

The Ultrasound Assisted Physical Exam

Charles Morrow DO, MS, FHM



Disclosures/Conflicts of Interest

None

But I do talk a lot about the Butterfly Ultrasound



About Your Speaker...

Charles Morrow DO, MS, FMH

- Medical Director Bowling Green Medical Center Hospitalist Group
- Assistant Professor UKCOM Bowling Green Campus
- Med Center President of Medical Staff 2026
- SHM Kentucky Chapter Director of Membership Development



Special Thanks!



Nilam Soni MD MS

"Godfather of HM POCUS"
Chair of SHM POCUS Steering Committee
Professor of Medicine
VA UT Health San Antonio



Trevor Jensen MD MS

Director HM POCUS, HM Procedures Service
POCUS Lead, UCSF SOM
Professor of Clinical Medicine
UCSF Health



What We'll Learn

- Why use POCUS?
- Barriers of POCUS
- Basics of POCUS
- Case examples of how a beginner (YOU!) can use POCUS for routine physical exam



Just a Thought...



Just a Thought...

Point: Routine Daily Physical Exams in Hospitalized Patients Are a Waste of Time

Journal of Hospital Medicine 16(9). 2021 September;568-569. Published Online First August 18, 2021 | 10.12788/jhm.3670

August 18, 2021 | JOURNAL OF HOSPITAL MEDICINE



Adam Rodman, MD, MPH ; Shane Warnock, MD

AUTHOR AND DISCLOSURE INFORMATION

"I want more time with my doctor": a quantitative study of time and the consultation

Jane Ogden ¹, Kheelna Bavalia, Matthew Bull, Stuart Frankum, Chris Goldie, Micaela Gossiau, Azita Jones, Sonia Kumar, Kishor Vasant

Affiliations + expand

PMID: 15367468 DOI: [10.1093/fampra/cmh502](https://doi.org/10.1093/fampra/cmh502)

Abstract

Background: Although consultations have increased in length, patients still express dissatisfaction with how much time they spend with their doctor.



What We Could/Should Be Doing



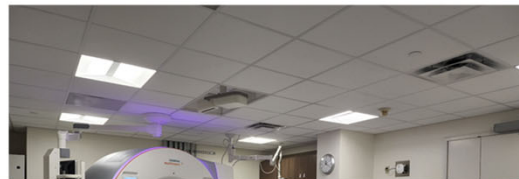
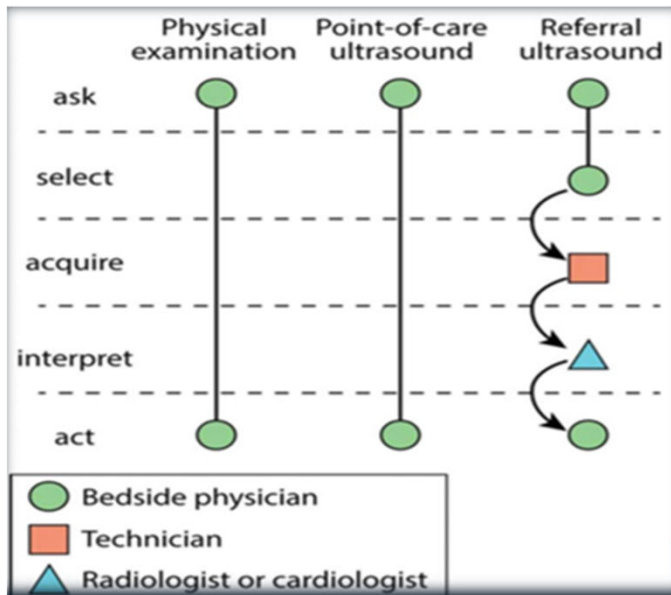
What We Could/Should Be Doing

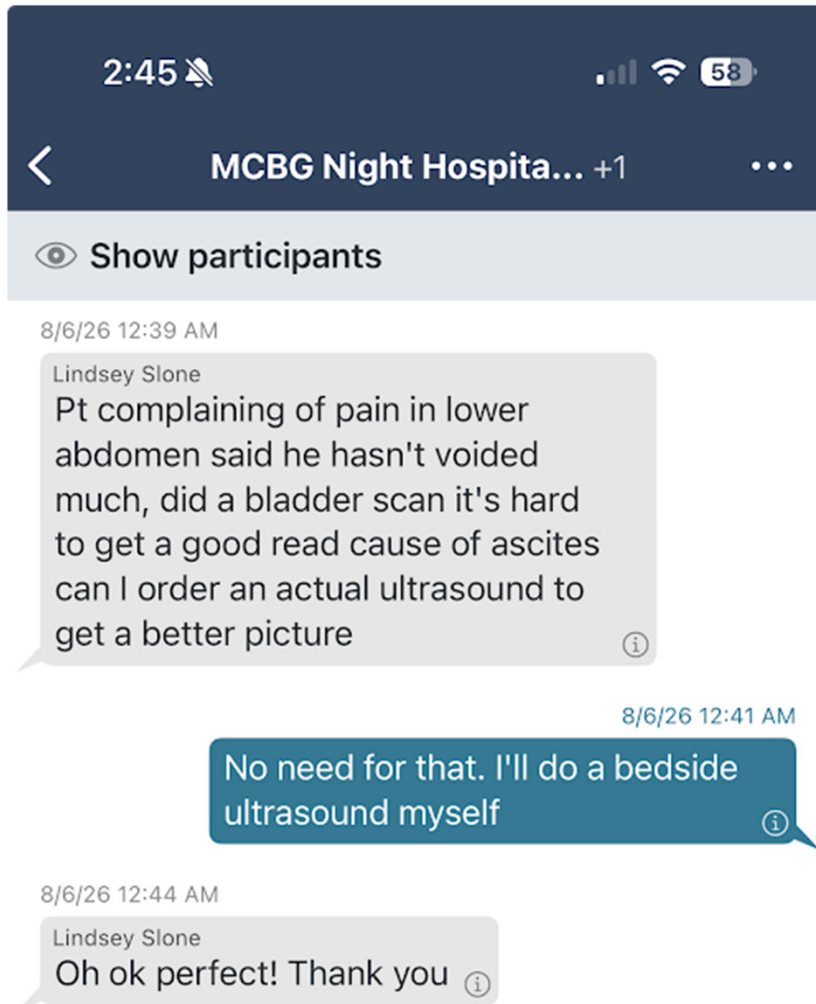


Point-of-Care Ultrasound (POCUS) should be the
STANDARD component of bedside patient evaluation
for Hospital Medicine patient



Why Add POCUS to you bedside Evaluation?





BASIC POCUS

ADVANCED POCUS

UAPE



TABLE 1. Common POCUS applications for hospitalists

Cardiac	Pulmonary	Abdominal	Vascular	MSK	Procedural
LV assessment	Pleural effusion	Free fluid	DVT	Cellulitis	Paracentesis
RV assessment	Interstitial syndromes	Kidney size	AAA	Abscess	Thoracentesis
Atrial size	Alveolar syndromes	Hydronephrosis		Joint effusions	CVC placement
Central venous pressure (IVC/IJ)	Pneumothorax	Bladder volume		Fractures	PIV placement
Pericardial effusion		Gallbladder			Arterial line placement
Chamber hypertrophy		Spleen size			Arthrocentesis
Gross valvular abnormalities		Liver size			Abscess drainage
					Lumbar puncture

HOURS TO DAYS:	Abd free fluid, Bladder volume, Pleural Effusion
DAYS TO WEEKS:	Pulm Edema, Hydronephrosis, IJ
WEEKS TO MONTHS:	LVSF, Pericard Effusion, Gallbladder , IVC, DVT
MONTHS TO YEARS:	More advanced cardiac

Barriers to POCUS

Time
Consuming

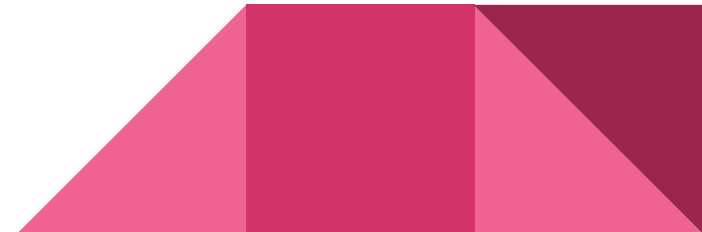
Mistakes/Liability

Training/Confidence

Not Enough Ultrasounds
to go around

Upfront Cost

Specialists, Radiology,
Hospital doesn't want
me to



Butterfly



iQ3™ **Award Winner**

\$3,899

iQ+™

\$2,699

Lumify S4-1

Phased Array Transducer

For abdominal and cardiac applications: cardiac, OB/GYN, lung, abdomen and FAST imaging preset optimizations

Lumify L12-4

Linear Array Transducer

For shallow applications: soft tissue, vascular, superficial, musculoskeletal, and lung

Lumify C5-2

Curved Array Transducer

For deeper applications: abdominal, gallbladder, OB/GYN and lung imaging preset optimizations

Clarius



Vscan Air™ CL

Vscan Air CL is a wireless, handheld ultrasound system that delivers crystal-clear images. Ideal for abdominal imaging, obstetric, MSK, and more.

