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26th World Congress on Ultrasound in Obstetrics and Gynecology, 25–28 September 2016, Rome, Italy: presentations and awards

Presentation of the Ian Donald Gold Medal to Joachim Hackelöer

The Ian Donald Gold Medal is the Society's most prestigious award because it is given to someone who has transformed the way in which we practice our specialty, either by introducing a new technique or by original research which has changed the way in which we think about our subject. This year, ISUOG has awarded the Gold Medal to Joachim Hackelöer: a worthy inheritor of this very famous medal, for his research founded the basis for ultrasound in reproductive medicine.

He was born in Marburg, Germany, in 1945. He studied medicine at the University of Marburg and received his doctorate in 1971. He studied obstetrics and gynecology in the University Hospital, Marberg between '71 and '78 and received advanced ultrasound training in prenatal diagnosis, with Manfred Hansmann in Bonn, and in gynecology, with Alfred Kratochwil in Vienna. At that time he would no doubt have seen an ovarian follicle demonstrated with a transvaginal probe; it was this that led him to a 'light-bulb moment' and his ground-breaking research. Back in Bonn, he realized that to develop his thesis he had to work with the Disonograph, which was only available in Glasgow. Although a seemingly cumbersome ultrasound machine, it was the only one capable of providing the precise measurements required for follicle tracking. In Bonn, the equipment available was the Siemen's Vidoson, so he persuaded Ian Donald to allow him to do his fellowship in Glasgow. His Annus Mirabilis was in 1977, with Hugh Robinson as a collaborator. At the end of his research he disappeared to the little island of Barra, off the coast of Scotland, to write his brilliant thesis entitled 'Demonstration of Ovulation by Ultrasound'. He gained his PhD from the University of Marburg in 1978 and was appointed full Professor of Obstetrics and Gynecology 3 years later. In 1984, he was appointed Chairman of the Department of Feto-Maternal Medicine, Gynecological and Breast Ultrasound and the Prenatal Diagnostic and Therapy Centre, Barmbeck General and Teaching Hospital, in Hamburg, and was made a full Professor in the University of Hamburg 3 years later.

Joachim is extraordinary in that he is an expert in so many aspects of our specialty: fetomaternal medicine, gynecological and breast ultrasound and prenatal diagnosis and therapy including intrauterine transfusion. When Kurt Hecher joined him in The



Joachim Hackelöer receiving the Ian Donald Gold Medal from Stuart Campbell.

Barmberg Hospital he became accomplished at laser separation in the placenta of monochorionic twins. He is indeed a master of every aspect of Ultrasound in Obstetrics and Gynecology.

As for his unique achievements: he pioneered the measurement of the growth of the ovarian follicle. In his famous article in the *American Journal of Obstetrics and Gynecology*, he established normal ultrasound values for follicular diameters at their various stages of development and correlated these values with peripheral plasma hormone levels. He demonstrated an almost linear growth of mean follicular diameter prior to ovulation and a rapid decline soon afterwards. In other words, he founded the basis of ultrasound in reproductive medicine. I would like to quote from his 1978 *Lancet* publication: 'With the technique, the developing cystic structures of the ovary can be seen, and the presence, number, and size of follicles determined. From results of 250 such scans in 20 cases, we deduced that ovulation induction would be successful (as shown by subsequent pregnancy) if the follicular diameter was 18–23 mm before human chorionic gonadotrophin was given. The technique could also be of value in detecting multiple follicular development and, consequently, the risk of resultant multiple pregnancy and hyperstimulation.' This was written 38 years ago - and is still true today.

In 1980, together with Manfred Hansmann, Joachim was responsible for the introduction of routine antenatal ultrasound screening at 20 weeks in Germany – the first national screening program anywhere. This was

remarkable; I personally was a great supporter of routine ultrasound and introduced it in my own hospital in 1970. Then, in 1974, the group in Malmö was the first to publish a study on the effects of routine ultrasound in their own hospital. The introduction of routine antenatal scanning, however, was slow to be adopted; then, suddenly, here was antenatal ultrasound screening applied to a whole nation, supported by the government and insurance companies. This set a trend in Europe for national ultrasound screening programs. It was a huge contribution by Manfred and Joachim and ensures their enduring legacy. For many years Joachim was also responsible for education and training at DEGUM, the German Ultrasound Academy, and in 1991 he became a founder member of the International Breast Ultrasound School. He has published widely on breast ultrasound which will be the subject of his talk today, and he's written a bestselling book on the subject, 'Ultrasound Mammography', which has gone through many editions. He has authored over 500 scientific publications. He is a former President of the German Ultrasound Society.

Finally, despite all his achievements, Joachim remains a modest, warm, generous and amusing companion and a supreme entertainer. He most ably entertained the guests at my 80th birthday dinner in the House of Commons with a Scottish song, 'Will ye go lassie go', on the mouth organ (see videoclip online). Joachim, the Society would be pleased if you would mount the podium, and receive our highest honor, The Ian Donald gold medal. Joachim, congratulations!

Stuart Campbell

Presentation of the Ian Donald Medal for Technical Merit to Kjell Lindström

The Ian Donald Medal for Technical Merit is given for the outstanding contribution by an individual to technical development in the field of obstetric and gynecological ultrasound. It is a great honor for me to introduce the 2016 winner of this prestigious award, Professor Kjell Lindström.

