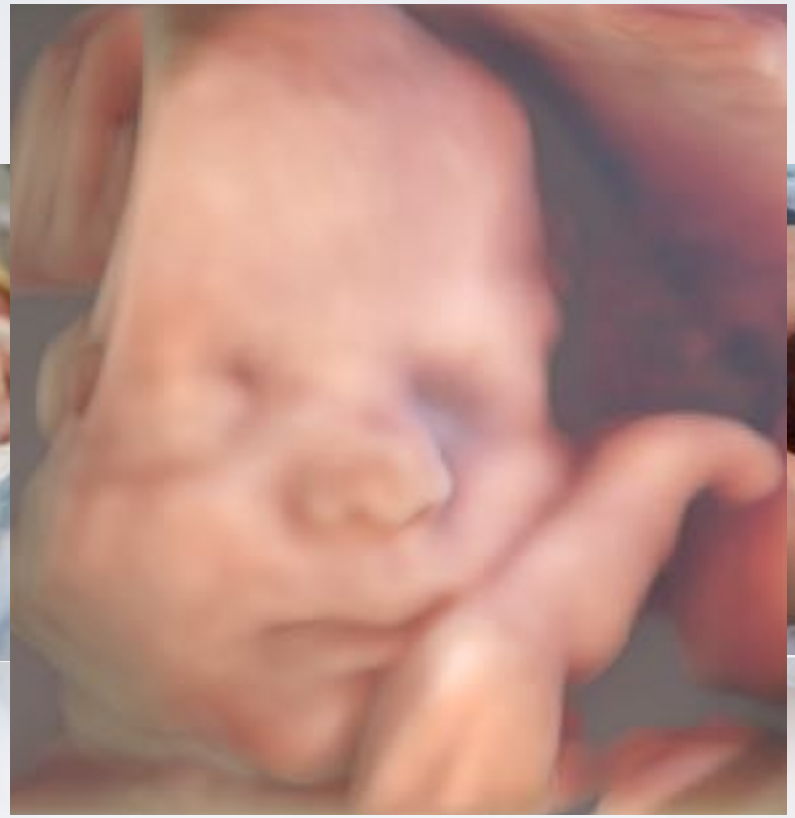
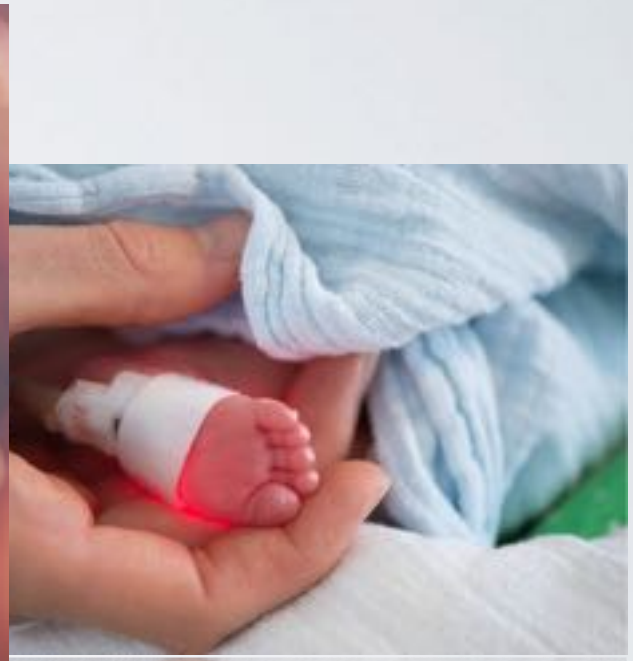
Brahms Quiz





Karl Oliver Kagan

CASE 1: 32YEARS, I.G, I.P

- Chronic Hypertension, Glumerulonephritis
- Proteinuria 1.5g/d
- RR 150/95mmHg with alpha-methyldopa

20 weeks: Normal Second Trimester Scan

Case 1: 32years, I.G, I.P

- Chronic Hypertension, Glumerulonephritis
- Proteinuria 1.5g/d
- RR 150/95mmHg with alpha-methyldopa

Increased PI levels in uterine arteries

What do you suggest?

a) Daily home blood pressure measurements
b) SFLIT-PLGF measurement
c) Re-assessment in 4 weeks time
d) Replace Aspirin by Heparin

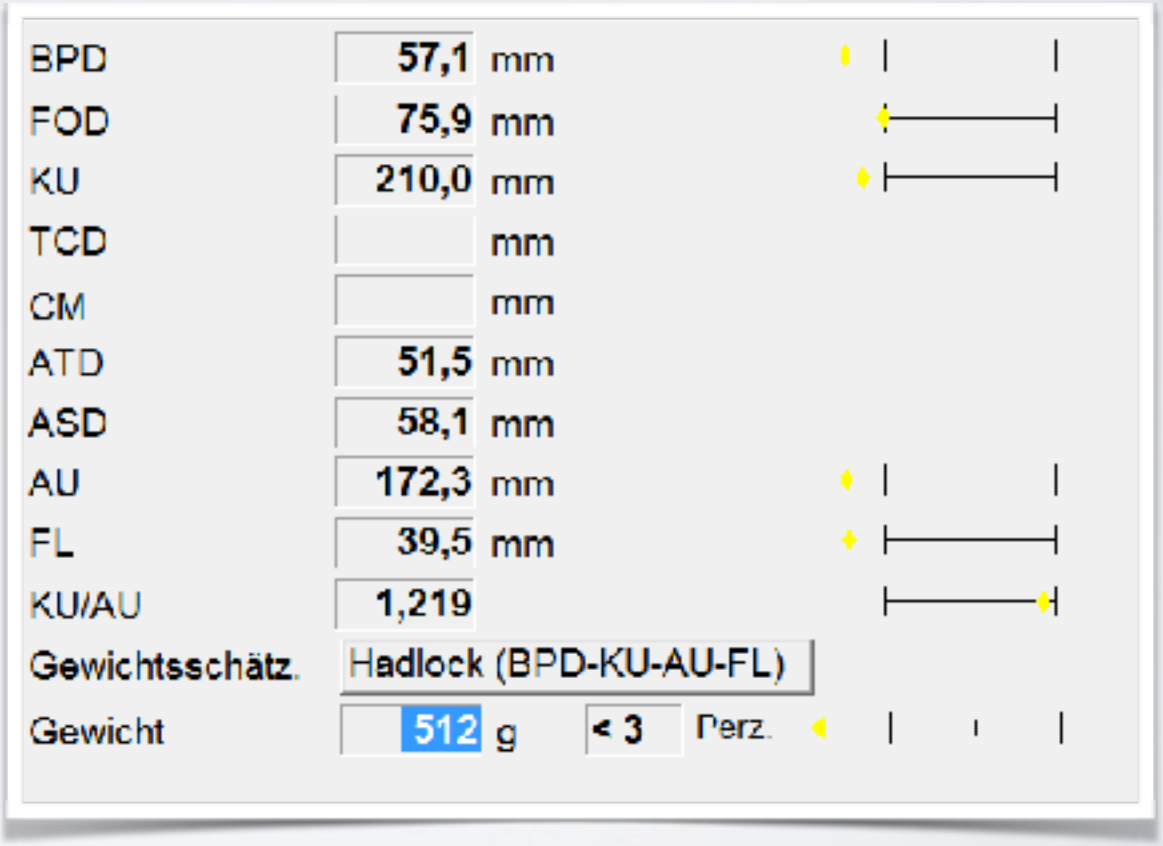
Our Patient went on Holidays for 4 weeks

24+6 weeks:
Home Blood Pressure is 190/110 mmHg

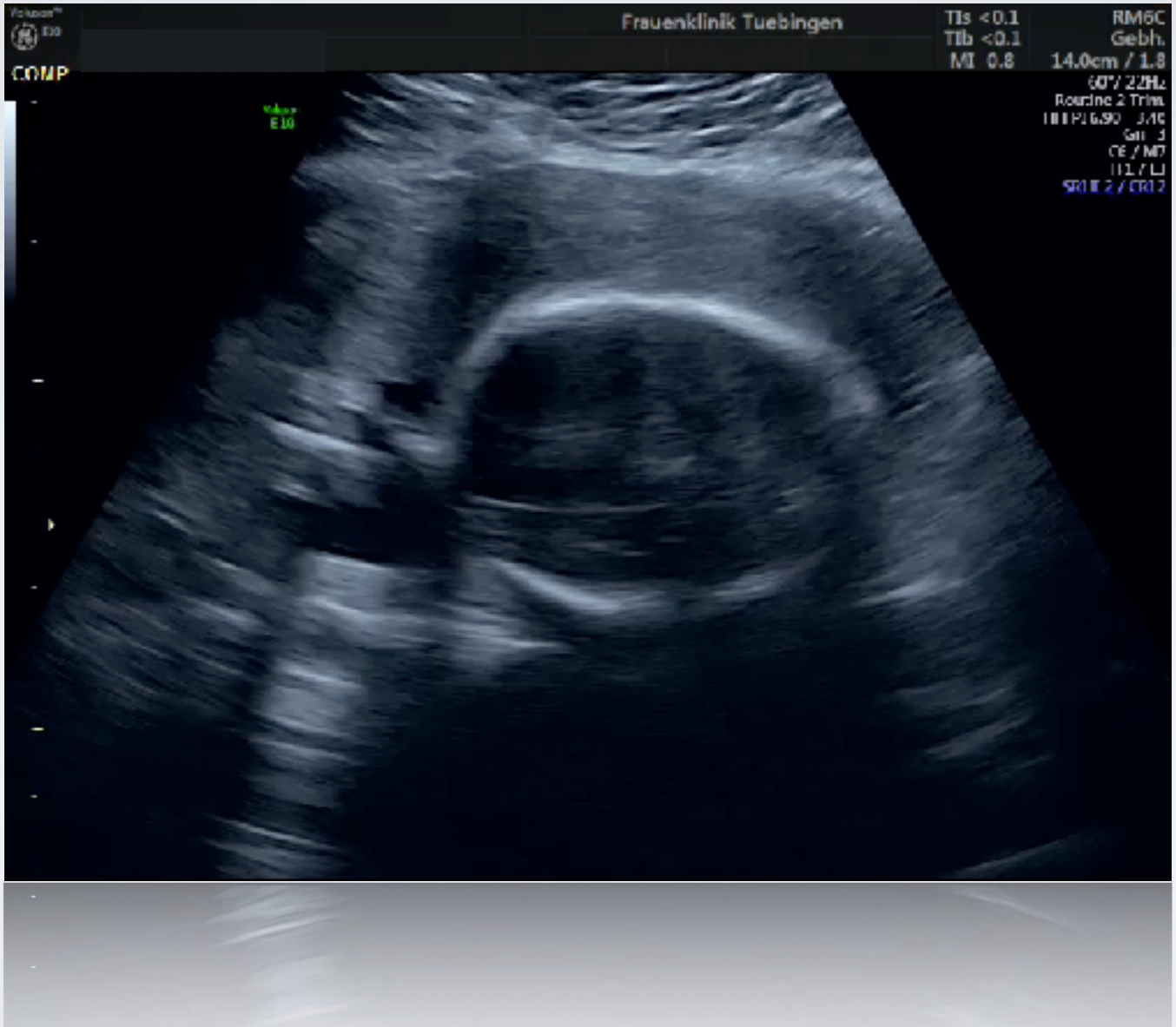
- Proteinuria 1.5/d
- No headache
- No hyperreflexia

- Hb 12.8 g/dl
- Platelets 165T/Ul
- Liver enzymes normal
- Uric acid 8.6 mg/dl
- Creatinin 1,1mg/dl

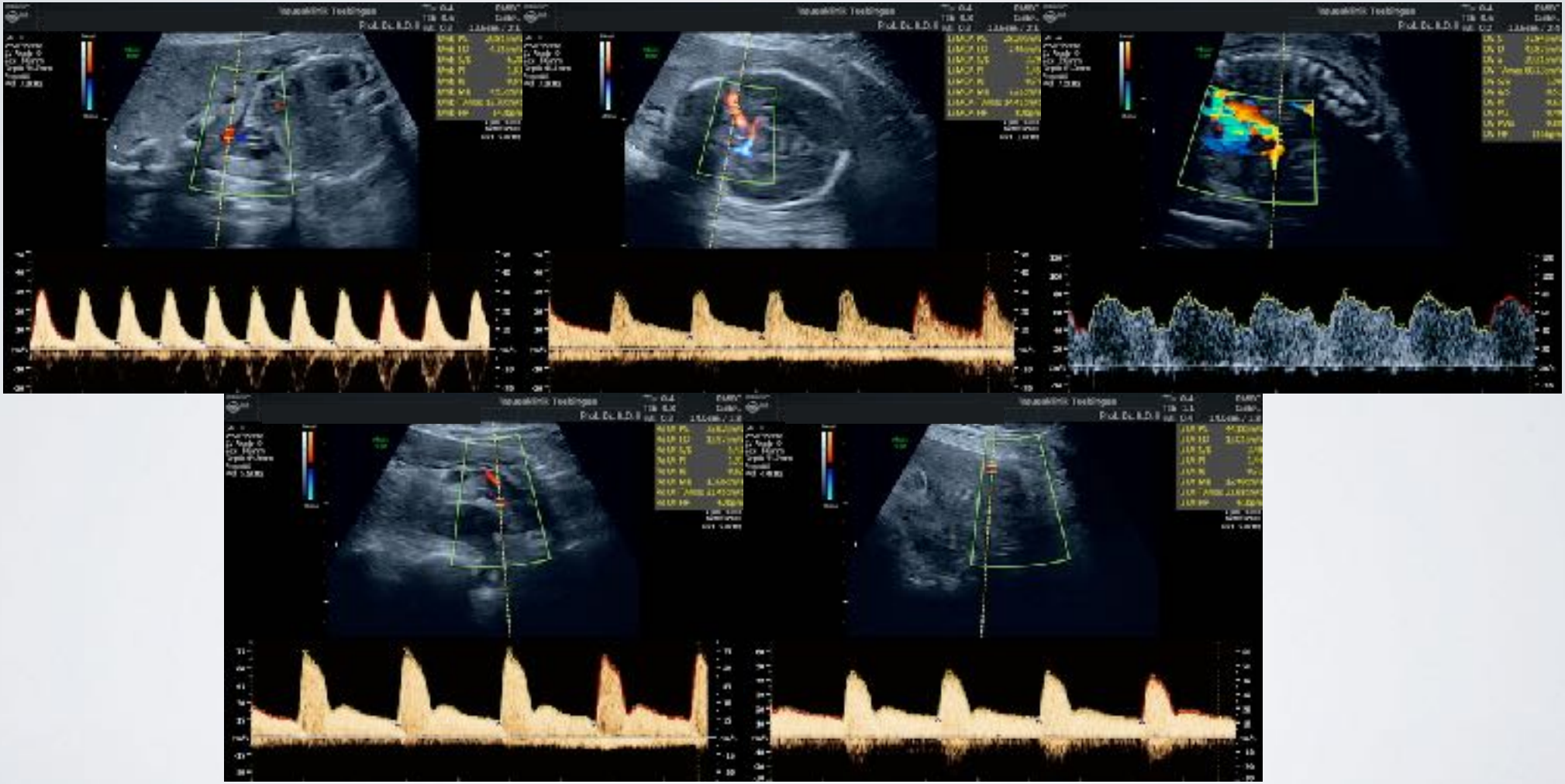
- EFW 500g



Case 1: 24+6 weeks



Case 1: 24+6 weeks



Case 1: 24+6 weeks

Preeclampsia or severe kidney disease?