3-Year Warranty | Starting at \$4,999

Philips Flash 5100 Pro



\$\$\$\$\$

Sonosite



How Do I Get More Training/Experience?

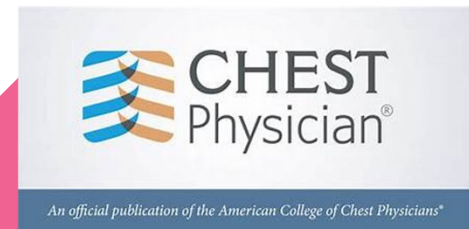


POCUS COC Roadmap

Recipients of the SHM | CHEST POCUS Certificate of Completion must complete all five program requirements within three years of entering the program. The requirements are listed in the recommended order of completion. Portfolio images used for certificate completion must be generated and collected personally after attending one of the live courses.

1. Complete online modules
2. Attend Ultrasonography: Essentials in Critical Care
3. Attend an approved regional POCUS course
4. Complete the online portfolio
5. Take the Comprehensive Skills and Knowledge Assessments

The SHM POCUS COC Steering Committee is responsible for developing and maintaining the standards for the Certificate of Completion.



<https://www.hospitalmedicine.org/clinical-topics/ultrasound/pocus-certificate-of-completion/#upcoming-courses-3>

Regional POCUS Courses

POCUS COC candidates must attend an approved multi-day regional ultrasound course. Individuals looking for more training without the certificate program are also eligible to attend.

Upcoming Regional Courses:

**CHEST: Integration into
Clinical Practice Course**
Chicago, IL

[More Information](#)

**SHM Rocky Mountain Chapter
POCUS Regional Course**
September 17-18, 2026
Aurora, CO

[Register](#)

**SHM Minnesota Chapter Regional
Point-of-Care Ultrasound Course**
October 10-11, 2026
Bloomington, MN

[Register](#)

**13th New York Point-of-Care
Ultrasound Course**
November 4-5, 2026
New York, NY

[Register](#)

Point of Care Ultrasound Course
November 4-6, 2026
Atlanta, GA

[Register](#)

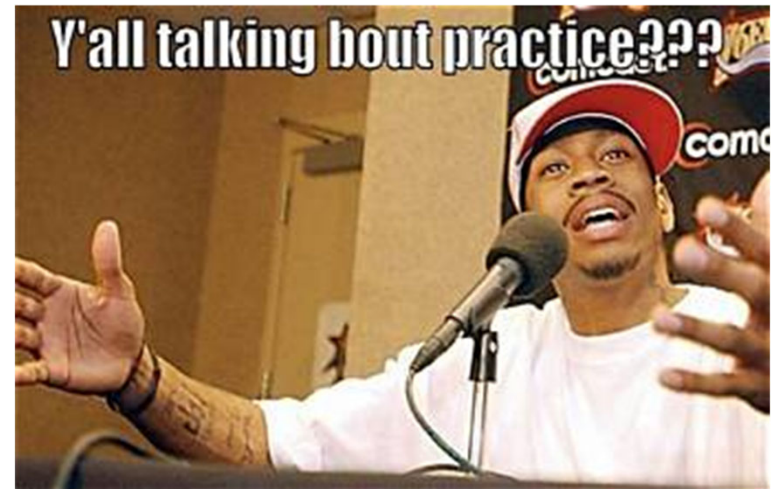
**UCSF Point of Care Ultrasound for
the Hospitalist**
November 5-6, 2026
San Francisco, CA

[Register](#)



So how do I get more confident?

Practice!!



HOSPITALIST POCUS BILLING CHEAT SHEET

2026 Medicare-oriented reference • Diagnostic POCUS must be medically necessary, documented, interpreted, and permanently image-retained.

POCUS application	CPT	2026 wRVU*	Typical hospitalist use
Focused cardiac / limited TTE	93308-26	0.52	LV/RV function, pericardial effusion, gross hemodynamics
Lung / chest ultrasound	76604-26	0.58	Pleural effusion, pneumothorax, focused thoracic assessment
Limited abdominal ultrasound	76705-26	0.58	Free fluid, gallbladder, focused abdominal questions
Aorta / renal / retroperitoneal limited	76775-26	0.57	AAA, hydronephrosis/renal-focused evaluation
Bladder / limited pelvic	76857-26	0.49	Bladder volume / retention and selected pelvic questions
Limited unilateral venous duplex	93971-26	0.44	Focused DVT evaluation
MSK / soft tissue / focal extremity	76882-26	0.67	Effusion, abscess, tendon/muscle/nerve or soft-tissue lesion
US-guided vascular access †	76937-26	0.29	Dynamic US guidance for line access; add-on to primary procedure
US-guided needle placement †	76942-26	0.65	Needle guidance for aspiration/injection/biopsy/localization

2026 wRVU figures are based on ACEP's current 2026 POCUS coding guidance

The 6-Point Billing Check

1. Indication/Medical Necessity
 - a. Document the clinical question and relevant symptoms/signs
2. Study/Scope
 - a. State the exam is limited/focused and identify the anatomical targets/views
3. Findings
 - a. Document what was visualized
4. Interpretation
 - a. Provide a separate final impression
5. Image retention
 - a. Permanently store retrievable images for the billed study
6. Identity/date
 - a. Identify the performing/interpreting clinician, date, and time

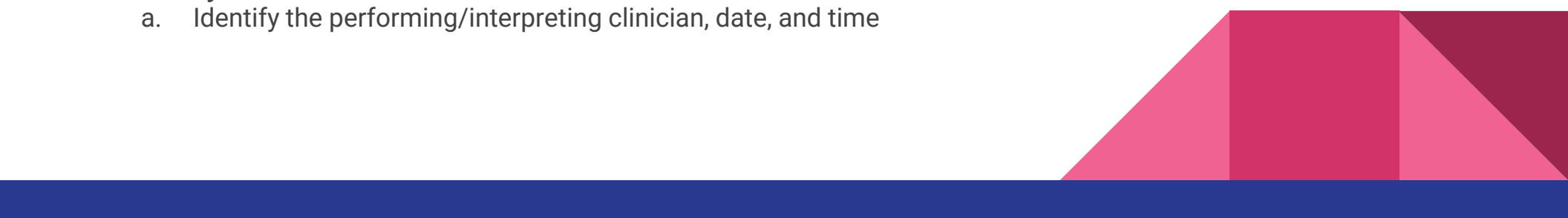
Point of Care Ultrasound Note: []

