Obseva

nature meets nurture

Focused on unmet needs in women's reproductive health

September 2020

Disclaimer

Matters discussed in this presentation may constitute forward-looking statements. The forward-looking statements contained in this presentation reflect our views as of the date of this presentation about future events and are subject to risks, uncertainties, assumptions, and changes in circumstances that may cause our actual results, performance, or achievements to differ significantly from those expressed or implied in any forward-looking statement. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future events, results, performance, or achievements. Some of the key factors that could cause actual results to differ from our expectations include our plans to develop and potentially commercialize our product candidates; our planned clinical trials and preclinical studies for our product candidates; the timing of and our ability to obtain and maintain regulatory approvals for our product candidates; the extent of clinical trials potentially required for our product candidates; the clinical utility and market acceptance of our product candidates; our commercialization, marketing and manufacturing capabilities and strategy; our intellectual property position; and our ability to identify and in-license additional product candidates. For further information regarding these risks, uncertainties and other factors that could cause our actual results to differ from our expectations, you should read he risk factors set forth in our Annual Report on Form 20-F for the year ended December 31, 2019 filed with the SEC on March 5, 2020 and the risk factors disclosed in the Report on Form 6-K filed with the SEC on August 6, 2020, and our other filings we make with the Securities and Exchange Commission from time to time.

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This presentation also contains estimates and other statistical data made by independent parties and by us relating to market size and growth and other data about our industry. This data involves a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates. In addition, projections, assumptions and estimates of our future performance and the future performance of the markets in which we operate are necessarily subject to a high degree of uncertainty and risk.

Obseva focus on unmet needs in women's health

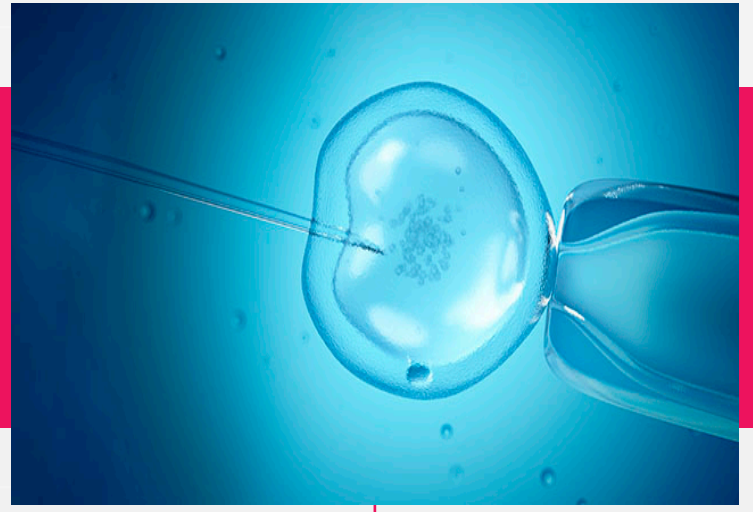
LINZAGOLIX

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

OBE022

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

NOLASIBAN



Potential to improve live birth rate following IVF & embryo transfer

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 Primary endpoint 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
OBE022 Oral $PGF_{2\alpha}$ receptor antagonist	Preterm Labor – Ph2a PROLONG			Phase 2a Part B results expected 4Q:20
	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:20
	IVF – Ph1/2 in China			

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* Primary and secondary endpoints met

