

Medicina Veterinaria, Sistemas de Produccion e Investigacion en AB, Canada

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Facultad de Cs. Veterinarias, Gral Pico, Febrero 21, 2014



Lake Louise-Banff



19/08/2013

Athabasca Glacier



18/08/2013

Alberta: Agricultura & Economia

	<u>2001</u>	<u>2004</u>	<u>2012</u>
Ganado Carne	3,939	\$2,617	\$4,900
Trigo	\$936	\$959	\$2,300
Canola	\$586	\$771	\$2,500
Cerdos	\$572	\$613	-----
Ganado Leche	\$348	\$383	\$521
Aves	\$214	\$213	\$330

Alberta: Ganado de carne (2012)

Cabezas	5.100.000 (41%)
Vacas y vaquillonas	2.345.000
Explotaciones	43.234
Inseminación Artificial	~5%

May, 2004



The Canadian Dairy Industry

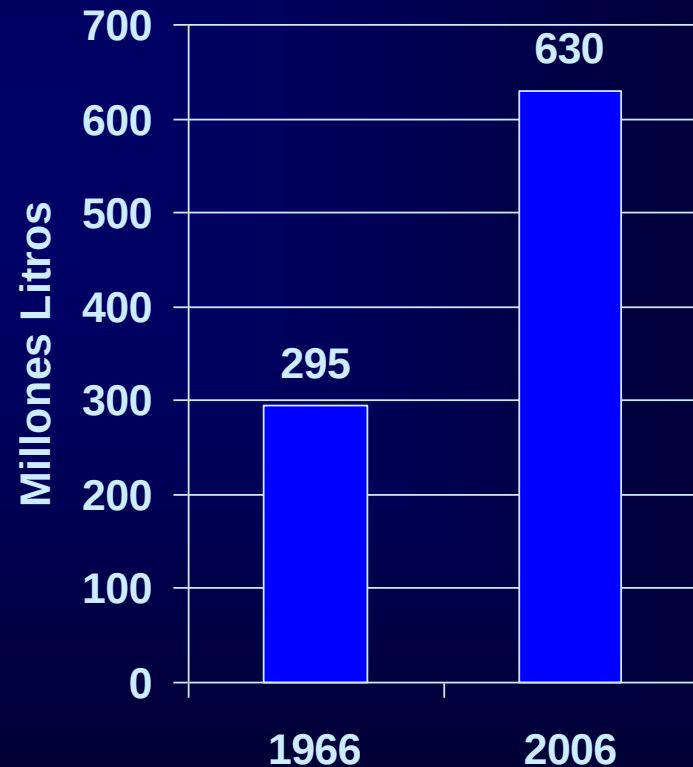
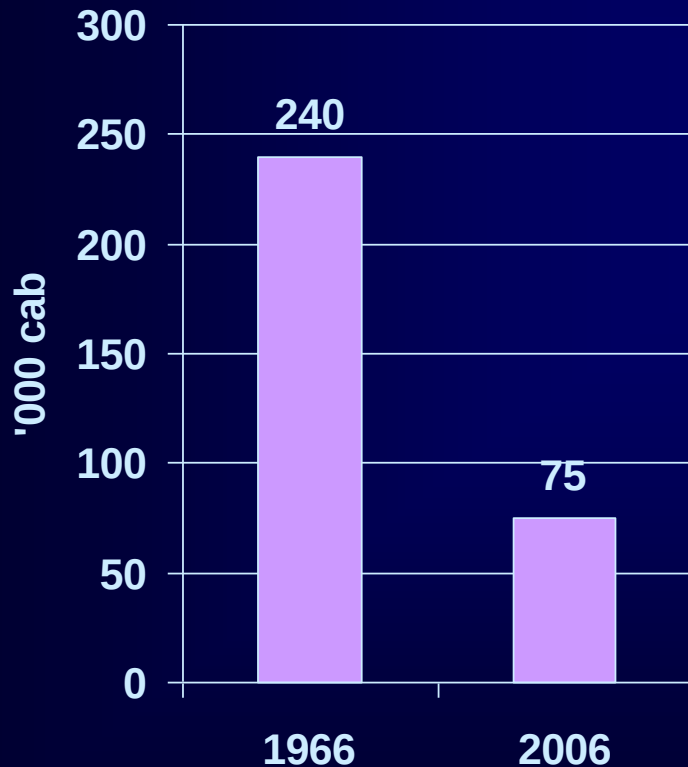
MSQ, July 31, 2004; Milk, 2004

Provinces	% Farms	% Cows	% Milk ^a	Milk, kg/ Cow ^b
Maritimes	5	6	4.3	
Quebec	48	38	45.8	~8,100
Ontario	32	34	31.5	~8,200
Manitoba	3	4	3.6	9,150
Saskatchewan	2	3	2.5	9,375
Alberta	5	8	6.6	9,504
B.C.	4	6	5.7	10,083

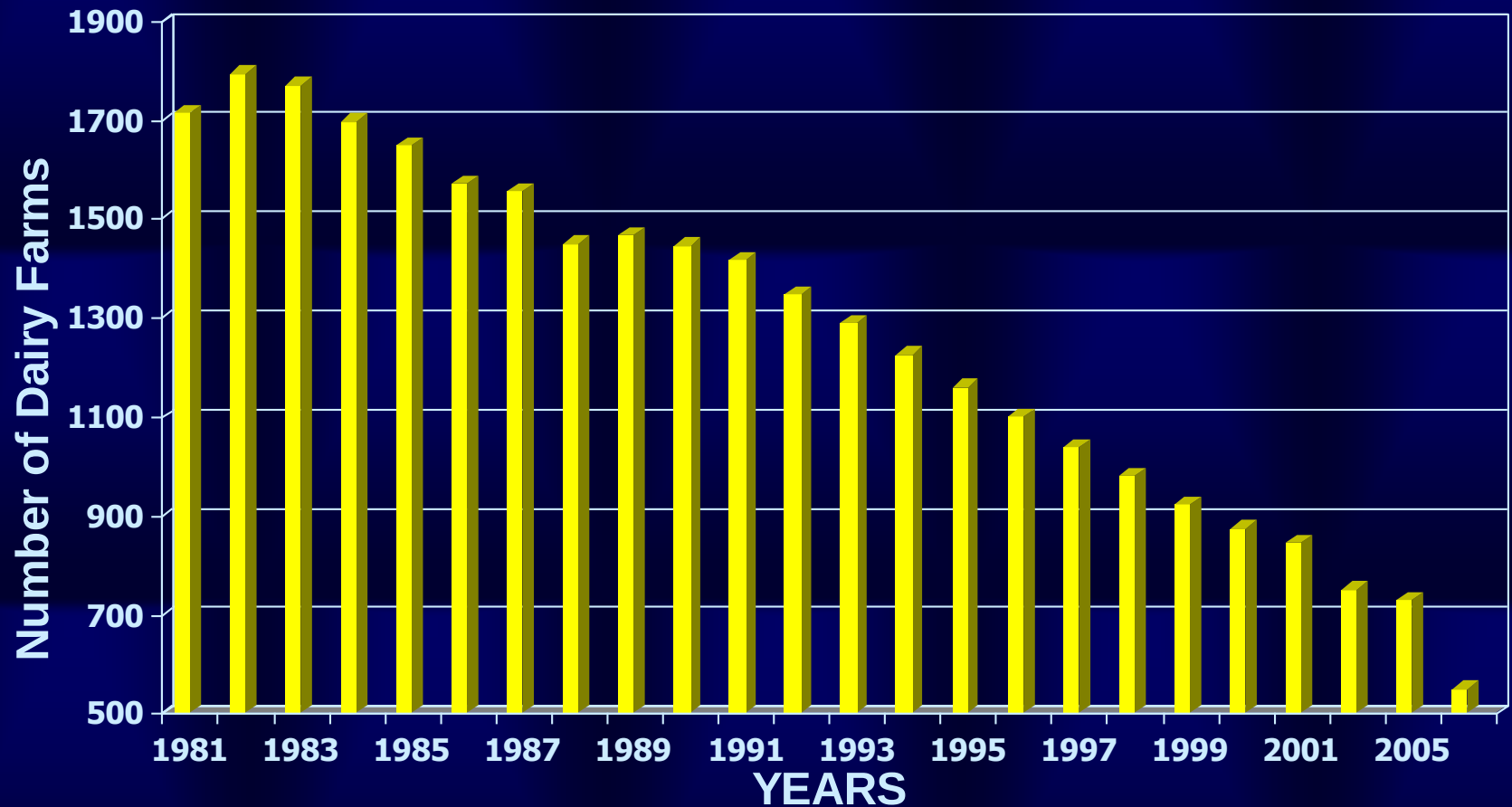
^a CDC (2004), ^b Canwest DHI, 2004

Alberta: Pasado (1966) y presente (2006)

Vacas y producción



Dairy farms in Alberta: the declining trend



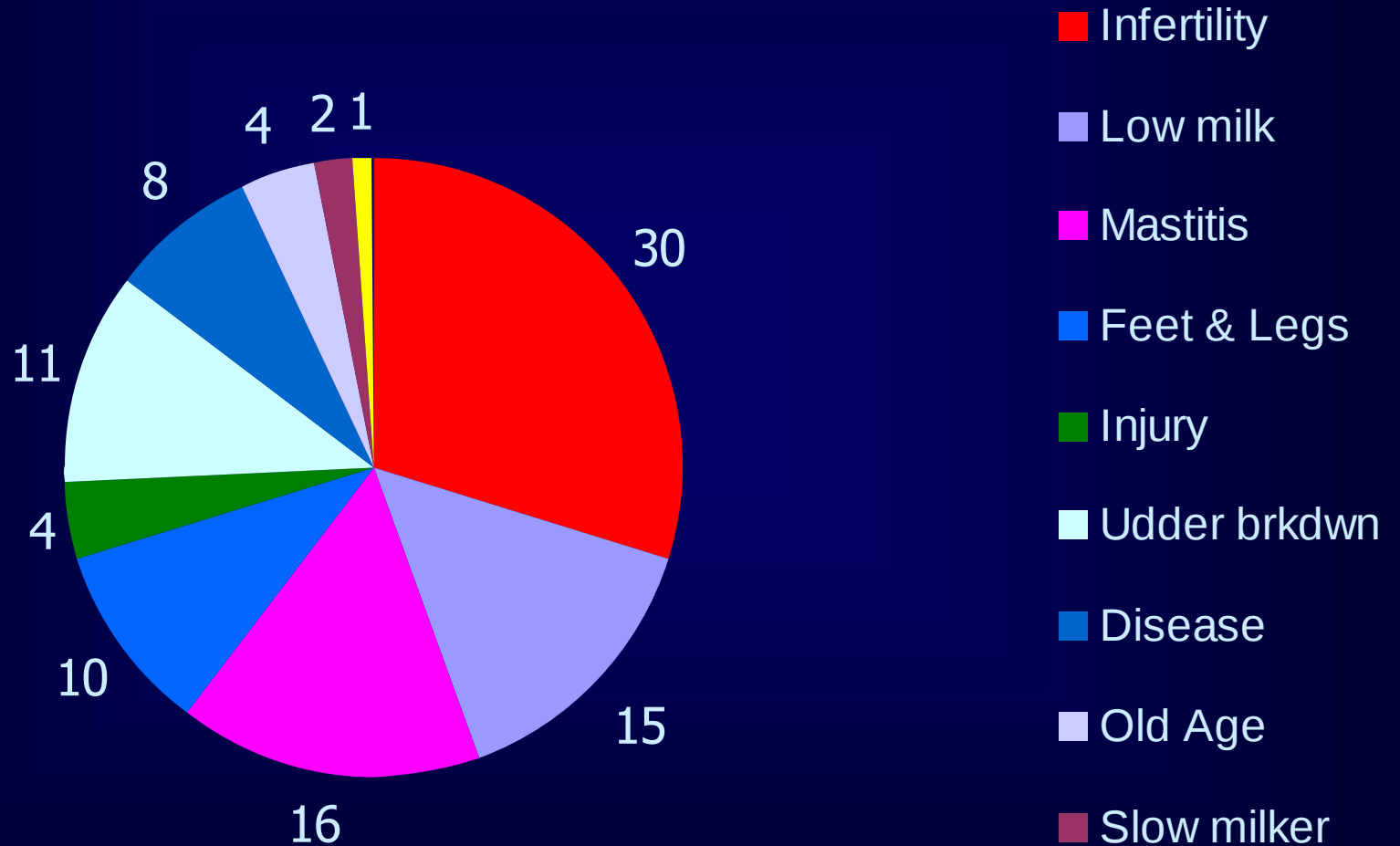


DRTC: Tambo de la Universidad de Alberta





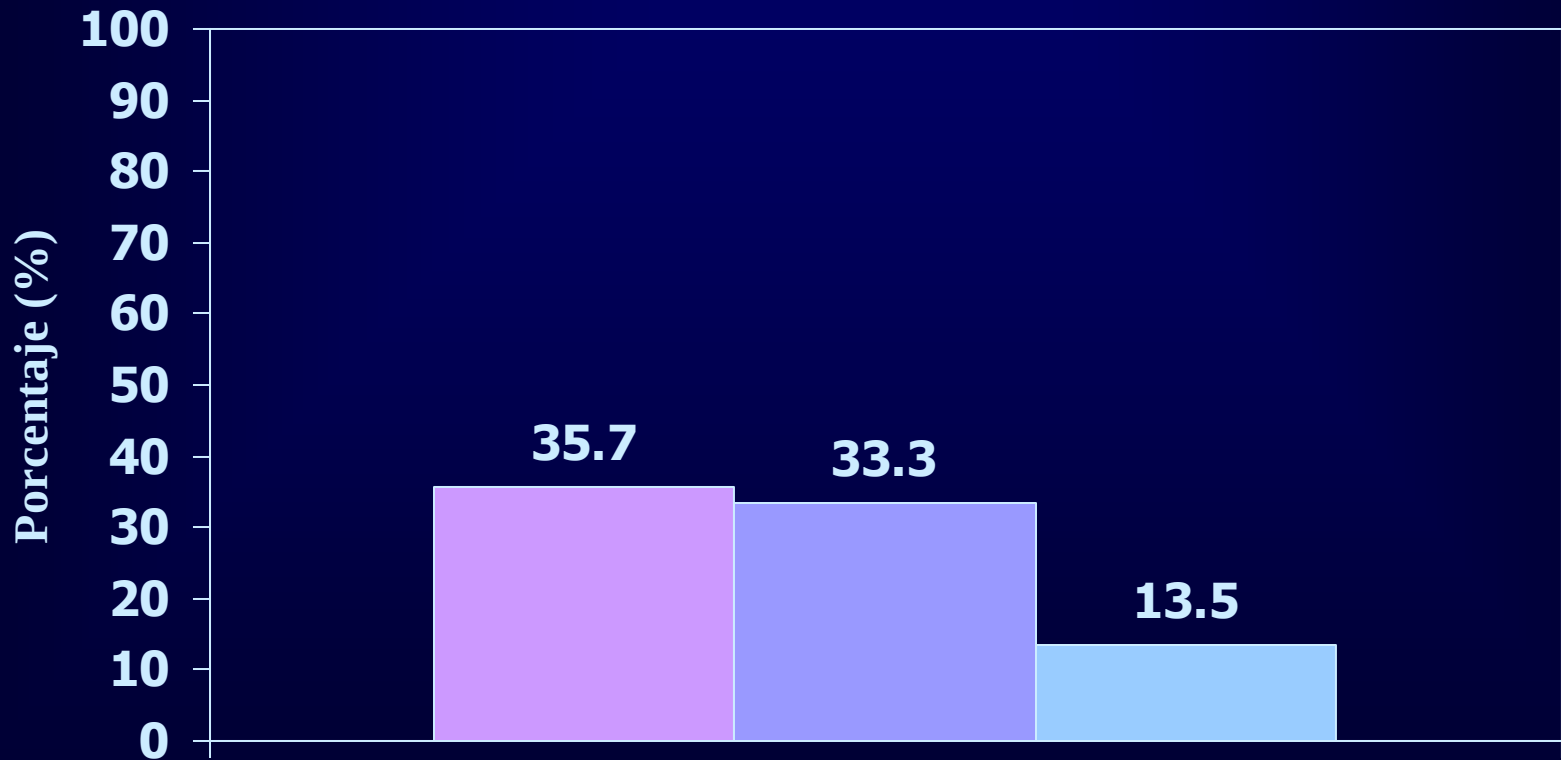
Alberta: Dairy cow disposal reasons, 2009