Operator: Dr Charles Morrow

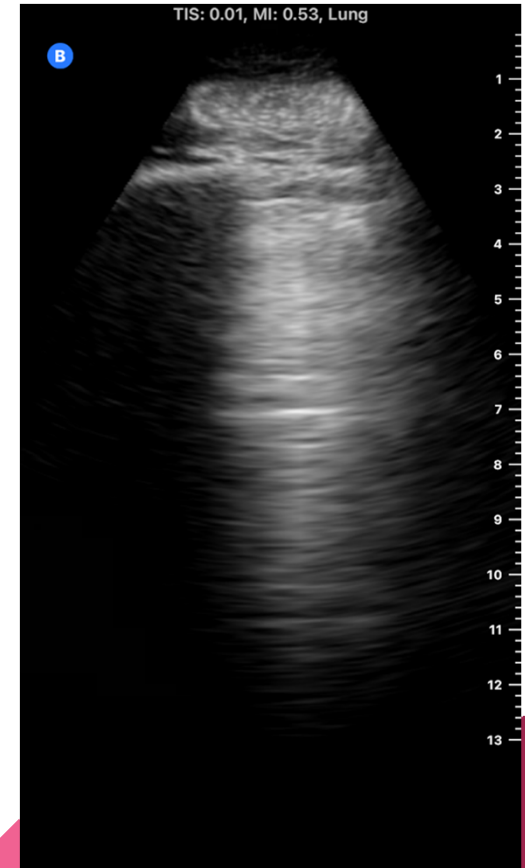
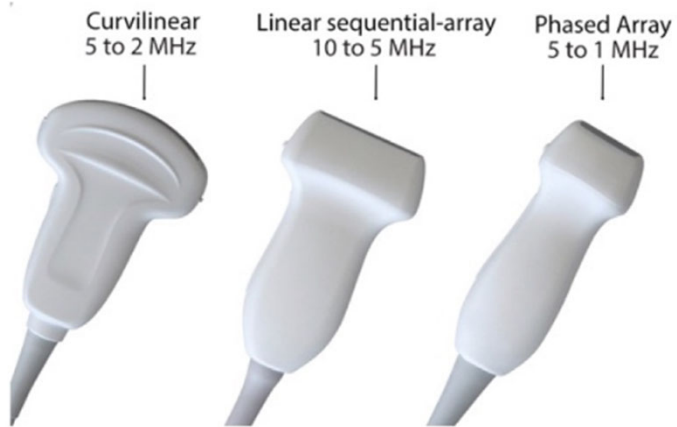
Date: []

Reason: []

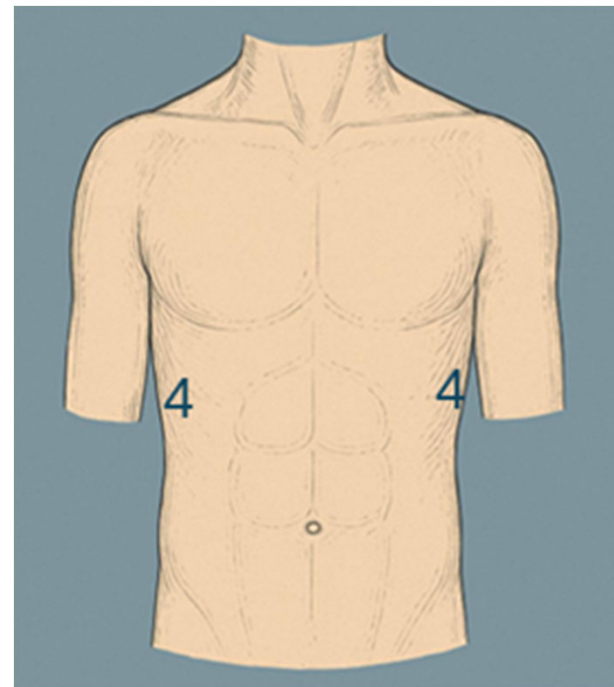
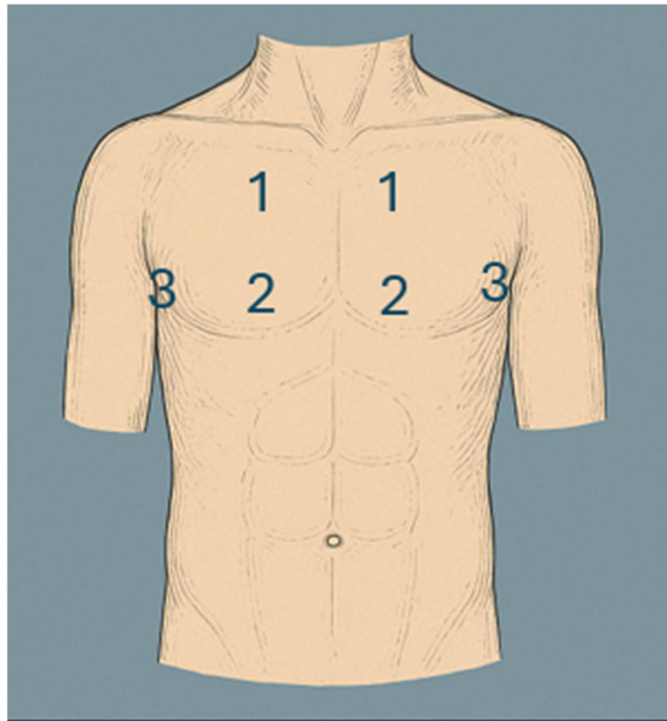
Findings:

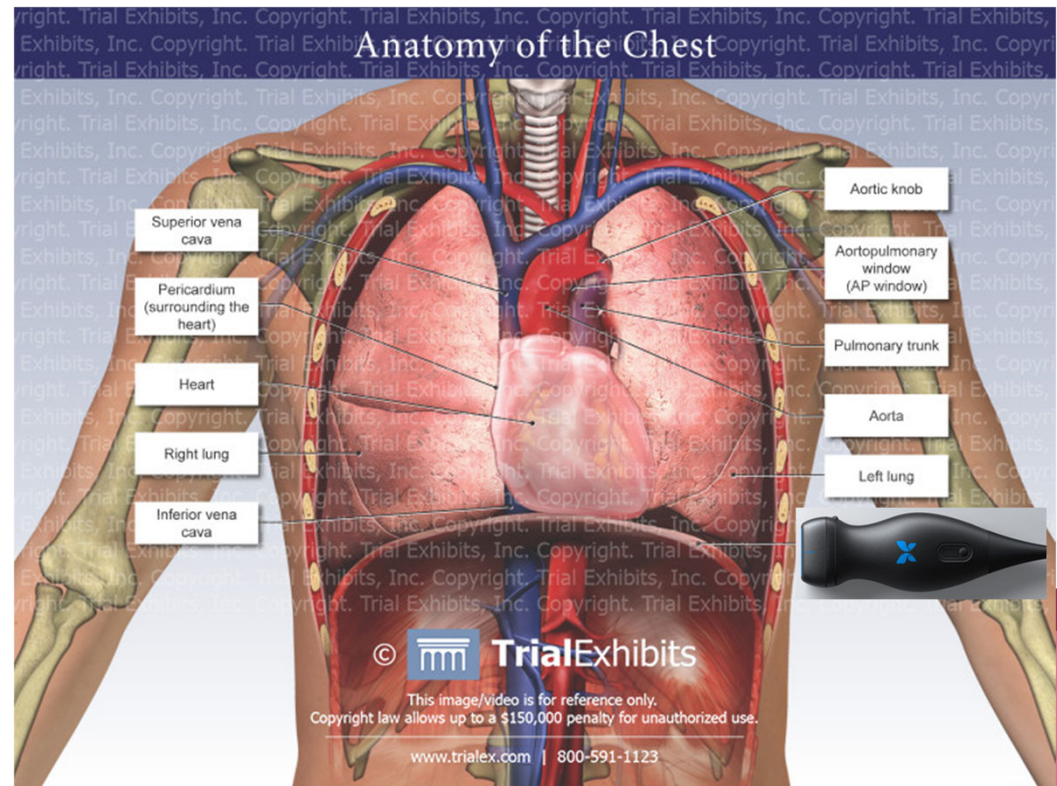
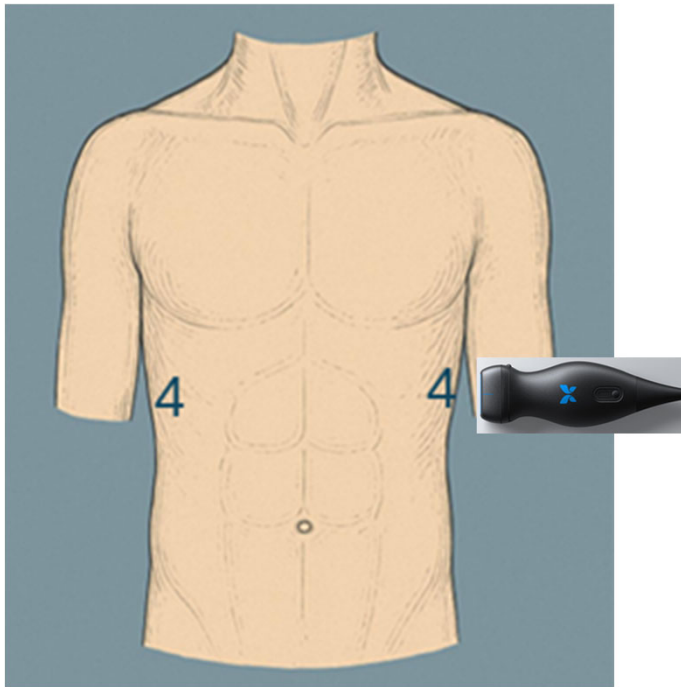


