03-06 JUNE 2019
BFS Study Week

PROGRAMMES:

MALE FERTILITY - MONDAY 03
CREATING MODERN FAMILIES - MONDAY 03
PELVIC ULTRASOUND - MONDAY 03 - TUESDAY 06
PR - EFFECTIVE FERTILITY SERVICES - TUESDAY 04 – WEDNESDAY 05
PGT - WEDNESDAY 05
EMBRYO TRANSFER/IUI - THURSDAY 06
FERTILITY PRESERVATION - THURSDAY 06
On behalf of the British Fertility Society I would like to extend a warm welcome to you all to the BFS Study Week 2019. The Study Week will be held again at the Millennium Gloucester Hotel in London.

I am delighted to announce that this year we are launching a new study day in collaboration with the HFEA which replaces our previous effective fertility study day. In addition to covering all the aspects of the effective fertility study day the new study day will also cover essential topics relevant to the HFEA Code of practice and essential for training to become a PR. The course is aimed at prospective and established PRs as well as others in the field looking to expand on their knowledge regarding the legislative and leadership aspects of running an effective fertility service. Through our strong collaboration with the HFEA we have produced a programme which we hope you will find both stimulating and productive.

As you are well aware the BFS study days are associated with modules which I would encourage you consider registering for, particularly the newer modules such as fertility preservation. This year I have handed over the fertility preservation module to Dr Melanie Davis who I am sure will offer exciting new developments to the programme given her expertise as lead for our National Fertility Preservation Special Interest Group.

The BFS continues to lead the way in providing top quality education and I hope you will join us for what is sure to be another fantastic study week but whilst with us, I hope you won’t forget to take some time out at the end of the day in our glorious British summer and enjoy some pleasant evenings out in London. I look forward to welcoming you all to the BFS Study Week 2019 at the Millennium Gloucester Hotel.”

Mostafa Metwally
Chair of Education and Training, British Fertility Society

ACKNOWLEDGEMENTS

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Fertility and Genomic Solutions
# MALE FERTILITY

**Monday 03 June**

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<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>08.00</td>
<td>Registration, refreshment and exhibition</td>
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<tr>
<td>08.55</td>
<td>Welcome, Kevin McEleny, Consultant Urologist, Newcastle Fertility Centre</td>
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<tr>
<td>09.00</td>
<td>The male reproductive tract and male sexual function, Marc Lucky, Consultant Urologist and Andrological Surgeon, Aintree University Teaching Hospital, Liverpool</td>
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<td>09.45</td>
<td>Male reproductive physiology, Allan Pacey, Professor of Andrology, University of Sheffield</td>
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<td>10.30</td>
<td>Refreshment and exhibition</td>
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<tr>
<td>11.00</td>
<td>Male history and examination, Kevin McEleny, Consultant Urologist, Newcastle Fertility Centre</td>
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<tr>
<td>11.30</td>
<td>Testicular causes of male infertility, Marc Lucky, Consultant Urologist and Andrological Surgeon, Aintree University Teaching Hospital, Liverpool</td>
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<tr>
<td>12.00</td>
<td>Q&amp;A for Urologists: Basic assessment &amp; management of infertile female, Uma Gordon, Consultant Gynaecologist and Sub-specialist in Reproductive Medicine and Surgery, Bristol Centre for Reproductive Medicine (BCRM)</td>
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<tr>
<td>12.30</td>
<td>Lunch and exhibition</td>
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<tr>
<td>13.30</td>
<td>Pre-testicular problems, Richard Quinton, Consultant and Senior Lecturer in Endocrinology, Newcastle-upon-Tyne Hospitals &amp; University</td>
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<td>14.00</td>
<td>Tests of semen quality, Bryan Woodward, Scientific Director, X&amp;Y Fertility</td>
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<td>14.30</td>
<td>The Genetics of severe male infertility, Joris Veltman, Newcastle University</td>
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<td>15.00</td>
<td>Post testicular causes of male fertility and reconstructive surgery, Majed Shabbir, Consultant Urologist, Clinical Lead for Andrology, Male Infertility and Genito-urethral Reconstruction, Guy’s Hospital London</td>
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<tr>
<td>15.30</td>
<td>Refreshment and exhibition</td>
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<td>16.00</td>
<td>Surgical sperm retrieval, Kevin McEleny, Consultant Urologist, Newcastle Fertility Centre</td>
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<tr>
<td>16.30</td>
<td>Varicoceles and male fertility, Majed Shabbir, Consultant Urologist, Clinical Lead for Andrology, Male Infertility and Genito-urethral Reconstruction, Guy’s Hospital London</td>
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<tr>
<td>17.00</td>
<td>Case studies, Kevin McEleny, Consultant Urologist, Newcastle Fertility Centre and Majed Shabbir, Consultant Urologist, Clinical Lead for Andrology, Male Infertility and Genito-urethral Reconstruction, Guy’s Hospital London</td>
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CREATING MODERN FAMILIES

Monday 03 June

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<tr>
<td>08.00</td>
<td>Registration, refreshment and exhibition</td>
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<tr>
<td>08.40</td>
<td>Welcome, Alka Prakash, Consultant Gynaecologist and Reproductive Medicine, Cambridge University Hospitals NHS Foundation Trust</td>
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<td>08.50</td>
<td>The changing face of the modern family, Vasanti Jadva, Senior Research Associate, Centre for Family Research</td>
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<td>09.30</td>
<td>Regulation and legal aspects in the use of donor gametes, James Lawford-Davies, Partner, Hill Dickinson LLP</td>
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<td>10.00</td>
<td>Cross border fertility care, Rachel Cutting, Principal Embryologist / Person Responsible, Jessop Fertility, Sheffield Teaching Hospitals NHS Foundation Trust</td>
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<td>10.30</td>
<td>Refreshment and exhibition</td>
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<tr>
<td>11.00</td>
<td>Treating single women and same sex female couples, Alka Prakash, Consultant Gynaecologist and Reproductive Medicine, Cambridge University Hospitals NHS Foundation Trust</td>
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<td>11.30</td>
<td>Eggs and embryos: donation and sharing, Jane Stewart, Consultant in Reproductive Medicine, Chair, BFS, Newcastle Fertility Centre at LIFE</td>
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<tr>
<td>12.00</td>
<td>Surrogacy (reasons for and outcomes), Jan Grace, Consultant Gynaecologist, Assisted Conception Units, Guy's Hospital, London</td>
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<td>12.30</td>
<td>Lunch and exhibition</td>
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<td>13.30</td>
<td>Adoption-Adoption Society, <em>speaker tbc</em></td>
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<td>13.55</td>
<td>Patient perspective, Rhona Brown, Patient</td>
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<td>14.15</td>
<td>Legal aspects of surrogacy, Louisa Ghevaert, Founder, Louisa Ghevaert Associates</td>
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<td>14.45</td>
<td>The role of counselling in contemporary family creation, Suzanne Dark, Executive Committee member of BICA and Fertility Counsellor</td>
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<td>15.15</td>
<td>Refreshment and exhibition</td>
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<tr>
<td>15.45</td>
<td>Fertility and gender reassignment, James Barrett, Lead Clinician, Charing Cross Gender Identity Clinic</td>
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<tr>
<td>16.15</td>
<td>Questions and closing remarks, Alka Prakash, Consultant Gynaecologist and Reproductive Medicine, Cambridge University Hospitals NHS Foundation Trust</td>
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# PELVIC ULTRASOUND

## DAY 1

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<tr>
<td>08.00</td>
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<td>08.50</td>
<td>Welcome, Ippokratis Sarris, Director and Consultant in Reproductive Medicine, King’s Fertility</td>
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<tr>
<td>09.00</td>
<td>Image optimisation, ultrasound artefacts and safety, Neil Pugh, Medical Physicist, University Hospital of Wales</td>
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<tr>
<td>09.45</td>
<td>Transvaginal scanning: Anatomy, physiology and technique, Nazar Amso, Emeritus Professor, Obstetrics and Gynaecology, Cardiff University</td>
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<td>10.30</td>
<td>Refreshment and exhibition</td>
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<tr>
<td>11.00</td>
<td>Interactive Lecture 1 – Image optimisation and machine controls, Neil Pugh, Medical Physicist, University Hospital of Wales</td>
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<td>12.30</td>
<td>Lunch and exhibition</td>
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<tr>
<td>14.00</td>
<td>Interactive Lecture 2 – Orientation &amp; measurements, Nazar Amso, Emeritus Professor, Obstetrics and Gynaecology, Cardiff University</td>
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<td>15.30</td>
<td>Refreshment and exhibition</td>
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<tr>
<td>16.00</td>
<td>Diagnostic ultrasound, Geeta Nargund, Medical Director, CREATE Fertility</td>
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<td>17.00</td>
<td>Close of Day 1</td>
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## DAY 2

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<td>Welcome, Ippokratis Sarris, Director and Consultant in Reproductive Medicine, King’s Fertility</td>
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<td>09.00</td>
<td>Pelvic pathology, Shyamaly Sur, Consultant Obstetrician and Gynaecologist, Queen Charlotte’s Hospital, London</td>
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<td>09.45</td>
<td>Ultrasound guided procedures in fertility treatments, Harish Bhandari, Consultant Gynaecologist and Sub-specialist in Reproductive Medicine, Leeds Fertility, Leeds Teaching Hospitals NHS Trust, Leeds</td>
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<tr>
<td>10.30</td>
<td>Refreshment and exhibition</td>
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<tr>
<td>11.00</td>
<td>Follicle tracking/endometrium measuring, Mostafa Metwally, Consultant Gynaecologist and Subspecialist in Reproductive Medicine and Surgery, Sheffield Teaching Hospitals and Chair, BFS Training Committee</td>
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<td>11.45</td>
<td>Early pregnancy scanning, Tommy Tang, Consultant Gynaecologist, ReproMed, Ireland</td>
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<tr>
<td>12.30</td>
<td>Lunch and exhibition</td>
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<tr>
<td>13.30</td>
<td>3D ultrasound, Kannamannadiar Jayaprakasan, Subspecialist and Hon. Associate Professor in Reproductive Medicine &amp; Surgery, Royal Derby Hospital, Derby &amp; University of Nottingham</td>
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<td>14.15</td>
<td>HyCoSy / hysterosonography, Gidon Lieberman, Consultant Obstetrician and Gynaecologist and Sub-specialist in Reproductive Medicine and Surgery, Whittington Health</td>
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<tr>
<td>15.00</td>
<td>Refreshment and exhibition</td>
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<tr>
<td>15.30</td>
<td>Applications of doppler, Stuart Campbell, Consultant &amp; Director of Ultrasound, CREATE Fertility</td>
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<tr>
<td>16.30</td>
<td>Close of Day 2</td>
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</table>
08.00  Registration, refreshment and exhibition

08.50  Welcome, Mostafa Metwally, Consultant Gynaecologist and Subspecialist in Reproductive Medicine and Surgery, Sheffield Teaching Hospitals and Chair, BFS Training Committee

09.00  The UK fertility market and commissioning, James Kingsland, OBE- President, GP, National Association of Primary Care

09.30  Developing a service and business planning, Jonathan Koslover, Managing Director, Manchester Fertility

10.00  Panel discussion

10.30  Refreshment and exhibition

10.45  The fundamentals: It’s the law - the essential components of the Act, Deirdre Fottrell, QC, 1GC, Family Law

11.15  The fundamentals of ‘consent’, Jemma Dally, Partner, Goodman Ray

11.45  Being PR: The PR Job Description, Rachel Cutting, Principal Embryologist / Person Responsible, Jessop Fertility, Sheffield Teaching Hospitals NHS Foundation Trust

12.15  Panel discussion

12.30  Lunch and exhibition

13.30  HFEA overview of inspection and compliance in UK fertility clinics Sharon Fensome- Rimmer, HFEA Chief Inspector

14.30  Leadership styles and workplace culture: leading a multidisciplinary Fertility team, challenges and solutions, Ray Shannon, Company Chair, Executive Coach

15.00  Refreshment and exhibition

15.30  (Continued) Leadership styles and workplace culture: leading a multidisciplinary Fertility team, challenges and solutions, Ray Shannon, Company Chair, Executive Coach

16.30  Reflection on the day, preparing for day 2, Rachel Cutting, Principal Embryologist / Person Responsible, Jessop Fertility, Sheffield Teaching Hospitals NHS Foundation Trust

17.00  Close of day 1
08.00 Arrival refreshment and exhibition

08.50 Welcome, Mostafa Metwally, Consultant Gynaecologist and Subspecialist in Reproductive Medicine and Surgery, Sheffield Teaching Hospitals and Chair, BFS Training Committee

09.00 Quality Management and You; Nilendran Prathalingam, Quality Development Manager, Newcastle Fertility Centre

09.30 Top tips for inspection Andrew Leonard, HFEA Senior Inspector and Andy Glew, Director/Embryology, Simply Fertility

10.00 Panel discussion

10.30 Refreshment and exhibition

11.00 Patients and the HFEA: Evidence from the HFEA national patient survey and Choose a Fertility Clinic patient feedback facility - one year+ on. Patient feedback and complaints: A case study, Clare Ettinghausen, Director of Strategy and Corporate Affairs, HFEA and Ruth Wilde, HFEA Authority member and Senior Fertility Counsellor

