

# Real-World Persistence to Later-Line Therapies Used to Treat Patients With Overactive Bladder

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## OBJECTIVE

Evaluate patient characteristics and real-world persistence to later-line treatment among patients with overactive bladder (OAB)

## CONCLUSIONS

Among patients with OAB initiating later-line therapy, onabotulinumtoxinA had a higher persistence rate at 14 months post-index date compared with mirabegron and peripheral tibial nerve stimulation (PTNS)

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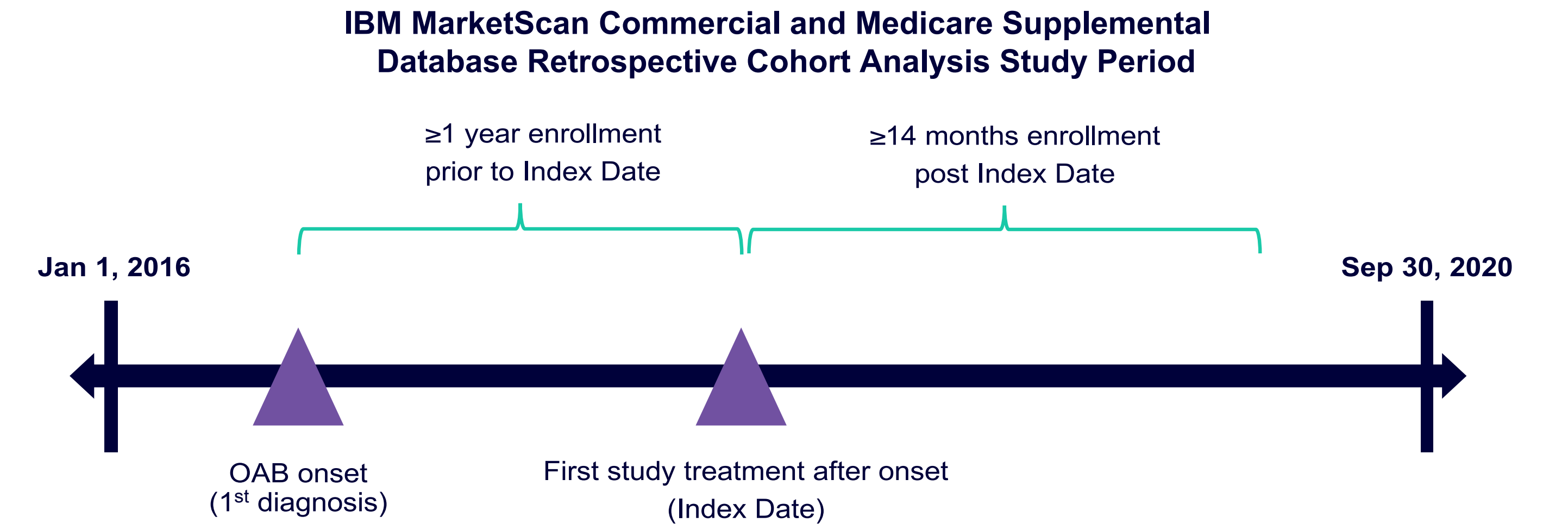
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## INTRODUCTION

- OAB is a chronic condition characterized by symptoms of urinary urgency, often accompanied by frequency and nocturia, with or without urinary incontinence<sup>1</sup>
- Treatments for OAB include first-line behavioral therapies, second-line pharmacologic management with oral therapies, and third-line therapies including intradetrusor injection with onabotulinumtoxinA, peripheral tibial nerve stimulation (PTNS), or sacral nerve stimulation<sup>2</sup>
- Anticholinergics have previously shown high rates of treatment discontinuation over 12 months (84%),<sup>3</sup> highlighting the need for other treatment options
- Currently there is little available evidence regarding rates of real-world persistence with later-line therapies such as onabotulinumtoxinA, beta-3 agonists (mirabegron), and PTNS

## METHODS

### Study Design



- A 14-month post-index window was selected for persistence follow-up, allowing for 2 or more onabotulinumtoxinA injections in the 14 months, considering that in clinical practice, injections for OAB are administered on average every 7 months (with a high degree of variability)<sup>4-7</sup>
- Cohort Attrition Index can be found in the supplemental material (QR code)

### Inclusion Criteria

- Diagnosis of OAB on at least 1 inpatient or 2 outpatient medical claims ≥60 days apart between January 1, 2016 and September 30, 2019
- ≥1 claims for onabotulinumtoxinA, mirabegron, and PTNS with OAB diagnosis on or after OAB onset (earliest claim = index date)
- Adults ≥18 years at index date
- Continuous enrollment in medical and pharmacy benefits in the 1 year prior to index date and at least 14 months after index date with a gap no greater than 30 days

### Exclusion Criteria

- Evidence of onabotulinumtoxinA, mirabegron, or PTNS use any time prior to index during study period
- Use of toxins other than onabotulinumtoxinA during the study period
- Patients with at least 1 inpatient OR at least 2 outpatient non-diagnostic medical claims (≥30 days apart) with a diagnosis of neurogenic bladder during the study period

### Outcomes & Definitions

- For each patient cohort, outcomes included:
  - 12-month pre-index demographics and clinical characteristics
  - 14-month post-index rate of persistence to onabotulinumtoxinA, mirabegron, and PTNS
- A sensitivity analysis was performed with alternate persistence definitions for mirabegron and PTNS that were more similar to how persistence was defined for onabotulinumtoxinA