Probes and Orientation

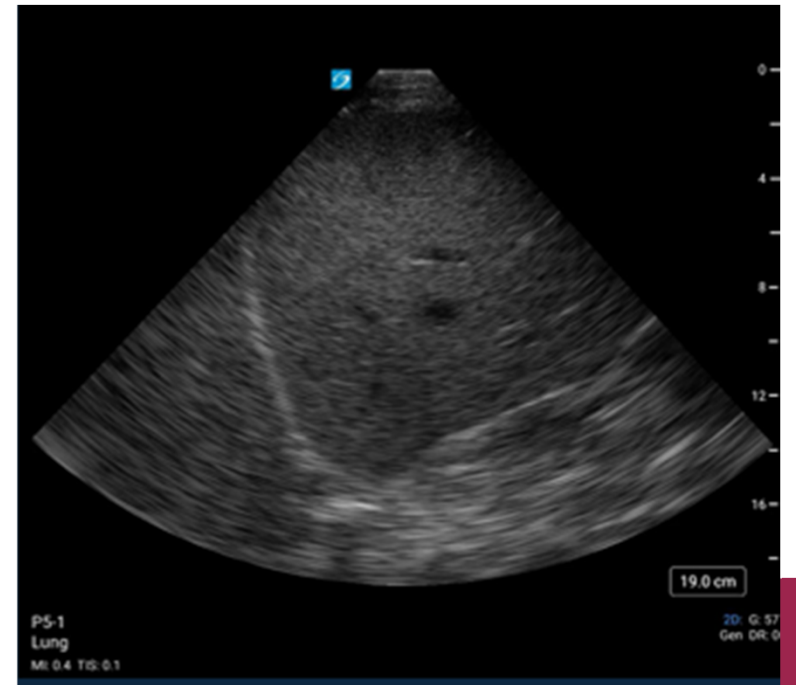
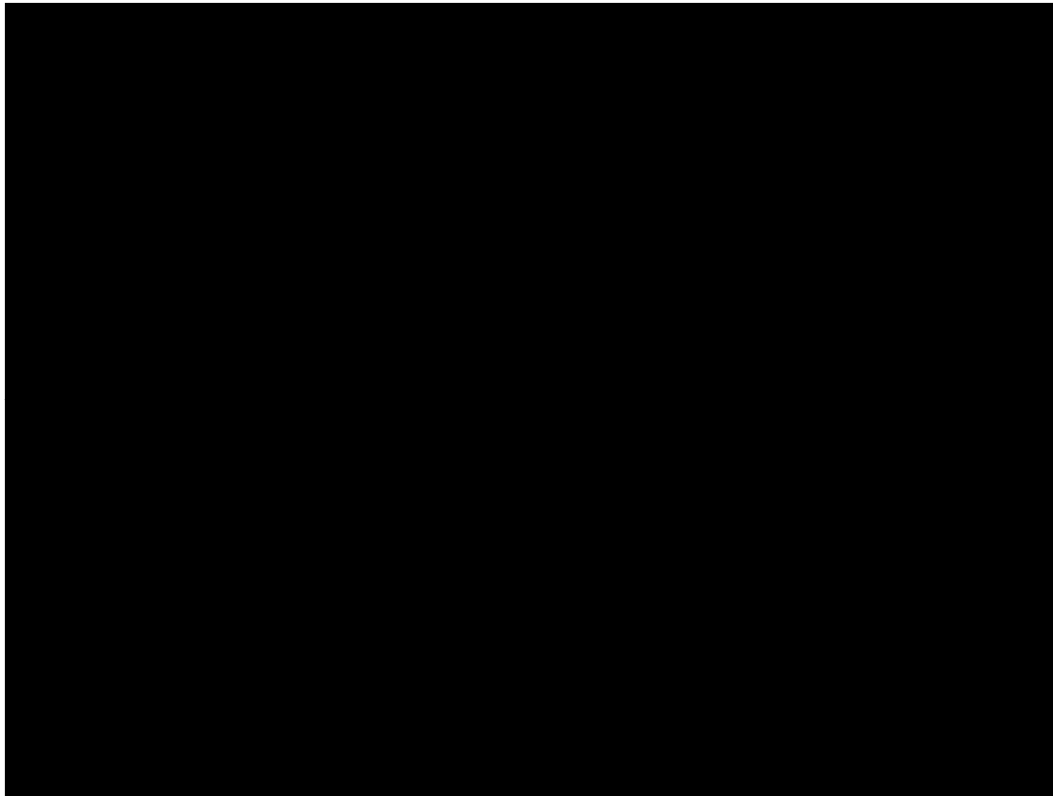


Basic Lung Ultrasound





Normal Lung Views



Case 1:

75 y/o M with PMH significant for dementia, CAD, CDK IV, diabetes who presents with shortness of breath and worsening mentation. Seen at an Urgent Care, where he was diagnosed with “pneumonia”. Prescribed PO Doxycycline.

Vitals:

T: 97.6

HR: 105

RR: 28

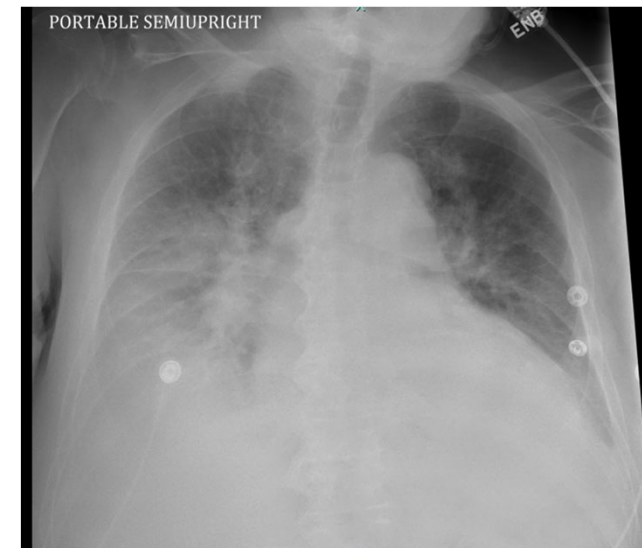
BP: 137/87

O2: 90% on 2 L bnc

8.1# 9.8L 167
30.8L#

140 | 110H | 56H | 118H
4.7 | 18L | 4.06H

Echo: EF 45-50%



Read: Worsening congestion and diffuse bilateral infiltrates. Large lower lobe consolidations and effusions, right greater than left

POCUS Dx: Large pleural effusion (~1 min)



Case 2:

