Obseva

nature meets nurture

Focused on unmet needs in women's reproductive health

November 2020

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Obseva focus on unmet needs in women's health

Key updates today

YSELTY® (LINZAGOLIX)

Potential to relieve symptoms from heavy menstrual bleeding due to uterine fibroids and pain associated with endometriosis

- **MAA filing 4Q:20 on track**
- **Commercial partnership discussions ongoing**

EBOPIPRANT (OBE022)

Potential to delay preterm birth to improve newborn health and reduce medical costs

- **Positive results PROLONG Proof-of-Concept Phase 2a**
- **Initiation Phase 2b**

NOLASIBAN

Potential to improve live birth rate following IVF & embryo transfer

- **Submission of IND in China by YuYuan**

Multiple development programs drive value

	Phase 1	Phase 2	Phase 3	Status/NEXT MILESTONES
YSELTY® (LINZAGOLIX) Oral GnRH receptor antagonist	Uterine Fibroids – Ph3 PRIMROSE 2 EU & U.S.			Positive Ph3 24W results for both PRIMROSE 1 & 2 PRIMROSE 1 52W data Q4:2020 MAA/NDA Q4:2020/1H:2021
	Uterine Fibroids – Ph3 PRIMROSE 1 U.S.			
	Endometriosis – Ph3 EDELWEISS 2 U.S.			Phase 3 trials ongoing
	Endometriosis – Ph3 EDELWEISS 3 EU & U.S.			
	Endometriosis – Ph2b EDELWEISS			Positive Phase 2b results 2018/19
EBOPIPRANT Oral $PGF_{2\alpha}$ receptor antagonist	Preterm Labor – Ph2a PROLONG			Positive PoC - Phase 2a study. Moving to Phase2b Dose Ranging study
	Preterm Labor – Ph1			Pre-clinical/Phase 1 complete
NOLASIBAN Oral oxytocin receptor antagonist	IVF – Ph3 IMPLANT 2/4 EU			Positive IMPLANT 2 Ph3 Results IMPLANT 4 Ph3 missed primary endpoint YuYuan BioScience: China IND submission 4Q 2020
	IVF – Ph1/2 in China			

Preterm birth is delivery before 37 weeks of pregnancy

Life altering and costly

$26B/yr
U.S. economic burden

>1
In 10 babies are born preterm

1 million
preterm related deaths in 2015 WW *

LEADING

cause of death
in children
under age 5

Babies surviving early birth face greater likelihood of lifelong disabilities

Preterm birth, a costly burden per baby

$16.9B+ U.S. infant medical costs

$195K+ average cost per U.S. survivor infant born 24-26 weeks

$50K average U.S. cost for a preterm infant

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WHO 'Born Too Soon: The Global Action Report on Preterm Birth' (2012); Kissin et al. NEJM, 2014
Behrman et al., National Academies Press, 2007

** WHO: 15 million babies born preterm each year worldwide, and number is rising.*

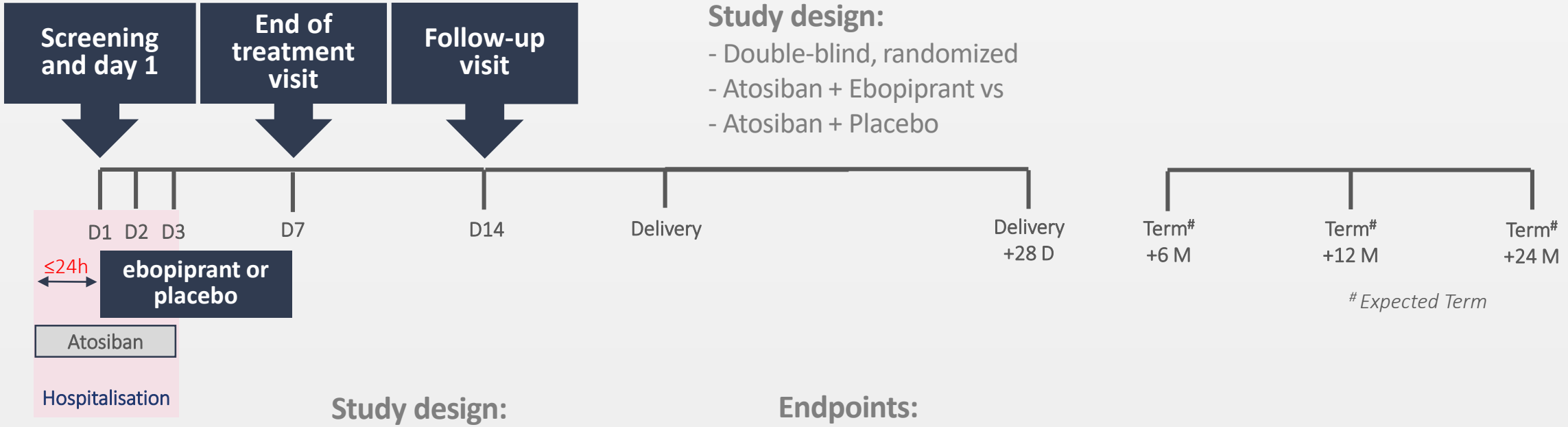
Ebopiprant Phase 2a PROLONG study

The objective of a PTL treatment is to delay delivery by at least 48 hours to allow transfer of women to a center with neonatal intensive care facilities, and to allow corticosteroids administration to the mother to have maximal effectiveness for the baby

