

Draw the line on

COPD

Exacerbations

Come test your
knowledge on COPD!

In this short interactive experience, you'll engage with several datasets related to COPD exacerbations. Leverage your expertise to help you predict the study outputs as you explore the three unique prompts.

Start Now >

Impact of Exacerbation on Lung Function

Instructions

Drag each circle along the dotted lines to create a line plot of what you think the mean change in FEV₁ may look like in the weeks leading up to and following a moderate/severe COPD exacerbation.

Based on one study, what do you believe may be the potential impact of a moderate/severe COPD exacerbation on FEV₁?

Study Design

This was a multinational, randomized, double-blind, parallel-group, active-controlled, 52-week study in patients with severe to very severe COPD. Patients entered a 6-week triple-therapy run-in with LAMA and LABA/ICS

Patients were randomized to either continue triple therapy for 52 weeks or to continue receiving dual bronchodilator therapy while discontinuing ICS in a stepwise manner over 12 weeks

Patients were ≥40 years of age, either current or former smokers, diagnosed with severe or very severe COPD,* and had a history of at least one documented exacerbation in the year prior to screening

The primary endpoint was the time to the first moderate or severe COPD exacerbation during the 12-month study period

In this study, the changes in FEV₁ were measured before and after exacerbations.

Mean ±SE change in FEV₁ (L)

-0.03
-0.04
-0.05
-0.06
-0.07
-0.08
-0.09
-0.10

-8 -7 -6 -5 -4 -3 -2 -1 1 2 3 4 5 6 7 8

Weeks from moderate/severe exacerbation

Time of Exacerbation



*Defined as an FEV₁ <50% of the predicted volume and <70% of the forced vital capacity after bronchodilation. Watz H, Tetzlaff K, Magnussen H, et al. Spirometric changes during exacerbations of COPD: a post hoc analysis of the WISDOM trial. *Respir Res.* 2018;19(1):251.



