

Criteria	Gurd and Wilson's	Modified Gurd's	Schonfeld's	Score
FES Diagnosis	2 major or 1 major + 4 minor	1 major + 3 minor or 2 major + 2 minor	Five points	
Major	Petechiae Hypoxemia	Petechiae on conjunctiva and upper trunk PaO₂ <60 at FIO₂ 0.2 l with or without pulmonary infiltrate on chest X-ray	Petechiae X-ray infiltrate on chest (diffuse alveolar infiltrate) Hypoxemia	5 4 3
Minor	Altered mentality Tachycardia Fever Thrombocytopenia Unexplained anemia Anuria or oliguria Retinal embolism Fat globule in urine or sputum Jaundice High ESR	Altered mentality with multiple cerebral white matter lesion on brain MRI HR >100/min Temperature >38°C Platelet <100×10 ³ /μL Anemia with coagulopathy or DIC without definite ongoing bleeding site Anuria or oliguria Retinal embolism on ophthalmoscopic examination	Mental confusion Tachycardia Fever Tachypnea	1 1 1 1

Note: Bold text represents major criteria.

Abbreviations: DIC, disseminated intravascular coagulation; ESR, erythrocyte sedimentation rate; FES, fat embolism syndrome; HR, heart rate; PaO₂, arterial oxygen pressure.

Source: [Original Gurd and Wilson's criteria, 9 Modified Gurd's criteria, 16 and Schonfeld's criteria 47 for diagnosis of FeS](#)

Specific management of Fat Emboli Syndrome

- Supportive therapy - mechanical ventilation (ARDS), inotropic support for RV failure, management of cerebral oedema (1)
- Prevention - early fixation of long bone fractures (ARDS 7% with early fixation vs 39% if >24 hours) (2) Pharmacological treatments largely ineffectual
- Heparin - increased risk bleeding
- Corticosteroids - no benefit
- IVC filter - not studied

Pre-simulation briefing

Establishing a safe container for learning in simulation



1 Clarify objectives, roles and expectations

1

- Introductions
- Learning objectives
- Assessment (formative vs summative)
- Facilitators and learners' roles
- Active participants vs observers

2 Maintain confidentiality and respect

2

- Transparency on who will observe
- Individual performances
- Maintain curiosity

3 Establish a fiction contract

3

Seek a voluntary commitment between the learner and facilitator:

- Ask for buy-in
- Acknowledge limitations

4 Conduct a familiarisation

4

- Manikin/simulated patient
- Simulated environment
- Calling for help

5 Address simulation safety

5

Identify risks:

- Medications and equipment
- Electrical or physical hazards
- Simulated and real patients



Note: Adjust the pre-simulation briefing to match the demands of the simulation event, contexts or the changing of participant composition.

Group and hold

Transfusion Medicine - Group and Antibody Screen

Blood Group: B Rh(D) POSITIVE

Antibody Screen: Negative

Coagulation

GENERAL COAGULATION

Specimen: Blood

INR	1.2
Prothrombin Time	14 H
APTT	30
Fib (derived)	4.2

Comment: Use shift-insert to view reference ranges. 24 years

Chem20

Specimen type	Blood	Urate	0.53 H mmol/L (0.15 - 0.50)	Phosphate	0.68 L mmol/L (0.75 - 1.50)
Sample Appearance	Clear	Protein	72 g/L (60 - 80)	Lipase	40 U/L (< 60)
Sodium	138 mmol/L (135 - 145)	Albumin	43 g/L (35 - 50)	Magnesium	0.64 L mmol/L (0.70 - 1.10)
Potassium	3.8 mmol/L (3.5 - 5.2)	Globulin	30 g/L (25 - 45)	OSM(Calc)	292 mmol/L (275 - 295)
Chloride	102 mmol/L (95 - 110)	Bilirubin	16 umol/L (< 20)	CHEM 20 PROFILE	
Bicarb.	21 L mmol/L (22 - 32)	Bili(Conj)	< 4 umol/L (< 4)	Press Shift F1 for more information on	
Anion Gap	14 H mmol/L (4 - 13)	ALP	67 U/L (30 - 110)	Osmolality calculation	
Glucose	7.4 mmol/L (3.0 - 7.8)	Gamma GT	12 U/L (< 55)		
Fasting RR	--> (3.0 - 6.0)	ALT	28 U/L (< 45)		
Urea	3.9 mmol/L (2.1 - 7.1)	AST	33 U/L (< 35)		
Creatinine	99 umol/L (60 - 110)	LD	460 H U/L (120 - 250)		
Urea/Creat.	39 L (40 - 100)	Calcium	2.35 mmol/L (2.10 - 2.60)		
eGFR	>90 mL/min/> 60)	Corr Ca	2.30 mmol/L (2.10 - 2.60)		
	1.73m ²				