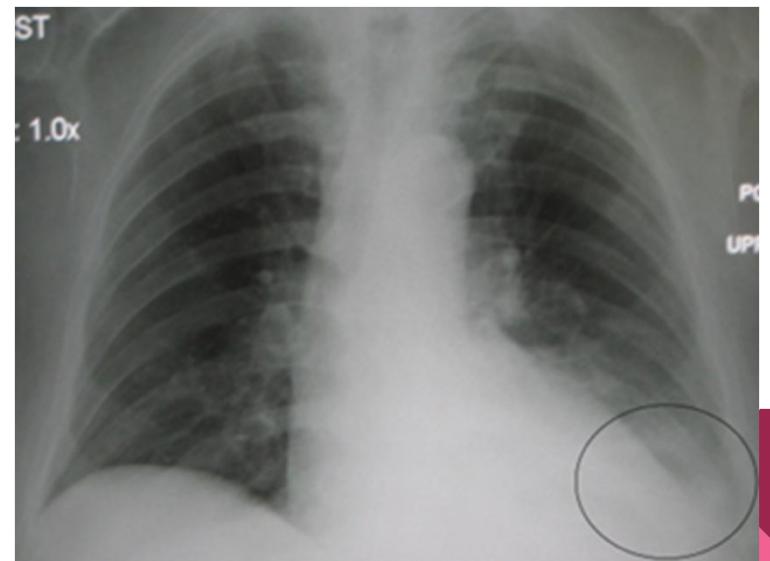
63 y/o F with cough and fatigue for several weeks.

No fever/chills.

Labs normal.

CXR: Basilar opacity +/- small effusion

Admitted for Pneumonia



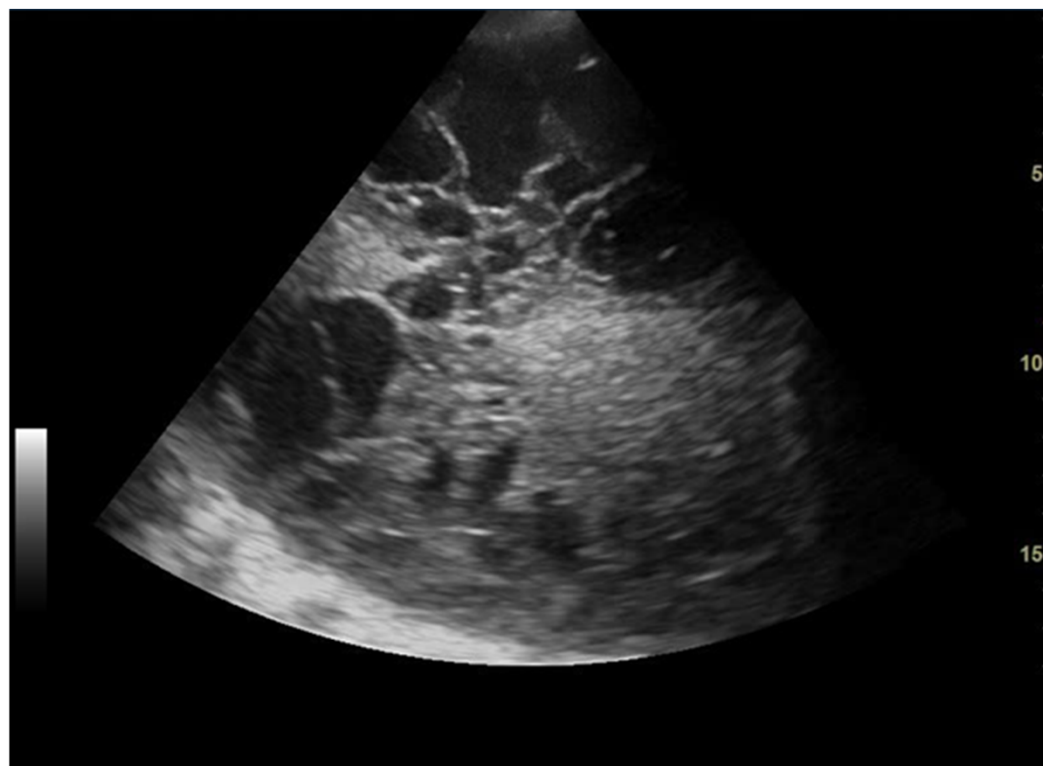
POCUS Dx: Pleural Loculations (takes less than 1 minute)

Differential:

- Empyema (infection)
- Malignancy
- Hemothorax
- Rheumatic pleuritis
- Esophageal rupture.

Chest tube placed

CT scan with left lower lobe mass

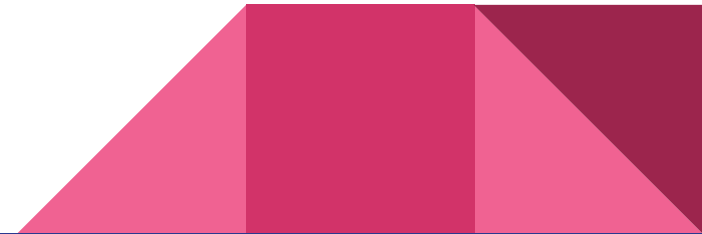


Key Point

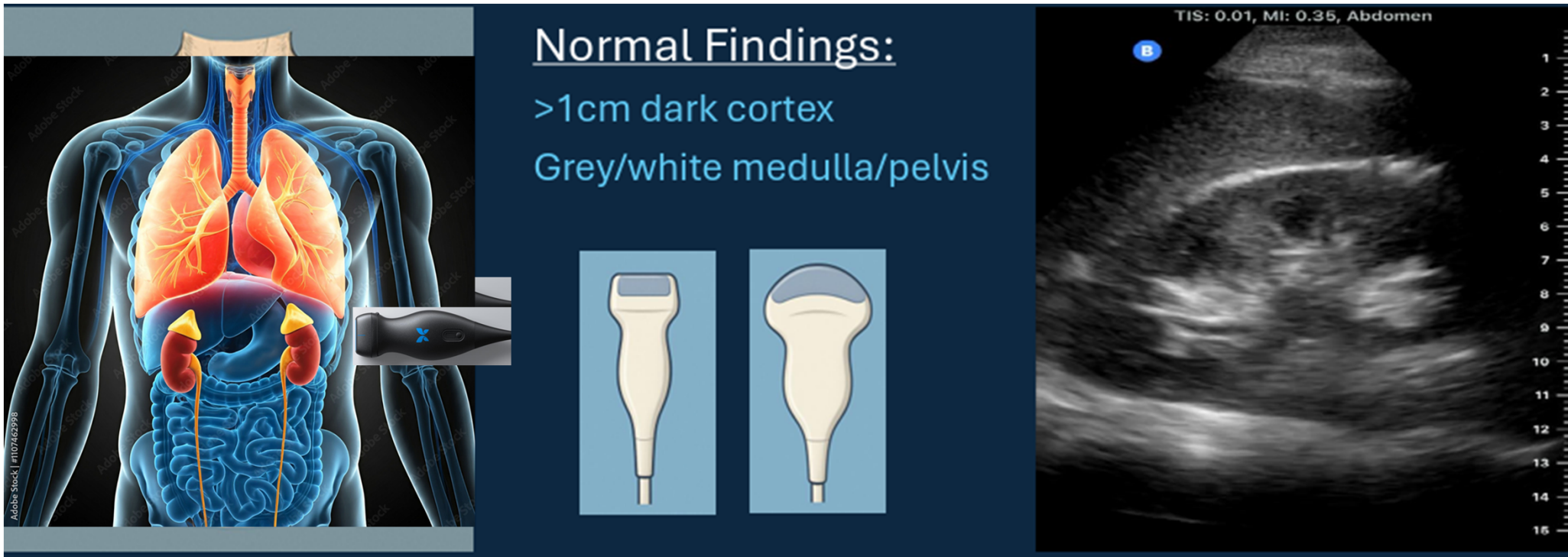
Modality	Sensitivity	Specificity
POCUS / Lung US	~91–100%	~92–100%
Physical examination	~44–56%	~89–92%
Chest X-ray	~42–66%	~81–89%