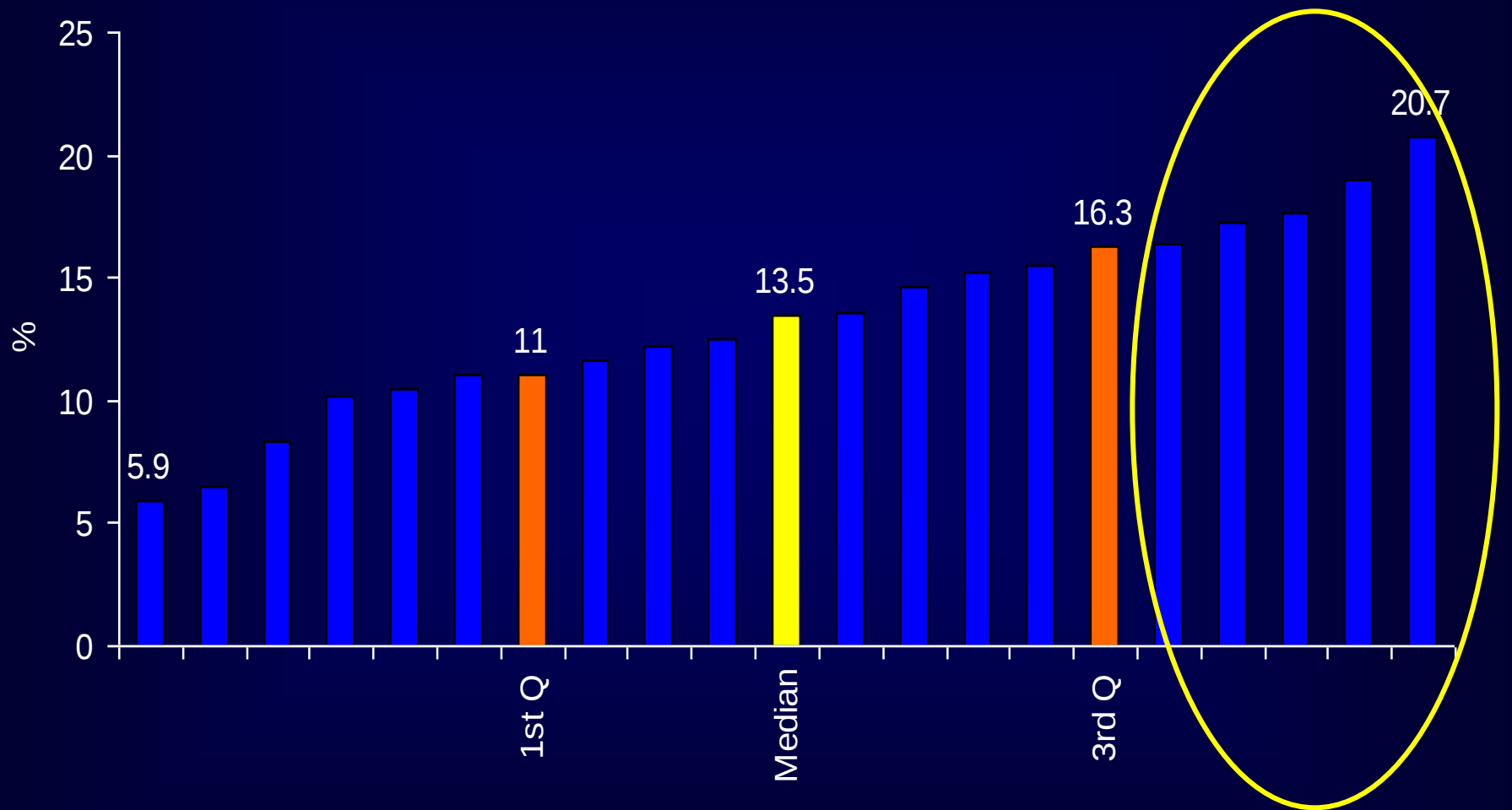
Source: 2009 CanWest DHI Herd Improvement Report

Porcentaje de animales inseminados y tasas de concepción y preñez c/21 días en Alberta, Canada.

(23 rodeos; 29.929 Animales; 2004-2006)

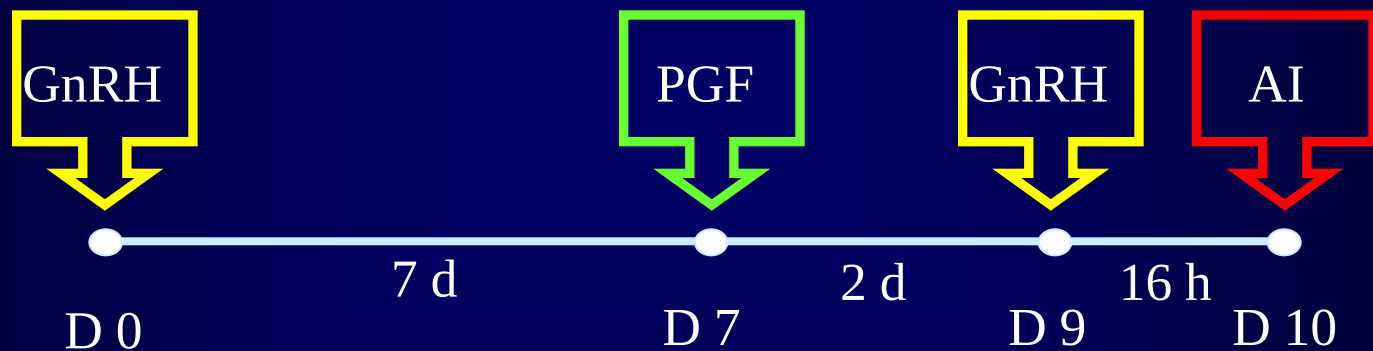


DHI Records 2004-06
(Pregnancy rates by 21 d intervals)

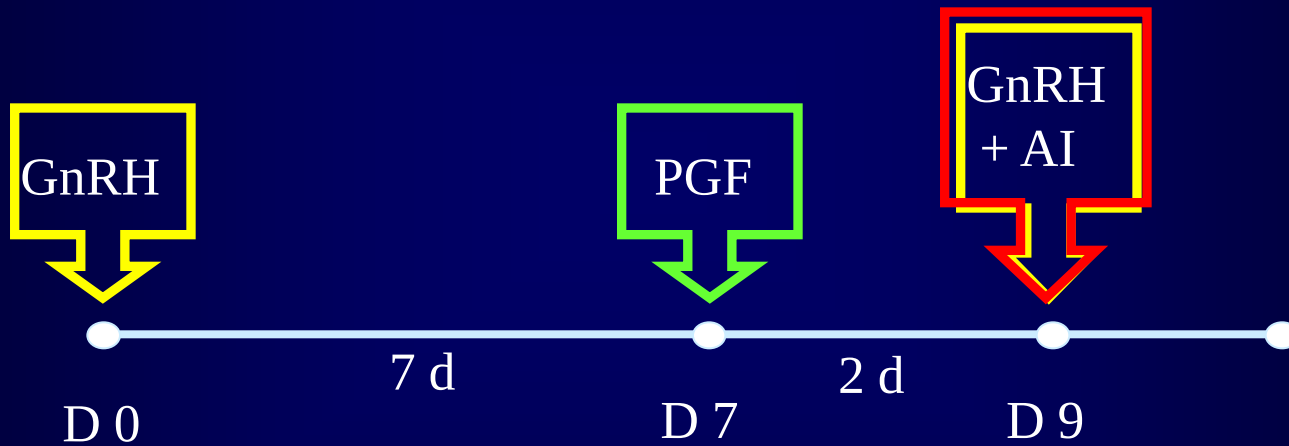


Han implementado un
programa de manejo de
servicios sistematizado....