Which is the best way to distinguish between both problems?

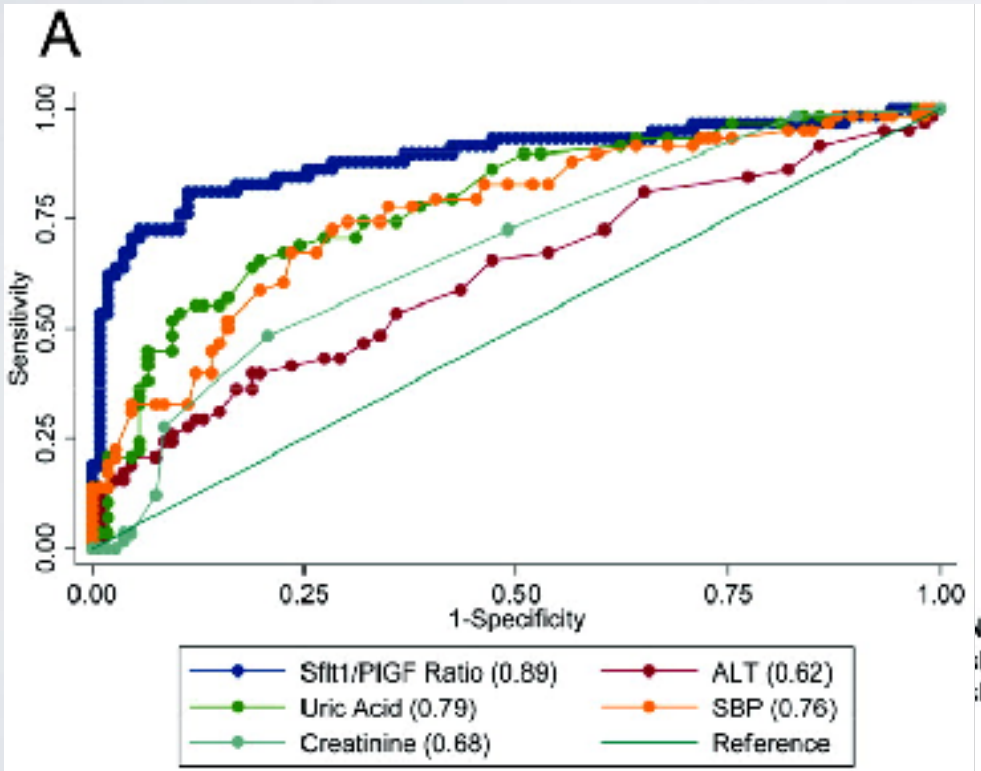
a) Wait and see
b) SFLT-1/PLGF measurement
c) Urid acid
d) Proteinuria

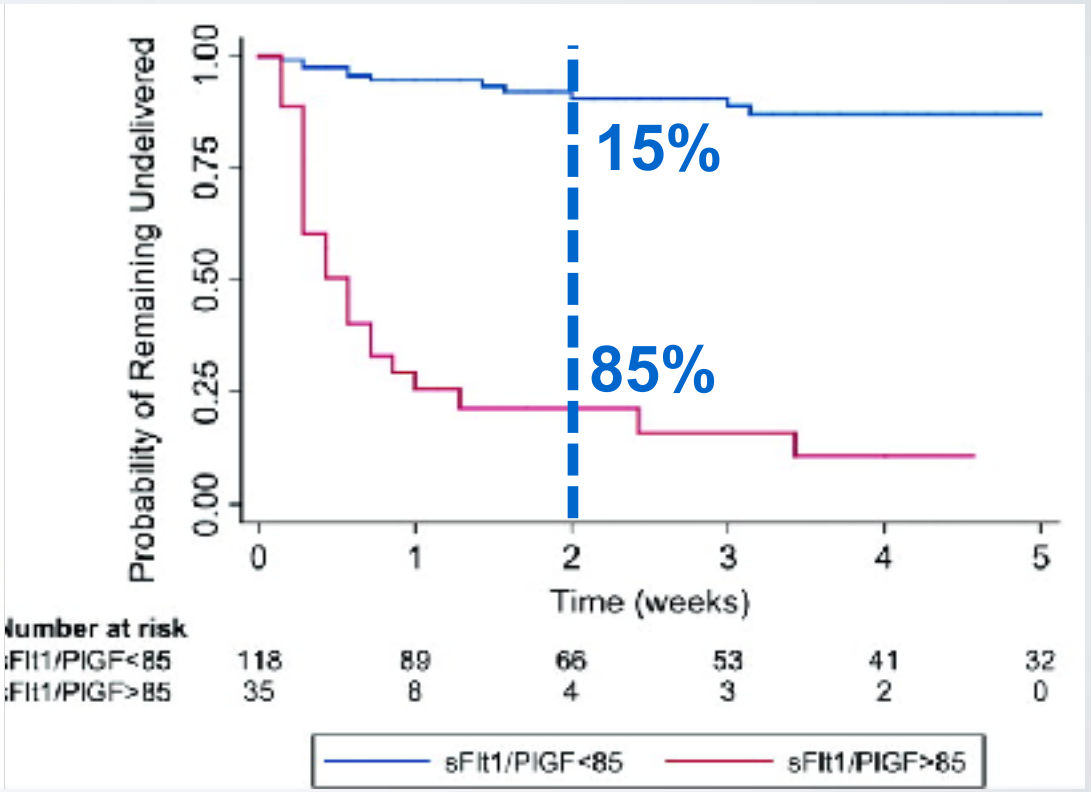
Circulation
JOURNAL OF THE AMERICAN HEART ASSOCIATION

American Heart Association
Learn and Live

Angiogenic Factors and the Risk of Adverse Outcomes in Women with Suspected Preeclampsia

Sarosh Rana, Camille E. Powe, Saira Salahuddin, Stefan Verlohren, Frank H. Perschel, Richard J. Levine, Kee-Hak Lim, Julia B. Wenger, Ravi Thadhani and S. Ananth Karumanchi





Update on the Diagnosis and Prognosis of Preeclampsia with the Aid of the sFlt-1/PlGF Ratio in Singleton Pregnancies

Ignacio Herraiz[a] Elisa Llurba[b] Stefan Verlohren[c] Alberto Galindo[a] on behalf of the Spanish Group for the Study of Angiogenic Markers in Preeclampsia

sFlt-1/PlGF result (EP/LP)	Interpretation	Time to delivery (EP)	What should be done?
Low: <38	Rule out PE: 1 week: NPV ≈99% 4 weeks: NPV ≈95%	Unmodified	Reassuring the patient No further determinations are needed unless new suspicion arises
Intermediate: 38–85/38–110	Rule in PE: 4 weeks: PPV ≈40%	20% remain pregnant after 1 month	Follow-up visit and retest in 1–2 weeks Maternal education about signs and symptoms of PE
High: >85/>110	Diagnosis of PE (or PD-related disorder) is highly likely	15% remain pregnant after 2 weeks	Follow-up visit and retest in 2–4 days EP: consider referral to higher-level center LP: consider lowering the threshold for labor induction
Very high: >655/>201	Short-term complications and need to deliver are highly likely	30% remain pregnant after 2 days	Close surveillance EP: corticoids to the mother for fetal maturation

NPV, negative predictive value; PD, placental dysfunction; PE, preeclampsia; PlGF, placental growth factor; PPV, positive predictive value; sFlt-1, soluble fms-like tyrosine kinase-1; EP, early phase (<34 weeks of gestation); LP, late phase ($\geq 34^{+0}$ weeks of gestation).

Case 1: 24+6 weeks

SFLT-1/PLGF ratio: 965!

Chronic Kidney Disease with preeclampsia and severe IUGR

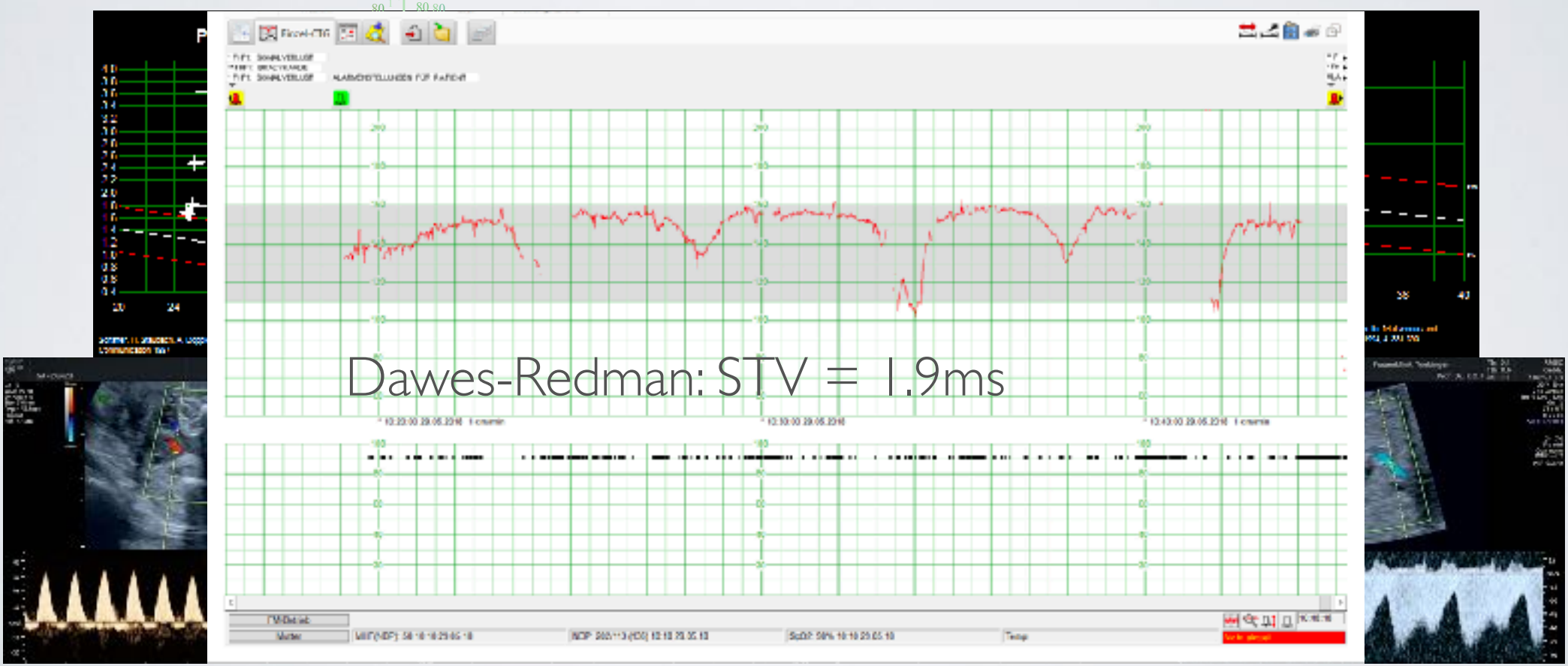
What do you suggest as next step?

a) Steroid injection
b) Planned delivery after steroid injection
c) Continuous fetal heart trace monitoring
d) Outpatient care

Case 1: 26+2 weeks

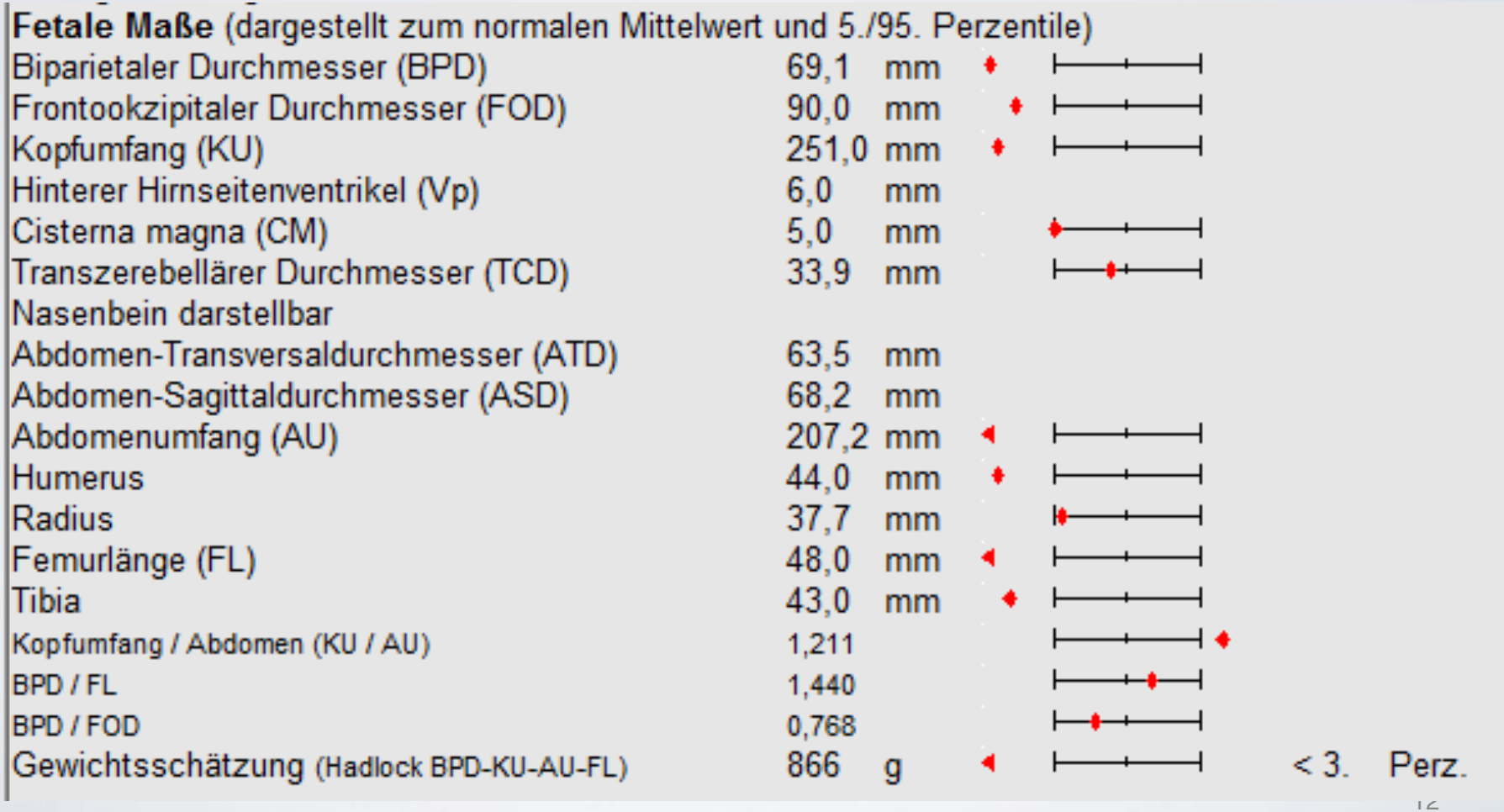
Chronic Kidney Disease with preeclampsia and severe IUGR