Dosing period and FU visit
- Visits at site -

Maternal and neonatal FU
- Site visits or medical records -

Infant follow-up
- Non-interventional, no site visits -



Study design:
- Double-blind, randomized
- Atosiban + Ebopiprant vs
- Atosiban + Placebo

 # Expected Term

Study design:
- Double-blind, randomized
- Atosiban + Ebopiprant vs
- Atosiban + Placebo

Endpoints:
- Incidence of delivery within 48 hours and 7 days of treatment
- Time to delivery and delivery prior to 37 weeks of gestation
- Maternal, fetal, neonatal safety

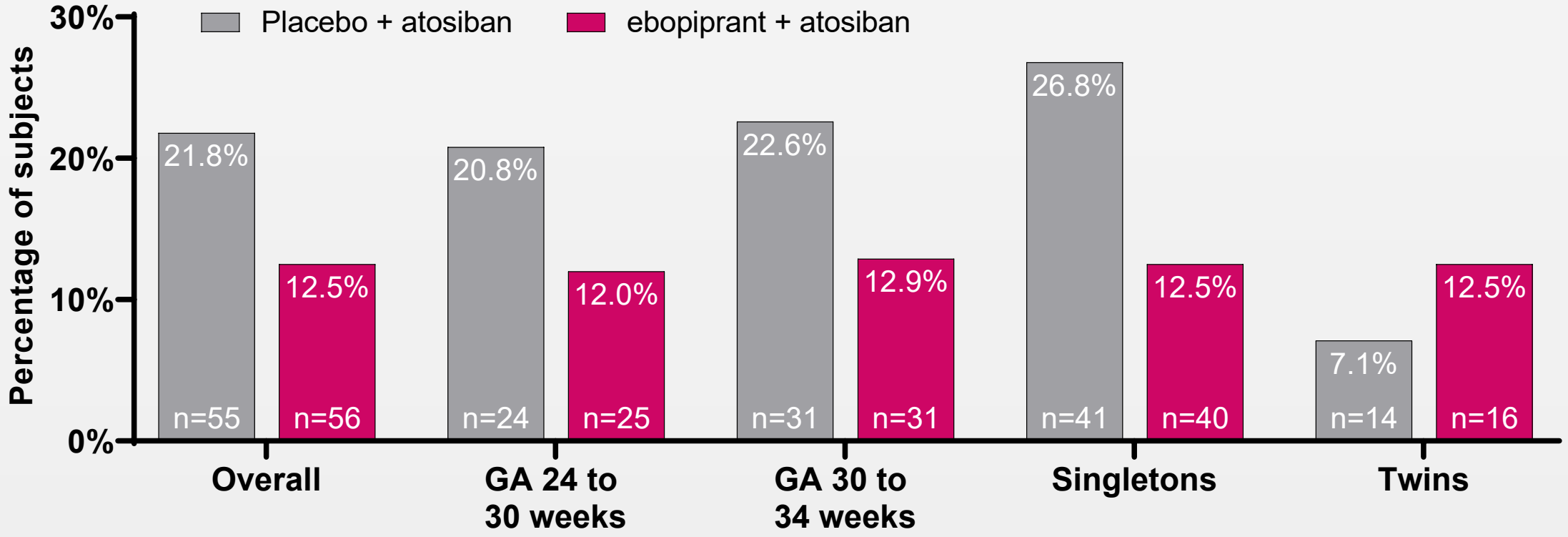
Ebopiprant Phase 2a PROLONG study

Demographics and baseline characteristics

	Atosiban + Placebo	Atosiban + Ebopiprant
	n=55	n=58
Mean age –years (SD)	29.6 (5.1)	29.7 (5.7)
Race		
White – n (%)	39 (70.9%)	42 (72.4%)
Asian – n (%)	16 (29.1%)	14 (24.1%)
Mean (SD) gestational age – weeks	29 (3.0)	30.2 (2.6)
24 to 30 weeks – n (%)	23 (41.8%)	25 (43.1%)
30 to 34 weeks – n (%)	32 (58.2%)	33 (56.9%)
Singleton – n (%)	41 (74.5%)	42 (72.4%)
Twin – n (%)	14 (25.5%	16 (27.6%)
Mean (SD) contractions /30 mins	3.19 (2.93)	3.37 (2.97)