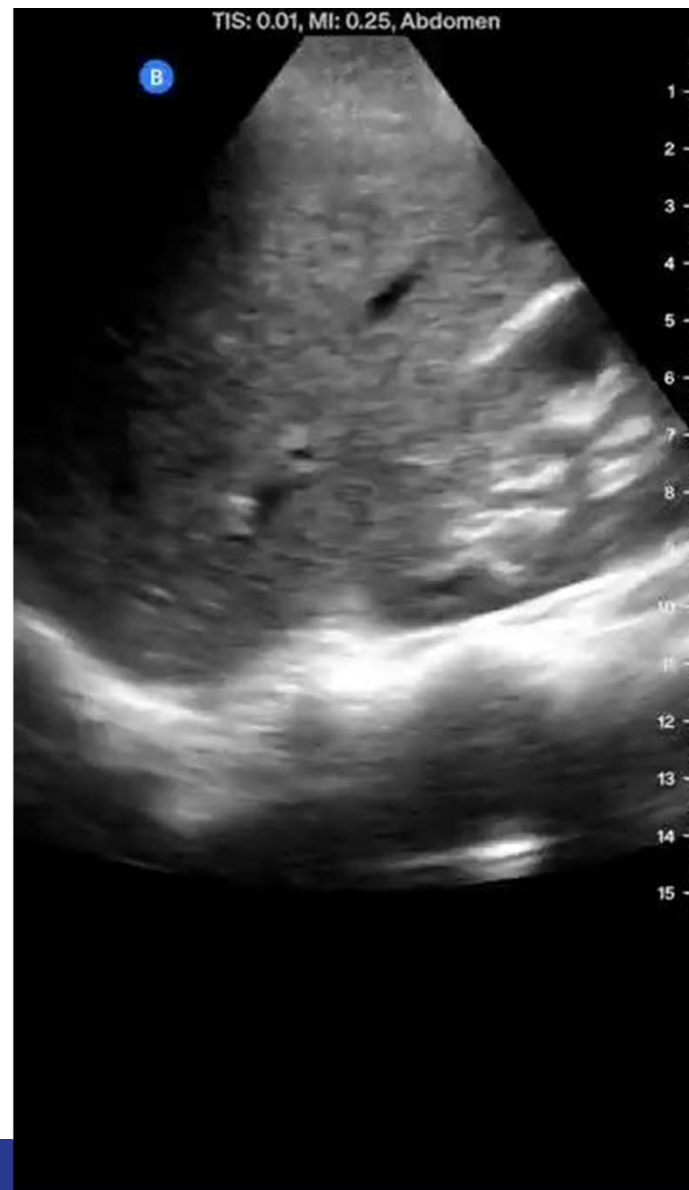
Soni et al. 2015; Liu et al. 2017; Xirouchaki et al. 2011; Hansell et al. 2021

POCUS detects pleural effusions more reliably than either physical examination or chest radiography, with particular advantages for small effusions.

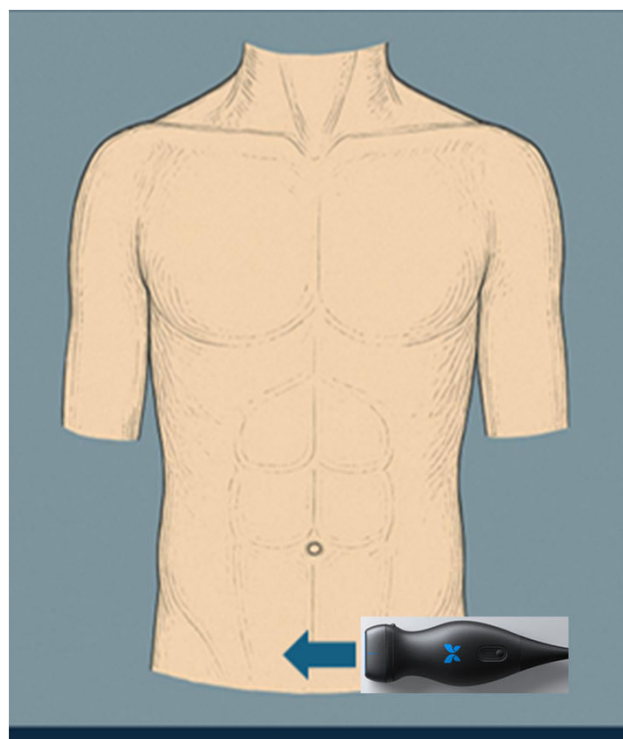


Basic Renal/Bladder Ultrasound





Basic Renal/Bladder Ultrasound (cont)

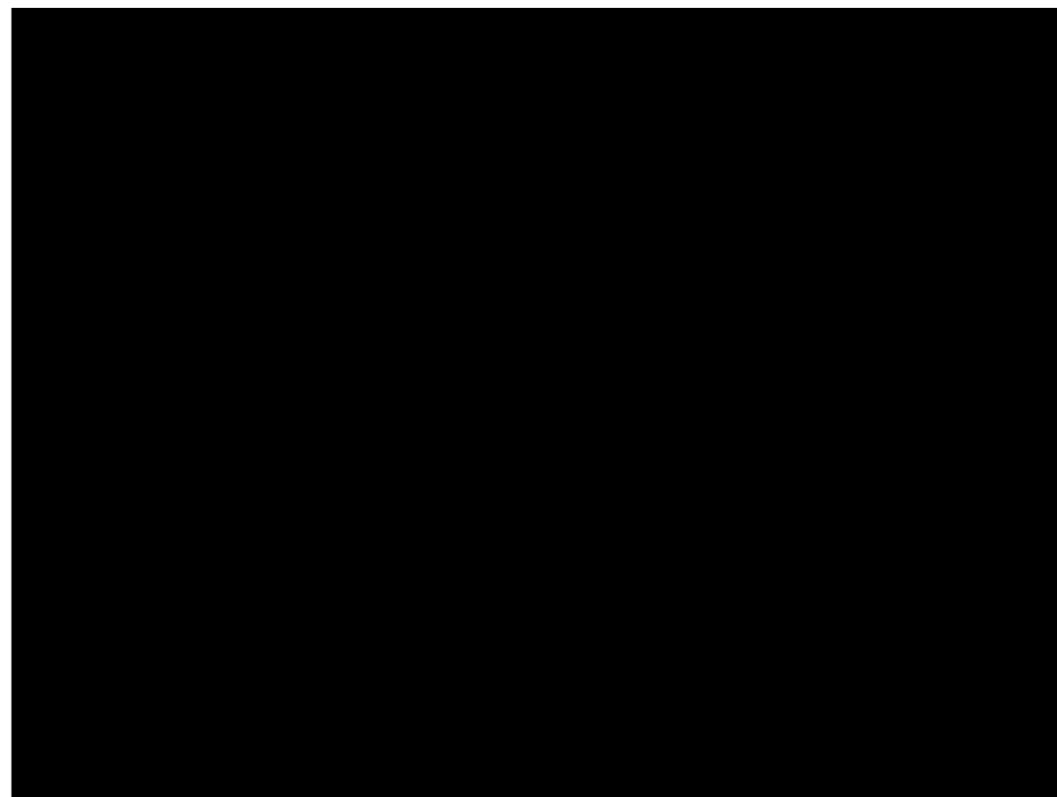
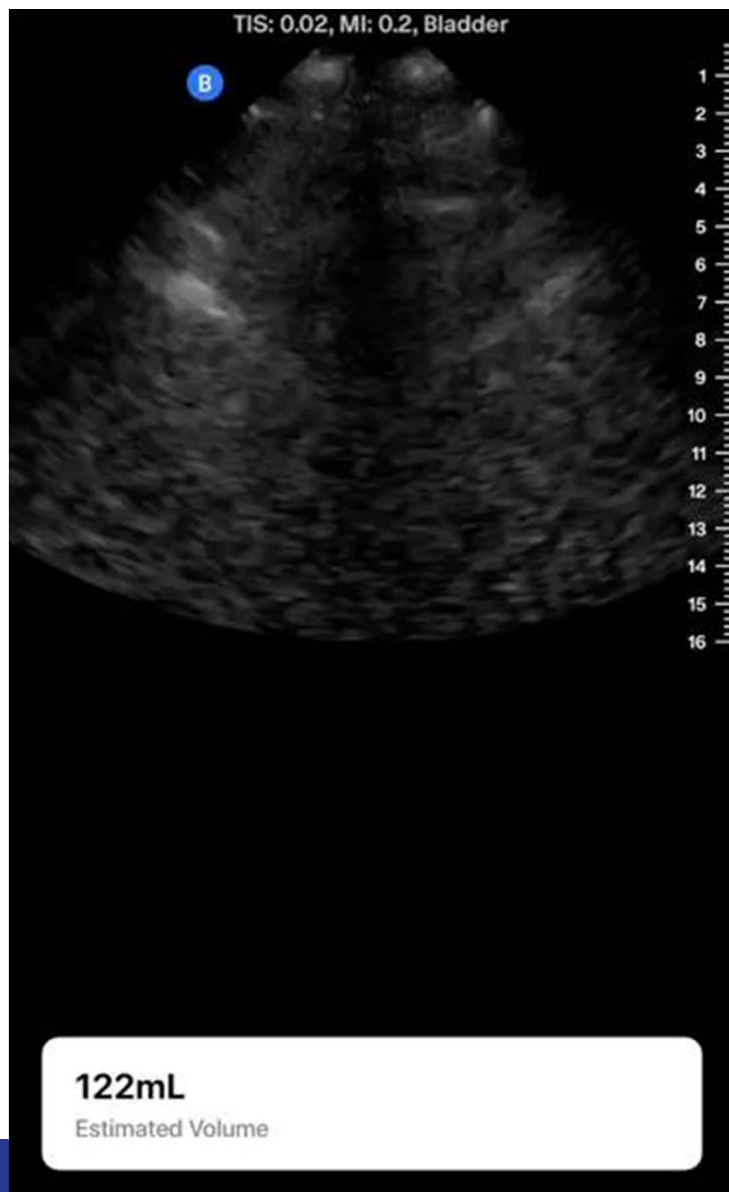