Impact of Exacerbations on Lung Function

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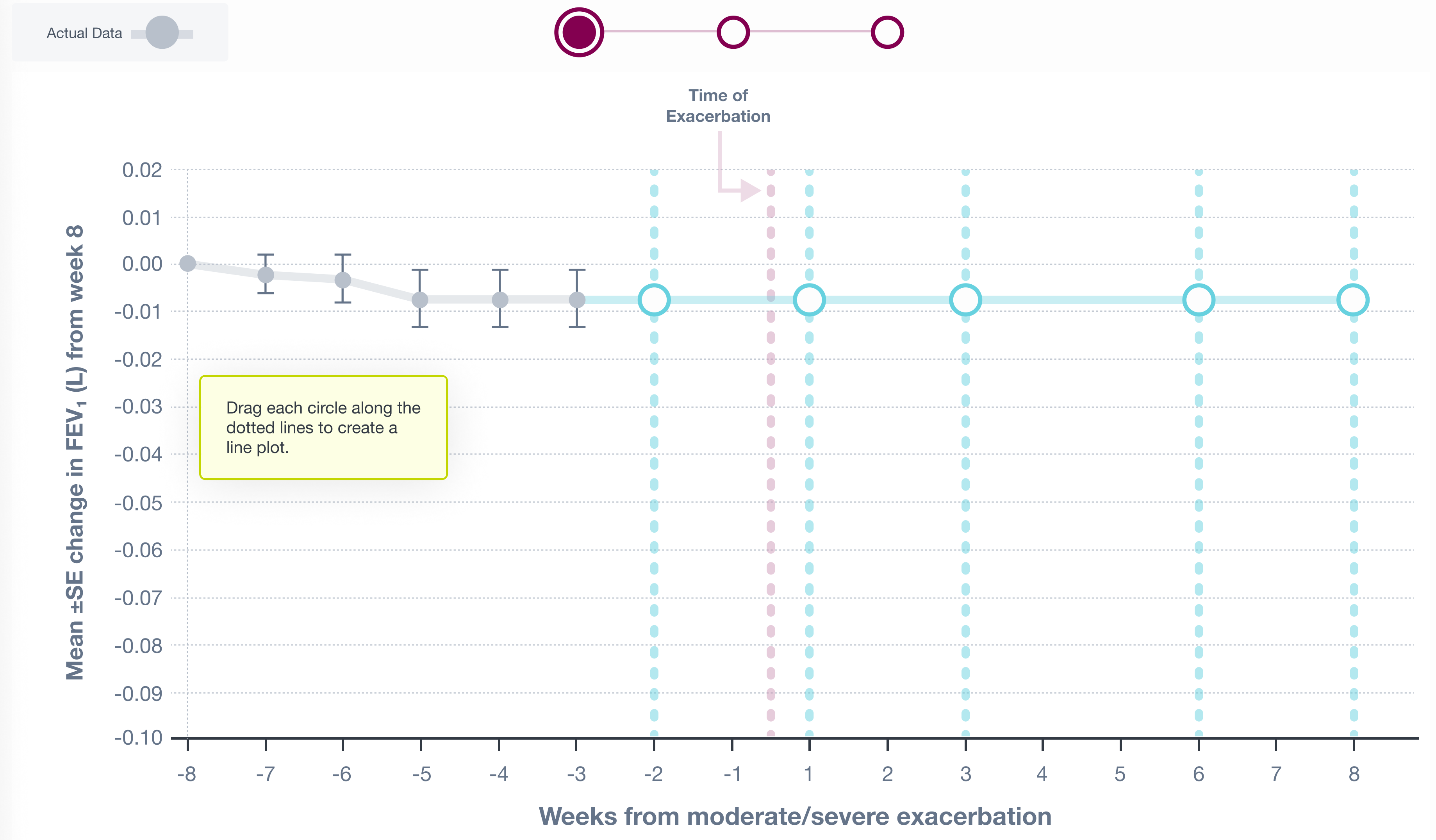
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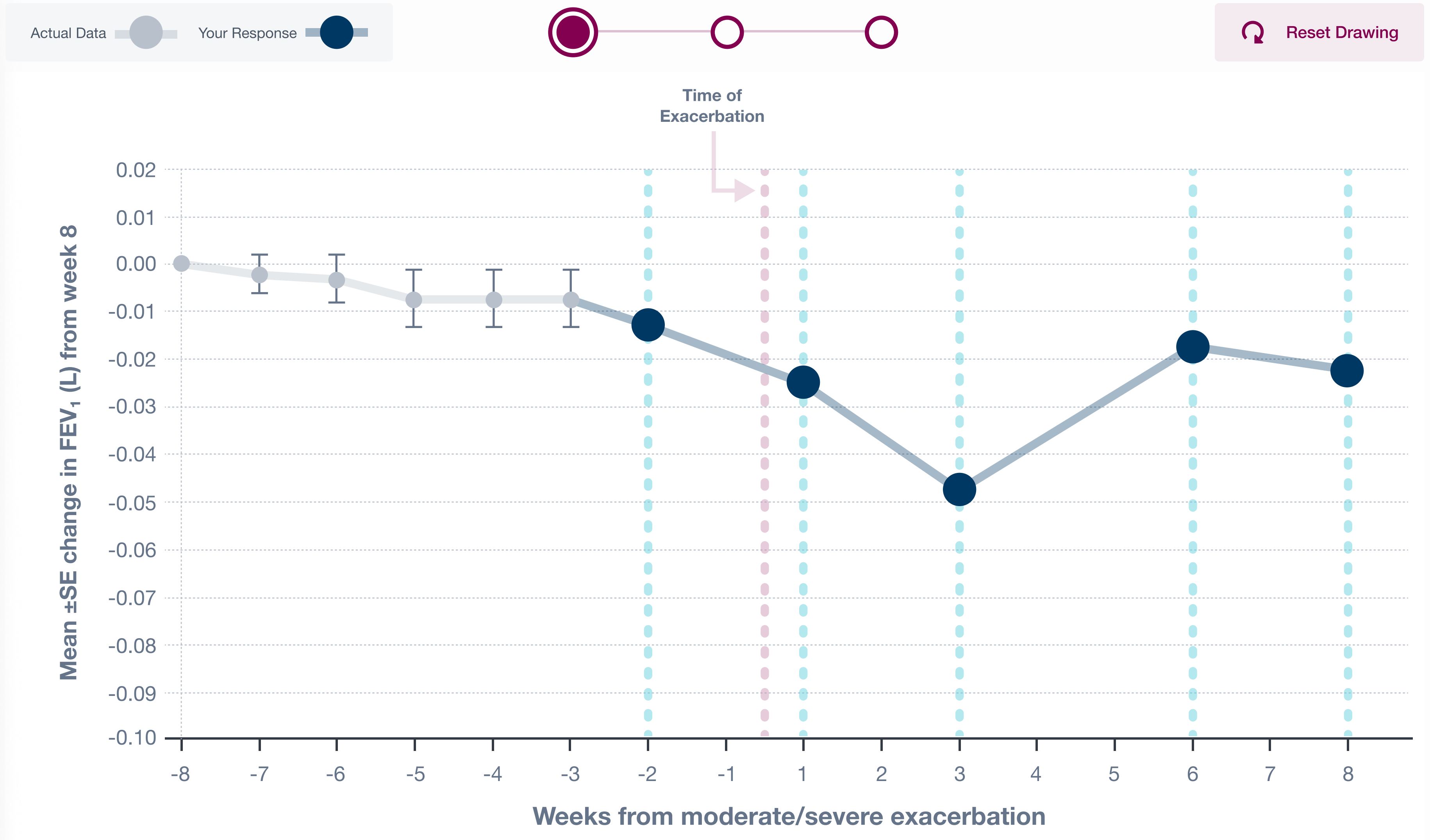
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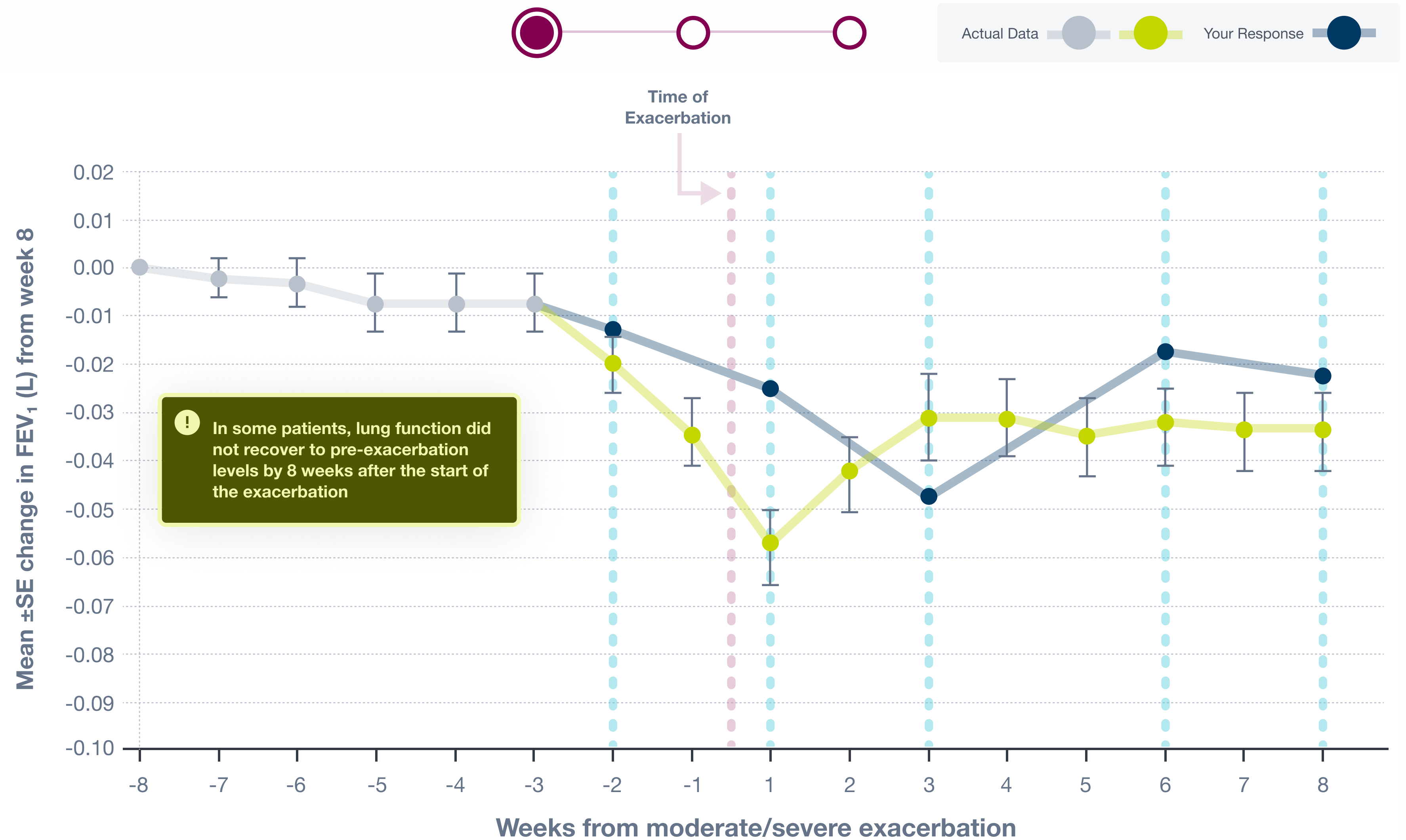
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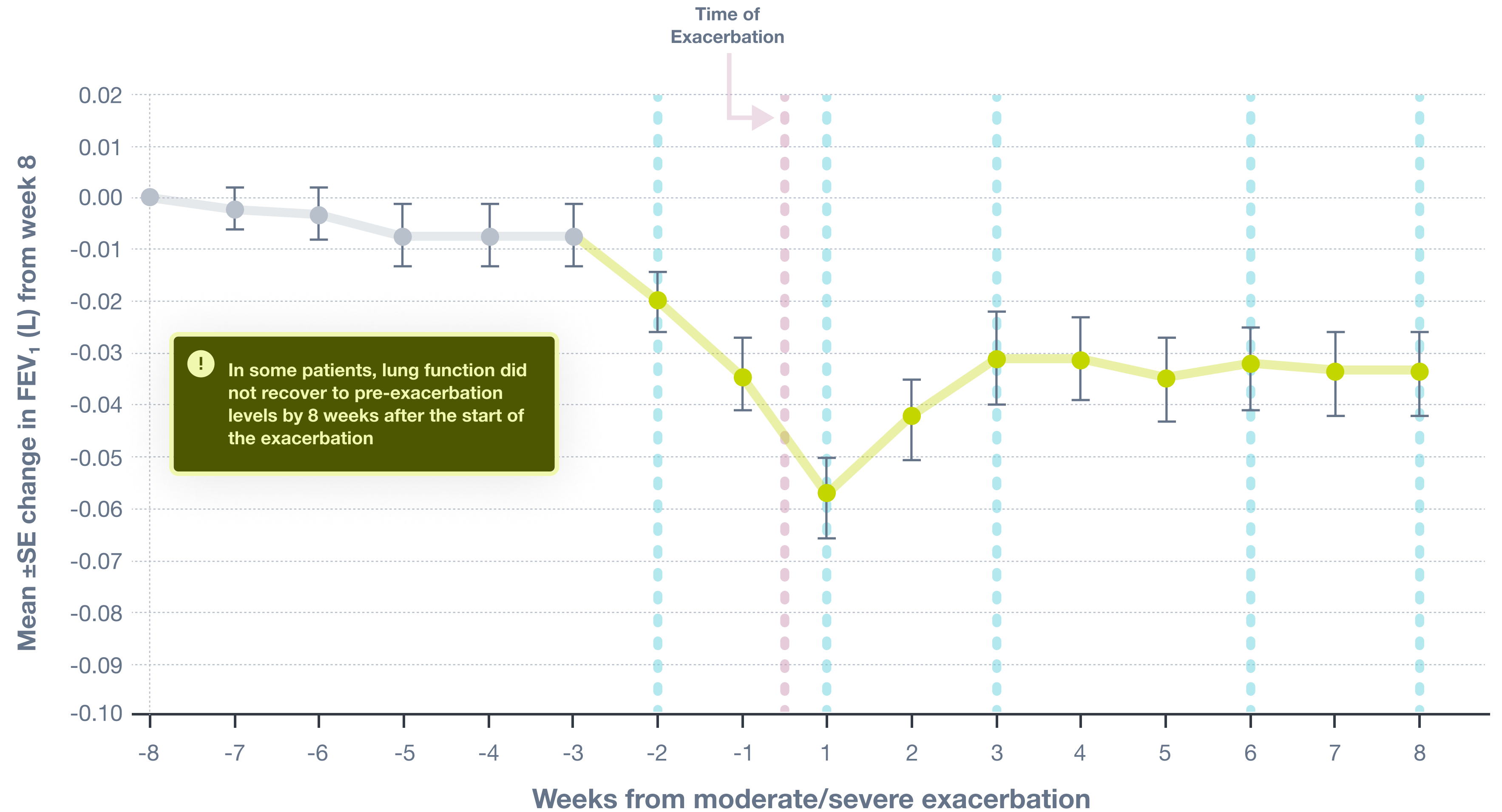
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Risk of Future Exacerbations

