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Jun 10, 2019 | Melvyn Rubenfire, MD, FACC Authors: Bakris G, Ali W, Parati G. Citation: ACC/AHA Versus ESC/ESH on Hypertension Guidelines: JACC Guideline Comparison. J Am Coll Cardiol 2019;73:3018-3026. The following are key points to remember from this comparison of the blood pressure guidelines from the American College of Cardiology/American Heart Association (ACC/AHA) and the European Society of Cardiology/European Society of Hypertension (ESC/ESH): The authors compared the recommendations of the most recent ACC/AHA and ESC/ESH blood pressure guidelines, each of which represented updates and reinforced concepts of prevention regarding elevated blood pressure (BP). Both guidelines provide general recommendations of a low-sodium diet (The guidelines agree on the importance of proper methods of BP measurement, the use of home BP monitoring and ambulatory monitoring, focusing on detecting and improving adherence, and both support the use of BP telemonitoring and digital health solutions for follow-up. Both recommend use of absolute cardiovascular (CV) risk estimates computed with risk calculators and that a >10% 10-year risk of atherosclerotic CV disease should be treated more aggressively. And both provide a concise definition of organ damage assessment. The ACC/AHA guideline details guidance for ethnic/racial groups. ESC/ESH emphasizes the importance of environmental and altitude effects on BP. There are major disagreements with the level of BP defining hypertension, the specific BP targets for treatment, and the use of initial combination therapy. ACC/AHA does not address isolated systolic hypertension, which is detailed in the ESC/ESH guideline, with target systolic BP to The initial single-pill combination is strongly recommended in both guidelines with angiotensin-converting enzyme inhibitor or angiotensin-receptor blocker + thiazide or calcium channel blocker. However, ESC/ESH recommends it as initial therapy in patients at ≥140/90 mm Hg and the ACC/AHA recommends a single-pill combination in patients with >20/10 mm Hg above BP goal. The most important distinction is that ACC/AHA maintains that all people with a BP >130/80 mm Hg have hypertension and BP should be targeted to The ESC/ESH guideline defines hypertension as >140/90 mm Hg with the goal being 130 to The authors suggest that a more evidence-based statement for the guideline would be to set the lower BP target for treatment at >15% 10-year CV risk, because all trials had cohorts with >15% CV risk. Clinical Topics: Cardiovascular Care Team, Diabetes and Cardiometabolic Disease, Prevention, Atherosclerotic Disease (CAD/PAD), Diet, Exercise, Hypertension Keywords: Altitude, Angiotensin-Converting Enzyme Inhibitors, Angiotensin Receptor Antagonists, Blood Pressure, Blood Pressure Determination, Blood Pressure Monitoring, Ambulatory, Calcium Channel Blockers, Coronary Artery Disease, Diabetes Mellitus, Diet, Sodium-Restricted, Exercise, Hypertension, Life Style, Metabolic Syndrome, Potassium, Practice Guidelines as Topic, Primary Prevention, Risk Factors, Stroke, Thiazides, Weight Loss < Back to Listings 30 Aug 2024 The current guidelines support healthcare professionals with the diagnosis and management of elevated blood pressure and hypertension. This 2024 guideline, developed by a multidisciplinary Task Force, updates the 2018 ESC/ESH guidelines on the management of arterial hypertension, using the most robust contemporary evidence. The new updated guideline provides a new simplified classification of blood pressure and outlines processes for the diagnosis, evaluation, and management of individuals with elevated blood pressure and hypertension. Topic(s): Pathophysiology and Mechanisms Risk Factors and Prevention Epidemiology, Prognosis, Outcome Back to ESC Guidelines list Introduction Hypertension is the leading cause of death, premature morbidity, and disability-adjusted life years worldwide and a primary risk factor for coronary artery disease (CAD), cerebrovascular disease (CeVD), heart failure (HF), chronic kidney disease (CKD), and dementia.1,2 Given the importance of hypertension management to reduce cardiovascular (CV) morbidity and mortality, clinical guidelines have been established to provide a framework to guide clinicians in the diagnosis and treatment of this condition. While professional medical societies have developed many hypertension guidelines, two well-established documents from North America and Europe are the 2017 American College of Cardiology (ACC)/American Heart Association (AHA) and 2018 European Society of Cardiology (ESC)/European Society of Hypertension (ESH) guidelines.3,4 Although there are key differences between these guidelines, it is important to acknowledge that there is also much overlap. In this review, we will discuss the common features and explore some of the major differences between the guidelines. Principal Areas of Agreement Between American and European Guidelines Emphasis on accuracy of BP measurements: Both guidelines recommend office blood pressure (BP) measurement on repeated visits and ambulatory blood pressure monitoring (ABPM) or home blood pressure monitoring (HBPM) to confirm the diagnosis of hypertension (Class I). ABPM uses a device worn on the patient's arm to record BP at 15- or 30-minute intervals for 24 to 48 hours during routine daily activities and sleep. HBPM is a self-monitoring tool where patients use commercially available instruments to measure and record their BPs. There is consensus that ABPM and HBPM provide a greater number of BP measurements than conventional office BPs and reflect conditions that are more representative of daily life. Additionally, both are useful tools for the diagnosis of "white coat" and masked hypertension. For adults who present with elevated office BPs but normal readings at home, ABPM or HBPM should be used to confirm diagnosis of white coat hypertension. Masked hypertension refers to untreated patients with normal office BPs but signs of end-organ damage. It is associated with an increased risk of CV morbidity and mortality and should be diagnosed using ABPM or HBPM. Cardiovascular-risk calculator to determine BP treatment thresholds: ESC guidelines utilize the Systematic Coronary Risk Evaluation (SCORE) system to estimate CV risk for patients with hypertension at the time of initial diagnosis prior to initiation of pharmacotherapy or whenever changes occur to BP readings.4 Since 2003, the European CV prevention guidelines have recommended the SCORE risk estimate because it is based on large, representative European cohorts and estimates the 10-year risk of a first fatal atherosclerotic cardiovascular disease event in relation to age, sex, smoking habits, total cholesterol level, and systolic BP (SBP). It also allows for country-specific risk calibration in European countries based on CV disease risk levels and has been externally validated. The ACC/AHA guidelines recommend use of the Atherosclerotic Cardiovascular Disease Risk (ASCVD) calculator using the Pooled Cohort Equation (PEC) for determination of BP targets. Both guidelines recognize that treatment decisions based on aligning thresholds with CV risk offer a more rational and evidence-based approach. If the CV risk is low, both recommend initial emphasis on lifestyle modifications prior to initiation of pharmacotherapy. While the Europeans identify hyperuricemia and elevated heart rate as CV disease risk factors, American guidelines do not recognize them due to limited evidence that treatment improves clinical outcomes. BP treatment targets: When comparing the guidelines, the definition of normal (as used in the ACC/AHA guidelines) or optimal BP (as used in the ESC/ESH guidelines) is the same for systolic BP (