Therapy	Definitions of Persistence With Treatment (Primary Analysis)	Definitions of Persistence for Sensitivity Analysis
OnabotulinumtoxinA	≥2 injections during follow-up period	---
Mirabegron	Continuous days' supply coverage with <30-day gap during follow-up period	≥7 prescription fills during follow-up period
PTNS	≥12 treatments in first 12 weeks followed by ≥1 treatment per month, with <30-day gap during remaining follow-up period	≥12 treatments in first 12 weeks, followed by ≥6 treatments during remaining follow-up period

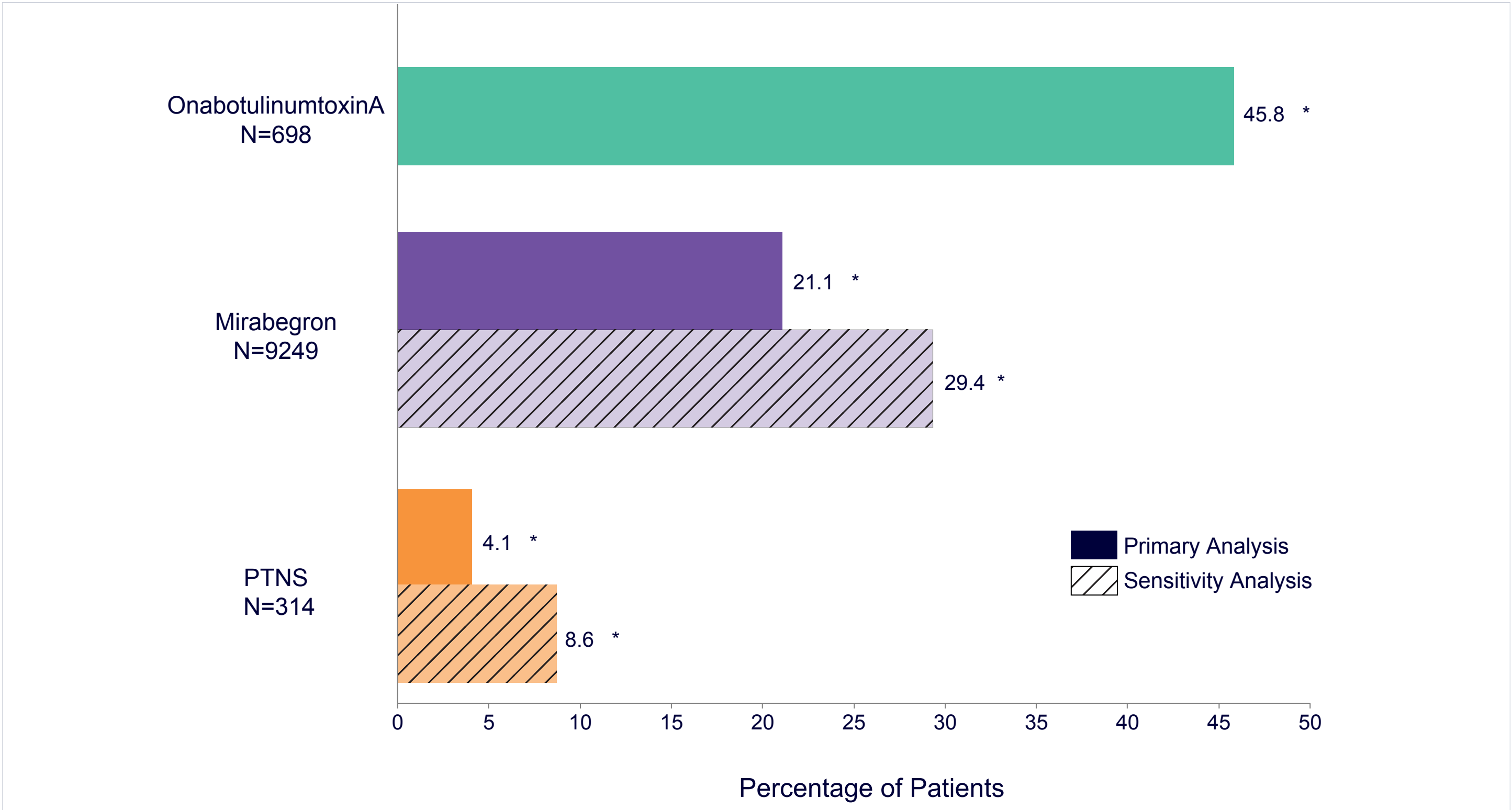
PTNS, percutaneous tibial nerve stimulation.

## RESULTS

Characteristic	OnabotulinumtoxinA N=698	Mirabegron N=9249	PTNS N=314
Age, mean (SD)	61.1 (13.77)	62.7 (15.23)	77.8 (7.31)
Sex, %			
Female	87	72	71
Male	13	29	29
Region, %			
North Central	25.1	15.1	21.0
Northeast	15.8	27.1	26.4
South	34.5	32.3	35.4
West	10.6	6.9	16.9
Unknown	14.2	18.6	0.3
Plan type, %			
Commercial	68	61	3
Medicare	32	39	97
Baseline CCI, mean (SD)	1.5 (1.91)	1.6 (1.95)	2.1 (2.05)
CCI score, %			
0	42	40	28
1	23	21	21
2	14	14	19
3	22	24	33

- Mean baseline age and Charlson Comorbidity Index (CCI) scores were higher in the PTNS group; the majority in this group were covered by Medicare rather than commercial insurance
- Persistence rate at 14 months post index date was highest in the onabotulinumtoxinA group (P<0.0001) in both the primary analysis and in a sensitivity analysis using more permissive definitions of persistence for mirabegron and PTNS groups

### 14-Month Persistence Rates by Treatment Cohort



P<0.0001 for between-group differences.  
PTNS, percutaneous tibial nerve stimulation.