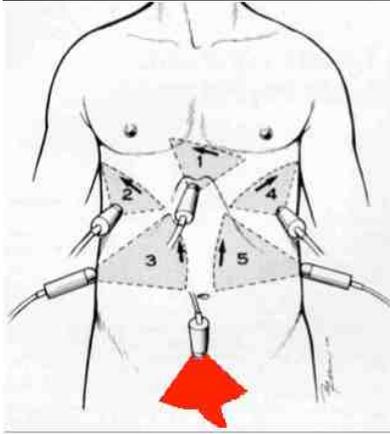


FAST - Réalisation



PFAST?

BJS British Journal of Surgery

Prehospital ultrasound imaging improves management of abdominal trauma.

Walcher F et al. Br J Surg. 2006 Feb;93(2):238-42.

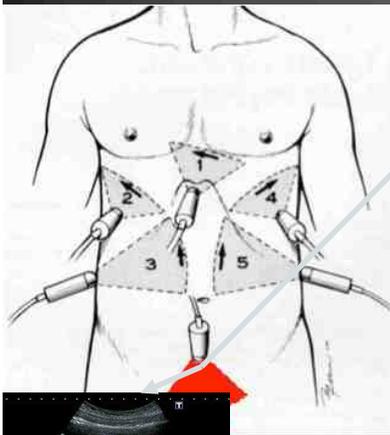
PFAST = prehospital focused abdominal sonography for trauma

202 trauma abdo en préhospitalier
26 Vrai Positif

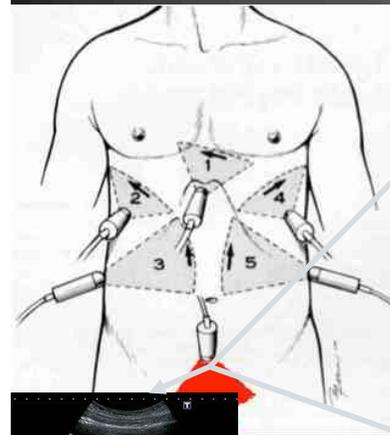
17 positif dans un seul quadrant

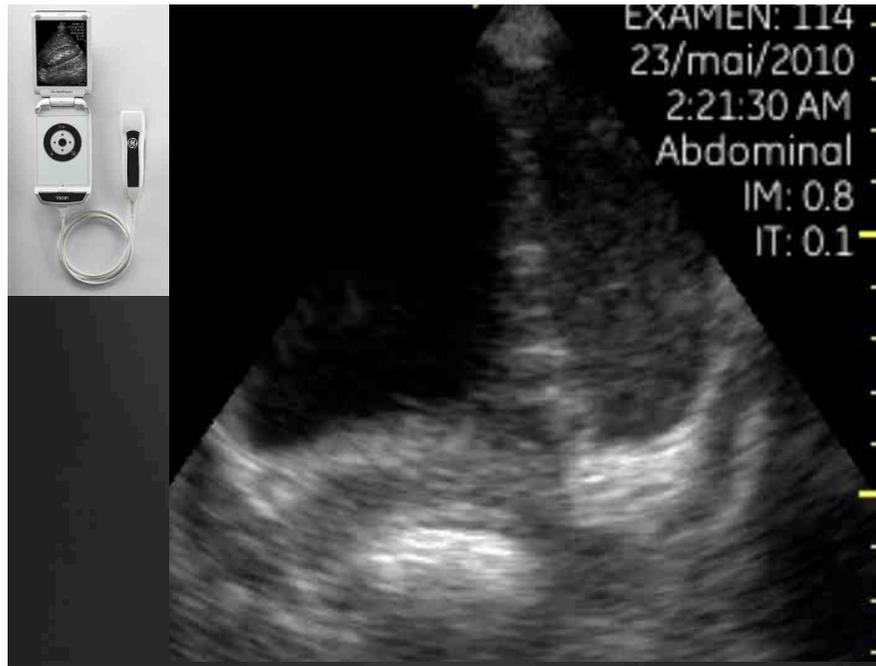
Douglas	18	69%
RUQ	12	46%
LUQ	8	31%

FAST - Réalisation



FAST - Réalisation





FAST – Hémopéritoine?

Surgeon-Performed Ultrasound for the Assessment of Truncal Injuries

Table 1. ULTRASOUND RESULTS OF TOTAL PATIENT POPULATION

Specific Groups	FP	FN	Sensitivity (%)	Specificity (%)
Precordial/transthoracic (313)	2	0	100	99.3
Blunt abdominal (1227)	2	16	78.3	99.8
Normotensive (1197)	2	16	75.7	99.8
Hypotensive (30)	0	0	100	100

Total = 1540 patients.
FP = False positive.
FN = False negative.