11.30 What do patients think, and want?, Kate Brian, Women’s Voices Lead, Royal College of Obstetricians and Gynaecologists and Anna Coundley Policy Manager, HFEA

12.15 Panel discussion

12.30 Lunch and exhibition

13.30 Dealing with incidents-Legal requirements: the duty of the PR on what, when and how to report incidents, Paula Nolan, Clinical Governance Lead, HFEA

14.00 Dealing with incidents: Case reports from a clinical practice, Raj Mathur, Consultant Gynaecologist, Manchester Foundation Trust

14.30 Panel discussion

15.00 Refreshment and exhibition

15.30 Interactive panel with Q&A from audience: HFEA representative - Paula Nolan; Clinician - Raj Mathur; Quality Manager - Nilendran Prathalingam, Patient Representative - Kate Brian

16.00 Wrap-up
- Re-cap of the programme
- Were my learning objectives met?
- Maintaining connections made
- Evaluation – what shall we do differently next time? Clare Ettinghausen and Mostafa Metwally

16.30 Close of day 2
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<td>08.50</td>
<td>Welcome, Yacoub Khalaf, Consultant in Reproductive Medicine &amp; Surgery &amp; Sub-Specialist in Reproductive Medicine &amp; Surgery, Director of the Assisted Conception Unit &amp; HFEA Person Responsible, Guy’s and St Thomas’ Hospital</td>
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<tr>
<td>08.55</td>
<td>Introduction to genetic diseases, their mode of inheritance and their burden on health and reproduction, Dr Anne Lampe, Consultant in Clinical Genetics, South East Scotland Clinical Genetic Service</td>
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<td>09.15</td>
<td>Reproductive options available to couples at risk, Janine Elson, Consultant in Gynaecology and Reproductive Medicine, Liverpool Women’s Hospital</td>
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<tr>
<td>09.35</td>
<td>The current status of NIPT and prenatal diagnosis, Kathy Mann, Lead Clinical Scientist (Prenatal &amp; Reproductive Genetics) ViaPath Analytics, Guy’s Hospital</td>
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<td>09.55</td>
<td>An introduction to PGT and expanded carrier screening, Joyce Harper, Professor, University College London</td>
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<td>10.15</td>
<td>PGT counselling and clinical pathway, Charlotte Tomlinson, Guys &amp; St. Thomas’ NHS Trust</td>
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<td>10.35</td>
<td>Refreshment and exhibition</td>
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<tr>
<td>11.00</td>
<td>How does the HFEA regulate PGT?, Dr Anne Lampe, Consultant in Clinical Genetics, South East Scotland Clinical Genetic Service</td>
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<td>11.30</td>
<td>Embryology of PGT, Alpesh Doshi, Director of Embryology, Consultant Embryologist, Embryology and PGD Academy</td>
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<td>12.00</td>
<td>PGT diagnostic technologies, Roy Pascal Naja, Laboratory Director, IGENOMIX UK</td>
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<td>12.30</td>
<td>Lunch and exhibition</td>
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<tr>
<td>13.30</td>
<td>Clinical assessment / preparation of PGT couples and factors that affect success and clinical result, Tarek El-Toukhy, Consultant Gynaecologist and Sub-specialist in Reproductive Medicine and PGD, Guy’s and St Thomas’ Hospital NHS Foundation Trust</td>
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<tr>
<td>14.00</td>
<td>Service delivery models, Jonathan Skull, Consultant in Reproductive Medicine and Surgery, Clinical Head of Assisted Conception, Jessop Fertility, Sheffield Teaching Hospitals NHS Foundation Trust</td>
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<tr>
<td>14.20</td>
<td>Case Discussions, Yacoub Khalaf, Consultant in Reproductive Medicine &amp; Surgery &amp; Sub-Specialist in Reproductive Medicine &amp; Surgery, Director of the Assisted Conception Unit &amp; HFEA Person Responsible, Guy’s and St Thomas’ Hospital</td>
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<td>15.30</td>
<td>Chair, Joyce Harper, Professor, University College London</td>
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<td>Debate: This house believes that clinical evidence supports routine use of PGT. Against the motion, Yacoub Khalaf For the motion, Roy Pascal Naja</td>
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<td>16.10</td>
<td>Open discussion</td>
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<td>16.30</td>
<td>Overall discussion of the day</td>
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**EMBRYO TRANSFER, IUI**  
Thursday 06 June

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<tr>
<td>08.00</td>
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<tr>
<td>09.00</td>
<td>Welcome, Debbie Evans, <em>Director of Clinical Services, Herts &amp; Essex Fertility Centre</em></td>
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<td>09.10</td>
<td>Structure of cervix, uterus and tubes, <em>Ali Al Chami, Fertility Consultant, The Centre for Reproductive &amp; Genetic Health, London</em></td>
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<td>09.30</td>
<td>Controlled ovarian stimulation, <em>Nabil Haddad, Consultant Gynaecologist, Cheshire Reproductive Medicine</em></td>
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<tr>
<td>10.00</td>
<td>Assessment and preparation of sperm, <em>Rachel Cutting, Principal Embryologist / Person Responsible, Jessop Fertility, Sheffield Teaching Hospitals NHS Foundation Trust</em></td>
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<td>10.30</td>
<td>Refreshment and exhibition</td>
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<td>11.00</td>
<td>Immunology and preparation of the endometrium, <em>Harish Bhandari, Consultant Gynaecologist and Sub-specialist in Reproductive Medicine, Leeds Fertility, Leeds Teaching Hospitals NHS Trust, Leeds</em></td>
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<tr>
<td>11.30</td>
<td>Optimising your embryo selection techniques, <em>Rachel Gregoire, Scientific Director/HFEA Person Responsible, Hewitt Fertility Centres, Liverpool Women’s Hospital</em></td>
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<tr>
<td>12.00</td>
<td>Is there a role for IUI in the future of fertility treatment?, <em>Valentine Akande, Lead Clinician and Person Responsible, Bristol Centre for Reproductive Medicine</em></td>
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<tr>
<td>12.30</td>
<td>Lunch and exhibition</td>
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<tr>
<td>13.30</td>
<td>Embryos transfer/IUI techniques, <em>James Nicopoullos, Consultant Gynaecologist, Sub-specialist in Reproductive Medicine and Surgery, Lister Fertility Clinic</em></td>
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<tr>
<td>14.00</td>
<td>3 x Workshops (30 minutes) Please make a note of your allocated Group.</td>
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<td><strong>Ultrasound Guided Transfer:  James Nicopoullos, Consultant Gynaecologist, Sub-specialist in Reproductive Medicine and Surgery, Lister Fertility Clinic</strong></td>
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<td><strong>Catheter Loading, Transfer Practice: Simon Wood, Consultant Gynaecologist, Countess of Chester Hospital/ Cheshire Reproductive Medicine</strong></td>
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<td><strong>Sperm: Rachel Cutting, Principal Embryologist / Person Responsible, Jessop Fertility, Sheffield Teaching Hospitals NHS Foundation Trust</strong></td>
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<td><strong>ULTRASOUND GUIDED TRANSFER</strong></td>
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<td><em>James Nicopoullos</em></td>
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<td><strong>GROUP 2</strong></td>
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<td><strong>CATHETER LOADING, TRANSFER PRACTICE</strong></td>
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<td><em>Simon Wood</em></td>
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<td><em>Simon Wood</em></td>
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<tr>
<td>SPERM</td>
<td>CATHETER LOADING, TRANSFER PRACTICE</td>
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<tr>
<td><em>Rachel Cutting</em></td>
<td><em>Simon Wood</em></td>
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<td><em>James Nicopoullos</em></td>
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<tr>
<td>08.50</td>
<td>Welcome, Melanie Davies, Consultant Gynaecologist, Chair, Fertility Preservation UK, University College London Hospitals</td>
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<td>09.00</td>
<td>Cancer in young people, longterm outcomes, Vicky Grandage, Consultant Haematologist with an interest in late effects, University College Hospital London</td>
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<td>09.30</td>
<td>The effect of cancer treatment on male fertility and sperm banking, Allan Pacey, Professor of Andrology, University of Sheffield</td>
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<td>10.00</td>
<td>The effect of cancer treatment on female fertility and an overview of female fertility preservation, Richard Anderson, Professor of Clinical Reproductive Science, MRC Centre for Reproductive Health, University of Edinburgh</td>
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<td>11.00</td>
<td>Oocyte cryopreservation, Gillian Lockwood, Medical Director, IVI-Midland</td>
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<td>11.30</td>
<td>Ovarian transposition for fertility preservation, Ertan Saridogan, Consultant in Reproductive Medicine and Minimal Access Surgery, University College London Hospital</td>
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<td>12.00</td>
<td>What factors influence the decision-making process for women contemplating fertility preservation?, Georgina Jones, Professor of Health Psychology, Leeds Beckett University</td>
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<td>12.30</td>
<td>Lunch and exhibition</td>
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<td>13.30</td>
<td>Clinical experience of a fertility preservation service- analysis of outcomes, Stuart Lavery, Director IVF, Imperial College</td>
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<td>14.00</td>
<td>Ovarian stimulation for oocyte cryopreservation, Julia Kopeika, Consultant Gynaecologist Subspecialist in Reproductive Medicine, Assisted Conception Unit, Guy's Hospital</td>
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<td>14.30</td>
<td>Uterine transplantation, Ben Jones, Post-doctorate Clinical Research Fellow, Imperial College NHS Trust</td>
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<td>15.00</td>
<td>Refreshment and exhibition</td>
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<td>15.30</td>
<td>Ovarian tissue preservation, Sheila Lane, Consultant Paediatric Oncologist, Oxford University Hospitals NHS Foundation Trust</td>
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<td>16.00</td>
<td>Effects of cancer treatment: early menopause and the use of HRT, Melanie Davies, Consultant Gynaecologist, University College London Hospitals</td>
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Mark Lucky, Consultant Urologist and Andrological Surgeon, Aintree University Teaching Hospital, Liverpool

Mr Lucky is a fellowship trained Urologist and Andrological surgeon with particular experience in andrology, male infertility, erectile dysfunction and genital reconstruction. A graduate of the University of Liverpool and Fellow of the Royal College of Surgeons in Edinburgh, Mr Lucky brings with him a number of years of experience in the field. Having completed urological training in the North West, Mr Lucky underwent a fellowship in andrology, genital oncology, genital reconstructive surgery and male infertility at University College Hospital, London.

Mr Lucky has contributed to multiple publications in the field of urology and andrology and has presented on the same subjects internationally. He continues to give back to his chosen field by teaching at the Royal College of Surgeons of England Urology courses and is seen by his peers as a leading surgeon in his field. One of Mr Lucky’s main drivers is through education and has qualified from the University of Dundee in medical education. A member of the British Association of Urology Andrology Executive committee and British Society of Sexual Medicine committee, Mr Lucky’s area of expertise include management of: male factor infertility (specifically microTESE operation), Peyronie's disease, erectile dysfunction, penis implant procedures, complex circumcision, sexual dysfunction, hypogonadism, UROLIFT surgery. He also specialises in functional urological conditions and urological cancers. He has published numerous consensus statements in leading urological literature and is the lead author of BAUS consensus statement on management of testicular trauma in the UK.

Male reproductive tract and Male Sexual function

Key Learning Points:
1. Overview of male sexual dysfunction
2. Correct assessment of men with erectile dysfunction
3. Treatment options alongside traditional assisted conception techniques

Male infertility may correspond with increasing sexual dysfunction especially in ageing men. It is important to understand the common clinical features of men suffering from sexual dysfunction and to address the problem directly during consultations. Appropriate assessment and testing will allow focused treatment to improve function whilst optimising fertility status for these men. Finally, recognising complex sexual and functional issues will allow involvement of appropriate experts.

Allan Pacey, Professor of Andrology, University of Sheffield

Allan is Professor of Andrology at the University of Sheffield School of Medicine. He is currently the chairman of the Steering Group for the UK National External Quality Assurance Scheme for Andrology and the Editor in Chief of the BFS journal Human Fertility. He was until January 2015 the Chairman of the British Fertility Society and served as BFS Secretary between 2005 -2010. In the 2016 New Year’s Honors list, he was awarded an MBE for Services to Reproductive Medicine.

Male reproductive physiology

Learning points:
Identify the components of the male reproductive system and how they work;
Understand the endocrine regulation of male reproductive system;
Highlight factors which influence the efficiency of spermatogenesis and ejaculate quality.
The embryological development of the male urogenital system is critical to the fertility of adult males and the six months either side of birth is thought to be the time at which the maximum sperm output of the adult testis is established. After puberty, the production of sperm is regulated by the secretion of FSH and LH from the hypothalamic pituitary axis, as well as paracrine factors from the testis itself. In comparison to many other mammals the production of sperm in the human is quite slow, taking just over 70 days followed by further maturation steps in the epididymis. The number and quality of sperm ejaculated depends on many factors including the abstinence period and the level of arousal as well as the quality of spermatogenesis itself. Spermatogenesis is affected by some lifestyle factors such as temperature (e.g. tight underwear), recreational drug use (e.g. cannabis) and occupation (e.g. exposure to glycol ethers). Finally, clinicians should be aware that sperm makes up only a minor part of the ejaculate (approximately 5% by volume), with secretions from accessory glands such as the prostate and seminal vesicles, among others.

