Scenario template: Harrison Ford Can't intubate CAN ventilate		
Scenario: Can't Intubate **CAN** ventilate	**Patient:** Harrison Ford , 44-year-old man.	**Simulator:** SIMMAN Essentials or similar
Case Summary: Harrison Ford, 44 year old man, has had pneumonia for a few days. He has deteriorated over this time and on his background of heavy smoking he is starting to decompensate. His oxygenation and carbon dioxide clearance are deteriorating and requires intubation to control his ventilation optimally.		**Participant Briefing:** Harrison Ford, 44 year old man Presents with increasing shortness of breath and cough, having had a fever for the past 4 days. Past history of stable angina and is a heavy smoker. He has a cannula in situ and is triaged category 2 to the resuscitation bay.
Clinical Issues		**Human factors / Non technical issues**
Severe pneumonia with type 2 respiratory failure – requires intubation Ischaemic ECG due to hypoxia on a background of IHD Knowledge of appropriate drugs and equipment for a RSI Plan A/B/C Difficult intubation – Can't intubate CAN ventilate scenario		Assemble team for RSI in the ED Call for help Role allocation Situational awareness of can't intubate and CAN ventilate situation Communication with the patient and the team
Learning Objectives: **To Communicate** effectively with the team and the patient **To Conduct** a safe and controlled Rapid Sequence Induction **To demonstrate** knowledge of and planning for a can't intubate, CAN ventilate situation		
Faculty Actors: **Harrison Ford (manikin):** Very breathless. Speaks in phrases. You become drowsier as time progresses, due to CO2 retention if high flow oxygen is given without NIV. The airway should be un-intubatable but allow Bag-Valve-Mask ventilation. **Faculty Nurse:** Helpful and as you would be in real life. Support the team to make their own decisions and subtly prompt when needed **Over the telephone help:** All help asked for will be helpful but unable to attend immediately		
Patient Moulage: No particular moulage needed. Harrison dressed in street clothes		

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Equipment & Props: EdWISE airway box and extras PEEP valve attachment to BVM if used in the department Fluid bags labelled with the appropriate antibiotics for a community acquired pneumonia presenting to the host site Host site difficult airway trolley if available or advise to familiarise with this after the session If the host ED has access to a video laryngoscope (if they would use this in their ED), it would be useful to have it available for these scenarios		
Monitor: ED setup ECG SPO2 CO2 ready NIBP	**Investigations:** VBG results – laminated x2 ABG results – laminated x2 CXR pneumonic changes – laminated x2	
Patient presentation	**Expected response by participants**	**Faculty /Actors Notes**
Initial Presentation: Rhythm – Sinus with occasional ectopic HR – 115 BP – 110/65 RR – 32/min SPO2 – 92% on non-rebreathing mask Temp – 39.7 (if asked for) Conscious level – GCS 15	ABCDE approach to Harrison Bronchodilators, Steroids, Antibiotics Investigations - 12 lead ECG VBG/ABG results CXR Blood cultures Crystalloid bolus of fluid	**Harrison Ford:** You blame your smoking now and sweat that you will give up. Otherwise you are compliant with actions that the team want to take. You begin to tire over about 5 minutes and become pleasantly confused. **Faculty Nurse:** Supply the team with the first VBG result as they enter the scenario. If they ask for further tests/investigations then hand them the appropriate laminated sheet. If there is not a laminated sheet for that investigation then the test has been sent or ordered. If they would like equipment that is not available then it is either in use or broken.