Rozycki et al. Annals Surg. 1998

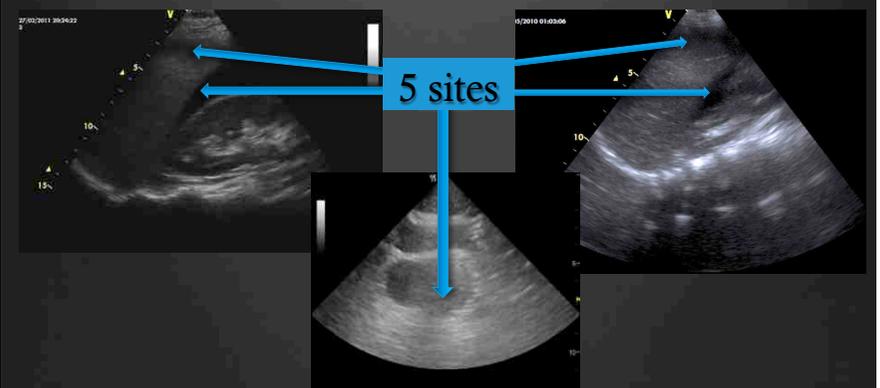
FAST – Intérêt dans la PEC du PTG



Hemoperitoneum Score Helps Determine Need for Therapeutic Laparotomy

2001;50:650–656.

Score de McKENNEY



FAST – Réalisation - Quantification

Hemoperitoneum Score Helps Determine Need for Therapeutic Laparotomy

Kimberly L. McKenney, MD, Mark G. McKeeney, MD, FACS, Stephen M. Cohn, MD, FACS, Raymond Compton, MD, Diego R. Nunez, MD, Matthew Dolich, MD, and Nicholas Namias, MD

J Trauma. 2001;50:650–656.

Score de McKENNEY

Obtenue en additionnant la profondeur (en cm) de la citerne d'hémopéritoine la plus profonde:

- ⊗ Péri hépatique
- ⊗ Péri splénique
- ⊗ Pelvis.

Et le nombre de site supplémentaire dans lesquels est mis en évidence du sang (5 sites)

FAST – Réalisation - Quantification

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J Trauma. 2001;50:650–656.

Score de McKENNEY

Table 1 Ultrasound hemoperitoneum score versus need for laparotomy

	OR n (%)	No OR ^a n (%)
USS ≥ 3	39 (85)	7 (15)
USS < 3	8 (15)	46 (85) ^b
Total	47	53

OR, operation; USS, ultrasound score.

^a $p < 0.0001$.

^b Includes two nontherapeutic operations.

FAST – Réalisation - Quantification

Hemoperitoneum Score Helps Determine Need for Therapeutic Laparotomy

Kimberly L. McKenney, MD, Mark G. McKeeney, MD, FACS, Stephen M. Cohn, MD, FACS, Raymond Compton, MD, Diego R. Nunez, MD, Matthew Dolich, MD, and Nicholas Namias, MD

J Trauma. 2001;50:650–656.

Score de McKENNEY

Table 2 Initial systolic blood pressure versus need for laparotomy

	OR n (%)	No OR n (%)
SBP ≤ 90 mm Hg	13 (72)	5 (28)
SBP > 90 mm Hg	34 (43)	46 (56)
Total ^a	47	51

OR, operation; SBP, systolic blood pressure.

^a Initial blood pressure not available on all patients.

FAST – Réalisation - Quantification

Hemoperitoneum Score Helps Determine Need for Therapeutic Laparotomy

Kimberly L. McKenney, MD, Mark G. McKeeney, MD, FACS, Stephen M. Cohn, MD, FACS, Raymond Compton, MD, Diego R. Nunez, MD, Matthew Dolich, MD, and Nicholas Namias, MD

J Trauma. 2001;50:650–656.

Score de McKENNEY

TABLE 3 Initial Systolic Blood Pressure and Need for Laparotomy in Patients with a Score of ≥ 3

SBP	OR n (%)	No OR n (%)	Total
≤ 90 mm Hg	10 (100)	0	10
> 90 mm Hg	32 (89)	4(11)	36

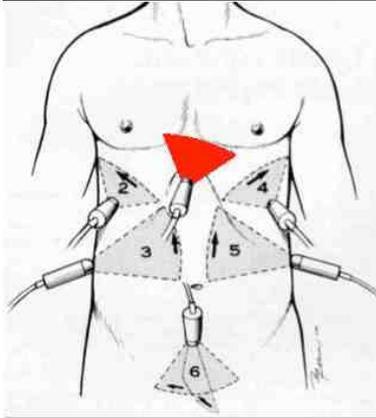
SBP, systolic blood pressure; OR, operation.