Kevin McEleny, Consultant Urologist, Newcastle Fertility Centre
Kevin McEleny, the Male Fertility Study Day Lead is a Consultant Urologist at Newcastle Fertility Centre and has set up a supra-regional specialist Male Fertility Service. His research interests include Psychosocial aspects of male Infertility and Male Infertility Genetics. He is on the BFS Executive Committee.

Male history and examination
Introduction History taking is a key aspect of the management of couples with a male fertility issue and whilst the patients are generally young and may not have any other relevant medical problems, pertinent factors can quickly be identified by appropriate questioning. Similarly, it is important that men with fertility problem are examined as it is not unusual to identify clinically relevant findings, which would contribute to the overall management of the patient as well as to identify other important conditions. The presentation will cover the appropriate history to be taken from infertile men as well as what should be examined and why.

Key learning objectives This presentation will support the accompanying training module points 2i (Conduct a clinical consultation with infertile couples). 2ii (Take a medical history from infertile males) and 2iii (Perform a physical examination on infertile men including: Examination of testes, epididymides, vasa deferens and evaluation for the presence of varicoceles). The teaching will be in accordance with international guidelines

Mark Lucky, Consultant Urologist and Andrological Surgeon, Aintree University Teaching Hospital, Liverpool
Biography as above

Testicular causes of male infertility
1. Assessment of the male patient with abnormal semen parameters
2. Testicular causes of Male Factor Infertility
3. Treatment of males with fertility issues

This talk will focus on the male partner in the fertility journey with particular attention to the underlying testicular anatomical and pathological causes of male factor infertility. This will also cover the assessment of the male partner in clinic through to medical and surgical treatment options.
Richard Quinton, Consultant and Senior Lecturer in Endocrinology, Newcastle-upon-Tyne Hospitals & University

Richard Quinton is an internationally-recognised expert in the field of hypogonadotropic hypogonadism (HH) and, over the past 25 years, has contributed to significant advances in our understanding of both genetic and phenotypic aspects of this condition. He has achieved around 30 healthy live births using combined FSH+hCG treatment regimes that he has contributed to refining, wherein FSH- rather than classical hCG- pretreatment appears to offer improved outcomes for men with severe disease. He has also published widely in the field of male and female sex hormone replacement therapy, including trans-gender and works closely with colleagues in Reproductive Medicine, Andrology, Paediatrics and Gender Dysphoria.

Pre-Testicular Problems

Key Learning Points:
Men with hypogonadotropic hypogonadism (HH) have a hormonally-treatable form of infertility. hCG-monotherapy only works in men with acquired disease, eg. post-pituitary surgery. Combined FSH+hCG therapy, aiming for physiological testosterone, E2, FSH & HB levels, is required for men with congenital HH, of whom those with small testes & history of bilateral cryptorchisism have the worst prognosis. Adult-onset HH is easily misdiagnosed in normal men (a) through non-fasted, or afternoon venepuncture, (b) by failing to realise when men are abusing androgens and (c) in chronic disease states, such as obesity, where there is physiological non-gonadal illness, or SHBG levels are really lo, such that fere testosterone may be normal, when when total seems to be low.

Men with hypogonadotropic hypogonadism (HH) have a hormonally-treatable form of infertility. Acquired HH, eg. following treatment of pituitary tumours, has the best prognosis and fertility can often be restored with hCG-monotherapy, titrated to achieve normal of Hb, testosterone & E2 levels. FSH is added later on should monotherapy be unsuccessful. Men with congenital HH (CHH) have a less good prognosis and even prolonged hCG-monotherapy cannot achieve normal sperm counts, but combined hCG+FSH treatment or GnRH pump results in around 75-80% developing sperm in the ejaculate.

Key factors affecting fertility outcomes in CHH include testicular volume (TV) and history of cryptorchidism. Men with larger TV (>4mL) are good responders and typically develop sperm within 6-months of starting treatment. The most severe cases (TV ≤4 mL and history of bilateral cryptorchidism) have the poorest outcomes, but results of sequential treatment protocols with FSH pre-treatment offer hope for these men.

Bryan Woodward, Scientific Director, X&Y Fertility

Bryan Woodward (PhD, FRCPath) is an free-lance reproductive scientist who specializes in trouble-shooting fertility clinics to improve andrology and embryology services. He has helped set up numerous IVF laboratories and offers hands-on andrology and embryology training as required. In the UK, he is the Person Responsible at X&Y Fertility and the European Sperm Bank.
Tests of semen quality

Key Learning Points:
To understand the parameters of traditional tests of semen quality
To learn how to check whether the test results are reliable?
To be aware of more detailed tests of semen quality.

Tests of semen quality are usually undertaken as an initial investigation into male fertility. Traditional tests are often performed in a pathology laboratory, where basic macroscopic and microscopic assessments are undertaken. These include sperm count, morphology and motility, as all have been reported to be predictive of pregnancy. Beyond the basic repertoire, more detailed tests are available in a few specialist labs to provide further information about semen quality. For example, sperm can be processed, as it would for assisted conception treatments, to see if the quality can be improved. Further tests can then be performed immediately prior to insemination to help to select the best quality sperm. Detailed diagnostic tests are also available, such as sperm DNA integrity, immunohistochemistry, and karyotyping, which may also offer useful information. This talk will provide an overview of tests of semen quality that are available in the diagnosis of male fertility.

Majed Shabbir, Consultant Urologist, Guy's & St. Thomas' Hospital, London

Majed Shabbir is a Consultant Urologist at Guy's & St. Thomas' Hospital, where he is the Clinical Lead for Andrology, Male Infertility & Genito-urethral reconstruction. He is the Secretary of the BAUS Section of Andrology and GU Reconstruction national executive committee. He is the course tutor for male factor infertility for the RCS (England), RCOG and ESHRE training courses.

Post Testicular causes of Infertility

Learning Points:
To be able to identify obstruction as the cause of the problem
2. to be able to pinpoint the location of the obstruction.
3. to be aware of the options, and the pros and cons of treatment options dependent on the nature of the underlying problem

Male infertility is a sign of an underlying problem, either with testicular function and spermatogenesis, or with delivery of sperm. Wherever possible any reversible cause for male infertility should be sought and corrected, to ideally allow a return to normal function. In this lecture we will explore causes of functional and structural obstruction of the sperm pathway, and understand how to pinpoint the level and nature of the underlying issue. The lecture will also cover the different treatment options and their outcomes.

Prof Joris Veltman, Newcastle University

Prof. Veltman worked in Nijmegen, The Netherlands from 2000 until 2017, when he was appointed Director of the Institute of Genetic Medicine at Newcastle University. Prof. Veltman contributed significantly to unravelling the genetic causes of rare disease, to our understanding of mutational mechanisms underlying genetic disorders and to the implementation of genomics approaches in medicine. His research using both exome and genome sequencing revealed the genetic cause for more than 50 clinical syndromes and provided strong experimental evidence for a de novo paradigm in severe early-onset disorders. He now studies the role of de novo mutations in severe male infertility.
The Genetics of severe male infertility
1. Genomics is enormously powerful in disease gene identification and patient diagnostics
2. The field of male infertility genetics is underdeveloped, most genes reported do not have sufficient evidence to be
called a male infertility gene
3. De novo germline mutations are a major cause of diseases with an effect on fitness, which
makes it important to study them in male infertility.

Genetics research has advanced dramatically in recent years, but unfortunately, advances in male infertility are not as
advanced as that in many other research fields. Consequently, most patients
remain without a molecular diagnosis. In this presentation, I will discuss the current state of the art of genetics research
and diagnostics in male infertility (see Oud et al. Human Reproduction 2019). In addition, I will show the first results of
exome sequencing studies in patient-parent trios, aiming to identify the role of de novo as well as inherited genetic
variation in severe male infertility.

Kevin McEleny, Consultant Urologist, Newcastle Fertility Centre

Biography as above

Surgical sperm retrieval

Introduction Surgical sperm retrieval can be used to recover sperms directly from the testicles in situations where there
is no sperm present in the ejaculate that is suitable for ICSI, and in nearly all cases, this means azoospermia.
Developments in recent years have enabled sperm to be recovered in situations where previously, the couples would
have been offered donor sperm treatment only. Patient selection is extremely important in this situation.

Abstract We will discuss the procedures used to recover sperm from men with obstructive and non-obstructive
azoospermia, with outcomes.

Key learning objectives The trainees will understand the indications for surgical sperm retrieval and the techniques
available (with indications). The presentation will accompany learning objectives 7i (trainee to observe surgical sperm
retrieval for obstructive azoospermia and 7ii (Trainee to observe surgical sperm retrieval for non-obstructive
azoospermia)

Majed Shabbir, Consultant Urologist, Guy's & St. Thomas' Hospital, London

Biography as above

Varicoceles and male infertility

Learning points
1. to understand the controversy surrounding varicoceles
2. to review the current literature, evidence and guidelines on
management. 3. to assess different forms of treatment

Varicoceles remain an area of controversy in male infertility. In this lecture we will explore the available evidence and
literature on varicoceles, including an assessment of the different treatment modalities and updates to guidelines, to
provide a more evidence based rationale to treatment.
James Lawford-Davies, Partner, Hill Dickinson LLP

James specialises in the regulation of assisted reproduction and embryo research. He advises a large number of clinics, hospitals, universities and researchers licensed by the Human Fertilisation and Embryology Authority (HFEA), the Human Tissue Authority (HTA) and the Care Quality Commission (CQC). He has been involved in most of the leading cases relating to assisted reproduction, embryo and stem cell research.

**Regulation and legal aspects in the use of donor gametes,**

This presentation will provide an overview of the key regulatory considerations regarding donor conception and the use of donor gametes. It will examine the legal and regulatory issues specific to donor conception, namely the information provisions regarding donor conceived children, the information available to donors, rules governing payments to donors, donor recruitment, consent and legal parenthood, and liability considerations.

Vasanti Jadva, Senior Research Associate, Centre for Family Research

Dr Jadva’s research examines the psychological well-being of parents and children in families created by IVF, egg donation, sperm donation and surrogacy. She has also studied the experiences of surrogates and gamete donors. Dr Jadva is currently working on a number of different projects including a longitudinal study of families created using gamete donation and surrogacy; a project examining parent-child relationships of infants born using identity-release egg donation; a study of single fathers by choice and a survey of intending parents motivations for and experiences of going abroad for surrogacy.

**The changing face of the modern family**

Children conceived by gamete donation and surrogacy do not experience psychological problems. Children who are told about their conception before age 7 have more positive family relationships and higher levels of adolescent wellbeing at age 14. Most adolescents felt indifferent about their conception, although many were interested in their donor or surrogate if they were not in any form of contact. Of those in contact most were positive about this. Findings will be presented from research into parenting, parent-child relationships and children's adjustment in families with a child conceived using egg donation, sperm donation and surrogacy. Other areas to be discussed include disclosure about the method of conception, children's thoughts and feelings about their birth and differences between families based on type of donor, i.e. known donor versus identity release donor.

Rachel Cutting, Principal Embryologist / Person Responsible, Jessop Fertility, Sheffield Teaching Hospitals NHS Foundation Trust

Rachel graduated from the University of Nottingham in 1995 and completed the ACE post graduate diploma in 1998. In 2001 she gained the position of Principal Embryologist at Jessop Fertility and holds the position of Person Responsible. Rachel’s was chair of the ACE from 2011-2014 and is an assessor for the ACS and NSHCS. She is involved in writing the national curriculum for training embryologists and has written national guidelines for oocyte freezing and elective single embryos transfer. She was awarded an MBE in 2015 for services to infertility.

Cross border fertility care

**Learning points:**
- Destinations and reasons for fertility travel
- Global aspects of regulation and quality of care
- Legal perspectives and ethical issues
Over the last few years increasing number of patients are seeking treatment overseas. This globalisation phenomenon sees patients traveling to wide range of countries for diverse reasons. Many patients use the internet and make independent choices regarding their choice of clinics where as other undergo a pathway of shared care with a consultant in their own country. There are many ethical issues as well as those associated with legalities and patient safety which suggests that there should be recommendations for best practice. Regulation and assessment of quality of care is limited in many countries and centres overseas should perhaps seek some form of accreditation to reassure patients and referrers. UK centre staff should ensure they know the regulations regarding export of sperm for use in donor egg cycles especially if an special direction is being applied for for export of sperm.

**Dr Jane Stewart, Chair, British Fertility Society**

Dr Stewart heads the Newcastle Fertility Centre; the largest NHS Centre in the North East of England. With over 25 years in the specialty she brings her experience of running a successful donor recruitment and treatment program to this course. She is a Subspecialty Training Programme Director, Person Responsible for the Centre and Chair of the BFS.

**Eggs and embryos: donation and sharing**

To understand:
- The principles of egg donation and sharing including recruitment and screening.
- Legal issues around egg donation and sharing.
- The specifics of egg donation including within single sex relationships.