Kjell Lindström was born in northern Sweden, above the polar circle, in 1942. He studied at Lund Technical University, where he received his degree Master of Science in Engineering in 1966 and PhD in 1978. During the years 1971–1985, he was the Head of the Department of Biomedical Engineering at the University Hospital in Malmö, Sweden, and in 1985, he became Professor and Chairman at the Institute of Electrical Measurements at Lund Technical University. He succeeded in this Chair his teacher and mentor, Professor Hellmuth Hertz.

A lot of pioneering work in the field of medical ultrasound was done at Lund University. It was there that Hellmuth Hertz, engineer, and Inge Edler, cardiologist, developed echocardiography in 1953. Kjell Lindström had already begun his research in the technology of diagnostic

ultrasound as a student. In 1967, together with Hellmuth Hertz, he developed a fast ultrasonic real-time scanning system for heart investigation. The equipment, called the Hertz-Lindström ultrasonic mirror system, produced initially seven, and, after further improvement, more than 18, two-dimensional images per second. In 1969, Kjell Lindström and Inge Edler recorded, for the first time, Doppler flow signals from the adult heart.

Since the mid-1960s, Kjell Lindström remained affiliated with Lund University. He was very active in research, collaborating closely with clinicians of various specialties and developing many new diagnostic methods based on ultrasound. These included a method for recording vocal-cord vibrations (echoglottography), an airborne ultrasound screening method for scoliosis, blood perfusion measurement with Doppler ultrasound and a method for recording longitudinal displacement and shear strain of the arterial wall. In 1988, he received, from the World Federation of Ultrasound in Medicine and Biology and the American Institute of Ultrasound in Medicine, the Medical Ultrasound Pioneer Award. Later, he also became Honorary Doctor at the Faculty of Medicine, Lund University.

My collaboration with Kjell Lindström started in the early 1970s, when he was the Head of the Biomedical Engineering Department and I was the registrar and research student at the Department of Obstetrics and Gynecology in Malmö. Luckily, despite the enormous load of administrative work, Kjell always gave priority to the research and development of new instruments at his worktable. The development of new ultrasound methods for research and clinics was a true interactive process, with very close contact between the engineers of Lindström's team and the clinical users. I will never forget the very intense brainstorming meetings in Kjell's office and his never-ending patience and enthusiasm when trying to lessen the ignorance of we clinicians in understanding the physics and techniques of ultrasound.



Kjell Lindström receiving the Ian Donald Medal for Technical Merit from Karel Maršál.

Several of the innovations and new ultrasonic devices developed by Kjell Lindström were designed for objective recording and quantification of fetal and uterine physiological activities during pregnancy. His focus on obstetric ultrasound opened up new possibilities for research in human fetal physiology, which, until the advent of ultrasound, had to depend mainly on animal experimental studies. In the early 1970s, human fetal breathing movements were recorded using A-mode ultrasound without any visual control of the origin of the received signals. Lindström developed a system, the time-distance recorder (TD-recorder) that was connected to the Vidoson, at that time the only commercially available real-time mechanical ultrasound scanner. The TD-recorder measured online the changes in fetal thorax diameter caused by breathing movements. Later, when linear-array real-time systems became available, the system was refined to enable recording of the changes in vessel diameter and measurement of the pulse wave and pulse-wave velocity in the fetal descending aorta. The Diamove system was based on ultrasound pulse-tracking of the vessel walls and was also used subsequently in adults for investigations of vascular function. In the meantime, Doppler studies of fetal volume blood flow were introduced, which used static measurements of the fetal aortic diameter in frozen two-dimensional ultrasound images for calculation of flow. Kjell Lindström's group developed a method for simultaneous recording of mean velocity from the Doppler spectrum and of the pulsating diameter of the fetal aorta. In this way, the aortic volume flow could be calculated online, avoiding many of the methodological errors in estimating flow. Other examples of new methods for obstetric application include uterine cervimetry, based on the ultrasound transit time, and equipment for automatic detection and quantification of fetal movements using a transabdominal approach.

Kjell Lindström's hobby is deep-sea fishing in the North Sea and fly fishing in Swedish rivers. It was possibly this interest in combination with his expertise in ultrasound that led him to become involved in research on dolphins, with researchers in marine biology both in Sweden and in San Diego, in the USA.

Kjell Lindström is the leading researcher and inventor within the field of medical ultrasound in Sweden and one of the most prominent researchers internationally. It is a great pleasure for me, on behalf of the International Society of Ultrasound in Obstetrics and Gynecology, to present to him the 2016 Ian Donald Medal for Technical Merit.

Karel Maršál

Morelli prize

Professor Francesco Morelli was the director of Obstetrics and Gynecology at Capua Hospital. One of the first generation of ultrasound pioneers in Italy, he was enthusiastic and passionate about Ultrasound in

Obstetrics and Gynecology. His wife, Sig.ra Carmela, and his family instituted a prize in his memory of 2000€ to be awarded to the best project in gynecological ultrasound presented by young investigators from an Italian institution. The Committee which evaluated the projects comprised Antonia Testa, Dorella Franchi and Pasquale Martinelli; the secretary is Pasquale Morelli. In 2016 the prize went to Chiara Landolfo, for the project entitled 'Ultrasonography and translational research in preoperative diagnosis and differentiation of adnexal lesions'.