FAST - Réalisation

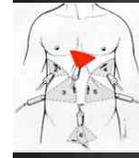
The Role of Ultrasound in Patients with Possible Penetrating Cardiac Wounds: A Prospective Multicenter Study

Rozycki, Grace S. RDMS, MD; Feliciano, David V. MD; Ochsner, M. Gage MD; Knudson, M. Margaret MD; Hoyt, David B. MD; Davis, Frank MD; Hammerman, David BS; Figueredo, Vincent MD; Harviel, J. Duncan MD; Han, David C. MD; Schmidt, Judith A. DNSc

The Journal of Trauma: Injury, Infection, and Critical Care
Numéro : Volume 46(4), April 1999, pp 543-552



FAST - Réalisation



The Role of Ultrasound in Patients with Possible Penetrating Cardiac Wounds: A Prospective Multicenter Study

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Numéro : Volume 46(4), April 1999, pp 543-552

261 traumatisés thoracique

225 (86,2%) vrai négatif

29 (11,1%) vrai positif

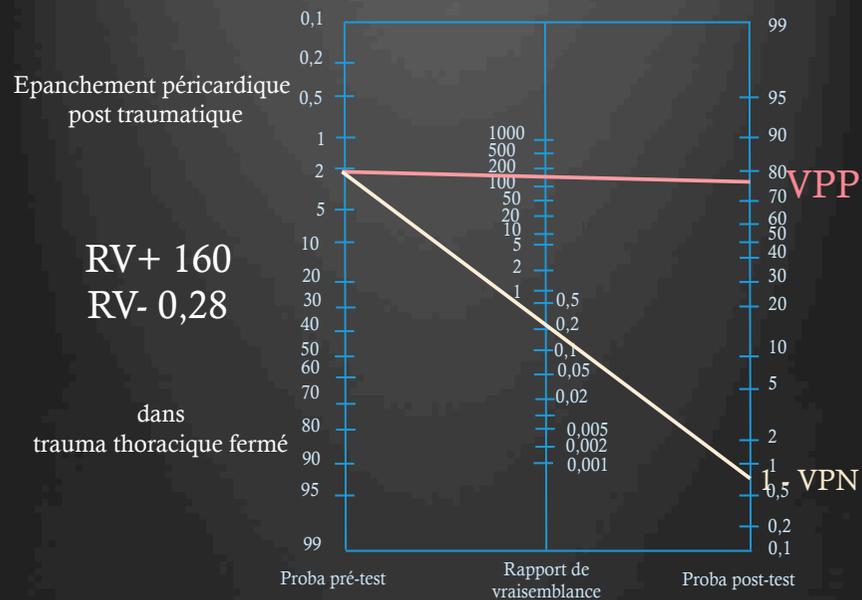
0 faux négatif

7 (2,7%) faux positif

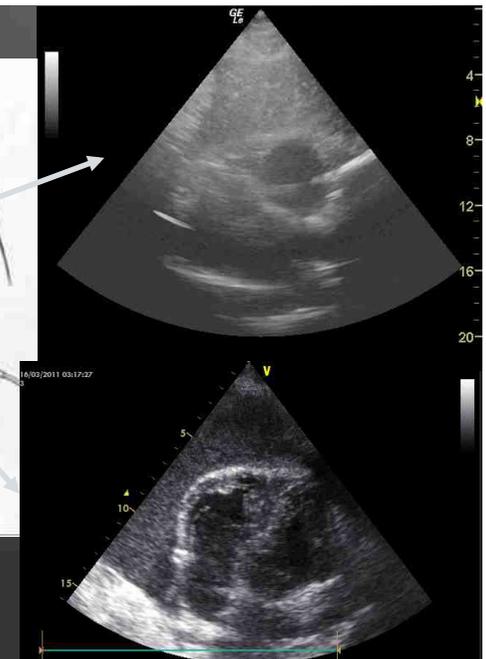
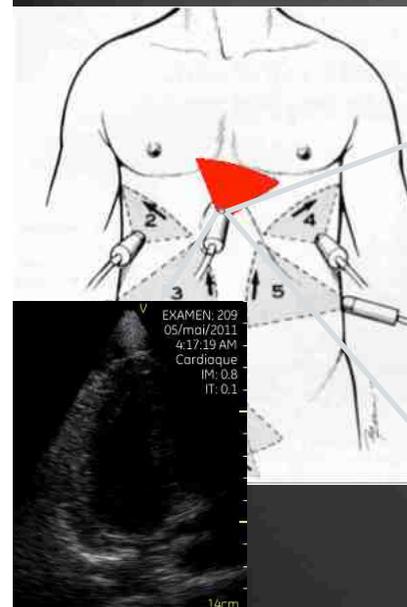
Sensibilité 100%

