



Dr. Phil Boyle, MRCGP, MICGP, MCRN 011986

*Evaluation and management
of early pregnancy.*

and

Case Presentations



Dr. Phil Boyle, MRCGP, MICGP, MCRN 011986

Conflict of Interest

*I am the developer
and director of
Neo Fertility*

NeoFertility Pregnancy Protocol:

- Key to success is to correct problems pre-conception
- We lay a solid foundation before we build
- Multiple assessment /intervention

NeoFertility 32yrs, G4 P0:

- TTC 15 months; Cycle 28 – 35 days
- Rx Aspirin, Progesterone, Prednisolone 5mg

Previous Pregnancies								
Pregnancy number	Date of Birth or miscarriage	months to conceive	1. No treatment 2. Clomid 3. IUI 4. IVF?	Birth weight, misc Ectopic, etc	D&C	Weeks at delivery	Vaginal Delivery	Caesarean
0	Never conceived		If never conceived... go to next section					
1	6/2018	0	X			11		
2	Jan 2019	5	X			5		
3	4/2019	3	X			4.5		
4	7/2019	2	X		X			
5								
6								
7								
8								

COMMENTS: #2 & 3 I took ASA/ progesterone after + test
#4 I took ASA/ progesterone + prednisolone 5mg

NeoFertility 32yrs, G4 P0:

- Clotting – normal
- Chromosomes – normal
- Thyroid function – normal 1.6iu
- Progesterone – 7nmol/l (2.2ng/dl)
- HSG – normal
- AMH 37pmol/l (5.18ng/ml)
- FSH 4.0iu, LH 10.9iu

Dx : Unexplained Recurrent Miscarriage

NeoFertility 32yrs, G4 P0:

- IVF is not a solution for recurrent miscarriage
- No point taking aspirin and heparin?
- Progesterone and Prednisolone not working...



cycles.

Starting 08-20-2019



Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Date	08-20-2019	08-21-2019	08-22-2019	08-23-2019	08-24-2019	08-25-2019	08-26-2019	08-27-2019	08-28-2019	08-29-2019	08-30-2019	08-31-2019	09-01-2019	09-02-2019
Code	 DL	 H	 H	 M	 DL	 D	 D	 P	 P	 D	 P	 1F	 P	 2S
Sex														

Starting 07-22-2019



Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	
Date	07-22-2019	07-23-2019	07-24-2019	07-25-2019	07-26-2019	07-27-2019	07-28-2019	07-29-2019	07-30-2019	07-31-2019	08-01-2019	08-02-2019	08-03-2019	08-04-2019	08-05-2019	08-06-2019	08-07-2019	08-08-2019	08-09-2019	08-10-2019	08-11-2019	08-12-2019	08-13-2019	08-14-2019	08-15-2019	08-16-2019	08-17-2019	08-18-2019	08-19-2019	
Code	 P FL	 1 M	 2 M	 P FL	 1 DL	 2 D LB	 3 DTB	 D	 D	 W	 D	 D	 P	 Fertile WF	 Fertile 2CS	 P 1F	 Fertile 1 1	 2 D	 3 P	 4 P	 5 P	 6 D	 7 D	 8 D	 9 D	 10 D	 11 DTB	 12 DT	 13 DT	
Sex																														
Tests															ov: -		ov: high	ov: high	ov: low											
Notes	Miscarriage day 1																													

<https://neofertility.azurewebsites.net/CharView?accountID=12659>

NeoFertility 32yrs, G4 P0:

- Mild PCO
- Premenstrual spotting
- Suboptimal Progesterone (Follicle)
- Food Intolerance – dairy
- Borderline NK Cells
- Adrenal Fatigue – clinically unlikely
- DFI male - pending

S.No	Drug Name	Description
1	Metformin (Glucophage) 500mg tabs	One twice daily with food. M 60
2	Vitamin D3 4000iu	once daily x 30 days, with fatty food
3	Omega 3 1100mg (EPA 360, DHA 240) - Lamberts	Two capsules with evening meal x 30 days
4	Folate 800mcg	once daily x 30 days
5	Letrozole 2.5mg	7 tabs mane - day 3 of cycle
6	HCG (Gonasi) 10,000 iu SC as directed to trigger ovulation	2 x 5,000iu vials. 2ml syringe- 21G and 30G needle
7	HCG (Gonasi) 5,000iu/ml (Take 0.5ml) Peak +3,5,7 of the cycle	3 x 5000iu Vials. 2ml Syringe, 21G and 30G needles
8	Cyclogest 400mg PR/PV	nocte x 10 nights, start peak + 3 of cycle
9	Follicle tracking day 14 and 19	one cycle
10	Monthly Blood Test P + 7	Progesterone and Oestradiol

S.No	Drug Name	Description	Duration
1	Metformin (Glucophage) 500mg tabs	One twice daily with food. M 60	on P+17 Positive test
2	Vitamin D3 4000iu	once daily x 30 days, with fatty food	
3	Omega 3 1100mg (EPA 360, DHA 240) - Lamberts	Two capsules with evening meal x 30 days	During pregnancy
4	Folate 800mcg	once daily x 30 days	
5	Diet - based on IgG blood test	Food Print 40	
6	Prednisolone 5 mg	20mg mane x 30 days	IF Pos NK Cell test
7	Cyclogest 400mg PR/PV	Twice daily. Mitte 60	
8	Weekly blood test for 3 weeks	progesterone, oestradiol, HCG	
9	Pregnancy scan	3 weeks after positive test	

