

# Emergency Department Ultrasound Data Sheet

Person performing ultrasound \_\_\_\_\_

Date of ultrasound \_\_\_\_\_

Patient name \_\_\_\_\_

Patient unit number \_\_\_\_\_

Check the type of ultrasound(s) performed and ultrasound findings for each type.

**Cardiac**

Is wall motion present?  Yes  No

Is pericardial effusion present?  Yes  No

**Abdominal**

Is free fluid present?  Yes  No

If so, check where it is observed:  Hepatorenal recess (Morison's pouch)

Splenorenal recess

Pelvis

Other \_\_\_\_\_

**Aortic**

Is the aorta enlarged ( $\geq 3$  cm)?  Yes  No

If so, write in the largest measured diameter: \_\_\_\_\_ cm

**Vascular and aspiration procedures**

Is the target visible?  Yes  No

If so, check which apply :

Internal jugular vein

Femoral vein

Pleural fluid

Peritoneal fluid

Pericardial fluid

Other \_\_\_\_\_

**Comments**

To validate this study, please print a copy of the ultrasound performed and attach it to this sheet. If possible, save the study in the SonoSite memory, upload it to computer, move it into a folder dedicated to your saved studies, and rename it with a unique identifier. Enter this name below.

Filename for saved study \_\_\_\_\_

**Background**

In 1997, the American Board of Emergency Medicine, the American College of Emergency Physicians, and the Society of Academic Emergency Medicine jointly approved an updated core curriculum for emergency medicine residency training which formally introduced the use and interpretation of urgent bedside ultrasonography for limited applications specific to the practice of emergency medicine. The latter two organizations also released updated policy statements supporting such use in community emergency medical practice.

We believe that these precedents, along with a growing body of literature on the use of emergency ultrasonography by emergency physicians, offer a present opportunity for a collaborative working agreement between the emergency physicians and radiologists here.

**Reasons for collaborative agreement between Department of Emergency Medicine and Department of Radiology**

Many specialties use ultrasonography in a directed fashion isolated from radiologist collaboration. Such uses include vascular ultrasonography by vascular surgeons, pelvic ultrasonography by obstetricians, echocardiography by cardiologists, and emergency abdominal ultrasonography by emergency physicians and trauma surgeons. However, we believe that interdepartmental collaboration between the Department of Emergency Medicine and Department of Radiology would be beneficial in several regards:

- Improvement of emergency patient care. This is clarified below, but would result from improved ability for consultation, for reducing time to diagnosis in critical care cases, for scan reinterpretation, for implementation of standards for emergency scan-directed diagnosis and treatment, and for quality assurance.
- Improvement of teaching. Both departments are committed to resident training and both specialties have unique needs for the use of ultrasonographic technology. A collaborative effort between departments would enhance teaching by increasing cross-specialty resident interaction and by allowing each department to educate the other about those aspects of ultrasonography unique to each respective specialty.
- Collaborative research. Though the field of emergency ultrasonography is young, current research in this field is robust. Most emergency centers doing research are doing so with little formal collaboration with their respective radiology colleagues. By setting up a working agreement between departments in advance, opportunities for research will be enhanced.

**Direct benefits for Department of Radiology**

- Rapid diagnosis of limited life-threatening conditions would be done by emergency physicians using a dedicated machine obviating the need for redirection of stressed radiology resources (such as interruption of the daytime schedule or calling in residents from home after hours).
- This agreement specifies that patients with non-life-threatening conditions, and those with equivocal diagnoses based on emergency department ultrasonography, will be scheduled for formal radiology department ultrasonography. Thus, no loss of billing will be incurred by the radiology department.
- The Department of Emergency Medicine will purchase and provide maintenance for a machine dedicated to the emergency department. Thus, no equipment or financial burden will be imposed on the radiology department.

- The Department of Emergency Medicine is actively soliciting current manufacturers of ultrasonographic technology specifically developed for emergency department applications, and intends to institute research among the other member emergency departments within the region. As a residency-based department, the Department of Radiology would be able to play an important role in this research. As an example, this radiology group could serve as the standard reading body for emergency department scans performed across all participating institutions.

#### **Direct benefits for the Department of Emergency Medicine**

- By having a machine dedicated to the emergency department, immediate information on potentially treatable life-threatening conditions could be obtained for critically ill or injured patients.
- Recognition of the role of directed ultrasound performed by emergency physicians would foster greater trust and cooperation between departments.
- The Department of Emergency Medicine would fulfill a teaching role dictated by the American Board of Emergency Medicine for training emergency medicine residents in the use and interpretation of directed emergency ultrasonography.

#### **Policy**

- Emergency physicians who have successfully completed an emergency ultrasonography course approved by the Society of Academic Emergency Medicine may perform bedside ultrasonography for the indications given below.
- Where patients are stable and formal radiology department imaging is available, patients will be sent for formal ultrasonography as a means for quality assurance and confirmation of diagnoses.
- Emergency department ultrasonography will be performed without extra patient charges, unless approved by the Department of Radiology in the future.
- Equipment for bedside emergency ultrasonography will be provided and maintained by the Department of Emergency Medicine.
- Collaborative research, quality assurance, resident teaching, and other projects of mutual interest to the Departments of Radiology and Emergency Medicine are initiated by this agreement.

#### **Indications**

***Diagnostic indications.*** *These are cases where bedside ultrasound may be the only imaging modality available during resuscitation, as patients may be too unstable to leave the ED. The purpose of ultrasound in these cases is to obtain information critical to immediate decision-making (unmatched transfusion versus crystalloid resuscitation, needle pericardiocentesis versus tube thoracostomy, and the like). Once the patient is stable, formal imaging with CT or ultrasound should be obtained.*

- Suspected intraperitoneal free fluid
- Suspected pericardial effusion or tamponade
- Diagnosis of electromechanical dissociation

**Procedural indications.** *These are cases where information provided by ultrasound imaging will improve patient care, particularly where former practice was blind needle or catheter placement, and the likelihood of a procedural complication is high.*

- Needle thoracostomy for relief of pericardial tamponade
- Central line placement

#### References

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