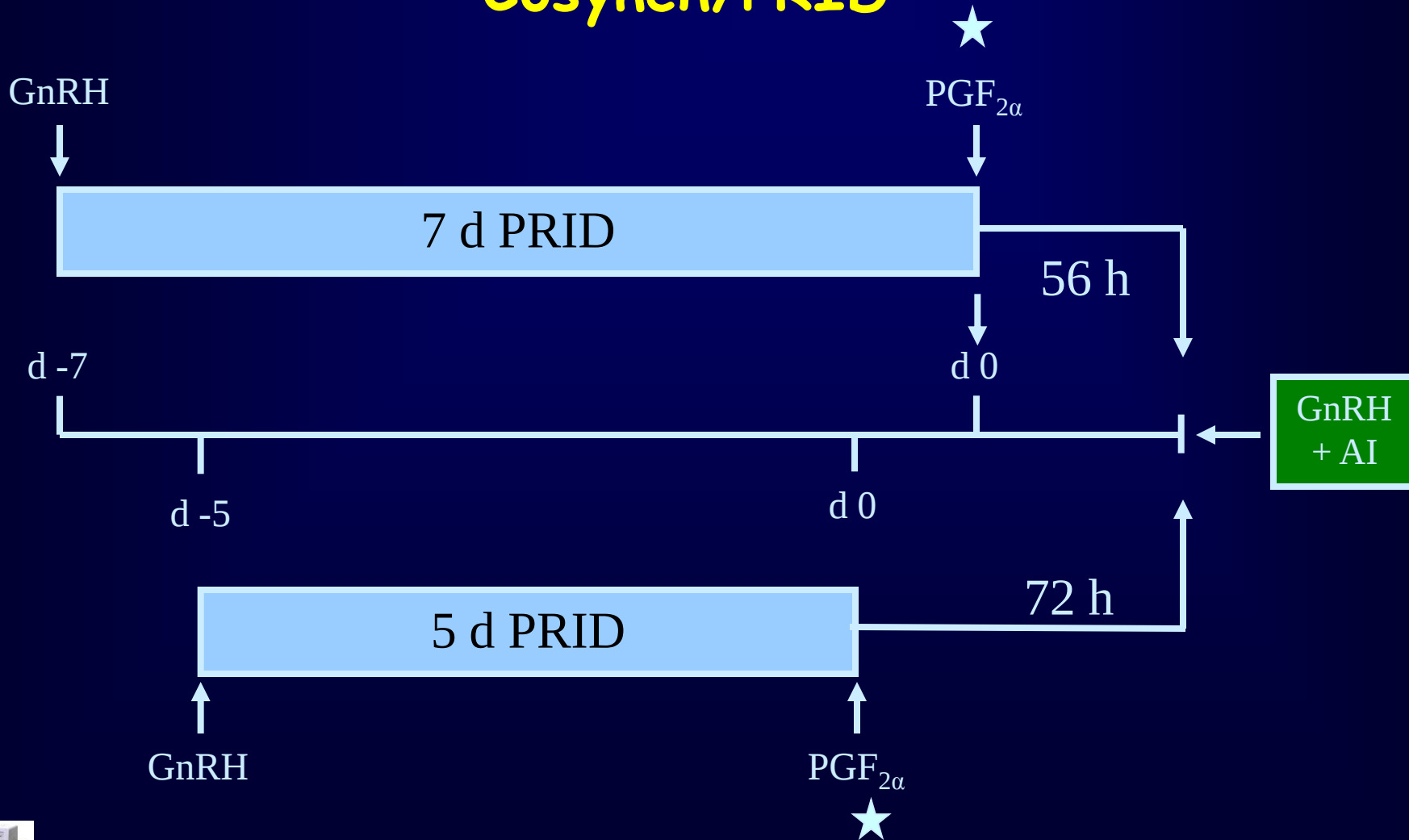
7-d OVSYNCH



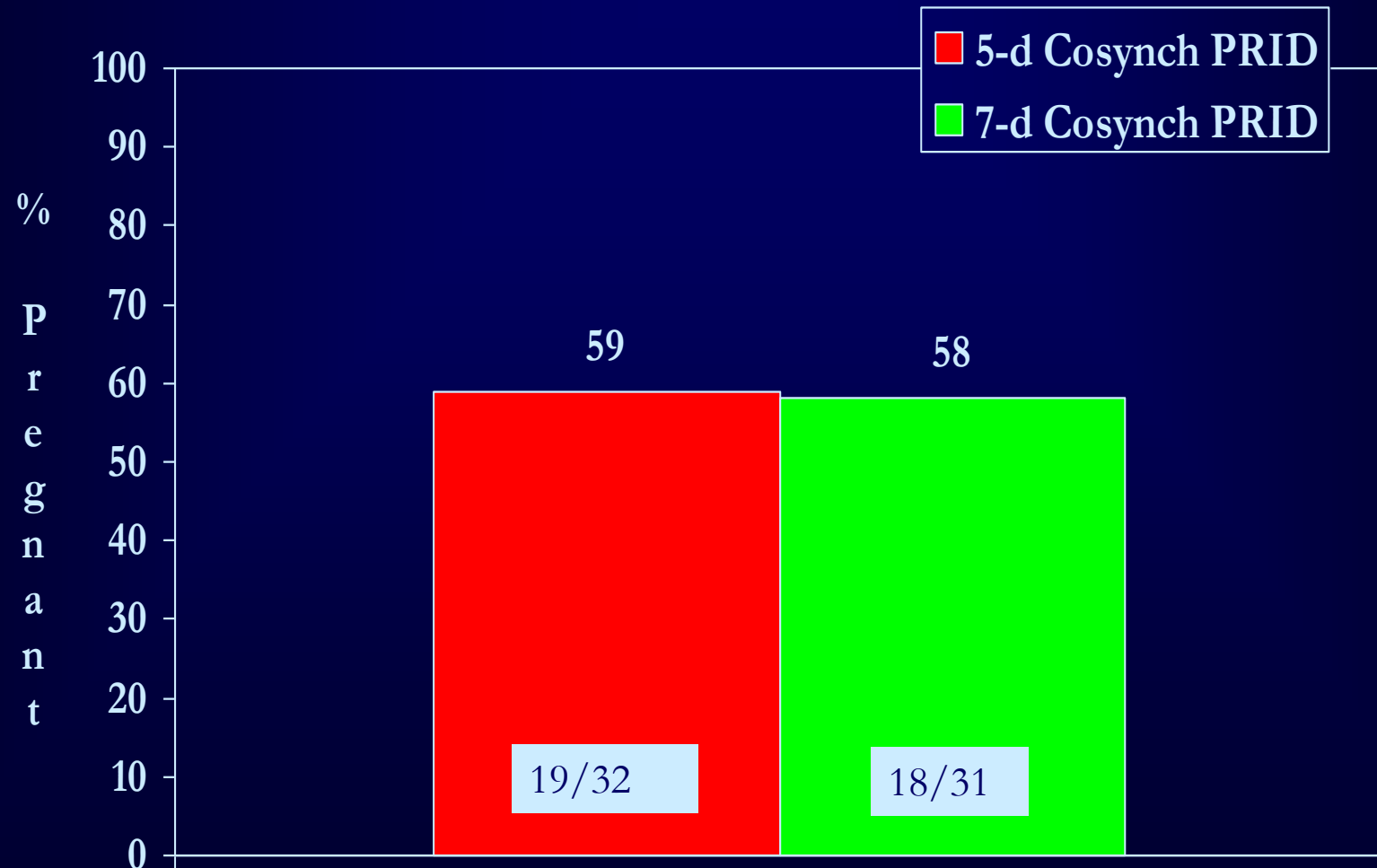
7-d COSYNCH



Experimental Design - 5- vs 7-d Cosynch/PRID



TAI Pregnancy Rate 28 d

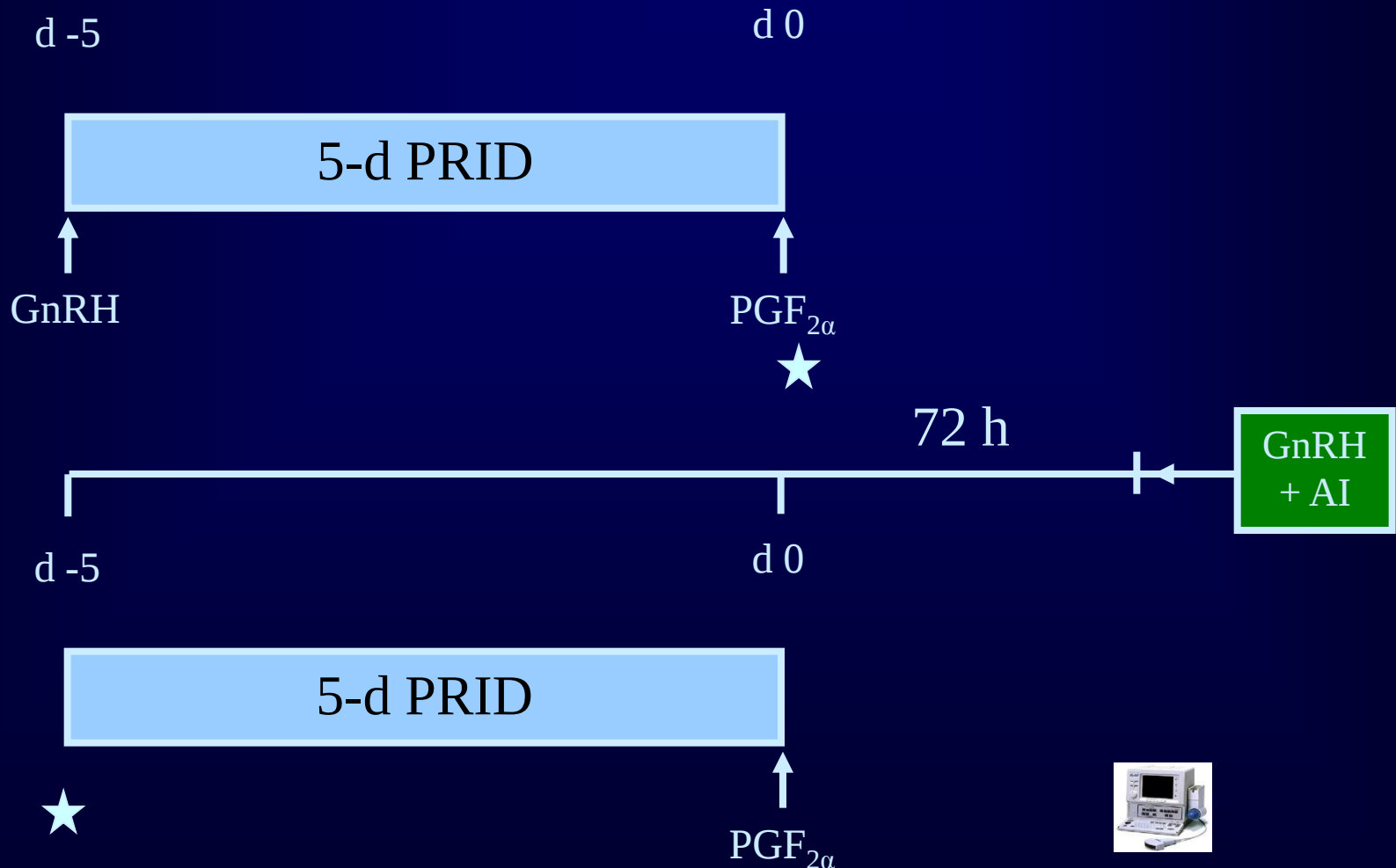


Trt, P > 0.05

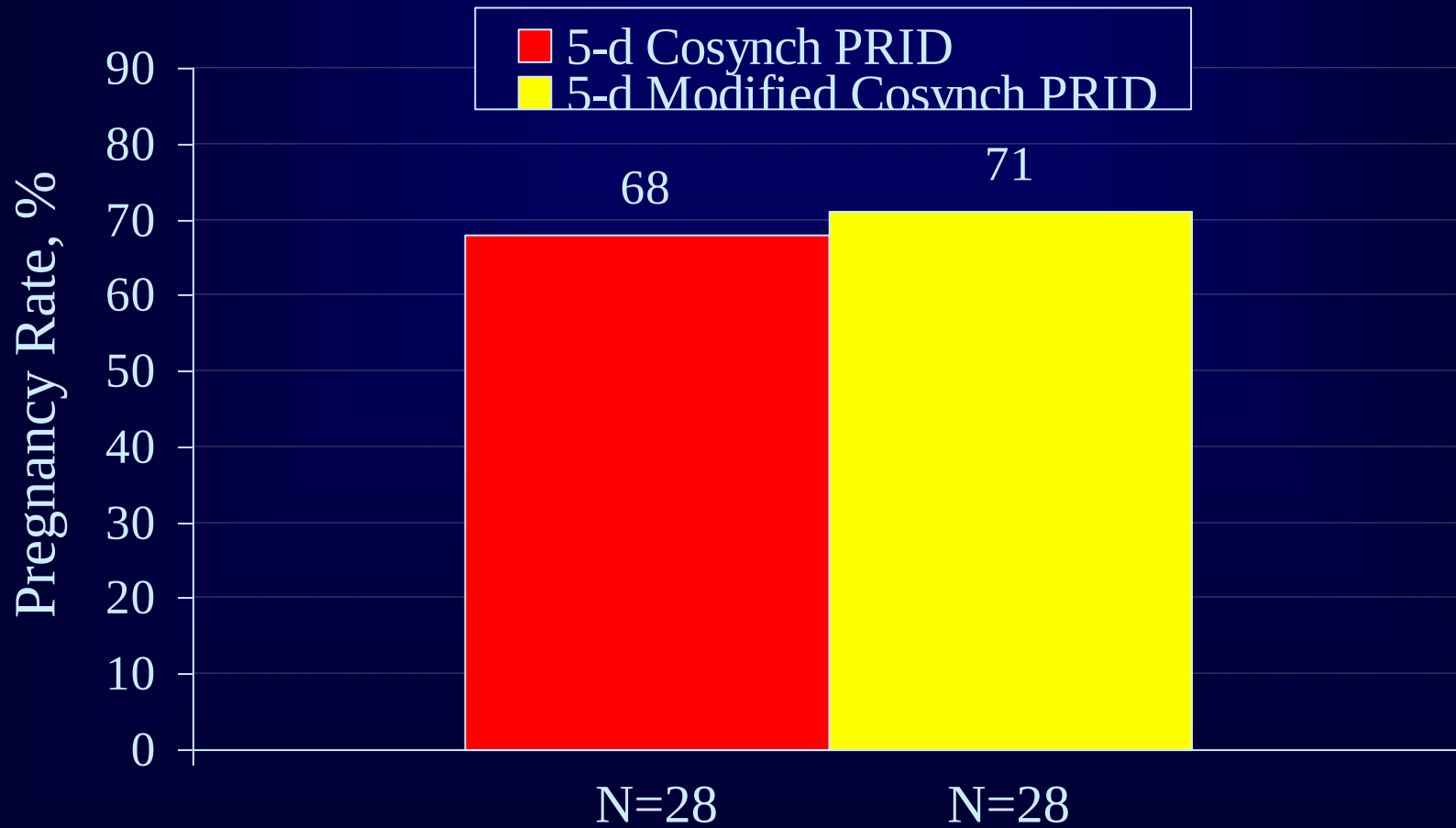
Colazo and Ambrose, 2011

	Cosynch/PRID	
	5-d	7-d
Ov. to 1st GnRH	25% *	39%
Ov. to 2nd GnRH	65%	84%
Ov. before TAI	22% *	10%
No resp. PGF	6%	0%