Comment: Age:24 years I H L KC

F1 Help **F9** Cumulative Results

Diff: Automated Specimen: Blood

Hgb : 97 L WBC : 10.1

PLT : 110 L :

RBC : 3.16 L HCT : 0.28 L

MCV : 90 MCH : 30.7

RDW : MCHC :

Press shift-insert to view reference ranges

Neut (73 %): 7.39

Lymph (14 %): 1.46

Mono (7 %): 0.70

Eosin (5 %): 0.50

Baso (0 %): 0.03

NRBC /100 WBC

SusFlg

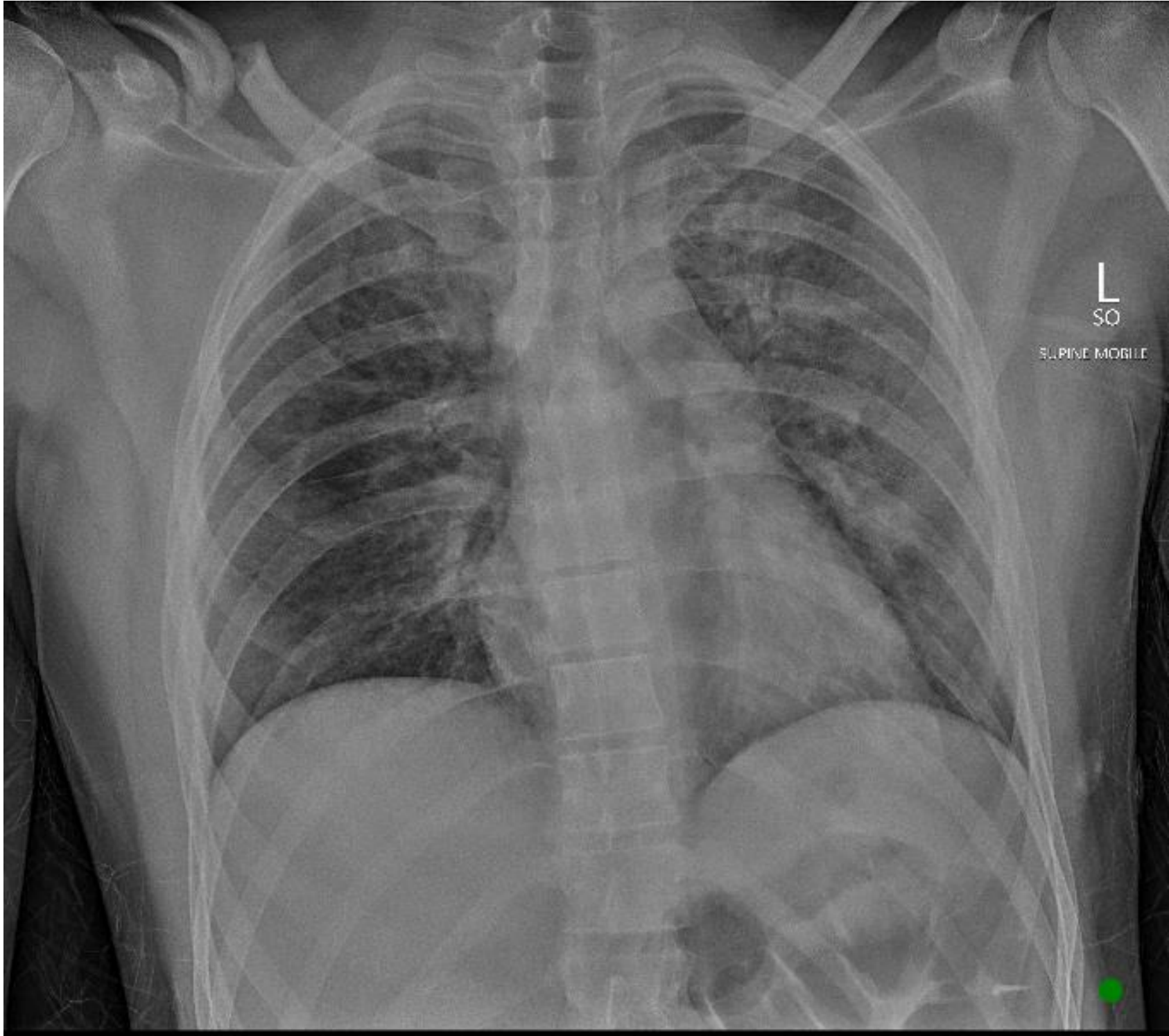
Comment: Patient Age: 24 years Val: sys



Arterial blood gas

Arterial		Temp.	37.0	Degree C	Na	133 L	mmol/L
Airway	Natural	Corr pH	7.41		K	4.1	mmol/L