Close Monitoring, daily CTG tracing and Doppler measurements
Steroid injection, Magnesium iv, RR control



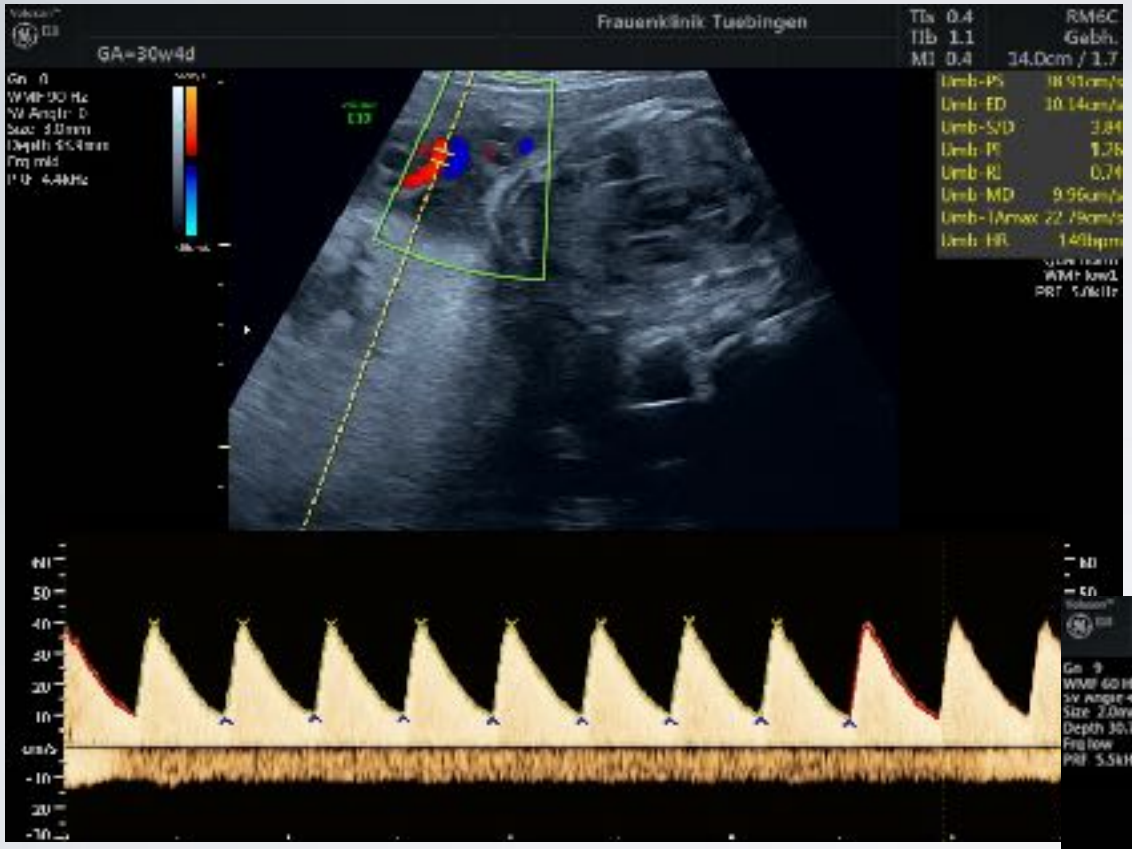
Case II: 41 years old, I.G, 0.P 2, 30wks

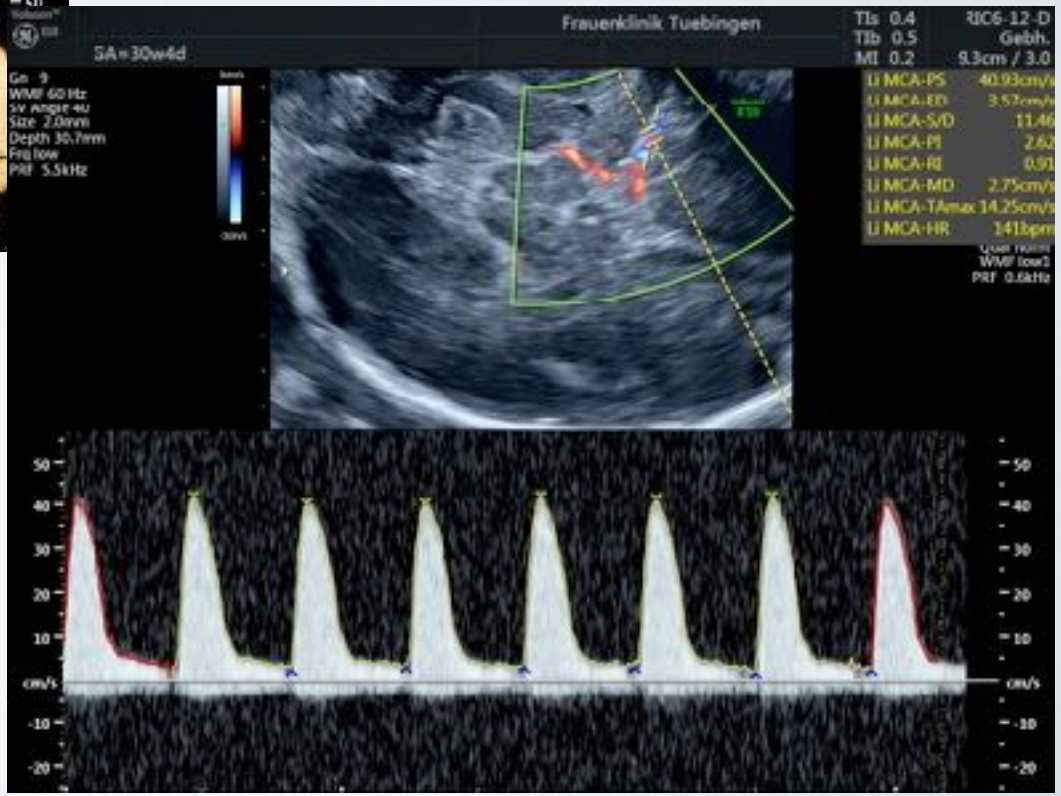
Referral for fetal growth restriction, no signs of preeclampsia
Ultrasound examination is carried out by the labour ward team



Fetale Maße (dargestellt zum normalen Mittelwert und 5./95. Perzentile)			
Biparietaler Durchmesser (BPD)	69,1	mm	
Frontookzipitaler Durchmesser (FOD)	90,0	mm	
Kopfumfang (KU)	251,0	mm	
Hinterer Hirnseitenventrikel (Vp)	6,0	mm	
Cisterna magna (CM)	5,0	mm	
Transzerebellärer Durchmesser (TCD)	33,9	mm	
Nasenbein darstellbar			
Abdomen-Transversaldurchmesser (ATD)	63,5	mm	
Abdomen-Sagittaldurchmesser (ASD)	68,2	mm	
Abdomenumfang (AU)	207,2	mm	
Humerus	44,0	mm	
Radius	37,7	mm	
Femurlänge (FL)	48,0	mm	
Tibia	43,0	mm	
Kopfumfang / Abdomen (KU / AU)	1,211		
BPD / FL	1,440		
BPD / FOD	0,768		
Gewichtsschätzung (Hadlock BPD-KU-AU-FL)	866	g	< 3. Perz.

Fetal Doppler Measurements





Case II: 41 years old, I.G, 0.P 2, 30wks, IUGR

What do you think?

a) Sounds like another case of IUGR
b) So small… very worrying
c) Most probably a genetic syndrome
d) Most probably wrong dates…

Case II: 41 years old, I.G, 0.P 2, 30wks, IUGR

What would you do next?

a) Delivery
b) Outpatient care, Doppler measurements once a week
c) Some more lab tests
d) Next examination in 4 weeks

Which lab test?

SFLT-1/PLGF ratio about 39

Update on the Diagnosis and Prognosis of Preeclampsia with the Aid of the sFlt-1/PlGF Ratio in Singleton Pregnancies

Ignacio Herraiz[a] Elisa Llurba[b] Stefan Verlohren[c] Alberto Galindo[a] on behalf of the Spanish Group for the Study of Angiogenic Markers in Preeclampsia

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Case II: 41 years old, I.G, 0.P 2, 30wks, IUGR

No signs of Preeclampsia and SFLIT-PLGF-Ratio about 39

But: SFLT-1 >85.000 pg/ml, PLGF 2173 pg/ml

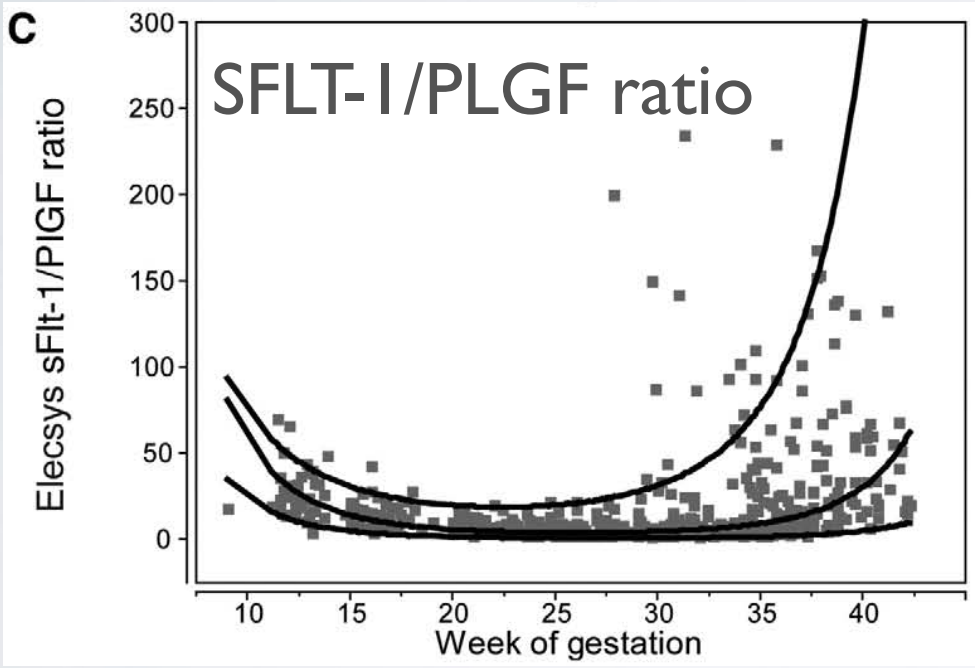
What do you think?