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

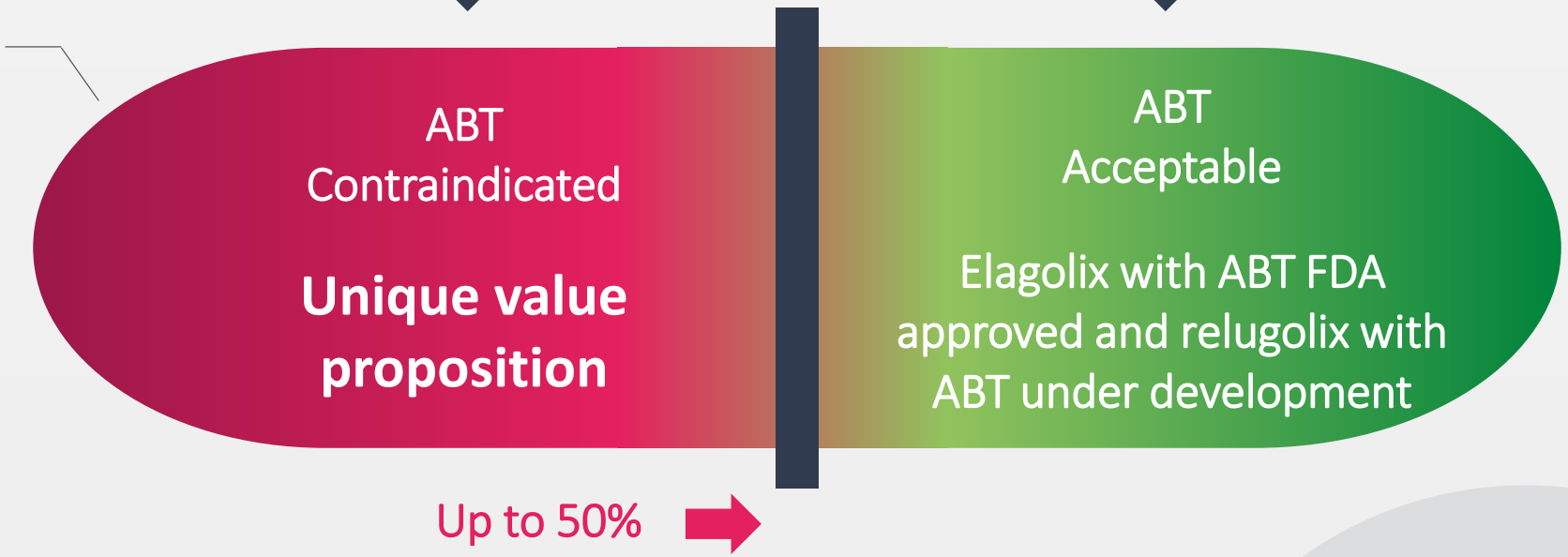
100 mg without ABT

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)

The only GnRH antagonist designed to treat more women

Because not every woman is the same, one size does not fit all

+/- 50%
UF patients

Carole, 47 – Desires a long-term medical treatment to transition her to menopause*

- Black woman, weighing 230 lbs
- Moderate hypertension, not well-controlled
- Worsening heavy bleeding and pain related to UF

100 mg linzagolix ⊖ ABT

+/- 50%
UF patients

Jane, 32 – Strongly wishes to avoid surgery

- Healthy white woman, weighing 120 lbs
- Increasingly heavy bleeding and unpredictable flooding episodes that interfere with quality of life
- Multiple fibroids in the uterine cavity

200 mg linzagolix ⊕ ABT

Additional indications (adenomyosis, UF pre-surgery, …)

Keisha, 42 – Needs a rapid & substantial reduction in uterine volume

- Black woman with bulky 26-week-sized uterus and MRI suggestive of concomitant adenomyosis
- Increasing pelvic pressure and pain, urinary frequency and urgency, interfering with ability to go to work
- Hb level of 10.2 g/dL

200 mg linzagolix ⊖ ABT

For up to 6 months

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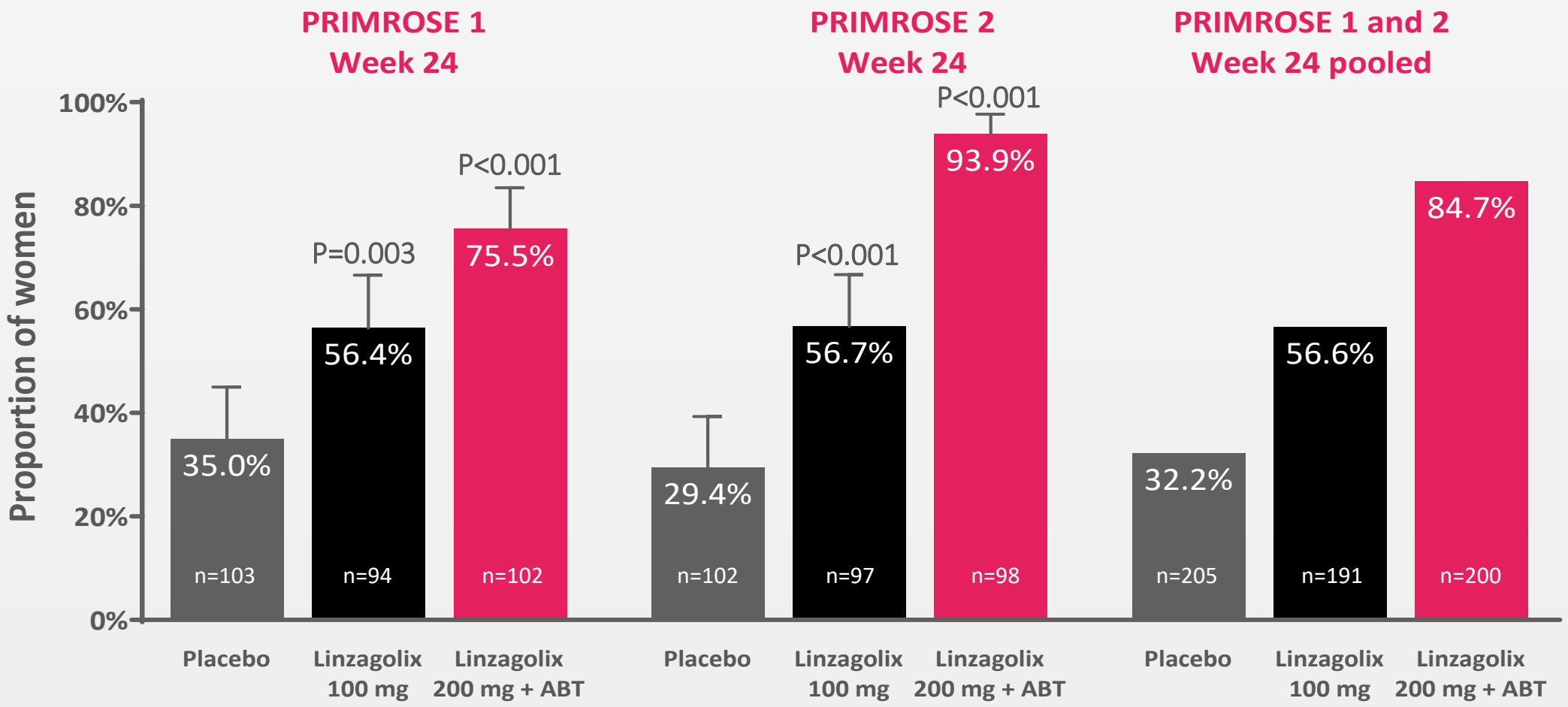
*U.S. FDA elagolix PI, section 4. Contraindications and section 5.1. Warnings and precautions – thromboembolic disorders and vascular events

Yselty®, our proposed trade name for linzagolix, is conditionally acceptable for the FDA. Linzagolix has not been approved by FDA for any indication for use. Linzagolix is an investigational drug. The hypothetical patients represented on this slide are for illustrative purposes only as no strength of linzagolix has been approved nor is there FDA-approved Prescribing Information to guide clinical decisions.