Experimental Design - 5-d Modified Cosynch



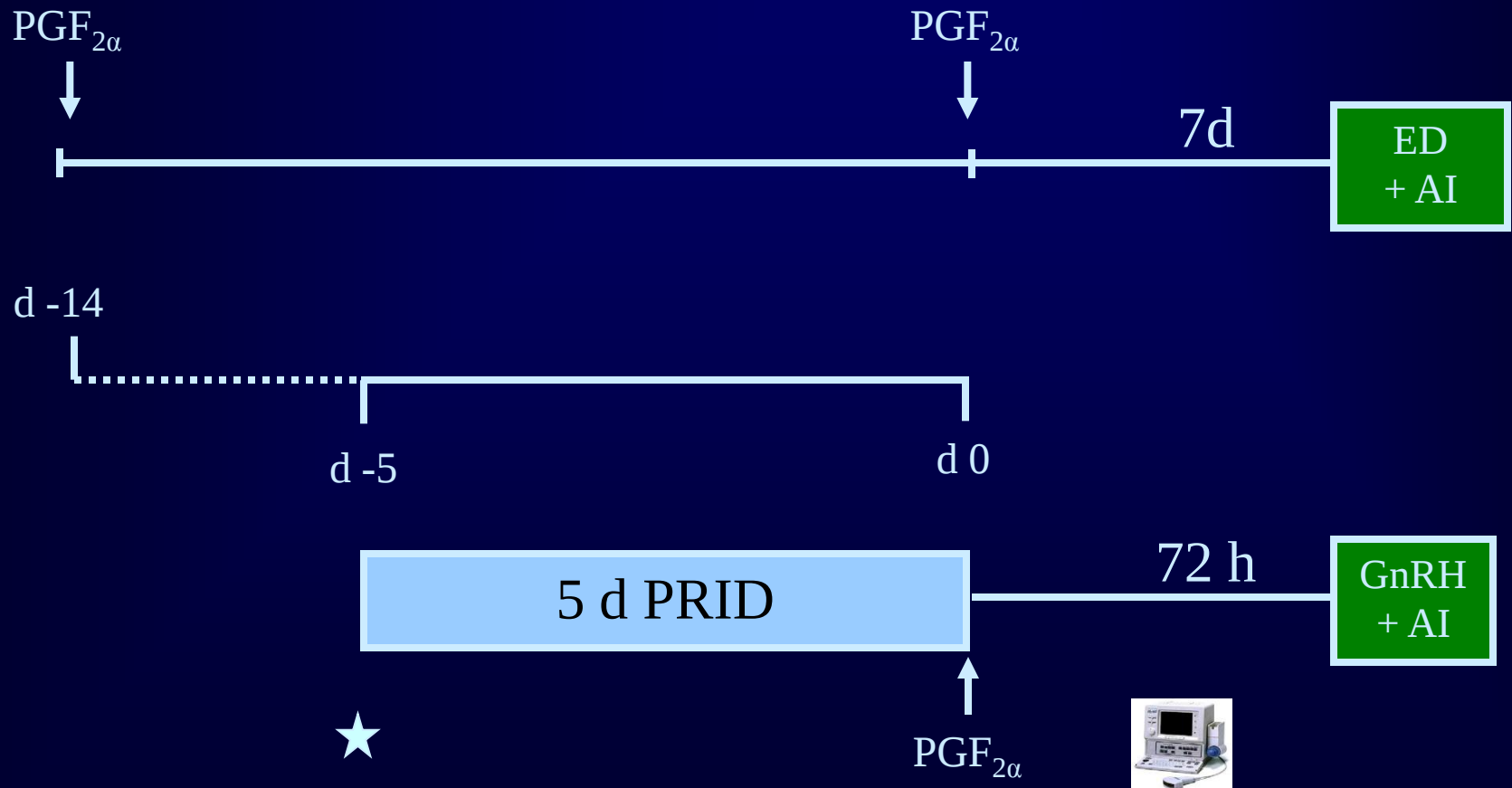
TAI Pregnancy Rate 28 d



Trt, $P > 0.05$

Colazo and Ambrose, 2011

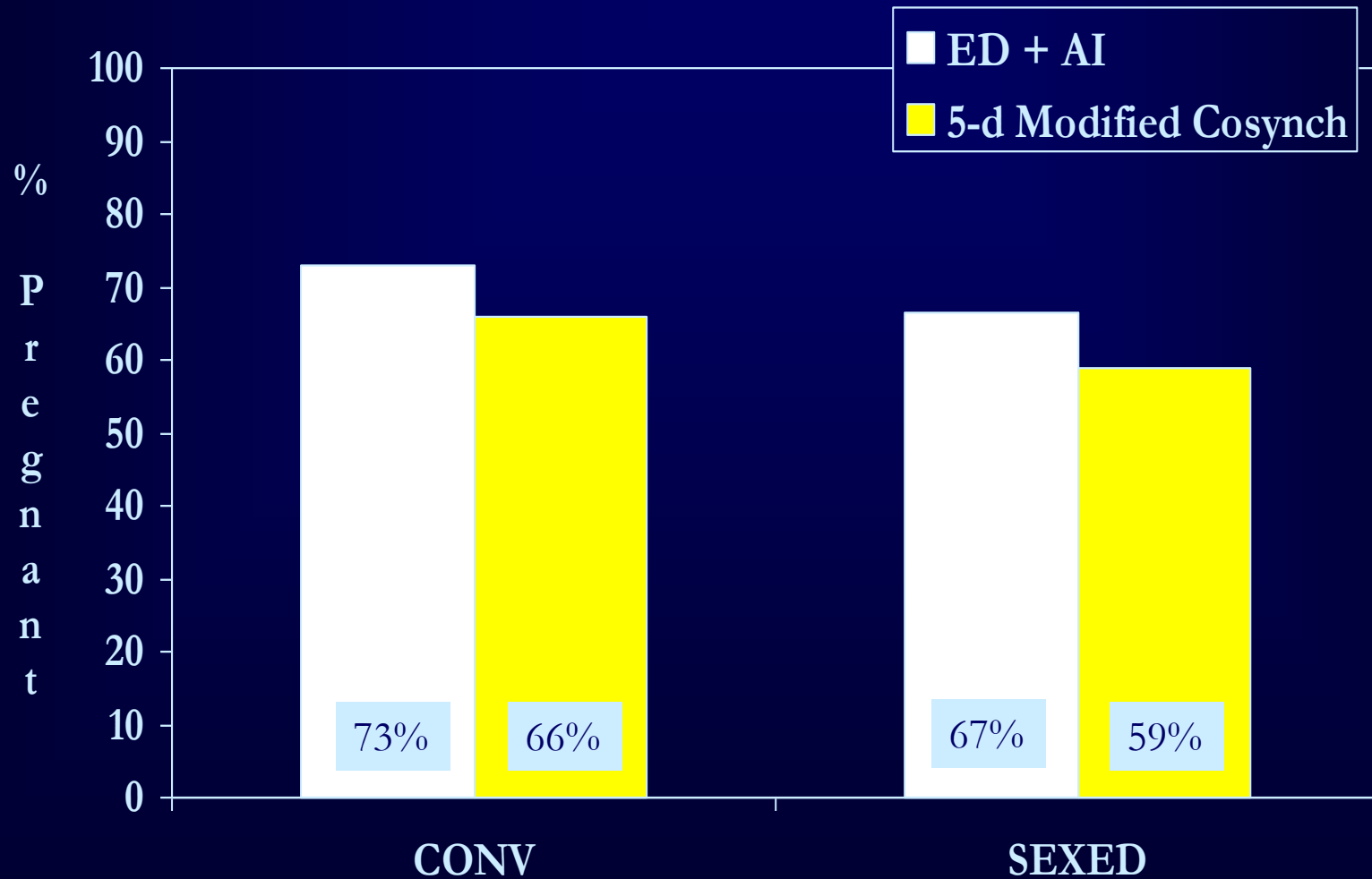
Experimental Design - ED vs 5d Modified Cosynch



N=224; ~half AI with sexed semen

Colazo, unpublished

Conception Rate 25-30 d



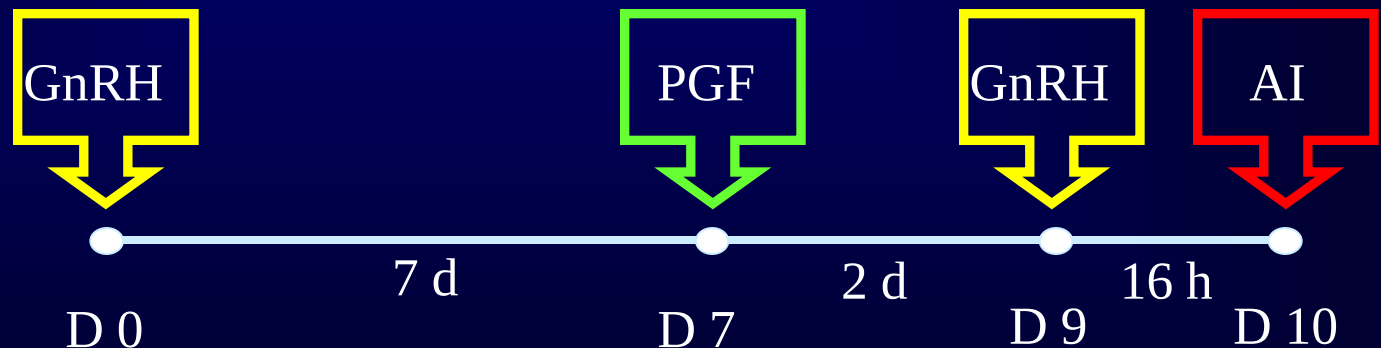
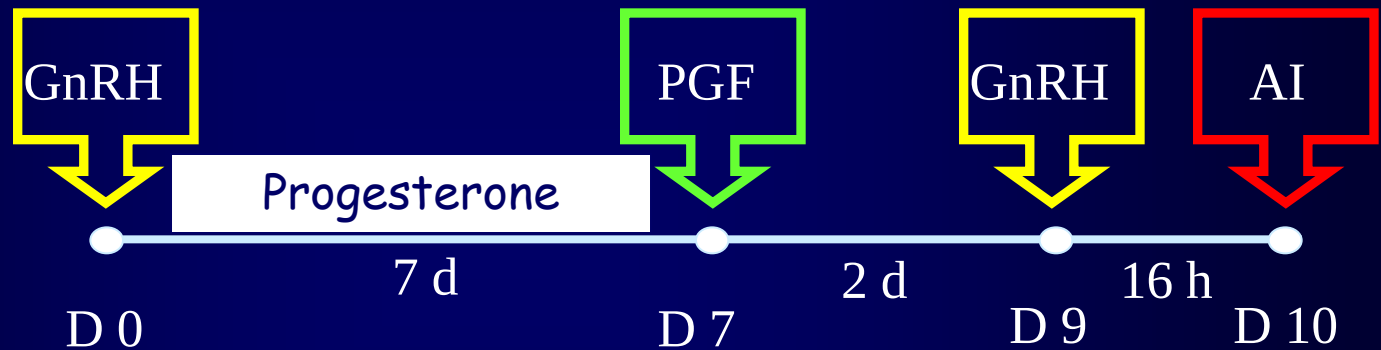
N=224

