Top Ten Things to Know
Resistant Hypertension: Detection, Evaluation, and Management

1. Apparent treatment resistant hypertension (aTRH) is a term used when one or more of the following are missing from data sources: medication dose, adherence, or out-of-office BP. Among treated adults with hypertension (HT), prevalent aTRH occurs in about 12% to about 15% of population-based and 15% to 18% of clinic-based reports. Definitions are included within this document.

2. Resistant hypertension (RH) is defined as the BP of a hypertensive patient that remains elevated above goal in spite of the concurrent use of three antihypertensive agents of different classes, commonly including a long-acting calcium channel blocker, a blocker of the renin angiotensin system [ACE inhibitor (ACEI) or angiotensin receptor blocker (ARB)] and a diuretic.

3. In 2008 the AHA issued its first scientific statement on resistant hypertension including the diagnosis, evaluation and treatment. Since then, large numbers of studies of RH have highlighted our understanding of its pathogenesis, evaluation and treatment. This is the first revision to the 2008 statement with more modern evidence.

4. Areas covered in this statement for diagnosing resistant hypertension include: identifying and correcting medication non-adherence, analyzing whether blood pressures have been taken correctly (technique), understanding if white coat effect, and if there is suboptimal antihypertensive therapy being recommended.

5. Lifestyle factors such as obesity, dietary sodium, alcohol consumption, physical inactivity, and dietary pattern are all linked to RH.

6. Several classes of pharmacologic agents can increase BP and contribute to drug-induced RH. These classes include: non-steroidal anti-inflammatory drugs (NSAIDs), Oral contraceptives and hormone replacement therapy, sympathomimetic amines, immunosuppressive agents as examples.

7. Sleep disorders (e.g. obstructive sleep apnea) and pseudopheochromocytoma are linked to RH.

8. Hypertension is accelerated and/or worsened by renal artery stenosis remains the most common causes of RH, especially in older age groups.

9. Evaluation of resistant hypertension starts with a thorough medical history, physical examination, collection in out-of-office BP monitoring, laboratory evaluation, non-invasive and imaging if warranted.

10. Management of resistant hypertension incorporates lifestyle interventions (weight loss, dietary salt restriction, recommending the DASH diet and considering other dietary factors such as alcohol restriction), and adding exercise to the management regime. Management also includes pharmacological treatment and referral to a hypertension specialist when warranted. Device-based treatments may be considered; renal nerve ablation as an example.