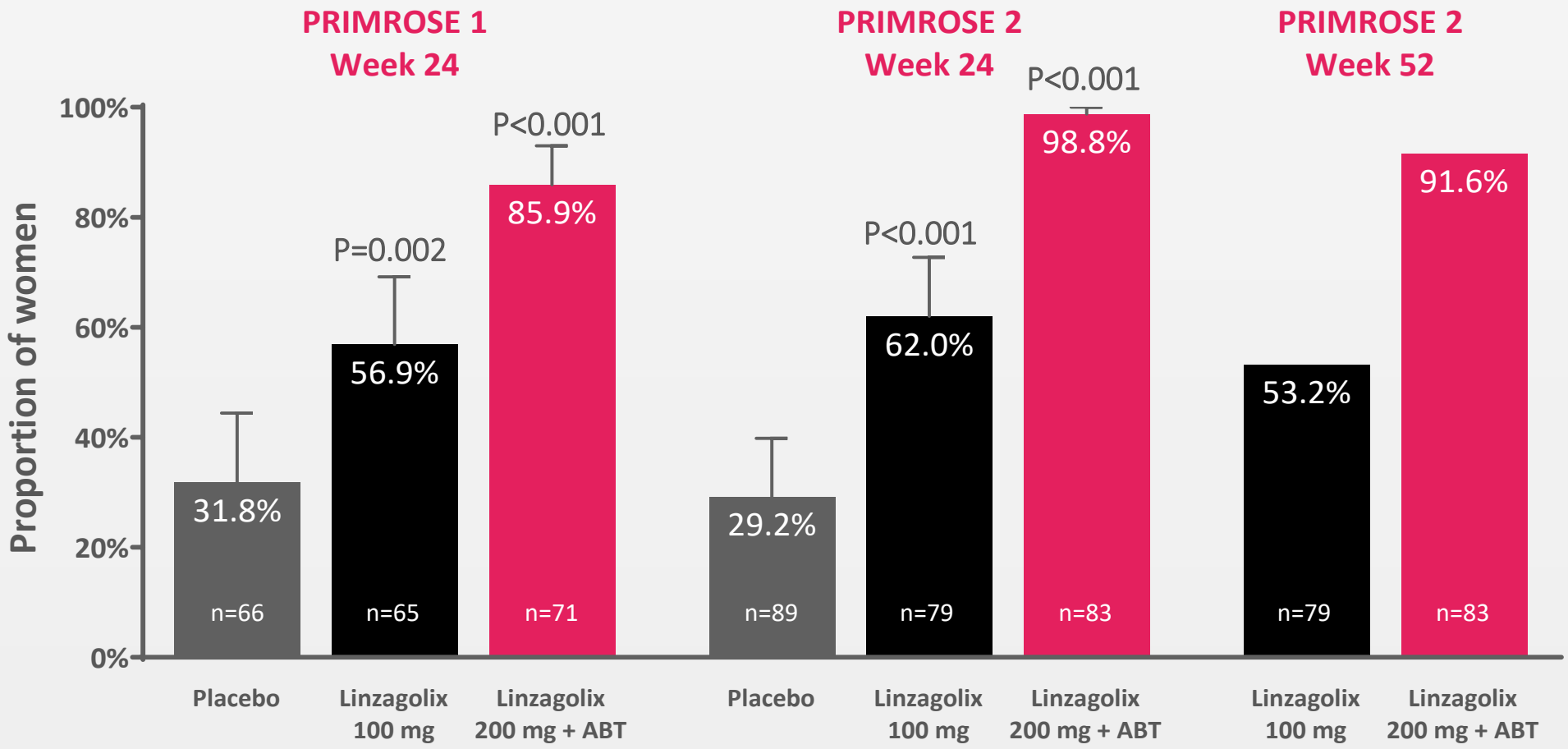
UF - PRIMROSE 1 and 2 achieved primary endpoint for both doses Responder* analysis



