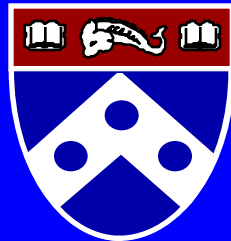


Ultrasound- Toward Standards (Guidelines) of Practice (AIUM)

Harvey L. Nisenbaum, M.D.



AIUM Culture

- Modality driven not specialty driven
- Physicians, sonographers, scientists, engineers, other healthcare providers, and manufacturers of ultrasound equipment
- Quality study by qualified individual (hands-on modality; not automated)
- Collaborate with other groups

AIUM-www.aium.org

The association for medical ultrasound
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Convention CME On Demand

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PHOENIX 2012

March 29 - April 1, 2012
JW Marriott Desert Ridge Resort and Spa
Phoenix, AZ

2011 Convention Info
2011 Convention Photos

Journal of Ultrasound in Medicine (JUM)



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Highlights Practice Guidelines Official Statements

- Need to Renew or Update Your Profile? Access "My Account"
- New Online Accreditation Application Available
- 7 New CME Video Programs Now Available
- Ultrasound Lecture Series
- Visit the AIUM's Career Center

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AIUM Communities

AIUM's 15 Communities are networking forums that enable members to discuss topics of special interest and communicate the needs of their discipline.

Basic Science and Instrumentation	Interventional-Intraoperative Ultrasound
Cardiovascular Ultrasound	Musculoskeletal Ultrasound
Contrast-Enhanced Ultrasound	Neurosonology
Emergency and Critical Care Ultrasound	Obstetric Ultrasound
	Gynecologic Ultrasound

Practice Guidelines

The screenshot shows the AIUM website interface. At the top, the navigation bar includes the AIUM logo, a search bar, and links for 'Log In | My Account' and social media. The main navigation menu on the left lists various site sections, with 'Guidelines & Statements' currently selected. A sub-menu is open under 'Guidelines & Statements', showing 'Practice Guidelines', 'Official Statements', and 'Technical Standards'. The 'Practice Guidelines' item is highlighted. The main content area features a banner for the 2012 convention, a 'Highlights' section with several news items, and a 'Journal of Ultrasound in Medicine (JUM)' section with links to CME tests and other resources. The 'Upcoming Courses' section is also visible, featuring 'webinar series' and 'postgraduate courses'.

http://www.aium.org/

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Convention CME On Demand

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Highlights Practice Guidelines Official Statements

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Journal of Ultrasound in Medicine (JUM)

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webinar series | postgraduate courses

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Practice Guidelines

The screenshot shows the AIUM website's 'Practice Guidelines' page. The browser address bar displays 'http://www.aium.org/publications/guidelines.aspx'. The page header includes the AIUM logo and a navigation menu with items like 'Home', 'Join the AIUM', 'AIUM Store', 'CME Activities', 'Guidelines & Statements', 'Publications', 'About the AIUM', 'Member Directory', 'Accreditation', 'Communities of Practice', 'Give to EER', 'Grant Opportunities', 'Buyers Guide', 'Related Sites', 'Press Room', 'Advertising', and 'Corporate Recognition'. A search bar is located in the top left. The main content area features a banner for 'Practice Guidelines' with the text 'The AIUM Practice Guidelines are available to download as pdf files.' Below this is a dropdown menu with 'Abdomen or Retroperitoneum' selected. A 'Policy for Practice Guidelines' section follows, containing a bulleted list of terms and conditions. The page also includes a 'Log In | My Account' link and social media sharing options.

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Practice Guidelines

The AIUM Practice Guidelines are available to download as pdf files.

>

Policy for Practice Guidelines

- Practice Guidelines may be downloaded for free on the website by members and nonmembers.
- Individuals may make as many photocopies as needed of the guidelines.
- If a member does not have access to the web, the AIUM will mail or fax one photocopy of the guidelines for free.
- If a nonmember does not have access to the web, the AIUM will mail or fax a single copy for free but with a \$5.00 prepaid handling charge. If an express order is needed, the normal rush charges apply.

