Improvements in cough severity and cough-related quality of life in a phase 2 trial with BLU-5937 in refractory chronic cough

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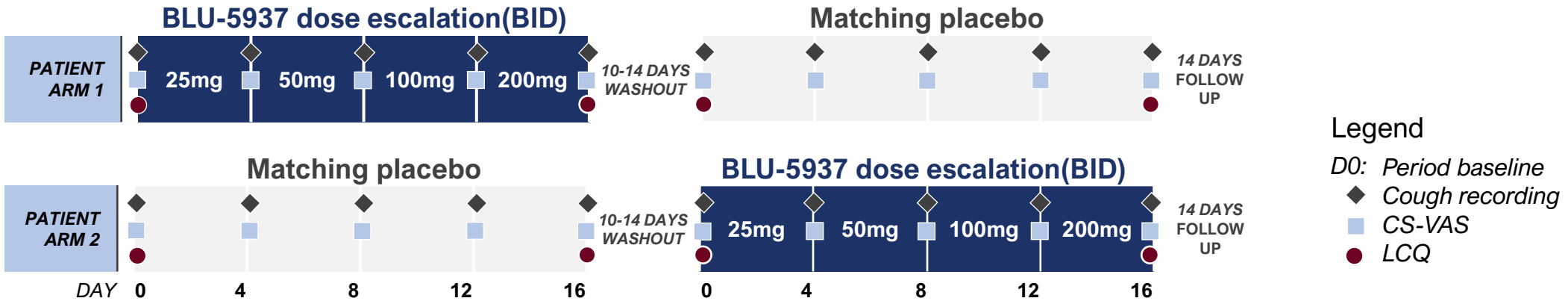
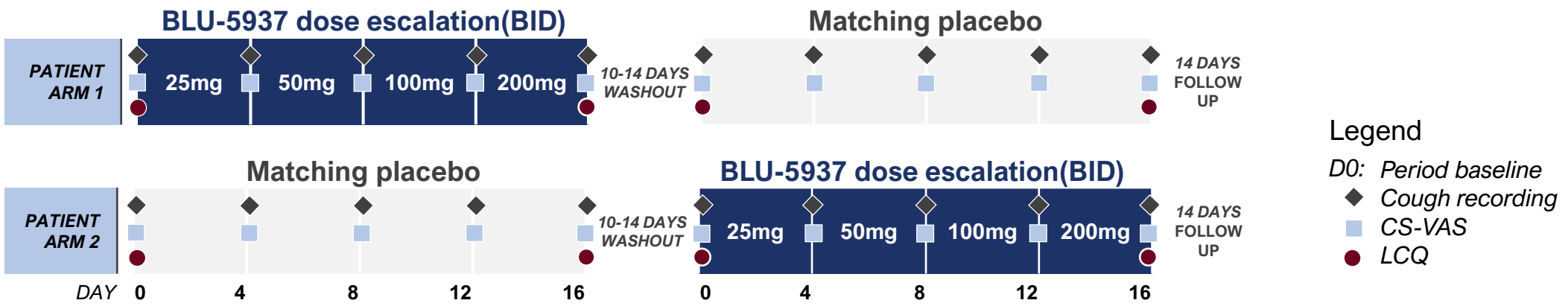
The RELIEF Study

- RELIEF (NCT03979638) assessed the safety and efficacy of BLU-5937 in subjects with refractory or unexplained chronic cough (RCC).
- Primary endpoint assessed placebo-adjusted change from baseline in awake cough frequency.
- Patient-reported cough severity was assessed using a visual analog scale (CS-VAS) at the end of each dose level.
- Impact of quality of life was assessed by the Leicester Cough Questionnaire (LCQ) at the end of the treatment period.