FREE COMMUNICATION ACKNOWLEDGMENTS

The following free communications presented at the 26th World Congress on Ultrasound in Obstetrics and Gynecology are acknowledged as the best presentations in their categories. Full abstracts to these titles can be found in *Ultrasound in Obstetrics & Gynecology* 2016; 48 (Suppl S1). We thank these authors for their valuable contributions to our scientific program.

Top abstract winner

Fetal growth restriction induces different phenotypes of cardiac remodeling (OC01.01)

M. Rodriguez-Lopez², M. Cruz-Lemini⁴, B. Valenzuela-Alcaraz¹, L. Garcia-Otero², M. Sitges⁵, B. Bijmens⁶, E. Gratacos⁷, F. Crispi³. ¹Hospital Clinic-Universitat de Barcelona, Barcelona, Spain, ²BCNatal-Barcelona Center for Maternal Fetal and Neonatal Medicine (Hospital Clinic and Hospital Sant Joan de Deu), Barcelona, Spain, ³BCNatal - Barcelona Center for Maternal Fetal and Neonatal Medicine (Hospital Clinic and Hospital Sant Joan de Deu), Barcelona, Spain, ⁴BCNatal-Barcelona Center for Maternal Fetal and Neonatal Medicine (Hospital Clinic and Hospital Sant Joan de Deu), Barcelona, Spain, ⁵Cardiovascular Institute, Hospital Clinic, IDIBAPS, University of Barcelona, Barcelona, Spain, ⁶ICREA, Universitat Pompeu Fabra, Barcelona, Spain, ⁷BCNatal-Barcelona Center for Maternal Fetal and Neonatal Medicine (Hospital Clinic and Hospital Sant Joan de Deu), Barcelona, Spain

SIEOG prize

Does fundal pressure in the second stage (Kristeller maneuver) increase the risk of pelvic floor damage? A prospective case control study (OC04.01)

A. Youssef⁶, G. Salsi⁶, M. Paganotto⁶, F. Bellussi⁶, I. Cataneo¹, G. Pacella^{1,9}, C. Azzarone³, G. Morganelli⁶, J. Krsmanovic¹¹, L. Cariello⁶, E. Montaguti⁶, N. Rizzo¹, G. Pilu⁶. ¹Department of Obstetrics and Gynecology, Sant'Orsola - Malpighi Hospital, University of Bologna, Bologna, Italy, ³Sant'Orsola-Malpighi Hospital, University of Bologna, Bologna, Italy, ⁶Obstetrics and Gynecology, University of Bologna, Bologna, Bologna, Italy,

⁹Medicine and Surgery, Università campus biomedico, Roma, Italy, ¹¹University of Bologna, Bologna, Italy

Young Investigator award winner – Obstetrics

Survival and neurodevelopment effects of Lactoferrin, Docosahexaenoic acid and environmental enrichment in an IUGR animal model (OC22.01)

M. Illa¹, E. Eixarch^{1,2}, L. Pla¹, E. Muñoz-Moreno¹, G. Serrano¹, F. Figueras^{1,2}, E. Gratacos^{1,2}. ¹Fetal i+D Fetal Medicine Research Center, IDIBAPS, BCNatal|Barcelona Center for Maternal Fetal and Neonatal Medicine Hospital Clínic and Hospital Sant Joan de Déu, Universitat de Barcelona, Barcelona, Spain, ²Centre for Biomedical Research on Rare Diseases (CIBER-ER), Barcelona, Spain, Barcelona, Spain

Young Investigator award winner – Gynecology

Influence of ulipristal acetate therapy on uterine fibroid-related symptoms and on uterine and fibroid volume and vascularity indices assessed by ultrasound (OC23.04)

S. Baggio, F. Galeone, F. Presti, P. Pomini. *Obstetrics and Gynecology*, AOUI Verona, Verona, Verona, Italy

Best Oral Communications

The following oral communications were each selected as the best in their subject area. Selection was according to a combination of anonymous peer review in advance of the Congress and scores for presentation and/or scientific merit allocated on-site by a panel of judges.

Aneuploidy and fetal anomalies – second trimester

Prenatal anogenital distance is shorter in fetuses with hypospadias (OC24.04)

S. Perlman, Z. Kivilevitch, B. Messing, R. Achiron, Y. Gilboa. *Prenatal Diagnostic Unit, Obstetrics and Gynecology, Sheba Medical Center, Tel-Hashomer, Ramat Gan, Israel*

Fetal echocardiography, CHD and cardiac function

Cerebral oxygen delivery, brain growth and white matter maturation are reduced in congenital heart disease fetuses (OC25.01)

J. Lim^{1,4}, P. Muthusami¹, S. Madathil¹, M. Zhu^{1,5}, B. S. Saini^{1,5}, P. Porayette¹, V. Chau⁶, S. Portnoy⁷, C. Macgowan^{3,7}, J. G. Sled⁷, J. C. Kingdom², M. Seed¹, S. Miller⁶. ¹Heart Centre, The Hospital for Sick Children, Toronto, Ontario, Canada, ²Obstetrics & Gynaecology, Mount Sinai Hospital, University of Toronto, Toronto, Ontario, Canada, ³Diagnostic Imaging, The Hospital for Sick Children, Toronto, Ontario, Canada, ⁴Physiology, University of Toronto, Toronto, Ontario, Canada,

⁵Institute of Medical Science, University of Toronto, Toronto, Ontario, Canada, ⁶Neurology, The Hospital for Sick Children, Toronto, Ontario, Canada, ⁷Medical Biophysics, University of Toronto, Toronto, Ontario, Canada