25 Practice Guidelines

The screenshot shows the AIUM website's 'Practice Guidelines' page. The page title is 'Practice Guidelines' and the main text states: 'The AIUM Practice Guidelines are available to download as pdf files.' A dropdown menu is open, listing 25 categories of guidelines, including Abdomen or Retroperitoneum, Abdominal Aorta, Breast, Developmental Dysplasia of the Hip, Postoperative Dialysis Access, Preoperative Dialysis Access, Documentation, Extracranial Cerebrovascular, Extremity Arteries, FAST, Female Pelvis, Fetal Echocardiography, Musculoskeletal, Neonatal Spine, Neurosonography in Neonates and Infants, Obstetric, Peripheral Arterial, Peripheral Venous, Prostate & Surrounding Structures, Renal Artery, Reproductive Medicine, Scrotal, Sonohysterography, Thyroid & Parathyroid, and Transcranial Doppler. The website header includes the AIUM logo and navigation links. A banner at the top right promotes becoming a member today, offering up to 84 free CMEs and free online CMEs for all members.

Collaborated with other organizations- ACEP, ACOG, ACR, SIR, SMFM, SPR, SREI, SRU

General Template for Guideline

Preamble

I. Introduction

II. Qualifications and Responsibilities of Personnel

III. Indications

IV. Written/Electronic Request for the Examination

V. Specifications of the Examination

VI. Reporting and Documentation

VII. Equipment Specifications

VIII. Quality Control and Improvement, Safety, Infection Control, and Patient Education

IX. ALARA Principle

OB US Guideline

AIUM Practice Guideline for the Performance of Obstetric Ultrasound Examinations



The American Institute of Ultrasound in Medicine (AIUM) is a multidisciplinary association dedicated to advancing the safe and effective use of ultrasound in medicine through professional and public education, research, development of guidelines, and accreditation. To promote this mission, the AIUM is pleased to publish, in conjunction with the American College of Radiology (ACR) and the American College of Obstetricians and Gynecologists (ACOG), this *AIUM Practice Guideline for the Performance of Obstetric Ultrasound Examinations*. We are indebted to the many volunteers who contributed their time, knowledge, and energy to bringing this document to completion.

The AIUM represents the entire range of clinical and basic science interests in medical diagnostic ultrasound, and, with hundreds of volunteers, the AIUM has promoted the safe and effective use of ultrasound in clinical medicine for more than 50 years. This document and others like it will continue to advance this mission.

Practice guidelines of the AIUM are intended to provide the medical ultrasound community with guidelines for the performance and recording of high-quality ultrasound examinations. The guidelines reflect what the AIUM considers the minimum criteria for a complete examination in each area but are not intended to establish a legal standard of care. AIUM-accredited practices are expected to generally follow the guidelines with recognition that deviations from these guidelines will be needed in some cases, depending on patient needs and available equipment. Practices are encouraged to go beyond the guidelines to provide additional service and information as needed.

OB US Guideline

Principal Reviewer: Beryl R. Benacerraf, MD

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Wesley Lee, MD

Lawrence Platt, MD

ACR

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Training Guidelines

Official Statements

View an Official Statement from the list below.

Training Guidelines for Physicians Who Evaluate

Training Guidelines for Physicians Who Evaluate and Interpret Diagnostic Ultrasound Examinations

Approved November 6, 2010

Physicians who evaluate and interpret diagnostic ultrasound examinations should be licensed medical practitioners who have a thorough understanding of the indication and guidelines for ultrasound examinations as well as familiarity with the basic physical principles and limitations of the technology of ultrasound imaging. They should be familiar with alternative and complementary imaging and diagnostic procedures and should be capable of correlating the results of these other procedures with the ultrasound examination findings. They should have an understanding of ultrasound technology and instrumentation, ultrasound power output, equipment calibration, and safety. Physicians responsible for ultrasound examinations should be able to demonstrate familiarity with the anatomy, physiology and pathophysiology of those organs or anatomic areas that are being examined. These physicians should provide evidence of training and requisite competence needed to successfully perform and interpret diagnostic ultrasound examinations in the area(s) they practice. The training should include methods of documentation and reporting of ultrasound studies. Physicians performing diagnostic ultrasound examinations should meet at least 1 of the following:

1. Completion of an approved residency program, fellowship, or postgraduate training that includes the equivalent of at least 3 months of diagnostic ultrasound training in the area(s) they practice, under the supervision of a qualified physician(s)*, during which the trainees will have evidence of being involved with the performance, evaluation, and interpretation of at least 300** sonograms.
2. Certification in breast ultrasound by the American Society of Breast Surgeons is accepted as proof of sufficient training in breast ultrasound.
3. Successful completion of the Endocrine Certification in Neck Ultrasound (ECNU) Program by the American Association of Clinical Endocrinologists (AACE) is accepted as proof of sufficient training in thyroid/parathyroid ultrasound.
4. Completion of training in "Focused Assessment with Sonography for Trauma (FAST)" as recommended by the American College of Emergency Physicians (ACEP) is accepted as proof of sufficient training for the performance of the FAST Examination.
5. Demonstration of at least 1 of the criteria listed in the AIUM's official statement "Training Guidelines for the Performance of the Musculoskeletal Ultrasound Examination" is accepted as proof of sufficient training in musculoskeletal ultrasound.
6. Proof of completion of an ABOG or ACOOG approved fellowship in Maternal - Fetal Medicine, with a brief written description of experience in performance of fetal echocardiography including both normal and abnormal cases is accepted as proof of sufficient training in fetal echocardiography. Physicians must be Active Candidates or Diplomates of ABOG or ACOOG. Others, including Pediatric Cardiologists and Radiologists, who have not completed formal MFM fellowship but who can demonstrate education and skills in performing fetal echocardiography should submit documentation of their educational and clinical experience.

