

# DOES KNOWLEDGE OF BLOOD CALCIUM AT 2 DIM IMPACT DECISIONS OF CALCIUM SUPPLEMENTATION?

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## INTRO:

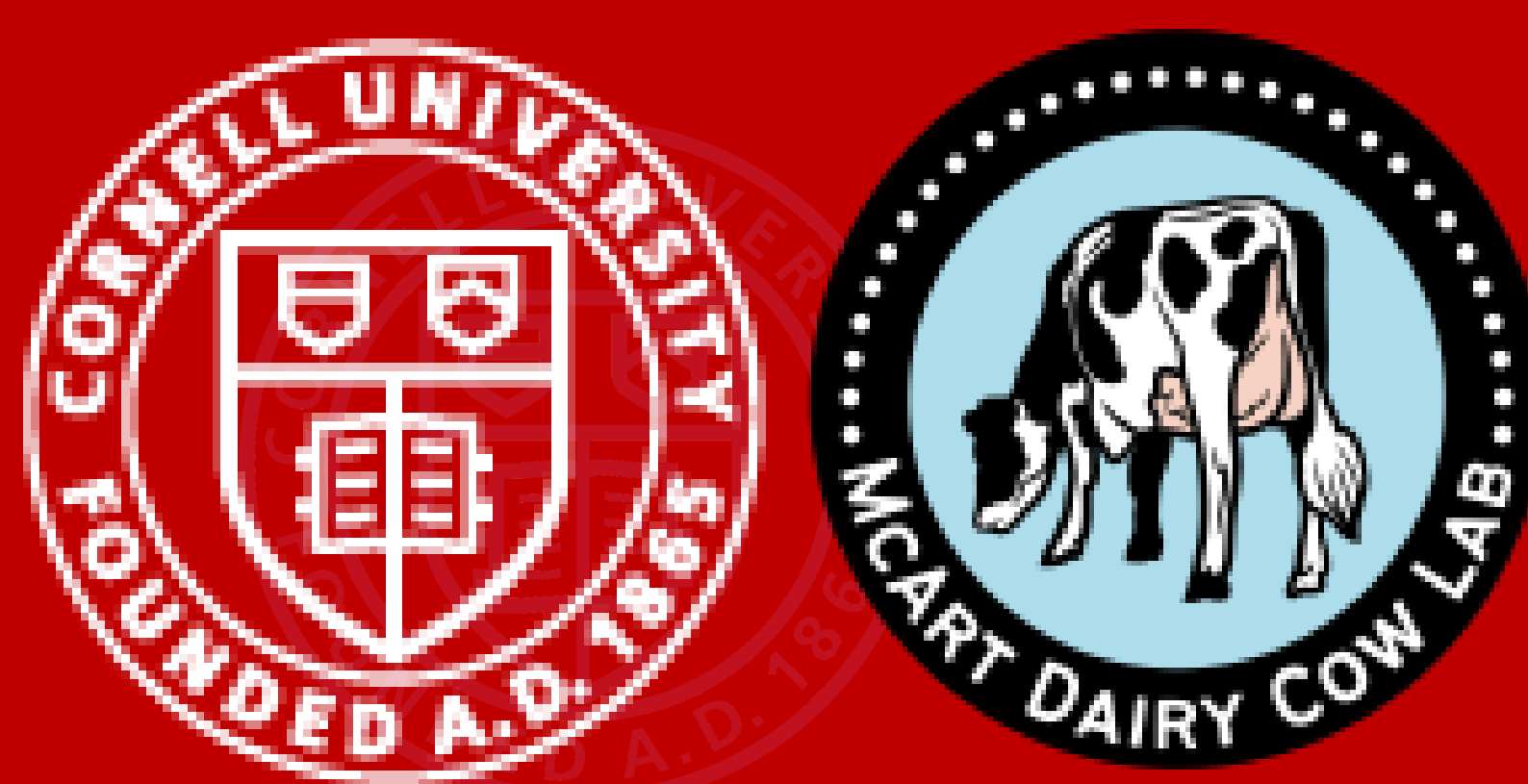
- Subclinical hypocalcemia (SCH) occurring at or persisting through 4 DIM, coined dyscalcemia (DYS), is associated with negative health and production outcomes when compared to normocalcemic (NC) cows.
- The effects of oral Ca bolusing on milk production, cow health, and blood Ca concentrations are variable and their use in a blanket fashion can be debated.

## OBJECTIVE:

- Determine if delayed oral Ca supplementation improves Ca status at 4 DIM and milk production in cows with reduced blood Ca at 2 DIM.

