



# ASUM

## Standards of Practice

Promoting ultrasound excellence

Guidelines, Policies and Statements

Guidelines on the Performance of a Gynaecological Scan

**Adopted** by Council January 2019

These Guidelines supersede ASUM Statement on the Performance of a Gynaecological Scan adopted by Council September 1993

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## 1. Introduction

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The Australasian Society for Ultrasound in Medicine (ASUM) is a multidisciplinary society whose mission is to advance the clinical practice of diagnostic medical ultrasound for the highest standards of patient care. A primary aim of ASUM is to promote, educate and disseminate standards of ultrasound practice in this continually developing specialty.

### 1.1. Background

Clinical practices in obstetrics and gynaecology will, of necessity, usually involve gynaecological examination of women. Many diagnostic and therapeutic processes are physically invasive, including transvaginal ultrasound. Sonographers/Sonologists should use appropriate sensitivity and respect for patients when conducting procedures and in addressing any concerns, including cultural and religious factors. It is expected that the ultrasound practitioner conducting the gynaecological scan will demonstrate competence in familiarity with the equipment and its functions, consistency in optimising images, display a systematic approach, consistently interpret findings correctly, and document the relevant images and reporting.

A transvaginal scan is usually the examination of choice and only when a transvaginal ultrasound is contraindicated a transabdominal or translabial ultrasound could be performed. If a transvaginal examination can be performed, a transabdominal ultrasound is usually only performed if the complete uterus and ovaries cannot be seen on a transvaginal scan. A full bladder is usually not required for a transvaginal scan.

Each practice needs to develop a strict protocol and guidelines for performing gynaecologic ultrasound examinations.

### 1.2. Scope/Applicability

This guideline is applicable to all ultrasound practitioners.

## 2. Abbreviations

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<b>DIAS</b>	Diagnostic Imaging Accreditation Scheme
<b>LMP</b>	Last Menstrual Period
<b>IOTA</b>	International Ovarian Tumour Analysis
<b>POD</b>	Pouch of Douglas
<b>TA</b>	Transabdominal scan
<b>TV</b>	Transvaginal scan

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### 3. Pre-performance of Ultrasound

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#### 3.1. History

An appreciation of the clinical history can be very important in reaching a diagnosis. Necessary clinical details include the presenting symptoms, the age of the patient, her parity, menstrual history and LMP, any previous gynaecological surgery, any current hormonal treatment, results of any available hormonal tests for pregnancy, or latex allergy. Careful note should be taken of any recorded clinical findings.

Transvaginal ultrasound scans and evaluations for suspected sexual assault should only be performed by those who have satisfactorily completed relevant training. The utmost care should be taken to explain the procedure(s) to minimise any anxiety, pain or discomfort.

#### 3.2. Informed Consent

If performing transvaginal scan, local recommendations/policy on the consent process of the transvaginal scan should be adhered to.

For Australian practitioners who have to comply with DIAS, please note DIAS Standard 2.2, *Consumer Consent and Information Standard*.

Genital examinations under anaesthetic, transvaginal ultrasound scans and evaluations for suspected sexual assault should be performed only by those who have satisfactorily completed relevant training.

Instrumental vaginal examination is very rarely indicated in prepubertal girls, however if further examination is deemed medically necessary, then examination under anaesthesia by appropriately trained medical practitioners may be indicated.

Local policies may require the use of a chaperone or patient privacy issues should be adhered to.

### 4. Equipment

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#### 4.1. Check Quality of Equipment

High quality high frequency vaginal and abdominal transducers should be available when an examination of the female pelvis is undertaken. The availability of colour/power and spectral Doppler is highly advisable.

Use latex free gloves and probe covers or if not, check whether patients have a latex allergy before proceeding with a latex cover/gloves.

#### 4.2. Disinfection

If performing a transvaginal or translabial approach, the ASUM policy on disinfection of vaginal transducers should be followed: see Guidelines for Reprocessing Ultrasound Transducers.

## 5. The Examination

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### 5.1. General

Privacy and confidentiality are of the utmost importance. Components of the examination must be communicated to the patient at her level of comprehension.

Patient dignity must be considered at all times.

Ultrasound practitioners should conduct a TV with an empty bladder and if necessary, fill and then do a complementary TA.

### 5.2. Scan Technique

A transvaginal scan is the examination of choice and only when a transvaginal ultrasound is contraindicated should a transabdominal ultrasound with a full bladder be performed. If a transvaginal examination can be performed, a transabdominal ultrasound should only be performed if the complete uterus and ovaries cannot be seen on a transvaginal scan. A full bladder is usually not required.

## 6. Pelvic Scanning

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### 6.1. Structural Check of Area

The assessment of the female pelvis is best performed in real time with particular attention to each of the anatomical structures, their appearance and relation to adjacent structures, their mobility and the eliciting of tenderness and/or reproduction of symptoms, all of which should be recorded.

If needing to complete a TV and a TA, the practitioner may also be including assessments of big fibroids, kidneys, difficult ovaries and other pathologies.