Ebopiprant Phase 2a PROLONG study

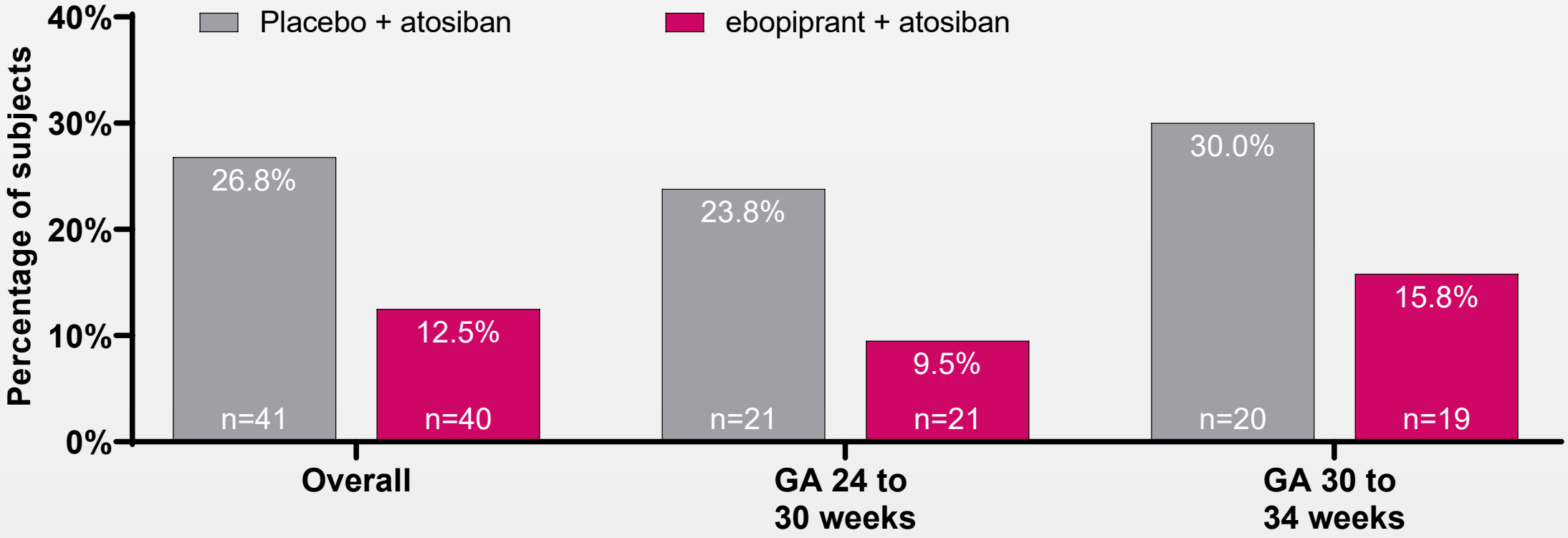
Percentage of subjects delivering within 48 hours



	Overall	GA 24 to 30 weeks	GA 30 to 34 weeks	Singletons	Twins
OR (90% CI)	0.52 (0.22, 1.23)	1.05 (0.20, 5.43)	0.77 (0.21, 2.89)	0.39 (0.15, 1.04)	2.05 (0.23, 18.1)

Ebopiprant Phase 2a PROLONG study

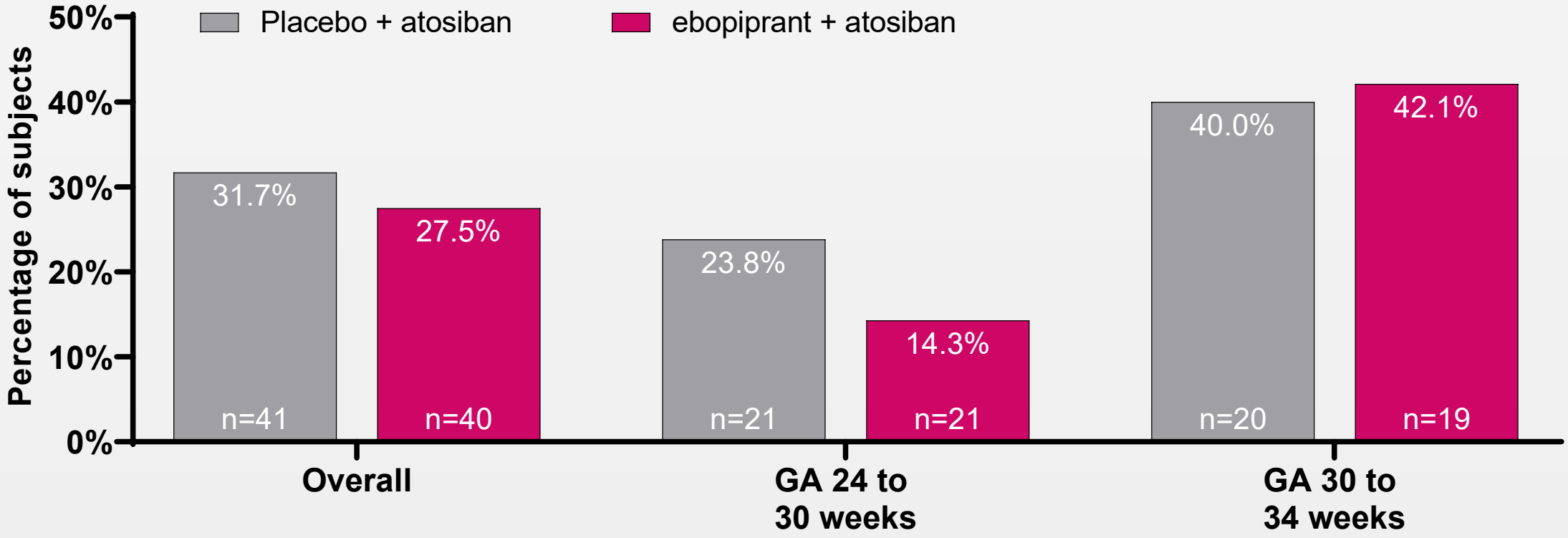
Percentage of singleton pregnancies delivering within 48 hours