Based on one study, how do you think exacerbation history predicts the risk of future exacerbations?



Study Design

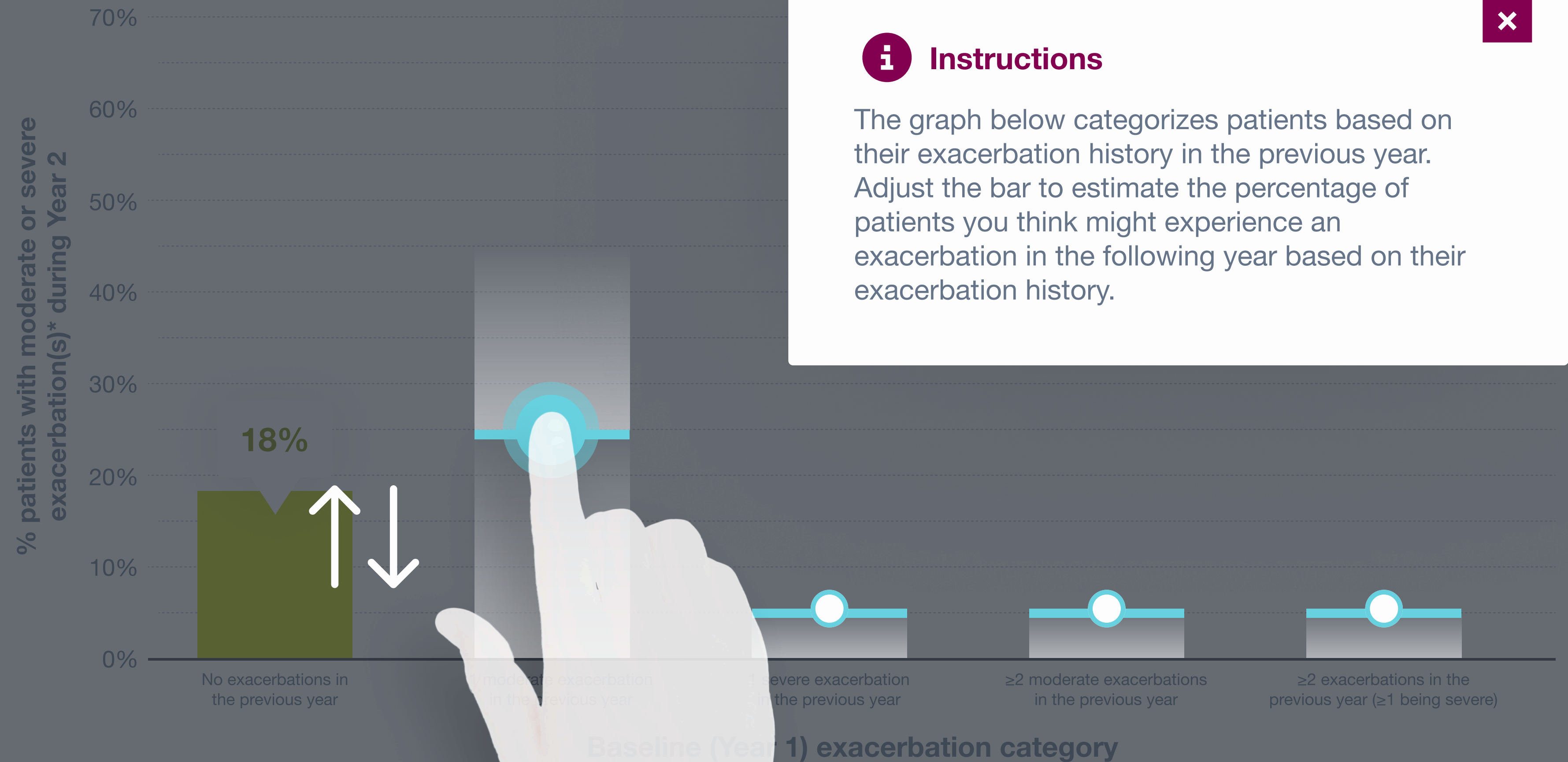
This was a retrospective cohort study that utilized 100% Medicare FFS claims data (~1.5 million patients) to identify patients with COPD exacerbations, treatments, and health care utilization

Patients were stratified by baseline exacerbation categories in the 1st year and subsequently evaluated in the 2nd year based on a prespecified number and severity of exacerbations observed in the 1st year

Patients included in the study were ≥40 years of age with at least one inpatient visit, or one ED visit, or two outpatient medical visits at least 30 days apart between January 1, 2015 and December 31, 2015 with a diagnosis code for COPD in any position on the claim

The purpose of this study was to observe the effects of moderate and/or severe COPD exacerbations on future exacerbations and healthcare costs

Actual Data 



Instructions

The graph below categorizes patients based on their exacerbation history in the previous year. Adjust the bar to estimate the percentage of patients you think might experience an exacerbation in the following year based on their exacerbation history.

