MINISTRY OF HEALTH EMERGENCY MEDICAL SERVICES ECHO

THE REPUBLIC OF UGANDA
MINISTRY OF HEALTH

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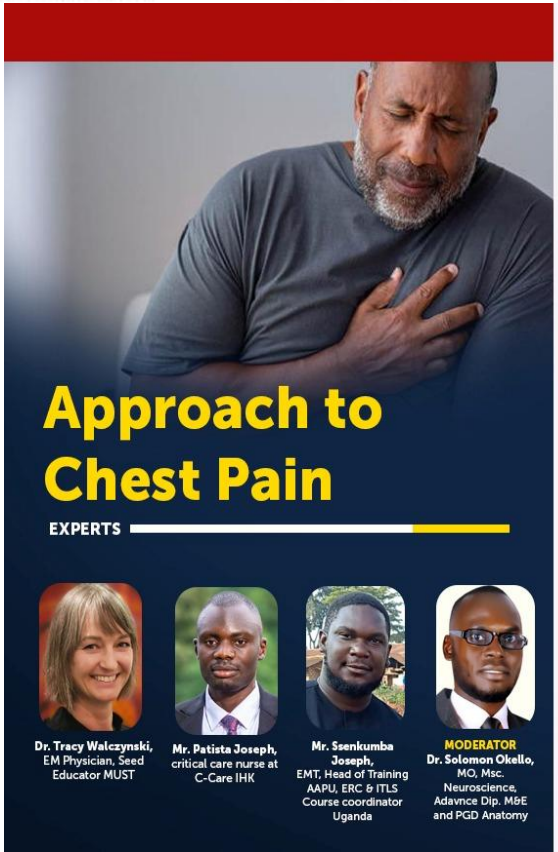
EMS ECHO Session 98



Brief History

58-year-old woman presents to ED with 3 days h/o sharp, right-sided chest pain and cough with progressive shortness of breath.

Poll 1

When considering the diagnosis of chest pain, all but one are

important differentials

that must be excluded

Primary Survey (Emergency Assessment)

Airway	Patent, Protected but patient is breathless Unable to finish sentences
Breathing	Marked distress (Accessory muscles use), shallow breaths, equal chest expansion. RR: 31/min SPO2: 85% on RA Trachea midline. Dullness to percussion right lower zone and reduced air entry Pleural rub at the same zone
Circulation	CRT = 2 seconds, Cool extremities, PR = 115 bpm, regular, weak but sync. peripheral pulses BP: 100/60, normal S1+S2

Primary Survey (Emergency Assessment)

Disability	RBS: 7.0 mmol, GCS (E4 V5 M6) 15/15 Patient is awake but anxious, Pupils are equal and reactive to light
Exposure	T: 38.0°C in pain 8/10. Patient is sitting upright, unable to lie flat Cyanosis of lips and nail beds. Mucus membranes are moist

Poll 2

what are the

top three priority management

for this patient?

What are BEDSIDE priorities?

THREATS	*PRIORITY*	*Findings*	*Associated Risk*	*Immediate Action Taken*
A	Hypoxemia	SPO2: 85% RA Unable to sit	Tissue hypoxia Anaerobic metabolism	O2 via mask at 10L – O2 improved to 94%
	Pain + Fever	T38 Pain 8/10	Shallow breathing, anxiety, discomfort, increased metabolic demand	IV access, paracetamol,
C	Hypotension	HR 115 BP 100/60	↓ End organ perfusion	IV fluids

And always reassess to monitor response to treatments

What happened in ED to stabilize the patient

- Oxygen 10L.
- 2nd IV access
- Ceftriaxone 1gm iv
- Morphine 6mg IV for pain relief.
- Normal saline 500ml/h
- IDC to help monitor fluid balance

This bought the team some time to find out more information

SAMPLE History

Signs & Symptoms	• Sharp right-sided chest pain, worse with breathing for 3 days • Productive cough with yellowish sputum now with streaks of blood • Seen in clinic 2 days ago and given oral antibiotics (not known which one).
Allergies	No known allergies to any substance.
Medications	Amlodipine 10mg Perinopril 5mg Metformin 500mg twice daily.

