

Modifications to Ovsynch improve fertility during resynchronization: Evaluation of presynchronization with GnRH 6 d before Ovsynch and addition of a second PGF treatment

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Background

Compared with no presynchronization, the use of a GnRH injection 7 d before an Ovsynch protocol:

- Increased the proportion of cows with high P4 concentrations at G1 (~9%)
- Increased the proportion of cow with high P4 concentrations at PGF (~8%)
- optimizes P4 concentrations during the Ovsynch protocol

(Dewey et al., 2010; Giordano et al., 2012; Lopes et al., 2013; Bruno et al., 2014)

Background

Presynchronization with GnRH 7 d before initiation of an Ovsynch protocol (**GGPG**) improves fertility to TAI in resynchronized cows compared to Ovsynch alone in some but not all studies

	GPG	GGPG	P-value
Dewey et al., 2010	24.6 (95/386)	33.6 (120/357)	< 0.05
Alkar et al., 2011	28.4 (183/645)	26.7 (157/587)	> 0.05
Mendonca et al., 2012*	27.0 (60/222)	31.0 (72/231)	> 0.05
Giordano et al., 2012	25.5 (94/368)	31.6 (111/351)	> 0.05
Lopes et al., 2013	33.9 (172/508)	38.9 (235/604)	< 0.05
Bruno et al., 2014	25.4 (189/745)	29.6 (259/875)	> 0.05
Overall	27.6 (793/2874)	31.7 (954/3005)	

Background

Compared with no presynchronization, the use of a GnRH injection 7 d before an Ovsynch protocol:

- Slightly increased the proportion of cows ovulating to G1 (~5%)
- might increase the proportion of cows with young CL at PGF which may not completely regress in response to single PGF treatment

(Dewey et al., 2010; Giordano et al., 2012; Lopes et al., 2013; Bruno et al., 2014)

Objective & Hypothesis

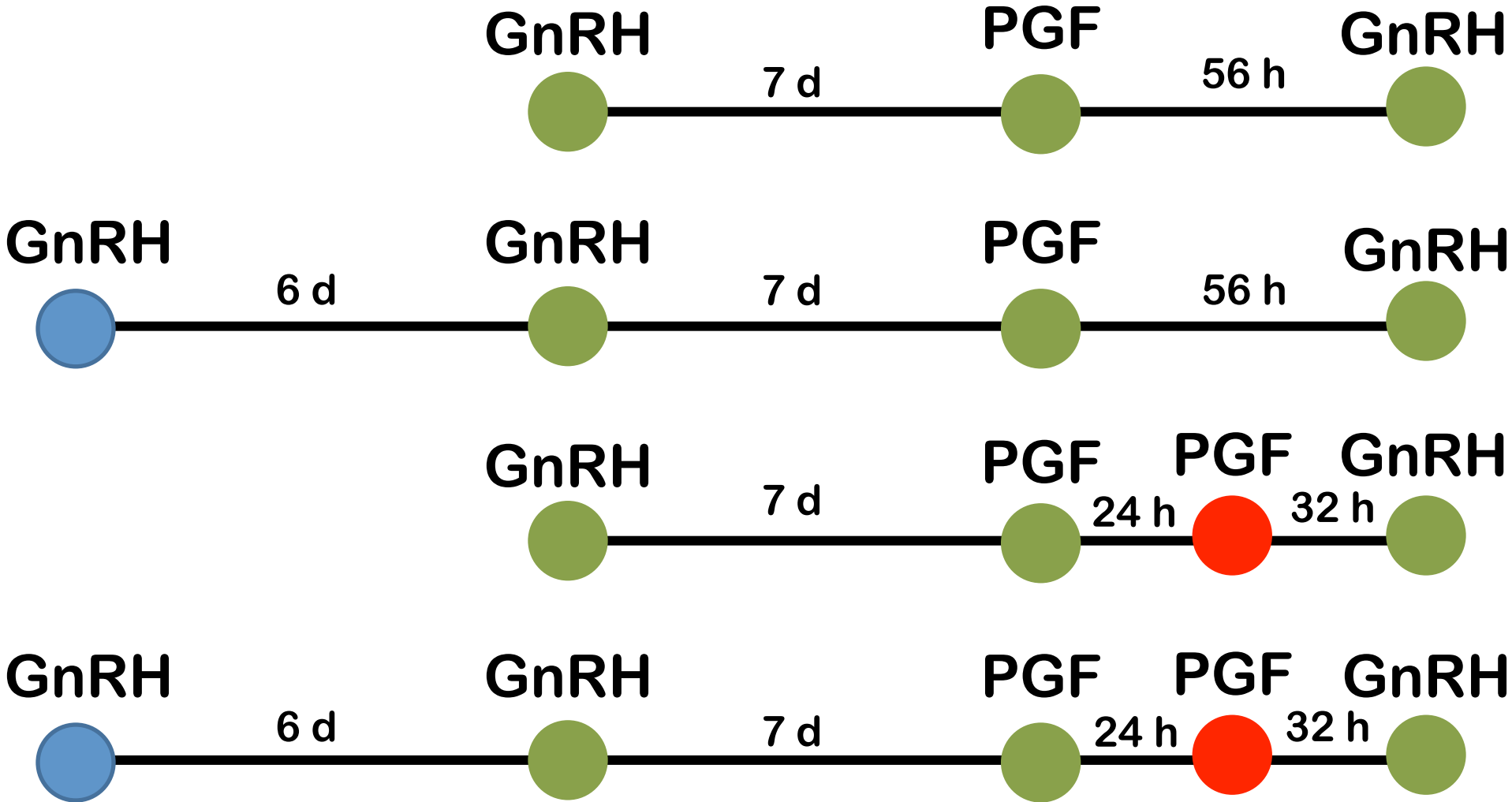
Objective:

Compare the effects of presynchronization using a GnRH injection 6 d before an Ovsynch56 protocol an increase the rate of luteal regression using a second PGF injection administered at 24 h on fertility of lactating dairy cows

Hypothesis:

Cows presynchronized with a GnRH injection and receiving a second PGF injection will have more P/AI compared with cows receiving Ovsynch56 alone

Experimental Treatments

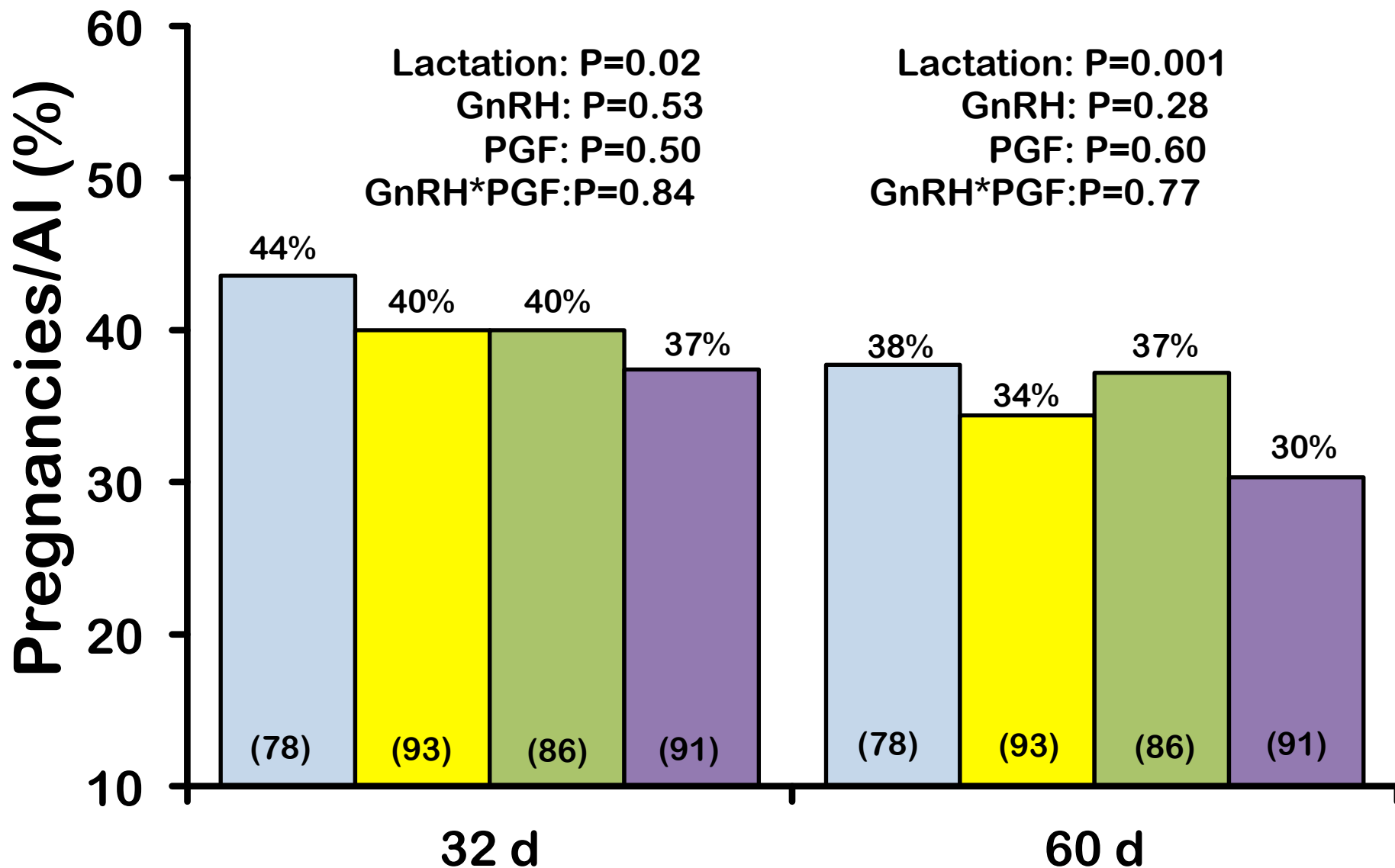


Presynch Ovsynch protocol for first TAI

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	PGF					
	PGF					
		±GnRH				
	GnRH					
	PGF	±PGF	GnRH	TAI		