FFS, fee-for-service.

*Moderate exacerbations were defined as COPD-related outpatient or ED visits with a systemic corticosteroid or antibiotic claim within 37 days of the visit and severe exacerbations as hospitalizations with a primary COPD diagnosis.

Sethi S, Make BJ, Robinson SB, et al. Relationship of COPD exacerbation severity and frequency on risks for future events and economic burden in the Medicare fee-for-service population. *Int J Chron Obstruct Pulmon Dis.* 2022;17:593-608.



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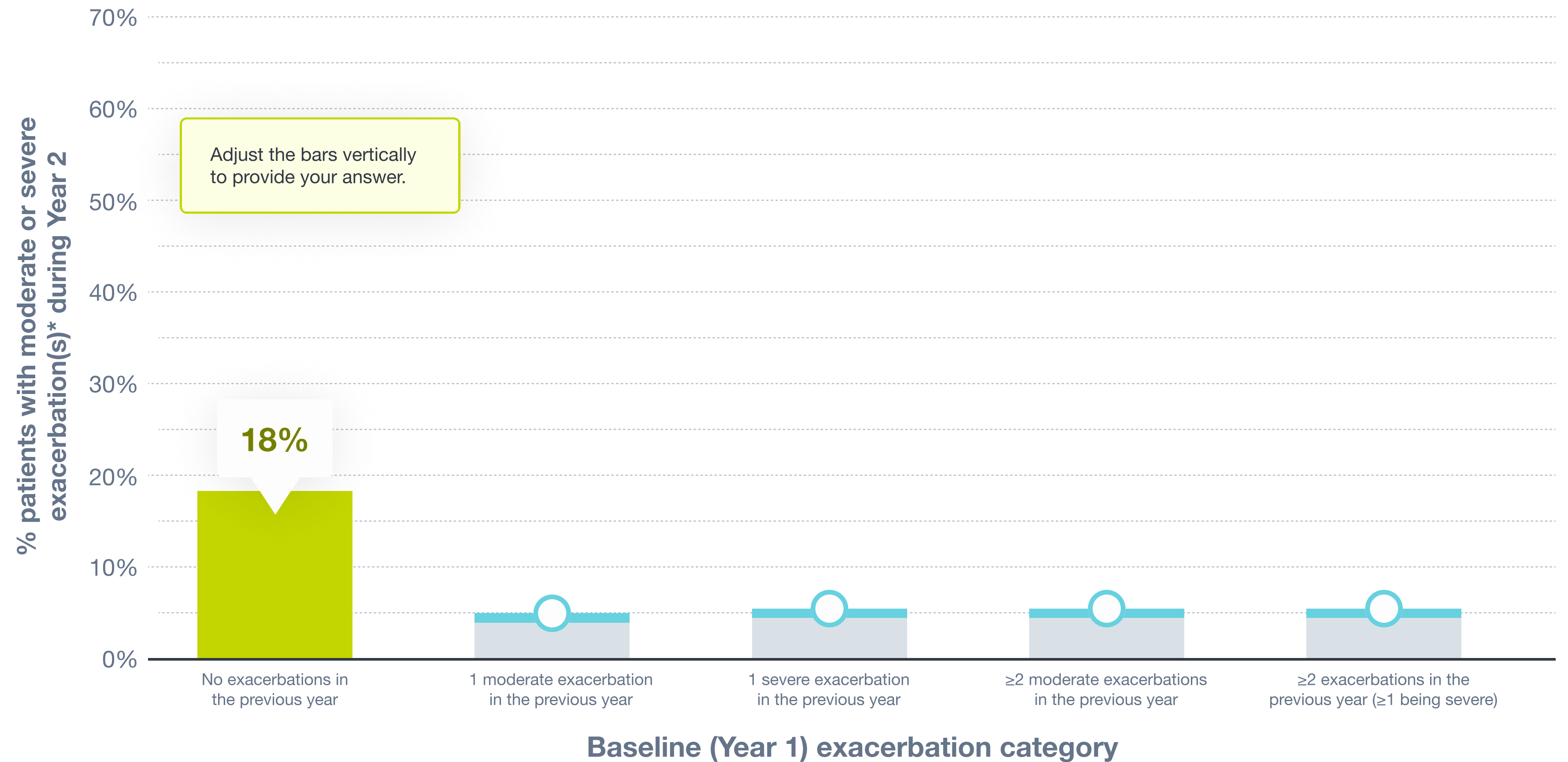
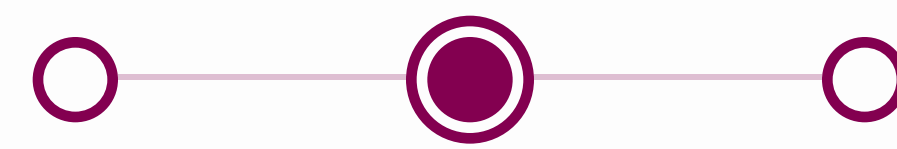
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Actual Data 



18%

Adjust the bars vertically to provide your answer.