OR (90% CI)	0.39 (0.15, 1.04)	0.34 (0.08, 1.49)	0.44 (0.12, 1.62)

Ebopiprant Phase 2a PROLONG study

Percentage of singleton pregnancies delivering within 7 days



OR (90% CI)	0.81 (0.36, 1.83)	0.53 (0.14, 2.01)	1.09 (0.37, 3.18)

Ebopiprant Phase 2a PROLONG study

Conclusions

Over 50% reduction of premature delivery within 48 hrs

Enabling administration of critical drugs for neonatal protection

Good maternal, fetal and neonatal safety

Maternal, fetal and neonatal safety comparable to placebo

Supports advancing ebopiprant into Phase 2b

Phase 2b dose range finding will include higher doses to more fully define ebopiprant potential and the longer-term benefits for babies

Ebopiprant has demonstrated proof of concept in delaying preterm birth, enabling ObsEva to plan its further development

Uterine fibroids

A significant unmet need translating into a multibillion market

$34B/yr

total U.S. costs from direct costs, lost workdays and complications

9 million

women in the U.S. affected by fibroids

70%+

of women have fibroids by age 50

Quality of Life

premenopausal women may experience heavy menstrual bleeding, anemia, bloating, infertility, pain and swelling

600,000

hysterectomies are performed annually in the U.S.

300,000

are because of uterine fibroids

>4 million

women in the U.S. are treated annually for fibroids

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Cardozo et al., Am J Obstet Gynecol 2012; Stewart et al. NEJM, 2015; Flynn et al., Am J Obstet Gynecol 2006; Truven Health, Fibroid Foundation website; Epidemiology of women's health, Jones & Bartlett Learning, Ruby T. Senie, 2014

Yselty® designed to treat more women

Only non-ABT dosing option under development for treating uterine fibroids
Potential best-in-class ABT containing regimen