Pregnancies/AI – 1st TAI

Control GGPG GPPG GGPPG

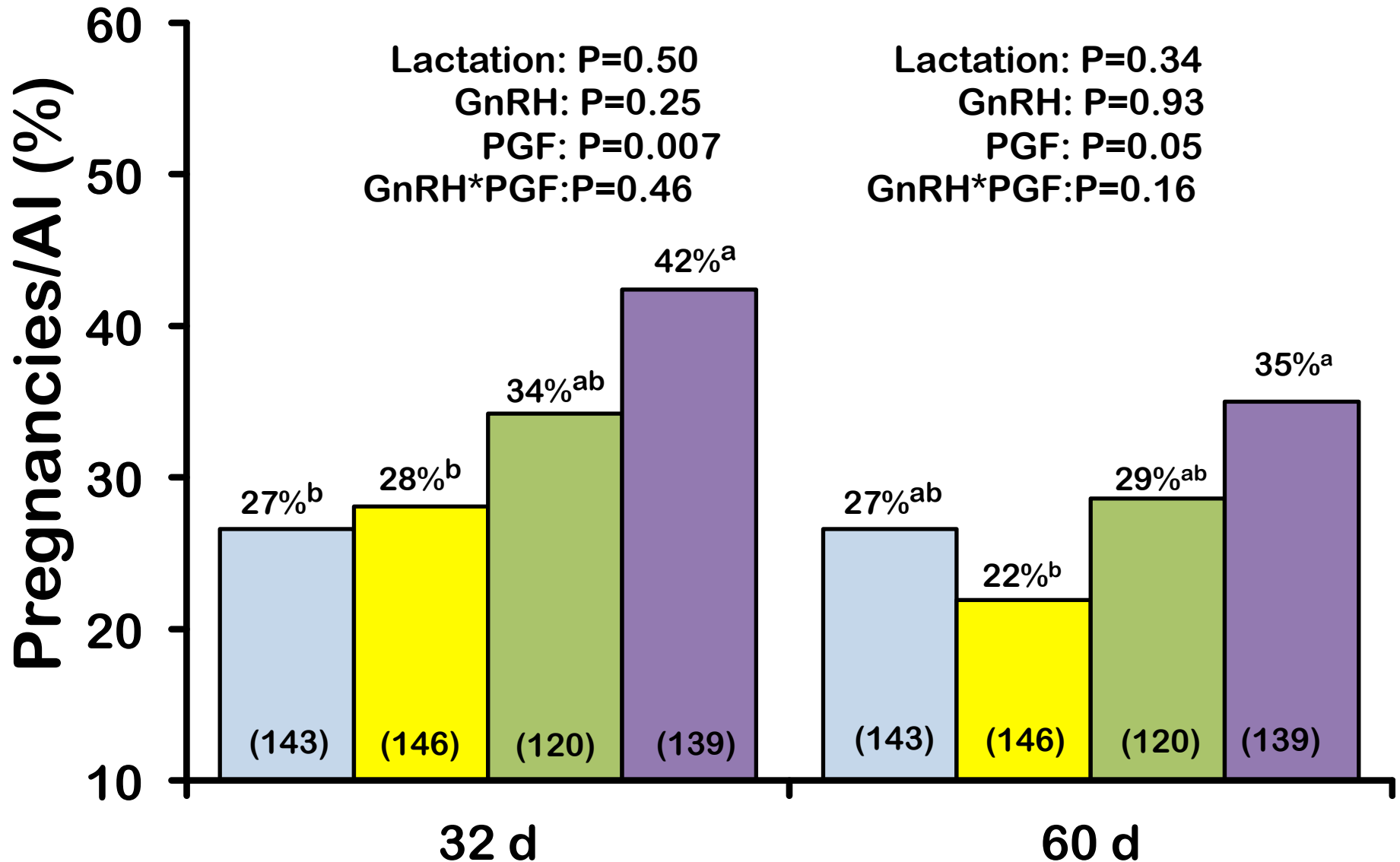


Resynch-Ovsynch for 2nd and greater TAI

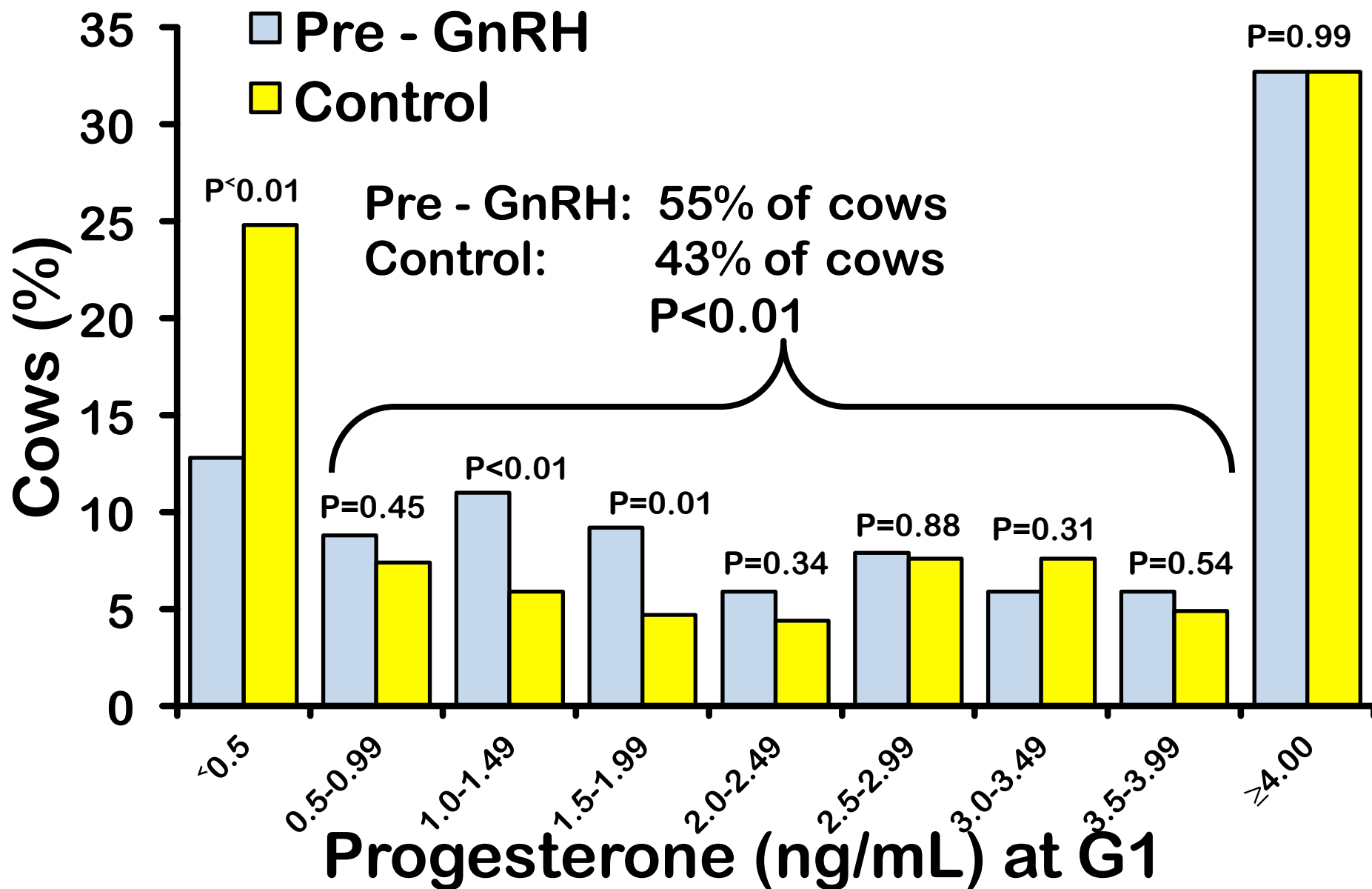
Sun	Mon	Tue	Wed	Thu	Fri	Sat
				TAI		
		±GnRH				
	GnRH					
	PGF	±PGF	GnRH	TAI		