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

Error bars are 95% CI

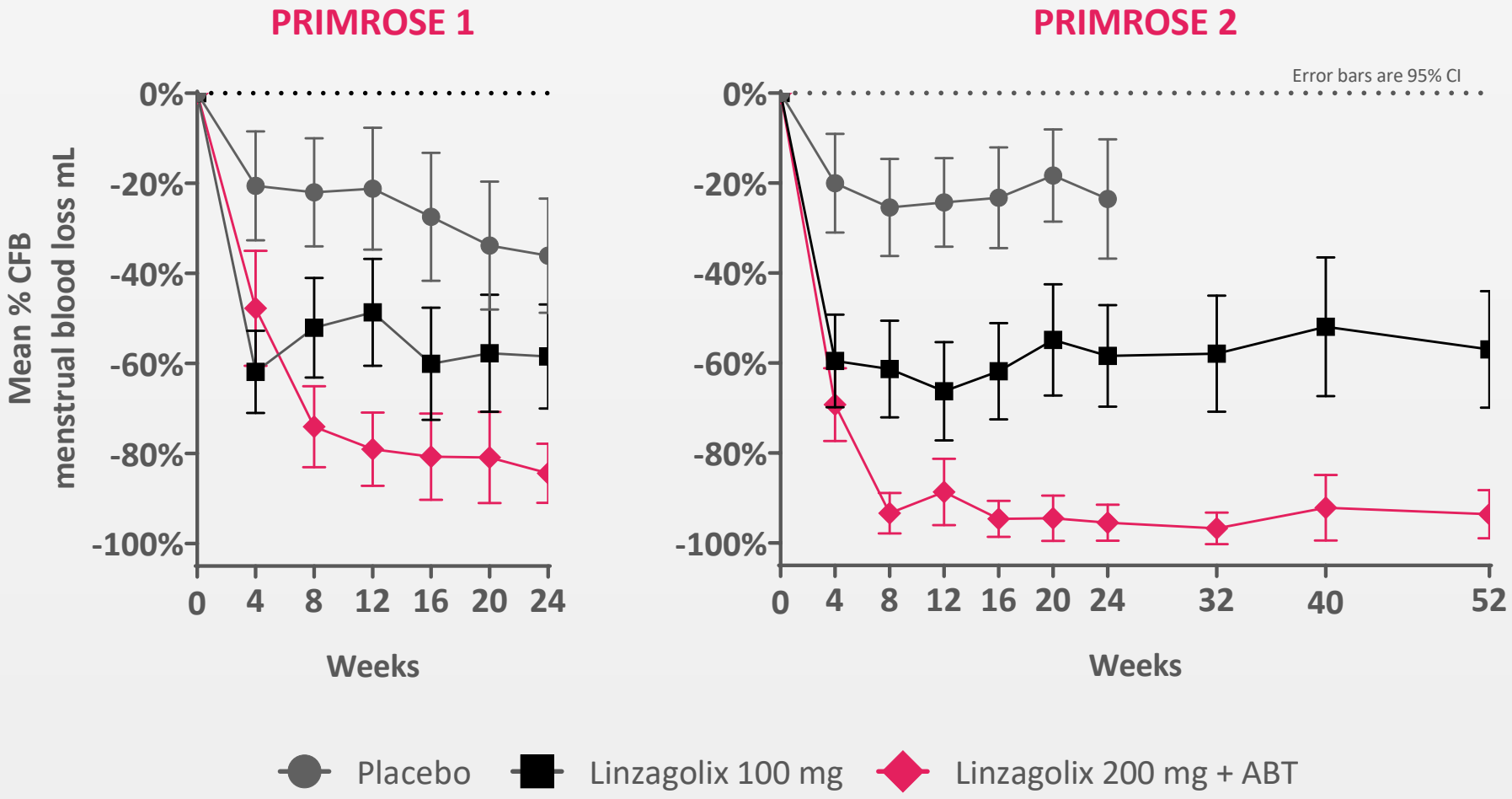
Responder* rate in patients completing treatment at week 24 sustained at week 52



