



## **Scientific program**

### **Tuesday 15 October 2019**

**07:30–08:10 MC: Acquired prenatal insults of the brain**

07:30 Acquired prenatal insults of the brain

**MC: Management and delivery in fetal growth restriction**

07:30 Management and delivery in fetal growth restriction

**MC: Managing early pregnancy complications**

07:30 Managing early pregnancy complications

**MC: Abnormal heart rhythm: how to diagnose and how to manage**

07:30 Abnormal heart rhythm: how to diagnose and how to manage

**08:00–12:00 Basic Training Simulation II (Title TBC)**

**08:15–09:35 OC: Corpus callosum et al**

08:15 From ultrasound to counselling

08:35 Prenatal neurodevelopmental outcome prediction using a novel MR-based scoring system in isolated callosal agenesis [*shortlisted for Young Investigator award*] OC14.01

08:43 Assessment of the corpus callosum in fetuses with isolated non-severe ventriculomegaly OC14.02

08:51 Added value of fetal MR tractography in evaluation of the short corpus callosum: preliminary results OC14.03

08:59 Corpus callosum length in fetuses with confirmed Down's syndrome OC14.04

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## 29<sup>th</sup> World Congress on Ultrasound in Obstetrics and Gynecology

12-16 October 2019, Berlin, Germany

09:07	Prenatal diagnosis of Aicardi syndrome	OC14.05
09:15	Differential effect in corpus callosum development in fetuses with congenital heart defect	OC14.06
09:23	The effect of flow and oxygenation on cortical development in fetuses with congenital heart defects using an automated brain-maturation prediction algorithm	OC14.07
<b>08:15–09:35</b>	<b>OC: Fetal growth: the bigger picture</b>	
08:15	Live scan: how to evaluate the growth-restricted fetus <i>[supported by GE]</i>	
08:31	Obstetric consequences of a false-positive diagnosis of large-for-gestational-age fetus	OC15.01
08:39	Born small-for-gestational age and moderate preterm: implications on postnatal growth	OC15.02
08:47	Identification of intrapartum fetal compromise using universal third trimester ultrasonography	OC15.03
08:55	Perinatal outcome of appropriate-weight fetuses with decelerating growth	OC15.04
09:03	Neighbourhood deprivation and fetal growth: the Generation R study	OC15.05
09:11	Human fetal growth restriction is influenced mainly by maternal socioeconomic status: an ecological study within a city from a developing country	OC15.06
09:19	Identification of phenotypes of fetal growth restriction using a network-based clustering approach	OC15.07
09:27	The association between fetal growth velocities and postnatal growth during the first five years after birth	OC15.08
<b>08:15–09:35</b>	<b>OC: Managing complications in early pregnancy</b>	

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08:15	Assessing anatomy in the first trimester of pregnancy: moving beyond dating and viability	
08:30	The role of human chorionic gonadotrophin and transvaginal ultrasound in pregnancies of unknown location beyond 48 hours	OC16.01
08:38	Application value of the contrast-enhanced ultrasound in the diagnosis of Caesarean scar pregnancy type	OC16.02
08:46	Implementation of a tool for predicting early pregnancy outcome: a psychological impact study	OC16.03
08:54	External validation of the M6 model and the two-step triage system for pregnancies of unknown location	OC16.04
09:02	The diagnostic value of contrast-enhanced ultrasound in Caesarean scar pregnancy	OC16.05
09:10	Can cervical elastography guide management of missed miscarriage?	OC16.06
09:18	Early pregnancy biomarkers for the prediction of first trimester viability	OC16.07
09:26	Uterine artery embolisation in extreme cases of “enhanced myometrial vascularity” (acquired AVM) after previously treated early pregnancies	OC16.08
<b>08:15–09:35</b>	<b>OC: Cardiac function and complications in congenital heart defects</b>	
08:15	Modern cardiac function assessment	
08:30	Development and application of deep learning for identification, quantification, and disease diagnosis in second trimester fetal hearts	OC17.01
08:38	Assessment of fetal right ventricular systolic function: nomograms of fractional area change by 2D-echocardiography	OC17.02