Normal Findings:

Thin walled, no
surrounding fluid

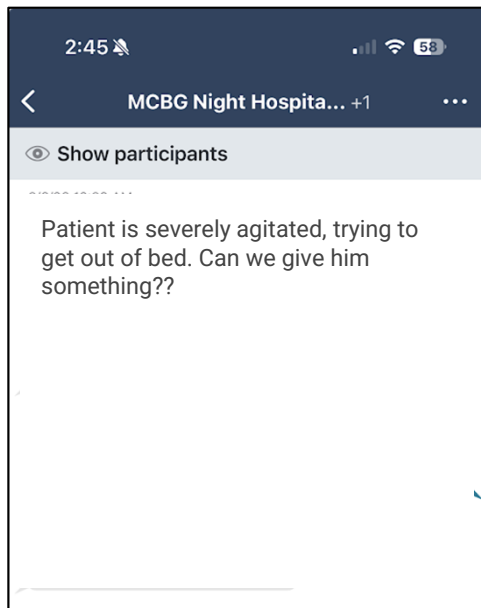
Volume depends on last
urination





Case 3:

84 y/o M from SNF with PMH significant for dementia, BPH, HTN, DM2 presents with altered mental status. Admitted for “UTI”



Exam:

Mildly agitation. Picking at things.
Delirious.

Wouldn't follow commands or answer any questions.

Suprapubic fullness to exam, mildly tender.

OUR PATIENT'S POCUS

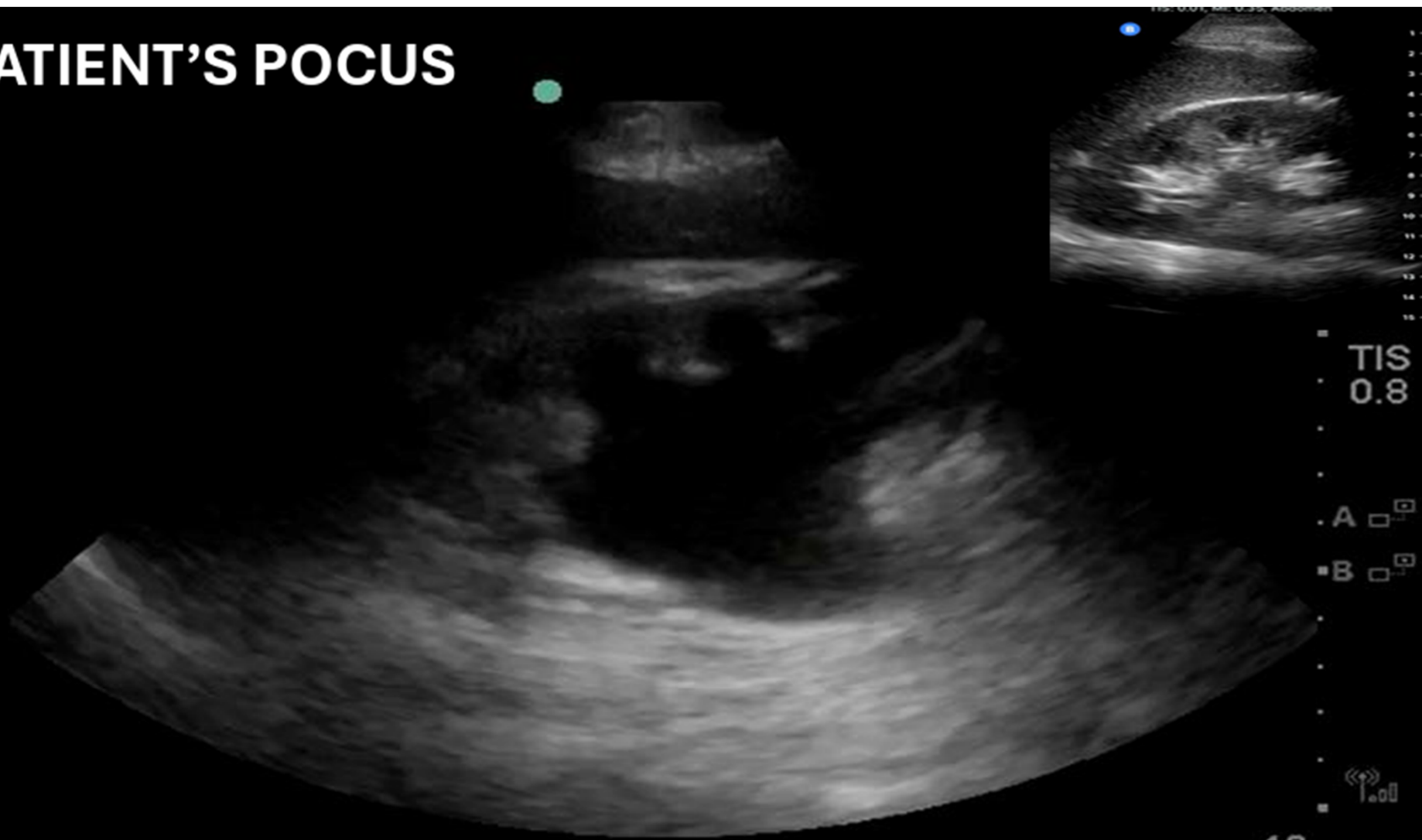
Foley placed with 1000 cc UOP!