Baseline (Year 1) exacerbation category

Skip to See Answer >

Submit Answer

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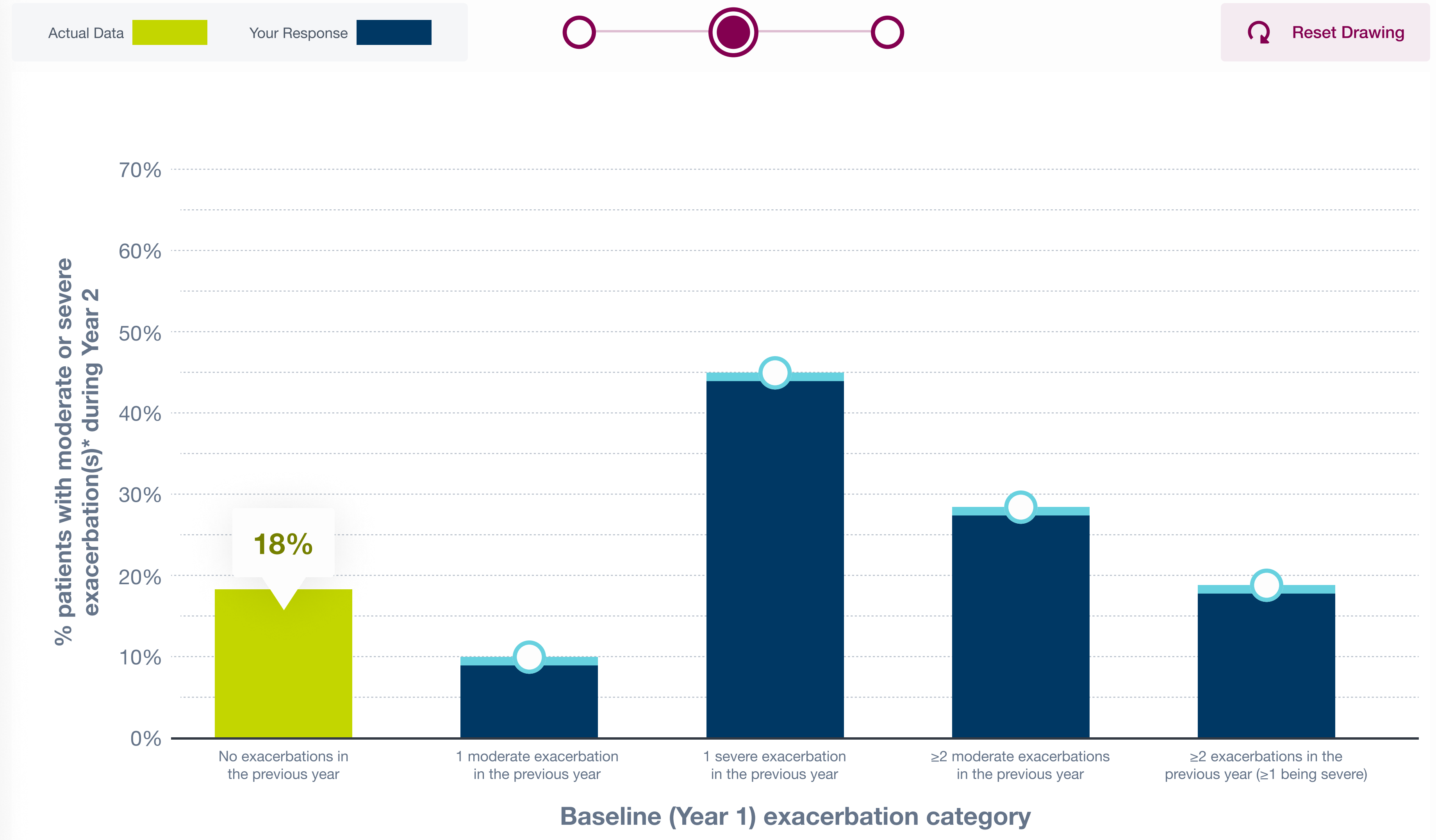
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[Skip to See Answer >](#)

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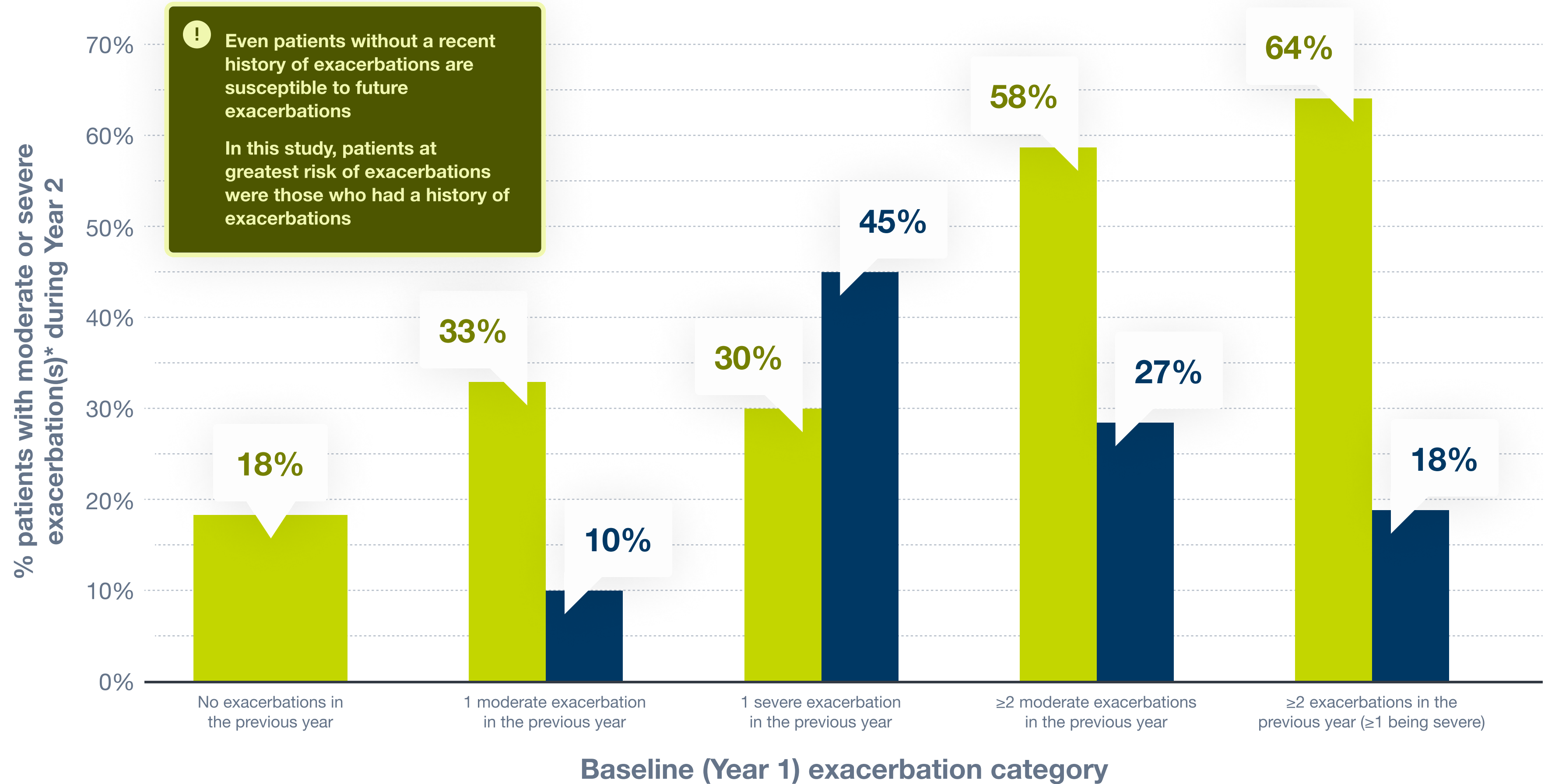
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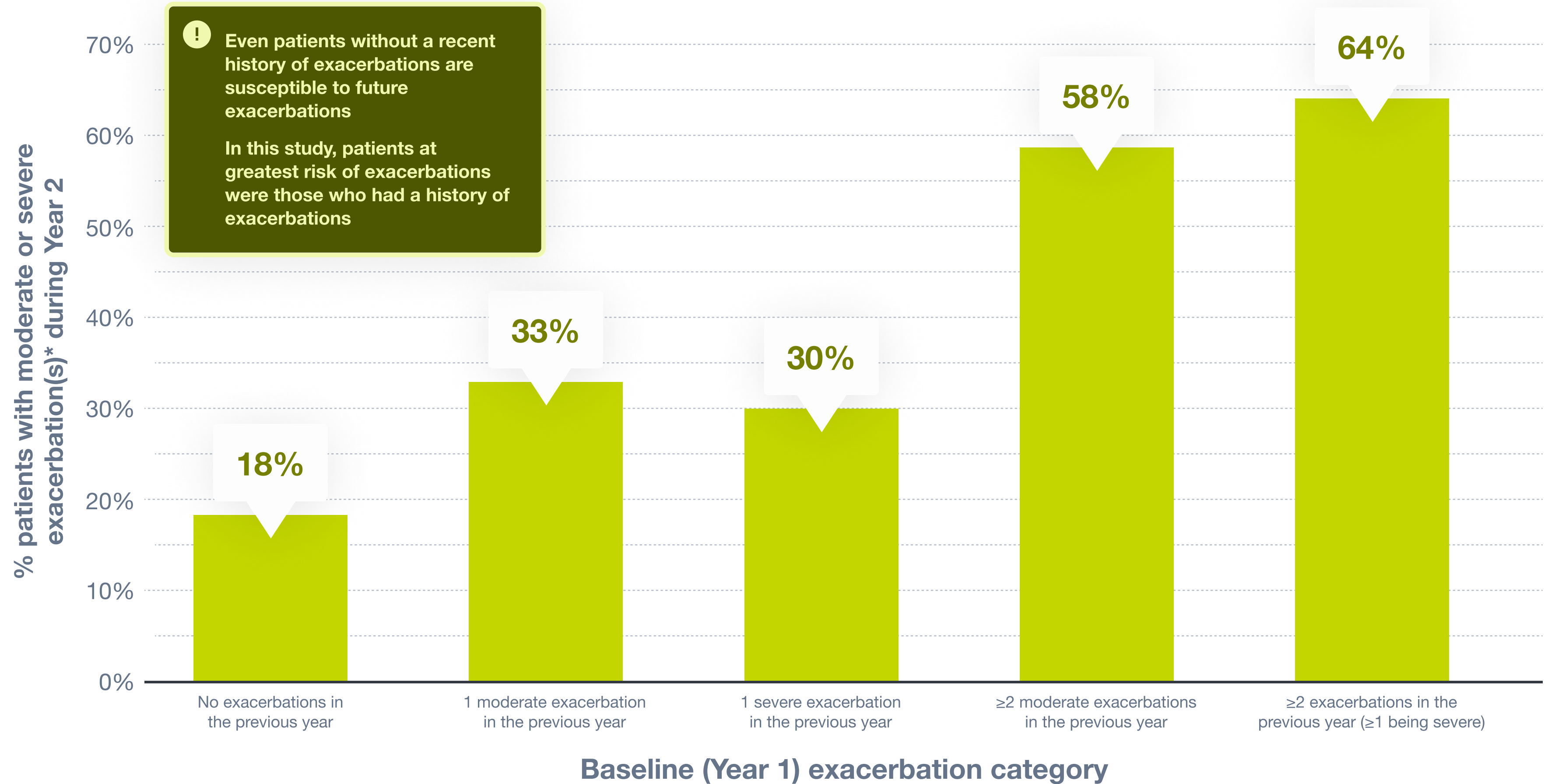
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COPD Exacerbations During the 12-Month Follow-Up Period

