



# Uncovering Oncologists' Gaps and Attitudes Toward Biosimilars: Impact of a 2-Phase Educational Program

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## Background

- Biosimilars are biological products designed to be equivalent to an already-approved biologic. The first 2 biosimilars were approved for oncology treatment by the FDA in 2017
- We sought to measure oncologists' understanding of biosimilars to identify and address educational gaps related to their clinical application and acceptance

## Methods

- We designed a 2-phase online educational program on biosimilars
  - Questions measuring clinicians' knowledge and competence were asked before and then repeated after the education was delivered
  - Clinicians also submitted their own questions about biosimilars
- To uncover key educational gaps, we identified questions with high incorrect responses at baseline, persistence of incorrect responses, and queries submitted by clinicians during Phase 1 of the education
  - These gaps were used to refine Phase 2 of the education

### Educational Phase 1

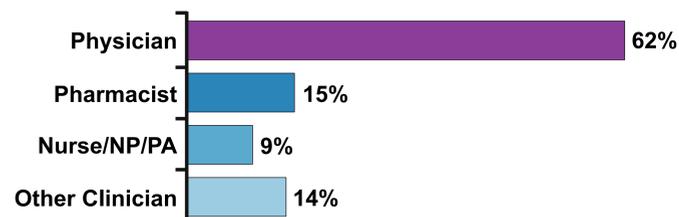


### Educational Phase 2



## Participant Demographics

- Between March 2017 and April 2018, N = 1763 clinicians self-identifying their specialty as oncology participated in the program
  - Results of other specialties will be presented in a future analysis



## Results: Competence in Using Biosimilars



### Gaps in Competence

- Among the subset of n = 404 oncology clinicians who answered at least 1 baseline or posteducation question in Phase 1 or Phase 2, we identified persistent pre-education misunderstandings about biosimilars

### Oncology Clinicians' Pre-education Gaps About Biosimilars

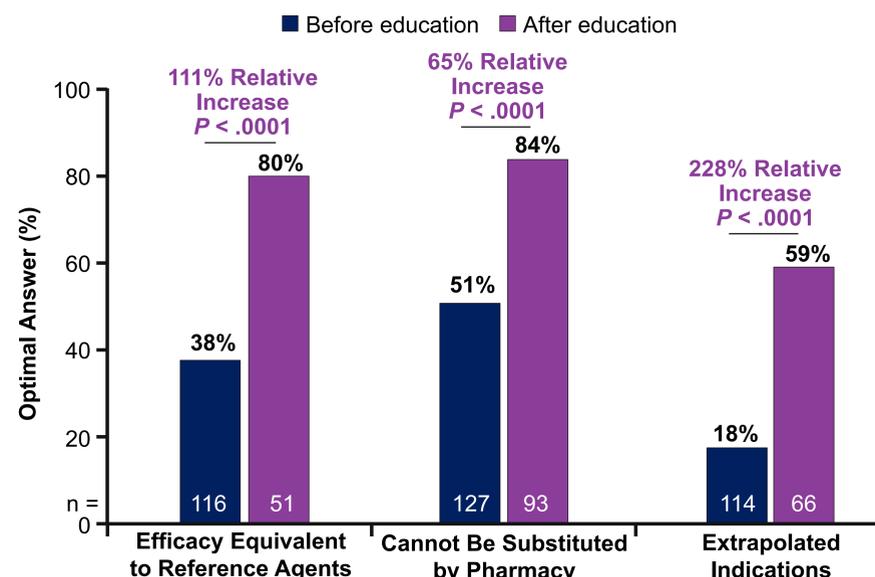
- 59% Mistakenly believed **efficacy** could differ from reference agent (n = 238)
- 66% Did not understand **substitution** rules in the US (n = 220)
- 82% Did not understand **extrapolation of indications** (n = 114)

**Switching, substitution, and extrapolation of indications** were also common concerns identified from clinician-submitted questions in Phase 1



### Improvement in Competence

- After Phase 2 of the education, oncology clinicians significantly improved their competence in all 3 domains



## Results: Clinician Attitudes



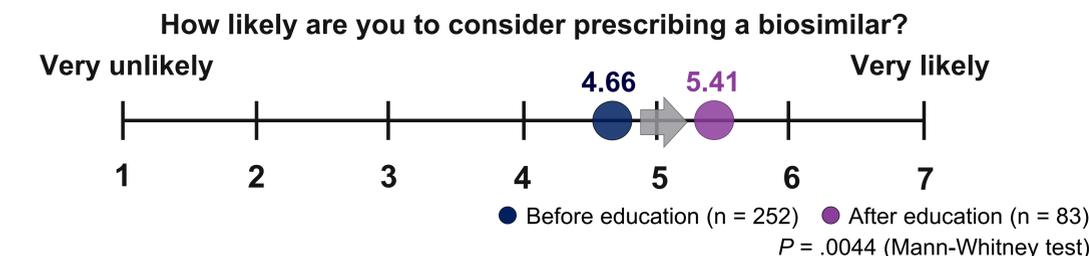
### Likelihood of Prescribing Biosimilars

- Oncology clinicians noted that patient education is a key factor required for acceptance of biosimilars

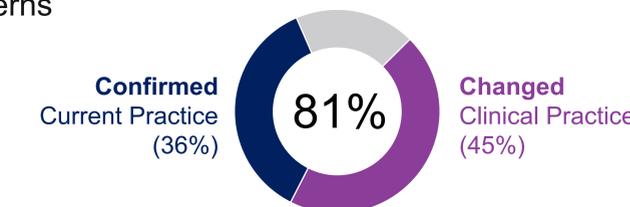
77%

Believed patients will accept biosimilars with appropriate explanation (n = 60)

- The education increased oncology clinicians' likelihood of prescribing a biosimilar



- As a result of the education, participants planned to change their practice patterns



## Conclusions

- Oncology clinicians' gaps in understanding of the **efficacy, substitution, and indications of biosimilars** may explain why some are reluctant to consider this new treatment option
  - Similar baseline gaps were observed in a separate CCO video program available at a similar time (Nov 2017 to April 2018)<sup>[1]</sup>
- This educational program increased oncology clinicians' competence with biosimilars, potentially removing barriers to their use
  - Similar education may further **increase oncology clinicians' willingness to consider biosimilars** as a treatment option for their patients