### Background

There is increasing evidence that nocturia is associated with lifestyle diseases. Among these diseases, hypertension is a risk factor for increased frequency and severity of storage symptoms [1], and these conditions cause sleep disturbance and nocturnal polyuria. Nocturia with hypertension is refractory to treatment with alpha-blockers alone in patients with benign prostatic hyperplasia/overactive bladder (BPH/OAB). We have previously shown the efficacy and safety of combination therapy with imidafenacin and an alpha-blocker as second-line therapy after failed alpha-blocker monotherapy for BPH/OAB with nocturia [2].

### Objective

In this post-hoc analysis, we examine changes in nocturia in BPH/OAB patients with hypertension using data from the GOOD-NIGHT study.

### Material & Method

- **Good Night Study**: Randomized, open-labeled, controlled trial to investigate efficacy and safety of combination therapy with imidafenacin plus alpha-blocker as second-line therapy after failed alpha-blocker therapy for men with nocturia.
- **Eligible criteria**
  - Nocturia more than twice per night
  - Not respond to treatment with an alpha-blocker alone for more than 4 weeks

### Protocol

- **Randomization**: Alpha-blocker alone
- **Control**
- **Group 1**: Alpha-blocker plus Imidafenacin 0.1 mg twice daily
- **Group 2a**: Alpha-blocker plus Imidafenacin 0.1 mg nightly

### Post-hoc analysis

- **Alpha-blocker (α-blocker)**
  - Baseline N-QOL, OABSS, IPSS, HRQOL
  - Day 3 bladder diary
  - N-QOL, CBS, CBS, IPSS-QOL

### Results

A total of 152 patients were enrolled in the study and 130 (46 in group 1, 43 in group 2a, and 41 in group 2b) were assessed for efficacy at 8 weeks. The 130 patients included 35 (26.9%) with hypertension and 95 (73.1%) without hypertension.

### Interpretation of results

In this post-hoc analysis, we provide the first evidence that an anticholinergic agent, imidafenacin, is effective for nocturia in BPH/OAB patients with hypertension. Nocturia has multifactorial symptoms and is associated with lifestyle diseases. Hypertension induces increased levels of circulating catecholamines. In the daytime, these high levels of catecholamines decrease renal blood flow, decrease daytime urinary production, and increase daytime intravascular volume expansion. The excess circulating volume in the daytime then induces night time diuresis. Thus, OAB with hypertension is related to nocturia and nocturnal polyuria. The most important findings in this study are that imidafenacin decreased nocturia and increased bladder capacity, and also improved nocturnal polyuria and decreased NPI in the imidafenacin group.

### Conclusion

- **Imidafenacin is effective for nocturia in BPH/OAB patients with or without hypertension and could reduce nocturnal polyuria**

### Reference

1. UTSJ 4: 68-72, 2012
2. EUA-2012 (Paris) Abstract No.745
5. BJU Int. 2013; 112(1):131-6