



12780 El Camino Real, San Diego, CA 92130 (858) 617-7600

### Treatment Patterns in Parkinson's Disease

Thank you for contacting Neurocrine Biosciences with your unsolicited Medical Information request regarding the treatment patterns in Parkinson's Disease (PD).

This retrospective claim's analysis used health insurance claims data from Humana®, a dataset containing claims from 22 million patients. The analysis included data from patients with diagnosed Parkinson's disease (PD) (ICD-9 or ICD-10 coding) from January 2007 to March 2017. Inclusion criteria included at least one ICD-9 or ICD-10 code for PD, at least one PD medication fill, as well as 6-months of pre-index data (index date was set as the date of first diagnosis code) as well as 2-, or 5-years of follow-up data after diagnosis to create two separate cohorts.<sup>1</sup>

In each of the two cohorts (2-year, and 5-year) the number of PD medication classes (carbidopa/levodopa [CD/LD], dopamine agonists [DA], monoamine oxidase B inhibitor [MAOB], catechol-o-methyltransferase [COMT]inhibitor, amantadine, or antimuscarinic) for where a patient had at least one fill was tracked. A focus was placed on the first two medication classes filled for patients with 2+ medication classes used within 2-years or 5-years.

The analysis included 18,285 patients in the 2-year cohort and 5,480 in the 5-year cohort. In both cohorts the majority of patients were 65 years of age or older at baseline (2-year Cohort, 88.8%; 5-year Cohort, 88.0%), and were predominately male (2-year Cohort, 53.8%; 5-year Cohort, 52.0%), and white (2-year Cohort, 85.6%; 5-year Cohort, 85.8%) (Table 1). In the 2- year cohort 11,945 (65.3%) had only one PD medication class fill, 2,672 (48.8%) in the 5-year cohort. In the 2-year cohort, of the 6,300 patients who had one fill or more for more than one PD medication class. The most common first line medication classes were CD/LD (56.0%), followed by DAs (22.3%) and MAOBs (8.5%). Similar results were seen in the 2,798 patients in the 5-year cohort who had one fill or more for more than one PD medication class: CD/LD (58.8%), followed by DAs (19.9%) and MAOBs (8.0%).

For the 3,527 patients who started on CD/LD, adjunct medication use in the second line was primarily DAs (49.4%) followed by MAOBs (19.4%), COMTs (11.5%), amantadine (11.5%) and antimuscarinics (8.2%) [Data from 2-year cohort]. Similar results were once again seen in the 5-year cohort: DAs (47.7%), followed by MAOB-I (18.0%), COMT-I (14.4%), amantadine (11.7%), and antimuscarinics (8.2%).



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**Table 1: Patient Characteristics, 2-year and 5-year cohorts**

Characteristic	2-Year Follow-up (N=18,285)	5-Year Follow-up (N5,480)
<b>Male, n (%)</b>	9,846 (53.8)	2,849 (52.0)
<b>Age category, n (%)</b>		
≤39 years	35 (0.2)	8 (0.1)
≥40 to 49 years	207 (1.1)	77 (1.4)
≥50 to 54 years	308 (1.7)	117 (2.1)
≥55 to 59 years	555 (3.0)	184 (3.4)
≥60 to 64 years	947 (5.2)	276 (5.0)
≥65 to 69 years	2,723 (14.9)	936 (17.1)
≥70 to 74 years	4,060 (22.2)	1,301 (23.7)
≥75 to 79 years	4,033 (22.1)	1,232 (22.5)
≥80 to 84 years	3,123 (17.1)	864 (15.8)
≥85 to 89 years	917 (5.0)	129 (2.4)
≥90 years	1,377 (7.5)	356 (6.5)
<b>Race, n (%)</b>		
White	15,650 (85.6)	4,704 (85.8)
Black	1,351 (7.4)	406 (7.4)
Other/Unknown	1,284 (7.0)	370 (6.8)
<b>Number of PD classes/drugs, n (%)</b>		
One	11,945 (65.3)	2,672 (48.8)
Two	4,298 (23.5)	1,212 (22.1)
Three	1,624 (8.9)	1,130 (20.6)
Four	324 (1.8)	374 (6.8)
Five	54 (0.3)	82 (1.5)

**This letter and the enclosed material are provided in response to your unsolicited medical information inquiry. Please feel free to contact Neurocrine Medical Information at (877) 641-3461 or [medinfo@neurocrine.com](mailto:medinfo@neurocrine.com) if you would like to request additional information.**

References:

1. Serbin M, Yonan C. Treatment Patterns in Parkinson’s Disease. Poster presented at the 2018 Academy of Managed Care Pharmacy Nexus Meeting, Orlando, FL.

Enclosures:

1. Serbin M, Yonan C. Treatment Patterns in Parkinson’s Disease. Poster presented at the 2018 Academy of Managed Care Pharmacy Nexus Meeting, Orlando, FL.