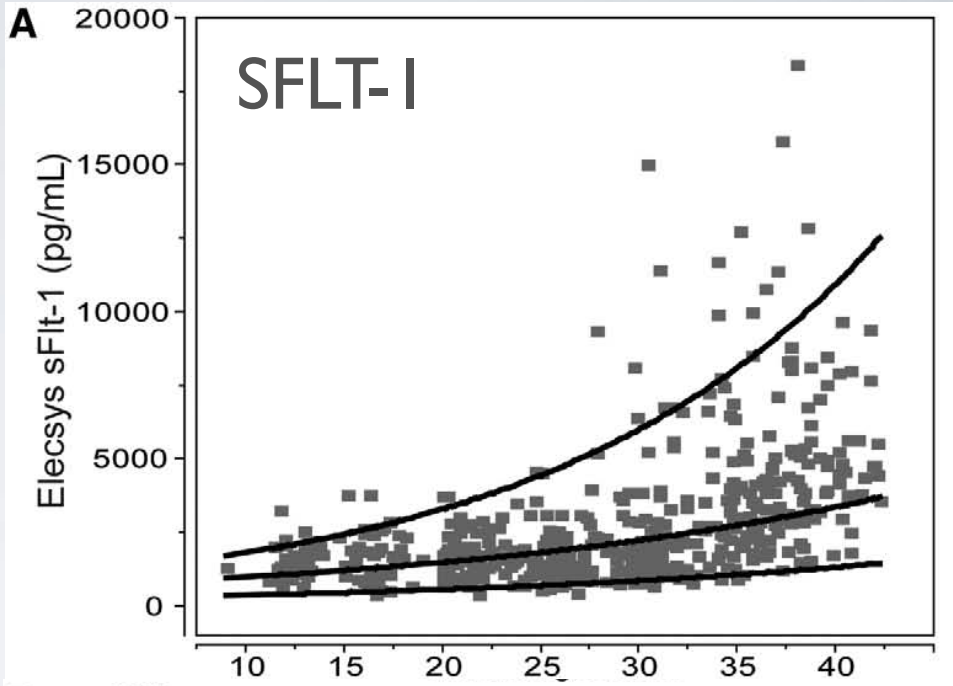
a) The ratio indicates that everything is still okay
b) Most probably a lab error
c) Time for a detailed ultrasound examination

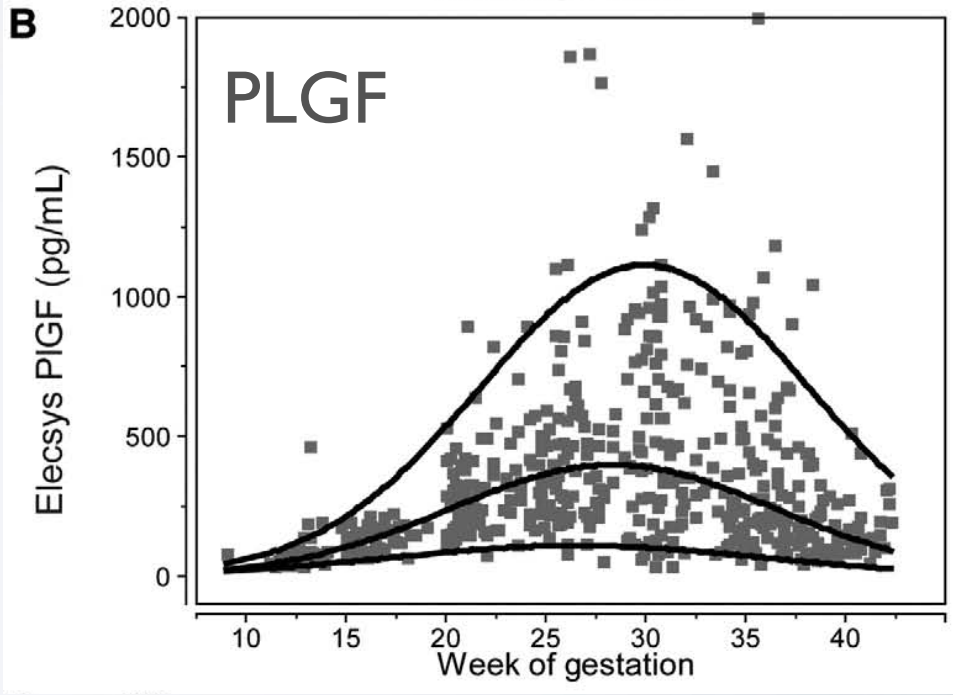
OBSTETRICS

An automated method for the determination of the sFlt-1/PlGF ratio in the assessment of preeclampsia

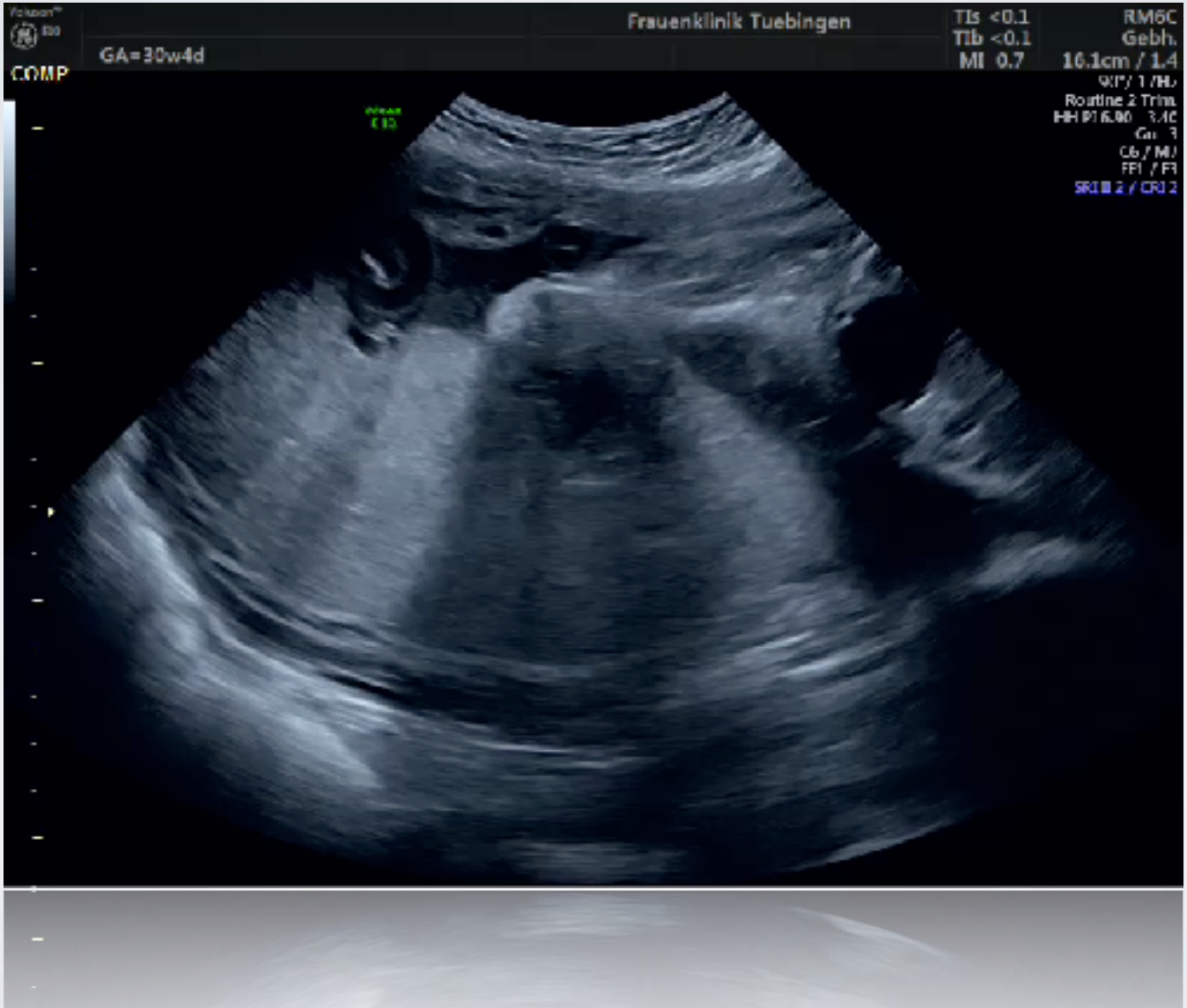
Stefan Verlohren, MD; Alberto Galindo, MD; Dietmar Schlembach, MD; Harald Zeisler, MD; Ignacio Herraiz, MD; Manfred G. Moertl, MD; Juliane Pape, MD; Joachim W. Dudenhausen, MD; Barbara Denk, PhD; Holger Stepan, MD







Case II: 41 years old, I.G, 0.P 2, 30wks, IUGR



Case II: 41 years old, I.G, 0.P 2, 30wks, IUGR Abnormal SFLT-1/PLGF Ratio

What do you think?

a) Now I sure that there is something wrong
b) Now I am sure that this is a lab error
c) There is no fetus????
d) Time for a break

Case II: 41 years old, I.G, 0.P 2, 30wks, IUGR

- SFLT-1-PLGF-Ratio:
  39
  SFLT-1 >85.000 pg/ml
  PLGF 2173 pg/ml
- FREE-BETA-HCG
  220.000 U/L
- AFP
  394 U/L

Case II: 41 years old, I.G, 0.P 2, 30wks, IUGR

No signs of Preeclampsia but Abnormal Lab Results

What is the most likely diagnosis?

a) Molar pregnancy
b) Partial molar pregnancy
c) Placental mesenchymal dysplasia
d) Fetal cytomegalovirus infection

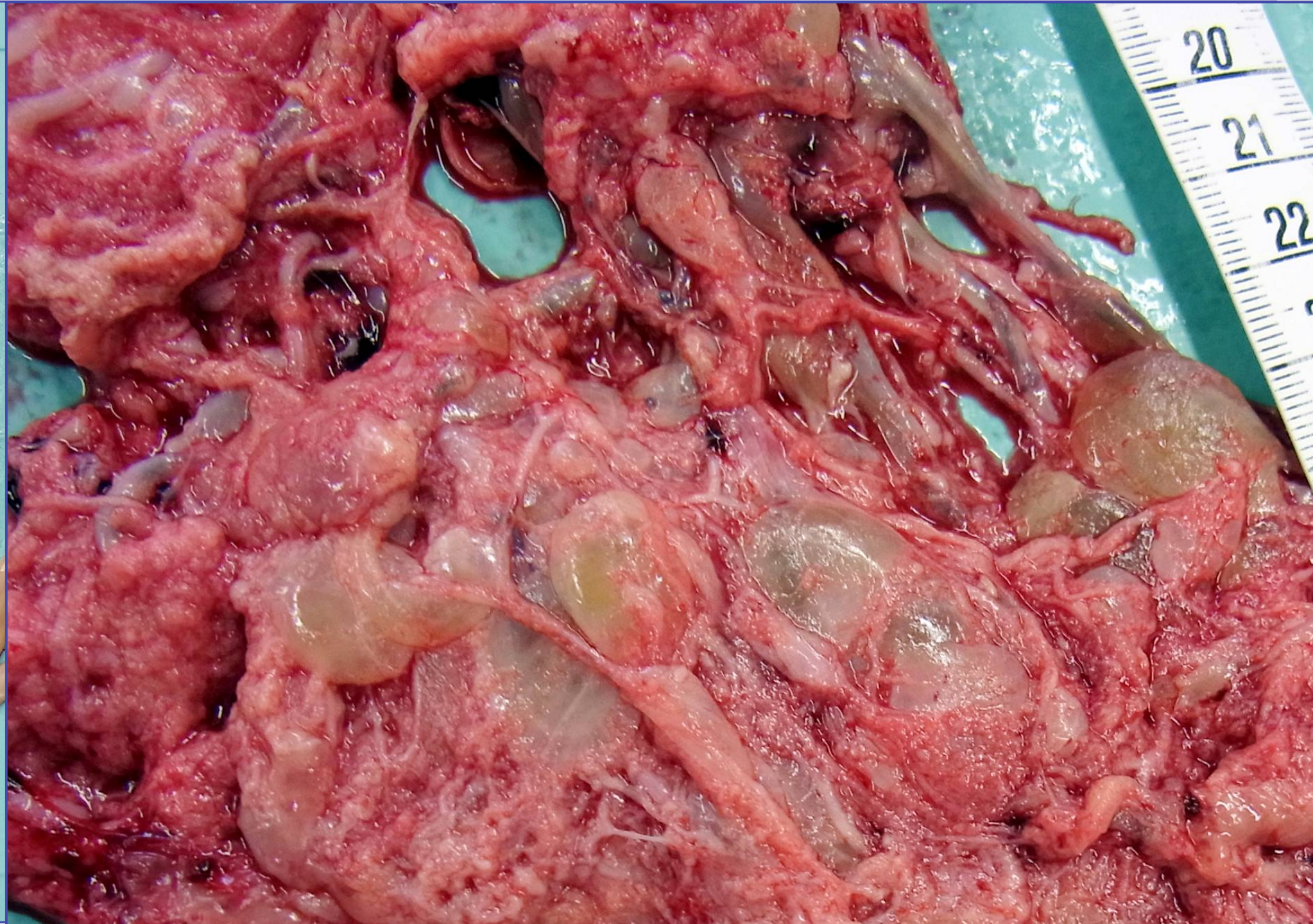
Case II: 41 years old, I.G, 0.P 2, 30wks, IUGR

No signs of Preeclampsia but Abnormal Lab Results

What would do do next?

a) Send her home and see her in 4 wks
b) Delivery
c) Keep her in hospital for the next days
d) Ask Dr. Google