## METHODS:

- 604 multiparous Holstein cows, 4 farms in NY
- Randomly assigned to treatment groups at calving:
  - Control (CON; n = 305); no supplemental Ca
  - Bolus (BOL; n = 299); 43 g oral Ca bolus at 48 and 72 h post-calving
- SCH diagnosed at 2 DIM based on cutpoints:
  - NC (n = 457); parity 2 tCa > 1.90 mmol/L, parity 3 tCa > 1.87 mmol/L
  - SCH (n = 61); parity 2 tCa ≤ 1.90 mmol/L, parity 3 tCa ≤ 1.87 mmol/L
- Cows further classified into SCH-treatment (SCHTRT) groups:
  - NC-CON (n = 165)
  - SCH-CON (n = 28)
  - NC-BOL (n = 162)
  - SCH-BOL (n = 30)
- Milk yield and 4 DIM tCa were analyzed using generalized linear mixed models (SAS v. 9.4).

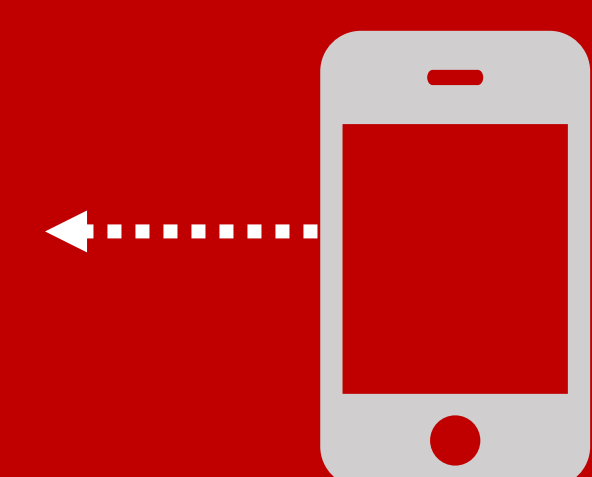


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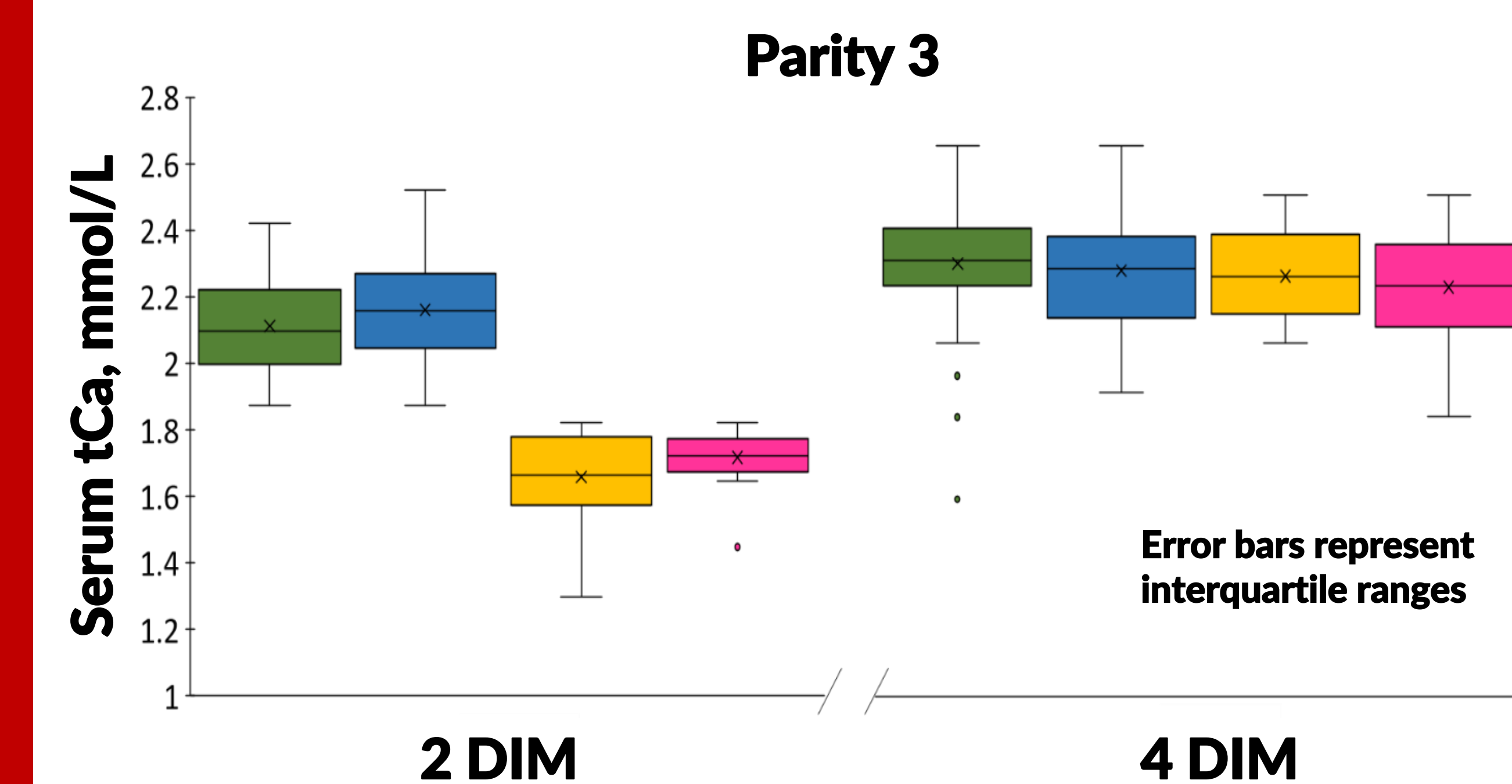
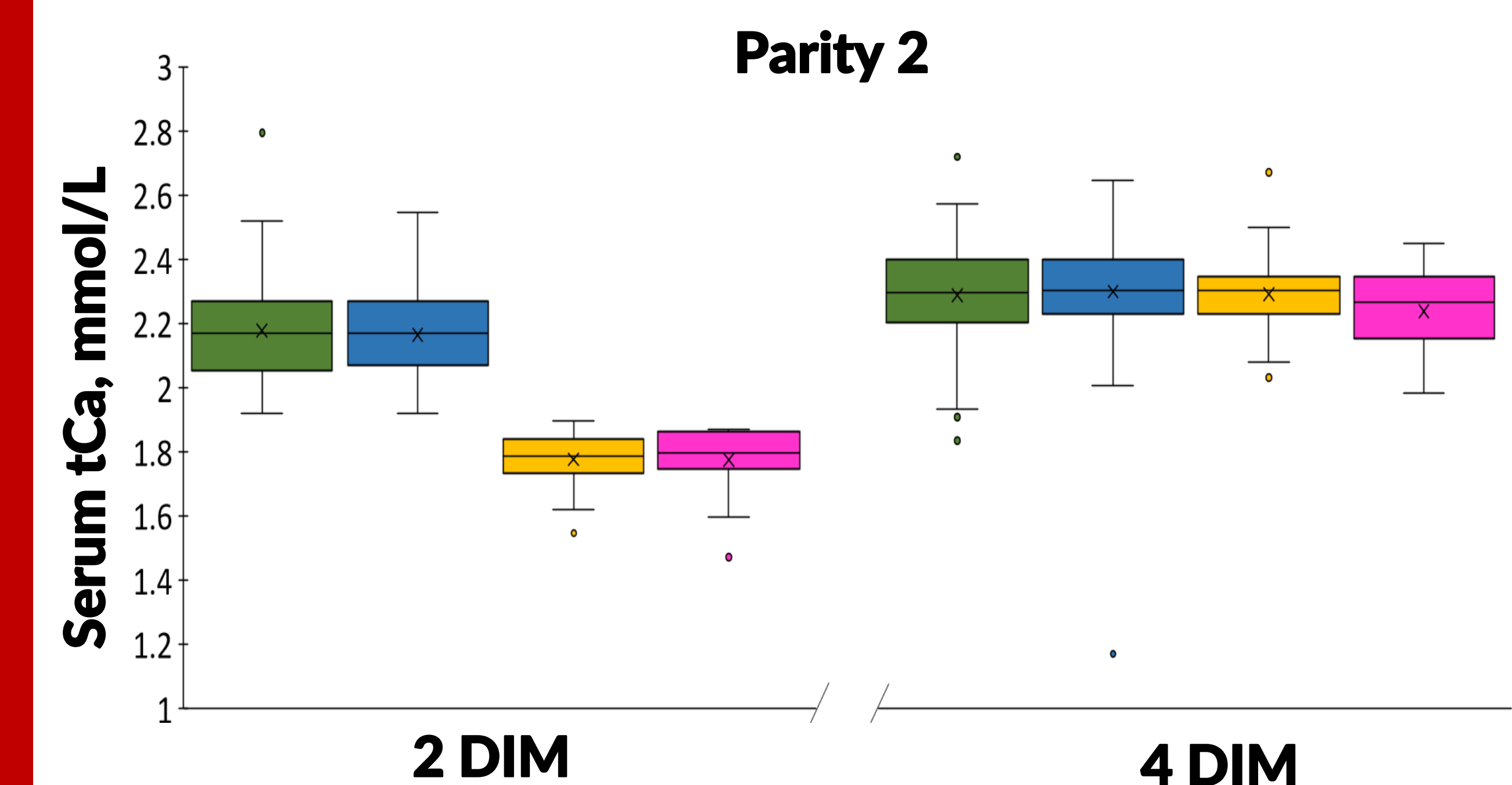