Positive Pregnancy test P+17

NaProTechnology

Blood test every 2 weeks for progesterone

Progesterone injections 200mg twice weekly

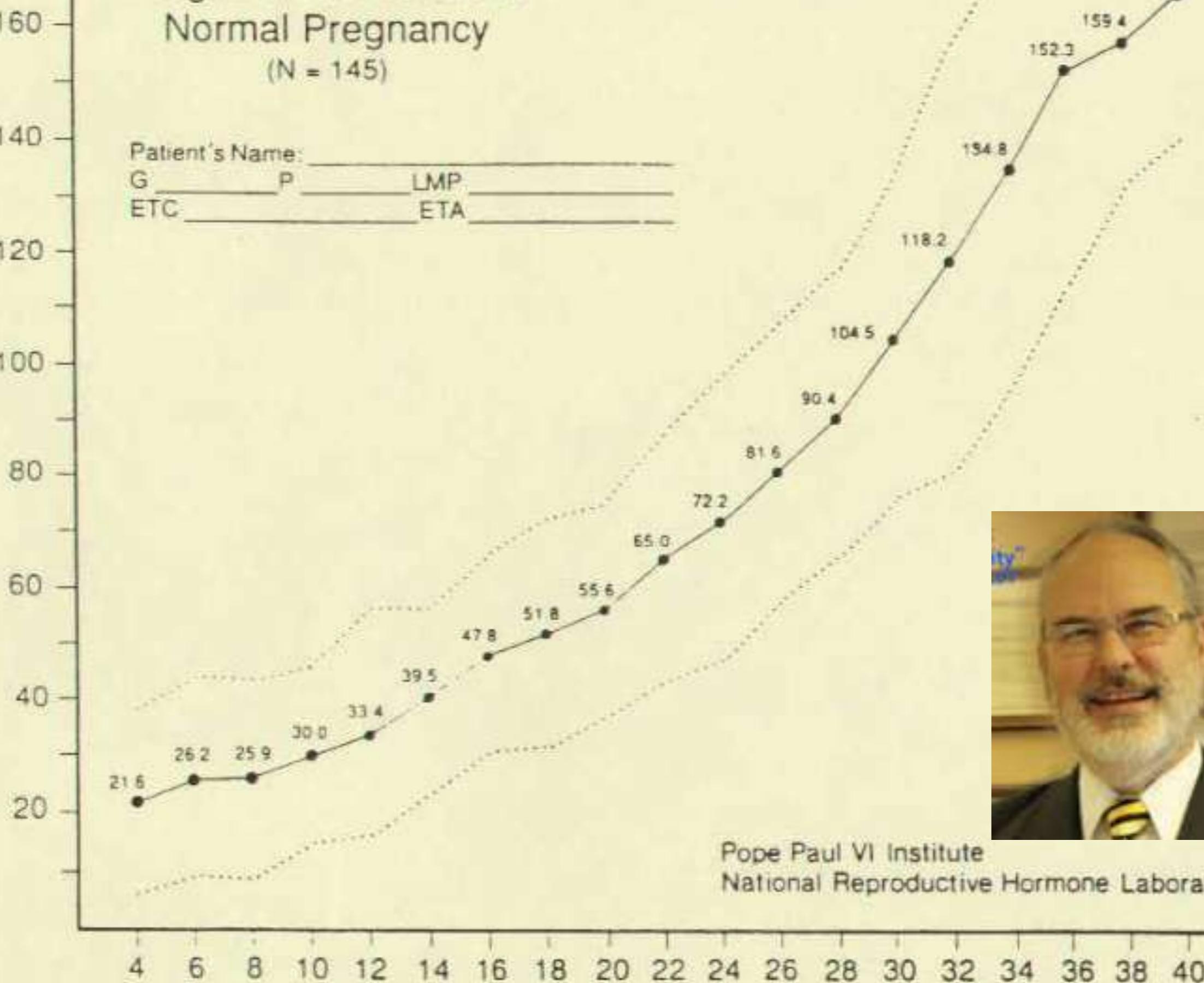
HCG 5000 iu 3 times weekly?

Pregnancy scan 2-3 weeks

Progesterone Levels in Normal Pregnancy (N = 145)

Progesterone Level (ng/ml)

Patient's Name: _____
G _____ P _____ LMP _____
ETC _____ ETA _____



Pope Paul VI Institute
National Reproductive Hormone Laboratory



NeoFertility Pregnancy Protocol:

Progesterone, Oestradiol, HCG

Every week x 3 weeks

- 4w 3d (P+17)
- 5w 3d
- 6w 3d
- 7w 3d Pregnancy scan
(3 weeks after positive test)

NeoFertility Pregnancy Protocol:

90% of the time we can predict if a pregnancy scan is viable based on blood test results in advance of ultrasound scan.

Oestradiol Levels in pregnancy

Low Oestradiol is associated with miscarriage

- Comparison of first trimester serum estradiol levels in aborters versus nonaborters during maintenance of normal progesterone levels.
- [Check JH¹](#), [Lurie D](#), [Davies E](#), [Vetter B](#).
- [Gynecol Obstet Invest. 1992;34\(4\):206-10.](#)



- 94 pregnant women
- E2 levels were significantly higher in successful pregnancies

Low Oestradiol is associated with miscarriage

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- 94 pregnant women
- E2 levels were significantly higher in successful pregnancies

Low Oestradiol is associated with miscarriage

Weeks	Normal E2 pg/ml	Misc E2 pg/ml
4	212	175
5	287	195
6	421	189
7	587	139
8	734	311
9	888	246
10	1018	
11	1096	
12	1569	
14		
16		

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16		

Oestradiol Supplementation during pregnancy.

Dr. Phil Boyle – Pregnancy Protocol Jan 2014

Weeks	Normal E2 pg/ml	Normal E2Pmol/l	Misc E2 pg/ml	Misc E2Pmol/l
4	212	778	175	642
5	287	1053	195	715
6	421	1545	189	693
7	587	2154	139	510
8	734	2693	311	1141
9	888	3258	246	902
10	1018	3736		
11	1096	4022		
12	1569	5758		
14				
16				

[https://www.dropbox.com/s/andwb8agi4oflri/Estradiol
AndPregnancy%20graph2014.pdf?dl=0](https://www.dropbox.com/s/andwb8agi4oflri/EstradiolAndPregnancy%20graph2014.pdf?dl=0)

Oestradiol Supplementation during pregnancy.