Pregnancies/AI – Resynch

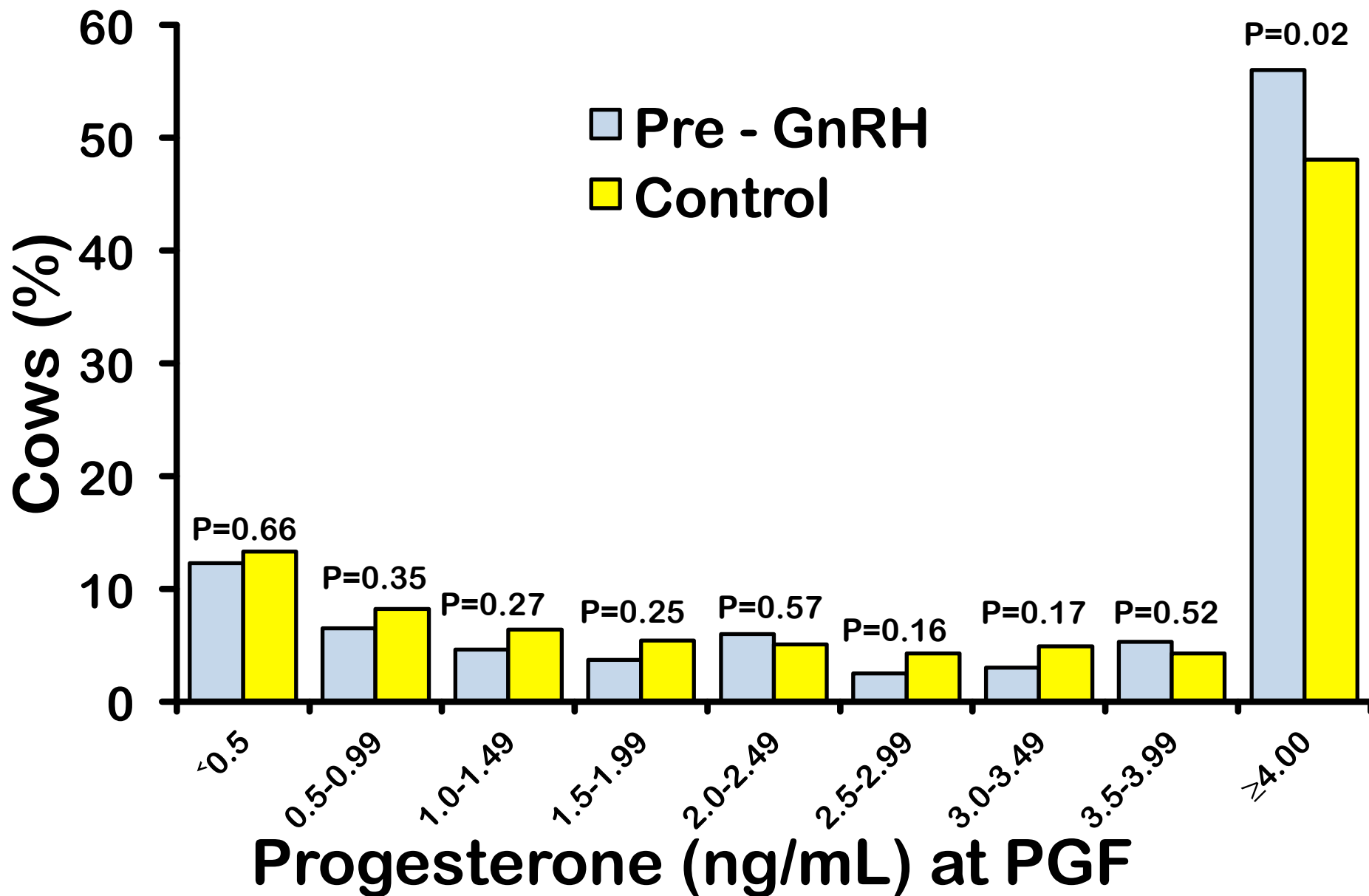
Control GGPG GPPG GGPPG



