

Training Module in Pelvic Ultrasound



British
Fertility
Society

DRAFT

Introduction

Course Aims, Learning Outcomes and Competencies

The trainee should acquire clinical competence in undertaking independently all aspects of transvaginal ultrasound examinations.

References

References which detail the evidence-base to support the content of the course; pertinent further reading:

Practical Gynaecological Ultrasound. Second Edition. Edited by Jane Bates, Cambridge University Press. ISBN-13: 978-0521674508

Application for Training

Potential trainees should register with the BFS before starting the training. Application forms are available within this handbook.

Application for training centre recognition

Guide to Application for Training Centre Recognition

To be eligible as a training centre in providing pelvic ultrasound examinations for reproductive medicine the following criteria must be met:

- The centre should provide access to a daily diagnostic pelvic ultrasound service.
- The centre should have an adequate clinical workload to ensure the trainee can undertake at least five scans per week.
- The centre should be able to have both transvaginal and transabdominal options for scanning available.

All application forms and completion documentation must be submitted to the BFS Office.

Trainee applications

Candidates seeking to register for training in Pelvic Ultrasound must:

- Be a member of the British Fertility Society.
- Undertake training over an agreed period of time (minimum of 6 months – max of 12 months) in a Unit recognised as a "Training Centre" by the Society, under the guidance of a designated "Trainer" (also a member of the British Fertility Society). Should the trainee require more than 12 months they should write to the chairman of the BFS Training Subcommittee explaining the reason for extending the training period and to agree a suitable time frame for completion.
- Provide payment of £150 upon application
- Have a basic medical qualification e.g. MB ChB or be a fertility nurse.

- Keep a log-book detailing experience in Pelvic Ultrasound scanning.
- The trainee must attend the approved BFS Study Week theoretical course on Pelvic Ultrasound.
- Complete the Guide to Learning
- Maintain a record of monthly appraisals with trainer.
- At the end of training submit your logbook, appraisal record, guide to learning, certificate of attendance from the study day noted above, notification of completion form and online trainee feedback form to the BFS Office for review by the BFS Training Subcommittee.

Documents required for certification at the end of training

- Certificate of attendance from the study day
- Logbook and Appraisal Record.
- Guide to Learning
- Notification of Completion form.
- Online Trainee Feedback form

Appraisal, Assessment and Certification

1. Log Book

The trainee must not start undertaking ultrasound examinations until the supervisor is confident that the trainee fully understands all the safety issues. It is recommended that the trainee should initially observe at least 10 TV ultrasound examinations. All examinations must be supervised until the logbook is completed and approved. It is expected that 50 examinations should be recorded in the logbook before submission.

2. Appraisals should be carried out at regular intervals (every month).

The trainee must meet with the trainer to discuss progress of their training relevant to acquisition of the necessary elements of knowledge, experience and clinical competence as laid out in the syllabus. If there are problems in relation to targets for completion of training then remedial action should be instituted. The trainer should review the logbook. Appropriate records should be kept of these meetings, which both trainer and trainee should sign.

Monthly Meetings with Trainer

Discussion at monthly meetings with Trainer should incorporate assessment of the Trainee's knowledge of:

- anatomy being examined including the major blood vessels and relationship to other pelvic organs
- pelvic pathologies – accurate descriptions of common variations in morphology of the uterus and common abnormalities e.g. fibroids, endometriosis
- superovulation effects on ovaries
- early pregnancy – normal first trimester, multiple, abnormal or ectopic
- physical principles and selection of appropriate imaging techniques
- preparation of patient for ultrasound examination
- record keeping issues

3. Guide to Learning should be signed off by the trainee and trainer throughout the course.

Assessment

The trainee provides the logbook and study day certificate of attendance, as well as the records of appraisal. If the assessors determine that training has been completed satisfactorily and this is approved by the BFS Training Committee, then the trainee will be awarded Certification.