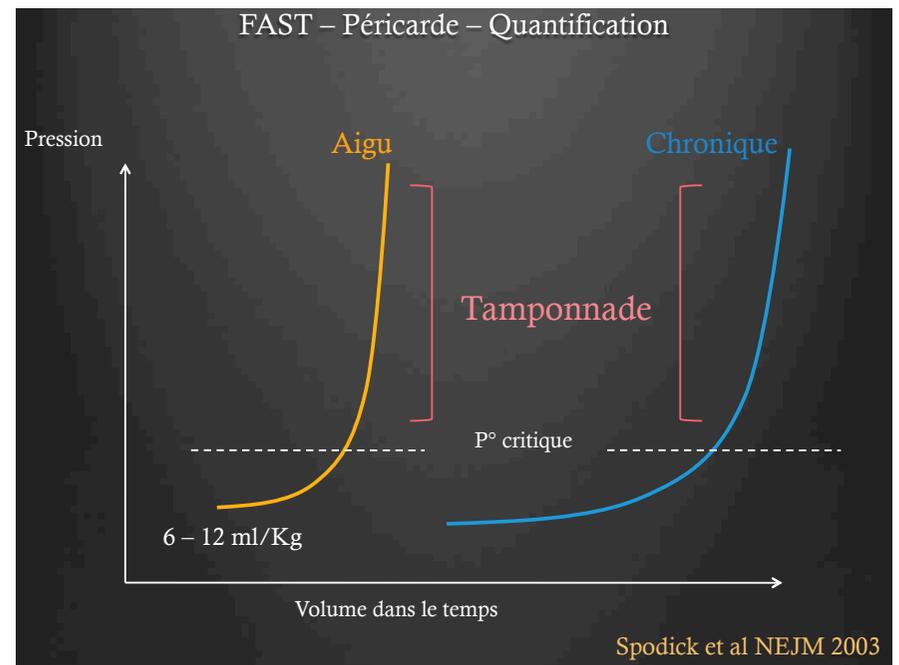
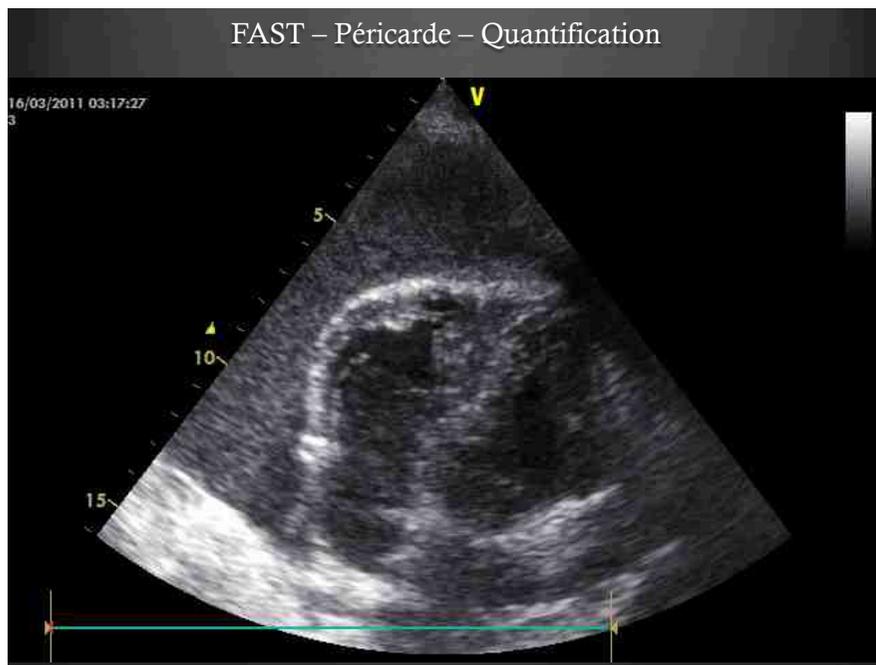
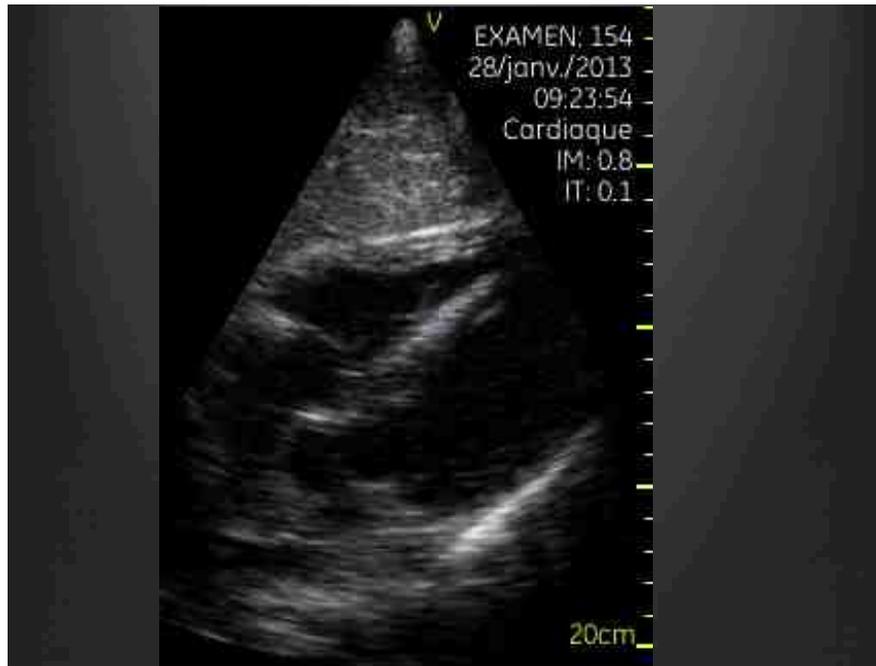
Spécificité 97%