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Progression: Obs change to this over 5mins from start of scenario! Rhythm – Sinus with occasional ectopic HR – 125 BP – 100/60 RR – 38/min SPO2 – 85% on non-rebreathing mask Temp – 39.7 (if asked for) Conscious level – GCS 13 (E3,V4,M6) ETCO2 – 60 (if attached)	Recognise that Harrison is deteriorating further. Recognise that Harrison is going to need intubation. Call for help to perform intubation Prepare appropriate equipment and drugs for the intubation Assign roles for the intubation Communicate plan A/B/C Attempt intubation	**Harrison Ford:** Your eyes are now closed and will open at times to voice. You are barely able to answer questions with one-word answers, due to breathlessness. Once intubation drugs are given you become unresponsive with eyes closed and apnoeic. **Faculty Nurse:** You continue to play your role in the team. Hand the team investigation results as available. You can prompt to call for help if this is not done (and appropriate for the seniority of the team). If non invasive ventilation requested as delayed sequence intubation or set up technique advise that machine in use with other patient, may suggest use of PEEP valve to temporise.
Deterioration: This is during the intubation attempt and after. The mannequin should be impossible to intubate but able to ventilate! Rhythm – Sinus with occasional ectopic HR – 140 BP – 100/50 RR – 0/min – what ever rate they are ventilating at SPO2 – will drop to 79% over about 60 seconds if nasal prongs are used during intubation attempt. If no nasal prongs then sats will drop to 74% over this minute. If the team return ventilation of the patient (BVM or LMA) then the sats will improve to 84%. If this is not done then sats will continue to drop to 65% Temp – 39.7 (if asked for) Conscious level – GCS 3 ETCO2 – 70 (if attached and ventilating)	Recognise and communicate that this is a can't intubate, CAN ventilate situation. They should try an alternate technique attempt at intubation and then return to BVM. LMA placement with ventilation may then be attempted. Call for additional help Ask for further equipment if they are skilled at using it	**Harrison Ford:** You are apnoeic with your eyes closed and unresponsive. **Faculty Nurse:** Support the team as above. If the team are struggling with the intubation and become fixated then you will need to prompt trying to bag-valve-mask ventilate. This can be done in a graded way – "His sats are falling further", "He is looking really blue", "This is not working we need to try something else", "Can you ventilate him with the BVM?"

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Recovery: If the team is able to ventilate well with either the BVM or preferably through an LMA. Rhythm – Sinus with occasional ectopic HR – 150 BP – 140/75 RR – 0/min – whatever rate they are ventilating at SPO2 – 90% on non-rebreathing mask Temp – 39.7 (if asked for) Conscious level – GCS 13 (E3,V4,M6) ETCO2 – 55 (if attached and ventilating)	Gain control ventilating the patient Realise that they have more time to think and plan for a further attempt/for help to arrive Think about continuing sedation of the patient, if appropriate Check that help is on the way Arrange for equipment/expertise to be available for the when the help arrives (fibre optic scope, video laryngoscope, other)	**Harrison Ford:** As above **Faculty Nurse:** As above

Debrief Guide	
Key clinical issues: Pick a maximum of 2 topics * are suggested topics Preparation for intubation Drugs used and why Can't intubate, CAN ventilate algorithm * What would they do next?	**Key non technical issues: Pick a maximum of 2 topics** Communication with the team and the patient Situational awareness – clinical picture, team function, can't intubate CAN ventilate situation Response to prompting by Faculty Nurse (if appropriate)