Dr. Phil Boyle – Pregnancy Protocol Jan 2014

Weeks	Normal E2 pg/ml	Normal E2Pmol/l	Misc E2 pg/ml	Misc E2Pmol/l	Treat E2 pg/ml	Treat E2Pmol/l
4	212	778	175	642	136	500
5	287	1053	195	715	190	700
6	421	1545	189	693	272	1000
7	587	2154	139	510	408	1500
8	734	2693	311	1141	545	2000
9	888	3258	246	902	681	2500
10	1018	3736				
11	1096	4022				
12	1569	5758				
14						
16						

[https://www.dropbox.com/s/andwb8agi4oflri/Estradiol
AndPregnancy%20graph2014.pdf?dl=0](https://www.dropbox.com/s/andwb8agi4oflri/EstradiolAndPregnancy%20graph2014.pdf?dl=0)

Oestradiol treatment

Patient Id : 4360, 34yrs, TTC 6yrs, G2 P0

Current Rx	Blood date	Gestation	Prog nmo	Prog ng/n	Oestradiol
Fematab2mg QID, Lutini	12-11-2012		25.2	7.92	1037
Fematab2mg QID, Cyc 4	19-11-2012		37.2	11.70	1024
Fematab2mg QID, Cyc 4	26-11-2012		34.3	10.79	1207
Fematab2mg QID, Cyc 4	04-12-2012	6w6d	38.5	12.11	1093
Fematab2mg QID, Cyc 4	10-12-2012	8wks	50.5	15.88	1352
Fematab2mg QID, Cyc 4	18-12-2012	8 1/2 wks	72.9	22.92	1593
Fematab2mg QID, Cyc 4		11wks	108	33.96	2388
Fematab2mg BD, Cyc Bl	16-01-2013	13wks	156.5	49.21	2520
Fematab2mg BD, Cyc Bl	30-01-2013	15 1/2wks	178.2	56.04	5446
Fematab2mg BD, Cyc Bl	17-02-2013	17wks	145	45.60	7497
Fematab2mg BD, Cyc Bl	25-02-2013	19wks	196	61.64	8775
Fematab2mg Nocte, Cyc	20-03-2013	22 1/2 wks	196.4	61.76	13337
Fematab2mg BD, Cyc Bl	17-04-2013	26wks	235.5	74.06	16050
Fematab2mg BD, Cyc Bl	14-05-2013	30wks	190	59.75	15781

Oestradiol treatment
Patient Id : 4360, 34yrs, TTC 6yrs, G2 P0

Male or Female

Birth Weight 2,665g

Actual Date of Birth

Estimated date of delivery

Weeks of Pregnancy

Delivery Details

Induced, NVD, Forceps, Vacuum

C-Section – Planned or Emergency

Any problems during Pregnancy?

They thought that the monitor wasn't working well so induced + did a c-section

Female
5lb 14oz ✓

11.7.13

24.7.13

38w.

Induced
C-Section

A little note of thanks



*Next
pregnancy*

Oestradiol treatment

Patient Id : 4360, 36yrs, TTC 1 yr, G3 P1(Neo)

Current Rx	Blood date	Gestation	Prog nmo	Prog ng/n	Oestradiol
+ Test	25-07-2014		129.6	40.75	1363
Cyc BD, Asp75, FA.	31-07-2014		122.8	38.62	1378
Cyc BD, FemBD, Asp75,	07-08-2014		125.4	39.43	1684
Cyc BD, FemTID, Pred 5	14-08-2014		108.5	34.12	2309
	21-08-2014		157.5	49.53	2955
	28-08-2014	9 weeks	137.6	43.27	2338
	03-09-2014	11 weeks	129.9	40.85	2224
	10-09-2014		168	52.83	3445
DHEA 25mg bd, FTab BC	25-09-2014	14 weeks			

Oestradiol treatment

Patient Id : 4360

Current Rx	Blood date	Gestation	Prog nmo	Prog ng/n	Oestradiol
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	10-09-2014		168	52.83	3445
DHEA 25mg bd, FTab BC	25-09-2014	14 weeks	187.5	58.96	10,834
cyc bd, DHEA	16-10-2014	17 weeks	167	52.52	14747
cyc od, DHEA od	24-11-2014	22 1/2 weeks	212.3	66.76	35,682
No DHEA since Friday	15-12-2014	25 1/2 weeks	243.6	76.60	

Oestradiol treatment

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Cyc BD, Asp75, FA.	31-07-2014		122.8	38.62	1378
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Oestradiol treatment

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No DHEA since Friday	15-12-2014	25 1/2 weeks	243.6	76.60	12298
DHEA	02-01-2015	28 1/2 weeks	275.4	86.60	30186