Fetal interventions

In-utero treatment of congenital cytomegalovirus infection with Valacyclovir in a multicenter, open-label, phase-II study (OC15.01)

M. Leruez-Ville^{4,5}, I. Ghout^{6,7}, L. Bussi eres^{4,8}, J. Stirneman^{2,4}, J. Magny^{4,9}, S. Couderc¹⁰, L. J. Salomon^{2,4}, T. Guillemainot^{4,5}, P. Aegerter^{6,7}, G. Benoist¹¹, N. Winer³, O. Picone¹², F. Jacquemard¹, Y. Ville^{2,4}. ¹Prenatal Diagnosis Department, American Hospital of Paris, Neuilly sur Seine, France, ²Maternit e, Hopital Necker Enfants Malades, AP-HP, Universit e Paris Descartes, Paris, France, ³Service de Gyn cologie Obst trique, Nantes, France, ⁴EA7328, Universit e Paris Descartes, Paris, France, ⁵Laboratoire de Microbiologie Clinique. Centre national de R f rence Cytomegalovirus, Hopital Necker Enfants Malades, APHP, Paris, France, ⁶Unit e de Recherche Clinique et D partement de Sant  Publique, AP-HP, H pital Ambroise Par , Boulogne, France, ⁷UMR-S 1168, Universit e Versailles St-Quentin-en-Yvelines, Montigny, France, ⁸Unit e de Recherche Clinique, AP-HP, H pital Necker-E.M., Paris, France, ⁹R animation N onatale, AP-HP, H pital Necker-E.M., Paris, France, ¹⁰Maternite, H pital Intercommunal de Poissy-Saint Germain, Poissy, France, ¹¹maternit e, H pital Universitaire de Caen, Caen, France, ¹²Service de Gyn cologie-Obst trique, Hopital Foch, Suresnes, France

Fetal neurosonography and central nervous system anomalies

Malformations of cortical development: early prenatal ultrasound diagnosis (OC05.03)

S. Shinar¹, K. K. Haratz⁴, Y. Salemnick¹, J. Har-Toov², Z. Leibovitz⁴, L. Gindes⁴, T. Lerman-Sagie⁴, G. Malinger³. ¹Lis Maternity Hospital, Tel Aviv, Israel, ²US in OB&GYN, Lis Maternity Hospital, Tel Aviv, Israel, ³OB-GYN Ultrasound Unit, Tel Aviv Sourasky Medical Center, Tel Aviv, Israel, ⁴Fetal Neurology Clinic, Wolfson Medical Center, Holon, Israel

Genomics

The Belgian approach to meet the challenge in interpreting prenatal microarray results (OC06.04)

J. Muys¹, B. Blaumeiser³, K. Janssens³, C. Bandelier⁵, J. Gatot⁶, A. Van Den Bogaert⁷, J. Vermeesch⁸, S. Rombout⁹, B. Menten², B. Pichon⁴, K. Keymolen⁷, K. Van Den Bogaert⁸, S. Janssens², J. Caberg⁶, J. D sir⁴, Y. Sznajder⁵, A. Destree⁹, Y. Jacquemyn¹. ¹Gynecology,

University Hospital Antwerp, Edegem, Antwerp - Belgium, Belgium, ²Center for Medical Genetics, Universiteit Gent, Gent, Belgium, ³Center for Medical genetics, Universiteit Antwerpen, Edegem, Belgium, ⁴Center for Medical Genetics, Université Libre de Bruxelles, Brussels, Belgium, ⁵Center for Medical Genetics, Université Catholique de Louvain, Louvain-la-Neuve, Belgium, ⁶Center for Medical Genetics, Université de Liège, Liège, Belgium, ⁷Center for Medical Genetics, Vrije Universiteit Brussel, Brussels, Belgium, ⁸Center for Medical Genetics, Katholieke Universiteit Leuven, Leuven, Belgium, ⁹Center for Medical Genetics, Institut de Pathologie et de Génétique, Charleroi, Gosselies, Belgium

Imaging technology including MRI

Prenatal ultrasound diagnosis of cleft palate without cleft lip, the new ultrasound semiology (OC21.05)

J. Faure¹, F. Grosjean², E. Mousty², G. Captier³, P. Boulot¹, V. Letouzey², F. Fuchs¹. ¹CHU Arnaud de Villeneuve, Montpellier, France, ²CHU Caremeau, Nîmes, France, ³CHU Lapeyronie, Montpellier, France

Maternal and fetal Doppler including fetal growth

Comparison of fetal brain apparent diffusion coefficients according to abnormal Doppler grade in early-onset intrauterine growth restriction (OC22.05)

M. S. Kutuk², M. Sahin², S. Gorkem³, S. Doganay³, A. Ozturk¹. ¹Biostatistics, Erciyes University, Faculty of Medicine, Kayseri, Turkey, ²Obstetrics and Gynecology, Erciyes University, Kayseri, Turkey, ³Pediatric Radiology, Erciyes University, Kayseri, Turkey

Multiple pregnancy

Metabolomic changes in amniotic fluid from twin-twin transfusion syndrome recipient twins in relation to treatment and fetal cardiovascular risk (OC09.03)