SAMPLE History

Past Medical History	HTN for 8 years. Normal blood pressure 140-150/80-90 T2DM for 10 years, G7P1+6 No hx of TB or known exposure. No sick contacts. No Hx of cardiac event, surgery.
Last Oral Intake	6 hours prior to admission
Events Leading Up to Presentation	Developed cough, pain and mild fever 3 days ago. Severe shortness of breath on exertion today with worsening pain prompted ED visit. Had been well recently, visiting relatives in Yumbe and returned just prior symptom onset.

Secondary Survey (Head-to-toe examination)

RELEVANT POSITIVES	RELEVANT NEGATIVES
• Patient sitting up uncomfortable. • Peripheral cyanosis. • Tachypnoea and Hypoxemia with pleural rub and reduced air entry on right side. • Tachycardia with hypotension. • Left leg swelling.	• Normal conscious state • No raised JVP. • No lymphadenopathy. • No wheezes • No tracheal deviation. • No sign of chest trauma. • No neurological deficit. • No skin lesions.

Now before we investigate this patient, what are our differentials?

Audience question

What are all the possible differentials we need to look for?

Category	Differential
Vascular	PE/ MI/ Aortic Dissection
Infectious	TB/ Pneumonia/ Pleuritis / Pericarditis/ costocondritis / HZV
Trauma or Toxin	Rib fracture/ pneumothorax/
Autoimmune	SLE/Goodpastures/Prothrombotic disorder
Metabolic	DKA/Uraemia
Iatrogenic	Medication error
Neoplastic	Lung cancer/metastatic cancer

Poll 3

Of the following choices What investigations best represent

key investigations

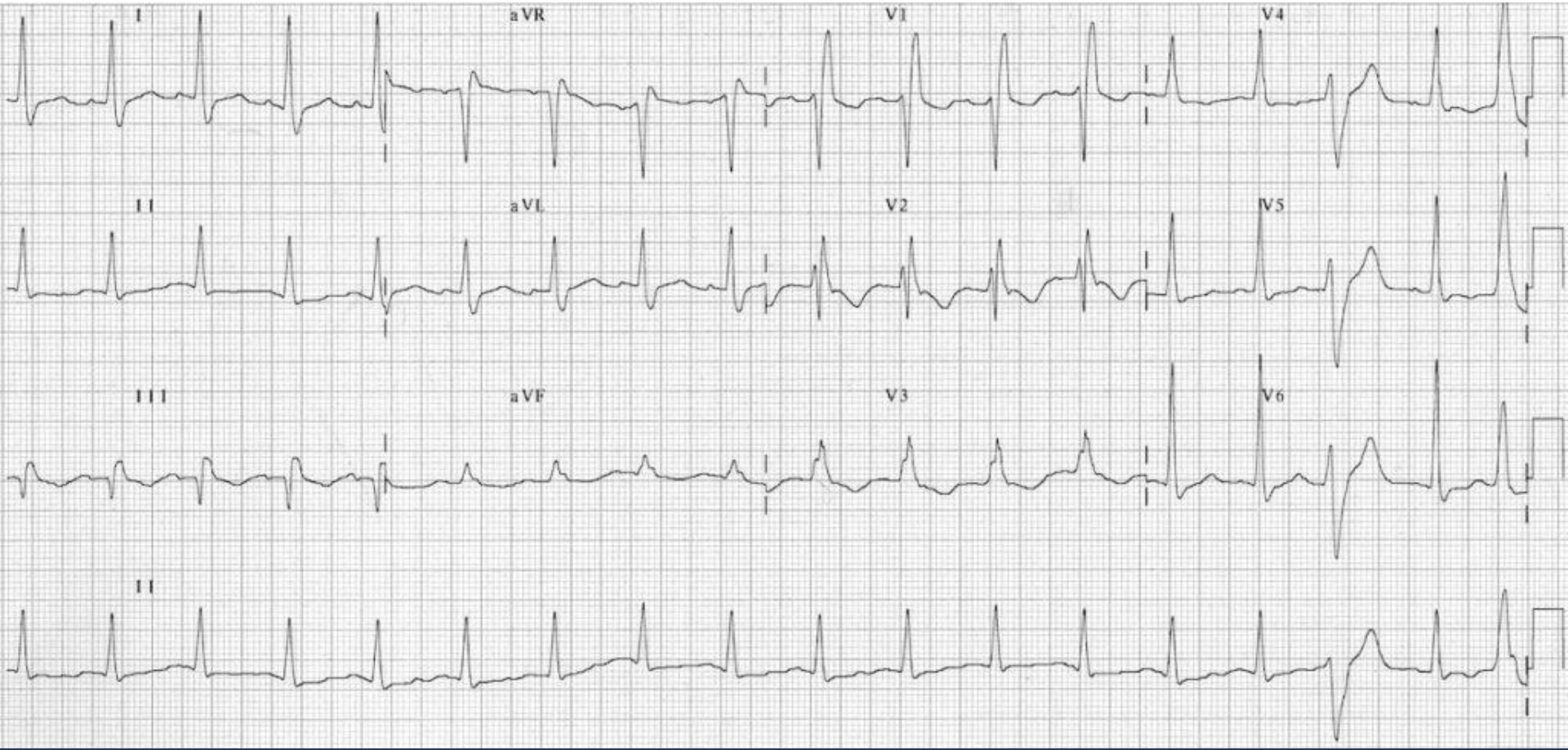
that would be most likely to change management in this patient