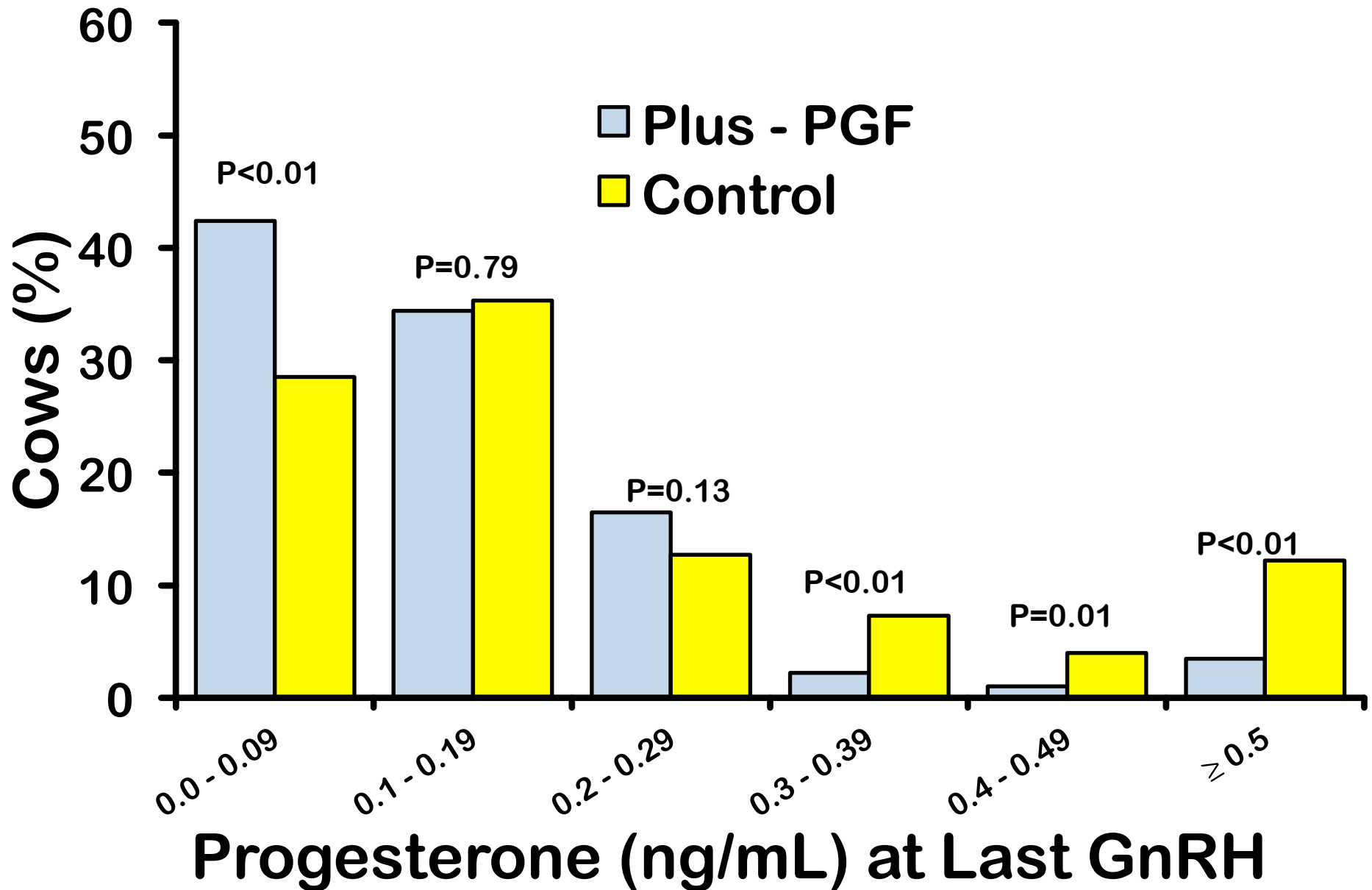
Effect of treatment on P4 at G1



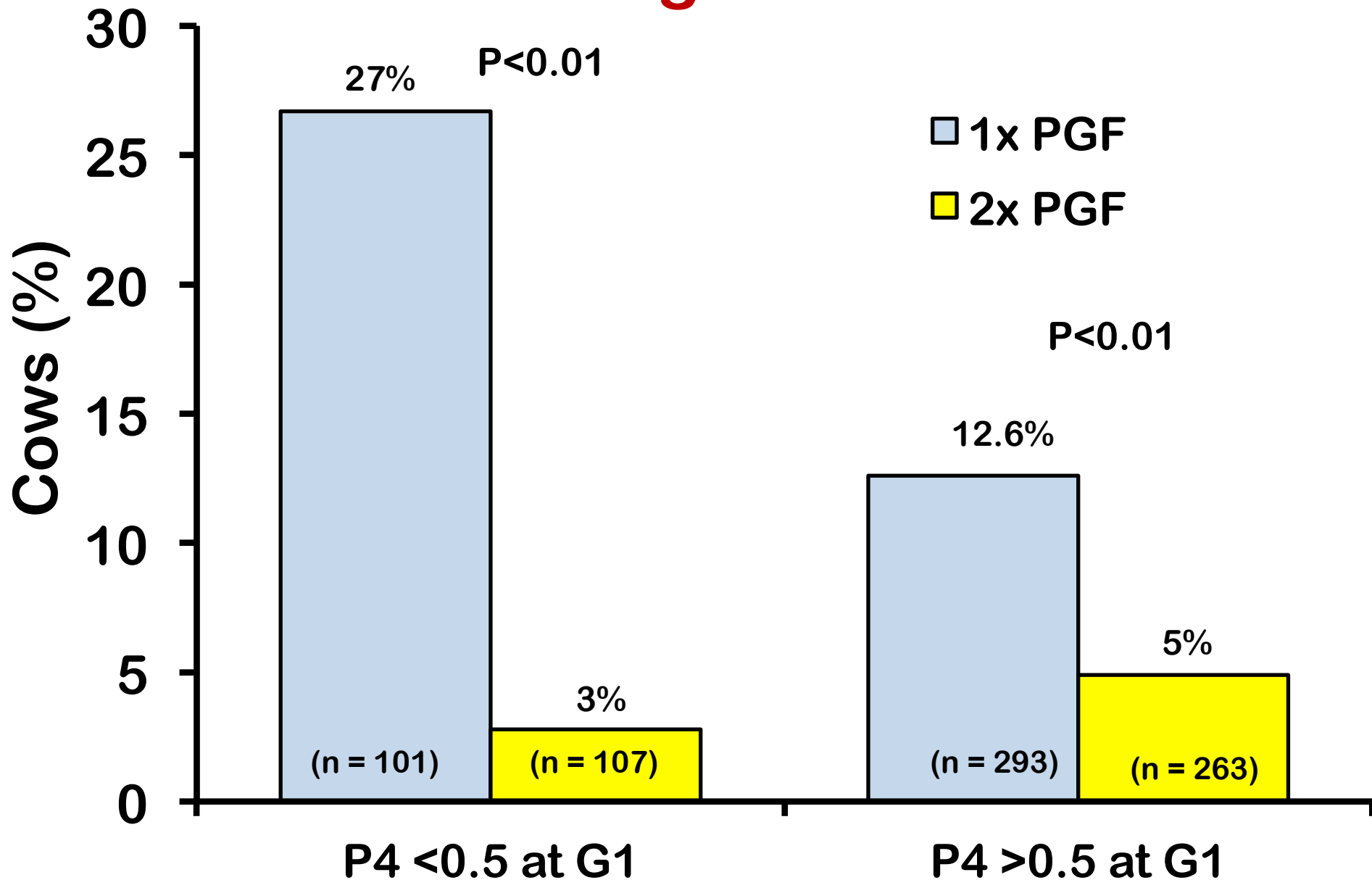