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

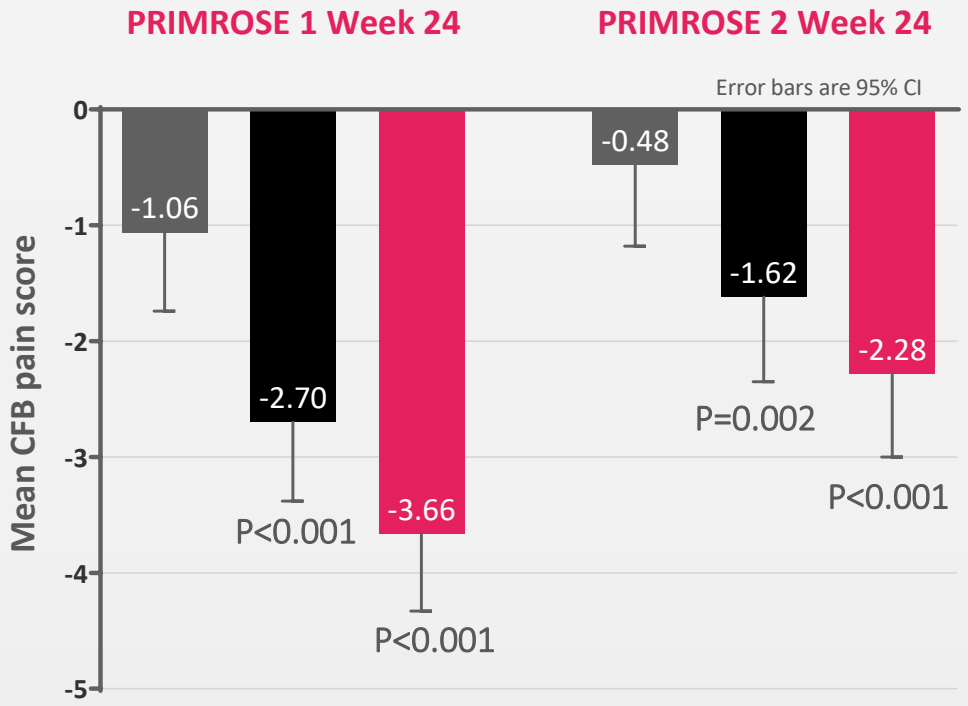
Error bars are 95% CI

Rapid onset and significant, sustained reduction in menstrual blood loss

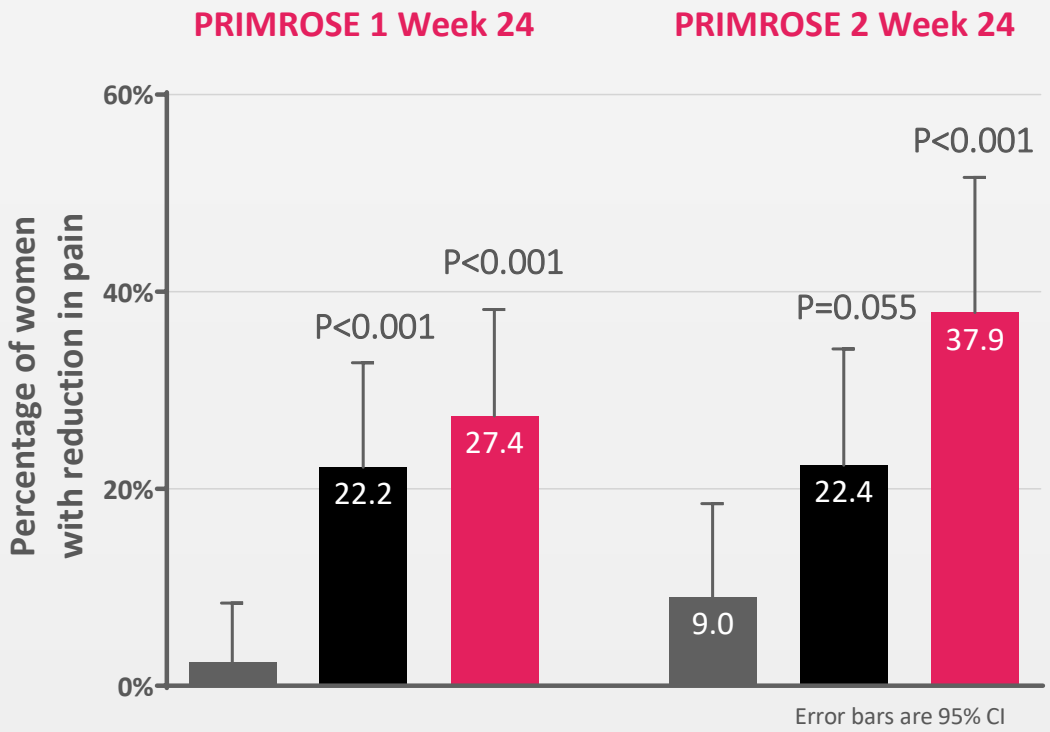


Both linzagolix doses significantly reduced or eliminated pain

Mean pain score reduction from baseline



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



Placebo Linzagolix 100 mg Linzagolix 200 mg + ABT

CFB = Change From Baseline

24 week efficacy data support linzagolix as potential best-in-class GnRH antagonist

Caution advised when comparing across clinical trials. Below data are not head-to-head comparison, and no head-to-head trials have been completed, nor are underway

	Linzagolix			Elagolix			Relugolix		
	PRIMROSE 1	PRIMROSE 2	Pooled Analysis	ELARIS 1	ELARIS 2	Pooled Analysis	LIBERTY 1	LIBERTY 2	Pooled Analysis
Dose Regimen	200mg + ABT Once daily			300 mg + ABT Twice daily			40mg + ABT Once daily		
Mean Age (y)	41.6	43.1		42.6	42.5		41.3	42.1	
Baseline MBL (mL per cycle)	197	212		238	229		229	247	
Responder* Rate (RR) (%)	75.5	93.9	84.7	68.5	76.5	72.2+	73.4	71.2	72.3++
Amenorrhea	✓	✓		✓	✓		✓	✓	
Pain	✓	✓		NR	NR		✓	✓	
Fibroid Volume	✗	✓		NR**	NR**		✗	✗	
Uterine Volume	✗	✓		NR**	NR**		✓	✓	
Menstrual Blood Loss	✓	✓		✓	✓		✓	✓	
Anemia	✓	✓		✓	✓		✓	✓	
Quality of Life	✓	✓		✓	✓		✓	✓	

Source: Company information Note: NR = Not reported.

*Primary endpoint: Proportion of women with menstrual blood loss ≤ 80 mL (by alkaline hematin method) and ≥ 50% reduction from baseline ** P-value not reported

+ Simon et al, Obstet Gynecol 135, 1313-1326 2020 ++ Venturella R et al, ESHRE 2020 abstract.