Delivery occurred 7 days later with placental abruption

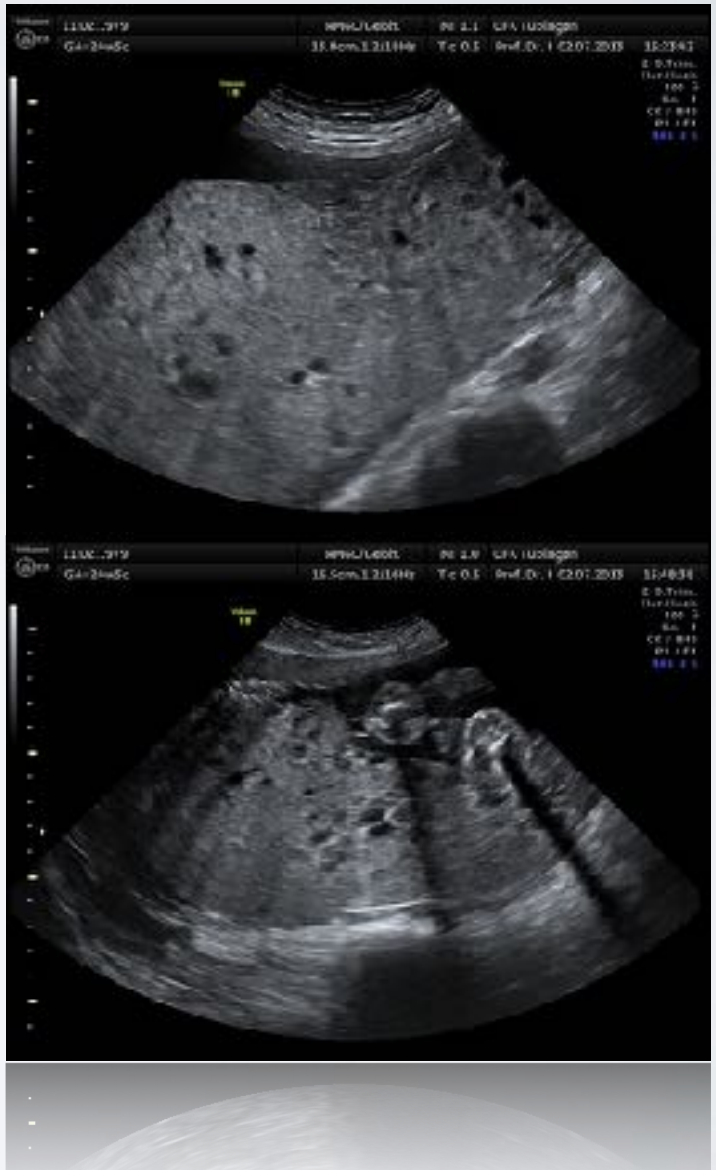

20
21
22

Placental Mesenchymal Dysplasia

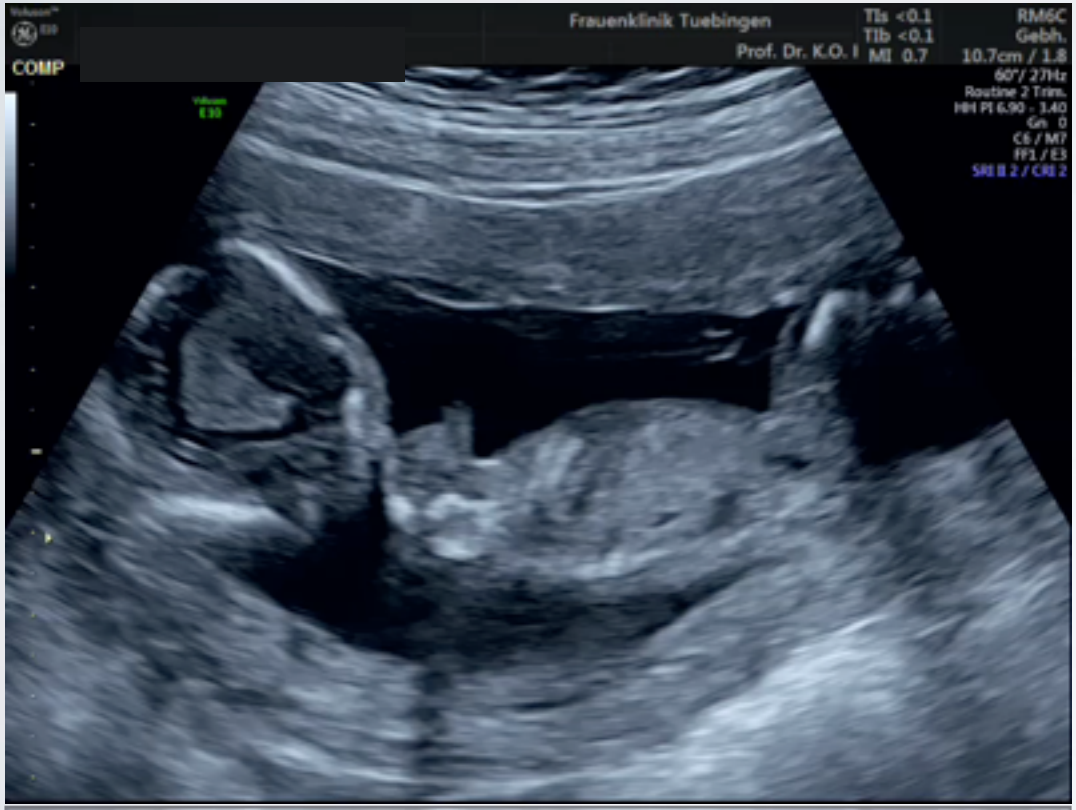
Placentomegaly and grapelike vesicles
resembling molar pregnancy
with a normal fetus
Prevalence 0.02%
82% female

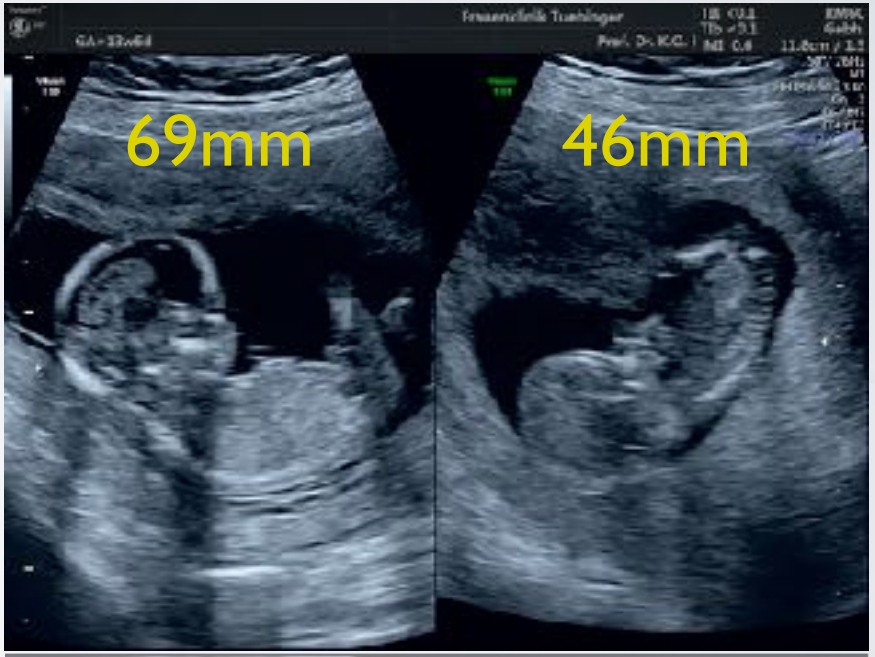
Associated with
fetal growth restriction (50%) and
intrauterine fetal death (36%)
Beckwith-Wiedemann syndrome (20%)

Common features:
anemia and thrombocytopenia

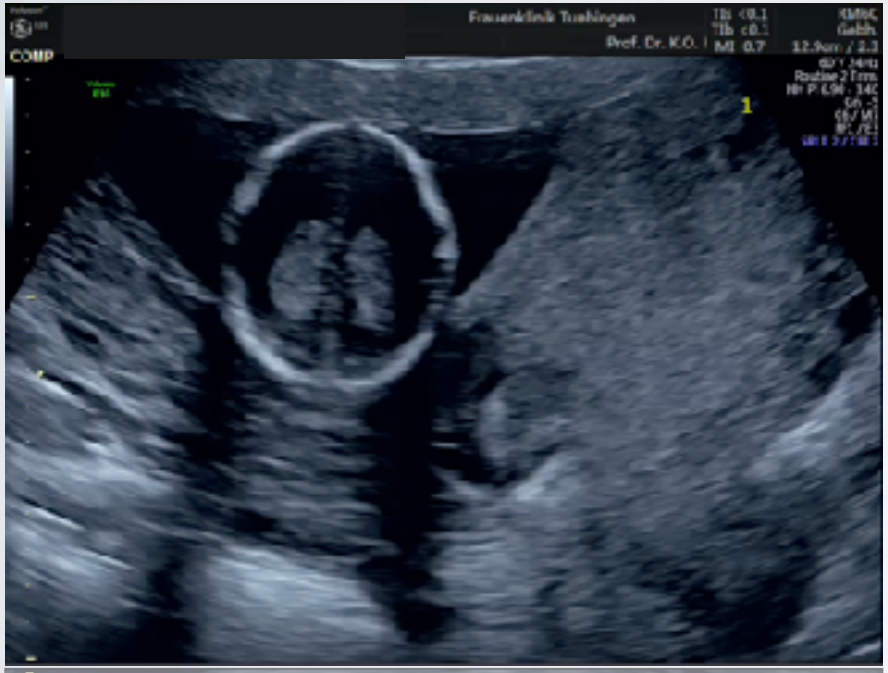


Case III: 35 years, DCDA, First Trimester Screening





Case III: 35 years, DCDA, First Trimester Screening



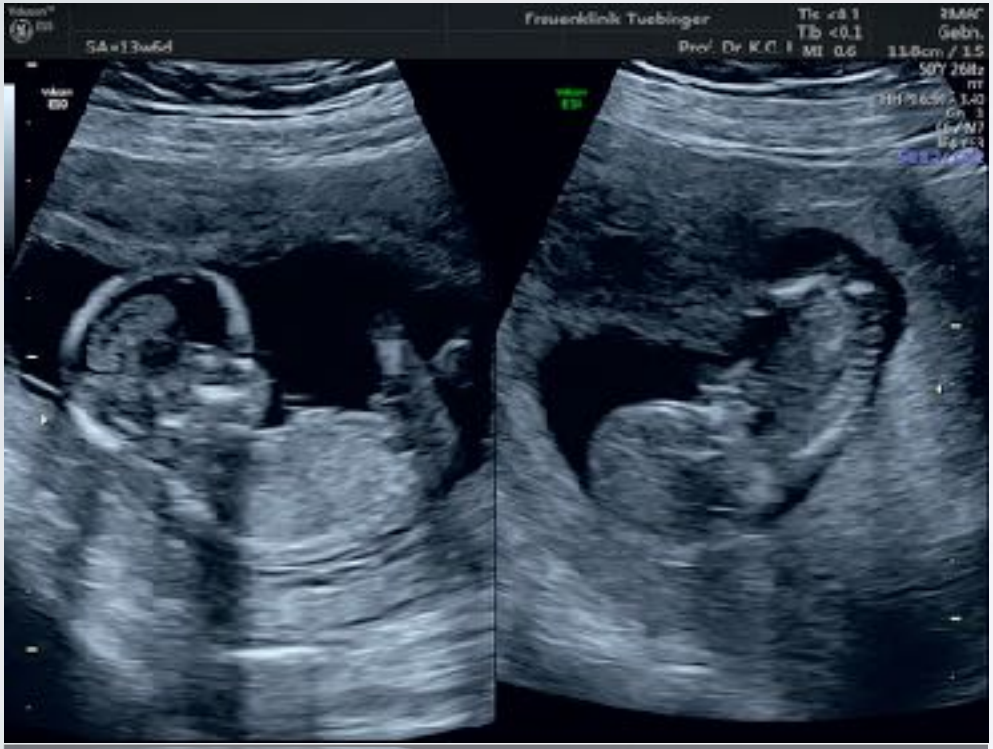
What do you suspect?

a) Normal
b) Heteropaternal superfecundation
c) Monozygotic dichorionic twins with unequal placental sharing
d) Superfetation

HETEROPATERNAL SUPERFECUNDATION

Twins with 2 fathers, conception within hours

Case III: 35 years, DCDA, First Trimester Screening



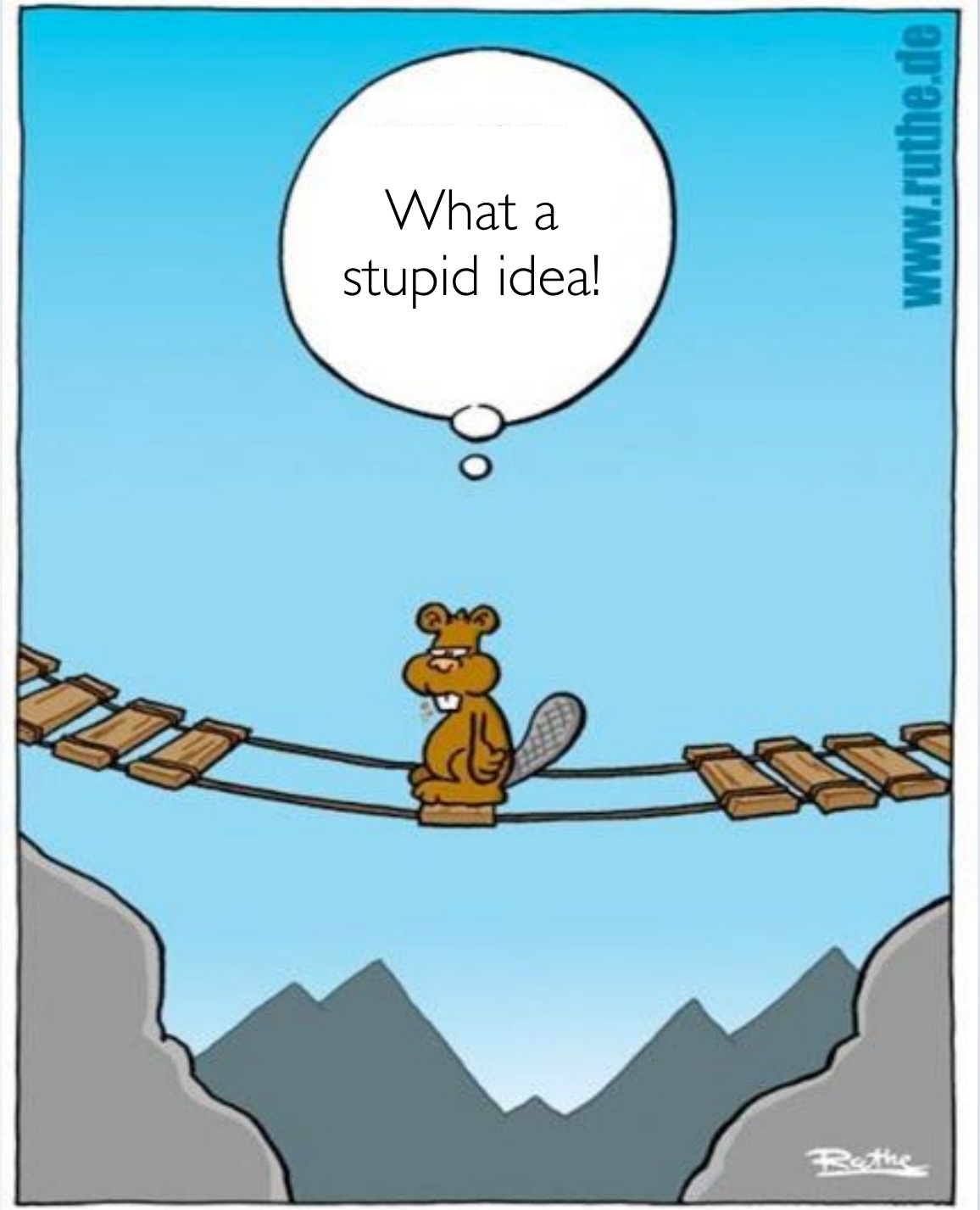
Free beta hCG 1.2 MoM, PAPP-A 0.41 MoM

Case III: 35 years, DCDA, First Trimester Screening

What would do you do next?

a) Cell free DNA testing?
b) Wait and see
c) Amniocentesis
d) CVS

Amnio in DCDA Twins



Case III: 35 years, DCDA, First Trimester Growth Discordance

We did a CVS

What is the most likely diagnosis?

a) Trisomy 21
b) Trisomy 18
c) Trisomy 13
d) Triploidy
e) Normal

Case III: 35 years, DCDA, First Trimester Growth Discordance

Short term culture CVS:
Large Fetus: Normal
Small Fetus: Mosaic Trisomy 16

Which fetal karyotype is not possible?

