Upon univariate analyses, baseline office systolic BP (p < 0.0001) and BMI (p = 0.014) were identified as significant predictors of a BP response after 6 months. Obese patients with a BMI of ≥ 30.0 had a significantly lower BP response after 6 months (8.9 ± 18.8 mmHg) compared to normal-weight patients with a BMI ≤ 29.9 (20.1 ± 24.9 mmHg; p = 0.013). Importantly, stepwise backward regression model revealed baseline office systolic blood pressure (standardized β = 0.46; r = 0.47; p < 0.0001) and BMI (standardized β = 0.51; r = 0.95; p = 0.019) as significant variables for BP response after 6 months. The other variables remained insignificant.

**Conclusions:** Hypertension severity and BMI are important predictors of BP response to RDN. BP reduction after RDN is, in fact, more pronounced in patients with lower BMIs. These findings may help in patient selection.

**TCT-415**

**CATHETER-BASED RENAL SYMPATHETIC DENERVATION FOR RESISTANT HYPERTENSION: A META-ANALYSIS OF RANDOMIZED TRIALS**

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**Background:** Percutaneous renal artery denervation has been shown to decrease blood pressure among patients with resistant arterial hypertension. We present in this review a meta-analysis of all randomized controlled trials evaluating effectiveness and complications of catheter-based RDN for blood pressure control in patients with resistant hypertension.

**Methods:** Pub Med, Chocrane and Scopus were systematically searched up to May 2014. Primary outcomes were 6 months reduction of systolic and diastolic blood pressure among patients with resistant arterial hypertension. We present in this review a meta-analysis of all randomized controlled trials evaluating effectiveness and complications of catheter-based RDN for blood pressure control in patients with resistant hypertension.

**Results:** 3 RCTs provided a total of 651 patients; 415 in the RDN group and 236 in the control. Office systolic blood pressure decrease of 18.29 mmHg and 6.83 mmHg mean diastolic blood pressure reduction (for both p < 0.05). A strong trend in the 24-hours systolic blood pressure mean reduction -10.99 at 6 months and significantly more patients responded to the RDN therapy presenting with > 10 mmHg systolic blood pressure decrease (for both p = 0.05) without any MACE.

**Conclusions:** Resistant hypertension treated with catheter-based RDN respond better to blood pressure reduction and with sustained control without carrying significant kidney and therapy specific complications. It is yet to be determined if some RDN catheters are capable to provide more concise results and therefore lead to better procedural outcomes. Therefore more randomized clinical data are warranted.

**TCT-416**

**Renal Denervation for the Management of Resistant Hypertension: A Meta-Analysis**

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**Background:** Renal denervation interrupts the sympathetic pathways to the kidneys and therefore may decrease blood pressure. This technique is increasingly being evaluated for the management of resistant hypertension.

**Methods:** All the available electronic databases were queried for studies on renal denervation for resistant hypertension. Studies that had a minimum follow up period of 6 months were included. Meta-analysis of the weighted mean difference of pre and post renal denervation blood pressures was performed using random effects model.

**Results:** A total of 18 studies met our inclusion and exclusion criteria and were included in the final analysis. Office blood pressures were reported in 16 studies, while ambulatory blood pressures were reported in 7 studies. At 6 months, post renal denervation, the office systolic blood pressure decreased by 25.2 mm Hg (95% CI, 24.7 – 25.7 mm Hg). Office diastolic blood pressure was lowered by 9.6 mm Hg (95% CI, 8.1 – 11 mm Hg). The ambulatory systolic and diastolic blood pressures also decreased by 12 mm Hg (95% CI, 4.4 – 19.7 mm Hg) and 6.5 mm Hg (95% CI, 3.3 – 9.5 mm Hg), respectively. At 1 year after renal denervation, the office systolic blood pressure was lowered by 24.6 mm Hg (95% CI, 21.9 – 27.4 mm Hg). The office diastolic blood pressure was decreased by 10.7 mm Hg (95% CI, 8.4 – 12.9 mm Hg) at 1 year follow up.

**Conclusions:** Renal denervation effectively lowers both systolic and diastolic blood pressures in subjects with resistant hypertension. The blood pressure lowering effect appeared to be sustained at 1 year after renal denervation.

**TCT-417**

**REALISE Trial: Renal Denervation by Ultrasound Transcatheter Emission: Six Month Results**

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**Background:** The Paradise® Renal Denervation System (ReCor Medical, Palo Alto, CA) delivers ultrasound (US) energy to perform circumferential denervation of the renal sympathetic nerves. The REALISE trial is a French post-market study in moderate resistant hypertensive (RH) patients with active hypertension medication management. Six-month safety and effectiveness data will be presented, as will MSNA data collected in a subset of patients to evaluate the ability of US denervation to down-regulate sympathetic activity.

**Methods:** The REALISE trial is a prospective, single-arm, open-label study. The study enrolled patients with office BP > 140/90, confirmed by ambulatory measures, and on a minimum of 3 medications. Patients were treated with up to 3 US emissions bilaterally. All patients underwent CT scan or MRI at baseline and follow-up to assess the renal arteries. Office and ambulatory BP measures and changes in medications were recorded at regular intervals. MSNA was obtained in five patients at baseline and post procedure.