Colazo, unpublished



PRID

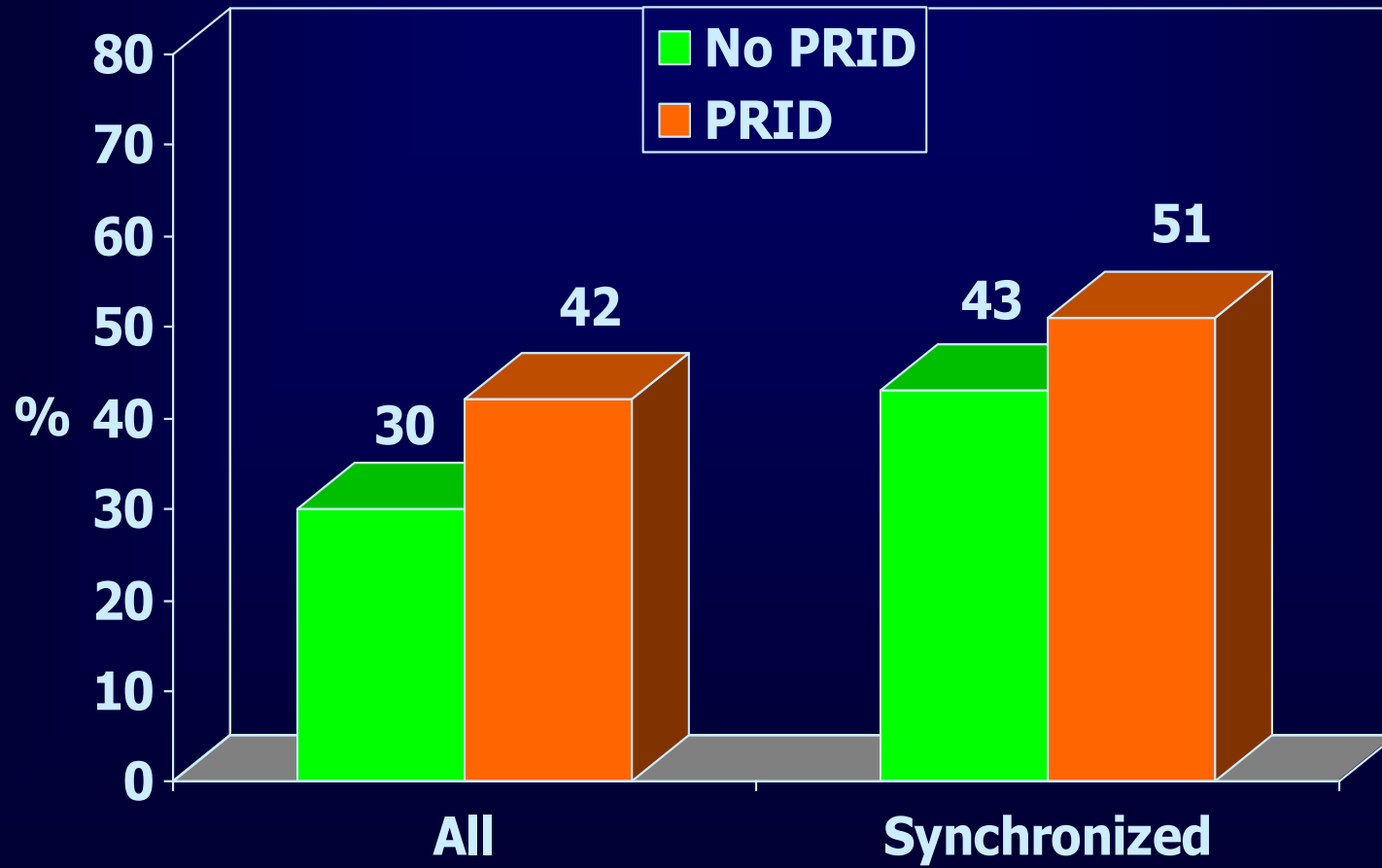
7-d OVSYNCH +/- P4



N = 608; Presynchronized N=217

Colazo et al., 2013

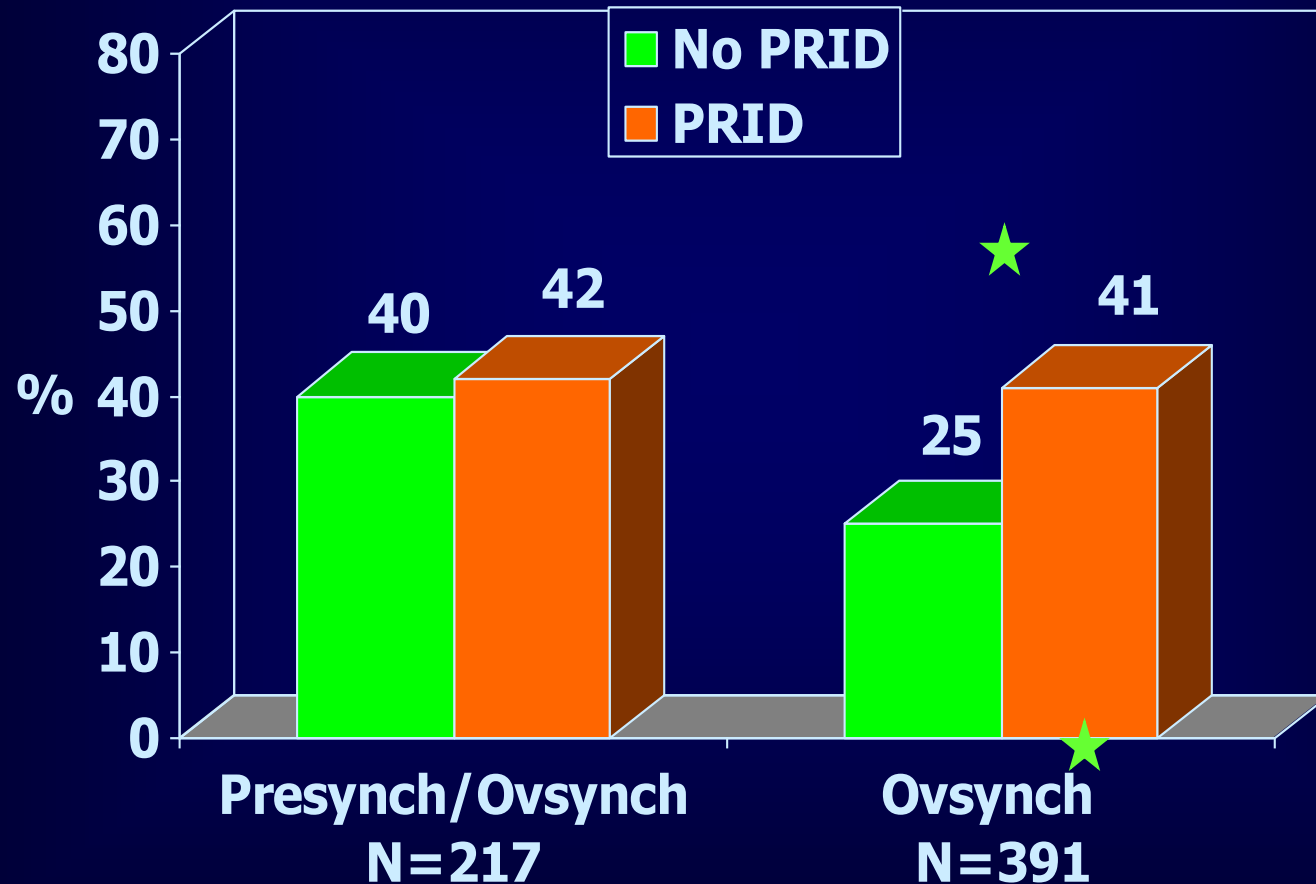
Pregnancy rate: PRID effect



N = 608; P < 0.05

Colazo et al., 2013

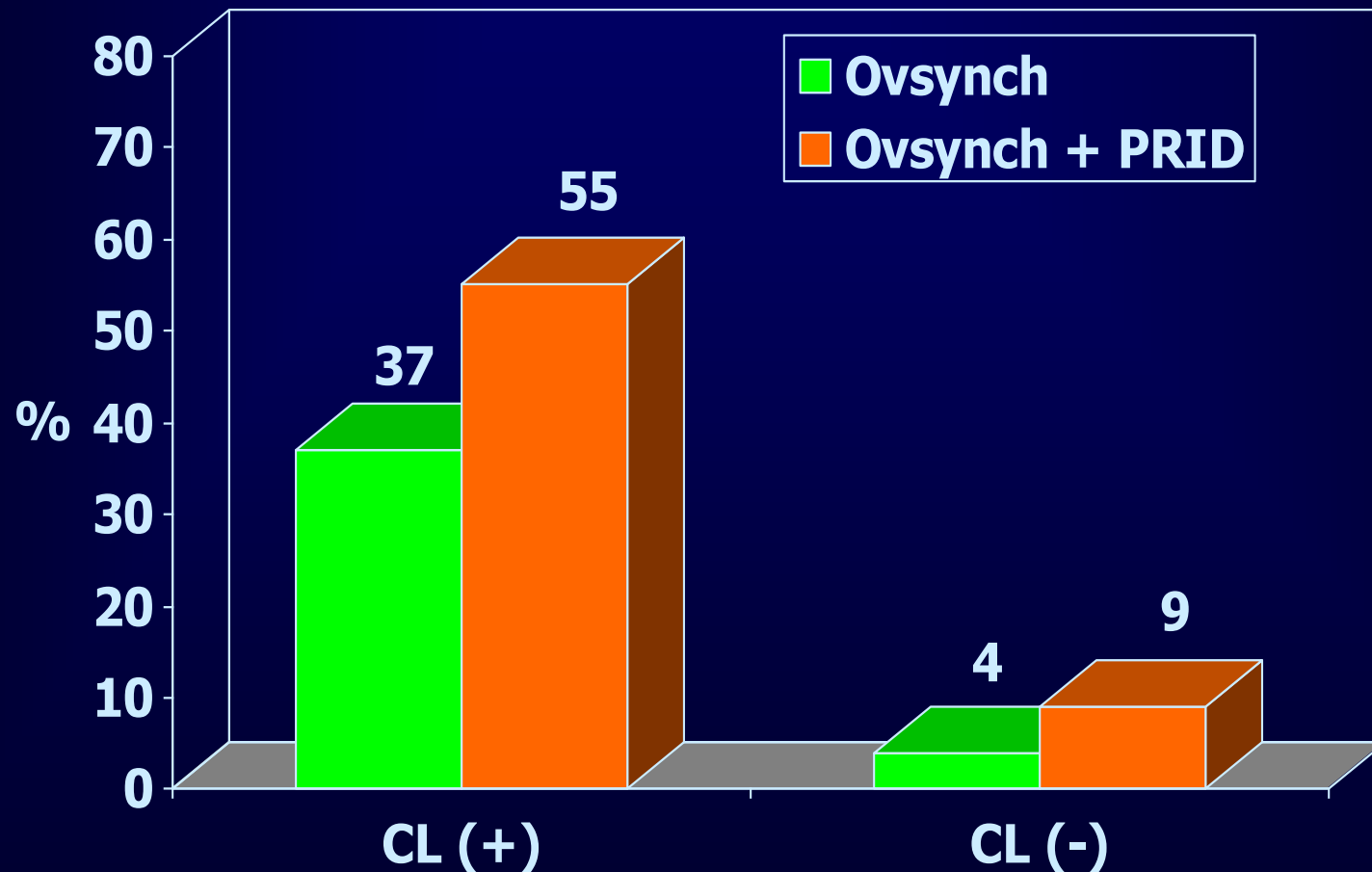
PRID treatment by TAI protocol



Interaction $P < 0.05$

Colazo et al., 2013

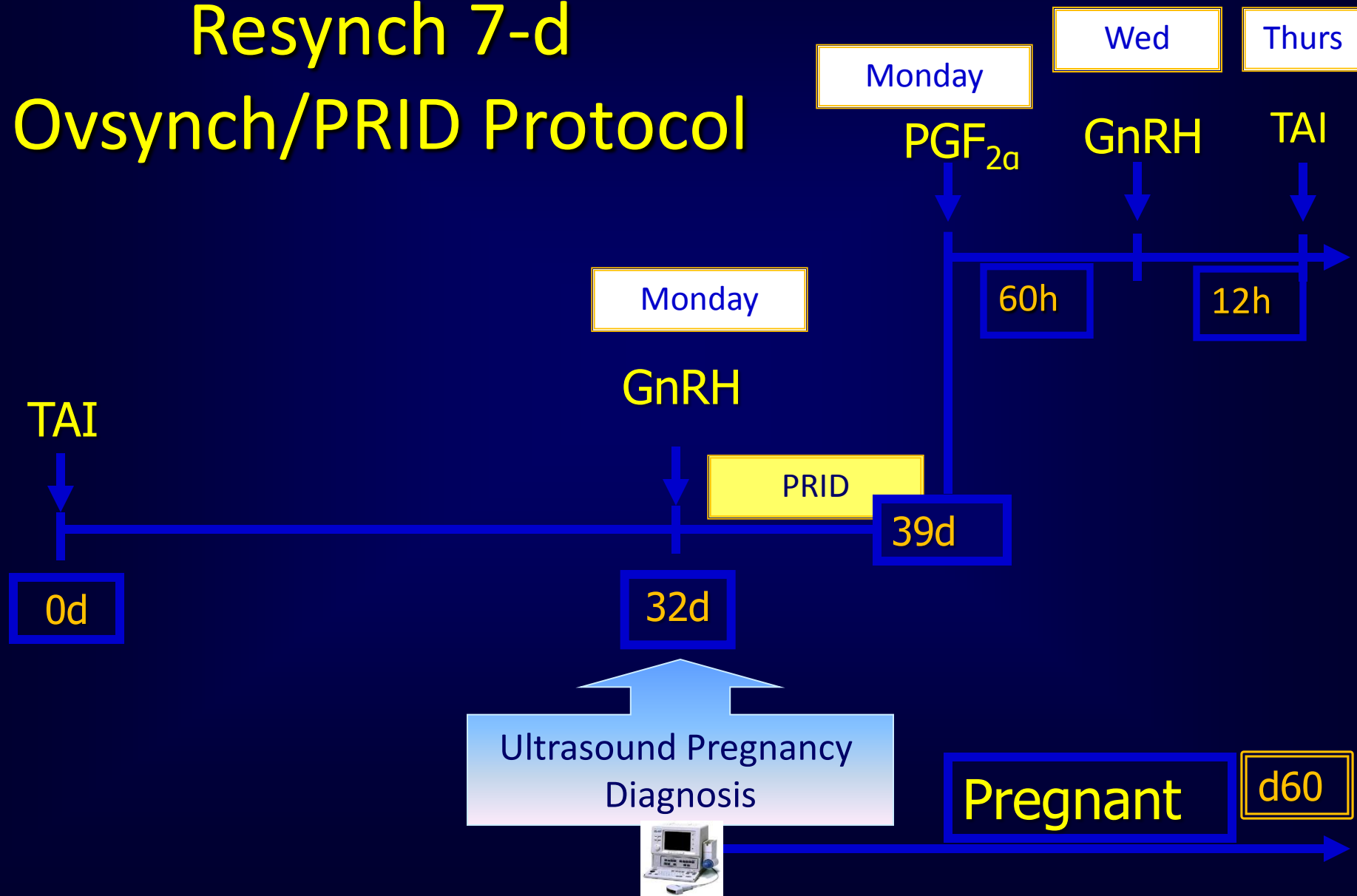
Ovsynch vs. Ovsynch + PRID Acyclic cows