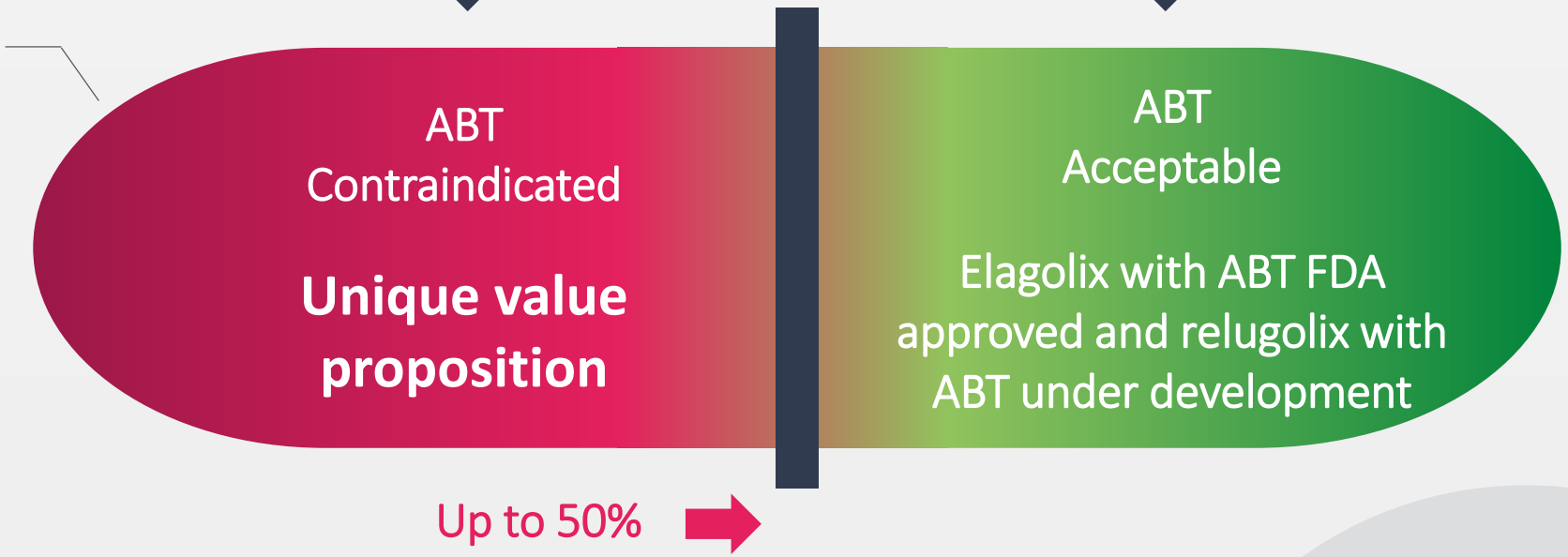
100 mg without ABT

When ABT is a **potential safety, tolerability or preference issue**

200 mg with ABT

When maximum **efficacy desired**

> 4M women treated for uterine fibroids in the US per year



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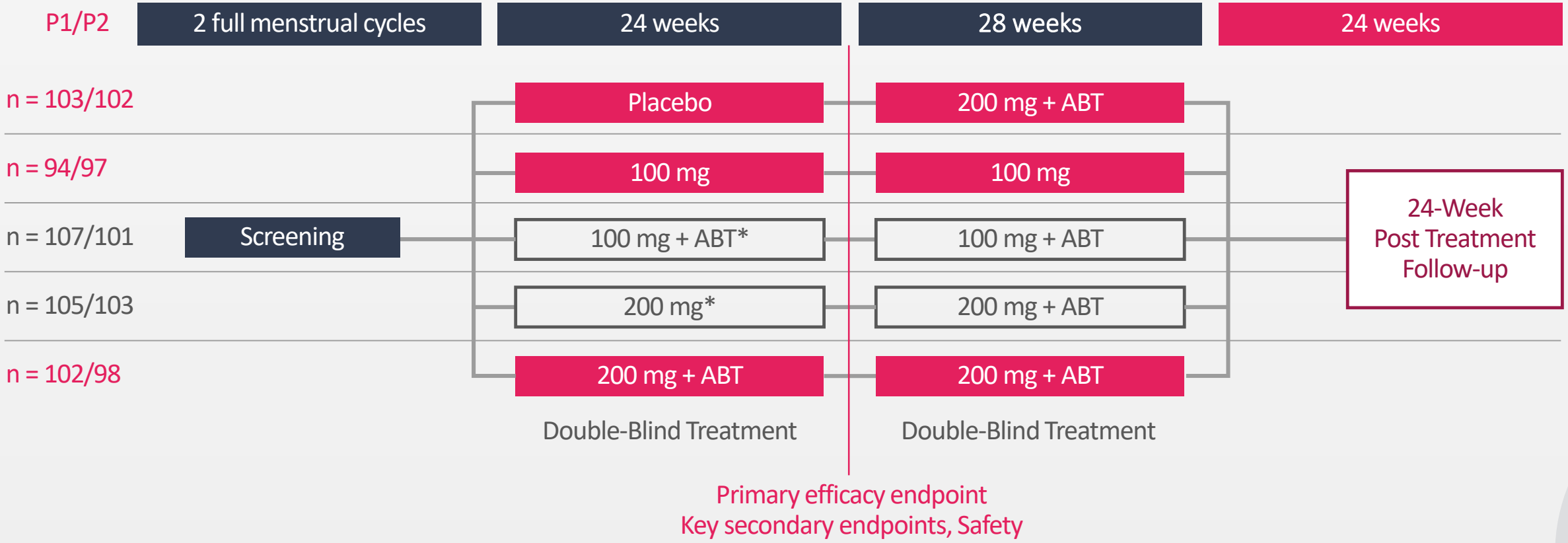
https://www.cdc.gov/2018; U.S. FDA elagolix PI, section 4. Contraindications and section 5.1. Warnings and precautions – thromboembolic disorders and vascular events (see slide 26); *Cardozo et al., Am J Obstet Gynecol 2012; Stewart et al. NEJM, 2015; Flynn et al., Am J Obstet Gynecol 2006; Truven Health, Fibroid Foundation website; Epidemiology of women's health, Jones & Bartlett Learning, Ruby T. Senie, 2014;* ABT = Add Back Therapy (1mg estradiol + 0.5 mg norethindrone acetate)