Effect of treatment on P4 at PGF



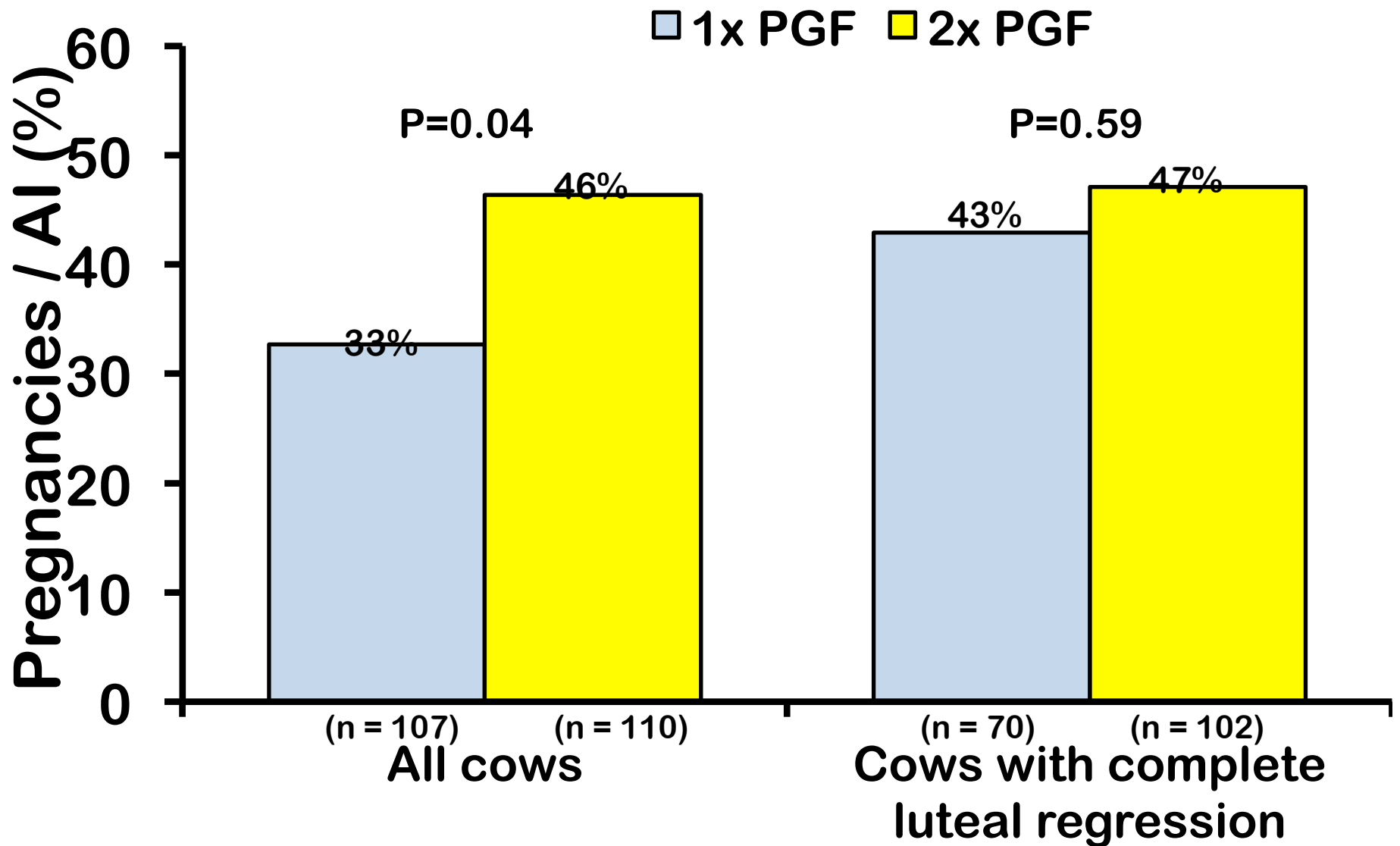
Effect of treatment on P4 Last GnRH