Oestradiol Curve 2017

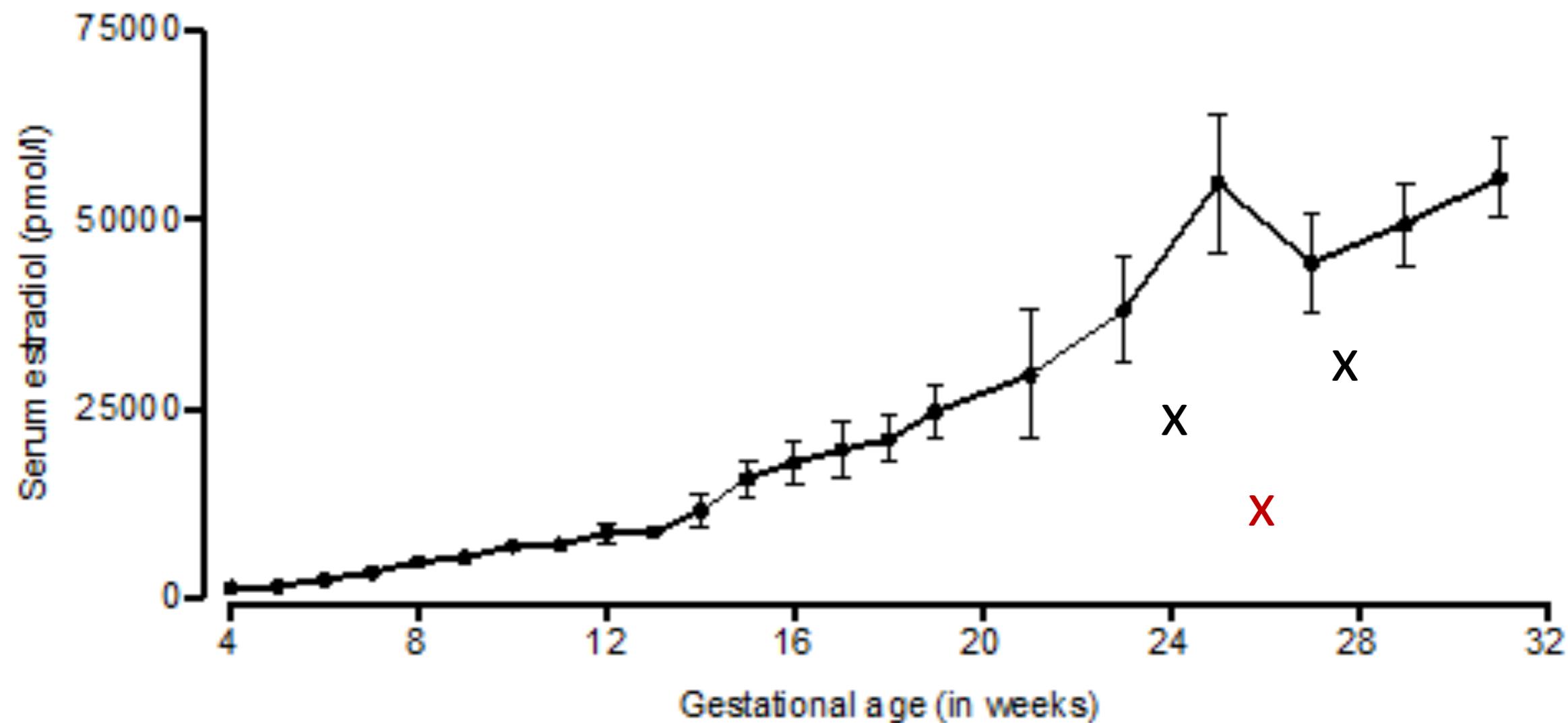


Figure 2. Estradiol curve of full-term, successful pregnancies, based on n=20 patients.

Oestradiol treatment

Patient Id : 4360, 36yrs, TTC 1 yr, G3 P1(Neo)



Male or Female	<u>female</u>
Birth Weight	<u>6 lbs 15 oz</u>
Actual Date of Birth	<u>25-03-2015</u>
Estimated date of delivery	_____
Weeks of Pregnancy	<u>40</u>
Delivery Details Induced, NVD, Forceps, Vacuum C-Section — Planned or Emergency	<u>NVD</u>

Baby is bigger and more sturdy after DHEA



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Part Two

Case Presentations

Patient Id : 8954

- 40 years old, Gravida 0 – October 2018
- 2.5yrs trying to conceive
- Reduced ovarian reserve AMH 3.2 pmol/l (0.44 ng/ml), FSH 5.1, LH 3.0
- Not suitable for IVF (Donor only)
- Irregular Cycle 24 to 200+ days
- Tried NaPro in 2016 – no success

40 years old, Gravida 0

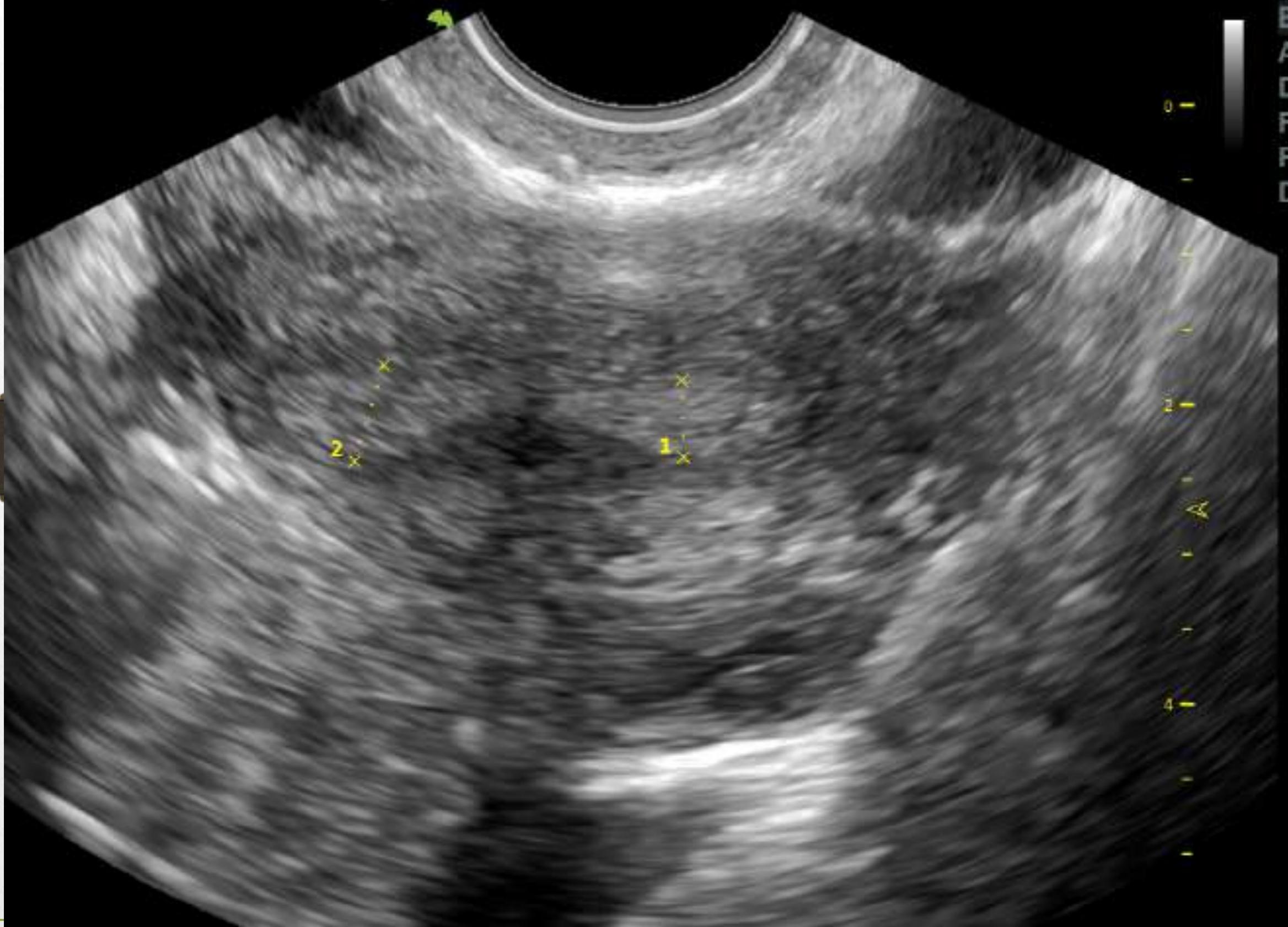
- No previous Laparoscopy or tubal assessment
- No symptoms of endometriosis
- No male factor assessment