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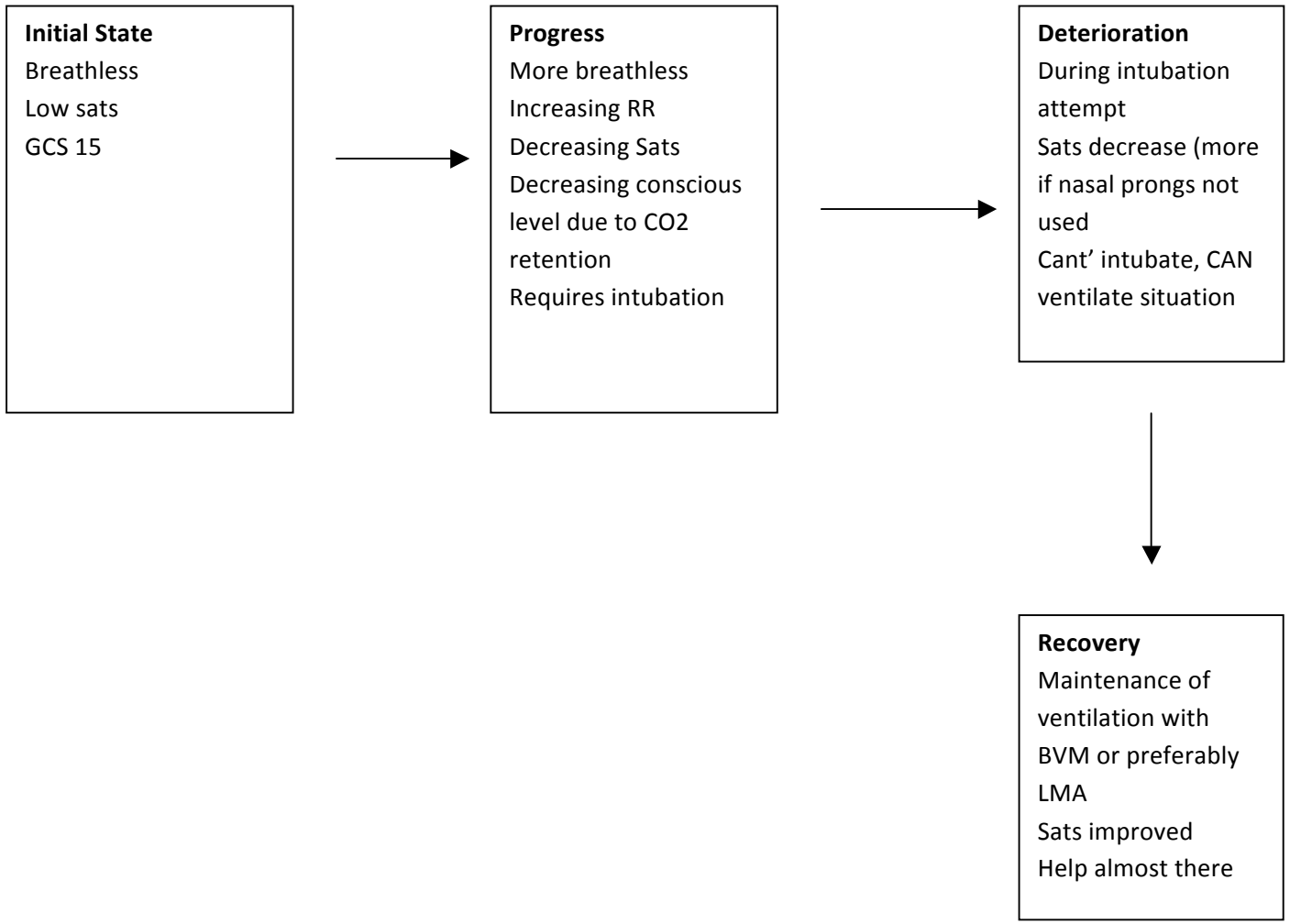

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Venous Blood Gas Result

pH	**7.28**	**(7.35-7.45)**
pO_2	**35**	**(80-100 mmHg)**
pCO_2	**65**	**(35-45 mmHg)**
HCO_3	**16**	**(20-24 $mmoll^{-1}$)**
BE	**-5**	**(-2 to +2)**
Lac	**0.6**	**(0-2)**
Hb	**143**	
Na^+	**148**	
K^+	**4.1**	

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Arterial Blood Gas Result 1

pH	**7.29**	**(7.35-7.45)**
pO_2	**73**	**(80-100 mmHg)**
pCO_2	**62**	**(35-45 mmHg)**
HCO_3	**16**	**(20-24 $mmoll^{-1}$)**
BE	**-5**	**(-2 to +2)**
Lac	**0.6**	**(0-2)**
Hb	**143**	
Na^+	**148**	
K^+	**4.1**	

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Arterial Blood Gas Result 2

pH	**7.27**	**(7.35-7.45)**
pO_2	**68**	**(80-100 mmHg)**
pCO_2	**70**	**(35-45 mmHg)**
HCO_3	**14**	**(20-24 $mmoll^{-1}$)**
BE	**-6**	**(-2 to +2)**
Lac	**1.9**	**(0-2)**
Hb	**143**	
Na^+	**145**	
K^+	**4.7**	