Patient calmed down and rested

From Point-of-Care Ultrasound, 1st edition, 2014

15

OUR PATIENT'S POCUS



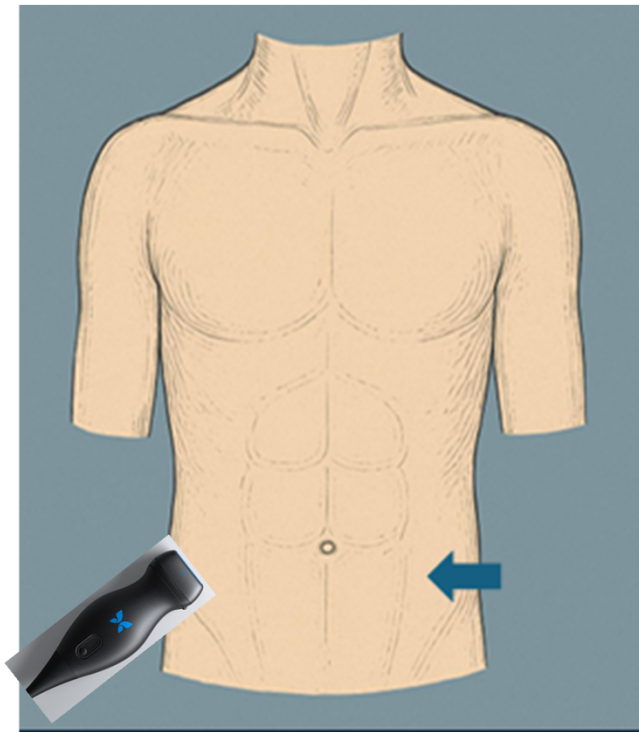
POCUS Dx: Severe Urinary Retention, hydronephrosis (1 min)

Modality	Diagnostic performance
POCUS / bladder ultrasound	High accuracy; sensitivity and specificity vary with device, patient population, and volume threshold
Physical examination	Limited and variable accuracy; often unreliable for clinically important bladder distension

Modality	Sensitivity	Specificity	LR+	LR-
Bladder ultrasound*	97%	91%	10.8	0.03
Physical exam†	81%	50%	1.62	0.38

POCUS values from a study using a 100-mL bladder-volume threshold; performance varies with device, population, and volume cutoff.

Basic Abdominal POCUS



Normal Findings:

Abd wall

US wave scattering from
bowel gas



Case 4:

48 y/o M with no PMH. Alcoholic. Last drink 3 days ago. Interested in alcohol rehab, admitted for “detox”

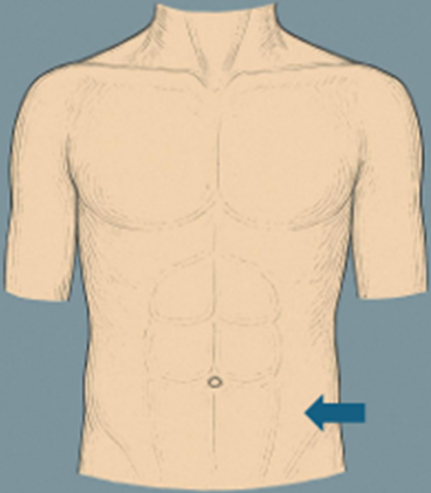
Labs: WNL (mild thrombocytopenia)

ROS: Constipated

Exam: Tremulous. Abdomen mildly distended. Nontender.



OUR PATIENT'S POCUS



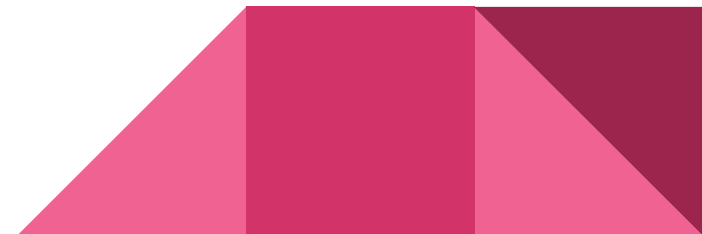
POCUS Dx: New small volume ascites

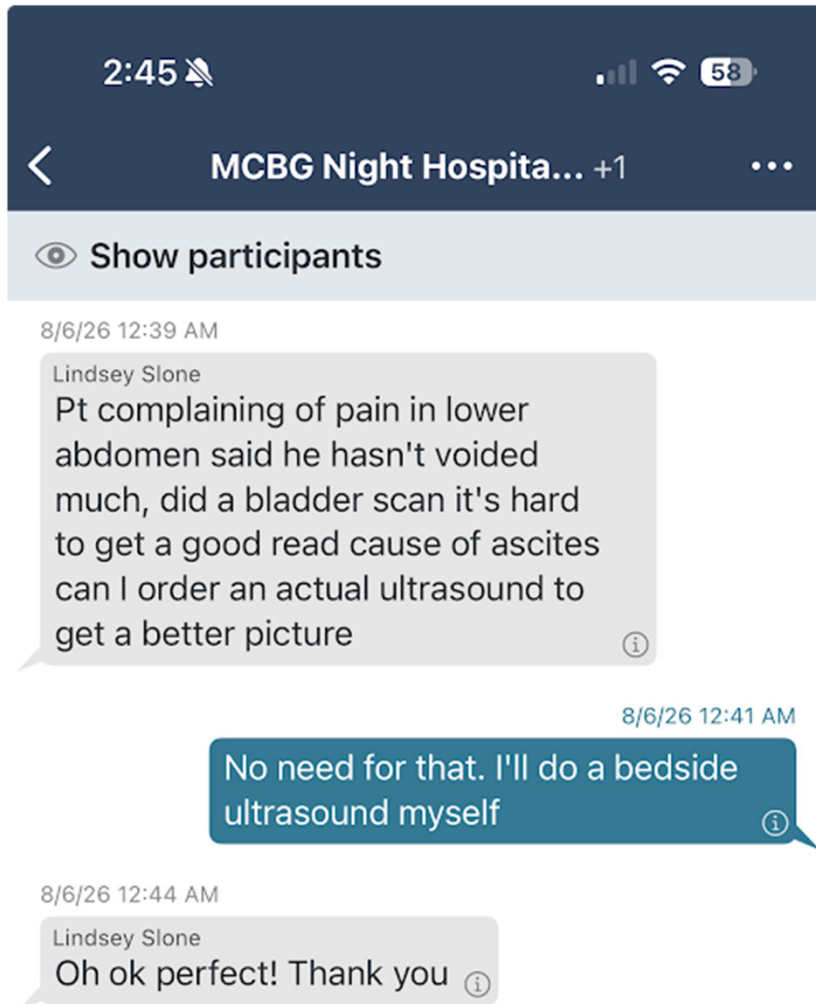
Most likely clinical dx: Early or compensated cirrhosis

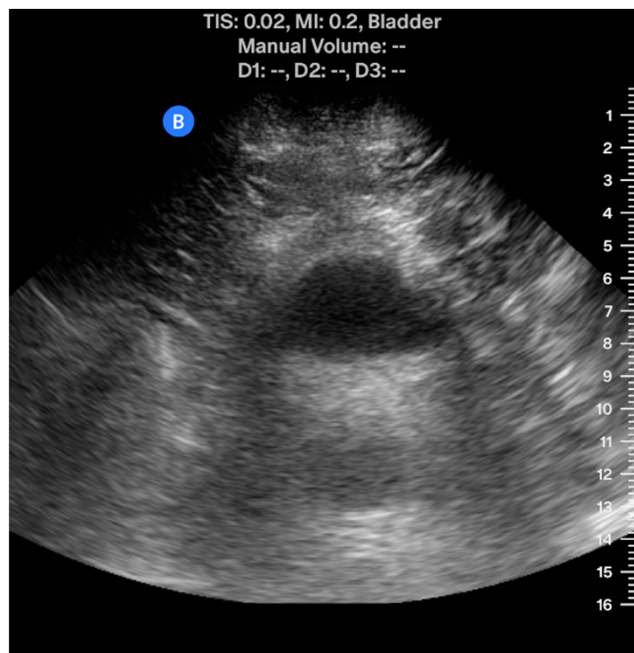
Modality	Sensitivity (%)	Specificity (%)
POCUS	94-100	97-100
Physical Exam	45-84	59-90

Liu 2017, Tapper 2023, Kaplan 2024,

Teaching point: POCUS can identify ascites well before it becomes clinically detectable.







Bladder evaluation negative, but
large volume ascites. Needs a
paracentesis!

Take Home Points

POCUS can be as easy and complex as you want to make it.

Research shows POCUS is an amazing tool for our patients.

Start Simple. Learn the Basics

Practice!





That's all Folks!