Whilst the technical processes of IVF have enabled eggs and embryos to be made available for donation for the treatment of others, there is much more involved than simply the handing over of good quality material.

This lecture will in addition to practicalities, consider the legal and ethical considerations surrounding egg and embryo donation which influence the implications both short and longer term for donors and recipients. It will also discuss the specific factors relating to donation within same sex relationships. Whilst the legal aspects relate to treatment undertaken in the UK there are many aspects which demonstrating good practice can be applied to an international perspective.

**Jan Grace, Consultant Gynaecologist, Assisted Conception Units, Guy's Hospital, London**

Jan Grace obtained a first degree in Biology and Chemistry graduating from the Royal London Hospital and then completed her Obstetric and Gynaecology training and sub-speciality training in reproductive medicine and surgery at Guy's and St Thomas' , Appointed as a consultant in 2006 at Guy's and St Thomas'. She has always had a keen interest in training and education. As undergraduate lead set up GSTT O and G summer school, as RCOG SE work place behaviour champion and developed GSTT bullying and harassment training programme and is RM SST programme director. having completed a diploma in NHS leadership she was head of service for gynaecology for 3 years and is now Clinical director for Women’s services. Clinically her interests lie in PGD, reproductive surgery in particular management of fibroids, gamete donation having set up the GSTT donor programme and combined andrology service and fertility preservation. She is also lead of Maidstone and Tunbridge Wells fertility service.

**Surrogacy (reasons for and outcomes)**

**Key Learning Points:**
1. Ensure indication the appropriate and both surrogate and intended parents are treated safely
2. Seeking legal advice is vital
3. As surrogacy is complex it is best managed by an experienced ,dedicated multidisciplinary team of nurses, clinicians and counsellors
Surrogacy is the agreement between a third party (commissioning couple) and a woman, that she will become pregnant with the intention of handing the child to the couple after delivery. About 50-80 births per year in UK. Host (gestational or full) IVF uses gametes from intended parents and/or donors and embryo transfer into surrogate. Straight or partial surrogacy is artificial insemination using intended fathers or donor sperm and surrogate mothers egg. Indications include absent or anatomically abnormal uterus, recurrent miscarriage or implantation failure, a medical condition in the mother that makes pregnancy life threatening and same sex couples. Thorough clinical management, counselling and consent by an experienced team is essential. Surrogacy is legal in the UK but the HFEA does not regulate the practice. It is imperative to seek legal advice and commissioning couple have to obtain a parental order.

Louisa Ghevaert, Founder, Louisa Ghevaert Associates

Louisa is the UK’s leading expert in fertility, surrogacy, donor conception and family law. She has litigated many of the most important fertility and family law cases for modern families and won numerous changes and improvements to law and policy for parents, children and families. Louisa is founder of specialist law firm Louisa Ghevaert Associates, www.louisaghevaertassociates.co.uk.

Louisa is a member of the national Egg Donation Stakeholder Advisory Group led by De Montfort University. She is a Fellow of the American Academy of Assisted Reproductive Technology Attorneys and a Fellow of the Assisted Reproductive Technology Section of the American Bar Association.

Legal aspects of surrogacy

Learning points:
Recent developments in surrogacy case law
Single intended parent eligibility for a parental order
Surrogacy/fertility claims following medical negligence

This session looks at recent developments in surrogacy law and practice including: single parent eligibility for a parental order, surrogacy and fertility claims in cases of medical negligence, surrogacy law reform, complex legal and practical issues and outcomes when surrogacy arrangements breakdown and the role of specialist legal advice.

Suzanne Dark, Senior Fertility Counsellor, British Infertility Counselling Association

Suzanne is Senior Fertility Counsellor at Jessop Fertility in Sheffield. She is a Senior Accredited Member of the British Infertility Counselling Association, involved nationally with fertility counsellor training and a member of BICA’s executive committee. Most recently Suzanne has been on the editorial group for the revision and recent publication of BICA’s ‘Guidelines for Good Practice in Fertility Counselling’, 4th Edition.

The role of counselling in contemporary family creation

Learning points:
Definition of counselling and the role of fertility counselling in creating family through donation and/or surrogacy
An overview of counselling for recipients, donors, and surrogacy arrangements.
The fertility counsellor’s role where welfare of the child concerns arise

This talk will cover the role of fertility counselling in a multidisciplinary approach to contemporary family creation through ART. The speaker will define counselling, and outline what it offers patients planning treatment involving donor conception and/or surrogacy. The speaker will emphasise the importance of the multi-disciplinary team's understanding of 'implications counselling', and how to introduce this to patients in the pre-treatment work-up. This will be followed by an overview of the issues and topics covered in implications counselling for recipients, donors, intending parents and surrogates. Finally the speaker will cover the counsellor’s role where Welfare of the Child issues arise.
James Barrett, Lead Clinician, Charing Cross Gender Identity Clinic

Dr James Barrett trained as a liaison psychiatrist but is now the Clinical Lead and Consultant in Adult Gender Dysphoria Medicine at the Charing Cross Gender Identity Clinic. In a thirty year career he has assessed about ten thousand people with gender dysphoria, is the author of a textbook on the subject and is President of the British Association of Gender Identity Specialists. Outside of Gender Dysphoria Medicine his only connection with fertility is being father to three children.

Fertility and gender reassignment

Key Learning Points:
1. People with gender dysphoria do not have a psychiatric illness; they and can and do make good parents.
2. They need a sensitive gamete storage service to preserve their fertility - something that is often funded by the NHS.

People who change their social gender role do not have a psychiatric illness; their body simply very profoundly doesn’t match their sense of themselves. Gender identity clinics assess, advise and support people with gender dysphoria through the emotional, social, legal and occupational process of changing social gender role along with the associated medical and surgical procedures. Gender dysphoria medicine intersects with fertility medicine at two very distinct points. The first is before any hormone treatment, when gamete storage is still possible; the second is later, when a settled life (and often relationship) in a new gender role might be completed by parenthood, sometimes deploying previously stored gametes.
Neil Pugh, Medical Physicist, University Hospital of Wales

Neil Pugh graduated from the University of Wales College Swansea with a degree in physics, and took up his first post as a medical physicist in Manchester. Whilst there, he completed a part time M.Sc. in Medical Physics at Leeds University. He returned to South Wales in 1985, working for 3 years in nuclear medicine before switching to the Doppler ultrasound department. During his time in Doppler ultrasound, he completed a PhD thesis investigating the effects of contrast media on the peripheral circulation. In 2001, he was appointed to the post of Consultant Medical Physicist and Head of Ultrasound Physics in the Medical Physics and Clinical Engineering directorate, with responsibility for vascular ultrasound and quality assurance. He holds an Honorary Professor post in Engineering at Cardiff University, where he runs modules in Medical Ultrasound and Foundation Science on undergraduate & PGC/PGD/ MSc courses. He heads an active research group containing several PhD students, along with personal research interests in ultrasound in the diagnosis of vascular disease and ultrasound vascularity assessment in gynaecology and fertility, both of which have resulted in many publications.

Image optimisation, ultrasound artefacts and safety

Key Learning Points:
1. To give a basic understanding of the physical principles underlying the formation of an ultrasound image and how to improve the image.
2. Common ultrasound artefacts and how to overcome these artefacts will be discussed.
3. At the end of the lecture, the trainee should understand the following: • The factors which lead to an optimal image • How the basic controls can be used to manipulate the ultrasound image • How to improve image quality • How to use ultrasound safely • Common B-mode artefacts and, where possible, how to overcome them

The topics covered in this lecture will include:
• What does image quality depend on? • Factors influencing image resolution • Factors influencing signal strength
Importance of the following on signal strength: Acoustic power / Gain / TGC / Focus
Importance of the following on resolution: Frequency / Focus
The importance of the following B-mode artefacts: Resolution artefacts / Reverberation / Refraction / Shadowing Enhancement / Other artefacts

Nazar Amso, Emeritus Professor, Obstetrics and Gynaecology, Cardiff University

Nazar Amso is an Emeritus Professor in Obstetrics and Gynaecology, Head of the Academic Department of Obstetrics and Gynaecology, School of Medicine, Cardiff University (2001-2002 and 2010-2013) and Senior Consultant in Gynaecology and Reproductive Medicine since April 1998. He qualified from the College of Medicine, University of Baghdad, Iraq in 1974, MRCOG in 1985 and PhD in reproductive medicine, London University in 1996. Nazar’s clinical interests include gynaecological ultrasound, reproductive surgery and minimally invasive techniques. He was the Director of Cardiff University Ultrasound Masters programme f(2004-2016). His research interests included reproductive medicine, minimally invasive treatments, gynaecological ultrasound and the role of simulation in ultrasound education. He was the founding President of the British Society for Gynaecological Imaging (2007-2016).
Transvaginal scanning: Anatomy, physiology and technique

Key Learning Points:
1. Key machine skills
2. Key patient-related skills
3. Systematic approach to transvaginal scanning

In this presentation, the speaker will emphasize on key skills, describing the key anatomical landmarks and their respective changes during the menstrual cycle.

The presentation will also demonstrate basic image orientation and optimisation skills, and a systematic approach to examining the cervix, uterus and adnexa. At the end of the presentation delegates should be able to implement these skills during the afternoon workshop and later in their own practice.

Geeta Nargund, Medical Director, CREATE Fertility

Founder and Medical Director, CREATE Fertility and Lead Consultant for Reproductive Medicine services at St George’s Hospital, London.


Publications: Professor Nargund has published several peer-reviewed scientific papers including abstracts and also several book chapters in the field of reproductive medicine and advanced ultrasound technology. Special interests: She is a regular blogger on Huffington Post on Health and Lifestyle. She introduced Fertility Education in London Secondary Schools. Campaigner for the welfare and safety of women in IVF.

Shyamaly Sur, Consultant Obstetrician and Gynaecologist, Queen Charlotte’s Hospital, London

Shyamaly is a consultant obstetrician and gynaecologist and subspecialist in reproductive medicine with a special interest in early pregnancy at Queen Charlotte’s Hospital, London. She graduated from Pembroke College, at the University of Cambridge and went on to train in the field of O&G within the Oxford Deanery. She also subspecialised in reproductive medicine in Nottingham, having completed her PhD there, investigating the pre-conceptual and first trimester predictors of pregnancy outcome in the IVF population. Her research interests lie within the field of early pregnancy and reproductive medicine, specifically the use of 3D USS and power Doppler to characterise pelvic pathology and first trimester measures of embryonic growth in relation to singleton and twin pregnancies as well as miscarriage which she has published in.
Pelvic pathology

Key Learning Points:
1. The use of transvaginal ultrasound, 3D ultrasound and saline ultrasonography in the diagnosis of pelvic pathology
2. During this interactive session, delegates will be introduced to the features of common benign endometrial, myometrial, tubal and ovarian pathology.
3. To enable delegates to recognise pathology at pelvic ultrasound.

Harish Bhandari, Consultant Gynaecologist and Sub-specialist in Reproductive Medicine, Leeds Fertility, Leeds Teaching Hospitals NHS Trust, Leeds

Mr Harish Bhandari is a full-time NHS Consultant Gynaecologist and Sub-specialist Reproductive Medicine in Leeds. He was awarded the Doctorate of Medicine (MD) by University of Warwick for his research work evaluating the effects of obesogenic environment on peri-implantation endometrium. He has special interests in recurrent miscarriage, recurrent implantation failure, reproductive immunology and endometrial research.

Ultrasound guided procedures in fertility treatments

Learning Point:
To learn the various ultrasound-guided procedures undertaken as a part of assisted reproductive technology treatment

Ultrasound is an important tool for undertaking assisted reproductive technology (ART) related procedures and this presentation would provide an overview of these procedures.
Trans-vaginal ultrasound guided approach is the gold standard technique for oocyte retrieval, which can be safely undertaken under sedation. Trans-abdominal ultrasound guided embryo transfer procedure appears to be associated with better pregnancy outcomes when compared to clinical-touch technique. Persistent simple ovarian cysts which fail to resolve spontaneously or with hormonal manipulation can be aspirated under ultrasound-guidance (trans-vaginal or trans-abdominal) prior to ART.
We will discuss if significant hydrosalpinx which becomes apparent during controlled ovarian stimulation should be aspirated during oocyte retrieval. Trans-vaginal ultrasound-guided methotrexate injection, complemented with systemic methotrexate has been found to be safe and effective for the management of clinically difficult ectopic pregnancies (interstitial and caesarean scar), which are more likely to be associated with ART.

Tommy Tang, Consultant Gynaecologist, ReproMed, Ireland

Dr Thomas Tang graduated from the University of Aberdeen and did most of his specialist training in the Yorkshire region. He was awarded a postgraduate degree of Doctor of Medicine by the University of Leeds in 2007; his research focused on fertility care for women with Polycystic Ovary Syndrome.
He became a Consultant Gynaecologist and Specialist in Reproductive Medicine in 2010 and joined the team in the Regional Fertility Centre, Belfast in 2012. He is also interested on postgraduate education and is currently an associate editor in the RCOG journal ‘The Obstetrician and Gynaecologist’.