Phase 3 registration studies

PRIMROSE 1 (US) and PRIMROSE 2 (EU/US)



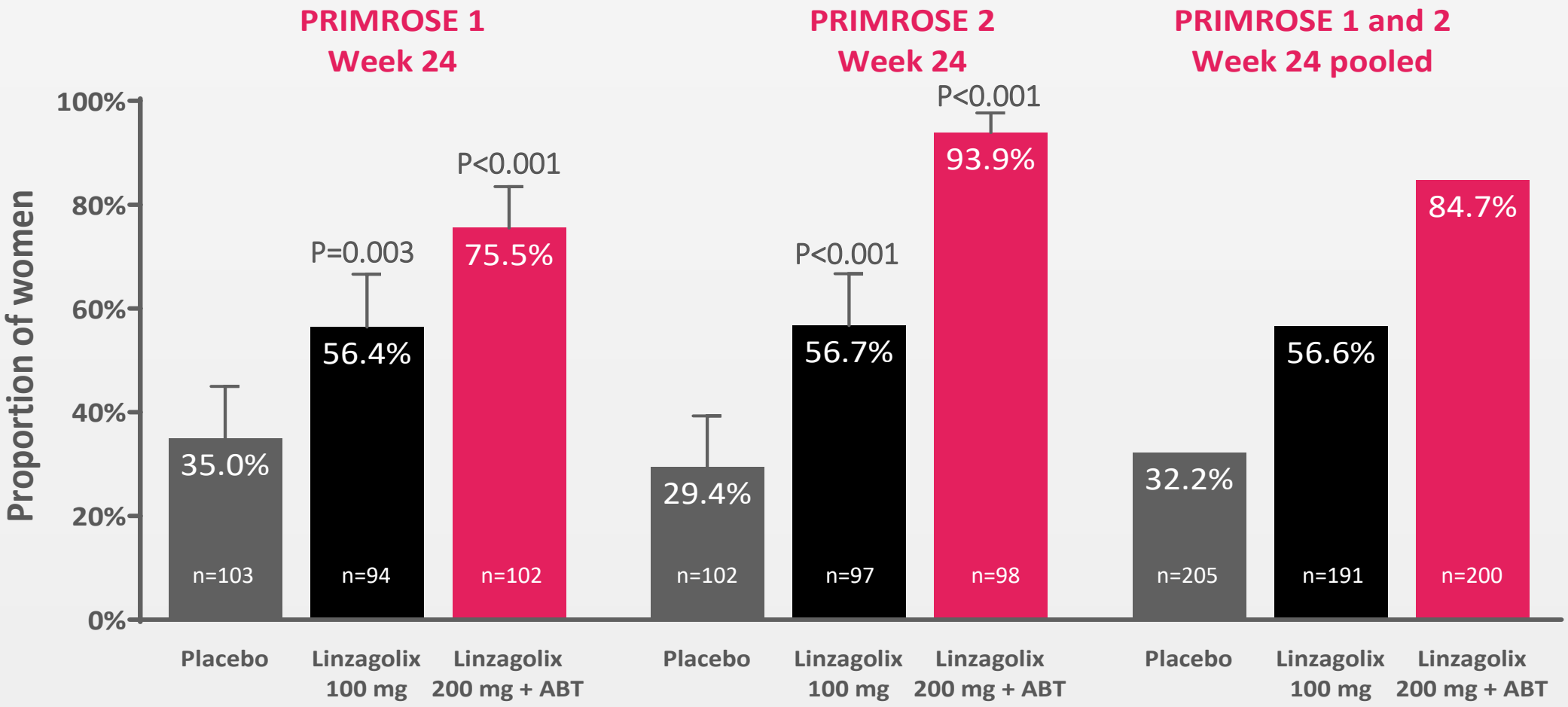
Primary efficacy endpoint is proportion of women with menstrual blood loss ≤ 80 mL (by alkaline hematin method) and ≥ 50% reduction from baseline

Patients in the studies received no Vitamin D or calcium supplementation

* These two arms are the control groups for 100 mg w/o ABT and 200 mg with ABT respectively, and will not be reported in this presentation
ABT = Add Back Therapy (1mg estradiol + 0.5 mg norethindrone acetate)