The RELIEF Study

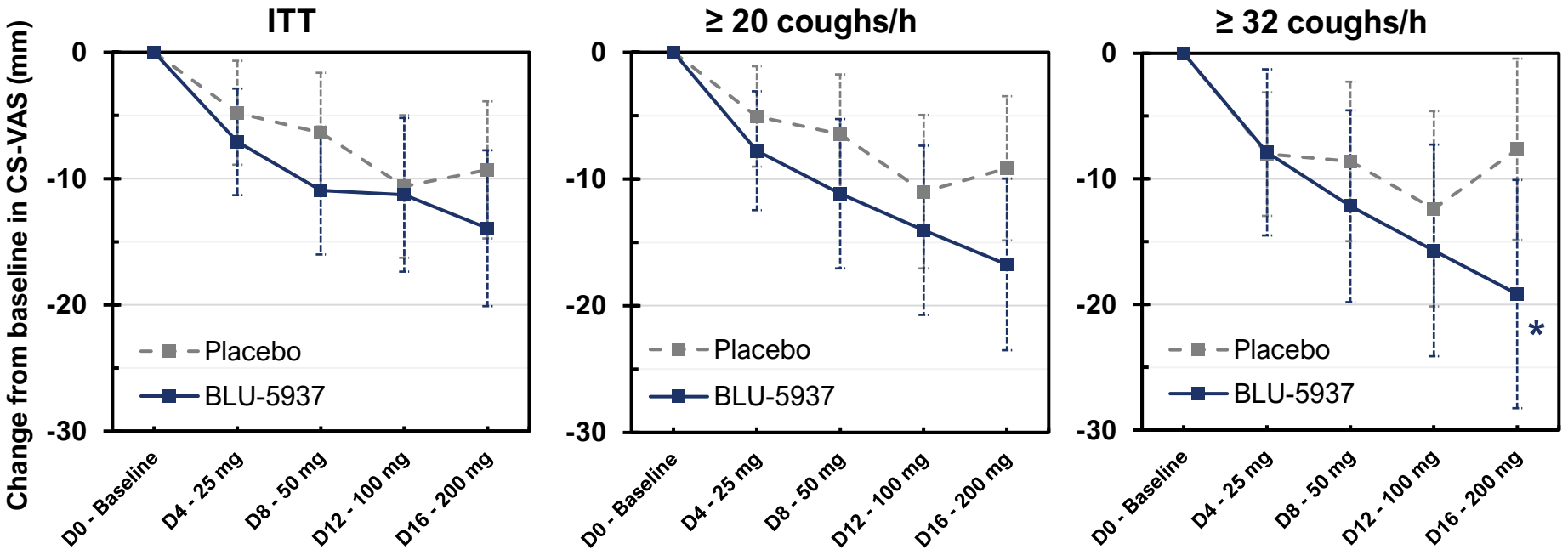
- In RELIEF, numerical reductions over placebo were observed at all doses in the Intent-to-treat (ITT) population but did not reach statistical significance. (Smith J et al. AJRCCM 2021;203:A1019)
- Significant (p <0.05) improvements over placebo were reported in pre-defined subgroups with awake cough frequencies at baseline ≥20 and ≥32 coughs/h. (Smith J et al. AJRCCM 2021;203:A1019)



Cough Severity Visual Analog Scale (CS-VAS)

- Participants scored the severity of their cough from 0 to 100 mm (worst cough imaginable).
- Steady, incremental improvements to CS-VAS over the 16 days treatment period.
- Subgroups with higher baseline cough frequency showed greater improvements over time.
- Improvements at D16 were statistically significant ($p < 0.05$) vs placebo in the subgroup ≥32 coughs/h.