Early pregnancy scanning

Recognise USS features of early intrauterine pregnancy
Diagnosis of ectopic pregnancies
Usefulness and limitations of serum hCG levels
Early pregnancy scanning in reproductive medicine settings is often different from scanning in early pregnancy units caring for women who conceive spontaneously.
Firstly, gestational age for assisted conception is fairly accurate; women are often offered very early pregnancy scan typically after 6 week’s gestation, therefore it is important to recognise ultrasound features of early intra-uterine pregnancy.

Secondly, multiple pregnancy in fertility treatments are far more common than in natural conceptions, as a result high order pregnancy and heterotopic pregnancy should always be considered as a possible diagnosis in early pregnancy scanning.

Finally, ectopic pregnancy is not uncommon in assisted conception and yet most patients are relatively asymptomatic at their first scan. A high index of suspicion is needed when intra-uterine pregnancy cannot be identified; understanding the usefulness and limitation of serum hCG levels can also aid the diagnosis.

Kannamannadiar Jayaprakasan, Subspecialist and Hon. Associate Professor in Reproductive Medicine & Surgery, Royal Derby Hospital, Derby & University of Nottingham

Mr. Jayaprakasan, sub-specialist and Hon. Associate Professor in Reproductive Medicine and Surgery, is working as Fertility Unit Lead at Royal Derby Hospital, Derby and as IVF consultant at CARE fertility, Nottingham. His PhD from University of Nottingham was on standardizing the ultrasound methods of ovarian reserve assessment with particular focus on 3D ultrasound markers. He has published over 80 peer reviewed papers on fertility and ultrasound topics and has edited three textbooks including “Ultrasound in Subfertility – Routine applications & Diagnostic challenges” and “Clinical management of pregnancies following ART”. He currently serves as expert adviser for NICE centre for guidelines, member of RCOG’s scientific advisory committee and StratOG module editor.

3D Ultrasound

Learning points:
How to do a 3D scan
Clinical application of 3D ultrasound in a fertility unit
Evidence base on the use of 3D ultrasound

Ultrasound is absolutely essential for day to day clinical practice in a fertility unit. Conventional 2D ultrasound provides us with two-dimensional images of three-dimensional structures, which appear as real-time cross-sectional slices through the organ/structures being examined. The views can be restricted at times due to limited scan planes. In contrast, 3D ultrasound techniques rely upon production of a composite of multiple two-dimensional scan images. Computing software within the 3D ultrasound machine is then used to fill in the gaps between these images to produce a 3D image volume. The acquired 3D ultrasound volume can then be displayed in simultaneous multiplanar view, which can then be post-processed to improve spatial orientation and image interpretation. 3D ultrasound, especially its unique coronal plane view, is the modality of choice in diagnosing uterine anomalies and may help in improving diagnosis and making appropriate management plans in certain other clinical scenarios. However, other than its application in the assessment and differentiation of uterine anomalies there is limited evidence that 3D ultrasound results in clinically-relevant benefit or negates the need for further investigation.
James Kingsland, OBE- President, GP, National Association of Primary Care

A UK General Practitioner of considerable experience and talent who throughout his career has consistently been elected by his peers into leadership positions, both locally and nationally. Unique as a practicing clinician, who is also a broadcaster, writer, presenter, speaker and educator. Featured in Who's Who since 2012 and appointed an Officer of the Order of the British Empire in the 2012 Queen’s Diamond Jubilee New Year Honours List for services to Medicine and to Healthcare.

A skilled clinician and manager of change he has been at the forefront of NHS reform for over 25 years.

James is the Senior Partner in a nationally renowned, award winning General Practice in the North West of England. He has a wealth of experience in primary care, medical education and medical politics.

He is President of the National Association of Primary Care (UK) having previously served as Chairman from 2004-08 and is the co-author and national clinical lead of the new care model for the NHS, the Primary Care Home, possibly the largest reform programme for primary care provision in a generation. He is a founding director of Waring health Ltd, an international specialist medical consultancy firm. In his international roles he is the primary care lead for the Faculty of Disaster Medicine for India and Nepal. He was a GP trainer for 20 years and an undergraduate tutor for the medical schools of Liverpool and University College London. In June 2018 James was appointed as an honorary clinical professor in the School of Medicine at the University of Central Lancashire.

Jonathan Koslover, Managing Director, Manchester Fertility

Jonathan has been involved with Manchester Fertility since 2011. He is a Chartered Accountant and Management Consultant by training. He has led the clinics’ business turnaround and development of the marketing, service offering, IT applications, innovation, organisation design and performance management aspects.

He jointly led the set up of Semovo, a sperm donor recruitment and sales business in 2016

Developing a service and business planning

Not provided

Rachel Cutting, Principal Embryologist / Person Responsible, Jessop Fertility, Sheffield Teaching Hospitals NHS Foundation Trust

Rachel graduated from the University of Nottingham in 1995 and completed the ACE post graduate diploma in 1998. In 2001 she gained the position of Principal Embryologist at Jessop Fertility and holds the position of Person Responsible. Rachel’s was chair of the ACE from 2011-2014 and is an assessor for the ACS and NSHCS. She is involved in writing the national curriculum for training embryologists and has written national guidelines for oocyte freezing and elective single embryos transfer. She was awarded an MBE in 2015 for services to infertility.

Being PR: The PR Job Description

Learning points:
1. Understand the legal requirements of a Person Responsible under the HFE Act 1990 (as amended)
2. Understand the duties a PR undertakes
3. Understand key behaviours which a leader should demonstrate to deliver high quality of care to patients with a high compliance

The law requires licensable activity to take place only under the supervision of a Person Responsible. The role of the Person Responsible (PR) is to ensure that all licensed activities are conducted within the regulatory framework that governs treatment and research involving gametes or embryos. Simply the PR has the ultimate responsibility. The PR role is key to running a successful centre and the ability to be a good leader is essential. There are many key behaviors which a good leader demonstrates, taking ownership and providing direction, having drive and energy, the ability to communicate and engage others to deliver and improve service and managing and developing staff. The PR needs to
ensure compliance not only in inspections but in day to day working. As well as legislation the PR must have enough understanding of the scientific, medical, social, ethical and other aspects of the centre’s work to be able to supervise its activities properly. The duties required are variable and involve the ability to communicate well with centre staff to ensure the legislation is integrated into clinical practice effectively. The role can be demanding and time consuming – an open door policy to support staff in my experience is essential. The ultimate goal is to ensure continuous improvement in order for patients to receive the best possible care.

Sharon Fensome- Rimmer, HFEA Chief Inspector

As a state registered scientist and a Chartered Quality Professional Sharon has worked within science & quality since 1988. Sharon started her career within quality control, trained as a Scientist within the NHS gained a Masters degree in Biomedical Science, becoming a fellow of the institute of Biomedical Science and achieving Chartered Scientist Status. She has undertaken further training in the field of Quality and has also achieved the status of Fellow of the Chartered Quality Institute. As both a Health and Care Professions Council registered Scientist and Chartered Quality Professional Sharon has a unique insight into the Health Care Sector having worked in laboratories & governance. Sharon is the Chief Inspector of the Human Fertilisation and Embryology Authority.

HFEA overview of inspection and compliance in UK fertility clinics

To have an appreciation of the following:
State of the Sector trends.
What the sector does well
What can be improved

An overview of the State of the Sector analysis giving details of the inspection data from 2015 through to 2018/19. Which will include the following:
Growth of the sector over the years.
How the sector has changed including demographics.
Number of inspections.
Comparison of renewal cycles including of non-compliances and common trends.
Early feedback from inspections regarding the most recent Code of Practice changes regarding emotional support and leadership.

Ray Shannon, Company Chair, Executive Coach

Former NHS chief Executive, with Board level experience in the Independent Health Sector as CEO and Chair. Executive Coach and Leadership Mentor (ILM level 7)

Leadership styles and workplace culture: leading a multidisciplinary Fertility team, challenges and solutions

Learning points:
1) demystifying leadership
2) understanding Organisational Culture and change strategies
3) managing the challenges of working in multi disciplinary teams.

Leadership Styles and workplace culture: leading a multidisciplinary Fertility team, challenges and solutions. This will be a workshop session drawing on participants experiences with emphasis on action based learning.
Nilendran Prathalingam, Quality Development Manager, Newcastle Fertility Centre

Nilendran Prathalingam is the Quality Development Manager at the Newcastle Fertility Centre. Having completed his first postdoctoral position in London, he joined the Centre in 2006 as a Postdoctoral Research Associate to derive clinical grade human embryonic stem cells. During this period he gained invaluable experience in Quality Management Systems in both a clinical and research environment. At the end of the project in 2012, he became the Quality Development Manager for the Fertility Centre. In this role he has prepared the department for numerous clinical and research HFEA inspections and works closely with the NHS Trust to meet their clinical governance requirements.

Quality Management and You

Learning points:
1) Establishing a culture of Quality Management System within a Fertility Centre.
2) Successes and failures in establishing a Quality Management System in a multidisciplinary team.
3) Understanding Quality Management in an NHS environment.

A Quality Management System (QMS) is vital to both the laboratory and clinical aspects of a Fertility Centre in order for the Centre to be safe and effective. Good incident investigation, audits, training, document control and selecting the correct key performance indicators and audits are vital. To be effective all staff have to be involved in the QMS and to see the benefits from the system. The presentation will also cover implementing the QMS aspect of the new Code of Practice.

Andrew Leonard, HFEA Senior Inspector and Andy Glew, HFEA External Inspector

Andrew Leonard Bio not provided

Andy Glew has been a Clinical Embryologist since 1984. He gained a huge amount of experience through all the laboratory and regulatory developments over time. He is the PR and Director of Simply Fertility which is part of the Fertility Partnership where they embrace all the latest technology to ensure consistent success. He has been an external inspector with the HFEA for over 10 years and been involved in many inspections throughout the UK.

Top tips for inspection

Learning points:
How to prepare as PR for an inspection
Ensure shared learning through your quality management system
Tools to ensure compliance with the regulator

Clare Ettinghausen, Director of Strategy and Corporate Affairs, HFEA and Ruth Wilde, HFEA Authority member and Senior Fertility Counsellor

Clare is Director of Strategy and Corporate Affairs at the HFEA. She oversees the HFEA work on policy development, research and intelligence using the register data more effectively, communication with patients, clinics and the media, and licensing and governance activities. Clare chairs the HFEA Executive Licensing Panel and Registers Research Panel

Patients and the HFEA: Evidence from the HFEA national patient survey and Choose a Fertility Clinic patient feedback facility - one year+ on. Patient feedback and complaints: A case study

Learning points:
- Gain an overview of what patients think about fertility treatment in the UK
- Understand how patients feedback on their experiences in clinics to the HFEA
- Look at how to utilise and learn from patient feedback at your clinic

Kate Brian, Women’s Voices Lead, Royal College of Obstetricians and Gynaecologists and Anna Coundley, Policy Manager, HFEA

Kate Brian is Women’s Voices Lead at the RCOG and a lay member of the HFEA. She is Editor of the Journal of Fertility Counselling and a Lay Representative for Health Education England in London. Kate is a former television journalist.
and is author of The Complete Guide to IVF and Precious Babies - Pregnancy, Birth and Parenting after Infertility. She continues to work as a freelance journalist and writer, and has presented two documentaries on sperm donation for BBC Radio 4. Kate’s two children were both born after IVF treatment.

Anna Coundley, Policy Manager, HFEA
Anna Coundley joined the HFEA Intelligence team in January 2017 as the Information Access Manager, before becoming a Policy Manager in February 2018. Anna has led on several policy areas including patient support, consent to data research and direct to consumer DNA testing and its impact on donor assisted conception. This year, Anna’s work on the high-profile patient support project has included a review of the HFEA’s Code of Practice guidance on patient support, the production of various online resources for clinics and the development of a series of web based and face to face training sessions aimed at clinic staff, to be held later in 2019. The project aims to improve the emotional support fertility patients, their partners and donors receive, before, during and after treatment. Before joining the HFEA Anna spent two years at the Department of Health working in Freedom of Information. She is a Modern Languages (French and German) graduate from the University of Exeter.

What do patients think and want?
Learning points: 1. The patient perspective: findings from the HFEA 2018 patient survey and other surveys
2. The emotional experience of fertility treatment
3. Communicating with empathy
4. HFEA new resources for clinics on patient support
This talk will focus on the patient perspective: what do patients tell us about their experiences of treatment, what would make a difference to them and how can we use the available evidence to improve patient experience? The talk will explore the emotional experience of fertility treatment and provide practical tips on how all staff can interact with patients with empathy. You’ll hear the HFEA’s response to the need for improved patient support, which will include a presentation of a range of new resources and training opportunities available to clinics.

Paula Nolan, Clinical Governance Lead, Human Fertilisation and Embryology Authority
Paula initially trained as a critical care nurse specialising first in heart and lung transplant and later in emergency medicine. After leaving acute medicine Paula became the Senior Caseworker at Action Against Medical Accidents. She became the Clinical Governance Lead at the HFEA after three years as Patient Complaints & Incident Inspector. Paula is a rapporteur representing ART in the Vigilance Expert Subgroup as part of a European Commission working group. As well as an editorial panel member (process sub group) for the NOTIFY Library. Paula is currently enrolled on an MSc in patient safety at Imperial College.