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08:46	The diastolic and systolic velocity time integral ratio of aortic isthmus is a sensitive indicator of aortic coarctation in fetuses	OC17.03
08:54	Assessment of fetal hemodynamics and flow volume of the umbilical vein in the EXTrauterine environment for neonatal development system	OC17.04
09:02	Fetal cardiac function before and after intrauterine transfusion assessed by automated analysis of colour tissue Doppler	OC17.05
09:10	Hemodynamic patterns in late-gestation human fetuses with cyanotic congenital heart disease	OC17.06
09:18	Relationship between foramen ovale restriction and flow characteristics of the ductus arteriosus in the fetus with transposition of the great arteries	OC17.07
09:26	Risk of pre-eclampsia, small-for-gestational age and placental abnormalities in pregnancies with prenatal diagnosis of major congenital heart disease	OC17.08
<b>08:15–09:15</b>	<b>HUB21: Basic Training Hubs series II</b>	
	<b>HUB22: Debate: 3D imaging in gynecological ultrasound</b>	
<b>09:40–10:20</b>	<b>OP: Neuroimaging</b>	
	<b>OP: IUGR: basic science</b>	
	<b>WS (short): Current thinking on Caesarean section scars and enhanced myometrial vascularity (EMV)</b>	
09:40	A consensus view on how to define and evaluate a uterine niche	
09:50	Enhanced myometrial vascularity: is this something to be concerned about?	
10:00	Should we be screening for Caesarean scar pregnancies?	

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**OP: Evaluation of the intrinsic function of the fetal heart**

**P09: First, second and third trimester screening**

**HUB23: Improving perinatal outcomes**

**P10: Using ultrasound to evaluate women with pelvic pain and possible endometriosis**

**P11: Multiple pregnancy**

10:15 Coffee break

**10:45–12:05 OC: Fetal surgery**

10:45 Fetal cardiac intervention 2019

11:05 Myelomeningocele repair: from prenatal evaluation to postnatal outcome OC18.01 & OC18.02 & OC18.03

11:18 Low transverse versus midline skin incision for *in utero* spina bifida repair OC18.04

11:26 Fetal tracheoscopy and endoscopic tracheal intubation to ensure tracheal permeability in cases with cervical masses and fetal airways compromise OC18.05

11:34 Fetal endoscopic tracheal occlusion is associated with resolution of pulmonary hypertension in moderate congenital diaphragmatic hernia OC18.06

11:42 International Fetal Cardiac Intervention Registry: a decade of data sharing and collaborative investigation OC18.07

11:50 MMC repair: future directions OC18.08

**10:45–12:05 OC: Growth: insights into assessment**

10:45 Biochemical manifestations of poor placentation



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11:00	The impact of periconceptional parental alcohol exposure on embryonic growth trajectories using 3D ultrasound and virtual reality	OC19.01
11:08	A novel eye tracking study: how common is expected value bias in fetal growth scan assessment?	OC19.02
11:16	Antenatal corticosteroid therapy is associated with reduced intrauterine fetal growth velocity	OC19.03
11:24	Early growth velocity and mode of conception in the prediction of small-for-gestational age	OC19.04
11:32	Fetoplacental Doppler identifies small fetuses with increased concentrations of cord blood erythropoietin	OC19.05
11:40	Metabolomic profiling of paired maternal and cord blood in pre-eclampsia and fetal growth restriction	OC19.06
11:48	Maternal vascular malformation in the placenta is an indicator for fetal growth restriction irrespective of neonatal birthweight	OC19.07
11:56	Cerebroplacental ratio and AC growth velocity as novel predictors of severe neonatal hypoglycemia	OC19.08
<b>10:45–12:05</b>	<b>OC: Using ultrasound to evaluate women with pelvic pain and possible endometriosis</b>	
10:45	Clinical application of ultrasound in the planning of rectal and bladder endometriosis surgery	
11:00	Preoperative mapping of deep infiltrating endometriosis in the posterior compartment using transvaginal strain elastography and IDEA classification	OC20.01
11:08	The prevalence of pouch of Douglas obliteration depicted on basic transvaginal ultrasound by a negative sliding sign in a general population	OC20.02
11:16	Prevalence of endometriosis at transvaginal ultrasound in women with dysmenorrhea	OC20.03

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11:24	Accuracy of 2D-ultrasonography in the diagnosis of abdominopelvic tuberculosis at the Philippine General Hospital: a five-year review	OC20.04
11:32	External validation of International Ovarian Tumour Analysis (IOTA) for classification of adnexal masses suspected to be endometriomas	OC20.05
11:40	Comparison of diagnostic accuracy of transvaginal ultrasound for deep endometriosis and pouch of Douglas obliteration in the presence and absence of ovarian endometriomas	OC20.06
11:48	Early learning curve in the assessment of deep infiltrating pelvic endometriosis when using ultrasound and magnetic resonance imaging	OC20.07
11:56	Is endometriosis a progressive disease? Ultrasonographic long-term study	OC20.08
12:04	Learning curve for the visualisation of ureters on transvaginal ultrasound in gynecological sonology trainees	OC20.09
<b>10:45–12:05</b>	<b>OC: Molecular techniques and MRI in the diagnosis of congenital heart defects</b>	
10:45	Novel 3D technology of the fetal heart	
11:00	Assessment of the correlation between congenital heart defects and brain injury in fetuses through magnetic resonance imaging	OC21.01
11:08	The incidence of genetic variants in fetuses with severe congenital heart defects	OC21.02
11:16	Dynamic fetal cardiac magnetic resonance imaging using Doppler ultrasound gating in the assessment of the fetal aortic arch: a feasibility study in comparison to fetal echocardiography	OC21.03
11:24	Next generation sequencing in 83 Chinese fetal congenital cardiac left-sided congenital heart defects	OC21.04