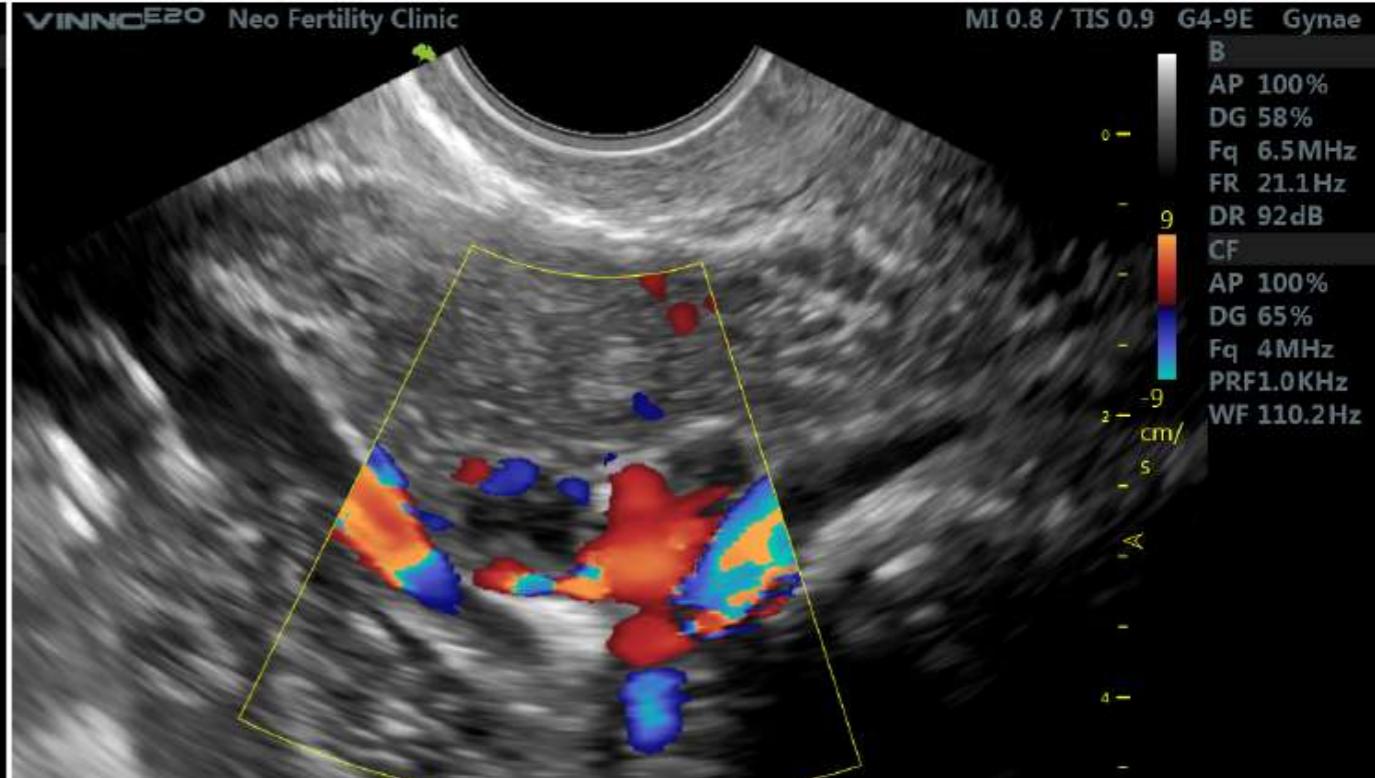
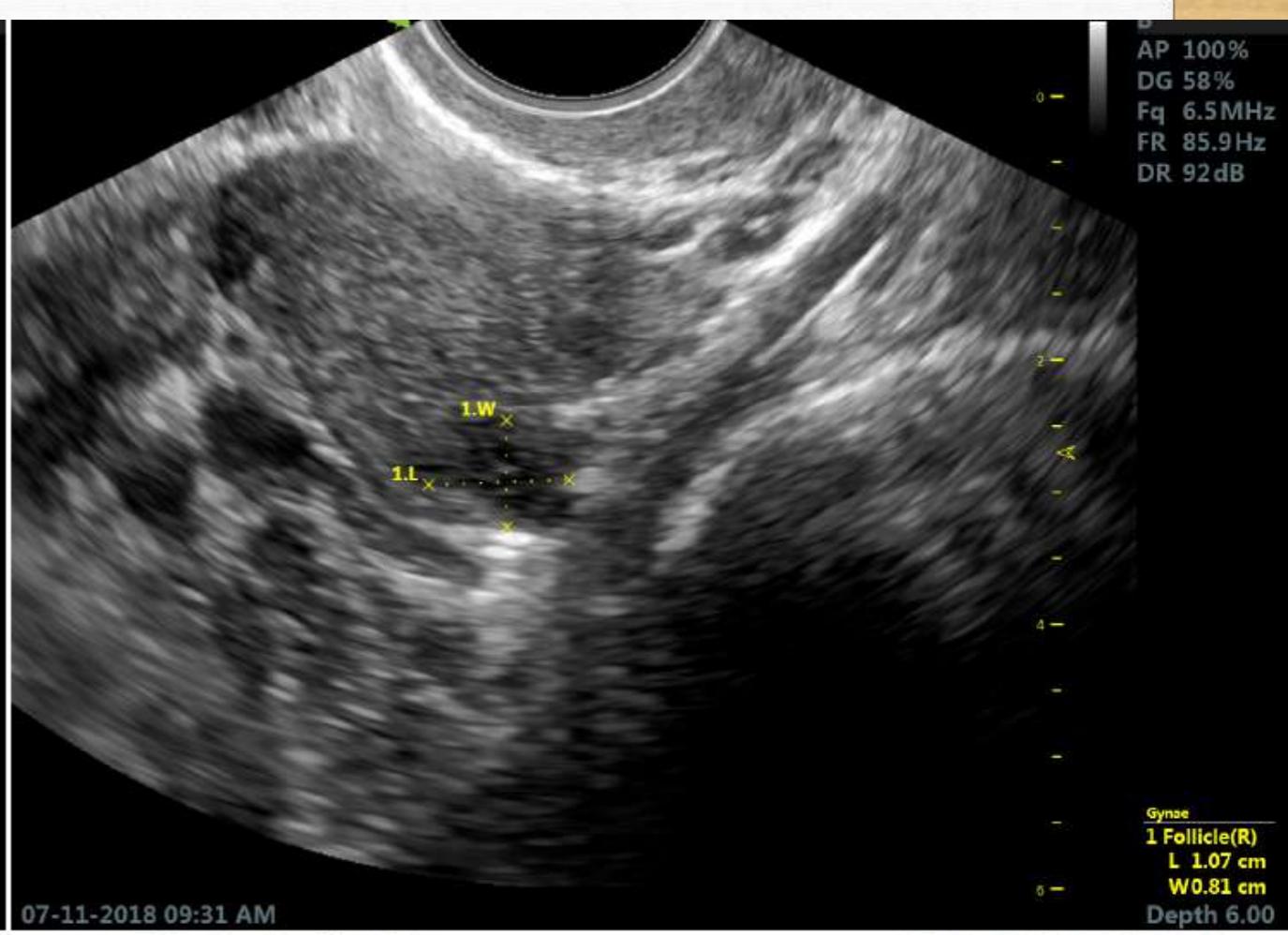
