rather as a reflection of the limited evidence base that has historically characterized primary aldosteronism research. Questions regarding optimal screening thresholds, medication management during testing, aldosterone suppression testing strategies, adrenal venous sampling protocols, and renin-guided therapy remain incompletely answered. Addressing these gaps will require pragmatic clinical studies focused not only on diagnostic accuracy but also on implementation, cost-effectiveness, and patient outcomes.

Ultimately, the implications extend beyond endocrinology. Primary care clinicians, nephrologists, cardiologists, and hypertension specialists will all play critical roles in determining whether primary aldosteronism remains underdiagnosed or finally receives the attention warranted by its prevalence and clinical consequences. In this sense, the 2025 Endocrine Society guideline[2] is best viewed not as the final word on primary aldosteronism, but as the beginning of an important conversation, one that asks clinicians to reconsider how hypertension is evaluated and how often excess aldosterone should be considered as an underlying cause.

WHERE DOES THIS LEAVE CLINICIANS TODAY?

While the appropriate role of broader screening remains an area of active debate, I favor considering testing aldosterone and renin levels early in the evaluation of hypertension, when the results are likely to influence management. Earlier testing may provide mechanistic insight that supports a more individualized treatment strategy and may be easier to interpret before multiple antihypertensive medications are introduced. Conversely, the case for early testing may be less compelling in patients whose blood pressure is readily controlled with conventional first-line therapy, although this balance may shift as evidence supporting broader screening continues to emerge. Improving physician education regarding the interpretation and clinical application of aldosterone and renin results will be essential to maximizing clinical benefit.

DISCLOSURES

Dr. Thomas reports no relevant financial relationships which, in the context of their contributions, could be perceived as a potential conflict of interest.

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