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

Low rates of adverse events of interest/pregnancy

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
Suicidal ideation	0	0	0	0	0	0
Depression; depressed mood	0	1 (1.0)	0	0	0	1 (1.0)
Anxiety	1 (1.0)	0	0	0	0	2 (2.0)
Alopecia	2 (1.9)	0	2 (1.9)	0	1 (1.0)	0
Decreased libido	0	0	0	0	1 (1.0)	1 (1.0)
Pregnancy	0	0	0	0	0	0

Minimal BMD change, similar across GnRH antagonists

Caution advised when comparing across clinical trials. Below data are not head-to-head comparison, and no head-to-head trials have been completed, nor are underway

	Linzagolix		Elagolix		Relugolix	
	PRIMROSE 1 US	**PRIMROSE 2 EU/US**	**ELARIS 1 US**	ELARIS 2 US	**LIBERTY 1 US/RoW**	LIBERTY 2 US/RoW
	200 mg QD + ABT		**300 mg BID + ABT**		**40 mg QD + ABT**	
Black women %	**61**	**4**	**67**		**48**	
BMI, mean (kg/m^2)	**33.0**	**26.8**	**33.4**	**33.2**	**31.4**	**31.0**
BMD mean CBL Spine (%) @W24	**-0.84**	**-1.31**	**-0.76+**	**-0.61+**	**-0.36++**	**-0.13++**
Patients (%) with BMD loss >3%	**23.3**	**29.1**	**20**	**20**	**<23***	**<23***
Patients (%) with BMD loss >8%	**1.8****	**0**	**0**	**0**	**0**	**0**
BMD mean CBL Spine (%) @W52	**NA**	**-2.03**	**-1.5+**		**ND**	
Patients (%) with BMD loss >3%	**NA**	**28.3**	**27.0**		**ND**	
Patients (%) with BMD loss >8%	**NA**	**1.7**	**1.7**		**ND**	

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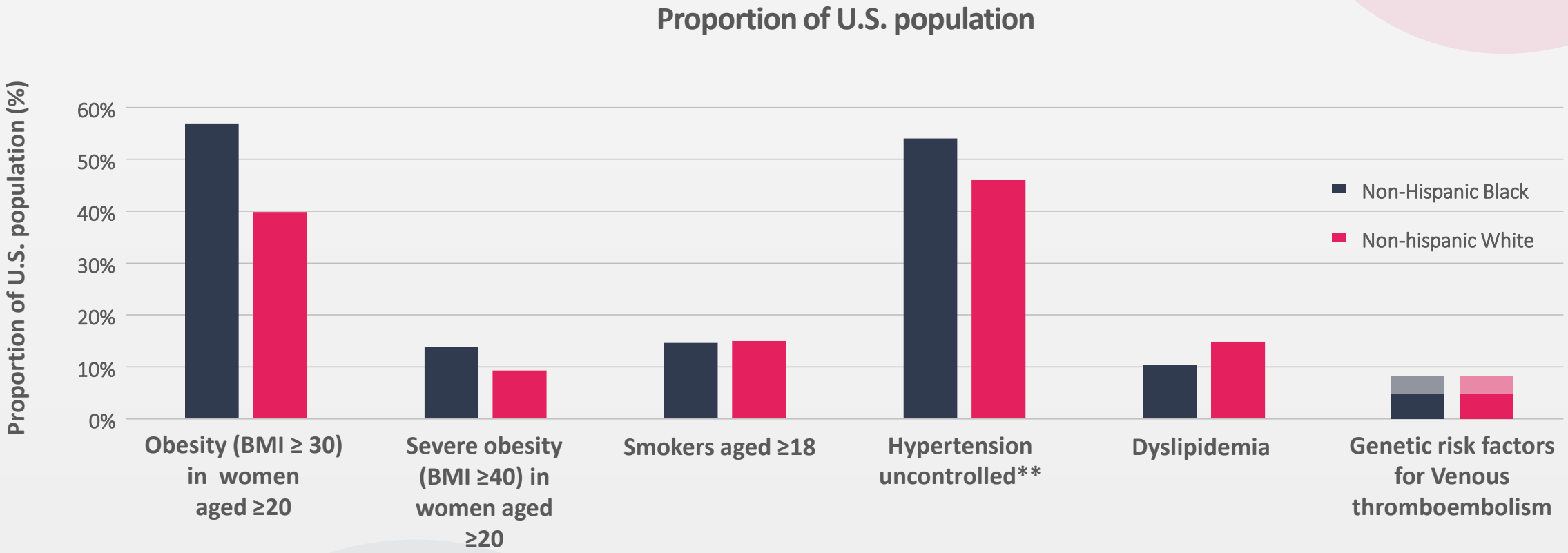
* Values disclosed are for > 2% and <8%
** 1 subject

+ Schlaff, W. D., New England Journal of Medicine 382, 328-340 2020 ++ Al-Hendy, ASRM 2019

Up to 50% of US women suffering from uterine fibroids may have a contraindication to hormonal ABT*

Minorities are overrepresented



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

https://www.cdc.gov/nchs/products/databriefs/db360.htm: 2017-2018; https://www.cdc.gov/nchs/products/databriefs/db360.htm: 2017-2018; https://www.cdc.gov/tobacco/data_statistics/fact_sheets/adult_data/cig_smoking/index.htm#nation; https://www.cdc.gov/2018