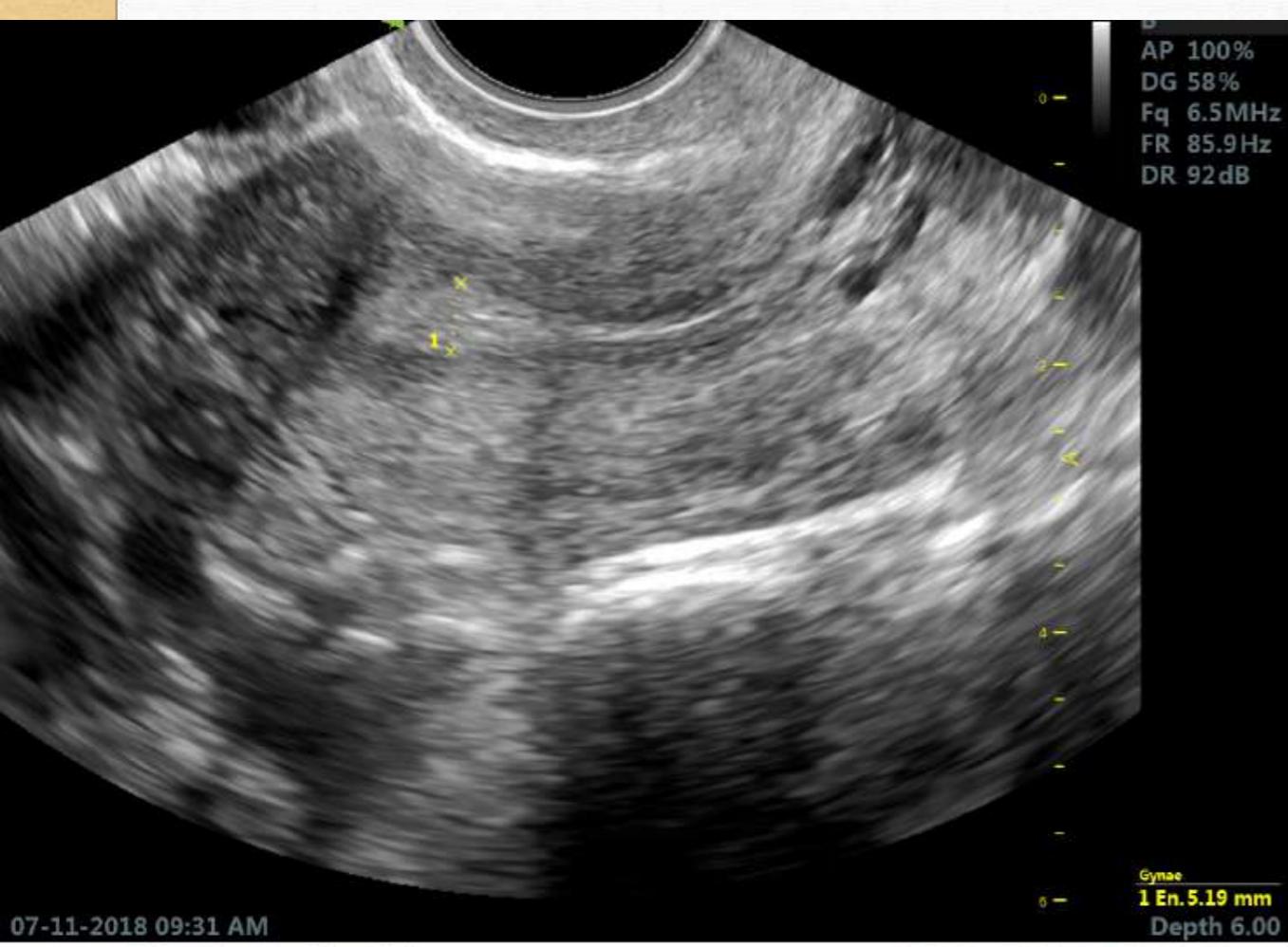
40 years old, Gravida 0