Evaluation

An evaluation process and evidence of how this will be used to improve the course in future will be utilised by the BFS Training Committee.

At the end of each study day there will be evaluation forms within the information packs for each delegate to complete. These will be collected by the organising committee and entered into a computer software datasheet. The results will be disseminated to speakers and organising committee in order for any adjustments to be made.

After completion of the course all participants will be asked to feedback on the structure, content, assessment procedure and ease of accessing resources necessary for undertaking the course.

Syllabus

Aims of Training

The trainee should acquire an *understanding* of:

- i The physical principals of the use of ultrasound examination
- ii The use and limitations of ultrasound examination
- iii Maintenance of ultrasound equipment
- iv The safety issues related to the use of ultrasound for clinical diagnosis
- v The anatomy of the pelvic organs
- vi The physiological changes of the pelvic organs during the ovarian cycle
- vii Pathologies of the uterus and ovaries which can be detected by ultrasound
- viii Ultrasound appearance of a normal first trimester pregnancy
- ix Diagnosis of ectopic pregnancy

The trainee should develop the *capacity* to:

- i Recognise that appropriate use of ultrasound examination
- ii Maintain ultrasound equipment
- iii Identify the normal pelvic organs on transvaginal ultrasound examination
- iv Identify abnormalities in the pelvic organs on transvaginal ultrasound examination
- v Identify normal and abnormal first trimester pregnancies on transvaginal ultrasound examination

The trainee should acquire *clinical competence* in:

- i Undertaking independently all aspects of transvaginal ultrasound examination as described above

Composition of Syllabus (Theoretical and Practical Elements)

Theoretical knowledge should be acquired during the course of training through:

- i Personal study appropriate to the "guide for learning"
- ii Attendance at a Pelvic Ultrasound study day.
- iii Tuition from the approved "Trainer"

Practical skills will be obtained during the course of clinical training. Such experience will comprise both supervised and unsupervised care of women undergoing pelvic ultrasound and will be recorded in the approved logbook. The tuition will be recorded in the approved Appraisal Record at monthly intervals.

Guide to Learning

Trainer should sign and date when trainee has acquired knowledge (clear boxes) and independent clinical skills competence (shaded boxed) targets. When each module completed thick box should be signed.

1. Physics of Ultrasound Examination

The trainee should understand and be able to:

Discuss the physical principals underlying ultrasound in relation to resolution, penetration, transducer options

Date:

Discuss image optimisation options – TA, TV, Doppler

Date:

Discuss the limitations of imaging techniques

Date:

Discuss the maintenance of ultrasound equipment

Date:

Discuss the evidence relating to the safety of ultrasound

Date:

Discuss the system in place ensuring imaging quality control within the department

Date:

Section Completed

Date:

2. Pelvic Anatomy

The trainee should understand and using images they have taken be able to:

Describe the ultrasound appearance of the uterus throughout a simulated and natural cycle

Date:

Describe the fallopian tubes, peritoneum and ligaments and major pelvic blood vessels

Date:

Describe the other pelvic viscera e.g. bowel and bladder

Date:

Describe the ultrasound appearance of the ovary throughout a simulated and natural cycle

Date:

Discuss the ultrasound appearance of polycystic ovaries and its relationship with polycystic ovary syndrome

Date:

Describe the macroscopic appearance of the endometrium at different stages of the ovarian cycle

Date:

Section Completed

Date:

3. Pelvic Pathology

The trainee should understand using images (if possible they have taken) be able to:

Recognise the common variations in morphology of the uterus
e.g. bicornuate uterus

Date:

Recognise common abnormalities e.g. fibroids, endometriosis

Date:

Discuss the role of ultrasound in diagnostic investigations
e.g. HyCoSy

Date:

Recognise the features associated with hyperstimulation

Date:

Section Completed

Date:

4. Early Pregnancy

The trainee should understand and demonstrate using images they have taken (where possible):

Accuracy in measuring gestation sac volume, crown rump length

Date:

Recognise a multiple pregnancy, including chorionicity

Date:

Recognise the abnormal intrauterine first trimester pregnancy

Date:

Recognise ultrasound appearances consistent with an ectopic pregnancy

Date:

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Date:

Section Completed

5. Psychological Factors Related to Pelvic Ultrasound

The trainee should understand and be able to:

Discuss the most appropriate environment for ultrasound examination to take place

Date:

Discuss the preparation of the patient and accompanying person for ultrasound examination

Date:

Discuss the issues relating to 'giving bad news'

Date:

Discuss the role of ultrasound examination in conjunction with other investigations which may be undertaken as a result of findings

Date:

Section Completed

Date:

6. Record Keeping and Audit

The trainee should understand and be able to:

Demonstrate accurate and concise writing of reports

Date:

Use terms to describe the ultrasonic appearance and textures e.g anechoic, homogenous, shadowing, enhancement

Date:

Discuss the recording of the ultrasound observation and the medico-legal implications

Date:

Discuss the role of the British Medical Ultrasound Society

Date:

Demonstrate ongoing assessment of practice

Date:

Section Completed

Date:

Pelvic Ultrasound Study Day

Details of the study days are available on our website at <http://www.fertility.org.uk/meetings/index.aspx>. It is intended that the meetings be held annually, depending on demand. An outline of the content of the lectures is given below.

Objectives of Lectures

- Provide evidence based information
 - Provide references/further reading
 - Provide Lecture review for study book
1. Principles, Safety and Practical aspects of Ultrasound
 2. Ultrasound Assessment of Ovarian and Endometrial Cycle
 3. Ultrasound features of PCO and PCOS
 4. Benign and Malignant changes in the Ovary
 5. Ultrasound Diagnosis of Benign Uterine abnormalities
 6. Ultrasound Evaluation of the Fallopian Tubes
 7. Scanning for Infertility Investigation and Assisted Conception Cycles
 8. What is the Role of Colour Doppler in Infertility Management
 9. Ultrasound Diagnosis of Early Pregnancy Complications

Please complete and return the form preferably by email to:

bfs@profileproductions.co.uk

Or post to: BFS Secretariat C/o Profile Productions Ltd

Boston House, 69-75 Boston Manor Road, Brentford, TW89JJ

t: +44 (0)20 3725 5849



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Notification of Completion of Training Module

(To be completed by trainer)

I certify that

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has completed the training module in Pelvic Ultrasound to my satisfaction.

I confirm that I have had regular assessment sessions with the trainee and each of the required skills in the logbook has been attained.

Date of commencement of practical training: ____/____/____

Date satisfactorily completed theoretical course: ____/____/____

Trainee name:

Trainee signature: Date:

Trainer(s) in charge of training:

Trainer name: **Date:**

Trainer signature: **Department address:**

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RECORD OF APPRAISAL

Date	Learning Targets Achieved	Log Book Progress	Targets for Next Month	Trainee Signature	Trainers Signature
01/03/09	<p><i>Example</i></p> <p><i>Safety issues understood.</i></p> <p><i>Does not yet understand the physics of ultrasound and therefore does not understand how to set the equipment appropriately.</i></p>	<p><i>10 scans completed but more that 50% inaccurate findings. Good relationship with patients. Still rather nervous but getting better.</i></p>	<p><i>Read about physics of ultrasound, its use in clinical practice and the manual of the ultrasound equipment.</i></p>	J Smith	R Black

Date	Learning Targets Achieved	Log Book Progress	Targets for Next Month	Trainee Signature	Trainers Signature

LOG BOOK

The supervising trainer must complete the following table for each case. It will be marked as follows:

- + Correct findings recorded
- Incorrect findings recorded
- 0 Feature not seen by trainee but seen by supervisor

The ideal record should show all '+' markings. A record showing mainly '-' marks indicates a potentially dangerous operator whereas a majority of '0' marks indicates that more experience is needed.