** See slide 27

** Proportion of individuals with hypertension - Overall population Male vs Female: 47% vs 43%

Yselty® designed to treat more women

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

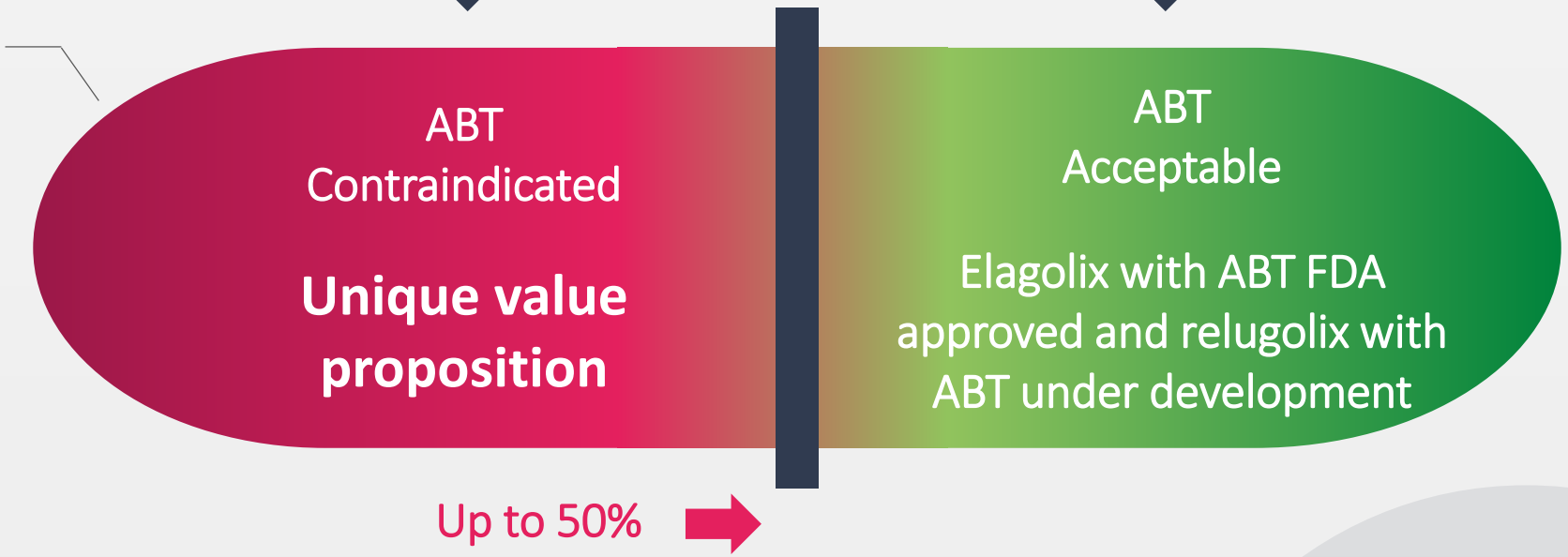
100 mg without ABT

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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Next steps in uterine fibroids

yselty® linzagolix

Yselty® is the **only** GnRH antagonist being developed to provide **differentiated options for women** suffering from uterine fibroids

1

Primrose 1
52 week results expected 4Q:20

2

MAA regulatory submission
anticipated in 4Q:20

3

NDA regulatory submission
anticipated in 1H:21

4

Commercial partnerships
active ongoing discussions

Designed to treat more women

Endometriosis

An emotionally and physically painful condition

$22B/yr
total U.S. costs

176 million
women worldwide suffer from endometriosis

60%+
of women feel symptoms by age 16

Quality of Life

premenopausal women may experience pelvic pain, pain during intercourse and defecation, infertility and emotional distress

Endometriosis affects up to

10%+ in the general population

50%+ in the fertile population

60%+ in patients with chronic pelvic pain

5 million
women in the U.S. are treated annually for endometriosis

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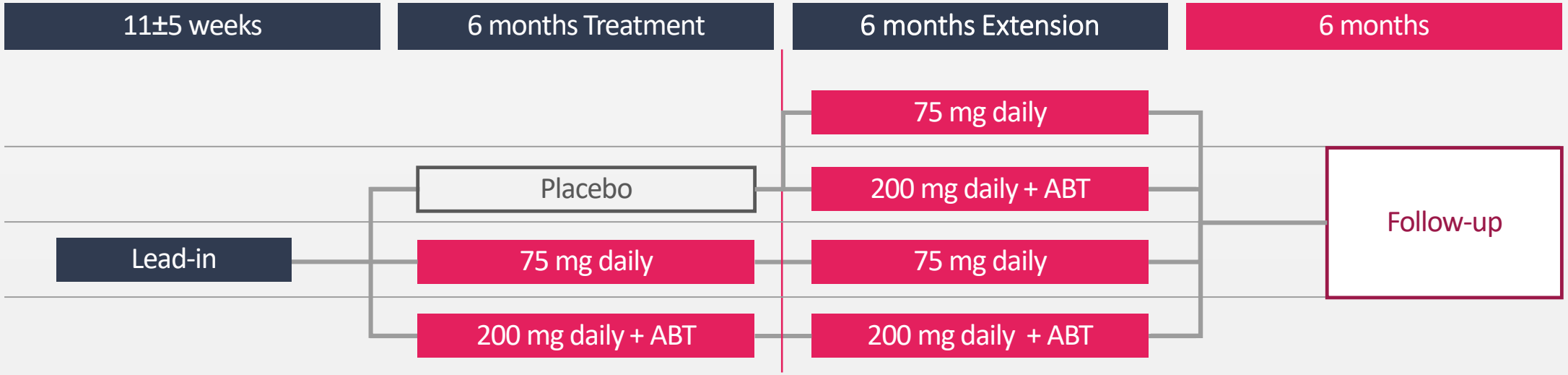
Cardozo et al., Am J Obstet Gynecol 2012; 2017; Stewart et al. NEJM, 2015; Flynn et al., Am J Obstet Gynecol 2006; Truven Health, Fibroid Foundation website

Phase 3 endometriosis trials

EDELWEISS 2 and 3



Co-Primary efficacy endpoint: DYS/NMPP Responder Analysis

Initiated 1H:19

ABT: Add Back Therapy (estradiol + norethindrone acetate)

Preterm delivery

Life altering and costly

$26B/yr
U.S. economic burden

>1
In 10 babies are born preterm

1 million
preterm related deaths in 2015 in the U.S.