PRIMROSE 1 and 2 achieved primary endpoint for both doses

Responder* analysis

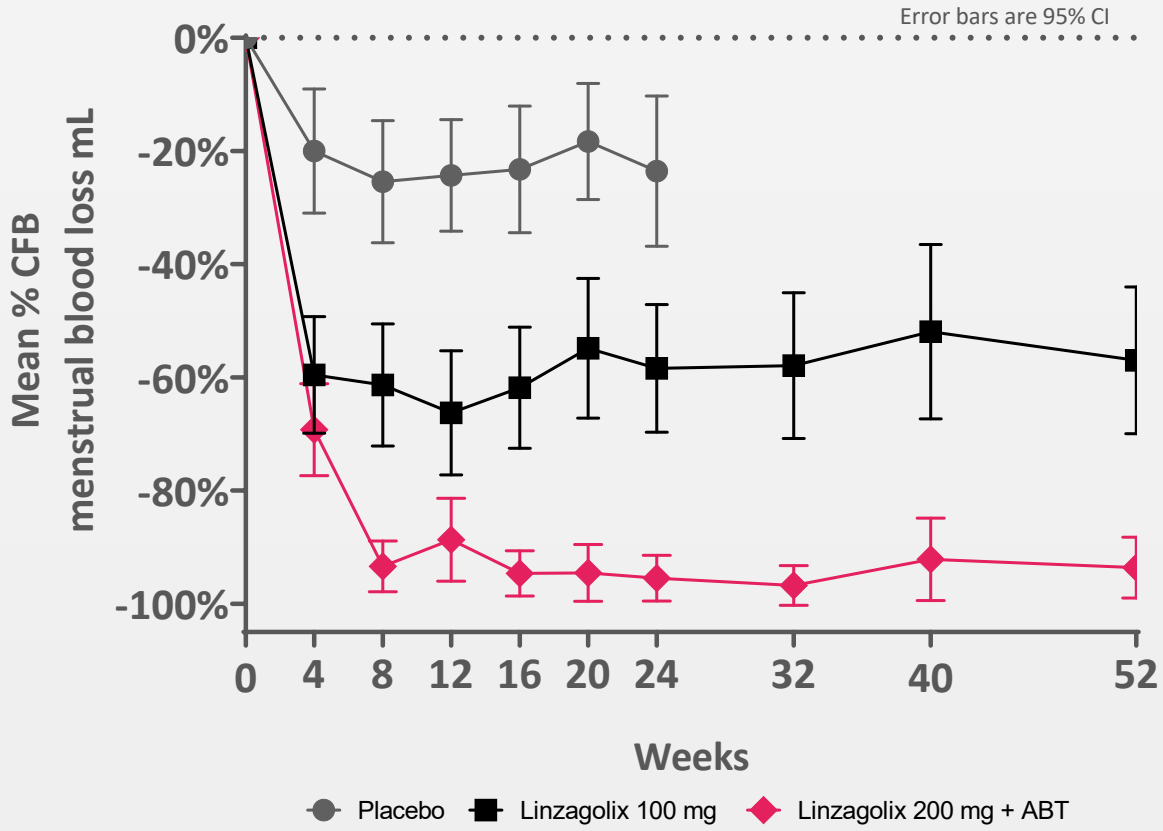


*Proportion of women with menstrual blood loss ≤ 80 mL (by alkaline hematin method) and ≥ 50% reduction from baseline