Trainee Name: _____

	Uterus				Gestation Sac				Right Ovary			Left Ovary			Peritoneal Cavity	Other	Indications Findings	Signed	Date
	Position	Myometrium	Cavity	Endometrial thickness	Size	Yoke sac	Fetal Pole	Fetal Heart	Size	Follicles	Cysts	Tumours	Size	Follicles					
<i>Example</i>	+	+	+	+	+	+	+	+	0	0	-	-	+	<i>Probable haematoma recognised in cavity</i>	<i>Suspected ectopic - IU pregnancy too early for viability confirmation</i>	<i>J Smith</i>	<i>01/03/ 2001</i>		
1																			
2																			

Trainee Name: _____

	Uterus				Gestation Sac				Right Ovary			Left Ovary		Peritoneal Cavity	Other	Indications Findings	Signed	Date
	Position	Myometrium	Cavity	Endometrial thickness	Size	Yoke sac	Fetal Pole	Fetal Heart	Size	Follicles Cysts Tumours	Size	Follicles Cysts Tumours						
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		

Trainee Name: _____

	Uterus				Gestation Sac				Right Ovary		Left Ovary		Peritoneal Cavity	Other	Indications Findings	Signed	Date
	Position	Myometrium	Cavity	Endometrial thickness	Size	Yoke sac	Fetal Pole	Fetal Heart	Size	Follicles Cysts Tumours	Size	Follicles Cysts Tumours					
11																	
12																	
13																	
14																	
15																	
16																	
17																	
18																	

Trainee Name: _____

	Uterus				Gestation Sac				Right Ovary			Left Ovary		Peritoneal Cavity	Other	Indications Findings	Signed	Date
	Position	Myometrium	Cavity	Endometrial thickness	Size	Yoke sac	Fetal Pole	Fetal Heart	Size	Follicles Cysts Tumours	Size	Follicles Cysts Tumours						
19																		
20																		
21																		
22																		
23																		
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25																		
26																		

Trainee Name: _____

	Uterus				Gestation Sac				Right Ovary			Left Ovary			Peritoneal Cavity	Other	Indications Findings	Signed	Date
	Position	Myometrium	Cavity	Endometrial thickness	Size	Yoke sac	Fetal Pole	Fetal Heart	Size	Follicles Cysts Tumours	Size	Follicles Cysts Tumours							
27																			
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34																			

Trainee Name: _____

	Uterus				Gestation Sac				Right Ovary			Left Ovary			Peritoneal Cavity	Other	Indications Findings	Signed	Date
	Position	Myometrium	Cavity	Endometrial thickness	Size	Yoke sac	Fetal Pole	Fetal Heart	Size	Follicles Cysts Tumours	Size	Follicles Cysts Tumours							
35																			
36																			
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38																			
39																			
40																			
41																			
42																			

Trainee Name: _____

	Uterus				Gestation Sac				Right Ovary			Left Ovary		Peritoneal Cavity	Other	Indications Findings	Signed	Date
	Position	Myometrium	Cavity	Endometrial thickness	Size	Yoke sac	Fetal Pole	Fetal Heart	Size	Follicles Cysts Tumours	Size	Follicles Cysts Tumours						
43																		
44																		
45																		
46																		
47																		
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50																		

CHECKLIST FOR SUBMISSION OF BFS PELVIC ULTRASOUND DOCUMENTS

The following materials are required to be submitted to the Training Subcommittee for their consideration:

- Υ Certificate of attendance from the most recent BFS Pelvic Ultrasound Study Day
- Υ Completed Guide to Learning
- Υ Completed Logbook (50 scans)
- Υ Completed Appraisal Record
- Υ Signed Notification of Completion form
- Υ Completed online Trainee Feedback form on Survey Monkey:

<https://www.surveymonkey.co.uk/r/YTQVCT6>

Please do not submit your documentation until you have all elements listed above.