Dealing with incidents-Legal requirements: the duty of the PR on what, when and how to report incidents
Looking back at the incidents reported to the HFEA between April 2018 – March 2019. Using examples of incidents to discuss what to report.
Discussing the impact an incident can have on a patient and the staff involved.
What type of concerns do patients report to the HFEA. How the quality of the complaint response can help or hinder with complaint resolution.

Raj Mathur, Consultant Gynaecologist, Manchester Foundation Trust
Raj Mathur is a subspecialist in Reproductive Medicine and Surgery and the clinical lead for a large NHS assisted conception unit. He has experience of leading HFEA-accredited units in the NHS and private sector. He is an Advisor to the Scientific and Clinical Advances Advisory Committee of the HFEA and Secretary of the BFS.
Dealing with incidents: Case reports from a clinical practice

Learning points:
1. The importance of understanding your obligations under the HFEA Code of Practice when faced with an incident
2. Keeping patients informed and involved through a candid and open approach
3. Using resources from other clinics which have been in similar situations and from the wider organisation that the clinic is a part of. I will present examples of real-life incidents from an IVF service. Incidents may involve individual patients or groups of patients and may result from non-conformance in clinical, laboratory or administrative functioning. The code of practice imposes specific duties on clinics with regard to reporting and investigation of incidents and the information that is required to be provided. Incidents will be discussed relating to breach of confidentiality, legal parenthood consents and extension of storage of embryos.
Dr Anne Lampe, Consultant in Clinical Genetics, South East Scotland Clinical Genetic Service

Dr Anne Lampe is a consultant in Clinical Genetics at the South East of Scotland Clinical Genetic Service in Edinburgh and has a special interest in rare syndrome diagnosis and eye genetics. She provides adult and paediatric genetic services for Fife, including prenatal and predictive testing.

Anne graduated from medical school at the Albert-Ludwigs-University in Freiburg, Germany and completed a PhD researching the role of collagen VI in muscular dystrophy at Newcastle University.

Anne is a Fellow of the Royal College of Physicians (Edinburgh) and is a member of the British Society for Genetic Medicine, the European Society of Human Genetics, the Clinical Genetics Society and the UK Eye Genetics Group. She is also an authority member of the HFEA.

**Introduction to genetic diseases, their mode of inheritance and their burden on health and reproduction**

**Learning points:**
- Mode of inheritance affects genetic risk
- A genetic diagnosis may affect different members of a family unit in different ways

Apart from affecting physical health, genetic disorders can also have a major impact on psychological and social well being of both patients and their families. Using examples from the "Telling Stories Understanding Real Life Genetics" project (http://www.tellingstories.nhs.uk) I will explore how genetic disorders and genetic testing results may affect inter-generational relationships, pose emotional challenges and ethical dilemmas.

Janine Elson, Consultant in Gynaecology and Reproductive Medicine, Liverpool Women's Hospital

Janine is an experienced Consultant in Gynaecology and a Subspecialist in Reproductive Medicine and Surgery. She has run Reproductive Genetics programmes for several large Fertility Groups and teaching hospitals. She was a member of the NHS England PGD policy group, and currently sits on the RCOG Clinical Quality Assurance Group. She was a co-author of ESHREs Recurrent Pregnancy Loss guideline.

**Reproductive options available to couples at risk**

**Learning points:**
- Importance of individualized patient care
- Genetic and reproductive counselling is key
- Information giving is key

Those at risk of a genetic condition may be aware of this because of screening tests carried out preconception, following pregnancy loss, after the birth of an affected child or because of their individual or family history. The key to managing such patients is counselling regarding the condition at which they are at risk, and a detailed discussion of the options available to them. This presentation will look at who is at risk, and the reproductive options that should be considered in each scenario.

Kathy Mann, Principal Clinical Scientist, Prenatal and Reproductive Genetics, Viapath Analytics, Guy's Hospital

Kathy Mann PhD FRCPath, is lead Clinical Scientist for Prenatal & Reproductive Genetics within the Regional Genetics Laboratory, Guy’s Hospital, London. With colleagues she developed the first QF-PCR service in the NHS for the rapid detection of prenatal aneuploidy and is widely published in the field of prenatal QF-PCR analysis including co-
The current status of NIPT and prenatal diagnosis

1. NIPT for trisomies is a screening test; confirmation of high risk results by invasive testing is recommended.
2. Evidence supports the use of NIPT for trisomies 13, 18 and 21; the use of NIPT for sex chromosome aneuploidy and microdeletions is not currently recommended and will result in additional non-invasive tests.
3. NIPD results for single gene disorders and fetal sexing are diagnostic and do not require confirmation. NIPD for a growing number of disorders is available from 10 weeks gestation.

Prenatal testing for genetic conditions has undergone a transformation in the UK in recent years; QF-PCR and array CGH technologies have largely replaced FISH and karyotype analysis for the detection of chromosome abnormalities and the long awaited goals of non-invasive prenatal testing and diagnosis (NIPT and NIPD) are finally being realised with an immediate impact on prenatal testing strategies. Whole exome sequencing (WES) is beginning to be applied to prenatal diagnosis with the latest data demonstrating significant clinical utility for a subset of pregnancies. Whilst there is no doubt that these exciting developments have the potential to improve prenatal testing, understanding of the limitations of these tests is necessary to minimise unhelpful and unexpected results. These technologies and their prenatal application will be reviewed with particular focus on current recommended practice.

Charlotte Tomlinson, Guys & St. Thomas' NHS Trust

Charlotte undertook a trainee genetic counsellor position at Bristol clinical genetics service from 2007 to 2009. She then worked as a genetic counsellor at St. George's Hospital clinical genetics service from 2009 to 2016, when she moved to Guy's Hospital clinical genetics service. In September 2018, she moved into the consultant genetic counsellor in general genetics and PGD role. In 2010 she was certified by the Genetic Counsellor Registration Board (GCRB) and re-registered in 2015. She has been a GCRB assessor of portfolios for a number of years and was elected to the GCRB board in 2019. Charlotte is a member of the British Society for Genetic Medicine Fetal Medicine Genomics steering committee.

PGD counselling and clinical pathway

Learning points:
- Learning about the counselling challenges of PGD.
- Understanding the importance of a PGD pathway.
- Close collaboration of the MDT team within the PGD service is essential to addressing the challenges.

The field of PGD has progressed significantly in terms of process and technology over the last 20 years. Whilst we are now able to offer PGD for more genetic conditions, the complexity of these conditions brings their own challenges. This talk will highlight these challenges and how a pathway and close MDT working is essential to managing these complexities.

Anne Lampe, Consultant in Clinical Genetics, South East Scotland Clinical Genetic Service

Biography as above

How does the HFEA regulate PGT?

What the law says about PGD and PGS
The regulatory pathway for PGD from patient consultation to embryo transfer
The HFEA’s position on PGS
PGD is regulated by the Human Fertilisation and Embryology Act 1990 (as amended)
A clinic must have a licence from the HFEA to carry out PGD testing. Then PGD can be carried out for a heritable condition for specific purposes listed in the Act
- where there is a particular risk that the embryo to be tested may have a genetic, chromosomal or mitochondrial abnormality,
- where there is a particular risk that any resulting child will have or develop a gender related serious disability, illness or medical condition.
The regulatory pathway from patient consultation to embryo transfer will be discussed.

Roy Pascal Naja, Laboratory Director, IGENOMIX UK
Dr Naja has a PhD in Human Genetics from McGill University, Montreal, Canada. Before joining Igenomix UK as Laboratory Director, Dr Naja was a Principal Clinical Scientist at the Neurogenetics laboratory UCLH/NHS foundation trust in London. From Dec 2015 to Aug 2016, Dr Naja was the senior Clinical Scientist at Reprogenetics UK. From Oct 2013 to Dec 2015 Dr. Naja was the Laboratory Manager of the UCL Centre for PGD. Dr Naja is a Clinical Scientist (HCPC) and an “Diplomate” member of the Royal College of Pathologists. Dr Naja is registered with UKAS as a technical assessor.

PGT diagnostic technologies

Learning points:
1. PGT diagnostic technologies have evolved over the last three decades and continue to evolve.
2. High resolution NGS has revealed chromosomal mosaicism in TE biopsies.
3. Rigorous validation of PGT procedures is mandatory.

PGT diagnostic technologies. Abstract: Preimplantation Genetic Testing (PGT) includes testing for monogenic disorders (PGT-M), structural rearrangements (PGT-SR) and aneuploidies (PGT-A). Technologies used in PGT-A/SR have evolved over the years from covering a single or few chromosomes by using Fluorescent In Situ Hybridization (FISH) to high resolution 24-chromosome screening by using Next Generation Sequencing (NGS). The increased sensitivity of NGS has revealed chromosomal mosaicism in TE biopsies thus creating some uncertainty regarding embryo selection for transfer. Similarly, methods used for PGT-M have evolved from interrogating a single mutation by using direct PCR to detecting the inheritance of any gene by using genome-wide linkage information derived from SNP arrays (Karyomapping method, Illumina) or NGS (Haplarythmisis/onePGT, Agilent). All preimplantation tests must be validated by the diagnostic laboratory before use to ensure high analytical accuracy as they generally involve small amounts of sample DNA as starting material.

Tarek El-Toukhy, Consultant Gynaecologist and Sub-specialist in Reproductive Medicine and PGD, Guy's and St Thomas' Hospital NHS Foundation Trust
Tarek El-Toukhy qualified in 1991. He completed a Masters degree and an MD degree in Gynaecology. He completed the RCOG accredited subspecialty training in Reproductive Medicine and Surgery at Guy's and St. Thomas' Hospital NHS Foundation Trust, where he was appointed as a consultant in Reproductive Medicine and Surgery and Pre-implantation Genetic Diagnosis (PGD). His special interests are PGD, recurrent implantation failure, hysteroscopic surgery and prevention of OHSS. He is a scientific editor for the British Journal of Obstetrics and Gynaecology
Clinical assessment/ preparation of PGT couples and factors that affect success and clinical results

Key Learning Points:
1. Understand the clinical assessment needed for PGT couples
2. Review the preparatory steps required before starting a PGT cycle
3. Explore the factors influencing the outcome of PGT cycle

Pre-implantation Genetic Diagnosis (PGD) was developed in the late 1980s as an alternative to prenatal diagnosis for couples at substantial risk of conceiving a pregnancy affected by a known genetic disorder. It enables IVF clinics to select embryos for implantation so that at-risk families can avoid passing on genetic disease to their children and to subsequent generations. Over the past decade the use of PGD has increased as its indications have expanded and changed, both with demand and improvement in molecular diagnostic techniques. The talk will cover clinical assessment and preparatory steps required before starting a PGD cycle, emphasize the difference between PGD and pre-implantation genetic screening (PGS), and explore the factors influencing the outcome of PGD cycle. Clinical results will also be presented.

Jonathan Skull, Consultant in Reproductive Medicine and Surgery, Clinical Head of Assisted Conception, Jessop Fertility, Sheffield Teaching Hospitals NHS Foundation Trust

Jonathan qualified from Bristol University and undertook postgraduate training in Sheffield and London. He was the Senior IVF Co-ordinator at the Hammersmith before returning to Sheffield in 1998, first as a Lecturer and then as Consultant. He was instrumental in establishing the Assisted Conception Unit at the Jessop Wing, where he has been the Clinical Head of the unit since it opened in 2001. He is also the lead clinician for the PGD satellite service. His other interests include Minimal Access surgery as well as active involvement with postgraduate training in Reproductive Medicine.

Service delivery models

Learning points:
1. Satellite PGD services allow patients to receive the majority of their treatment closer to home making the whole procedure more convenient and less stressful.
2. Various models for running a satellite PGD service will be discussed.
3. Good links with local genetic services and communication with the main PGD centre are essential for a successful programme Importance of good communication.

Service Delivery Models. Jessop Fertility started working with Guy’s as a Satellite PGD centre in 2008 and the demand for the service has increased significantly. Patients are initially referred to the service after initial assessment by the local Genetics team, where their suitability for PGD is assessed and relevant samples sent for work up. A full fertility assessment is undertaken concurrently in the fertility clinic to ensure that IVF+PGD is appropriate for the couple. Patients are then seen in a Joint PGD clinic to plan their treatment. All IVF monitoring is conducted locally with patients only having to travel to the PGD centre for the egg collection and subsequent frozen transfer. Alternative satellite PGD models where patients could undertake a local embryo biopsy with genetic testing performed at another centre will also be discussed. For satellite programmes to be successful there has to be excellent communication between all relevant disciplines.
Ali Al Chami, Fertility Consultant, MBBS, MRCOG, The Centre for Reproductive & Genetic Health, London

Ali Al Chami is a fertility consultant at the Centre of Reproductive and Genetic Health. He graduated as a medical doctor in 2006 and received obstetrics and gynaecology specialty training at the American University of Beirut Medical Centre. He then completed three years of clinical and research fellowship in reproductive medicine and assisted conception at the Reproductive Medicine Unit, University College London Hospital. He is also a member of the Royal College of Obstetrics and Gynaecology. His research interests include fertility preservation, pre-implantation genetic diagnosis and reproductive surgery.