F. L. Mackie^{1,2}, W. B. Dunn^{3,5}, J. W. Allwood⁵, T. Van Mieghem⁴, R. K. Morris^{1,2}, C. E. Fox², M. D. Kilby^{1,2}. ¹Centre of Women's and Newborn's Health, Institute of Metabolism and Systems Research, University of Birmingham, Birmingham, West Midlands, United Kingdom, ²West Midlands Fetal Medicine Centre, Birmingham, United Kingdom, ³Phenome Centre, University of Birmingham, Birmingham, United Kingdom, ⁴Fetal Medicine Division, Mount Sinai Hospital, Toronto, Ontario, Canada, ⁵School of Biosciences, University of Birmingham, Birmingham, United Kingdom

Ultrasound in term and preterm labor

Serial intrapartum transperineal ultrasound to predict successful vaginal delivery in 190 Chinese women (OC18.03)

C. Chor. The Chinese University of Hong Kong, Hong Kong

Abnormal uterine bleeding and fibroids

Validation of risk of endometrial cancer (REC) score for diagnosis of endometrial cancer in women with postmenopausal bleeding (OC23.01)

M. Dueholm², I. Hjorth³, K. Dahl¹, G. Ørtoft⁴. ¹Obstetrics and Gynaecology, Aarhus University Hospital, Skejby, Aarhus N, Denmark, ²Department of Obstetrics and Gynecology, Aarhus University Hospital, Aarhus, Denmark, ³Aarhus University Hospital Skejby, Aarhus, Denmark, ⁴Aarhus University Hospital Skejby, Aarhus, Denmark

Early pregnancy complications

Urine metabolomic changes by gestational age in early pregnancy and differences in the metabolome between viable pregnancies and those that miscarry (OC13.02)

M. Al-Memar^{1,2}, S. Cacciatore², S. Bobdiwala^{1,2}, S. Saso², J. Farren¹, D. Timmerman³, P. Bennett^{1,2}, D. MacIntyre², T. Bourne^{1,2}. ¹Early Pregnancy & Acute Gynaecology Unit, Tommy's National Miscarriage Centre, Queen Charlotte's and Chelsea Hospital, Imperial College London, London, United Kingdom, ²Department of Surgery and Cancer, Imperial College London, London, London, United Kingdom, ³KU Leuven, Leuven, Belgium

Imaging in oncology

Ultrasound in preoperative assessment of pelvis and abdominal spread in patients with ovarian cancer: a prospective study (OC10.01)

D. Fischerová¹, M. Zikan¹, R. Kocian¹, P. Dundr¹, A. Burgetova¹, L. Dusek², D. Cibula¹. ¹Department of Pathology, First Faculty of Medicine and General University Hospital, Charles University, Prague, Czech Republic, ²Institute of Biostatistics and Analysis, Masaryk University, Brno, Czech Republic

Managing ovarian masses

Two-step strategy to preoperatively assess adnexal lesions not classifiable by EDs, using RMI, IOTA ADNEX or Simple Rules risk model (OC07.04)

C. Landolfo^{3,15}, W. Froyman^{3,15}, T. Bourne^{4,15}, B. De Cock³, A. C. Testa⁵, L. Valentin⁶, D. Fischerová⁷, C. Van Holsbeke⁸, D. Franchi⁹, L. Savelli¹⁰, E. Epstein¹¹, A. Czekierdowski¹², S. Guerriero², R. Fruscio¹³, F. Leone¹, I. Vergote^{14,15}, J. Verbakel^{3,17}, B. Van Calster³, D. Timmerman^{3,16}. ¹Dept Obstetrics & Gynecology, DSC L. Sacco, Milan, Italy, ²Department of Obstetrics and Gynecology, University of Cagliari, Cagliari, Italy, ³Department of Development and Regeneration, KU Leuven, Leuven, Belgium, ⁴Queen Charlotte's and Chelsea Hospital, Imperial College, London, UK; London, United Kingdom, ⁵Department of Oncology, Catholic University of the Sacred Heart, Rome,

Italy, ⁶Department of Obstetrics and Gynecology, Skåne University Hospital Malmö, Lund University, Malmö, Sweden, ⁷Department of Obstetrics and Gynecology, Gynaecological Oncology Centre, Charles University, Prague, Czech Republic, ⁸Department of Obstetrics and Gynecology, Ziekenhuis Oost-Limburg, Genk, Belgium, ⁹Preventive Gynecology Unit, Division of Gynecology, European Institute of Oncology, Milan, Italy, ¹⁰Department of Obstetrics and Gynecology, S Orsola-Malpighi Hospital, University of Bologna, Bologna, Italy, ¹¹Department of Obstetrics and Gynecology, Karolinska University Hospital, Stockholm, Sweden, ¹²1st Department of Gynecological Oncology and Gynecology, Medical University in Lublin, Lublin, Poland, ¹³Clinic of Obstetrics and Gynecology, University of Milan-Bicocca, San Gerardo Hospital, Monza, Italy, ¹⁴Department of Oncology, KU Leuven, Leuven Cancer Institute, Leuven, Belgium, ¹⁵Department of Obstetrics and Gynecology, University Hospitals Leuven, Leuven, Belgium, ¹⁶Department of Obstetrics and Gynecology, University Hospitals Leuven, Leuven, Belgium, ¹⁷Nuffield Department of Primary Care Health Sciences, University of Oxford, Oxford, United Kingdom

Pelvic pain and endometriosis

Pelvic floor dysfunction at three-dimensional transperineal ultrasound in women affected by deep infiltrating endometriosis (OC26.03)