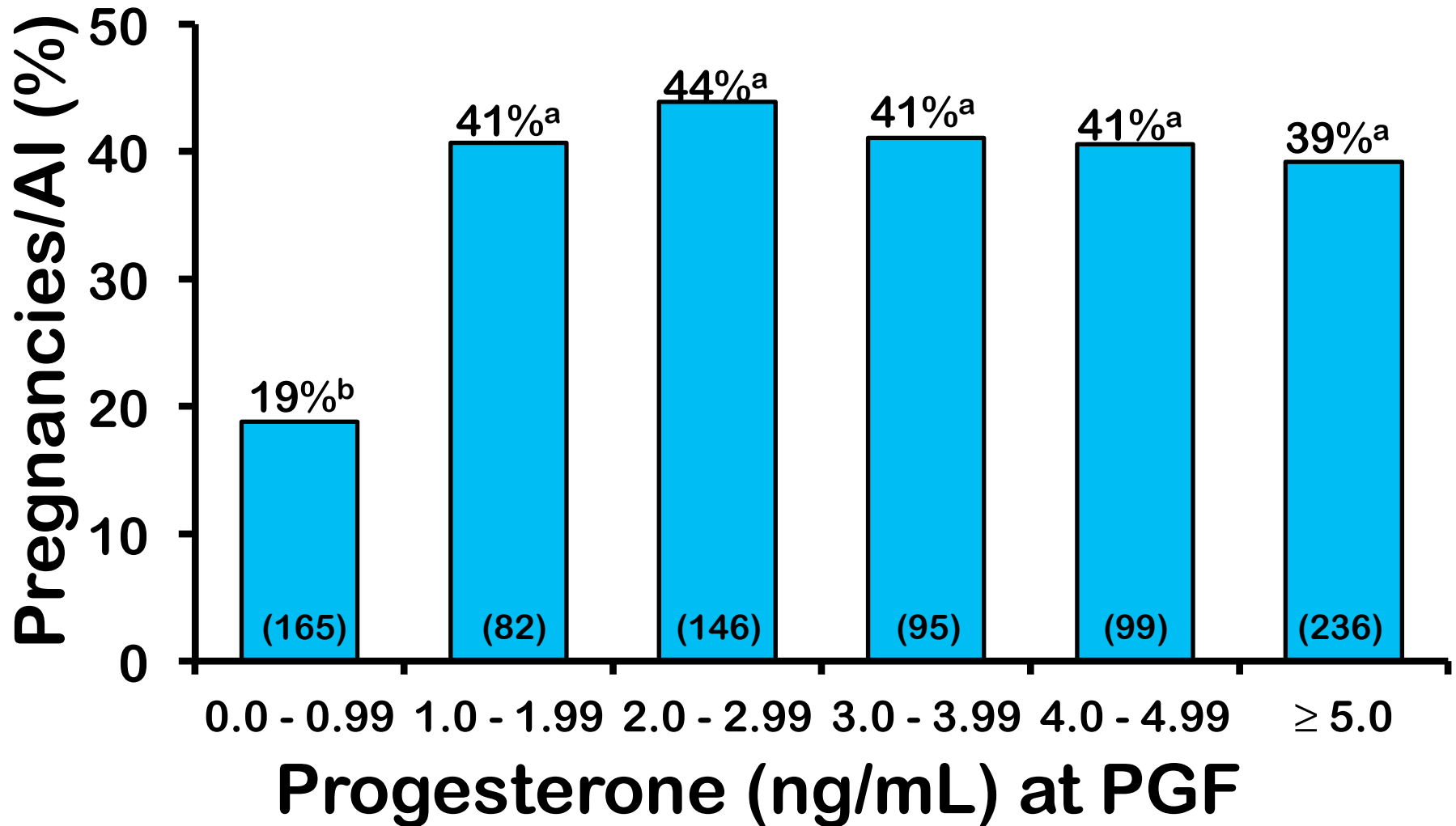
Proportion of cows with incomplete CL regression