Structure of cervix, uterus and tubes

1. To recognise the normal and pathological anatomical variations of the cervix, uterus and fallopian tubes and their impact on the embryo transfer procedure.
2. Understand the factors that affect the outcome of the procedure
3. To discuss the approaches to overcome difficulties in embryo transfer.

Embryo transfer procedure is the final and crucial step in any IVF cycle which can adversely impact the IVF treatment outcome. Most embryo transfer procedures are easy however in a small group of patients the procedure could be difficult and may cause cervical or endometrial trauma which can lead to unsuccessful implantation and poor outcome. This talk will review the anatomical and physiological aspects of the cervix, uterus and tubes and their relation to the embryo transfer techniques. It will also cover the impact of the related anatomical and pathological variations and the suggested evidence-based approaches to overcome any difficulty of the embryo transfer and IUI procedures.

Nabil Haddad, Consultant Gynaecologist, Cheshire Reproductive Medicine


Controlled ovarian stimulation

Learning points
1. When to use. 2. Safety first. 3. What’s new.

Rachel Cutting, Principal Embryologist / Person Responsible, Jessop Fertility, Sheffield Teaching Hospitals NHS Foundation Trust

Rachel graduated from the University of Nottingham in 1995 and completed the ACE post graduate diploma in 1998. In 2001 she gained the position of Principal Embryologist at Jessop Fertility and holds the position of Person Responsible. Rachel’s was chair of the ACE from 2011-2014 and is an assessor for the ACS and NSHCS. She is involved in writing the national curriculum for training embryologists and has written national guidelines for oocyte freezing and elective single embryos transfer. She was awarded an MBE in 2015 for services to infertility.
Assessment and preparation of sperm

- To understand the importance of accurate sperm assessment and the use of standardised World Health Organisation methodology;
- To understand how reference values for semen quality have been defined and how they relate to spontaneous conception and ART outcome;
- To understand the range of sperm preparation method available and what they are designed to achieve (e.g. removal of non-sperm cells from semen);

Sperm assessment has a long history and has the aim of trying to identify ‘good sperm’ and make a prediction of how likely conception is to happen. The World Health Organisation has produced guidelines for sperm assessment since 1980 and the 5th Edition of this manual was published in 2010. Using these guidelines, there is a positive relationship between semen quality and the probability of conception. However, there is significant uncertainty where the probability of conception is ‘indeterminate’. Data shows significant variation in the performance of sperm assessment between laboratories and proper internal and external quality assurance is essential to try and minimise such errors. Sperm preparation is essential prior to IUI or IVF (±ICSI) in order to remove sperm from seminal plasma and any non-sperm components of semen. There are three main sperm preparation methods in use in UK laboratories: (i) Density centrifugation; (ii) Swim-up; and (iii) wash and centrifugation. Although Density centrifugation is the most common, large randomised controls are lacking and a recent Cochraine review suggests there was insufficient evidence to suggest one method above another. Current research is being undertaken to assess and prepare sperm using: (i) microfluidic chambers; (ii) electrophoresis; (iii) high magnification optics (IMSI); and (iv) sperm binding to hyaluronic acid.

Harish Bhandari, Consultant Gynaecologist and Sub-specialist in Reproductive Medicine, Leeds Fertility, Leeds Teaching Hospitals NHS Trust, Leeds

Mr Harish Bhandari is a full-time NHS Consultant Gynaecologist and Sub-specialist Reproductive Medicine in Leeds. He was awarded the Doctorate of Medicine (MD) by University of Warwick for his research work evaluating the effects of obesogenic environment on peri-implantation endometrium. He has special interests in recurrent miscarriage, recurrent implantation failure, reproductive immunology and endometrial research.

Immunology and preparation of the endometrium

Learning points:

To learn about the endometrial preparation for implantation and the markers predictive of pregnancy outcome
To understand the role of endometrial decidualization in implantation
To discuss the immunological determinants of implantation success

A successful implantation and pregnancy depends on complex, but well-designed interaction between good quality embryo and receptive endometrium. Ovarian steroids induce endometrial decidualisation irrespective of pregnancy which is paramount for endometrial receptivity, embryo selection and subsequent placenta formation. Failure to express adequate decidual phenotype results in reproductive complications. Prospective assessment of decidualisation is an important tool for predicting the likelihood of successful implantation and pregnancy. Endometrial leucocytes are thought to play a key role in establishing feto-placental unit and subsequent immunological maintenance of pregnancy.

In this presentation, various markers of endometrial preparation for embryo implantation are discussed, and the clinical implications of impaired decidualisation and altered immune cells are addressed.
Rachel Gregoire, Scientific Director/HFEA Person Responsible, Hewitt Fertility Centres, Liverpool Women’s Hospital

Rachel has worked in the field of embryology for 20 years, starting her clinical training at Ninewells Hospital, Dundee where she completed a PhD in Developmental Medicine. In 2008 she moved to the Hewitt Fertility Centre Liverpool, one of the UK’s largest assisted conception providers, as Senior and then Lead Clinical Embryologist, leading a team of 15 scientists. In 2014 she moved to Glasgow Royal Infirmary as Consultant Embryologist and HFEA Person Responsible where she led the scientific service in delivering cutting edge techniques and achieved a significant improvement in clinical and laboratory success rates. In 2017 Rachel returned to the Hewitt Fertility Centres in Liverpool and Knutsford as the Scientific Director and HFEA Person Responsible where she continues to strive for excellence in laboratory technique and in clinical and laboratory success rates.

Rachel is very much involved in clinical embryology as a profession, working closely with the Association of Clinical Embryologists and the Royal College of Pathologists in delivering the HSS training program for future Consultant Embryologists, and chairs the NEQAS Reproductive Science Steering Committee for Embryology.

Optimising your embryo selection techniques

Learning objectives:
Overview of embryo selection techniques / Pre-implantation genetic screening / Time-lapse imaging technology / Morphokinetics / Embryo selection algorithms / Drawbacks and benefits of embryo selection technologies

Embryo selection for embryo transfer is the single, most influential factor affecting IVF outcome. The accurate selection of one or more viable embryos for transfer is therefore central to IVF success and improving live birth rates.

The risks of multiple pregnancy has lead to an increase in elective single embryo transfer (eSET) from 7% to 38% in 18-34 year old women over the last five years in the UK, whilst maintaining IVF success rates. The growth of eSET adds further pressure on the scientist to select ‘the’ single embryo with the highest potential of implanting and ultimately resulting in a healthy live birth.

As a result of this, embryo evaluation techniques employed within the IVF laboratory have rapidly evolved to include advanced technologies such as time-lapse imaging; morphokinetic assessments with embryo selection algorithms, and pre-implantation genetic screening, before there is sufficient robust evidence of their safety, efficacy and cost-effectiveness.

This presentation aims to provide an overview of current embryo selection techniques and to evaluate the benefits and drawbacks of the new technologies now routinely applied in UK clinics.

Valentine Akande, Bristol Centre for Reproductive Medicine

Valentine qualified in 1989 and has worked as a doctor in the NHS since 1991. He is a Consultant in Gynaecology and Reproductive Medicine at Southmead Hospital Bristol, North Bristol NHS Trust, and also an Honorary Senior Lecturer at the University of Bristol.

He is the Medical Director and Person Responsible for the Bristol Centre for Reproductive Medicine. Valentine Akande was elected to the British Fertility Society’s Executive committee from 2011-2017 and chaired the scientific meetings and conferences subcommittee. He has previously served on the Royal College of Obstetricians and Gynaecologist sub-specialist training and academic committees as well as the British Fertility Society Education and Training committee.

Is there a role for IUI in the future of fertility treatment?

Learning points:
IUI is a viable option for people with unexplained infertility
Higher pregnancy rates are achieved with ovarian stimulation
Undertaking IUI can be challenging, key points to optimise outcome will be discussed

James Nicopoullos, Consultant Gynaecologist, Sub-specialist in Reproductive Medicine and Surgery, Lister Fertility Clinic

James Nicopoullos is a consultant gynaecologist and sub-specialist in reproductive medicine and surgery now the "person responsible" at the Lister Fertility Clinic. He completed his O&G and sub specialty training in London, and completed an MD research thesis on the effect of Sperm aneuploidy and DNA fragmentation on ICSI outcome. He is also widely published in other areas of assisted reproduction such as management of viral positive couples, ovarian hyper stimulation and management or poor responders. when time allows he spends free time chasing after his 10 and 12 year old sons, tennis balls and obsessively following Arsenal.

Embryos transfer / IUI techniques

Learning points:
Preparation for transfer.
Transfer technique.
Post transfer advice.

Simon Wood, Countess of Chester Hospital/ Cheshire Reproductive Medicine

Simon Wood started in Reproductive medicine as a research fellow in Liverpool. He was the first trainee to undergo Sub Specialty training in the region and completed his training in 2001. Following this he was appointed as a consultant at the Countess of Chester Hospital and oversaw the running of the transport IVF service. In 2017 he was part of the team that established a full IVF service as a joint venture with a private IVF service and the NHS trust and in 2019 was involved in the creation of a new fertility provider Cheshire Reproductive Medicine.
He is the Medical director and Person responsible but is was still the leading practitioner in embryo transfers and IUI both in terms of numbers and pregnancy rates.

Catheter loading, transfer practice

Learning points:
Understanding catheters
Choosing catheters
Practical tips

Richard Anderson, Professor of Clinical Reproductive Science, MRC Centre for Reproductive Health, University of Edinburgh

Richard Anderson Completed Subspecialty training in Reproductive Medicine as a lecturer at the University of Edinburgh. After a year in Sam Yen’s lab in San Diego, he was appointed to the MRC Human Reproductive Sciences Unit. Subsequently appointed to current post in the University in 2005: established a group investigating the female reproductive lifespan, with both laboratory and clinical aspects focusing on the establishment of the follicle pool in fetal life, and the assessment and mitigation of iatrogenic damage in girls and women.
The effect of cancer treatment on female fertility and an overview of female fertility preservation

Key Learning points:

Range of effects of different chemotherapies; importance of age and ovarian reserve at different ages; success of oocyte cryopreservation and current data on ovarian tissue cryopreservation.

It has long been recognised that cancer treatments, including chemotherapy, radiotherapy and surgery can compromise female fertility. While the ovary is often the key organ of consideration, the uterus and less frequently the hypothalamus and pituitary gland may also need to be considered. Most of the data on pregnancy after cancer has come from children and adolescents with cancer, but recent data provide a more comprehensive overview, highlighting the importance of age as well as treatments. It is also clear that women with a higher ovarian reserve at diagnosis of breast cancer are more likely to retain ovarian function after treatment. This talk will also provide current data on the success of oocyte vitrification, and data on pregnancy rates after ovarian transplantation and replacement.

Victoria Grandage, Consultant Haematologist with an interest in late effects, University College Hospital London

Dr Victoria Grandage has been a Consultant Haematologist at University College Hospital London since 2007. She works with patients within the TYA age bracket with haematological disorders predominantly malignant.
Dr Grandage also has a specialist interest in late effects and consequences of treatment. She has led the development UCLH late effects service which is now one of the largest services for adult survivors of childhood cancer in the UK. She is a member of the CCLG late effects steering group and is involved in a number of projects Nationally relating to fertility and late effects.

Cancer in young people, long term outcomes

Learning points:
1) Definition and prevalence of late effects
2) Factors affecting the risk of late effects.
3) Aims of late effects follow up

The incidence of cancer in the UK has increased year on year with over 80% of teenagers and young adults becoming long term survivors. The burden of late effects after childhood cancer is dependent on tumour, treatment and host-related factors, such as age at diagnosis, gender and genetic predisposition. Detailed knowledge of these has been gained from two important cohort studies one in the USA and one in the UK. At 30 years after a cancer diagnosis, the US Childhood Cancer Survivor Study (CCSS) reported 73% patients had at least one chronic health condition; classified as severe, disabling or life-threatening in over 40%. Survivors therefore require lifelong holistic care focusing on the medical issues, psychosocial, educational and vocational implications of living beyond cancer.
The effect of cancer treatment on male fertility and sperm banking

Learning points:
- To understand the background to cancer in the male and how it affects fertility
- To be aware of the process of sperm banking and how males make the decision to bank
- To understand long-term fertility outcomes of survivors and the importance of fertility monitoring.

Sperm banking is a cheap and effective way of preserving the fertility of postpubertal males who face a risk to their fertility of medical treatments such as chemotherapy and radiotherapy. However, the organisation of services to maximise uptake continues to be a challenge and men often find making the decision quite difficult. However, in the long-term the fertility prospects for most men are quite good after the end of treatment, with many regaining the capacity to produce sperm. Only about 10% of men who bank sperm, ever return to use their frozen samples. Therefore, a challenge for those running sperm banks is how to assist men to engage with fertility monitoring so that those who no longer need their banked sperm can dispose of it in a timely manner. This presentation will outline our recent research which has examined these issues and provide practical suggestions for those running sperm banks for this group of patients.

Oocyte cryopreservation

Oocyte cryo-preservation provides a low but psychologically and statistically significant chance of achieving pregnancy. Involvement of the entire care-team (oncologists, IVF doctors, embryologists, counsellors, parents) is vital to ensure the treatment is offered appropriately and effectively. Establishing ovarian reserve (by AMH) is vital to set expectations as women with malignancy have reduced ovarian reserve when compared to age-matched controls.