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Arterial Blood Gas Result 3

pH	**7.31**	**(7.35-7.45)**
pO_2	**79**	**(80-100 mmHg)**
pCO_2	**55**	**(35-45 mmHg)**
HCO_3	**18**	**(20-24 $mmoll^{-1}$)**
BE	**-3**	**(-2 to +2)**
Lac	**1.7**	**(0-2)**
Hb	**143**	
Na^+	**145**	
K^+	**4.7**	

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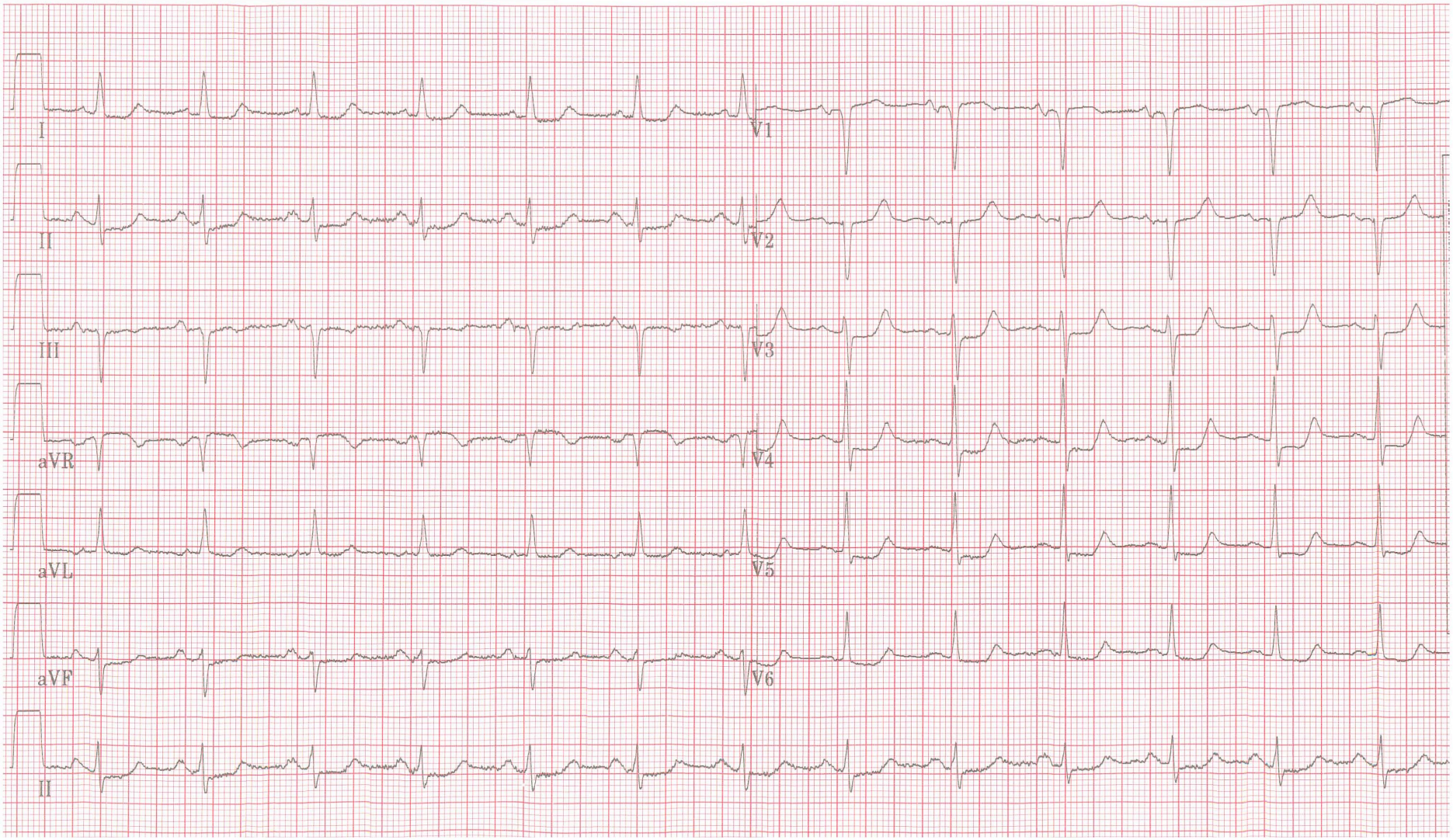

