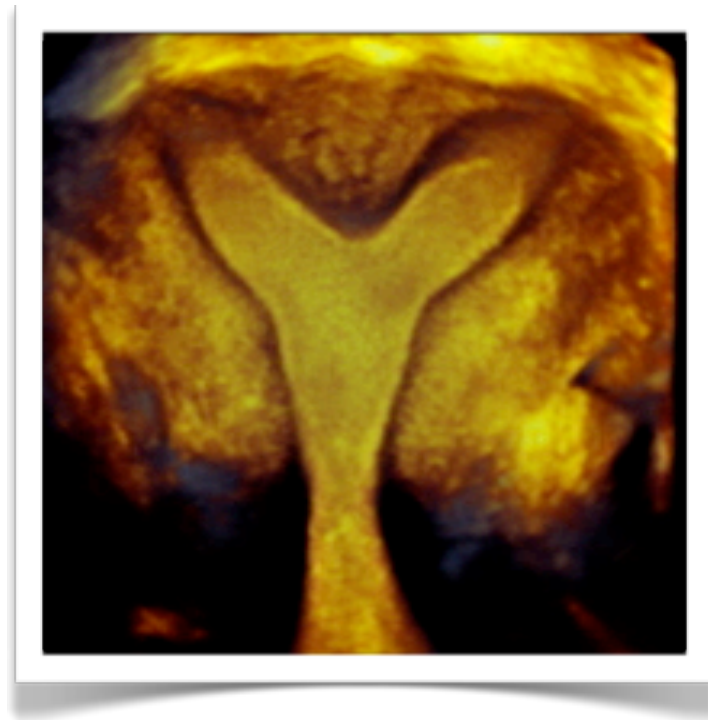


3D Ultrasound in Gynaecology



The Nottingham Theoretical
Training Course in
3D Ultrasound for Gynecologists

Dear Friends,

I would like to invite you to Nottingham to join us for this unique and exciting course dedicated to 3D gynaecological ultrasound. The course, which has now been running for five years, has received excellent feedback and comes highly recommended. I promise it will prove to be intellectually stimulating and rewarding for each and every one of you regardless of your expertise and knowledge. The course has been designed specifically for those of you who practice gynaecological ultrasound and want to learn more about advanced scanning techniques particularly 3D and Doppler ultrasound but is also suitable for beginners and improvers. Its' *bespoke* nature allows us to personalise the course for all who attend so do let us know what you hope to achieve either before or when you arrive. The aims of the course, which has distinct practical and clinical components, include:

Establishing the basic principles of gynaecological ultrasound:

- *getting the best out of your machine*
- *assessment of the pelvis with 2D and Doppler ultrasound*

Qualitative and quantitative 3D ultrasound:

- *3D data acquisition and image display*
- *manual and automatic quantification of 3D data*
- *the practical applications and clinical relevance of 3D*

Hands-on practical sessions:

- *live scanning (using a gynecology phantom)*
- *4D view: basic and advanced applications*
- *4D view: clinical cases and worked examples*

A large proportion of the course involves working with **4D View**. Each delegate will be given a USB or a CD, which contain a series of 3D datasets that we will look through together as a group during the hands-on practical sessions to provide working examples of the topics discussed. You will become confident with the software and leave being able to use the different display options and perform reliable measurements of volume and vascularity. You can assess your progress in an informal quiz on the final day! We also have **Voluson machines** and a gynaecological phantom to practice '**live**' scanning.

The course is held at the Park Plaza Hotel, a modern, four-star hotel in the heart of the city within walking distance of the main shopping and business districts. The course dinner is held on the Friday leaving Thursday evening free for you to do as you please. Please note that whilst we can offer advice and help with arranging your transport to and from the venue and on booking accommodation these are no longer covered in the course fee and will be added to your invoice.

Venue:

Park Plaza Nottingham
41 Maid Marian Way
Nottingham NG1 6GD

For further information:

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The legendary Robin Hood

What you can expect aka the “Timetable”

Thu	Session	Learning objective
<i>GETTING THE BASICS RIGHT</i>		
13.00	Introduction & Welcome	An Overview of the Course
13.15	Setting up Your Machine	How to Get the Best 2D Image
13.45	2D Assessment of the Pelvis	Defining Standards in Gynecological Scanning
14.15	3D / 4D Data Acquisition	How to Acquire Your 3D datasets
14.30	<i>Live ‘Phantom’ Demonstration</i>	Putting this Altogether on the E8 / Voluson-i
15.15	<i>COFFEE</i>	
15.30	4D View: An Introduction	Dataset Management, Image Settings, Options for Image Display and Standardization
16.30	<i>Practical Session 1</i>	How to Get the Best Image