Since Chen announced the first ‘frozen egg’ baby in 1986, progress with egg freezing has been advanced by improved cryoprotectants, vitrification and ICSI. Although vitrified eggs from young, healthy donors perform near identically to ‘fresh’ eggs, the situation for even young cancer patients is not as good as their malignancy has often compromised their ovarian reserve and their oocyte quality. A significant proportion of ‘oncology’ egg freezers have breast cancer and initial anxiety about the impact of even transient hyper-estrogenemia on their prognosis has been largely alleviated by follow-up studies and the use of Letrozole. The possibility of fertility preservation by oocyte freezing is too often raised too late or not at all and so it is vital that oncologists have ready access to information for their patients and a seamless referral pathway, including the availability of NHS funding, to their local IVF facility that has experience of oocyte freezing.
Ertan Saridogan, Consultant in Reproductive Medicine and Minimal Access Surgery, University College London Hospitals

Ertan Saridogan is a Consultant in Reproductive Medicine and Minimal Access Surgery at University College London Hospitals. He is a former President of the British Society for Gynaecological Endoscopy and a member of the European Society for Gynaecological Endoscopy Executive Committee as the Chair of Scientific Programme of Annual Congresses. He is also a member of the ESHRE and ESGE/ESHRE/WES Endometriosis Guideline Development Groups. His clinical interests include laparoscopic and hysteroscopic surgery for benign gynaecological conditions, reproductive surgery, endometriosis, fibroids and outpatient hysteroscopy. His research interests include noninvasive diagnosis of endometriosis, clinical outcomes following endometriosis surgery, outpatient hysteroscopy, and the place of screening and risk reducing surgery in women with a history of familial cancer.

Ovarian transposition for fertility preservation
Ovarian transposition (OT) and ovariopexy (or oophoropexy, OP) are surgical procedures performed to reposition the ovaries out of the radiation field in order to protect ovarian function in patients receiving pelvic radiotherapy.

Ovaries are very radiosensitive and radiation doses administered for the treatment of cancers of the cervix, endometrium, rectum, bladder and pelvic lymphomas range from 30 to 60 Gy, which will uniformly induce ovarian failure. By transposing the ovaries out of the field of radiation, the ovarian dose is reduced to 5-10% of that of nontransposed ovaries. In OT procedures the ovary is detached from the uterus by dividing the ovarian ligament, whilst maintaining the infundibulopelvic ligament, and moved out of the pelvis into the upper abdomen outside the radiation field. The ovary is then fixed to the peritoneum on the anterior abdominal wall under the costal margin. In OP procedures, both the ovarian and infundibulopelvic ligaments are maintained and the ovary is moved out of the radiation field by suturing it onto a supporting structure such as the obliterated umbilical artery, iliopectineal ligament, round ligament, uterosacral ligament or the posterior uterine wall.

The procedures are most effective below the age of 30 years, and in those not receiving concurrent chemoradiation. Their use should be considered either as a sole procedure or in association with other fertility preservation methods prior to pelvic radiotherapy.

Georgina Jones, Professor of Health Psychology, Leeds Beckett University

Georgina Jones (GJ) is a chartered psychologist and professor of health psychology at Leeds Beckett University having previously gained her D.Phil from the University of Oxford. She has over 15 years’ experience working on social science related projects using both qualitative and quantitative methods, including leading on the development and validation of new instruments; particularly within the field of women’s health; the Endometriosis Health Profile-30 (Jones et al, 2001, 2004, 2004, 2006), an electronic pelvic floor questionnaire (Radley & Jones 2004; Radley et al, 2006; Jones et al, 2008, 2009), the Polycystic Ovary Syndrome Questionnaire (Jones et al, 2004) and the Mothers & Partners Postnatal Health Instruments (Jones et al, 2011). She is currently developing a new questionnaire to measure the burden of immunoglobulin treatment for patients with primary immunodeficiency. Her EHP-30 is now officially translated into over 30 languages and is used internationally and in clinical trials by major pharmaceuticals. She has recently completed a three-year study exploring the decision-making process in women with cancer contemplating fertility preservation. Based upon these findings, she is leading on a new study to develop and evaluate a patient decision aid to help female cancer patients make decisions around preserving their fertility funded by Yorkshire Cancer Research.
What factors influence the decision-making process for women contemplating fertility preservation?

Key Learning Points:
An increased understanding of the fertility preservation decision making process for women diagnosed with cancer.
Knowledge of the key factors that hinder the fertility preservation decision-making process for women with cancer.
An increased understanding of the impact of this process upon patient-reported outcomes e.g. quality of life, anxiety and depression.
An increased understanding of the factors that might help women with cancer better prepare for the fertility decision.

Unfortunately, cancer treatment often results in loss of fertility. Women diagnosed with cancer and facing cancer treatment may have to make decisions very quickly regarding fertility preservation with specialist fertility services whilst planning care for their treatment of cancer with oncology services. These decisions are extremely stressful and complex and the consequences will impact on a women’s quality of life for the rest of their lifetime. Therefore, it is vital they feel supported in making the right decision for them whilst also having to deal with a cancer diagnosis and its treatment. However, the existing evidence suggests that women do not feel well supported in their choices with many patients finding the process challenging and missing out on fertility care at this crucial time.

This talk will discuss the results of a recently completed three year study in Sheffield which has explored the fertility preservation decision making process in women with cancer (The PreFer Study) and a systematic review in this area recently carried out by the study team. The presentation will report on the key factors that were found to hinder the decision making process and also explore key questions such as, why do some women with cancer of reproductive age choose not to preserve their fertility? Are there other issues purely than relationship status that impact upon the choice to freeze oocytes or embryos? What are women’s level of understanding regarding oocyte and embryo freezing? What is the impact of these decisions upon quality of life, anxiety and other patient-reported outcomes? The talk will also cover the factors that might help women with cancer better prepare for the fertility decision and ensure they make the best decision for their future. Finally, the presentation will introduce the development of a new fertility preservation patient decision aid to support women with cancer – a recently funded three-year study by Yorkshire Cancer Research (The Cancer, Fertility and Me Study).

Stuart Lavery, Director IVF, Imperial College

Mr Lavery is a Consultant in Gynaecology, Reproductive Medicine and Surgery at the Hammersmith Hospital in London. The unit has an international reputation as a centre of excellence for assisted conception and is one of the largest IVF units in the UK. Mr Lavery was a founding partner of The Fertility Partnership, the largest provider of assisted conception services in the UK. He serves on national and international pharmaceutical advisory boards. Mr Lavery is an honorary senior lecturer at Imperial College Medical School and has served on several national committees including NICE, HFEA Licence Panel and NHS England IVF Expert Advisory Group. His research interests are assisted conception, fertility preservation and preimplantation genetic testing, he has presented nationally and internationally on these topics and has over 50 peer-reviewed articles published.

Clinical experience of a fertility preservation service - analysis of outcomes

Data on outcomes of fertility preservation programmes is sketchy, national and international collection and collation of data will help us to be able to advise patients accurately of expected outcomes.
Oocyte cryopreservation should no longer be considered experimental and should be offered by all Fertility Preservation programmes. Accurate and honest management of expectation alongside counselling and informed consent are key parts of an effective programme.

Experience in establishing a Fertility Preservation Service will be presented including analysis of demand, creation of rapid access patient pathways and utilisation of NHS funding streams. Data from 10 years of fertility preservation including
patient demographics, cycle data, freeze and thaw results as well as pregnancy outcome will be discussed. Special clinical circumstances including gynaecological cancer, treatment in teenagers and posthumous use will be included. Finally a horizon view of future fertility preservation options will be presented.

Julia Kopeika, Consultant Gynaecologist Subspecialist in Reproductive Medicine, Assisted Conception Unit, Guy's Hospital
Dr Julia Kopeika works as a consultant gynaecologist at Guy’s and St Thomas NHS Foundation Trust. She finished medical school back in 1999 with “Top grade of the whole Graduate Year”. She completed RCOG accredited Subspecialty in Reproductive Medicine and Surgery back in 2015. She also accomplished a PhD, studying effects of cryopreservation on genome of reproductive cells and embryos. Her novel research was awarded on a number of occasions by international scientific societies. She has been instrumental in delivering and expanding fertility preservation service at Guy’s Hospital, that provides care to the most of South East Cancer Network.

Ovarian Stimulation for oocyte cryopreservation
Learning points:
- Principals of fertility preservation
- Random start and underlying physiology
- Specific considerations for different types of cancer

This talk will give an overview of the principals of controlled ovarian stimulation, followed by tips for emergency stimulation. New data on physiology of follicular development and recruitment will be presented as a basis for understanding random start stimulation. Specific details on how to start stimulation in late follicular or peri-ovulatory phases of the cycle will be provided. The talk will also give overview how to approach fertility preservation in young post-pubertal patients, patients with lymphoma, brain tumours, oestrogen positive breast cancer, gynaecological cancers or malignancies with genetic inheritance.

Ben Jones, Post-doctorate Clinical Research Fellow, Imperial College NHS Trust
After graduating in 2009, Benjamin undertook O&G training in North West Thames, before being appointed as a clinical research fellow at Imperial College London in 2015. He undertook his PhD on fertility preservation and restoration. In 2016, he became a founding member of the International Society of Uterine Transplantation (ISUTx). He is PI of the INSITU trial on uterine transplantation using deceased donors which is due to commence in September 2019.

Benjamin has published a number of peer reviewed publications and has presented internationally on uterine transplantation and various other aspects of fertility preservation. His ongoing interests include uterine transplantation, ovarian tissue preserving laparoscopic surgery, social egg freezing and endometrial transplantation.

Uterine transplantation
Key learning points:
1. Outline the options to acquire motherhood in women with AUFI
2. Describe the essential anatomical and physiological considerations in UTx
3. Appreciate the different risk vs benefit ratios in deceased and living donors

Absolute uterine factor infertility (AUFI) is a term used to describe women who cannot carry a pregnancy because of either a congenital absence of a uterus or the presence of an anatomically or physiologically non-functioning uterus. It affects 1 in 500 women of childbearing age. The current options to acquire motherhood include adoption or surrogacy, both of which are associated with moral and ethical difficulties in addition to complex legal, financial and religious factors. Uterine transplantation (UTx) has now been performed more than 60 times worldwide with 15 livebirths being recorded so far.
Not only does UTx give women with AUFI the opportunity to conceive and carry pregnancy, but in addition may also improve their psychological wellbeing and allow them to re-discover their own femininity.

Sheila Lane, Consultant Paediatric Oncologist, Oxford University Hospitals NHS Foundation Trust

Dr Lane received her PhD from Cambridge University before qualifying as a doctor at St George’s Hospital London. In 2007 she was appointed as a Consultant Paediatric Oncologist at Oxford University Hospitals NHS Foundation Trust. She has been involved in the development and since 2014 has been Director and Clinical Lead for the Oxford Children and Young Adult Fertility programme. This programme offers fertility preservation treatment, including reproductive tissue cryopreservation to children and young adults at high risk of premature infertility. Dr Lane has co-authored the UK Fertility Preservation Guidelines published in 2018 and is involved in a similar publication for children and young adults.

Ovarian tissue preservation
A girl is born with their total compliment of immature eggs. These develop in utero and are stored in the cortex of the ovary. Some immature eggs start to develop and are lost on a daily basis from before birth. When a girl reaches puberty one immature egg per month under the influence of the pituitary hormones will develop into a mature egg and be shed leading to the monthly cycles. For children and young adults at high risk of infertility who cannot store eggs to preserve fertility, it is now possible to store ovarian tissue.

In this talk I will discuss:
Patient selection
Procurement, processing and storage of tissue and how this differs from storage of mature eggs
Use of the stored tissue
Challenges and new frontiers

Melanie Davies, Consultant Gynaecologist, University College London Hospitals

Melanie is a consultant in Reproductive Medicine, with interests in the reproductive effects of cancer and chronic disease (the long-term follow-up service at UCLH has seen >2000 patients), premature ovarian insufficiency, and adolescent care. She set up the egg and embryo freezing 'emergency service' at UCLH, and supervised the sperm banking service (the largest in the UK). She initiated a national network “Fertility Preservation UK” and chairs the British Fertility Society special interest group.

Effects of cancer treatment: early menopause and the use of HRT

Learning points:
Effects of ovarian insufficiency
Options for oestrogen replacement
Developing 'late effects' services

Ovarian insufficiency, due to loss of oocytes, is one of the commonest long-term adverse effects of cancer therapies, and the most distressing. There is a spectrum from low ovarian reserve causing menstrual problems to overt menopause. Besides typical vasomotor symptoms, mood changes, joint stiffness and sexual difficulties, there are long-term risks of osteoporosis, premature cardiovascular disease and possibly cognitive effects. Oestrogen replacement is the mainstay of treatment, and is recommended up to the age of natural menopause. The ideal type of oestrogen treatment is uncertain. Topical oestrogen may be needed in addition to systemic treatment. Infertility needs to be addressed by egg donation, and some women will have medical co-morbidities or pelvic radiotherapy which prevent them carrying a pregnancy.