LEADING
cause of death
in children
under age 5

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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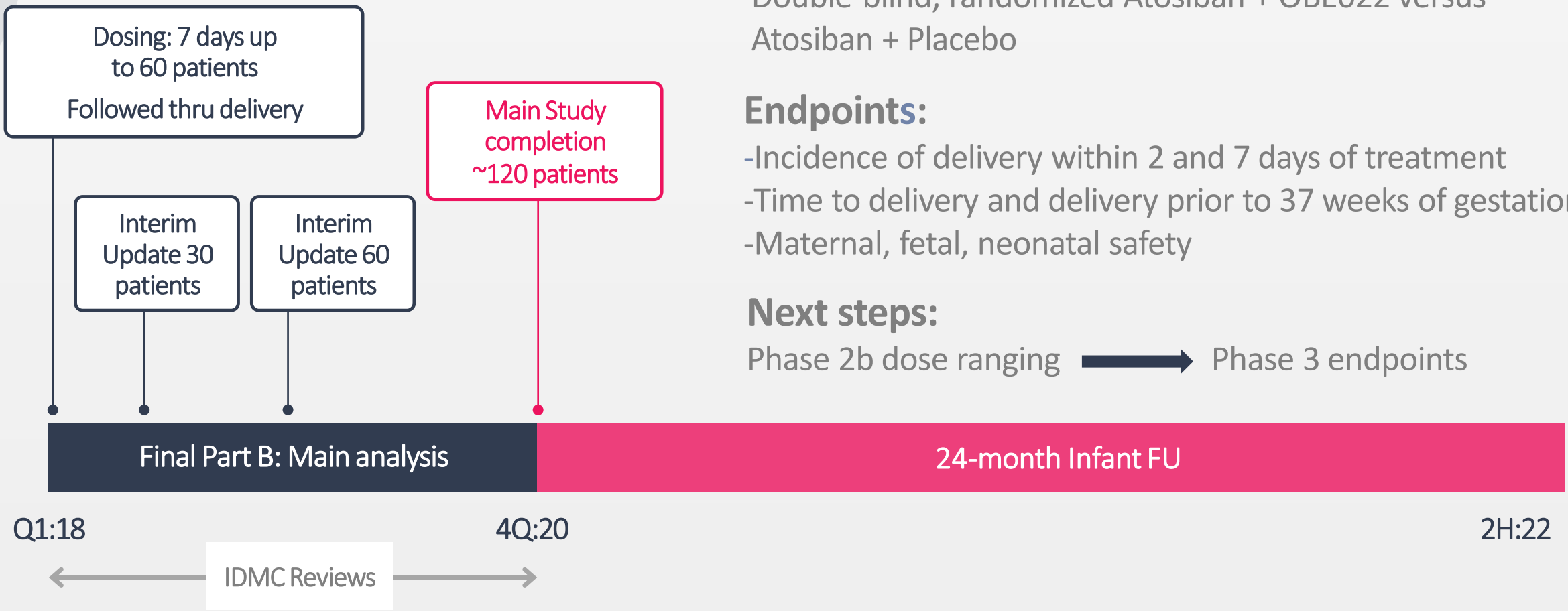
OBE-022 Phase 2a study part B
PROLONG



Study design:
Double-blind, randomized Atosiban + OBE022 versus Atosiban + Placebo

Endpoints:
-Incidence of delivery within 2 and 7 days of treatment
-Time to delivery and delivery prior to 37 weeks of gestation
-Maternal, fetal, neonatal safety

Next steps:
Phase 2b dose ranging → Phase 3 endpoints

Financial outlook to achieve milestones and drive programs

June 30 2020 cash + pro-forma Sept. financing

$65 million

Expected cash runway

Mid-2021 ex credit facility

First commercial launch

Yselty EU Q1:22

1

Linzagolix

- Completion of PRIMROSE 1 and 2
- EU/US Uterine Fibroid regulatory filings
- Preparing commercialization through partnership(s)
- EDELWEISS 2 and 3 continuation

2

OBE-022

- PROLONG readout
- Phase 2b initiation

3

Nolasiban

- Phase 1 trial results in China
- Phase 2 initiation in China
- Reassess EU/U.S. development

Major upcoming catalysts

Evolving from pure development to commercial focused company

First linzagolix regulatory filings

MAA/NDA Q4:20/1H:21

Linzagolix regional commercial partnerships

Active discussions ongoing

Phase 2a readout of OBE022 in preterm labor

Part B results in ~120 patients 4Q:20

Nolasiban development proceeding in China

Partner YuYuan Bioscience submitting IND 4Q:20

Thank you