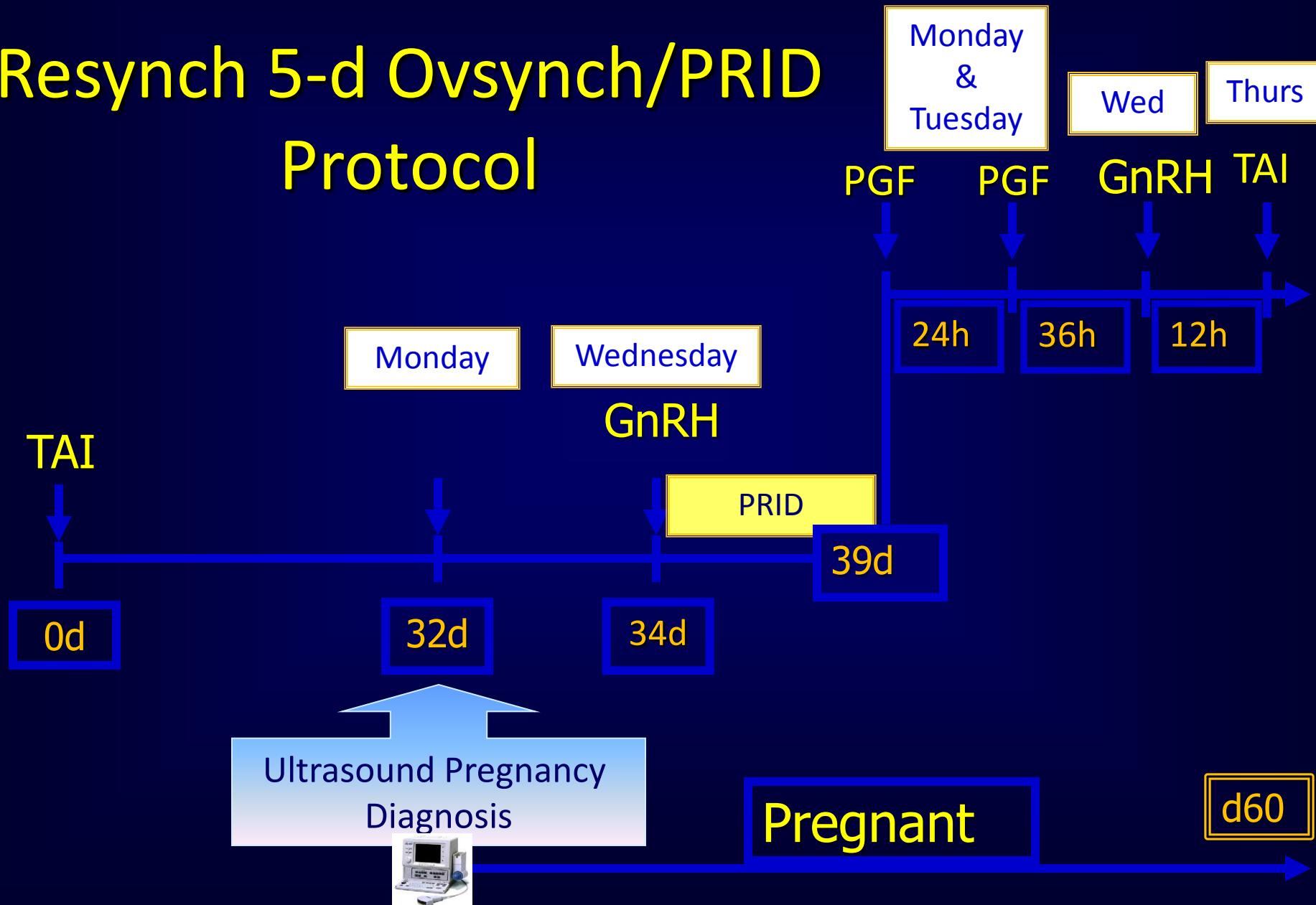
N = 107; Interaction $P < 0.05$

Colazo et al., 2013

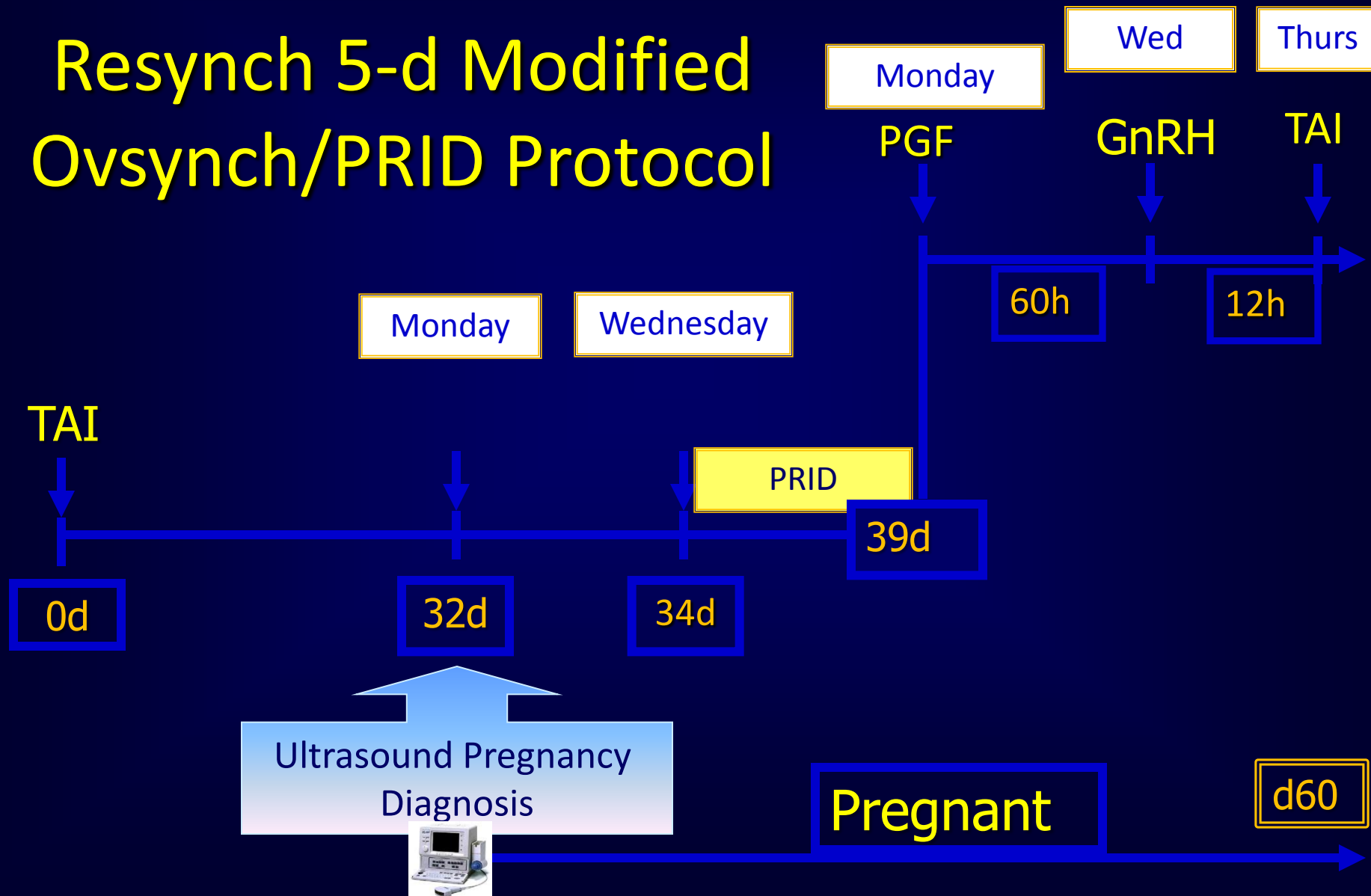
Resynch 7-d Ovsynch/PRID Protocol



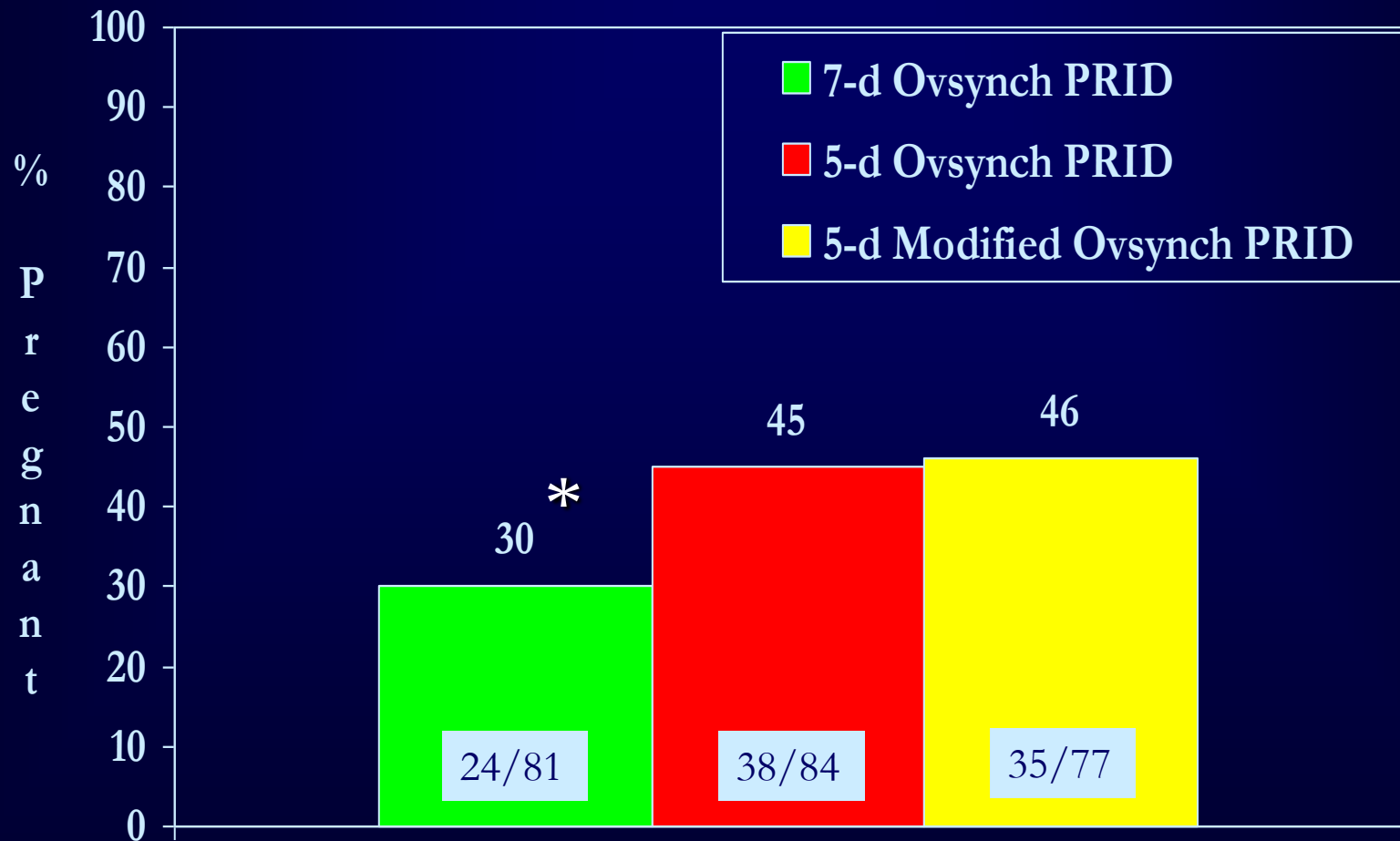
Resynch 5-d Ovsynch/PRID Protocol



Resynch 5-d Modified Ovsynch/PRID Protocol



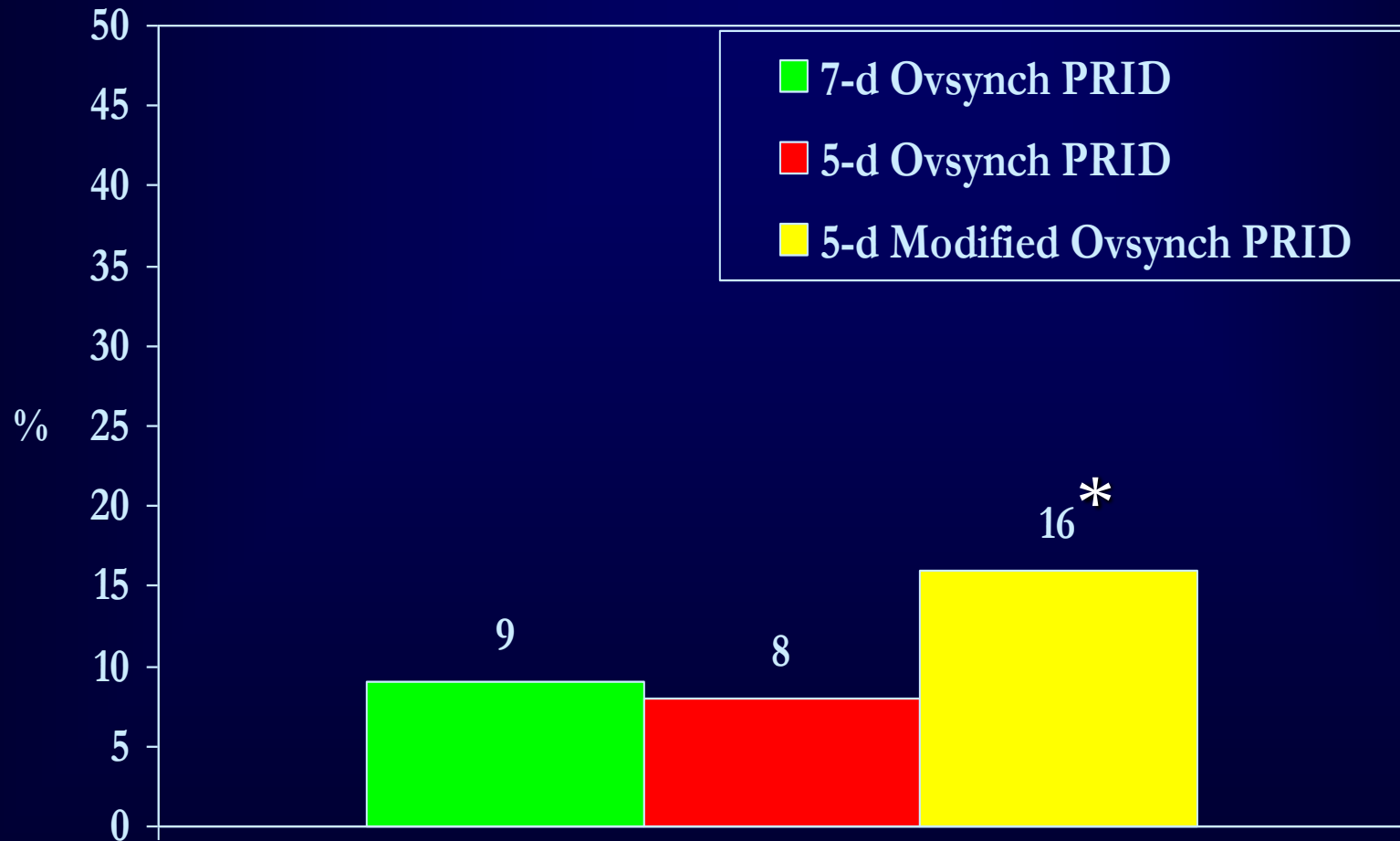
Resynch Pregnancy Rate 32 d



Trt, $P < 0.05$

Colazo unpublished

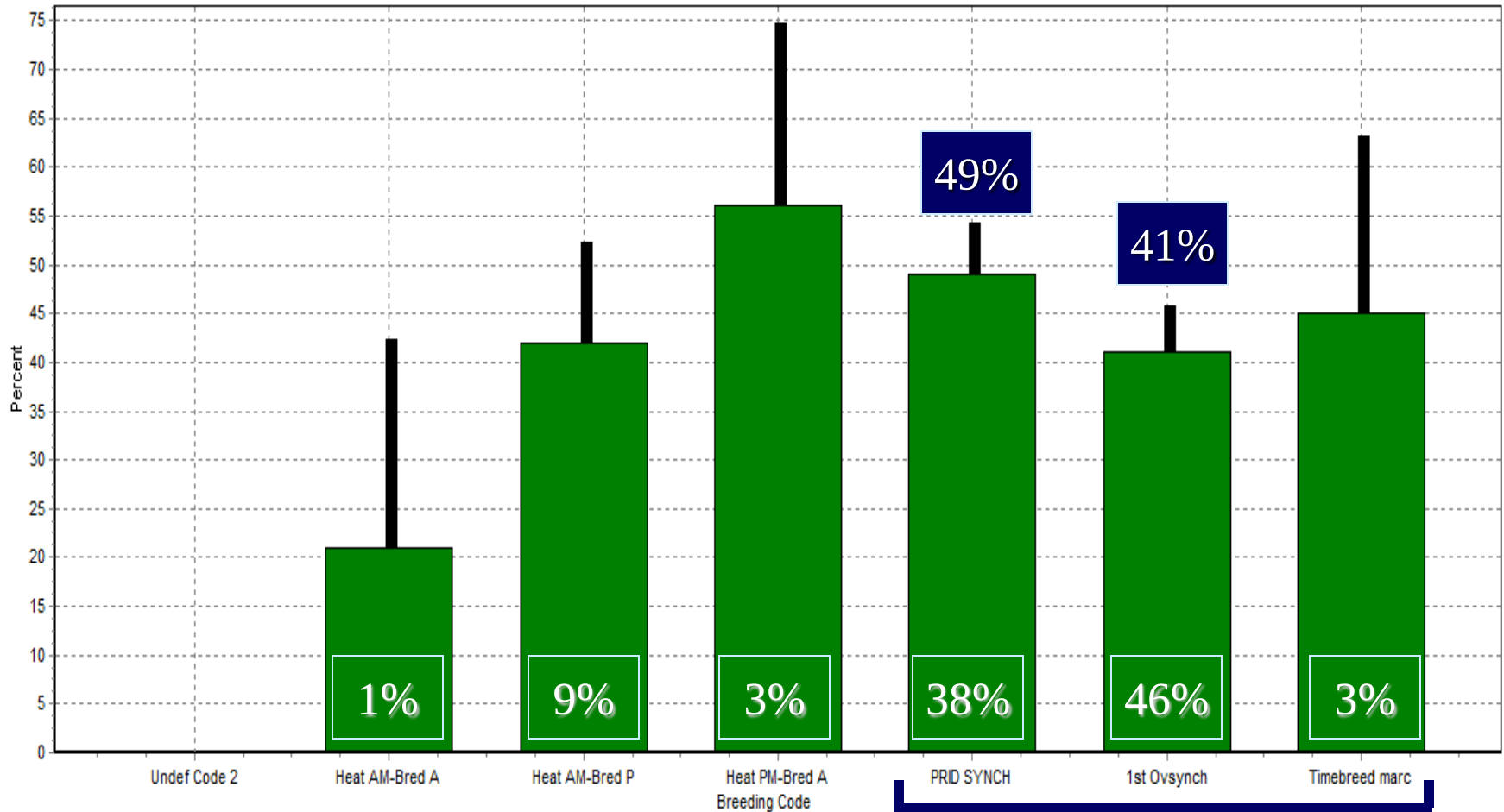
