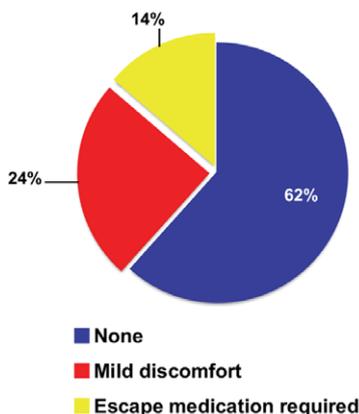


# CLINICAL IMPLICATIONS

Hypertension ■ Vol. 69 ■ No. 5 ■ May 2017

## Safety of Temporary Discontinuation of Medication (p 927)

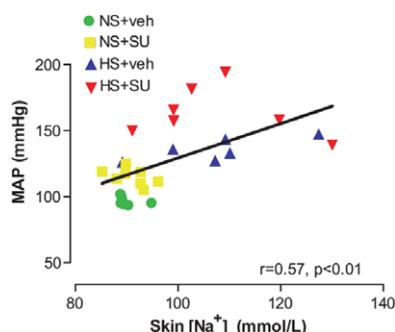
### Side effects of discontinuation



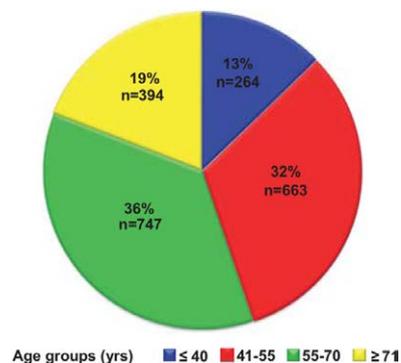
Optimal blood pressure control could prevent up to 50% of cardiovascular events, but control rates remain disappointingly low. Successful treatment of hypertension benefits from an extensive diagnostic work-up to identify secondary causes and contributing factors of hypertension, particularly in patients with difficult-to-control hypertension. However, concomitant use of antihypertensive medication can interfere with the investigation and result in false-positive results or missed diagnoses. We report our 6-year experience with the diagnostic work-up of patients with difficult-to-control hypertension, which includes temporary discontinuation of antihypertensive drugs. The results demonstrate that temporary discontinuation of medication does not increase the acute risk of a cardiovascular event, provided the program is performed in a well-controlled setting in a specialized hospital with appropriate protocols for safety monitoring. The event rate in our cohort was comparable to or lower than a reference group with similar cardiovascular risk that did not discontinue medication. In addition, temporary discontinuation is well tolerated by the majority of patients: 86% of patients completed the program without any side effects or experienced only mild discomfort that required no intervention. The remaining 14% were treated with escape medication. Thus, when performed with proper regard for patient selection and safety, diagnostic screening programs for hypertension, including temporary discontinuation of antihypertensive medication, are safe and will likely increase the diagnosis of secondary causes and improve blood pressure control in hypertension.

## Salt Sensitivity of Sunitinib-Induced Hypertension (p 919)

Hypertension is the most frequent cardiovascular adverse effect of vascular endothelial growth factor signaling (VSP) inhibitors used for the treatment of a variety of cancers. Factors reported to be involved in the development of hypertension are a decrease in nitric oxide availability, activation of the circulating and renal endothelin system, and rarefaction; that is, a structural decrease in microvessels. In addition to impairing angiogenesis, VSP inhibitors also impair formation of lymph vessels, which contributes to their antitumor effect. Given previous observations that impairment of skin lymphangiogenesis associates with salt-sensitive hypertension directly related to skin sodium accumulation, Lankhorst et al investigated whether such an effect may also account for sunitinib, a VSP inhibitor that blocks angiogenesis and lymphangiogenesis. Administration of a high-salt diet to normotensive rats was associated with a rise in blood pressure, an increase in skin sodium accumulation and an increase in skin lymph vessels, whereas plasma sodium concentration, body weight, or renal excretory function did not change. Although the first 2 effects were markedly enhanced by sunitinib, no significant decrease in skin lymphangiogenesis was observed during sunitinib administration either with the normal or high-salt diet. The authors conclude that VSP inhibition is associated with salt-sensitive hypertension, but in view of their data, diminished NO availability, renin suppression, and activation of the endothelin system more likely contribute to this salt sensitivity of blood pressure than VSP inhibitor-induced impairment of skin lymphangiogenesis.



## Younger Resistant Hypertensive Patients Phenotype (p 827)



Patients with resistant hypertension are at a higher risk for cardiovascular events compared with those with more easily controlled hypertension. Characteristics that predict resistant hypertension include older age, obesity, longer duration of hypertension, left ventricular hypertrophy, history of cardiovascular events, reduced renal function, microalbuminuria, diabetes mellitus, and dyslipidemia. Recent evidence has shown the emergence of unfavorable trends in coronary heart disease, with increased incidence, hospitalizations, and related mortality in younger individuals (35–55 years). In the current study, Ghazi et al report results of a cross-sectional analysis of patients with resistant hypertension. In this analysis, characteristics were determined by age group. The study showed that younger patients had an earlier onset of hypertension, were obese, had hyperaldosteronism, and had excessive sodium intake. The elderly were overweight and had normal aldosterone and sodium status, suggesting that obesity and excessive sodium intake play a less important role in this population. These results provide evidence that different risk factors and comorbidities are important regarding underlying mechanisms and future prevention, and treatment needs to be tailored to the individual. Furthermore, there is a need for more data on mechanisms (eg, early vascular aging, neurohumoral dysregulation) and optimal antihypertensive treatment in the younger population. According to the World Health Organization, prevention of premature coronary heart disease in the young must be prioritized in public health strategies to achieve the goal proposed by the World Health Organization of 25% reduction in premature death by the year 2025.

## Clinical Implications

*Hypertension*. 2017;69:739

doi: 10.1161/HYPERTENSIONAHA.117.09343

*Hypertension* is published by the American Heart Association, 7272 Greenville Avenue, Dallas, TX 75231

Copyright © 2017 American Heart Association, Inc. All rights reserved.

Print ISSN: 0194-911X. Online ISSN: 1524-4563

The online version of this article, along with updated information and services, is located on the  
World Wide Web at:

<http://hyper.ahajournals.org/content/69/5/739>

**Permissions:** Requests for permissions to reproduce figures, tables, or portions of articles originally published in *Hypertension* can be obtained via RightsLink, a service of the Copyright Clearance Center, not the Editorial Office. Once the online version of the published article for which permission is being requested is located, click Request Permissions in the middle column of the Web page under Services. Further information about this process is available in the [Permissions and Rights Question and Answer](#) document.

**Reprints:** Information about reprints can be found online at:  
<http://www.lww.com/reprints>

**Subscriptions:** Information about subscribing to *Hypertension* is online at:  
<http://hyper.ahajournals.org/subscriptions/>