A. Youssef, D. Raimondo, S. del Forno, M. Mabrouk, V. Martelli, E. Montaguti, G. Pilu, A. Benfenati, R. Seracchioli. *Obstetrics and Gynecology, University of Bologna, Bologna, Italy*

Reproductive medicine

Prospective evaluation of impact of adenomyosis on *in-vitro* fertilization outcome (OC16.01)

T. K. Holland¹, M. Khalil³, O. O'Donovan², D. Jurkovic¹, Y. Khalaf³, D. Mavrelos². ¹Gynaecology diagnostic and treatment unit, University College Hospital London, London, United Kingdom, ²Reproductive Medicine Unit, University College London Hospital, London, United Kingdom, ³Assisted Conception Unit, Guy's and St Thomas' NHS Foundation Trust, London, United Kingdom

Urogynecology

Does fundal pressure in the second stage (Kristeller maneuver) increase the risk of pelvic floor damage? A prospective case control study (OC04.01)

A. Youssef⁶, G. Salsi⁶, M. Paganotto⁶, F. Bellussi⁶, I. Cataneo¹, G. Pacella^{1,9}, C. Azzarone³, G. Morganelli⁶, J. Krsmanovic¹¹, L. Cariello⁶, E. Montaguti⁶, N. Rizzo¹, G. Pilu⁶. ¹Department of Obstetrics and Gynecology, Sant'Orsola-Malpighi Hospital, University of Bologna,

Bologna, Italy, ³Sant'Orsola-Malpighi Hospital, University of Bologna, Bologna, Italy, ⁶Obstetrics and Gynecology, University of Bologna, Bologna, Bologna, Italy, ⁹Medicine and Surgery, Università campus biomedico, Roma, Italy, ¹¹University of Bologna, Bologna, Italy

Best Short Oral Presentations (oral posters)

The following short oral presentations were each selected as the best in their subject area. Selection was according to a combination of anonymous peer review in advance of the Congress and scores for presentation and/or scientific merit allocated on-site by a panel of judges.

Aneuploidy and fetal anomalies – first trimester

Abnormal sonographic appearance of posterior brain at 11–14 weeks and fetal outcome (OP25.05)

T. Fanelli², B. Muto², G. Volpe³, G. Rembouskos², V. De Robertis², G. Campobasso¹, A. Tempesta², P. Volpe². ¹Fetal Medicine Unit, Di Venere Hospital, Bari, Italy, ²Fetal medicine, Di Venere and Sarcone Hospital, Bari, Italy, ³University of Bari, Department of Obstetrics and Gynecology, Bari, Italy

Aneuploidy and fetal anomalies – second trimester

3D assessment of the umbilical vein deviation angle (UVDA) for the prediction of liver herniation in left congenital diaphragmatic hernia (OP32.03)

N. Volpe², E. Mazzone², B. Muto¹, A. Suprani², T. Fanelli¹, C. Kaihura², C. Del Rossi², T. Ghi², P. Volpe¹, T. Frusca². ¹Fetal medicine, Di Venere and Sarcone Hospital, Bari, Italy, ²Obstetrics and Gynecology, University Hospital of Parma, Parma, Italy

Education

Quality improvement programme for the routine anomaly scan using a dedicated quality-control platform (OP15.01)

A. T. Papageorgiou¹, R. Napolitano¹, M. Yaqub², J. A. Noble², B. Kelly¹. ¹Nuffield Department of Obstetrics & Gynaecology and Oxford Maternal & Perinatal Health Institute, Green Templeton College, University of Oxford, Oxford, United Kingdom, ²Institute of Biomedical Engineering, University of Oxford, Oxford, United Kingdom

Fetal echocardiography, congenital heart defects and cardiac function

Evaluation of tissue Doppler imaging (TDI) for measurement of the right fetal myocardial performance index (MPI); an international online study (OP06.06)

H. Avnet^{2,5}, J. Wang⁶, H. Gardiner³, E. A. Hernandez-Andrade⁴, F. Crispi¹, S. Redmond⁶, A. W. Welsh^{2,5}. ¹Maternal Fetal Medicine, BCNatal-Barcelona Center for Maternal Fetal and Neonatal Medicine Hospital

Clínic and Hospital Sant Joan de Déu, Barcelona, Barcelona, Spain, ²*School of Women's & Children's Health, University of New South Wales, Randwick, Sydney, New South Wales, Australia,* ³*Texas Fetal Center, University of Texas School of Medicine at Houston, Houston, Texas, United States,* ⁴*Maternal Fetal Medicine, Wayne State University, Detroit, Michigan, United States,* ⁵*Department of Maternal-Fetal Medicine, Royal Hospital for Women, Randwick, Sydney, New South Wales, Australia,* ⁶*Graduate School of Biomedical Engineering, University of New South Wales, Randwick, Sydney, New South Wales, Australia*

Fetal interventions

Acute impact of fetal surgery for myelomeningocele on placental and cerebrovascular circulations (OP21.02)

L. Sun¹, Z. Tian¹, J. Moldenhauer², N. Khalek², J. Martinez-Poyer², M. P. Johnson², N. Adzick², J. Rychik¹. ¹*Fetal Heart Program, The Children's Hospital of Philadelphia, Philadelphia, Pennsylvania, United States,* ²*Center for Fetal Diagnosis and Treatment, The Children's Hospital of Philadelphia, Philadelphia, Pennsylvania, United States*