Training Guidelines

7. In the absence of formal fellowship or postgraduate training or residency training, documentation of clinical experience could be acceptable providing the following could be demonstrated:

- a. Evidence of 100 AMA PRA Category 1 CreditsTM dedicated to diagnostic ultrasound in the area(s) the physicians practice, and,
- b. Evidence of being involved with the performance, evaluation and interpretation of the images of at least 300** sonograms within a 3-year period. It is expected that in most circumstances, examinations will be under the supervision of a qualified physician(s)*. These sonograms should be in the specialty area(s) in which the physicians are practicing.

* A qualified physician is one who, at minimum, meets the criteria defined above in this document.

** Three hundred cases were selected as a minimum number needed to gain experience and proficiency with sonography as a diagnostic modality. This is necessary to develop technical skills, to appreciate the practical applications of basic physics as it affects image quality and artifact formation, and to acquire an experience base for understanding the range of normal and recognizing deviations from normal.



The number of required cases will be greater for physicians utilizing ultrasound for multiple subspecialty applications or anatomic areas (at least 500 cases). It is recognized, however, that the experience gained in the initial 300 cases provides an important foundation of knowledge and skill, which may reduce the number of additional cases needed to master other diagnostic ultrasound uses.

Cases presented as preselected, limited image sets-such as in lectures, case conferences and teaching files are excluded. The ability to analyze a full image set, determining its completeness and the adequacy of image quality, and performing the diagnostic process, distinguishing normal from abnormal, is considered a primary goal of the training experience.

MSK Training Guidelines (Outcome of 2008 Forum)

Official Statements

View an Official Statement from the list below.

Training Guidelines for the Performance of Musc  

Training Guidelines for the Performance of Musculoskeletal Ultrasound Examinations

Approved November 14, 2009

Qualifications and Responsibilities of the Personnel

A. Physician

Physicians who perform and/or interpret diagnostic musculoskeletal (MSK) ultrasound examinations should be licensed medical practitioners who have a thorough understanding of the indications and guidelines for MSK ultrasound examinations as well as a familiarity with the basic physical principles and limitations of the technology of ultrasound imaging. They should be familiar with alternative and complementary imaging and diagnostic procedures and should be capable of correlating the results of these other procedures with the ultrasound findings. They should have an understanding of ultrasound technology and instrumentation, ultrasound power output, equipment calibration, and safety. Physicians responsible for diagnostic MSK ultrasound examinations should be able to demonstrate familiarity with the anatomic, physiologic, and pathophysiologic characteristics of the anatomic areas that are being examined. These physicians should provide evidence of the training and competence needed to perform and/or interpret diagnostic MSK ultrasound examinations successfully. The training should include methods of documentation and reporting of ultrasound studies.

Physicians performing and/or interpreting diagnostic examinations should meet at least 1 of the following criteria:

1. Certification in Radiology or Diagnostic Radiology by the American Board of Radiology, the American Osteopathic Board of Radiology, the Royal College of Physicians and Surgeons of Canada, or Le Collège des Médecins du Québec, and the supervision and/or performance, interpretation, and reporting of 150 MSK ultrasound examinations within the last 36 months. Unless within 2 years of completion of a residency and/or fellowship, the radiologist will also need to have completed 40 hours of *AMA PRA Category 1 CreditsTM* specific to MSK ultrasound, including at least 1 MSK ultrasound course that includes hands-on training.

or

2. Completion of an Accreditation Council for Graduate Medical Education (ACGME)- or American Osteopathic Association (AOA)-accredited diagnostic radiology residency program and the performance, interpretation, and reporting of 150 MSK ultrasound examinations in the past 36 months. Unless within 2 years of completion of a residency, the radiologist will also need to have completed 40 hours of *AMA PRA Category 1 CreditsTM* specific to MSK ultrasound, including at least 1 MSK ultrasound course that includes hands-on training.