Timing of Treatment Initiation for COPD

How do you think timing of triple therapy initiation following an exacerbation may impact the risk of future exacerbations?



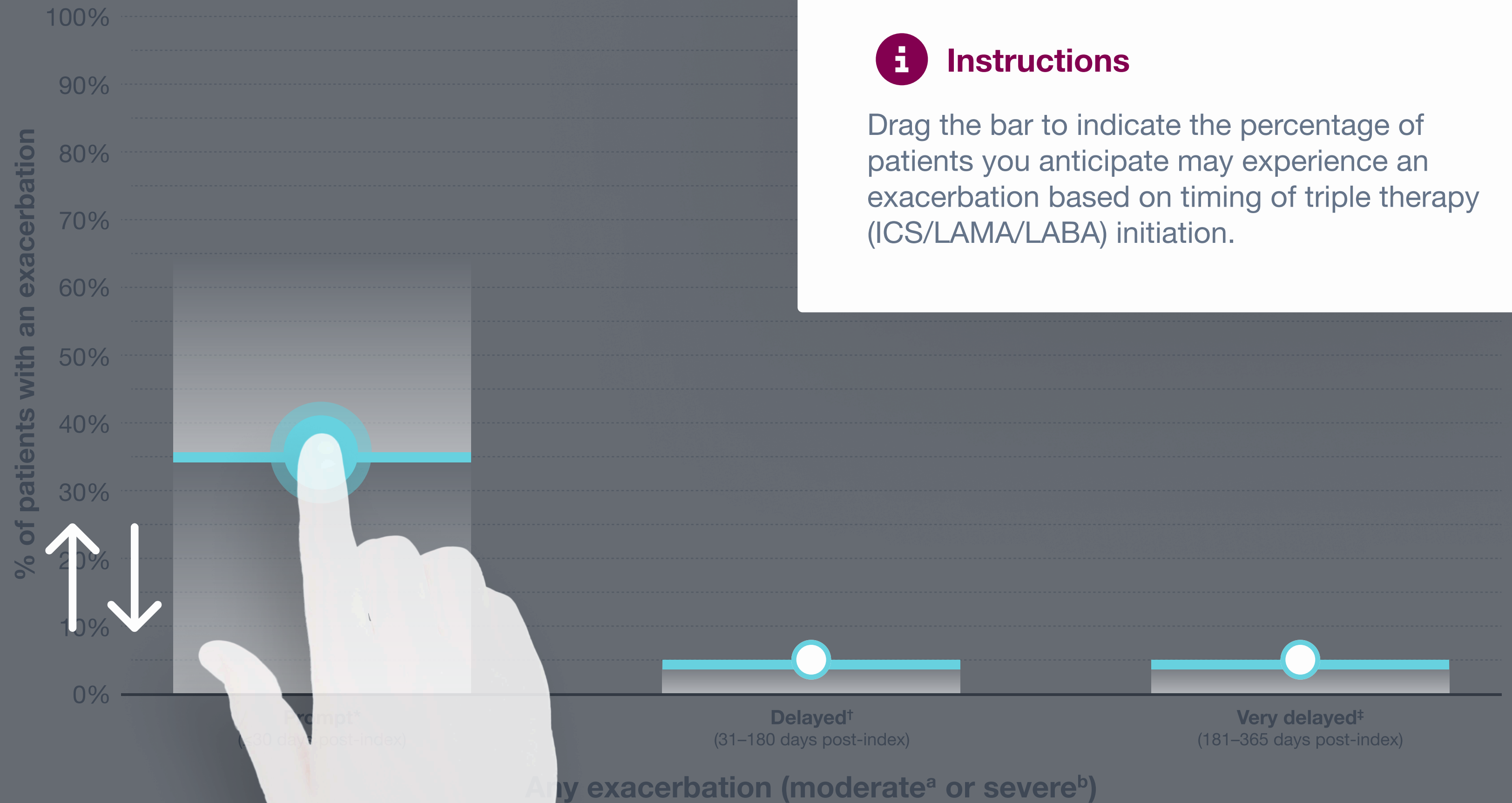
Study Design

The PRIMUS study was a retrospective observational analysis of US healthcare claims data in patients ≥ 40 years old with COPD that evaluated outcomes during a 12-month follow-up period according to the time from the index COPD exacerbation to initiation of triple therapy