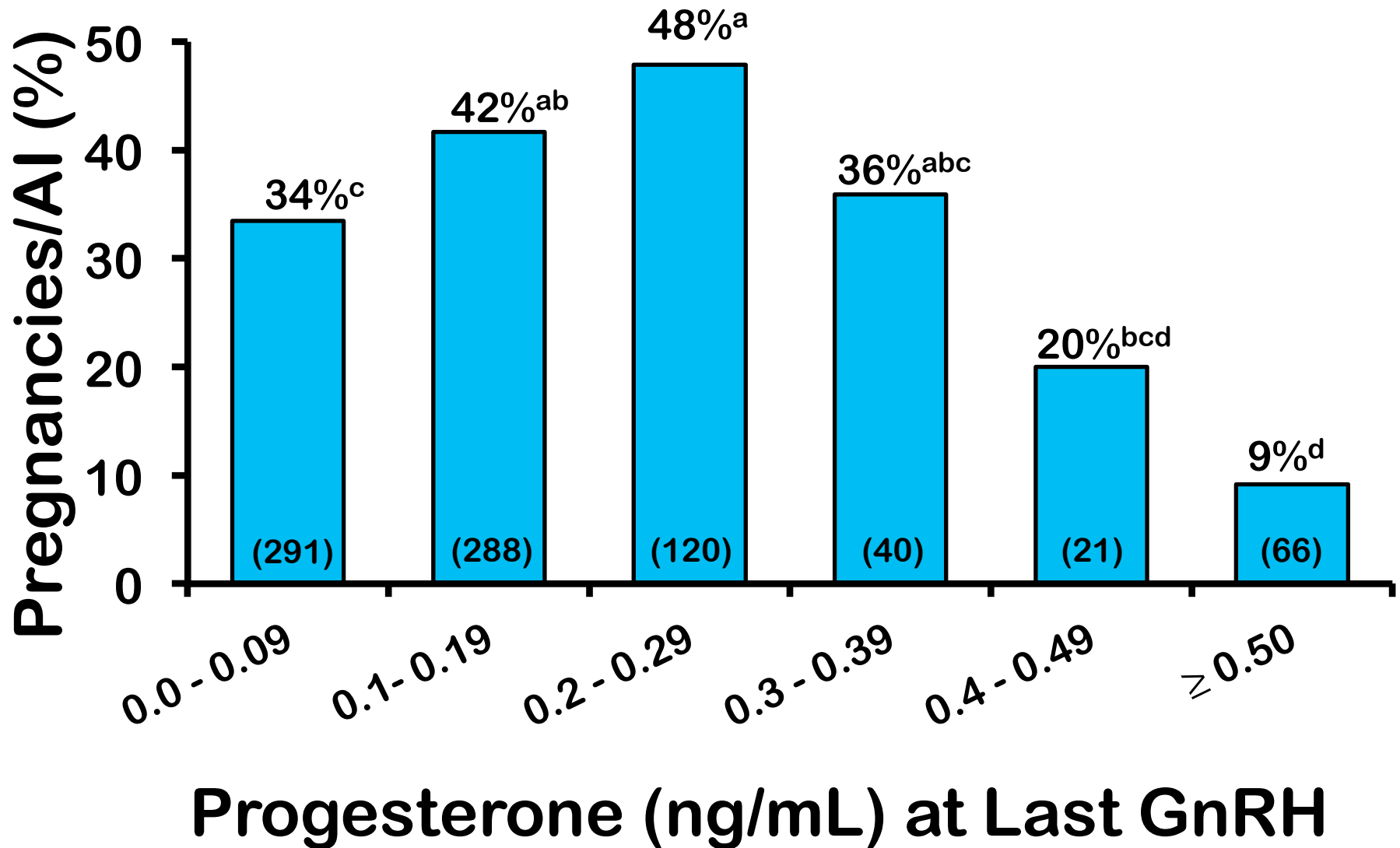
Pregnancies/AI for cows with low P4 at G1



Effect of P4 at PGF on fertility



Effect of P4 at Last GnRH on fertility



Conclusions

- Presynchronization with a GnRH injection decreased the proportion of cows with low P4 concentrations at first GnRH injection.
- Administration of a second PGF at 24 h increased the proportion of cows with completed luteal regression
- An improvement in P/AI was observed for cows presynchronized with the GnRH and receiving the second PGF injection for second and greater TAI services.

Thank you!



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