The following structures should be assessed:

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|--------|---|
| Uterus | <ul style="list-style-type: none"><li>• Size, shape, position</li><li>• Endometrium – thickness, appearance and or classification, vascularity, masses</li><li>• Myometrium – masses/fibroids (size, number, echotexture, vascularity, position, particularly in relation to the endometrial cavity)</li><li>• Assess for adenomyosis (asymmetrical thickening, hyperechoic islands, venetian blind shadowing)</li><li>• Serosal surface</li><li>• 3D assessment if congenital abnormality is suspected on 2D ultrasound</li><li>• Uterine flexion – e.g. anteverted, anteflexed uterus</li><li>• UV fold and POD</li><li>• Mobility and tenderness of the uterus</li></ul> |
|--------|---|
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	<ul style="list-style-type: none"> <li>• Pregnancy</li> </ul>
Cervix	<ul style="list-style-type: none"> <li>• Subjective</li> <li>• Objective (length and, where necessary, width)</li> </ul>
Ovaries	<ul style="list-style-type: none"> <li>• Positive identification of both ovaries</li> <li>• Location/position</li> <li>• Size, echotexture</li> <li>• Follicle number and size - a threshold of 25 follicles as the definition of a Polycystic ovary</li> <li>• Tenderness and mobility</li> <li>• Presence of cysts or solid masses (describe according to <u>IOTA</u>)</li> </ul>
Adnexa	<ul style="list-style-type: none"> <li>• Masses, characteristics</li> </ul>
Pouch of Douglas	<ul style="list-style-type: none"> <li>• Free fluid</li> <li>• Presence of obliteration</li> </ul>
Bladder	<ul style="list-style-type: none"> <li>• Look for endometriosis nodules</li> </ul>
Vaginal vault	<ul style="list-style-type: none"> <li>• Look for endometriosis nodules</li> </ul>
Rectum and sigmoid	<ul style="list-style-type: none"> <li>• Look for endometriosis nodules</li> </ul>
POD	<ul style="list-style-type: none"> <li>• Check sliding sign to exclude POD obliteration</li> <li>• Check for endometriosis nodules in POD</li> </ul>
Kidneys	<ul style="list-style-type: none"> <li>• If a congenital abnormality of the uterus is found, further clinical consideration should be undertaken</li> </ul>

## 6.2. Evaluation of Masses

IOTA has described criteria which may be useful in classifying and reporting ovarian masses. Likewise, a classification for endometrial and myometrial pathology have been described.

A full description of the mass is essential in classifying its nature. This description may include:

1. Site of origin, relationship to uterus and ovaries;
2. Dimensions;
3. Borders (well defined, irregular, poorly defined, thick walled);
4. Cystic, solid, mixed, loculated or septated;
5. Contents of cysts;
6. Echogenicity and architecture of solid areas;

7. Vascularity; and
8. Mobility.

Further assessment of pelvic pathology may involve additional procedures such as saline infusion sonohysterography, hysterosalpingography with contrast sonography, 3D Ultrasound and scans for deep infiltrating endometriosis.

## 7. Documentation

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There should be adequate documentation of:

1. the technique/s utilised in the scan
2. the anatomical structures assessed and any pathologic findings
3. documentation of findings
4. imaging evidence supporting findings.

## 8. Report

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As a minimum the report should:

1. The clinical indication for the scan
2. Relevant findings for the:
  - a. the uterus, endometrium and myometrium
  - b. both ovaries – noting re follicle number; The commonly accepted 2003 Rotterdam criteria recommended to use 25 follicles and or 10cc volume as the criteria.
  - c. adnexa
  - d. bladder
  - e. vaginal vault
  - f. rectum
  - g. POD

## 9. Related/Supporting Documents

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The following documents are required to give effect to this guideline:

1. Guidelines for Reprocessing Ultrasound Transducers (<https://onlinelibrary.wiley.com/doi/full/10.1002/ajum.12042>).
2. ASUM Policy on Vaginal Scanning by Sonographers (<https://www.asum.com.au/standards-of-practice/>).

## 10. Supporting Information/References

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The following documents inform this guideline:

1. The Royal Australian and New Zealand College of Obstetricians and Gynaecologists, Guidelines for Gynaecological Examinations and Procedures, 2016.

2. The Royal Australian and New Zealand College of Obstetricians and Gynaecologists, Genital Examinations in Girls and Young Women: A Clinical Practice Guideline, 2009.
3. Church, C.C. & Barnett, S.B. 'Ultrasound-induced heating and its biological consequences', in G. ter Haar (Ed.). The Safe Use of Ultrasound in Medical Diagnosis, 3rd ed., 2012:46-68.
4. Van den Bosch, T. et al., Terms, definitions and measurements to describe sonographic features of myometrium and uterine masses: a consensus opinion from the Morphological Uterus Sonographic Assessment (MUSA) group. Consensus Statement. Ultrasound Obstet Gynecol 2015; 46:284-298. DOI: 10.1002/uog.14806
5. Leone, F.P. et al. Terms, definitions and measurements to describe the sonographic features of the endometrium and intrauterine lesions: a consensus opinion from the International Endometrial Tumor Analysis (IETA) group. Consensus Statement. Ultrasound Obstet Gynecol 2010; 35:103-112. DOI: 10.1002/uog.7487
6. Timmerman, D. et al. Simple ultrasound-based rules for the diagnosis of ovarian cancer. Ultrasound Obstet Gynecol 2008; 31:681-90. DOI: 10.1002/uog.5365.
7. International Ovarian Tumour Analysis (IOTA). IOTA Simple Rules and SRrisk calculator to diagnose ovarian cancer, 2017.
8. Rotterdam ESHRE/ASRM-Sponsored PCOS Consensus Workshop Group. Revised 2003 consensus on diagnostic criteria and long-term health risks related to polycystic ovary syndrome. Fertil Steril. 2004;81:19-25.