Prediction for postnatal treatment of hydrocephalus in fetuses that underwent a neural tube defect (NTD) repair based on prenatal brain imaging (OP21.03)

M. Sanz Cortes¹, C. Guimares², M. Yopez¹, A. Zarutskie¹, N. Park¹, L. M. Mack¹, R. Gandhi¹, A. N. Shetty¹, A. Nassr¹, H. Sangi-Haghpeykar¹, W. Lee¹, M. A. Belfort¹, W. Whitehead³. ¹*Obstetrics and Gynecology, Baylor College of Medicine, Houston, Texas, United States,* ²*Radiology, Baylor College of Medicine, Houston, Texas, United States,* ³*Neurosurgery, Baylor College of Medicine, Houston, Texas, United States*

Fetal neurosonography and central nervous system anomalies

Clinical significance of 3D HDlive silhouette/flow in neurosonography and fetal neurosonography (OP01.10)

R. K. Pooh. CRIFM Clinical Research Institute of Fetal Medicine PMC, Osaka, Japan

Imaging technology including MRI

Novel MRI assessment of maternal cerebral oxygen consumption and oxygen extraction during pregnancy (OP28.03)

A. N. Shetty^{1,2}, M. Sanz Cortes^{1,2}, M. Yopez^{1,2}, P. Liu³, H. Lu³, K. Fox^{1,2}, M. A. Belfort^{1,2}, W. Lee^{1,2}. ¹*Obstetrics and Gynecology, Baylor College of Medicine, Houston, Texas, United States,* ²*Texas Children's Hospital Pavilion for Women, Houston, Texas, United States,* ³*Radiology, Johns Hopkins University School of Medicine, Baltimore, Maryland, United States*

Maternal and fetal Doppler including fetal growth

Obstetric home-monitoring including CTG in complicated pregnancies: development and results of system, based on free available Open Source software (OP31.05)

O. Petersen, L. Holst. *Obstetrics and Gynecology, Aarhus University Hospital Skejby, Aarhus N, Denmark*

Multiple pregnancy

Customized fetal growth curves in twin pregnancies: an Italian multicenter study (OP13.01)

T. Ghi⁶, F. Prefumo⁴, E. Ferrazzi⁷, C. Di Pietro⁵, C. Celentano¹⁵, N. Chianchiano¹⁴, E. Cosmi³, A. Fichera⁴, S. Gabrielli², M. Lanna⁷, A. Mazzocco¹², E. Pappalardo⁸, E. Periti¹⁰, N. Persico¹³, T. Stampalija¹¹, E. Viora⁹, P. Volpe¹, G. Rizzo⁵. ¹*Department of Obstetrics and Gynecology, Di Venere Hospital, Bari, Italy,* ²*Department of Obstetrics and Gynecology, Policlinico S.Orsola Malpighi, Bologna, BO, Italy,* ³*Department of Woman and Child Health, University of Padua, Padova, Italy,* ⁴*Department of Obstetrics and Gynecology, University of Brescia, Brescia, Italy,* ⁵*Department of Obstetrics and Gynecology, University Roma Tor Vergata, Roma, Italy,* ⁶*Department of Obstetrics and Gynecology, University of Parma, Bologna, Italy,* ⁷*Department Woman Mother and Neonate, Buzzi Children's Hospital University of Milan, Milano, Italy,* ⁸*Department of Obstetrics and Gynecology, ARNAS Garibaldi Nesima, Catania, Italy,* ⁹*Department of Obstetrics and Gynecology, Ospedale Sant'Anna, Torino, Italy,* ¹⁰*Unit of Maternal Fetal Medicine, Piero Palagi Hospital, Florence, Italy,* ¹¹*Unit of Prenatal Diagnosis, Institute for Maternal and Child Health, IRCCS Burlo Garofolo, Trieste, Trieste, Italy,* ¹²*Department of Obstetrics and Gynecology, Ospedale Montebelluna, Montebelluna TV, Italy,* ¹³*Department of Obstetrics and Gynecology, Università di Milano Fondazione Ca' Granda, Ospedale Maggiore Policlinico, Milan, Italy,* ¹⁴*Department of Obstetrics and Gynecology, Ospedale Fatebenefratelli, Palermo, Italy,* ¹⁵*Department of Obstetrics and Gynecology, Università di Chieti, Chieti, Italy*

Role of ultrasound in patient safety

Abnormally invasive placenta – prevalence, risk factors and antenatal suspicion: results from a large population-based study in the Nordic countries (OP27.04)

L. Thurn¹, P. G. Lindqvist², M. Jakobsson⁷, L. B. Colmorn⁴, K. Klungsoyr⁵, I. Bjarnasdóttir⁶, A. Tapper⁸, P. E. Børdahl⁹, K. Gottvall¹⁰, K. Birch¹¹, L. Krebs¹², M. Gissler¹³, J. Langhoff-Roos⁴, K. Källén³. ¹*Fetal Medicine, Lund University, Karlskrona, Sweden,* ²*Obstetrics and Gynaecology, Karolinska University Hospital, Stockholm, Sweden,* ³*Lund University, Lund,*