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reveals the entire genetic architecture in fetal population

- |                    |   |         |
|--------------------|---|---------|
| 11:32              | A comparative study of prenatal ultrasound diagnosis and autopsy MRI and pathology on fetal congenital heart disease                              | OC21.05 |
| 11:40              | Whole-exome sequencing and whole-genome sequencing improves genetic diagnosis of fetuses with heterotaxy syndrome revealed by prenatal ultrasound | OC21.06 |
| 11:48              | The diagnostic value of postmortem magnetic resonance imaging of the fetal heart compared to conventional autopsy and ultrasound                  | OC21.07 |
| 11:56              | Pilot study: utilising MRI to measure cardiac function in the sheep fetus   | OC21.08 |
| <b>10:45–11:45</b> | <b>HUB24: In conversation with Asma Khalil: medico-legal cases</b>  |         |
|                    | <b>HUB25: In conversation with Gustavo Malinger: why do I (NOT) need MRI?</b>   |         |
|                    | <b>HUB26: In conversation with Karl Oliver Kagan: fetal anomaly screening in the first trimester</b>  |         |
|                    | <b>HUB27: Meet the Ambassadors</b>  |         |
| <b>12:10–12:50</b> | <b>OP: Multiple pregnancy</b>   |         |
|                    | <b>OP: Fetal anomalies: infections</b>  |         |
|                    | <b>OP: Using ultrasound to evaluate women with pelvic pain and possible endometriosis</b>   |         |
|                    | <b>OP: Screening for and diagnosis of congenital heart defects</b>  |         |
|                    | <b>P12: Fetal interventions and therapy: complicated monochorionic pregnancy, spina bifida and other conditions</b>                               |         |

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**P13: Hypertension in pregnancy**

**P14: Managing early pregnancy complications**

**P15: Fetal growth: Doppler and other functional  
assessment**

12:45

Lunch break

**13:10–14:10**

**HUB28: Guidelines Russian**

**HUB29: Guidelines Spanish**

**HUB30: Sonohysterography pitfalls/pearl**

**HUB31: False-positive images at the mid-term  
scan**

**14:15–15:35**

**OC: Monochorionic twins**

14:15

Fetal cardiac assessment in monochorionic twins

14:35

Reducing stillbirth in twin pregnancy through  
implementation of guidelines: is it possible?

OC22.01

14:43

Contribution of the Solomon technique in the  
treatment of Twin–twin transfusion syndrome: a single  
centre experience

OC22.02

14:51

Apparent diffusion coefficient differences between  
normal and complicated monochorionic diamniotic  
pregnancy

OC22.03

14:59

Cardiac morphometry in uncomplicated  
monochorionic diamniotic twins: comparison to  
singletons

OC22.04

15:07

Amniotic fluid NT-proBNP is only associated with  
congestive heart failure of recipient twin in TTTS but  
not larger twin in selective IUGR

OC22.05



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15:15	Short-term cardiac follow-up of survivors of Twin–twin transfusion syndrome treated with fetoscopic laser coagulation	OC22.06
15:23	Monochorionic diamniotic twins with selective fetal growth restriction (sFGR) and intermittent absent end-diastolic flow have outcomes more similar to Type-1 versus Type-3 sFGR	OC22.07
<b>14:15–15:35</b>	<b>OC: Fetal anomalies in the second trimester</b>	
14:15	Live scan: the full anomaly scan <i>[supported by Samsung]</i>	
14:35	Risk of congenital anomalies in newborns conceived by ART versus spontaneous pregnancies	OC23.01
14:43	Fetal anogenital distance is longer in polycystic ovary syndrome mothers	OC23.02
14:51	Prenatal diagnosis of disorders of sex differentiation	OC23.03
14:59	Reference range of the fetal anal sphincter from 22–37 weeks of gestation	OC23.04
15:07	Effect of maternal BMI on ultrasound image quality at the routine anatomy scan	OC23.05
15:15	Significant variation in practice for first trimester anatomy assessment: results from a nationwide survey	OC23.06
15:23	A longitudinal study of three-dimensional fetal anatomy imaging in the first and early second trimester	OC23.07
<b>14:15–15:35</b>	<b>OC: Ultrasound, infertility and fertility preservation</b>	
14:15	Use of intraoperative ultrasound during fertility-sparing surgery	
14:27	Fertility-sparing surgery	OC24.01 & OC24.02