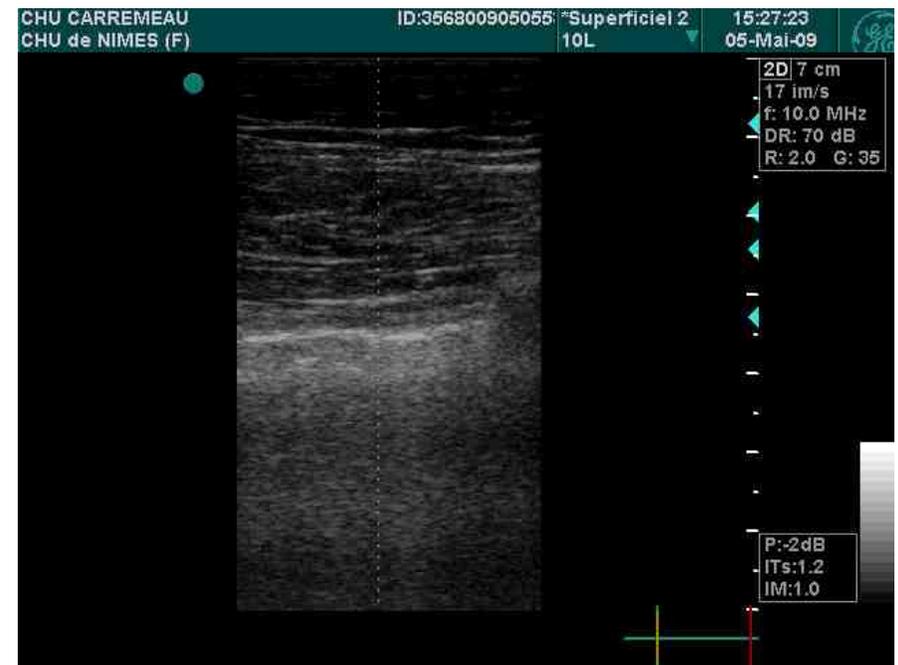
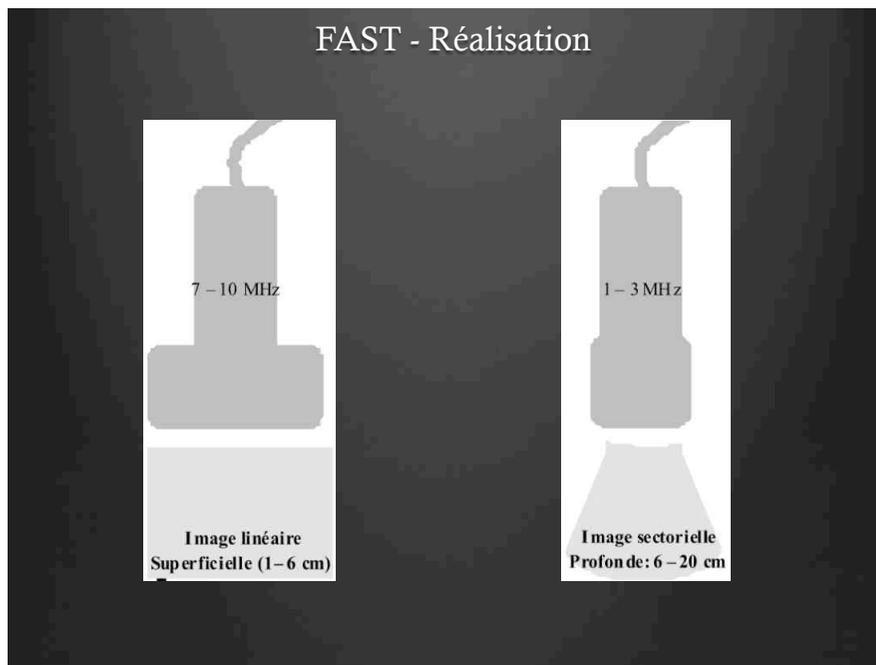