Evening: free (please ask for a list of recommended restaurants)

Fri	Lecture	Learning objective
<i>ADVANCED 3D IMAGING</i>		
09.00	4D View: Advanced Options	Tomographic Ultrasound Imaging, Omni View, Image Rendering, and Cine Mode
09.45	<i>Practical Session 2</i>	Advanced Image Displays and Rendering
11.00	<i>COFFEE</i>	
11.15	Clinical Applications of 3D Ultrasound	Diagnostic Advantages of 3D: The Uterus and Ovaries
12.00	<i>Practical Session 3</i>	Clinical Cases
13.00	<i>LUNCH</i>	

Fri	Lecture	Learning objective
<i>QUANTITATIVE 3D IMAGING</i>		
13:45	Volume Analysis	VOCAL and SonoAVC: <i>Techniques and Clinical Applications</i>
14.30	<i>Practical Session 4</i>	Manual and Automatic Volume Calculation
15.30	<i>COFFEE</i>	
15.45	Doppler Ultrasound	Qualitative and Quantitative 2D and 3D Doppler: <i>Techniques and Clinical Applications</i>
16.30	<i>Practical Session 5</i>	Qualitative and Quantitative 3D power Doppler

Evening: Course Dinner

Sat	Lecture	Learning objective
<i>CLINICAL APPLICATIONS</i>		
09.00	Early Pregnancy	Normal and Abnormal Pregnancy
10.00	Urogynecology	Urogynecology and the Pelvic Floor
10.30	Gyne-oncology	Ovarian and Endometrial Cancer
11.00	<i>COFFEE</i>	
11.15	<i>Practical Session 6</i>	Clinical Cases & Measurements - Quiz
12.30	The Final Word	Answers and an Overview of the Course
13.00	<i>LUNCH</i>	

Meeting closes

Important

Please note that the practical sessions using 4D View require that it is essential to:

- 1. bring your own laptop, and**
- 2. have a working version of 4D View installed on it**

Previous courses have shown this ensures you get the most out of the course.

There are 3 ways to do this:

- 1. Purchase 4D View Option from GE** - & install it on your computer. It is essential to remember the Dongle to allow the 4D View programme to open and work the datasets.
- 2. Install the 60 day demo version** - this option does not require a dongle and lasts for 60 days from when you first open the application (please note this version does not offer sonoAVC and cannot currently be installed on PCs running Windows Vista)
- 3. Install a “free unlimited de-featured version”** - this option does not require a dongle and does not expire over time but has reduced 3D / 4D data capability and several restrictions as it does not offer:
 - ⊗ volume data storage / archiving
 - ⊗ VOCAL
 - ⊗ SRI filter
 - ⊗ inversion mode
 - ⊗ static VCI
 - ⊗ sonoAVC

Whilst you would still be able to open and manipulate the data files supplied during the course the absence of these facilities may reduce your enjoyment and learning experience. We would only advise you to use this version if you are unable to load the demo version (i.e. you have Windows Vista or have previously used the demo version and the 60 day free trial period has expired)

For further information, and to download 4D View, please visit the Voluson Club website: <http://www.volusonclub.net/emea/4dview>

Please note – 4D View does not work with **Apple Macintosh** computers unless you have installed ‘Parallels’ or ‘VMware Fusion’ but we recommend you check this before your arrival.

We do have a limited number of spare laptops but would strongly advise you to bring your own to avoid disappointment. We also recommend that you check your version works before you leave by physically opening and working on one or two datasets. Please feel free to bring any interesting cases along with you. We can look at these as a group.

I sincerely look forward to welcoming you to Nottingham.

Yours sincerely,

Nick Raine-Fenning

N J Raine-Fenning MBChB MRCOG PhD

Course Director & Convenor

Biography

Nick is a Consultant Gynecologist and Reader / Associate Professor of Reproductive Medicine & Surgery in Nottingham. He is based within the University of Nottingham's assisted conception unit, NURTURE (Nottingham University Research and Treatment Unit in Reproduction), at Queen's Medical Centre where he is the lead for Academic Imaging and Director of Research.

Nick has a special interest in both gynaecological ultrasound and reproductive medicine. He is an internationally recognised expert in three-dimensional ultrasound and was awarded a PhD in 2004 for work relating to the quantification of pelvic blood flow using quantitative 3D power Doppler angiography. He is Deputy Editor-in-Chief of Ultrasound in Obstetrics & Gynecology and leads the gynecology side of the journal. He is a Board member of the International Society for Ultrasound in Obstetrics and Gynecology (ISUOG), Chair of their Clinical Standards Committees and Patient Liaison Group in addition to being a core member of their Education Committee. He has been an invited speaker on the VISUS Course since 2004 and has made a DVD about volume ultrasound in gynecology that is available through the Voluson Club.