Mean changes from baseline in CS-VAS



Placebo-adjusted CS-VAS change from baseline (Δ) at D16

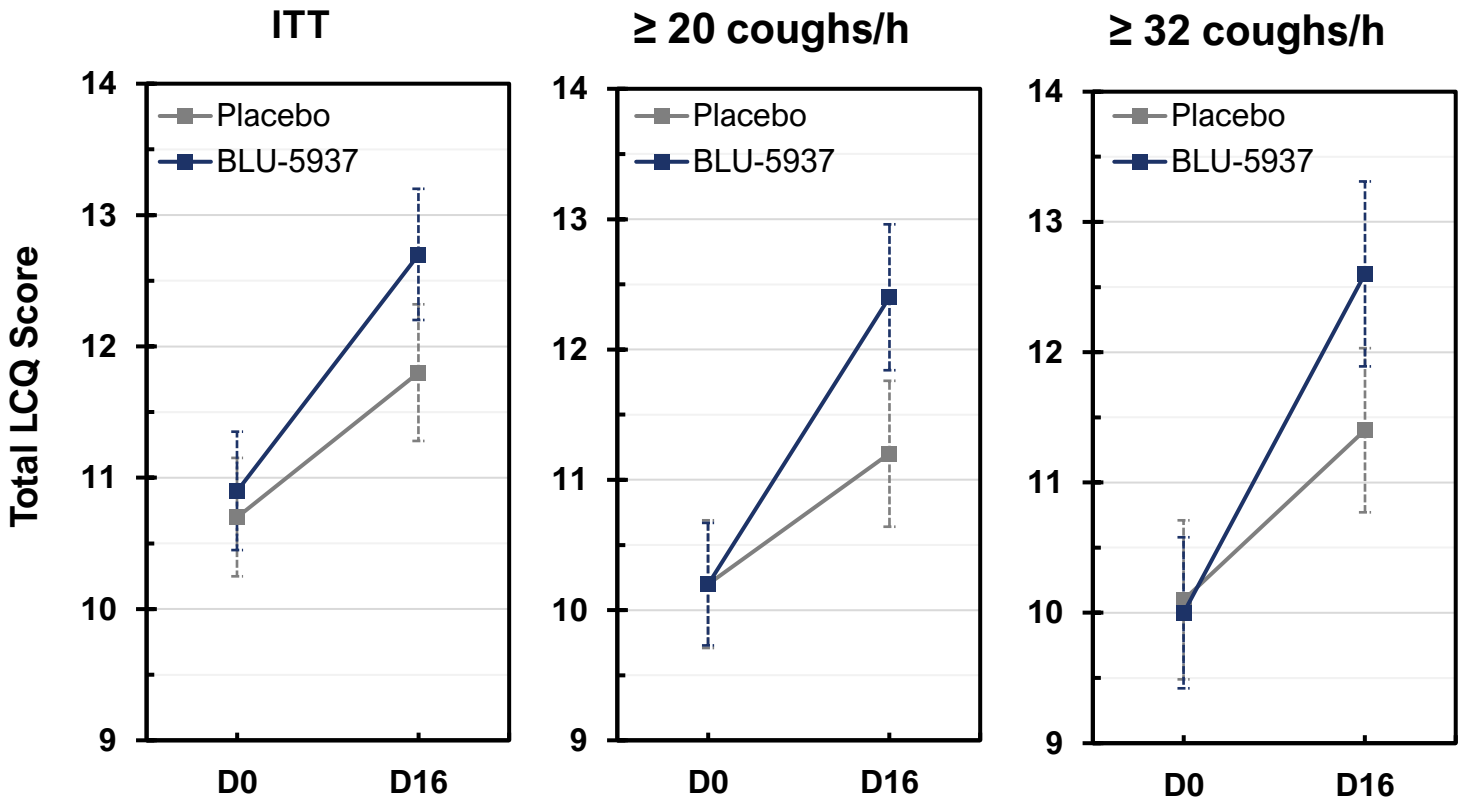
Group	Δ CS-VAS
ITT	- 4.6 mm
≥20 coughs/h	-7.6 mm
≥32 coughs/h	-11.5 mm *

* $p < 0.05$

Leicester Cough Questionnaire (LCQ)

- LCQ scores range from 3 to 21; lower scores reflect a lower quality of life.
- Both the ITT and subgroups improved from a moderate/severe burden on QoL (Cho et al. ERS2021) to a moderate/mild burden.
- Improvements in LCQ with BLU-5937 after 16 days exceeded the MCID (1.3): 1.7, 2.1 and 2.5 for the ITT, ≥20 and ≥32 coughs/h groups, respectively.
- In contrast, improvements during the placebo periods were 1.2, 1.2 and 1.4 for the ITT, ≥20 and ≥32 coughs/h, respectively.
- Improvements favored BLU-5937 in all groups but did not reach $p < 0.05$.