Bloods

Investigation	Result
Full Blood Count	*TWBC = 14,000 mainly Neutophilia* *Hb 110 Plt 160*
Malaria RDT	Negative
Random Blood Sugar	*7.0 mmol*
ECG	On next slide…
Electrolytes, Creatinine	Cr:1.0 Urea: 23 K: 4.0 NA: 140
Troponin	0.5 ng/dl
ABG/VBG	-
CRP	*46 mg/dl*
Blood cultures	*Pending*

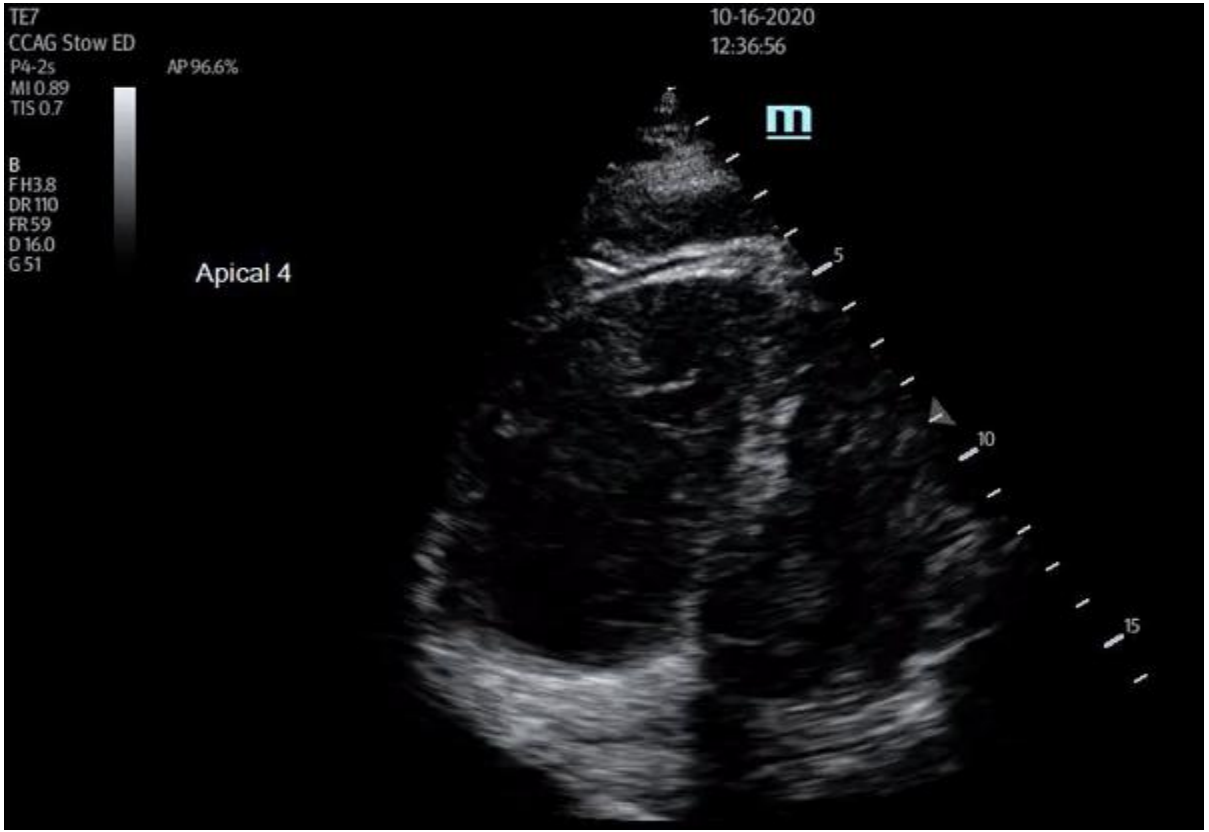
Poll 4

Which of the following is a component of the Wells score for assessing the probability of pulmonary embolism (PE)?