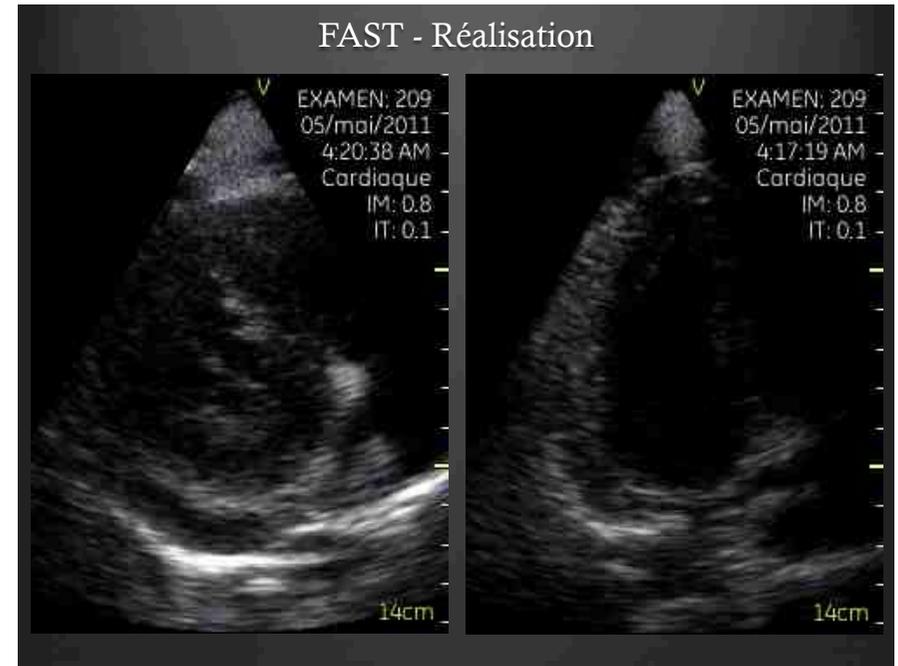
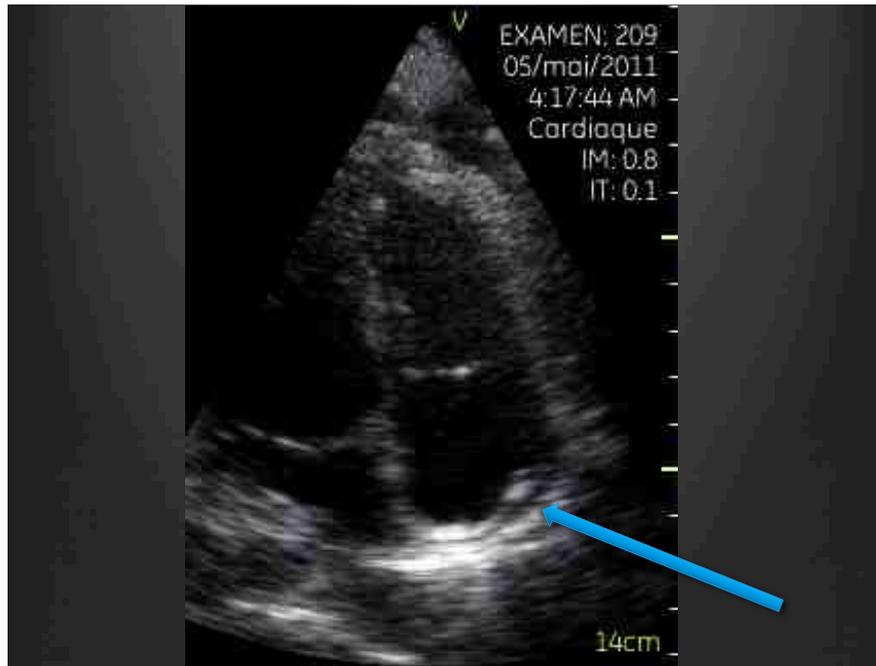
FAST – Péricarde – Performance