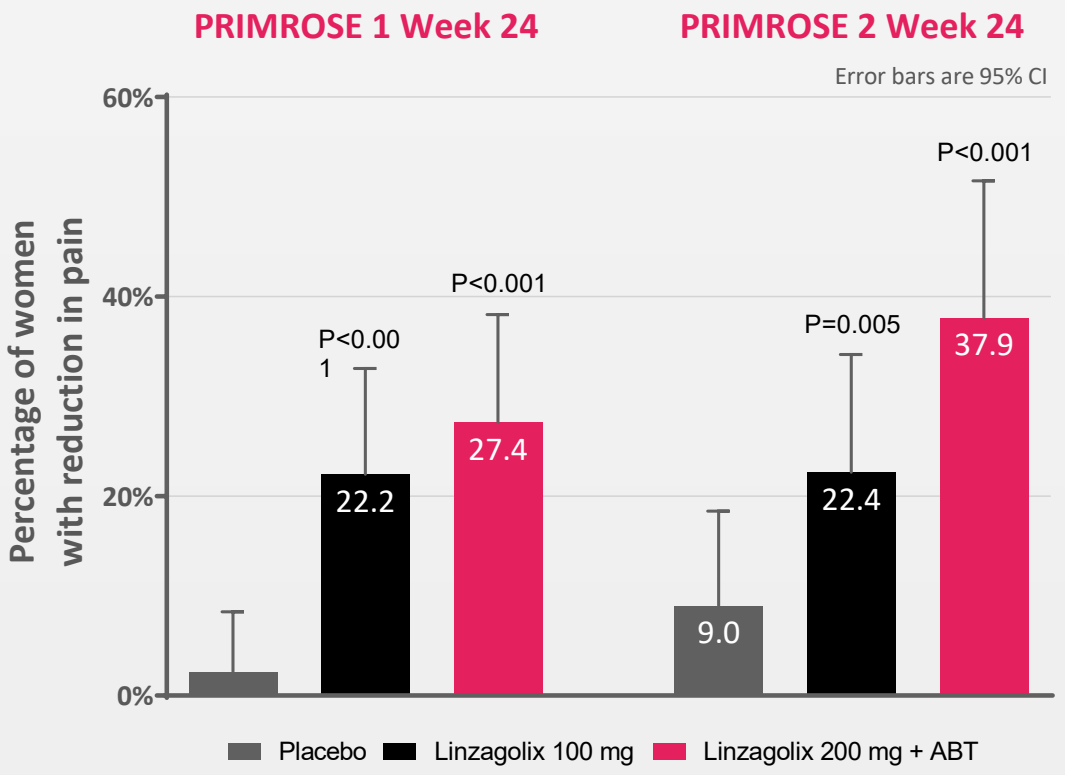
Error bars are 95% CI

Rapid onset and significant, sustained reduction in menstrual blood loss, as well as reduction or elimination of pain

PRIMROSE 2



Proportion of patients with a score of 1 or less at Week 24 out of those with a baseline score of at least 4



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CFB = Change From Baseline

Linzagolix safety profile
Day 1 to week 24

Number (%) of women	PRIMROSE 1			PRIMROSE 2		
	Placebo	Linzagolix 100 mg	Linzagolix 200 mg + ABT	Placebo	Linzagolix 100 mg	Linzagolix 200 mg + ABT
	n=104	n=100	n=107	n=105	n=99	n=101
Subject with at least one TEAE	56 (53.8)	66 (66.0)	61 (57.0)	47 (44.8)	50 (50.5)	52 (51.5)
TEAE leading to discontinuation	10 (9.6)	8 (8.0)	10 (9.3)	7 (6.7)	7 (7.1)	7 (6.9)
SAE related to linzagolix	0	0	0	0	1 (1.0)*	0
Adverse Events occurring in > 5% of women in 100 mg or 200 mg + ABT groups						
Hot flush	7 (6.7)	6 (6.0)	7 (6.5)	4 (3.8)	14 (14.1)	13 (12.9)
Headache	6 (5.8)	8 (8.0)	8 (7.5)	6 (5.7)	4 (4.0)	7 (6.9)
Anemia	4 (3.8)	1 (1.0)	4 (3.7)	11 (10.5)	19 (19.2)	9 (8.9)

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* Hypertension in an obese subject

Safety: Minimal BMD change

	PRIMROSE 1 US		PRIMROSE 2 EU/US	
	Linzagolix 100mg	Linzagolix 200 mg + ABT	Linzagolix 100mg	Linzagolix 200 mg + ABT
Black women %	63	61	4	4
BMI, mean (kg/m^2)	33.0	33.0	27.4	26.8
BMD mean CBL Spine (%) @W24	-2.04	-0.84	-2.07	-1.31
Patients (%, n) with BMD loss >3%	38.0 (19)	23.2 (13)	35.7 (25)	29.2 (21)
Patients (%, n) with BMD loss >8%	4.0 (2)	1.8 (1)	1.4 (1)	0
BMD mean CBL Spine (%) @W52	-	-	-2.40	-2.03
Patients (%, n) with BMD loss >3%	-	-	36.4 (20)	30.0 (18)
Patients (%, n) with BMD loss >8%	-	-	1.8 (1)	1.7 (1)

ABT = add-back therapy (E2 1 mg/NETA 0.5 mg), once a day concomitant administration

"2% of bone loss is marginal. Treatment with glucocorticoids can cause patients to lose 5-15% of bone in the first year of use!"

BMD Expert

Patients in the studies received no Vitamin D or calcium supplementation

Designed to treat more women

Excellent clinical data driving differentiated profile

Statistically significant & clinically meaningful efficacy

Primary and key secondary endpoints met in PRIMROSE 1 & 2

Durability of response

Sustained efficacy and continued safety at week 52 for PRIMROSE 2

Differentiated options for more women

Unique profile offers convenient, once daily dosing, with or without Add Back Therapy (ABT)

ABT-containing regimens may be contraindicated in up to 50% of US women with uterine fibroids based on the elagolix US label* and analysis of CDC data

*U.S. FDA elagolix PI, section 4. Contraindications and section 5.1. Warnings and precautions – thromboembolic disorders and vascular events (see slide 26)

Financial outlook to achieve milestones and drive programs

September 30 2020 cash	Expected cash runway	First commercial launch
$50.6 million	Q2 2021 ex credit facility and warrants	Yselty® EU Q1:22

Major upcoming catalysts

Evolving from pure development to a commercial company

Linzagolix PRIMROSE 1 - 52 Weeks data
Q4:20

First linzagolix regulatory filings
MAA/NDA Q4:20/1H:21

Linzagolix regional commercial partnerships
Active discussions ongoing

Nolasiban development proceeding in China
Partner YuYuan Bioscience submitted IND

Initiation Phase 2b Ebopiprant in preterm labor
Anticipated 2H:21

Thank you