Changes from baseline in LCQ during placebo and treatment periods

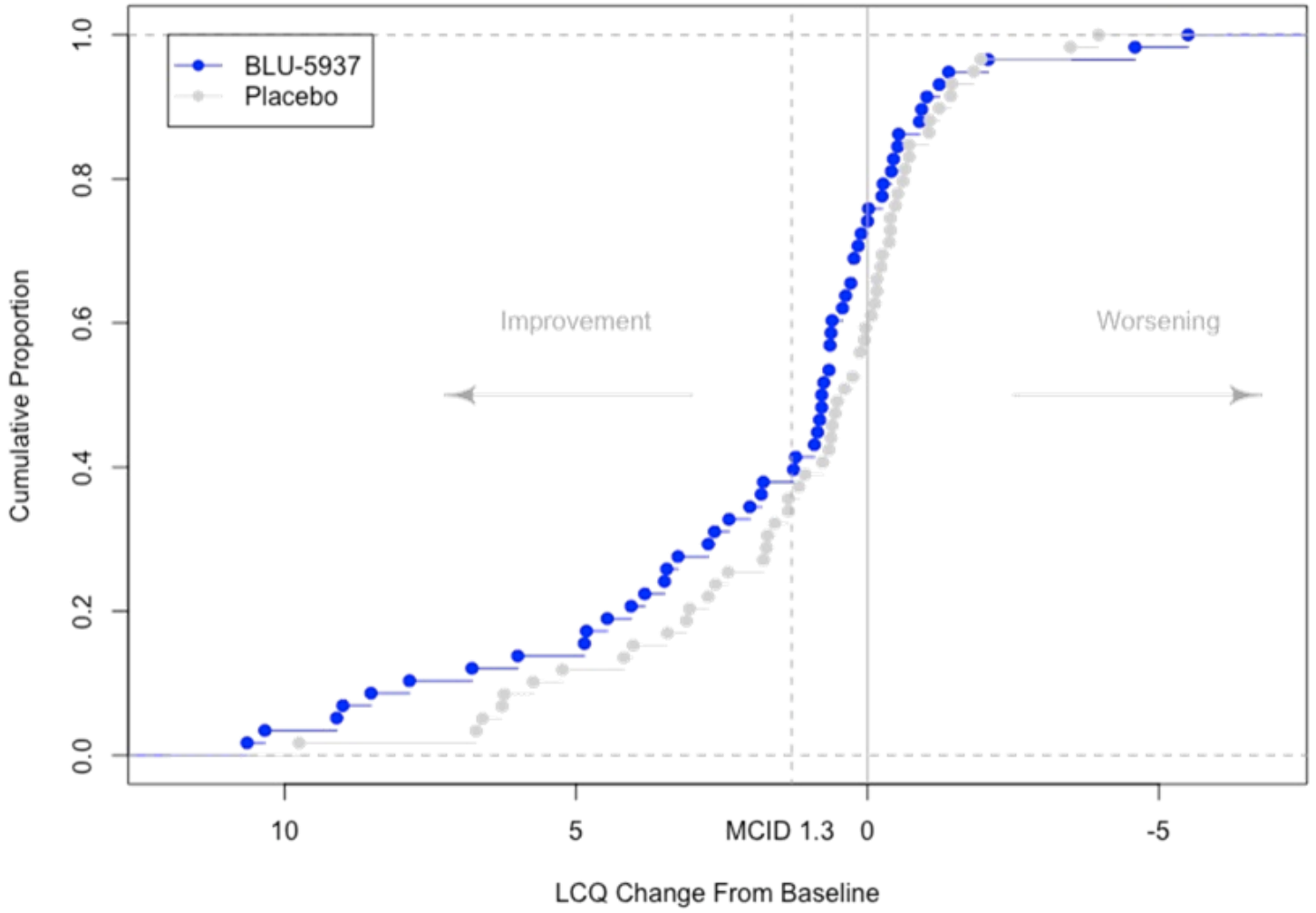


Standard error shown as error bars

Leicester Cough Questionnaire (LCQ)

- Empirical cumulative distribution function illustrate the proportion of responders over a range of LCQ changes from baseline.
- Participants were consistently more likely to experience LCQ improvements with BLU-5937 over placebo across all magnitudes of improvement.

Empirical cumulative distribution function of LCQ change from baseline



Conclusions

Over a 16-day treatment period, cough severity and QoL improvements in RELIEF numerically favored BLU-5937.

Greater benefits were observed in subgroups that demonstrated superior reductions in cough frequency.

Trends observed suggest that treatment with an optimal therapeutic dose over a longer period may show greater benefit.

Thank you to all RELIEF investigators!