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14:35	How I use ultrasound to guide treatment for Caesarean scar ectopic pregnancies to reduce the risk of damage to the uterus	
14:45	Ovarian reserve parameters as indications for ovarian tissue cryopreservation in children suffering from non-iatrogenic premature ovarian failure	OC24.03
14:53	Study on correlation between tubal patency and uterine pressure under three-dimensional hysterosalpingo-contrast-sonography	OC24.04
15:01	Clinical and ultrasound characteristics of adnexal torsion	OC24.05
15:09	Value of transvaginal sonography in diagnosing cervical pregnancy after <i>in vitro</i> fertilisation-embryo transfer	OC24.06
15:17	Prevalence of congenital uterine anomalies in asymptomatic premenopausal women at three-dimensional transvaginal ultrasound examination	OC24.07
<b>14:15–15:35</b>	<b>OC: Hemodynamics from fetus to mother</b>	
14:15	Maternal hemodynamics: has the time come for routine implementation?	
14:30	Video demonstration: how to assess the maternal heart	
14:40	Fetoplacental Doppler for the identification of cardiac dysfunction in small-for-gestational-age fetuses	
14:48	Hemodynamic factors associate with fetal cardiac remodelling in late fetal growth restriction	OC25.01
14:56	Estimated pulse wave velocity in growth-restricted fetuses: a novel perspective for fetal hemodynamic changes using phased tracking method	OC25.02
15:04	Fetal Dopplers are associated with maternal cardiovascular function	OC25.03 & OC25.04

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15:12	Fetal-placental Doppler indices are associated with maternal cardiovascular function: a three-centre study using different techniques [ <i>shortlisted for Young Investigator award</i> ]	OC25.03
15:12	Fetal umbilical artery Doppler end-diastolic flow is associated with changes in maternal cardiovascular function: a three-centre study using different techniques	OC25.04
15:15	Maternal hemodynamic findings in small-for-gestational-age and growth-restricted fetuses	OC25.05
15:23	Maternal hemodynamics in small babies	OC25.06 & OC25.07
<b>14:15–15:15</b>	<b>HUB32: Ultrasound images per country</b>	
<b>15:20–16:20</b>	<b>HUB33: Philippines Society Hub</b>	
	<b>HUB34: Hellenic Society Hub</b>	
	<b>HUB35: Debate: should methotrexate be given to treat ectopic pregnancy?</b>	
	<b>HUB36: Romanian Society Hub</b>	
15:35	Coffee break	
<b>16:00–17:30</b>	<b>WS: Outcome of infratentorial anomalies</b>	
16:00	How sure am I that this vermis is normal?	
16:30	Normal and pathological development of the midbrain-hindbrain	
17:00	Follow-up of infants diagnosed with brain anomalies prenatally: a plea for a standard evaluation of outcomes	
<b>16:00–17:30</b>	<b>WS: Ultrasound in the labour ward: why and how</b>	

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- 16:00 Live scan: how to scan in active labour? *[supported by GE]*
- 16:15 Ultrasound in labour arrest: malpositions and malpresentations
- 16:35 Ultrasound in women with slow progress in the second stage: Caesarean section, instrumental delivery or wait for spontaneous delivery?
- 16:55 Ultrasound in postpartum hemorrhage: spotting the cause, solving the problem
- 17:15 Practical demonstration with IUSIM PLUS mannequin
- 16:00–17:30 WS: Ultrasound, fertility preservation and fertility sparing surgery**
- 16:00 Oncofertility: past present and future
- 16:20 How to carry out ultrasound-guided laparoscopic surgery: case examples and videos
- 16:40 Avoiding damage to the uterus: ultrasound-guided procedures and the uterus
- 17:00 Managing incidental findings found on ultrasound scans: when can we safely discharge from follow-up or at least avoid surgery
- 16:00–17:30 WS: Updates on infections during pregnancy**
- 16:00 Zika virus epidemic in Brazil: what happened?
- 16:20 CMV: what is new in antiviral therapy
- 16:40 CMV: what is new in immunoglobulin therapy
- 17:00 Update on toxoplasmosis
- 16:25–17:25 HUB37: Translational research for clinicians' work in gynecological ultrasound**

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**17:30–18:00      HUB38: Tuesday HUB session hall 1 summary**

**HUB39: Tuesday HUB session hall 2 summary**

**HUB40: Tuesday HUB session hall 4 summary**

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