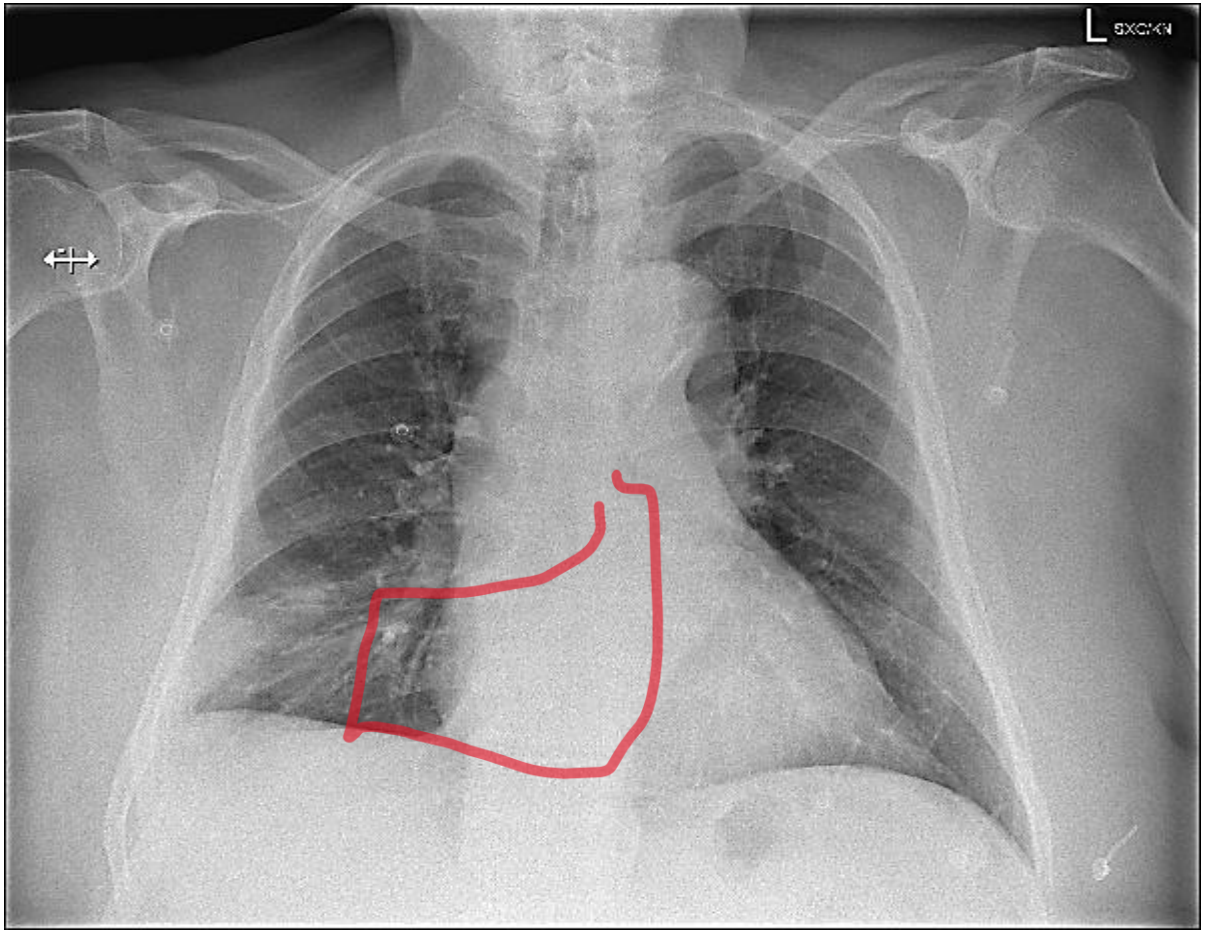


Regular Sinus tachycardia. RBBB. PVC
Simultaneous T-wave inversions in precordial leads V1-3 plus inferior leads III and aVF.