- Diagnoses
 1. Bilateral Tubal occlusion – HSG, Catheterisation
 2. Reduced Ovarian Reserve – resistant to Letrozole
 3. Clinical Endorphin Deficiency
 4. Bicornuate Uterus
 5. Thin Endometrium – 5mm

VINNCE20 Neo Fertility Clinic

MI 0.9 / TIS 1.0 G4-





40 years old, Gravida 0

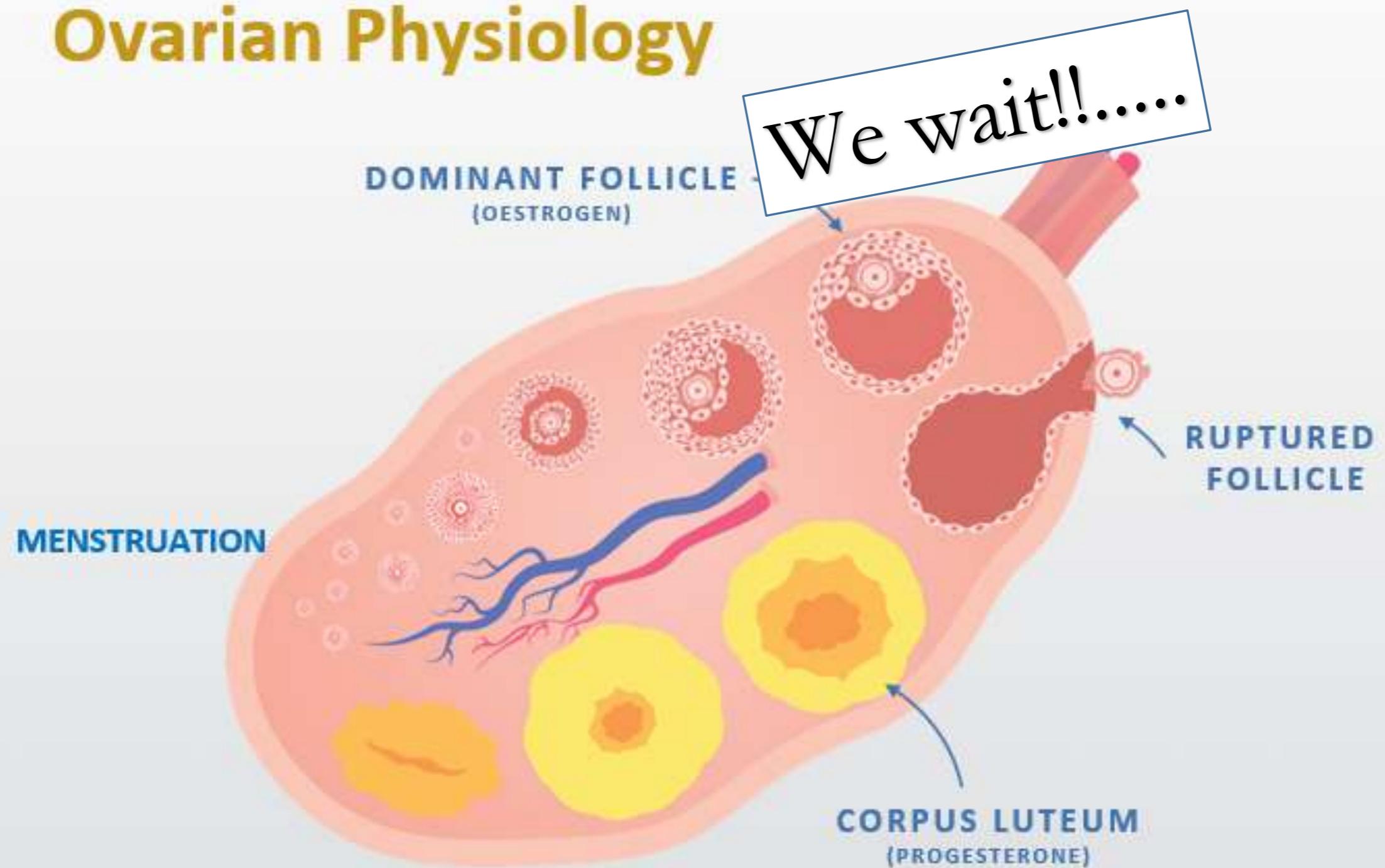
- Normal Results
 1. Male factor (Normal including DFI)
 2. Adrenal Function
 3. Follicle Rupture – on treatment

40 years old, Gravida 0

Reduced Ovarian Reserve – resistant to Letrozole

- Diet – no milk, wheat or sugar
- Vit D3 4000 iu, Omega 3 (EPA 720mg)
- Naltrexone
- Follicle Maturation Treatment – NEW CONCEPT...
from Dr Jerome Check...