a) Trisomy 16
b) Mosaic Trisomy 16
c) Uniparental disomy 16
d) Normal karyotype
e) Monosomy 16

Case III: 35 years, DCDA, Mosaic Trisomy 16

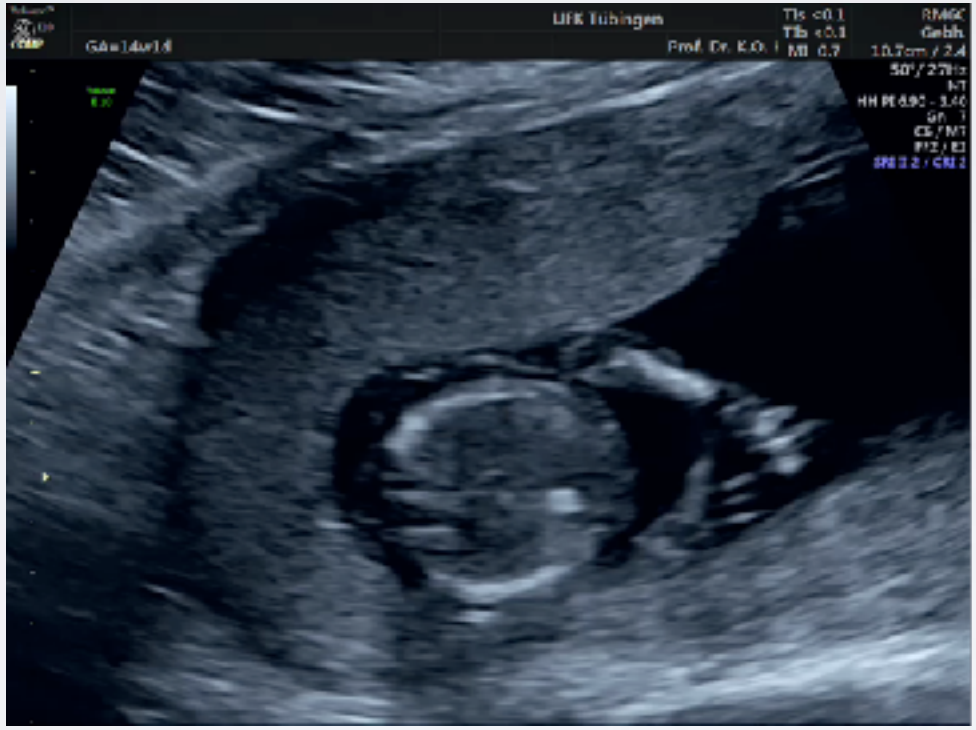
We suspect at least placental dysfunction and severe/early growth restriction

What would you do?

a) Termination of the whole pregnancy
b) Wait for an amniocentesis
c) Selective Termination
d) Re-evaluation at 20 weeks

Case III: 35 years, DCDA, Mosaic Trisomy 16

Selective Reduction



Case III: 35 years, DCDA, Mosaic Trisomy 16

After selective reduction:
Long term CVS culture: Normal

What should be your next step?

a) Call your lawyer!
b) Call your genetician
c) Take a café and relax
d) Start your one year boat trip

Amnio at the time of Reduction:
Mosaic Trisomy 16 + symptomatic fetus

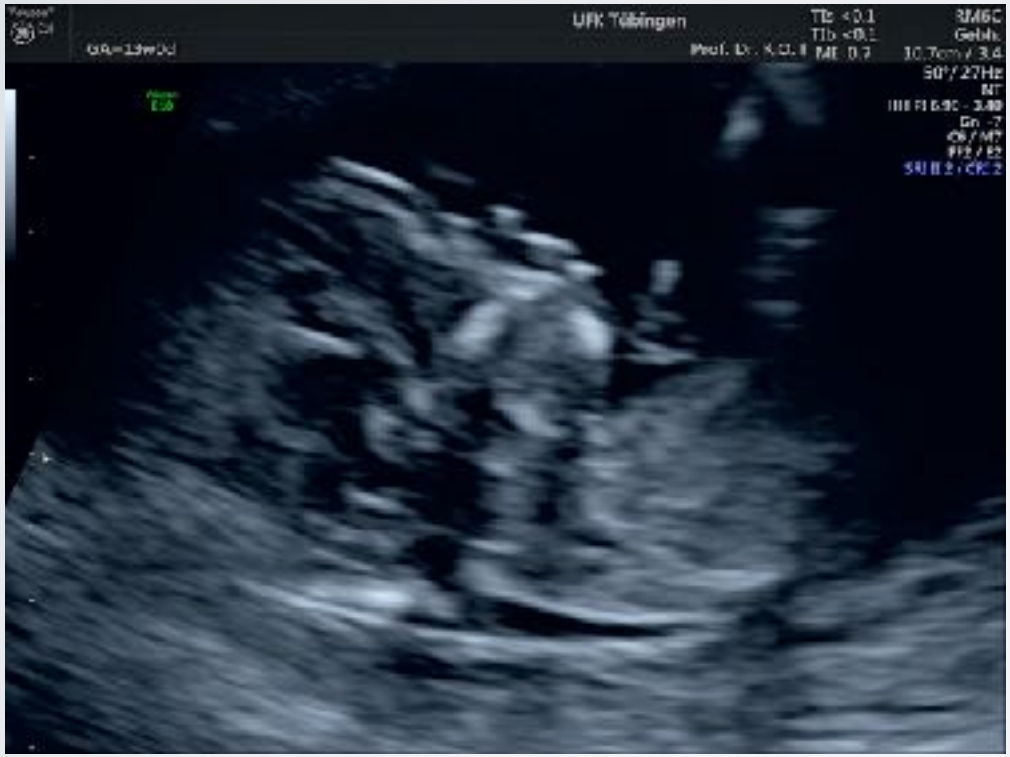
Case 1V: 29 years old, II.G, 0.P 13 Weeks

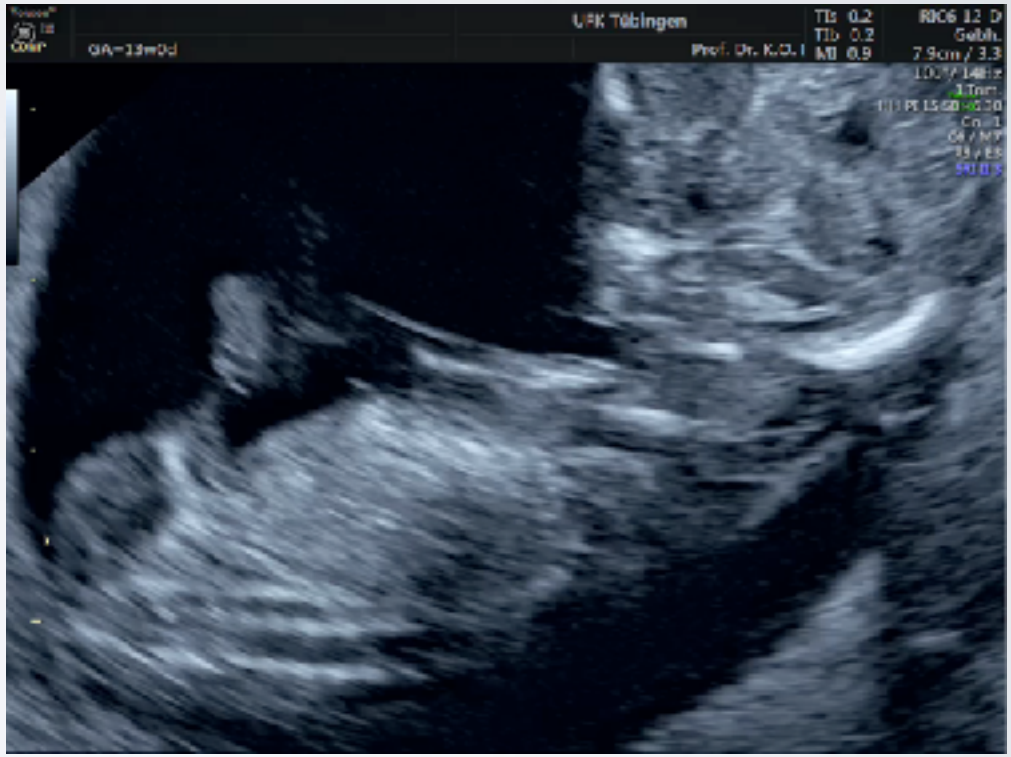
Referral for abnormal first trimester screening results:
29 years, CRL 68mm, NT 2,8mm
Free beta-hCG 1,2 MoM, PAPP-A 0,31 MoM

What is the most likely diagnosis?

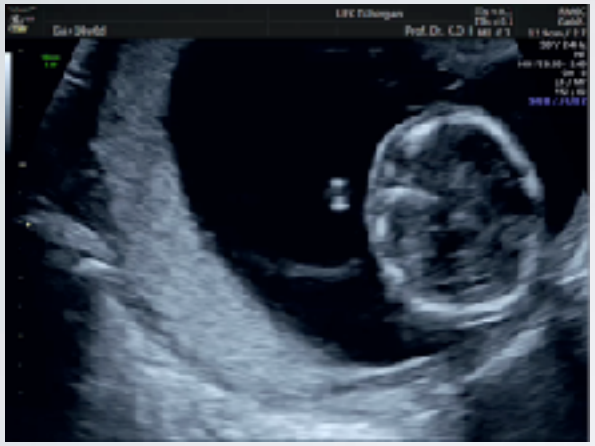
a) Normal outcome
b) Trisomy 21
c) Trisomy 18 or 13
d) IUGR in the subsequent course of the pregnancy
e) Genetic syndrome

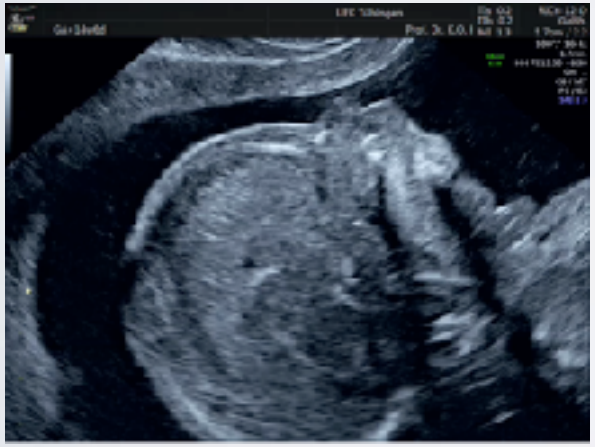
29 YEARS OLD, II.G, 0.P 13 WEEKS





29 years old, II.G, 0.P 13 Weeks





What is now the most likely diagnosis?

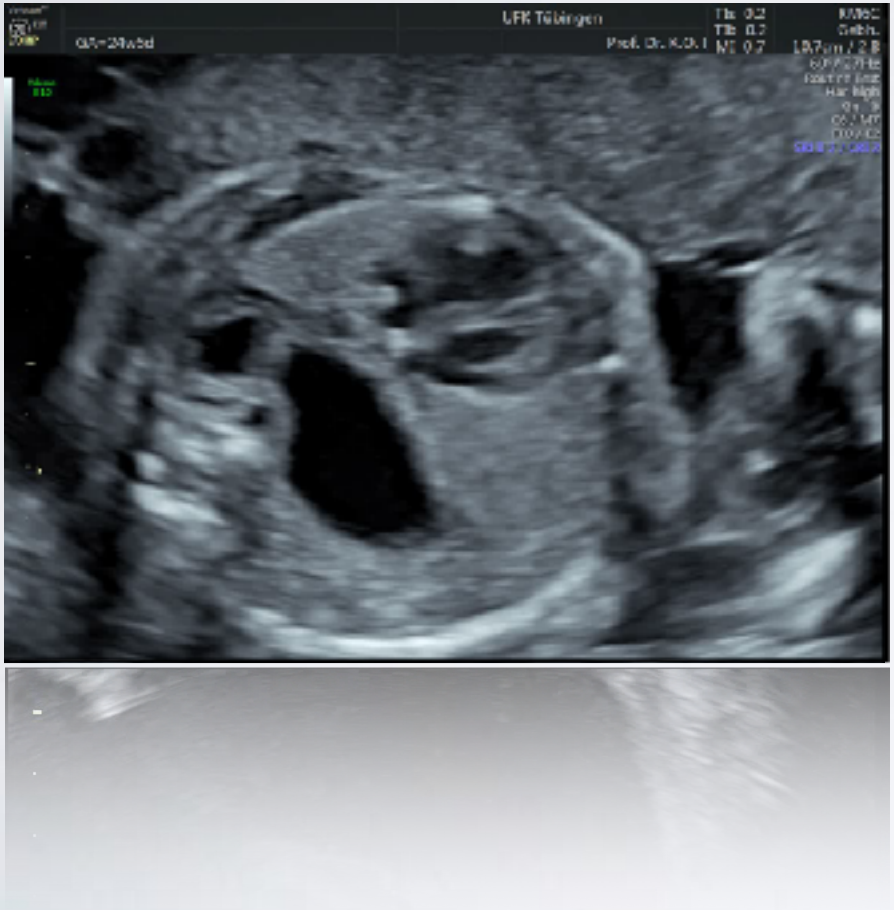
a) Normal outcome
b) Trisomy 21
c) Trisomy 18 or 13
d) IUGR in the subsequent course of the pregnancy
e) Genetic syndrome

29 YEARS OLD, II.G, 0.P 13 WEEKS

Which genetic syndrome could fit?

a) Cornelia de Lange syndrome
b) Noonan syndrome
c) DiGeorge syndrome
d) Holt Oram syndrome
e) TAR syndrome

