Huang and colleagues point out the difference in results of our study (1) and the recent systematic review and meta-analysis conducted as a part of the guideline from the American College of Physicians and the American Academy of Family Physicians on pharmacological treatment of hypertension in adults ages 60 years or older (2,3). Apart from other substantial flaws (4), the guideline (2) and the accompanied meta-analysis (3), although supposedly dealing with adults ages 60 years or older, included randomized trials of adults with a diagnosis of hypertension and mean age of at least 60 years. This means that the meta-analysis (and the resulting guidelines) were based on numerous patients who were below that age limit. Our meta-analysis included 4 high-quality randomized controlled trials that exclusively randomized older hypertensive patients (≥65 years) to intensive versus standard blood pressure (BP) targets (1).

Huang and colleagues rightly contend that “individualized target BP weighing side effects and treatment effort may be much more proper than advocating intensive BP lowering.” In doing so, they basically reiterated the same point that we have emphasized in our conclusions: “When considering more intensive BP control in the elderly, clinicians should carefully balance benefits against potential risks” (1). Finally as clinicians, we should remember a simple, but inescapable, truth in medicine: patients are genetically, physiologically, metabolically, pathologically, psychologically, and culturally different. Accordingly, there never will be only 1 way to diagnose and treat.

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REPLY: Hypertension Treatment in the Elderly
Individualized Target or Intensive Blood Pressure Lowering?

The recent American College of Cardiology expert consensus for transcatheter aortic valve replacement (TAVR) decision pathway mentions pulmonary hypertension (PH) as a major cardiovascular comorbidity (1). The consensus does not specify the method of assessment, only suggesting that PH may be evaluated by echocardiography; however, right heart catheterization (RHC) is the gold standard for PH assessment. We retrospectively evaluated consecutive patients that had transthoracic echocardiogram (TTE) and RHC performed within 3 days of one another as part of their routine clinical care before TAVR at the University of Pittsburgh Medical Center. We sought to determine the agreement between pulmonary artery systolic pressure (PASP) measured by TTE and RHC in these patients.

According to the guidelines, PASP was calculated using the maximal tricuspid regurgitation jet

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The Importance of Invasive Hemodynamics for Pulmonary Hypertension Screening in TAVR Patients

The recent American College of Cardiology expert consensus for transcatheter aortic valve replacement (TAVR) decision pathway mentions pulmonary hypertension (PH) as a major cardiovascular comorbidity (1). The consensus does not specify the method of assessment, only suggesting that PH may be evaluated by echocardiography; however, right heart catheterization (RHC) is the gold standard for PH assessment. We retrospectively evaluated consecutive patients that had transthoracic echocardiogram (TTE) and RHC performed within 3 days of one another as part of their routine clinical care before TAVR at the University of Pittsburgh Medical Center. We sought to determine the agreement between pulmonary artery systolic pressure (PASP) measured by TTE and RHC in these patients.

According to the guidelines, PASP was calculated using the maximal tricuspid regurgitation jet
velocity obtained from continuous-wave Doppler using multiple windows and integrated into the modified Bernoulli equation plus the estimated right atrial pressure. RHC was performed with a standard pulmonary artery catheter. PH severity was categorically classified as none (PASP < 35 mm Hg), mild (35 to 45 mm Hg), moderate (46 to 59 mm Hg), and severe (≥60 mm Hg). Bland-Altman plots and linear regression correlated PASP between the 2 methods.

Our study included 86 patients with severe AS with a mean age of 84 ± 6 years, indexed AV area 0.33 ± 0.1 cm²/m², LVEF 51 ± 15%, and PASP 45 ± 20 mm Hg. Correlation of PASP measurement by RHC and TTE was modest with wide variability (Figures 1A and 1B). Twenty-seven patients were classified as having no PH by TTE; of these, 8 (30%) were reclassified to ≥ moderate PH by RHC with 4 (15%) patients as severe PH by RHC. TTE was very specific for severe PH (96%; 95% confidence interval [CI]: 87% to 99%), but not adequately sensitive (47%; 95% CI: 29% to 65%).

In conclusion, we found substantial variability between TTE versus RHC assessment of PH severity in patients undergoing TAVR evaluation. TTE was highly specific, but not adequately sensitive. Up to 30% of patients with no PH by TTE were reclassified to moderate or severe PH by RHC. Our data support that RHC should be the gold standard method for accurate PH assessment in patients being evaluated for TAVR procedure because presence and severity of PH impacts TAVR outcomes.

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**REFERENCE**