Imaging

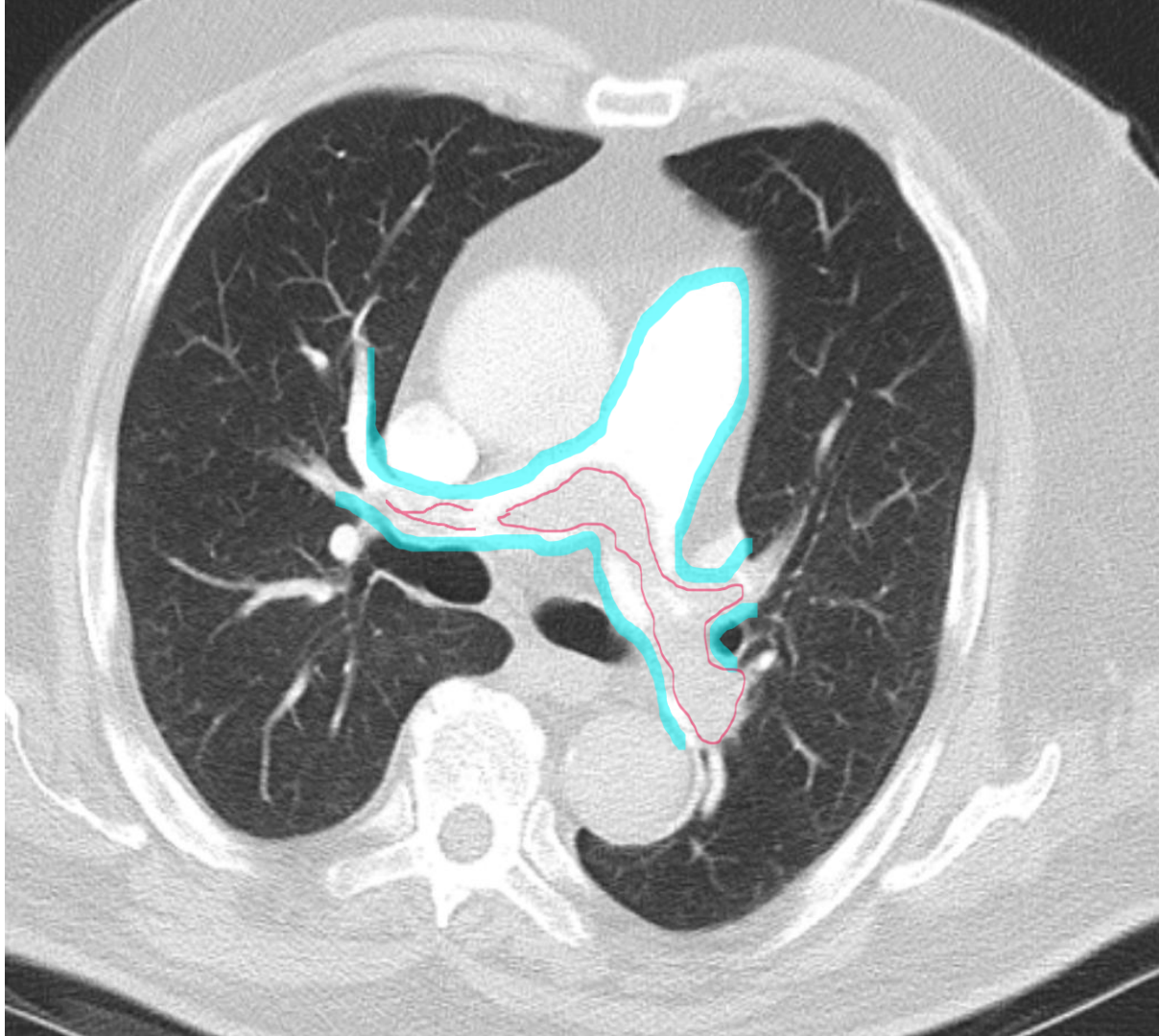

TE7
CCAG Stow ED
P4-2s
MI 0.89
TIS 0.7
AP 96.6%
B
F H3.8
DR 110
FR 59
D 16.0
G 51
Apical 4
10-16-2020
12:36:56
5
10
15

IMAGING



24 hours later

- CTPA obtained



Supportive Management

- Head up 45 degree.
- Paracetamol 1 gm iv/po TDS.
- Pantoprazole 40 mg
- Monitor blood glucose with meals.
- Maintenance fluids until able to drink

Specific Management

Acute PE	• Contiunous O2 support. • Aspirin 75 mg + Clopidogrel 75mg • Enoxaparin 1 unit/kg BD • Aim pain free
Community Acquired Pneumonia	• Levofloxacin 500 mg BD • Paracetmol infusion for fever control.

24h Follow-up

- Ongoing O2 requirement.
- SpO2 94% 8L
- BP 120/60 HR 100
- Able to lie flat
- Sputum contains clots of blood
- Requiring regular pain relief