FI02	0.30	Corr pCO2	35	mmHg	Cl	105	mmol/L
pH	7.41	Corr pO2	55	mmHg	Anion Gap	7	mmol/L
pCO2	35 mmHg	Total Hb	138	g/L	Creatinine		umol/L
pO2	55 C mmHg	Oxy Hb	88 L	%	Ca (Ionised)	1.12 L	mmol/L
O2 Sat.	90 L %	Carboxy H	0.9	%	Glu	8.0 H	mmol/L
p50	25.0 mmHg	Met Hb	1.1	%	Lact	1.3	mmol/L
HCO3-	21 L mmol/L	Sulph Hb			Bili (Total)		umol/L
ABE	-2.2 L mmol/L				Fetal Hb		%
Comp. Val. Yes		MODE 1			MODE 2		
COMMENT:							

CXR



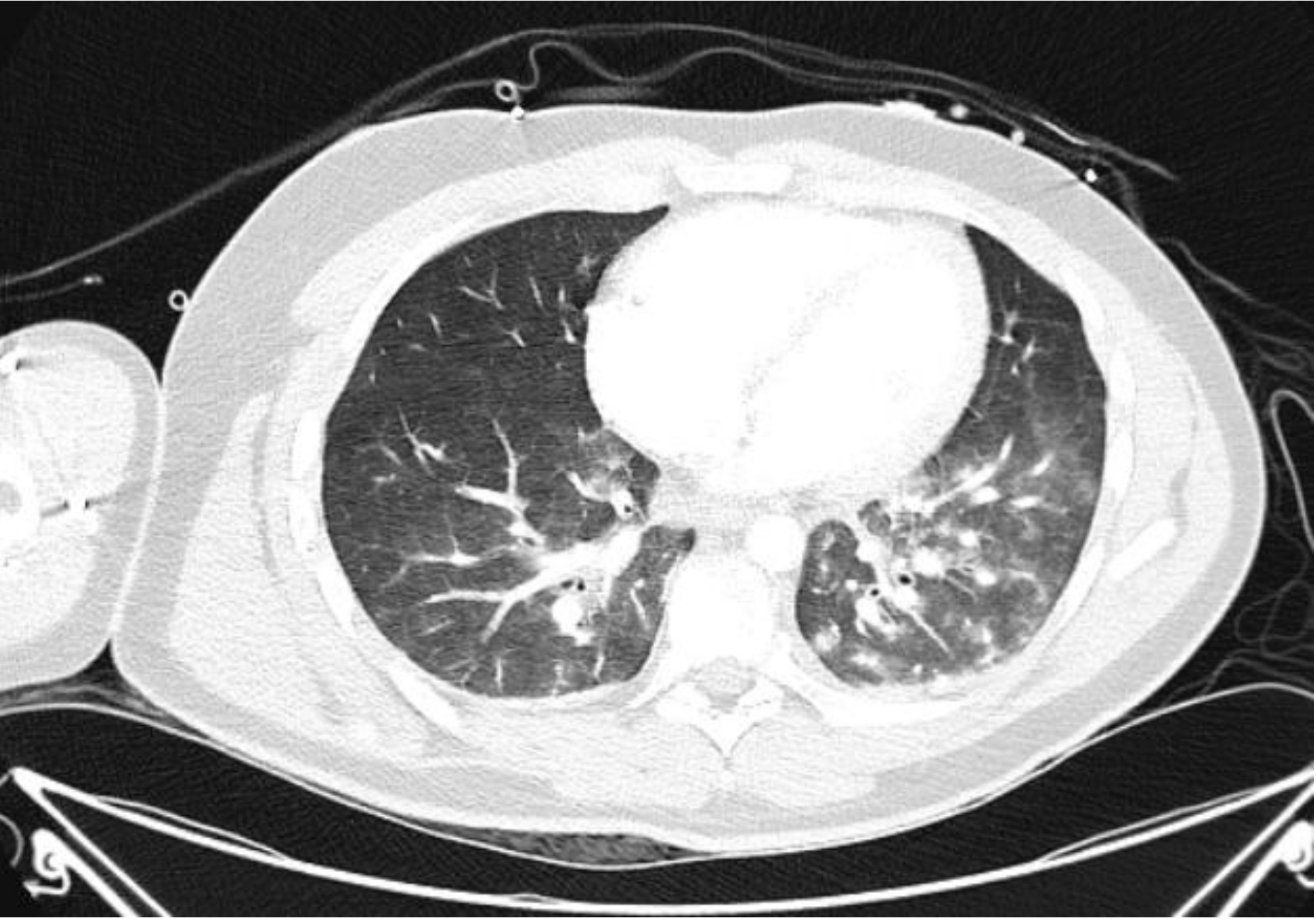
Pelvic Xray



R femur Xray



Additional images for senior participants, CT Chest



CT Abdo/pelvis



CT Brain