Selected publications relevant to the Course:

Salomon LJ, Alfirevic Z, Bilardo CM, Chalouhi GE, Ghi T, Kagan KO, Lau TK, Papageorgiou AT, Raine-Fenning NJ, Stirnemann J, Suresh S, Tabor A, Timor-Tritsch IE, Toi A, Yeo G. ISUOG Practice Guidelines: Performance of first-trimester fetal ultrasound scan. *Ultrasound in obstetrics & gynecology*. 2013;41:102-113

Jayaprakasan K, Chan Y, Islam R, Haoula Z, Hopkisson J, Coomarasamy A, Raine-Fenning N. Prediction of in vitro fertilization outcome at different antral follicle count thresholds in a prospective cohort of 1,012 women. *Fertility and Sterility*. 2012

Sur SD, Clewes JS, Campbell BK, Raine-Fenning NJ. Embryo volume measurement: An intraobserver, intermethod comparative study of semi-automated and manual 3D ultrasound techniques. *Ultrasound in Obstetrics & Gynecology*. 2011;38:516-523

Raine-Fenning N. What's in a number? The polycystic ovary revisited. *Hum Reprod*. 2011;26:3118-3122

Martins WP, Welsh AW, Lima JC, Nastri CO, Raine-Fenning NJ. The "volumetric" pulsatility index as evaluated by spatiotemporal imaging correlation (STIC). *Ultrasound in Medicine & Biology*. 2011;37:2160-2168

Martins WP, Raine-Fenning NJ, Leite SP, Ferriani RA, Nastri CO. A standardized measurement technique may improve the reliability of measurements of endometrial thickness and volume. *Ultrasound in Obstetrics & Gynecology*. 2011;38:107-115

Jayaprakasan K, Chan YY, Sur S, Deb S, Clewes JS, Raine-Fenning NJ. Prevalence of uterine anomalies and their impact on early pregnancy in women conceiving after assisted reproduction treatment. *Ultrasound in Obstetrics & Gynecology*. 2011;37:727-732

Chan YY, Jayaprakasan K, Zamora J, Thornton JG, Raine-Fenning N, Coomarasamy A. The prevalence of congenital uterine anomalies in unselected and high-risk populations: a systematic review. *Human Reproduction Update*. 2011;17:761-771

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Deb S, Campbell BK, Clewes JS, Raine-Fenning NJ. Quantitative analysis of antral follicle number and size: a comparison of two-dimensional and automated three-dimensional ultrasound. *Ultrasound Obstet Gynecol*. 2010 Mar; 35(3): 354-60.

Raine-Fenning N, Jayaprakasan K, Chamberlain S, Devlin L, Priddle H, Johnson I. Automated measurements of follicle diameter: a chance to standardize? *Fertil Steril*. Apr 2009;91(4):1469-1472.

Raine-Fenning N, Nordin N, Ramnarine K, Campbell B, Clewes J, Perkins A, Johnson I. Evaluation of the effect of machine settings on quantitative 3D power Doppler angiography. *Ultrasound Obstet Gynecol*. Sep 2008;32(4):551-559.

Raine-Fenning N, Nordin N, Ramnarine K, Campbell B, Clewes J, Perkins A, Johnson I. Determining the relationship between 3D power Doppler data and true blood flow characteristics. *Ultrasound Obstet Gynecol*. Sep 2008;32(4):540-550.

Raine-Fenning N, Jayaprakasan K, Deb S. 3D characteristics of endometriomata. *Ultrasound Obstet Gynecol*. 2008;31(6):718-724.

Lam P, Raine-Fenning N. The role of 3D ultrasonography in PCO. *Hum Reprod*. Sep 2006;21(9):2209-2215.

Raine-Fenning N, Campbell B, Johnson I. The reliability of VOCAL for the semiquantification of ovarian, endometrial and subendometrial perfusion. *Ultrasound Obstet Gynecol*. Dec 2003;22(6):633-639.

Raine-Fenning N, Kendall N, Campbell B, Johnson I. The interobserver reliability and validity of volume calculation from three-dimensional ultrasound datasets in the *in vitro* setting. *Ultrasound Obstet Gynecol*. Mar 2003;21(3):283-291.

Raine-Fenning N, Campbell B, Collier J, Brincat M, Johnson I. The reproducibility of endometrial volume acquisition and measurement with the VOCAL-imaging program. *Ultrasound Obstet Gynecol*. Jan 2002;19(1):69-75.