Sweden, ⁴Department of Obstetrics and Gynaecology, Rigshospitalet, Copenhagen, Copenhagen, Denmark, ⁵Department of Global Public Health and Primary Care, University of Bergen, Bergen, Norway, ⁶Department of Obstetrics and Gynaecology, Landspítali University Hospital, Reykjavik, Reykjavik, Iceland, ⁷Department of Obstetrics and Gynaecology, University Hospital, Helsinki, Finland, Helsinki, Finland, ⁸Department of Gynaecology and Paediatrics, University Hospital, Helsinki, Finland, Helsinki, Finland, ⁹Department of Obstetrics and Gynaecology, Haukeland University Hospital, and University of Bergen, Norway, Bergen, Norway, ¹⁰Department of Evaluation and Analysis, Epidemiology and Methodological support unit, National Board of Health and Welfare, Stockholm, Sweden, Stockholm, Sweden, ¹¹Fertility Clinic, Copenhagen University Hospital, Rigshospitalet, Denmark, Copenhagen, Denmark, ¹²Department of Obstetrics and Gynaecology, Holbæk Hospital and University of Copenhagen, Denmark, Copenhagen, Denmark, ¹³THL National Institute for Health and Welfare, Helsinki, Finland, Helsinki, Finland

Ultrasound in term and preterm labor

Prospective study on cervical length (CL) in the first and second trimesters in a large Danish cohort (OP11.01)

C. B. Wulff², L. Rode², E. Hoseth³, O. Petersen¹, A. Tabor². ¹Dept of Obstetrics and Gynecology, Aarhus University Hospital Skejby, Aarhus N, Denmark, ²Center of Fetal Medicine, Copenhagen University Hospital, Rigshospitalet, Copenhagen, Denmark, ³Fetal Medicine Unit, Obstetrics, Aalborg University Hospital, Aalborg, Denmark

Abnormal uterine bleeding and fibroids

Changes in the sonographic characteristics of adenomyosis after treatment with ulipristal acetate (OP30.04)

S. Ferrero, A. Racca, E. Tafi, C. Scala, P. L. Venturini, U. Leone Roberti Maggiore. Department of Neurosciences, Rehabilitation, Ophthalmology, Genetics, Maternal and Child Health (DiNOGMI), IRCCS AOU San Martino – IST, University of Genova, Italy, GE, Italy

Early pregnancy complications

The potential use of urinary β hCG for managing pregnancies of unknown location (PUL): correlating urinary & serum β hCG levels using two immunoassays (OP18.07)

S. Bobdiwala¹, B. De Cock², R. Harvey³, Y. Abdallah⁴, M. Al-Memar¹, R. Fisher³, C. Stalder¹, D. Timmerman⁵, B. Van Calster⁵, T. Bourne^{1,5}. ¹Tommy's National Early Miscarriage Research Centre, Queen Charlotte's & Chelsea Hospital, Imperial College, London, United Kingdom, ²Biomedical Sciences Group, KU Leuven, Brecht, Belgium, ³Charing Cross Trophoblast Unit, London, United Kingdom, ⁴Obstetrics and Gynaecology,

Imperial College, London, United Kingdom, ⁵KU Leuven, Leuven, Belgium

Imaging in oncology

Early cervical cancer: can we consider TVUS an alternative to MRI in preoperative delineation of tumor extension? (OP14.01)

A. Vidal Urbinati¹, L. Ottino², S. Boveri³, V. Zanagnolo⁴, D. Franchi¹. ¹Preventive Gynaecology Unit, European Institute of Oncology, Milano, Italy, ²Gynaecologic Oncology, A.O. Mauriziano Umberto I, Turin, Italy, ³Epidemiology and Biostatistics, European Institute of Oncology, Milan, Italy, ⁴Gynaecology, European Institute of Oncology, Milan, Italy

Managing ovarian masses

Clinical history of low-risk ovarian lesions in post-menopausal women (OP09.02)

F. Leone, A. Crepaldi, C. Personeni, R. Clauser, M. Mazzocco. Dept Obstetrics & Gynecology, DSC L. Sacco, Milan, Italy

Pelvic pain and endometriosis

Complications during pregnancy and delivery in women with untreated rectovaginal deep endometriosis (OP34.08)

L. Lazzeri³, C. Exacoustos¹, I. Lariola², G. De Felice³, E. Zupi¹. ¹Department of Biomedicine and Prevention, Obstetrics and Gynecology Clinic, Università degli Studi di Roma "Tor Vergata", Rome, Italy, ²Department of Obstetrics and Gynecology, University of Parma, Parma, Italy, ³Molecular and Developmental Medicine, University of Siena, Siena, Italy

Reproductive medicine

Essure for women with hydrosalpinx before embryo transfer: a systematic review and meta-analysis (OP22.07)

M. Barbosa², A. Sotiriadis¹, S. Papatheodorou³, V. Mijatovic⁴, C. O. Nastri², W. P. Martins². ¹Aristotle University of Thessaloniki, Thessaloniki, Greece, ²Department of Obstetrics and Gynecology, Ribeirao Preto Medical School, University of Sao Paulo, Ribeirao Preto, Sao Paulo, Brazil, ³Cyprus University of Technology, Limassol, Cyprus, ⁴VU University Medical Center, Amsterdam, Netherlands

Urogynecology

Ultrasonographic evaluation of the urethral rhabdosphincter's morphology in female patients with urodynamic stress incontinence (OP04.01)

D. Zacharakis, T. Grigoriadis, E. Domali, E. Pitsouni, S. Stavrou, S. Athanasiou. Obstetrics and Gynecology, University of Athens, Voula, Greece