Index exacerbation date was defined as the earliest of the first severe^b event or second moderate^a event occurring in the 12-month baseline period prior to triple therapy initiation

Evidence of triple therapy was required between January 1, 2011 and March 31, 2019, defined as either one pharmacy claim for a closed triple therapy product containing ICS/LABA/LAMA, or separate pharmacy claims for each component of triple therapy with at least 14 consecutive and 30 total days of overlap between all components during a 90-day period

Patients were stratified by triple therapy timing: prompt (≤ 30 days post-index), delayed (31–180 days), very delayed (181–365 days)



Instructions



Drag the bar to indicate the percentage of patients you anticipate may experience an exacerbation based on timing of triple therapy (ICS/LAMA/LABA) initiation.

^aModerate exacerbations were defined as either a) an outpatient medical claim (office or emergency department [ED]) with a COPD diagnosis and a pharmacy claim for a short course (≤ 14 days) of a systemic corticosteroid or antibiotic within ± 7 days, or b) an outpatient medical claim with a COPD diagnosis code and a procedure code for a corticosteroid injection. ^bSevere exacerbations were defined as inpatient admissions with a primary diagnosis of COPD. ^{*}Triple therapy within 30 days after or on the index exacerbation date. [†]Triple therapy between 31 and 180 days after index exacerbation. [‡]Triple therapy between 181 and 365 days after index exacerbation. Tkacz J, Evans KA, Touchette DR, et al. PRIMUS - Prompt Initiation of Maintenance Therapy in the US: a real-world analysis of clinical and economic outcomes among patients initiating triple therapy following a COPD exacerbation. *Int J Chron Obstruct Pulmon Dis*. 2022;17:329-342.



Timing of Treatment Initiation for COPD

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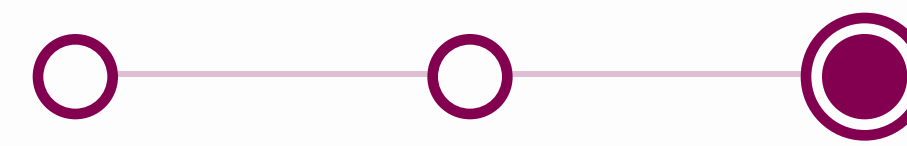
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COPD Exacerbations During the 12-Month Follow-Up Period



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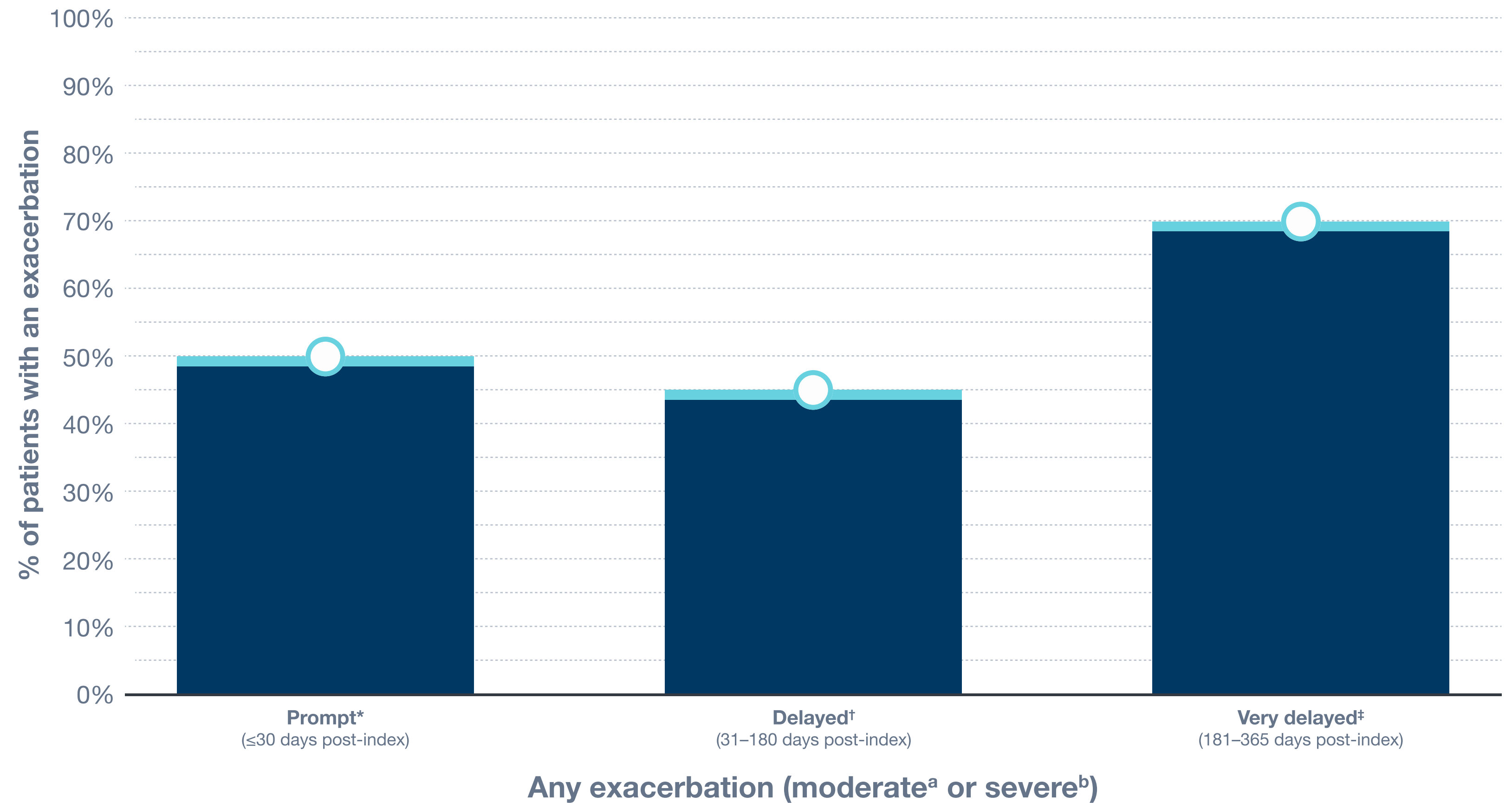
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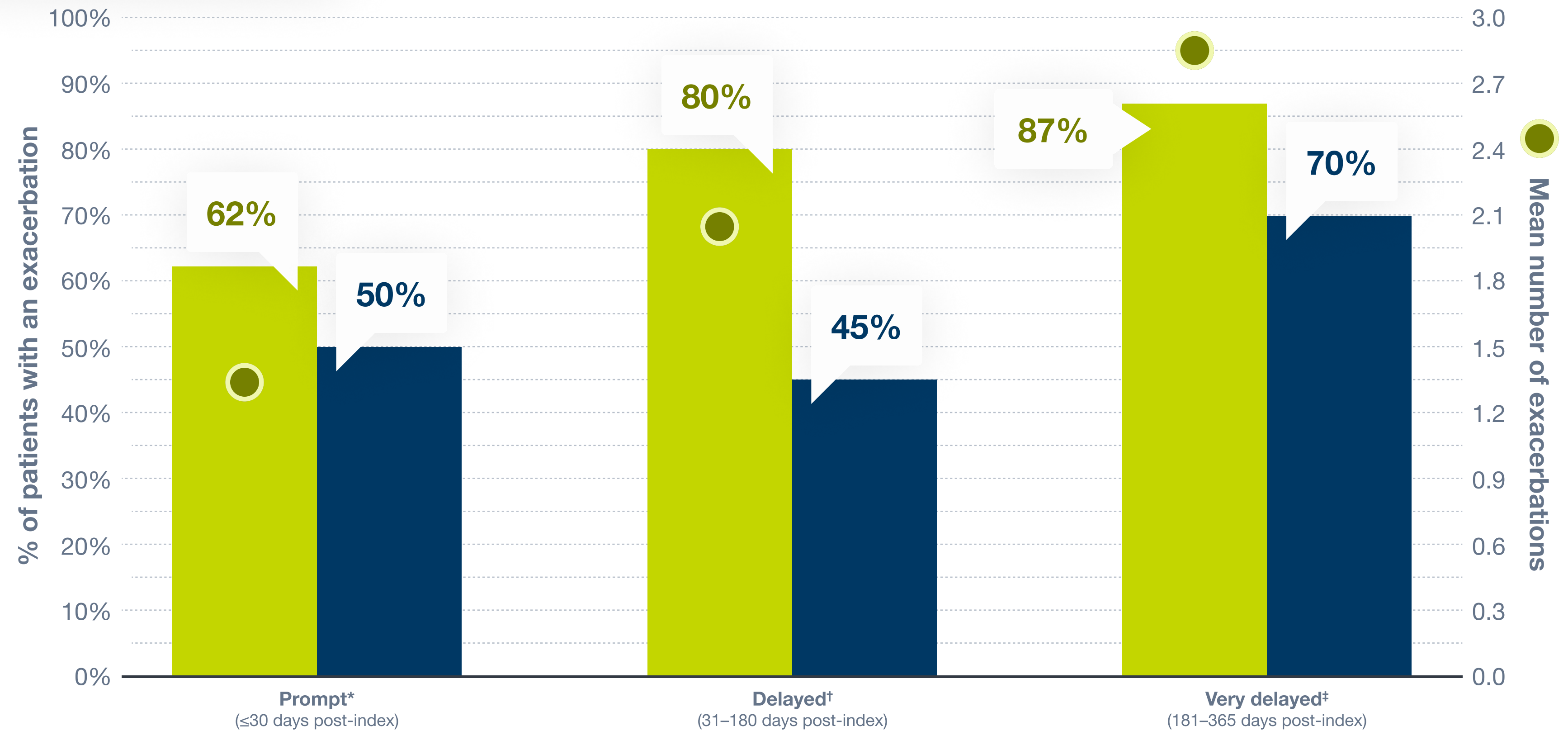
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! Delay in initiating triple therapy increased the likelihood of subsequent exacerbations compared to those who received triple therapy ≤30 days after their index exacerbation