Ovarian Physiology



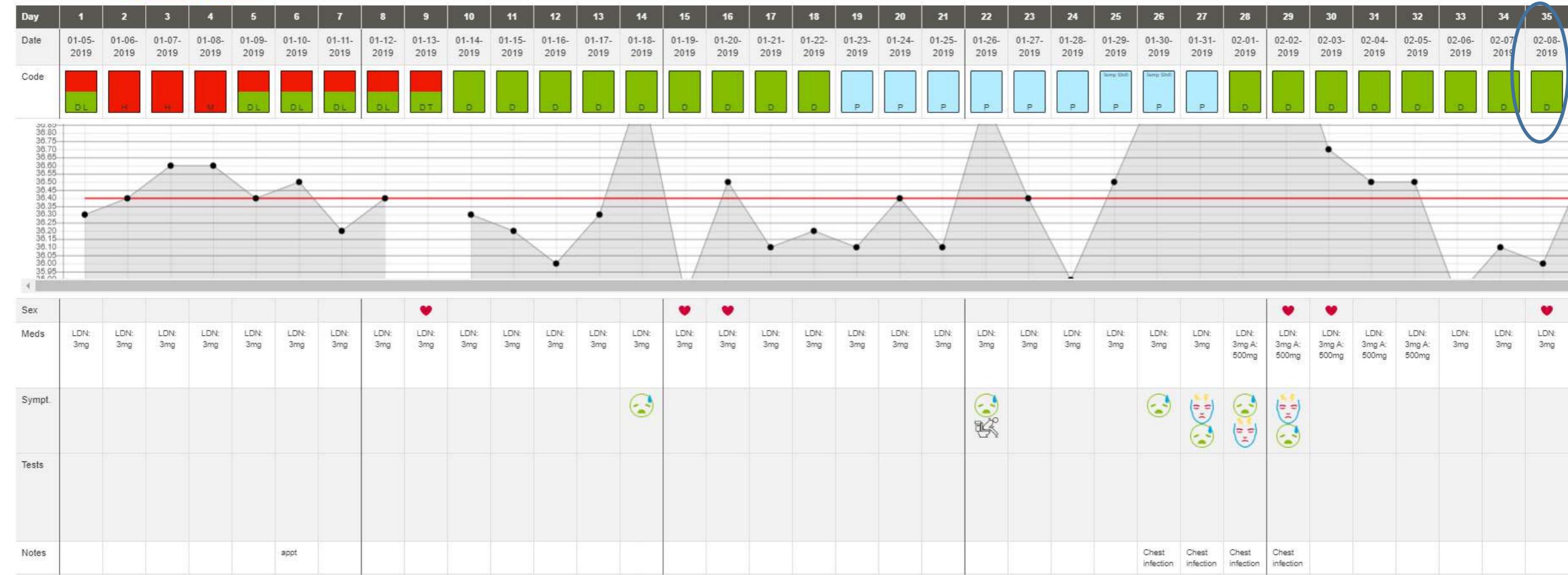
Moving Peak Day

Clear mucus appears
before ovulation



3 Cycles:

Starting 01-05-2019



<https://neofertility.azurewebsites.net/ChartView?accountID=10500>

40 years old, Gravida 0

Pregnancy bloods

	Progesterone nmol/l	Oestradiol Pmol/l	HCG iu
P+7	103 (32)	722 (197)	N/A
P+17 (4w3d)	96.4 (30)	1280 (349)	1,631

40 years old, Gravida 0

Pregnancy bloods

	Progesterone nmol/l	Oestradiol Pmol/l	HCG iu
P+7	103 (32)	722 (197)	N/A
P+17 (4w3d)	96.4 (30)	1280 (349)	1,631
5w3d	102 (32)	1667 (455)	27,732

40 years old, Gravida 0

Pregnancy bloods

	Progesterone nmol/l	Oestradiol Pmol/l	HCG iu
P+7	103 (32)	722 (197)	N/A
P+17 (4w3d)	96.4 (30)	1280 (349)	1,631
5w3d	102 (32)	1667 (455)	27,732
6w3d	120 (37)	3050 (831)	93,870

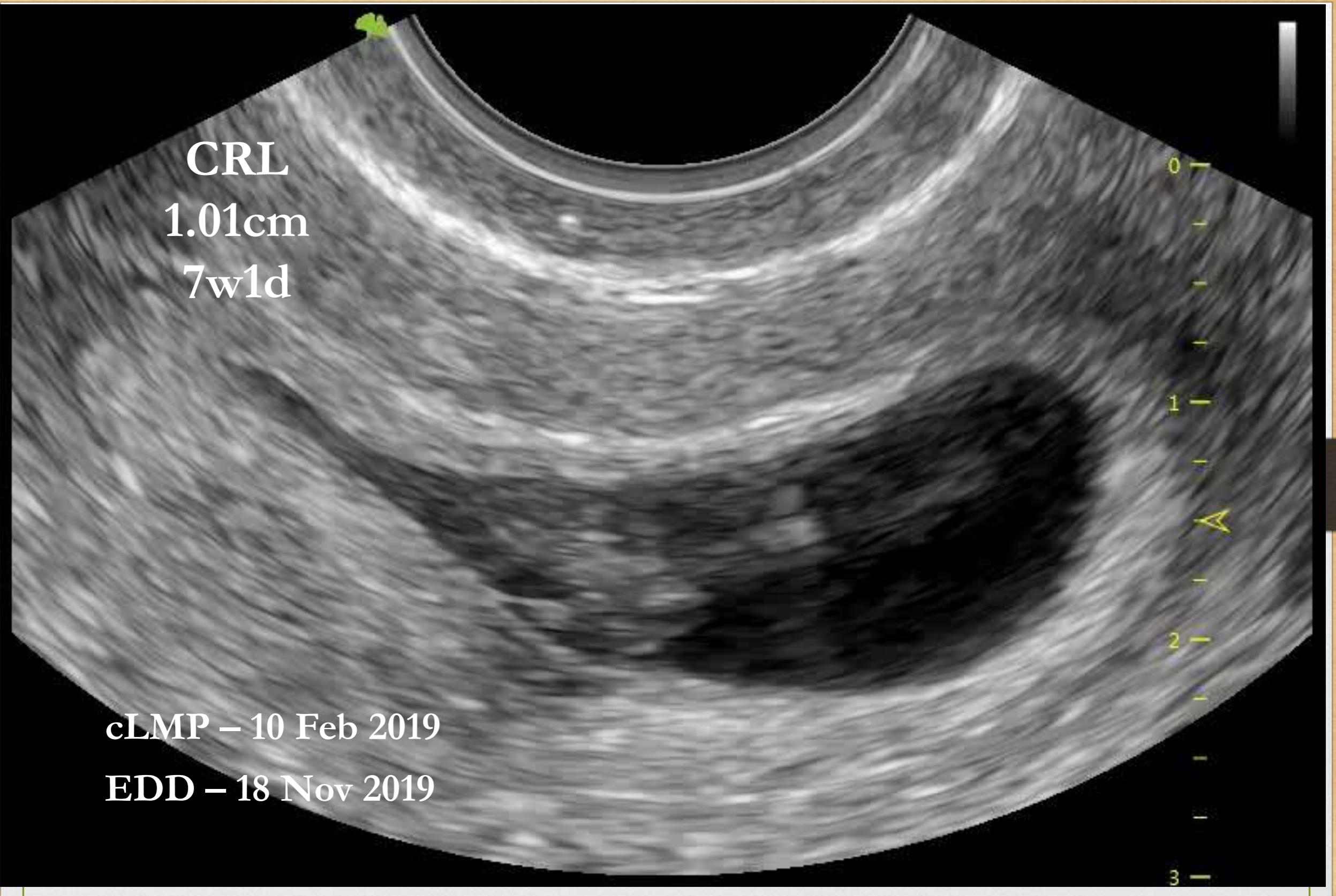
B
AP 100%
DG 45%
Fq 6.5 MHz
FR 109.6 Hz
DR 98 dB

cLMP – 10 Feb 2019
EDD – 18 Nov 2019

Fetus A
OB Early
1 CRL 1.01 cm
(Hedlock)
GA 7w 1d
EDD 18-11-2019

CRL
1.01cm
7w1d

cLMP – 10 Feb 2019
EDD – 18 Nov 2019





fertility