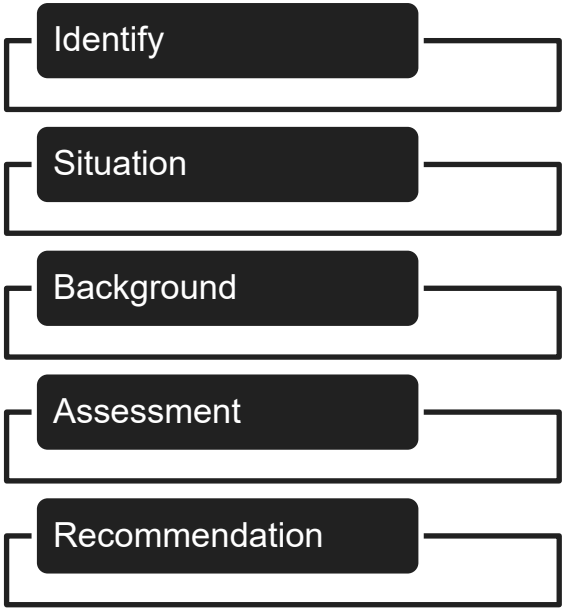
Specific Management Disposition

CT PA confirmed PE	• Start anticoagulation. • Role for thrombolysis • Involve ICU team
CBC, CRP &CXR possible Pneumonia	• Start Empiric antibiotics. • Blood and sputum cultures
GeneXpert test is negative	No further management is needed.

Prehospital team:

What do you need to prepare for pre-hospital care for this patient?

- Staff
- Patient
- Equipment / Medications
- Mode of transport
- Documentation/Handover



What are the **nursing priorities** for this patient during their inpatient stay?

Presenter
Mr. Joseph Patista
Critical Care Nurse

Now, let's dive into Specialist ED Care for a patient with PE

Presenter: Dr. Tracy Walczynski,
EM Physician, Seed Educator MUST

Thank you