Pregnancy loss between 32 and 60 d



Trt, $P < 0.1$

Colazo unpublished

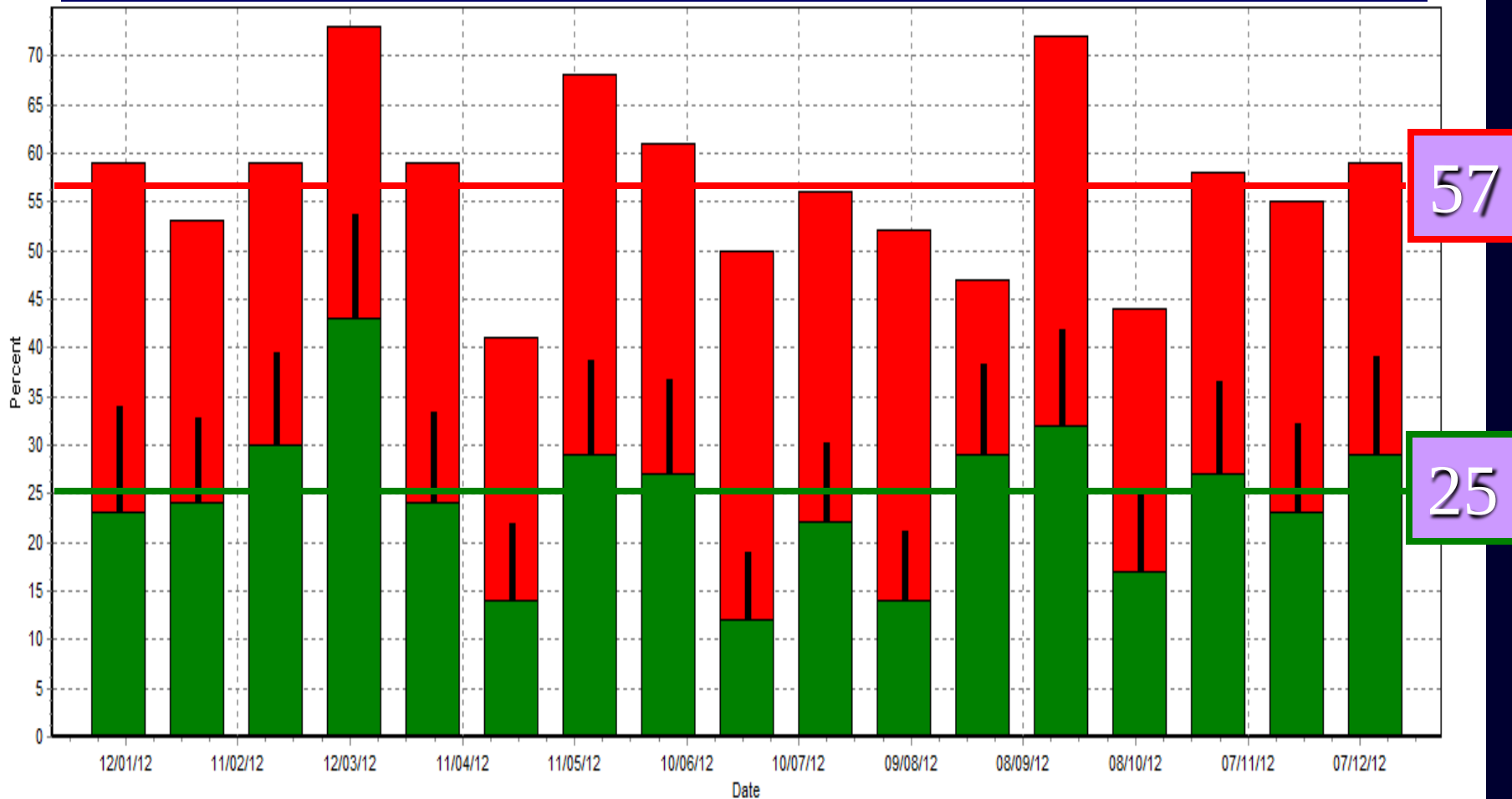
Conception rates (957 AI - 2012)



Wetaskiwin, AB
475 Lac cows
11460 kg

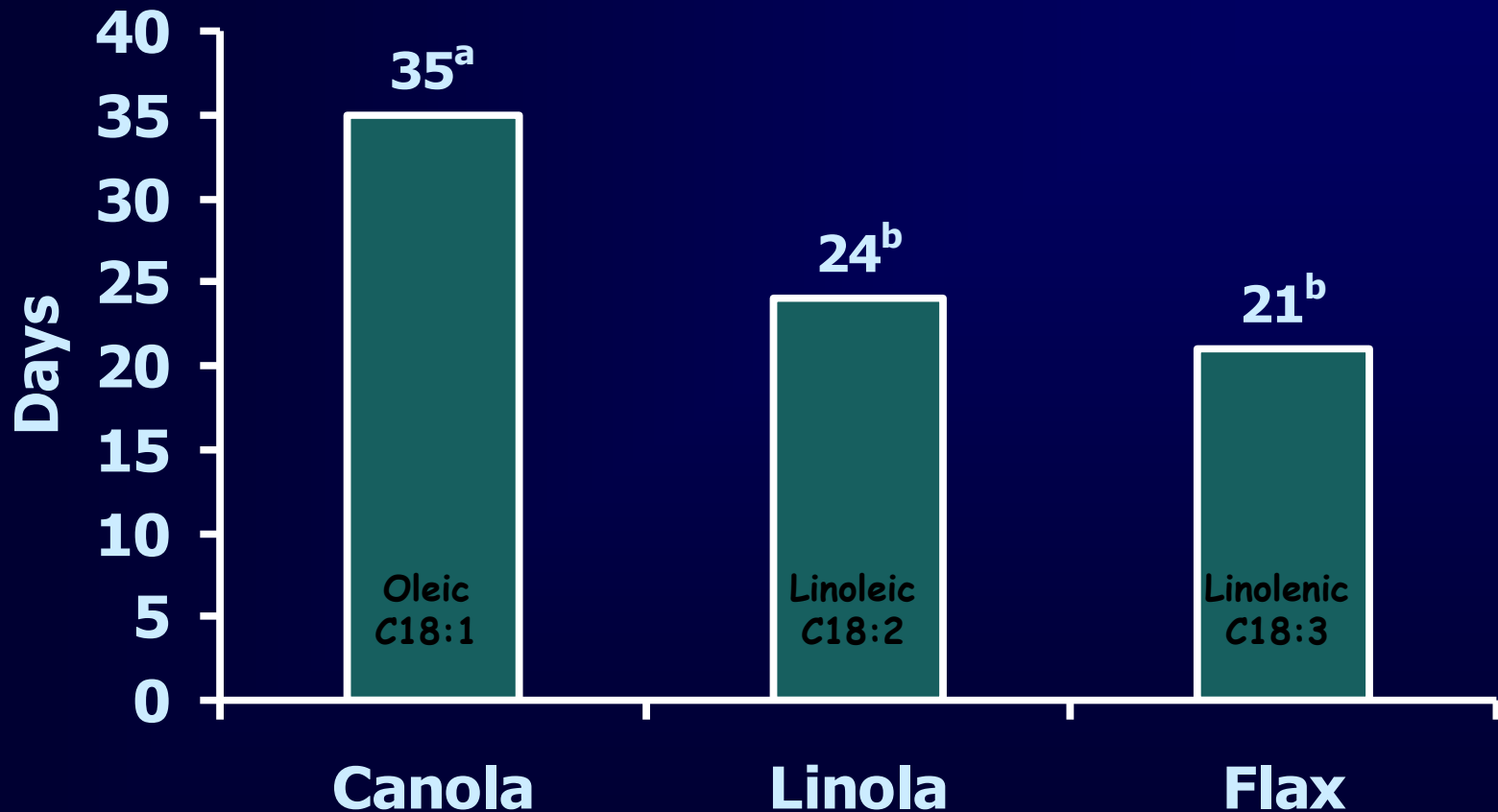
87%

21 d Insemination and Pregnancy risk (2012)



Mean interval from calving to ovulation in dairy cows fed oilseed supplements (8% DMI) during dry period for 5 weeks

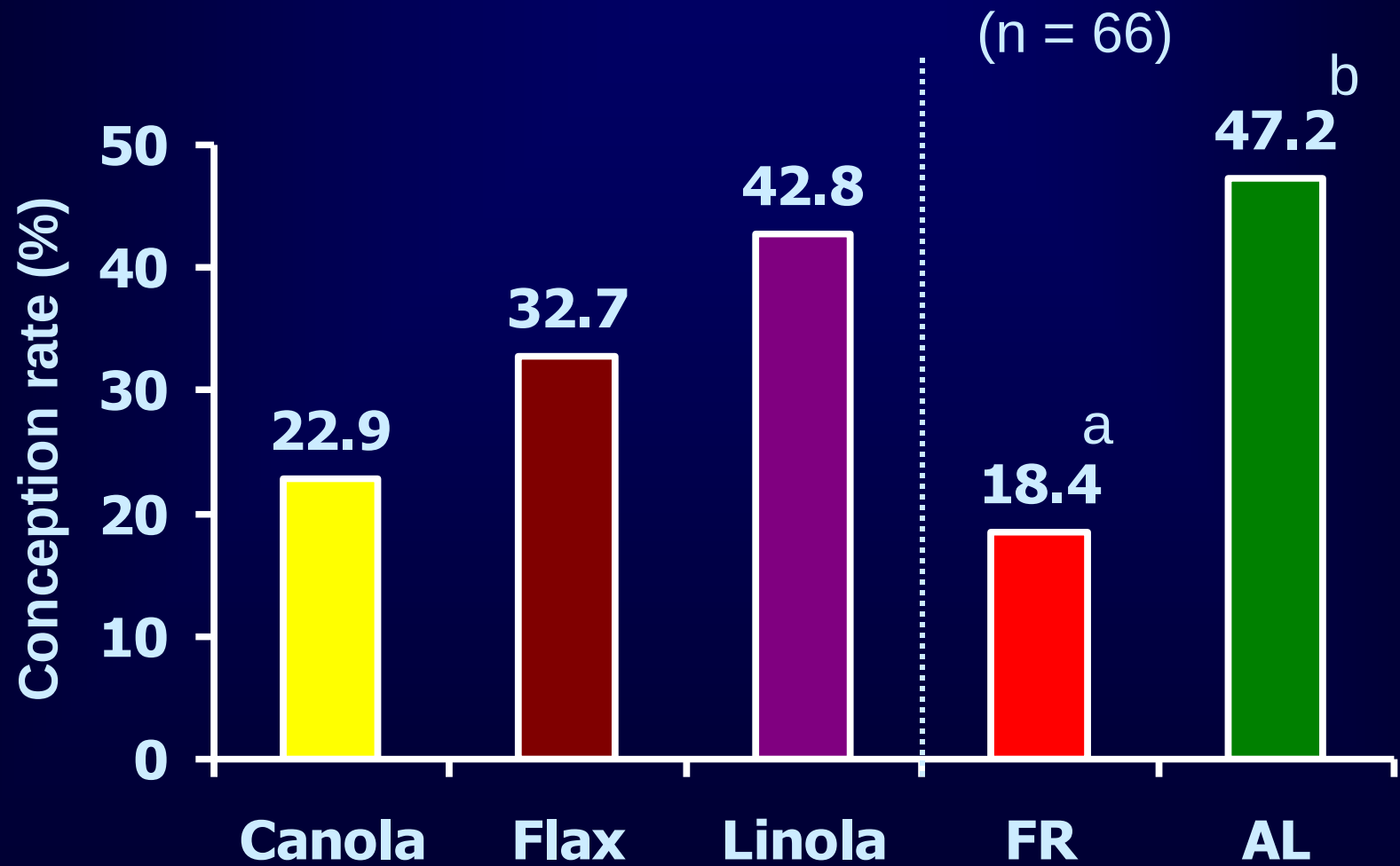
(n = 72 cows)