Cornelia de Lange syndrome



Prevalence: 1 in 30.000
Gene: NIPBL Gen

Prenatal symptoms:
Brachycephaly, IUGR, long philtrum, arm defects, diaphragmatic hernia

additional postnatal symptoms:
reduced growth, IQ 30-80, hypertrichiosis

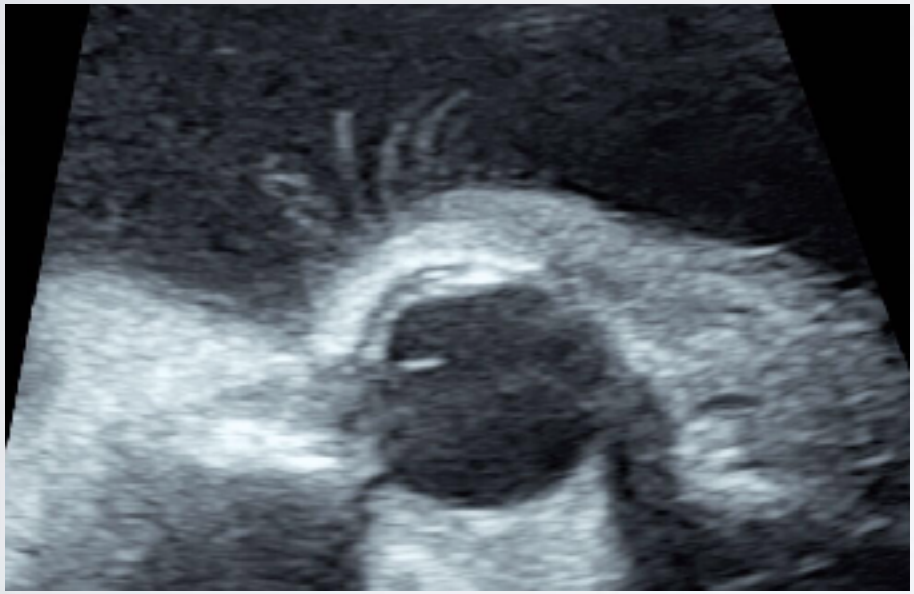
Identification of a Prenatal Profile of Cornelia de Lange Syndrome (CdLS): A Review of 53 CdLS Pregnancies

Dinah M. Clark,[1] Ilana Sherer,[2] Matthew A. Deardorff,[1,2] Janice L.B. Byrne,[3] Kathleen M. Loomes,[2,4] Malgorzata J.M. Nowaczyk,[5] Laird G. Jackson,[1,6] and Ian D. Krantz[1,2]*

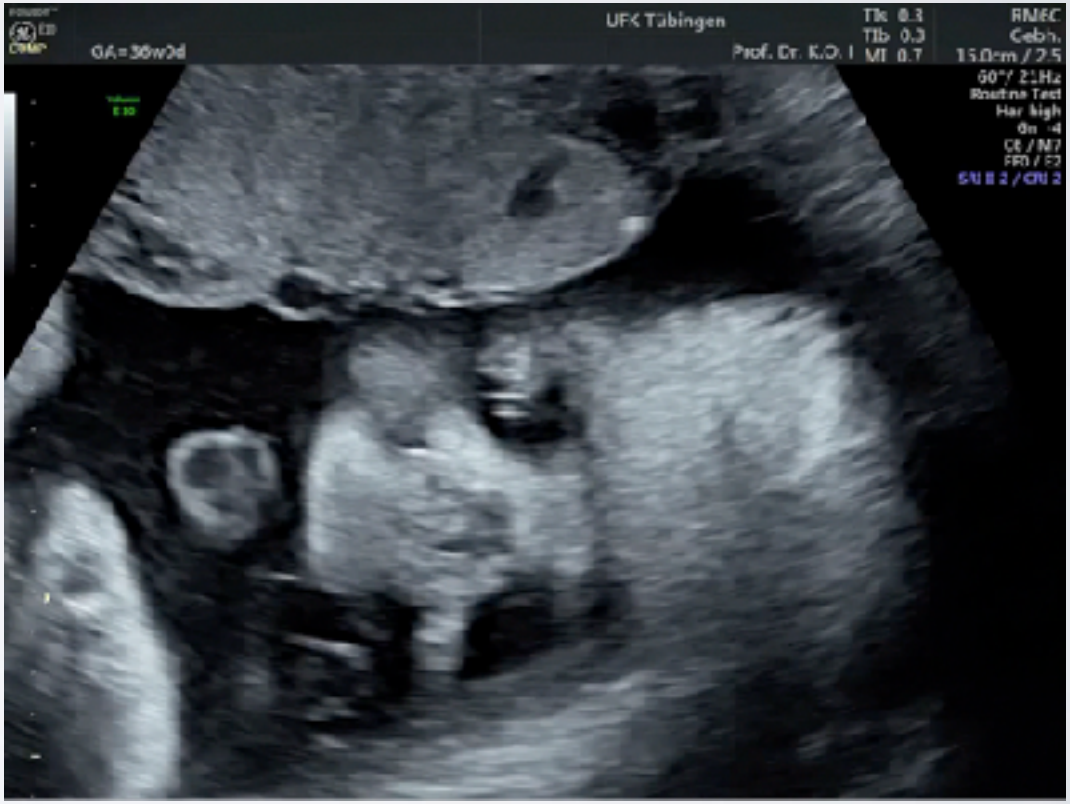
Growth restriction	50/53
Long philtrum, micrognathia	26/53
Abnormal limbs	37/53
Diaphragmatic hernia	16/53
Cardiac defect	10/53
Increased NT	6/13
Low PAPP-A	2/6

Long Ey lashes
Cornelia de Lange syndrome

Case 1



Fall 11



Case V:20 years old, I.G, 13 Weeks

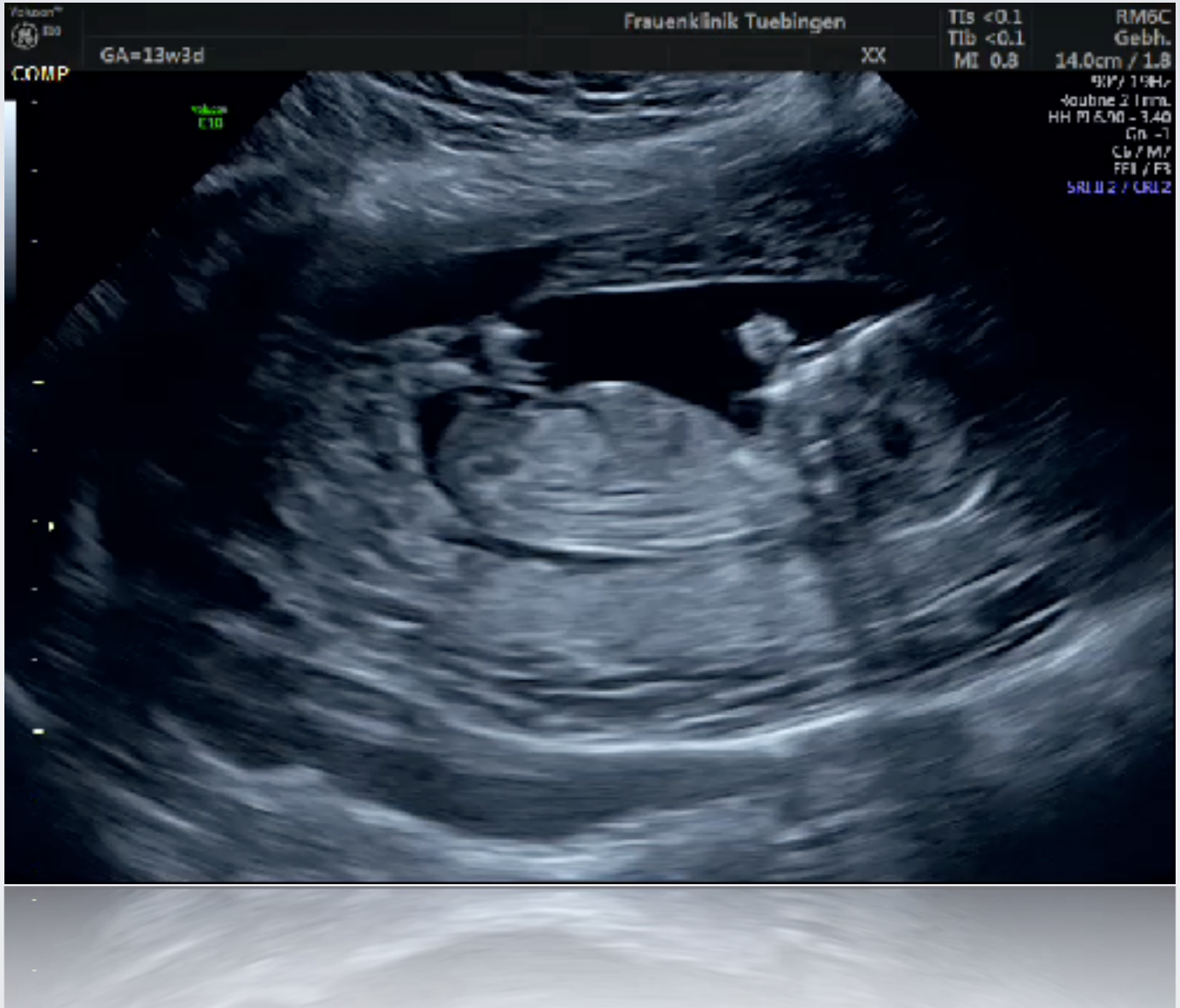
Previous first trimester screening:
CRL 81mm, NT 2.0mm, add. markers normal
Free beta hCG 63.5 MoM (!!), PAPP-A 3.6 MoM

T21 risk: 1:1300, T18 1:32,000, T13: 1:120,000

What do you think

a) Slightly increased free beta hCG
b) Everything is okay, the risk is low
c) Most probably the numbers are switched.
d) I need to repeat the ultrasound examination

20 YEARS OLD, I.G, 13 WEEKS



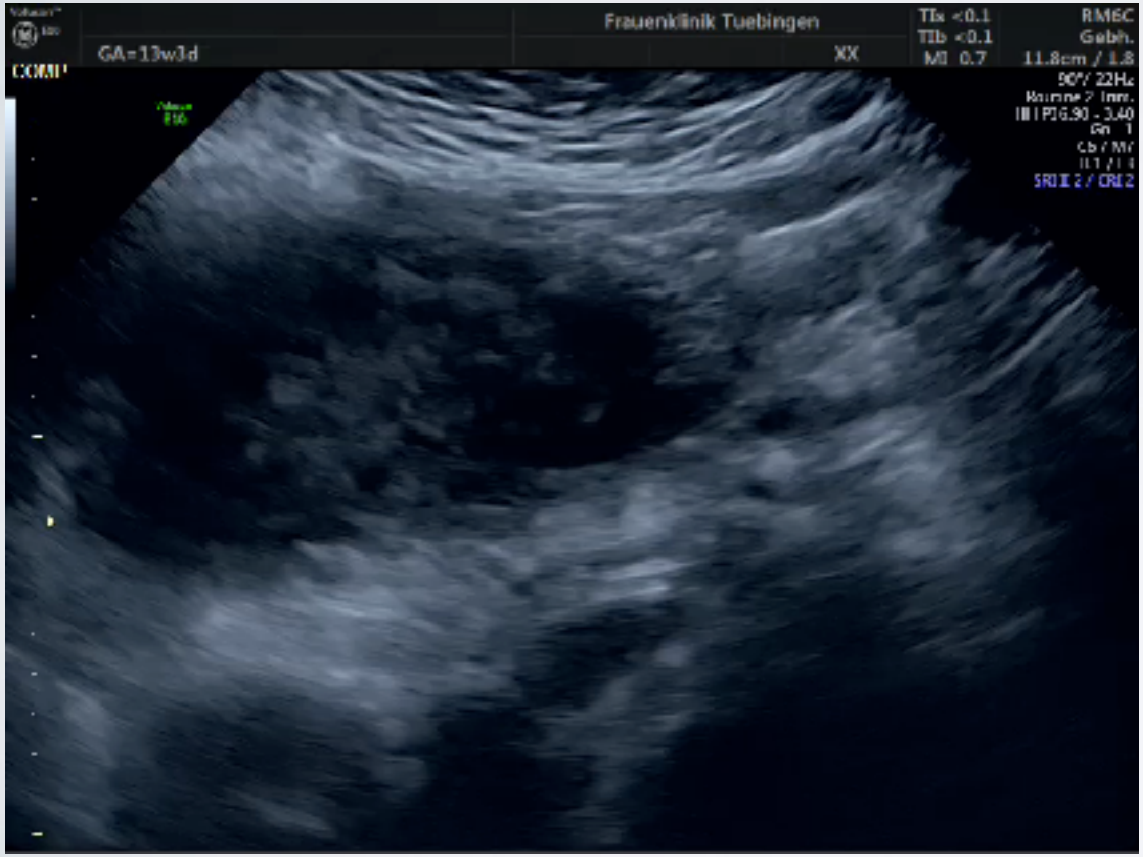
20 YEARS OLD, I.G, 13 WEEKS

Previous first trimester screening:
CRL 81mm, NT 2.0mm, add. markers normal
Free beta hCG 63.5 MoM (!!), PAPP-A 3.6 MoM

Which diagnosis is most likely

a) Molar pregnancy
b) Partial molar pregnancy
c) DCDA with one molar pregnancy
d) Beckwith Wiedemann syndrome

20 YEARS OLD, I.G, 13 WEEKS



DCDA pregnancy with one Molar pregnancy

What do you suggest?

a) Termination of pregnancy
b) Prolongation of pregnancy
c) Chemotherapy
d) Dependent on the symptoms

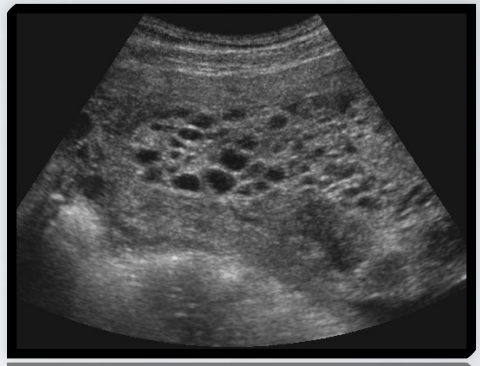
(Partial) Molar Pregnancies

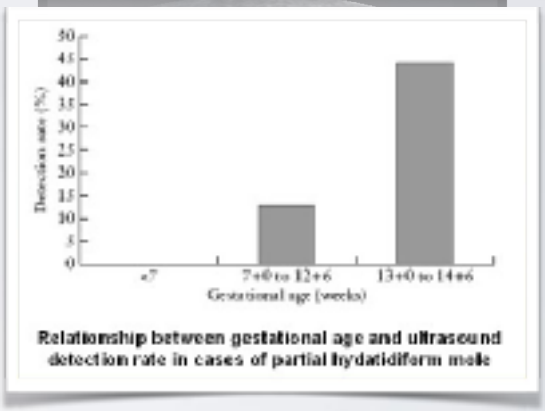
- Prevalence: 1: 500-1000

- Classical symptoms:
  Increased uterine size, large Theca-lutein cysts,
  vaginal bleeding, massive increased b-hCG