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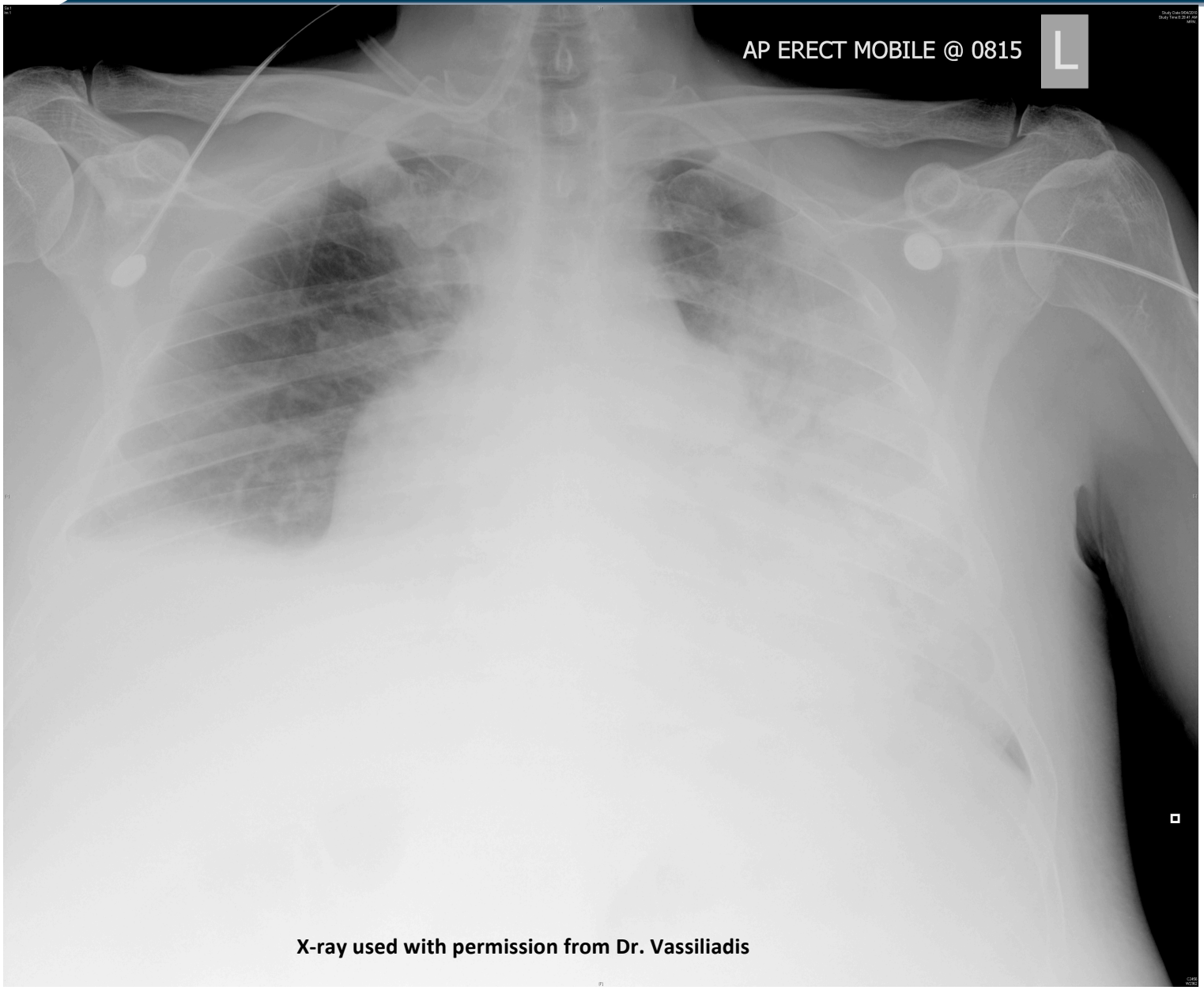

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