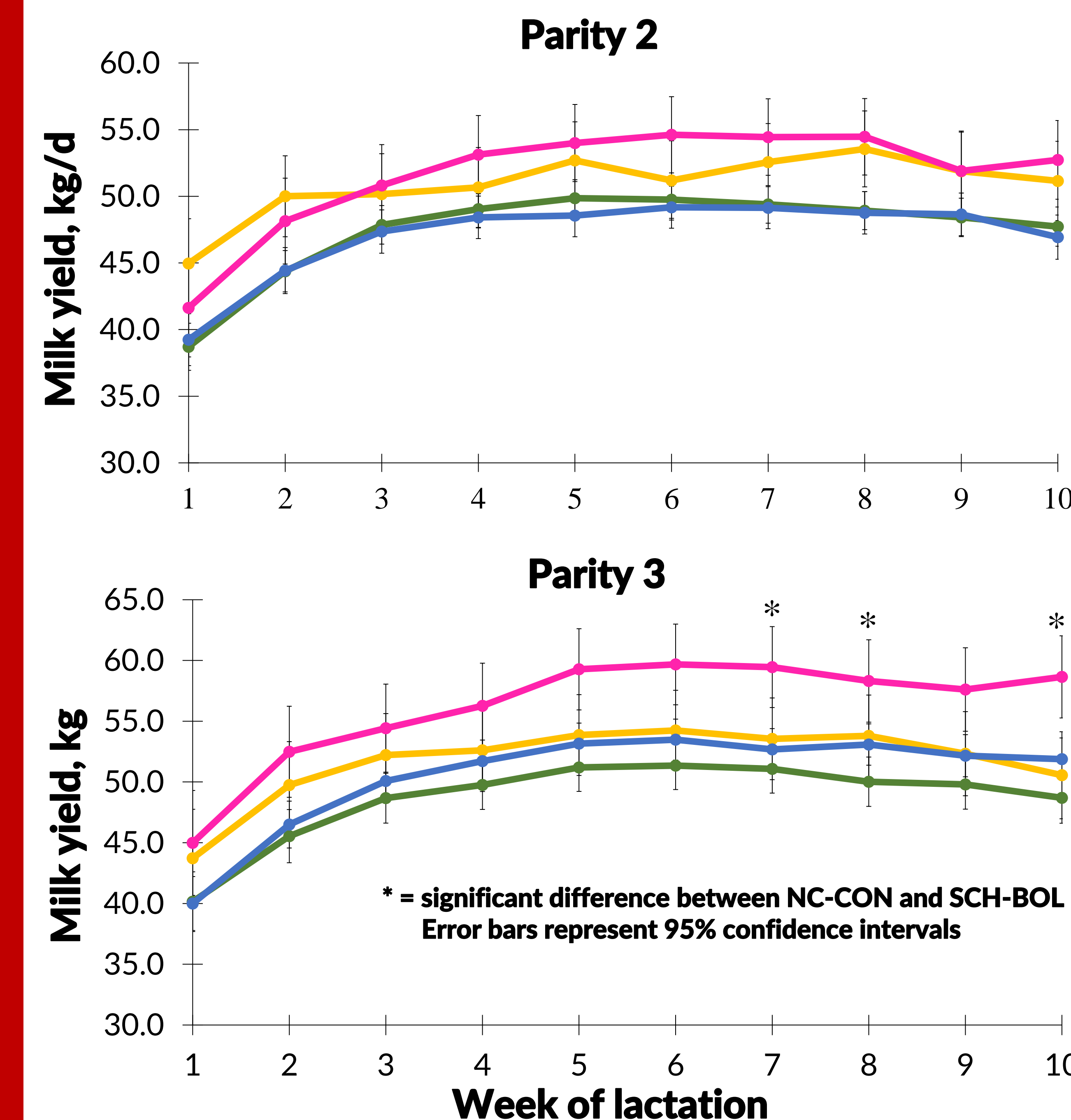
# Knowledge of blood Ca at 2 DIM should not impact decisions of Ca supplementation

Providing oral Ca at 2 and 3 DIM to parity 3 cows supports milk production regardless of 2 DIM blood Ca status



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RESULTS: ■ NC-CON ■ NC-BOL ■ SCH-CON ■ SCH-BOL



## ACKNOWLEDGEMENTS:

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