FAST - Réalisation





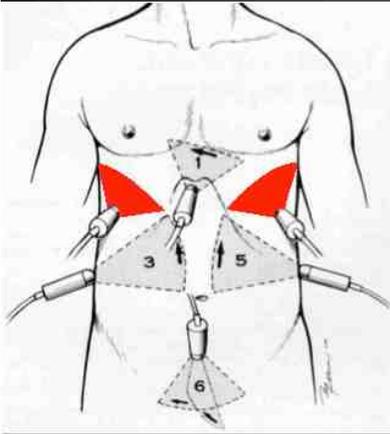


FAST - Réalisation

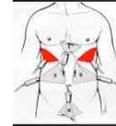
Trauma Ultrasound Examination Versus Chest Radiography in the Detection of Hemothorax

O John Ma, MD*
James R Mateer, MD, RDMS†

ANNALS OF EMERGENCY MEDICINE 29:3 MARCH 1997



FAST - Réalisation



Trauma Ultrasound Examination Versus Chest Radiography in the Detection of Hemothorax

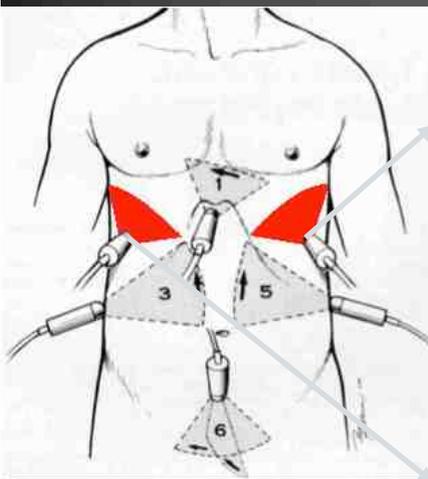
O John Ma, MD*
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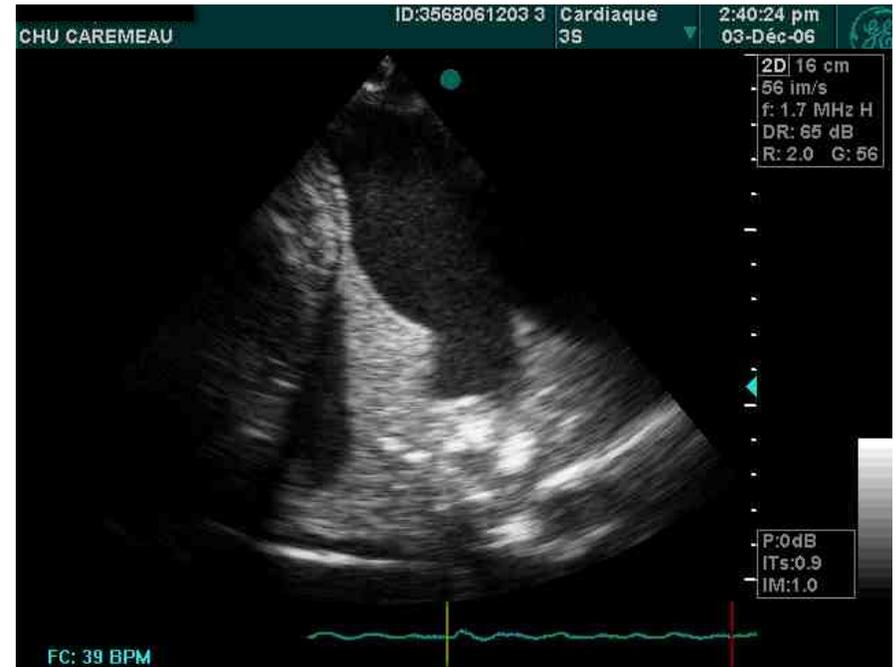
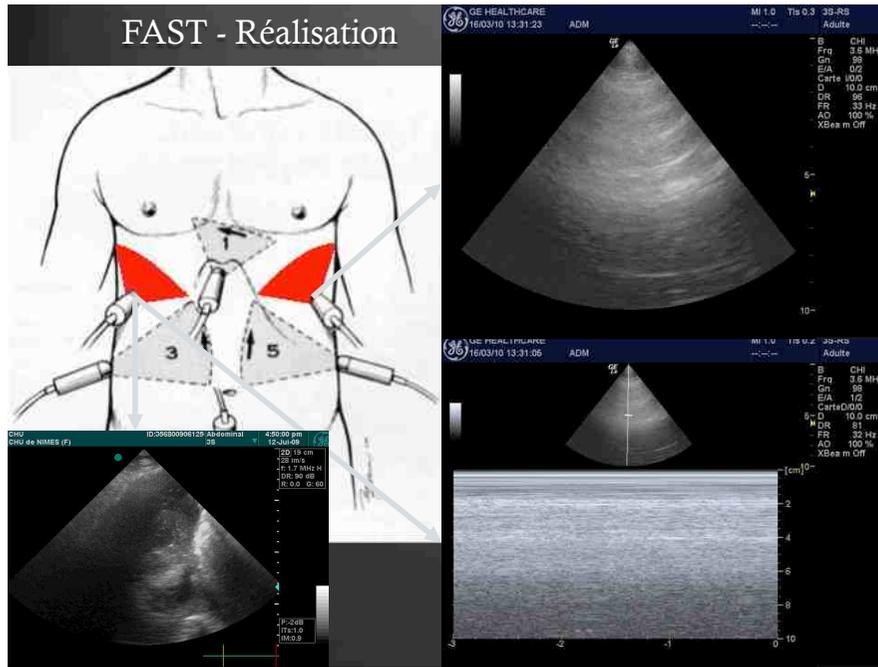
ANNALS OF EMERGENCY MEDICINE 29:3 MARCH 1997