or

MSK Training Guidelines (Outcome of 2008 Forum)

or

3. Completion of a residency or fellowship program supervised by a physician qualified to perform MSK ultrasound examinations that provides structured MSK ultrasound training, including the performance, interpretation, and reporting of 150 MSK ultrasound examinations. Unless within 2 years of completion of a residency and/or fellowship, the physician will also need to have completed 40 hours of *AMA PRA Category 1 Credits™* specific to MSK ultrasound, including at least one MSK ultrasound course that includes hands-on training.

or

4. Completion of an ACGME- or AOA-accredited residency in a specialty practice plus 100 hours of *AMA PRA Category 1 Credits™* in MSK medicine, surgery, and/or imaging, of which at least 40 hours need to be specific to MSK ultrasound, including at least 1 MSK ultrasound course that includes hands-on training, and supervision and/or performance, interpretation, and reporting of 150 MSK ultrasound examinations within the last 36 months. Physicians will not need to complete the 60 hours of non-MSK ultrasound-specific CME if they are within 2 years of residency and/or fellowship training in a specialty that focuses on MSK medicine and/or surgery.

or

5. Completion of a Council on Podiatric Medical Education-accredited residency plus 100 hours of *AMA PRA Category 1 Credits™* in podiatric medicine, surgery, and/or imaging, of which at least 40 hours need to be specific to MSK ultrasound, including at least 1 MSK ultrasound course that includes hands-on training, and supervision and/or performance, interpretation, and reporting of 150 MSK ultrasound examinations within the last 36 months. Podiatrists will not need to complete the 60 hours of non-MSK ultrasound-specific CME if they are within 2 years of residency and/or fellowship training.

Maintenance of Competence

All physicians performing MSK ultrasound examinations should demonstrate evidence of continuing competence in the interpretation and reporting of those examinations. A minimum of 50 diagnostic MSK ultrasound examinations per year is recommended to maintain the physician's skills.

Continuing Medical Education

The physician should complete 30 hours of *AMA PRA Category 1 Credits™* specific to MSK ultrasound every 3 years.

B. Diagnostic Medical Sonographer

When a sonographer performs MSK ultrasound examinations, that person should be qualified by appropriate training to perform diagnostic ultrasound examinations. This qualification can be demonstrated by certification of same by a nationally recognized certifying body.

Point-of-Care Use of Ultrasound Forum (2010)

American Academy of Nurse Practitioners
American Academy of Otolaryngology
American Academy of Pain Medicine
American Academy of Physical Medicine & Rehabilitation
American Academy of Physician Assistants
American Association of Clinical Endocrinologists
American Association of Critical-Care Nurses
American Association of Neuromuscular & Electrodiagnostic Medicine
American Association of Nurse Anesthetists
American Chiropractic Association
American College of Cardiology
American College of Emergency Physicians
American College of Nurse-Midwives
American College of Obstetricians & Gynecologists
American College of Osteopathic Obstetricians & Gynecologists
American College of Radiology
American College of Rheumatology
American College of Surgeons
American Institute of Ultrasound in Medicine
American Medical Society for Sports Medicine
American Physical Therapy Association

American Registry for Diagnostic Medical Sonography
American Society of Anesthesiologists
American Society of Cytopathologists
American Society of Echocardiography
American Society of Endocrine Physician Assistants
American Urological Association
Association for Vascular Access
Association for Women's Health, Obstetric & Neonatal Nursing
Military Medicine
Infusion Nurses Society
International Society for Therapeutic Ultrasound
Intersocietal Accreditation Commission
Physician Assistant Education Association
Renal Physicians Association
Society of Critical Care Medicine
Society of Diagnostic Medical Sonography
Society for Maternal-Fetal Medicine
Society of Radiologists in Ultrasound
Society for Vascular Surgery
Society for Vascular Ultrasound
Urological Association of Physician Assistants
World Federation for Ultrasound in Medicine & Biology

Tracks

- Participants broke up into selected Tracks

Track 1: Ob/Gyn Point-of-Care Procedures:

Alfred Abuhamad, MD

Track 2: Ultrasound-Guided Procedures

(e.g., MSK, Anesthesia, Line Placement):

Jay Smith, MD

Track 3: Emergency/Critical Care Point-of-Care Procedures:

Christopher Moore, MD

Update

- Workgroups from each of the tracks are being formed to start developing practice and training guidelines pertaining to their relevant procedures

Future Plans

- Be more involved in educating medical students in the use of US by working with organizations like SUSME