^{ab} $P < 0.05$

Colazo et al. (2009) J Dairy Sci 92:2562-71

Conception rates in dairy cows fed oilseed supplements during dry period

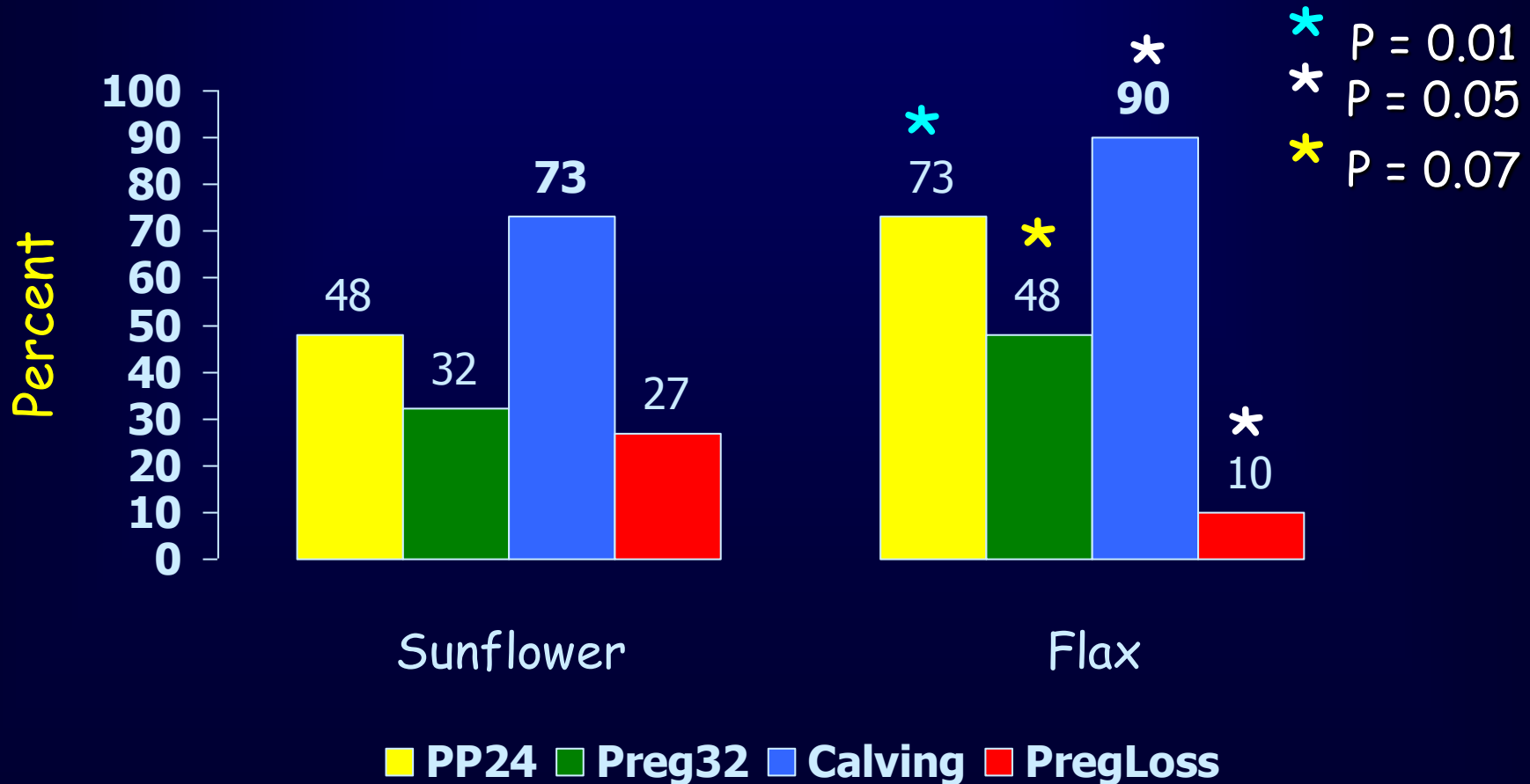


FR= 24% feed restriction; AL = ad libitum

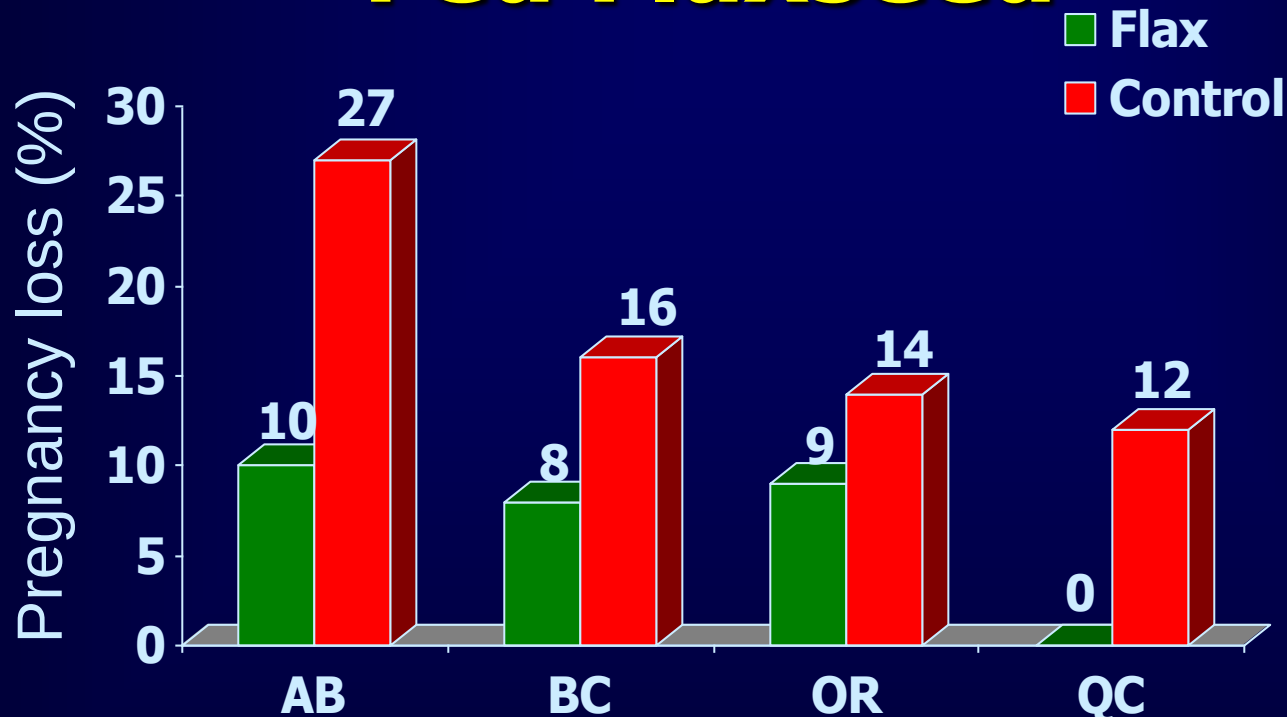
^{ab} $P < 0.05$

Presumptive (D 24) and confirmed (D 32) pregnancy to first AI and pregnancy losses

n=121

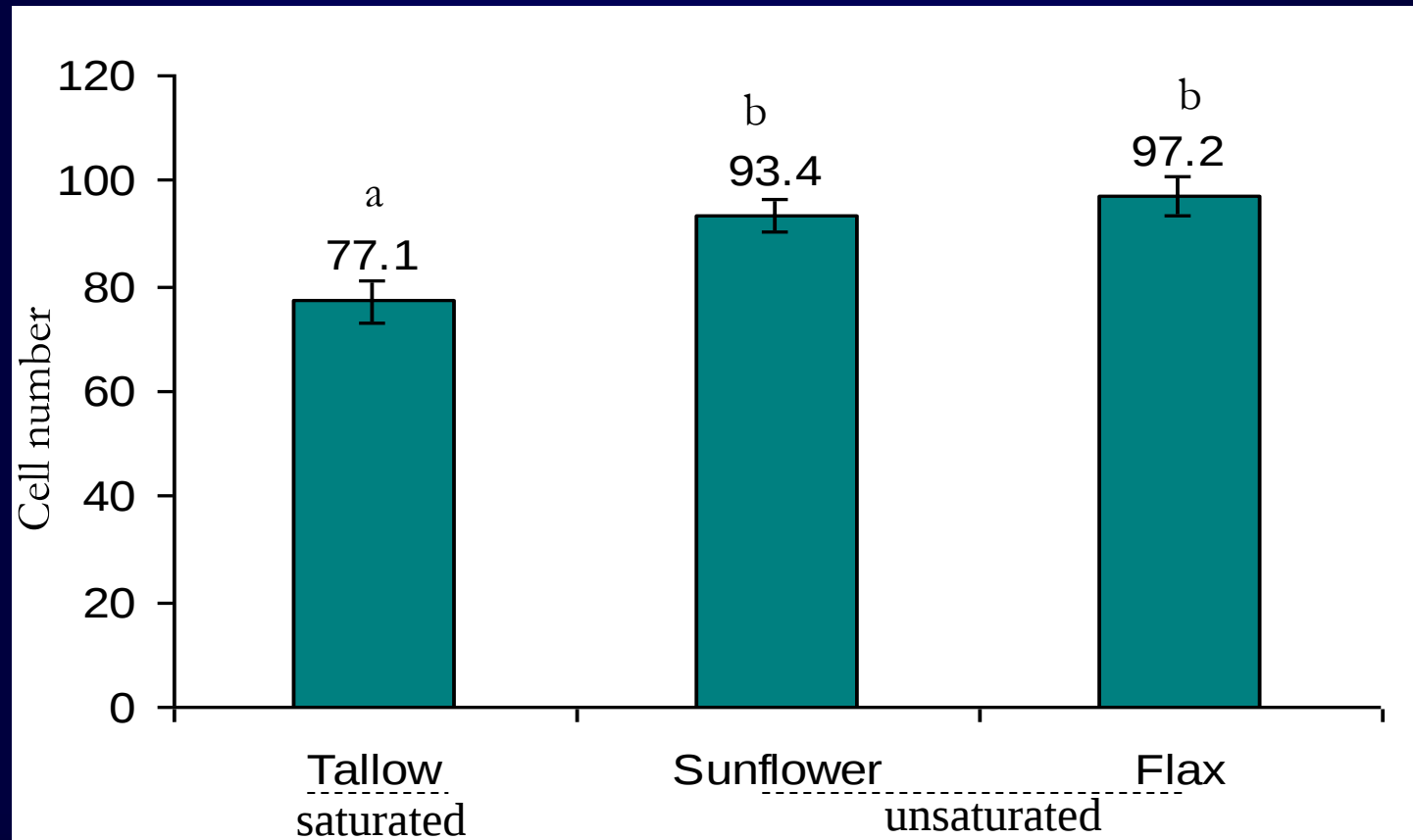


Pregnancy Losses in Cows Fed Flaxseed



Cows:	121	263	303	138
P value:	(0.05)	(0.15)	(0.18)	(0.07)
Reduction in loss (%):	63	50	36	100

Embryonic cell number in cows fed saturated or unsaturated fatty acids



a,b $P < 0.001$

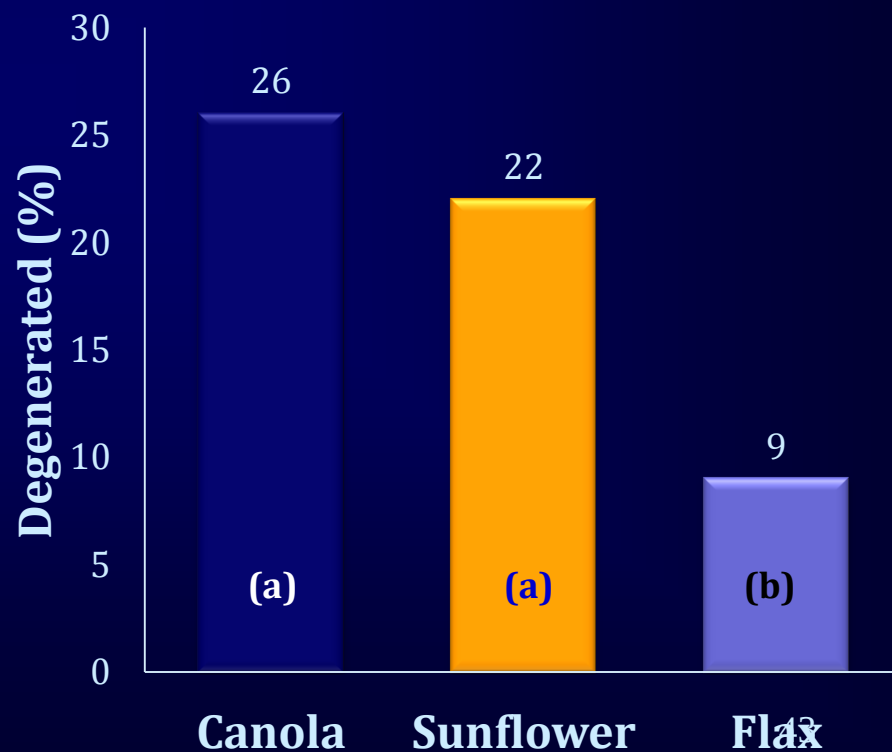
Thangavelu et al (2006)

Day-7 embryo flushing



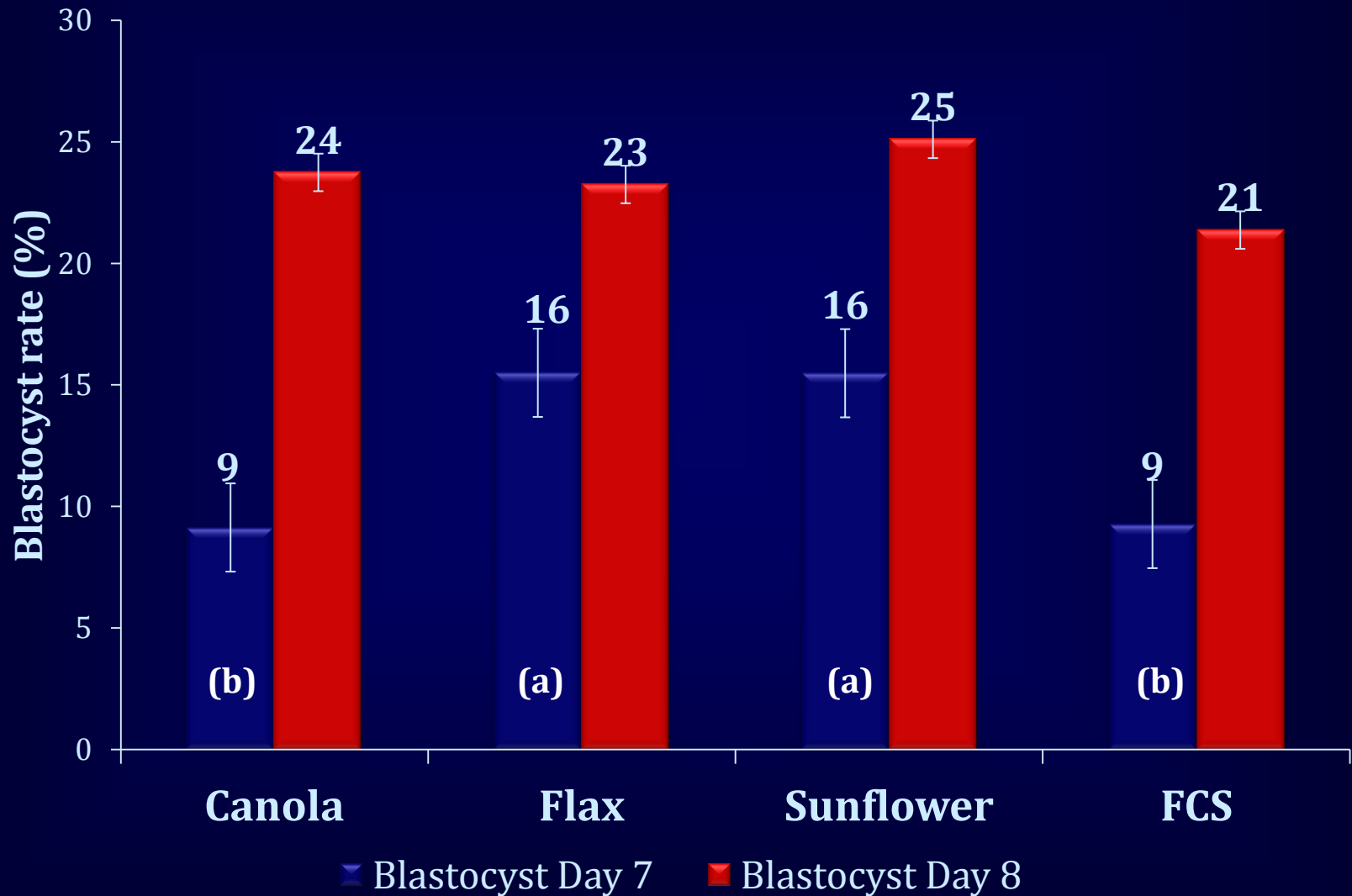
TRT	Total	Analysis
Canola	82	Need TBP
Sunflower	99	Need TBP
Flax	87	Need TBP

Degenerated embryo¹



¹Salehi, et al., IETS conference, 2014 (Accepted)

Total Blastocyst rate on Day 7 & 8



$P < 0.05$



Muchas Gracias!

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