240 traumatisés thoraciques

	US	Rx
Sensibilité	96 %	96 %
Spécificité	100 %	100 %

FAST - Réalisation





FAST - Réalisation

Hand-Held Thoracic Sonography for Detecting Post-traumatic Pneumothoraces: The Extended Focused Assessment With Sonography for Trauma (EFAST)

7-10 MHz

Image linéaire Superficielle (1-6 cm)

Kirkpatrick et al - J Trauma 2004

FAST - Réalisation

Hand-Held Thoracic Sonography for Detecting Post-traumatic Pneumothoraces: The Extended Focused Assessment With Sonography for Trauma (EFAST)



225 traumatisés thoraciques

US

Rx

Sensibilité

49 %

21 %

Spécificité

99 %

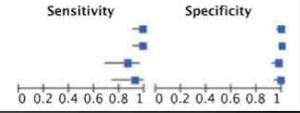
99 %

Kirkpatrick et al - J Trauma 2004

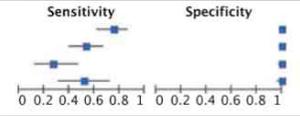
FAST - Réalisation



Study	TP	FP	FN	TN	Sensitivity	Specificity
Blaivas 2005	53	1	1	121	0.98 [0.90, 1.00]	0.99 [0.96, 1.00]
Soldati 2006	55	0	1	130	0.98 [0.90, 1.00]	1.00 [0.97, 1.00]
Zhang 2006	25	3	4	103	0.86 [0.68, 0.96]	0.97 [0.92, 0.99]
Soldati 2008	23	1	2	83	0.92 [0.74, 0.99]	0.99 [0.94, 1.00]



Study	TP	FP	FN	TN	Sensitivity	Specificity
Blaivas 2005	40	0	13	123	0.75 [0.62, 0.86]	1.00 [0.97, 1.00]
Soldati 2006	30	0	26	130	0.54 [0.40, 0.67]	1.00 [0.97, 1.00]
Zhang 2006	8	0	21	106	0.28 [0.13, 0.47]	1.00 [0.97, 1.00]
Soldati 2008	13	0	12	84	0.52 [0.31, 0.72]	1.00 [0.96, 1.00]



Wilkerson et al Acad J Emerg Med. 2010

FAST - Réalisation

FAST - Réalisation