- Risks:
  Severe Bleeding
  preeclampsia, hyperthyroidism
  persistent gestational trophoblastic disease
  (15% after molar pregnancy, 0.5% after partial mole)

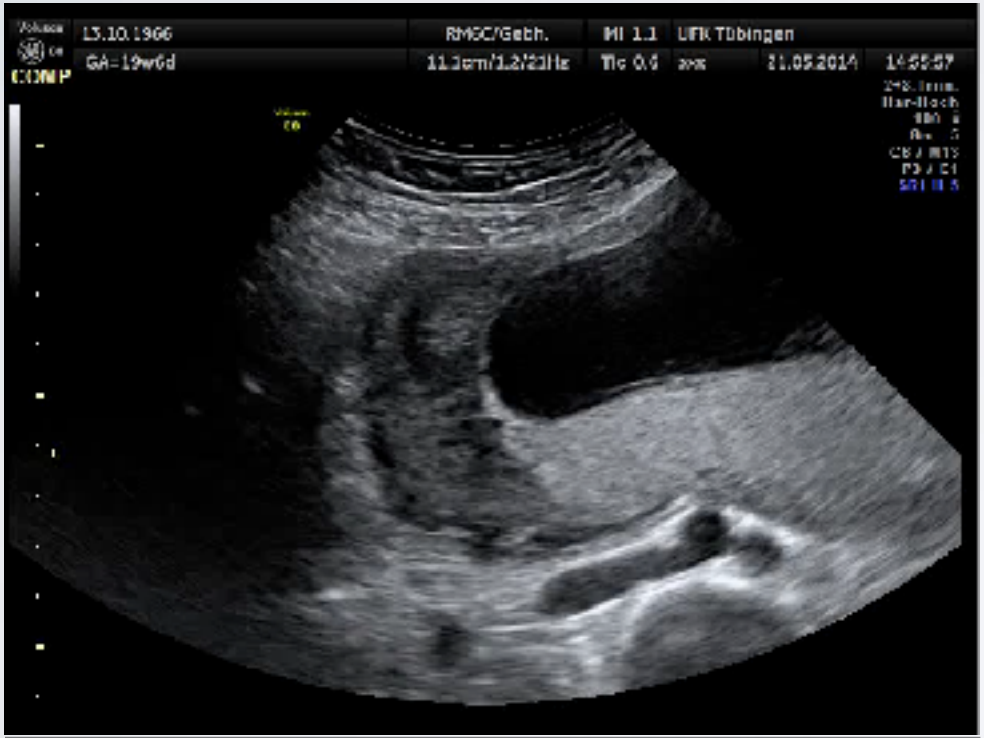
- Therapy:
  TOP, long term f/u

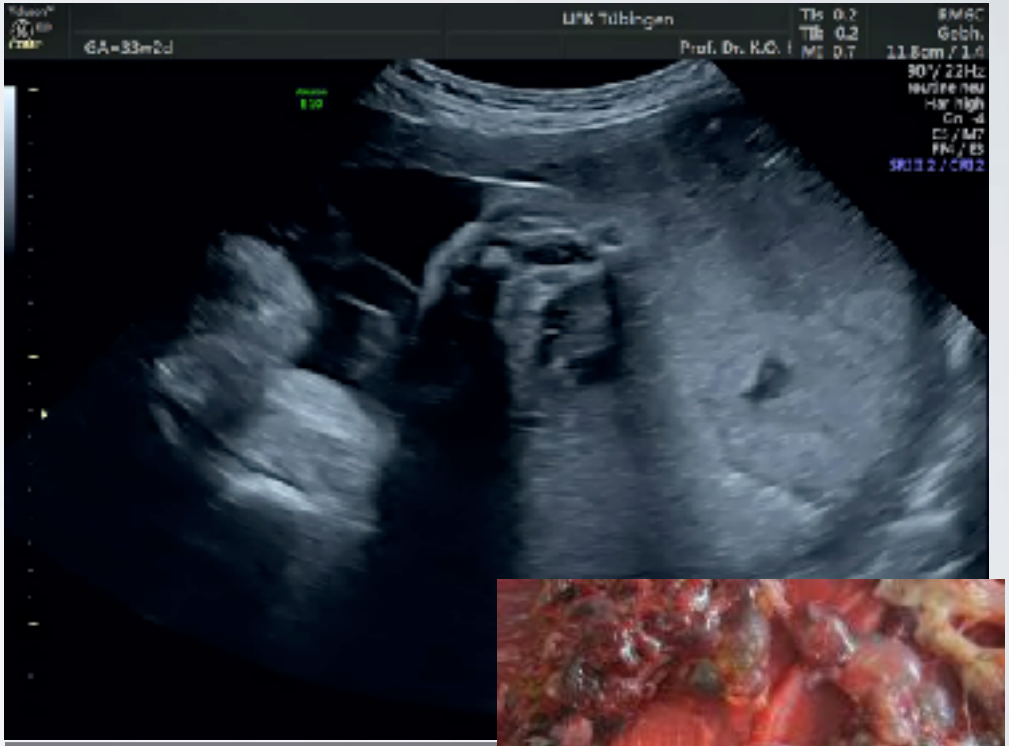


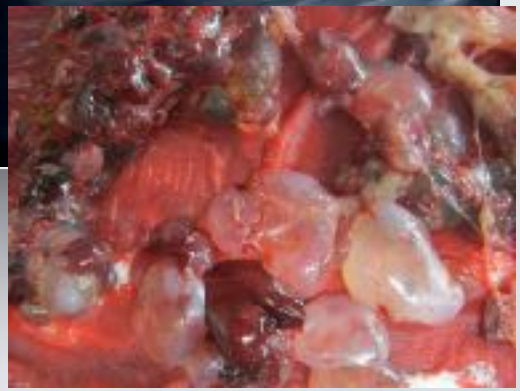


Relationship between gestational age and ultrasound detection rate in cases of partial hydatidiform mole

DCDA with one (Partial) molar Pregnancy



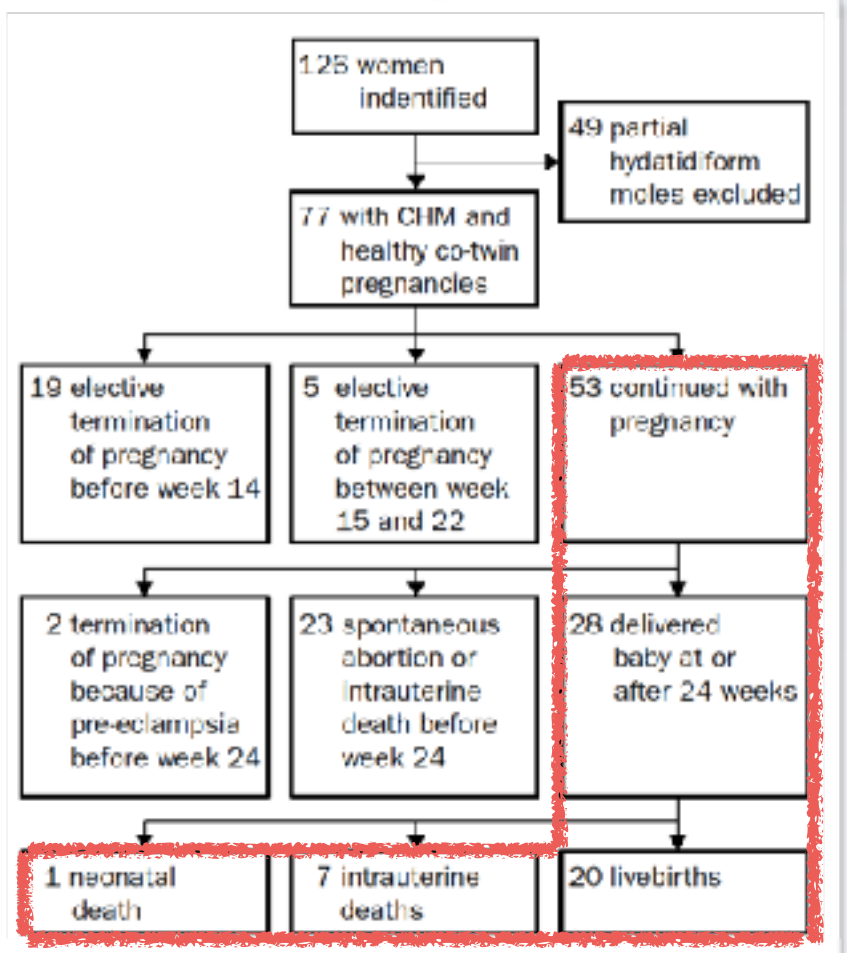




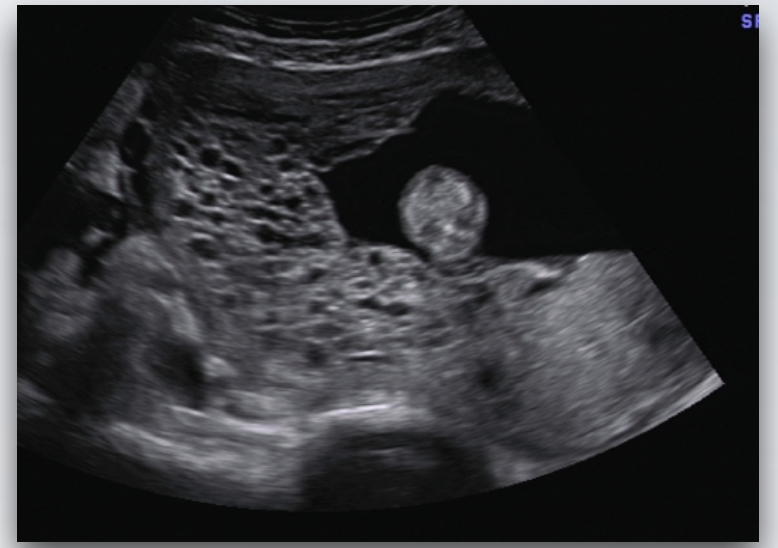
Outcome of twin pregnancies with complete hydatidiform mole and healthy co-twin

Lancet 2002; 359: 2165–66

Neil J Sebire, Marianne Foskett, Fernando J Paradinas, Rosemary A Fisher, Ros J Francis, Delia Short, Edward S Newlands, Michael J Seckl



Live births: 20/53 (38%)



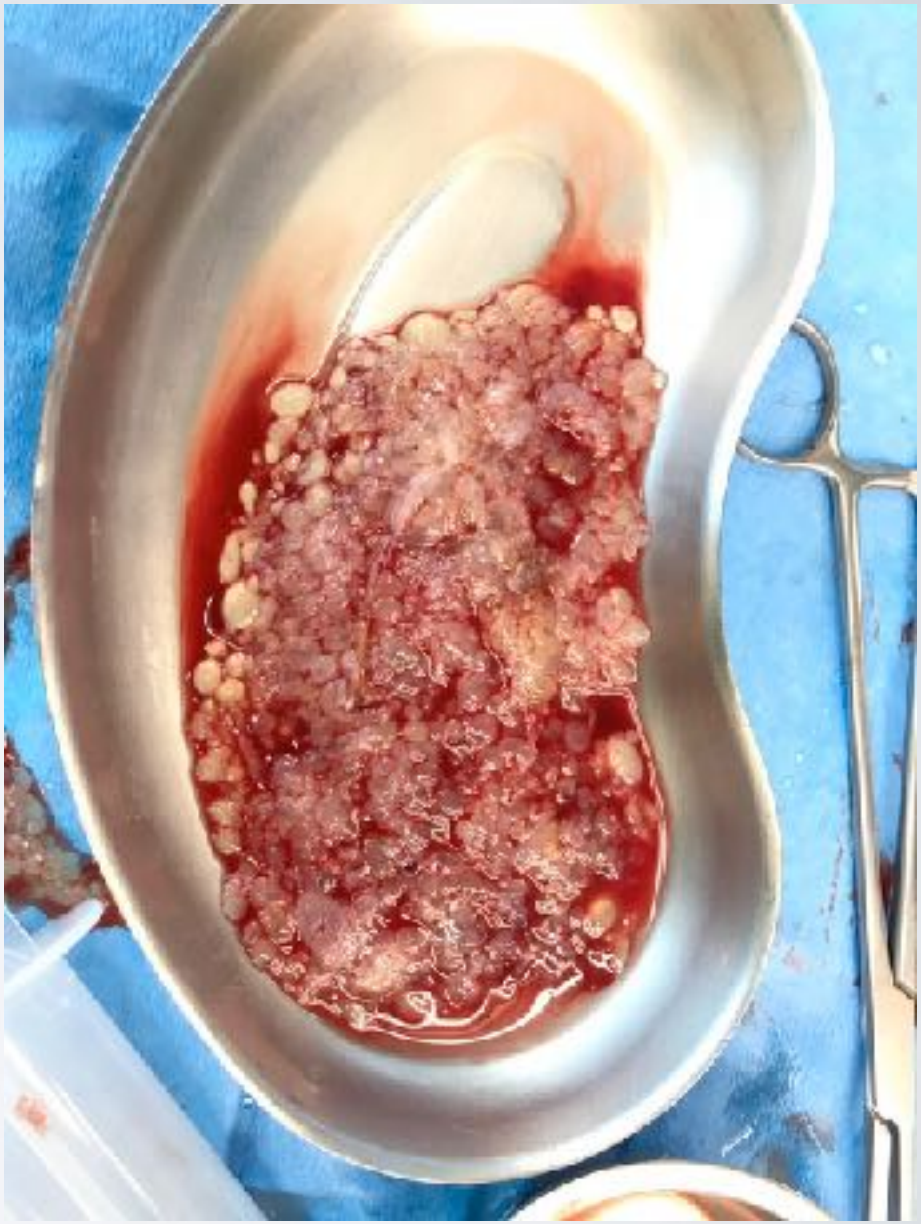
Persistent gestational trophoblast disease

1st Trim TOP: 3/19 (16%)

Continued P: 12/58 (21%)

20 YEARS OLD, I.G, 13 WEEKS

- Heavy vaginal bleeding
- Hb 5,5 g/dl



Thank you