COPD Exacerbations During the 12-Month Follow-Up Period



Any exacerbation (moderate^a or severe^b)

Continue >

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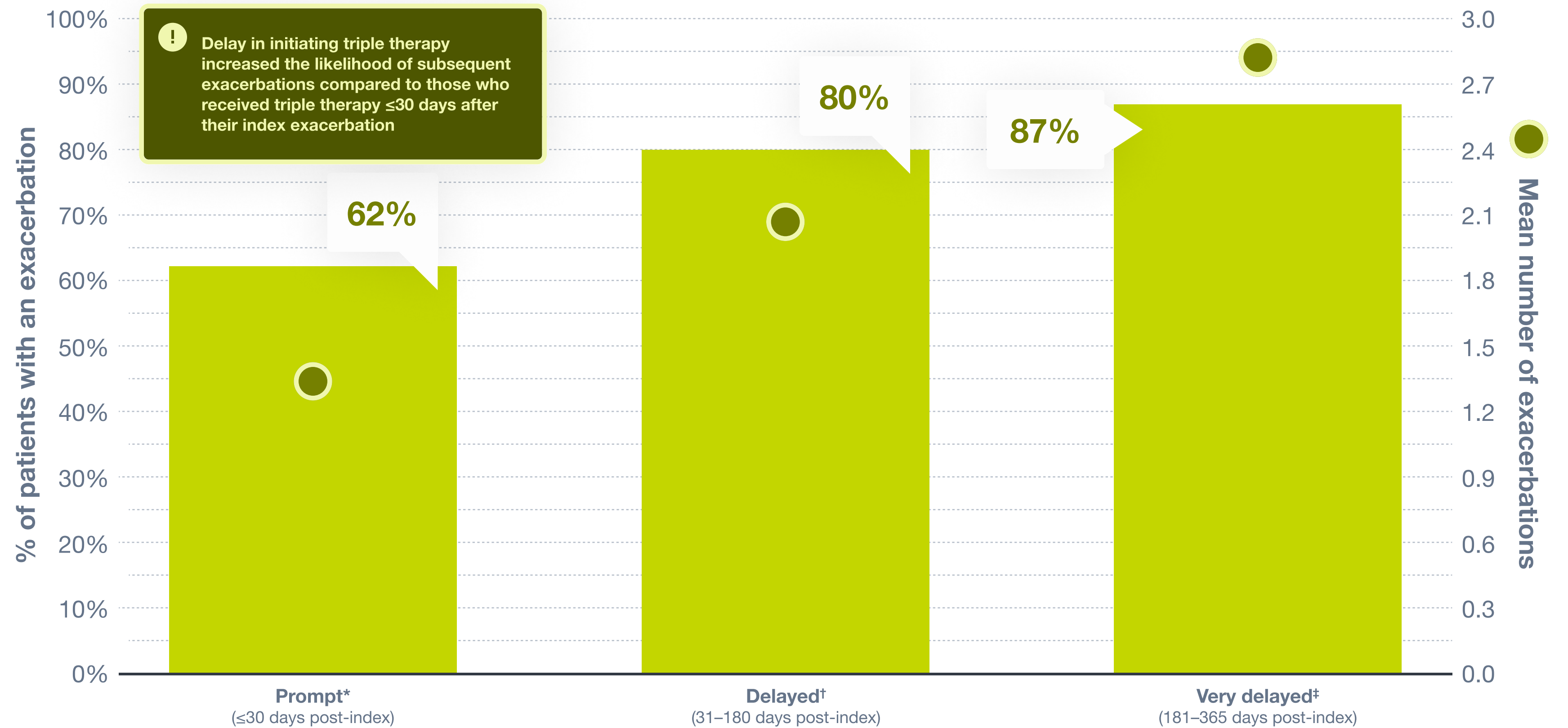
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draw the line on

COPD

Exacerbations?

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draw the line**

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any questions you may have.

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