A Deadly Cough

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I have no financial or other conflicts of interest related to this presentation.

History

21 year-old African American male, who presented to an outside hospital (OSH) in El Paso TX.

One week history of cough, dyspnea on exertion, 10 lb weight loss and back pain

Supplemental History

Past Medical:
Tobacco abuse
Seasonal allergies
Treated Chlamydia infection 2017

Past Surgical: None

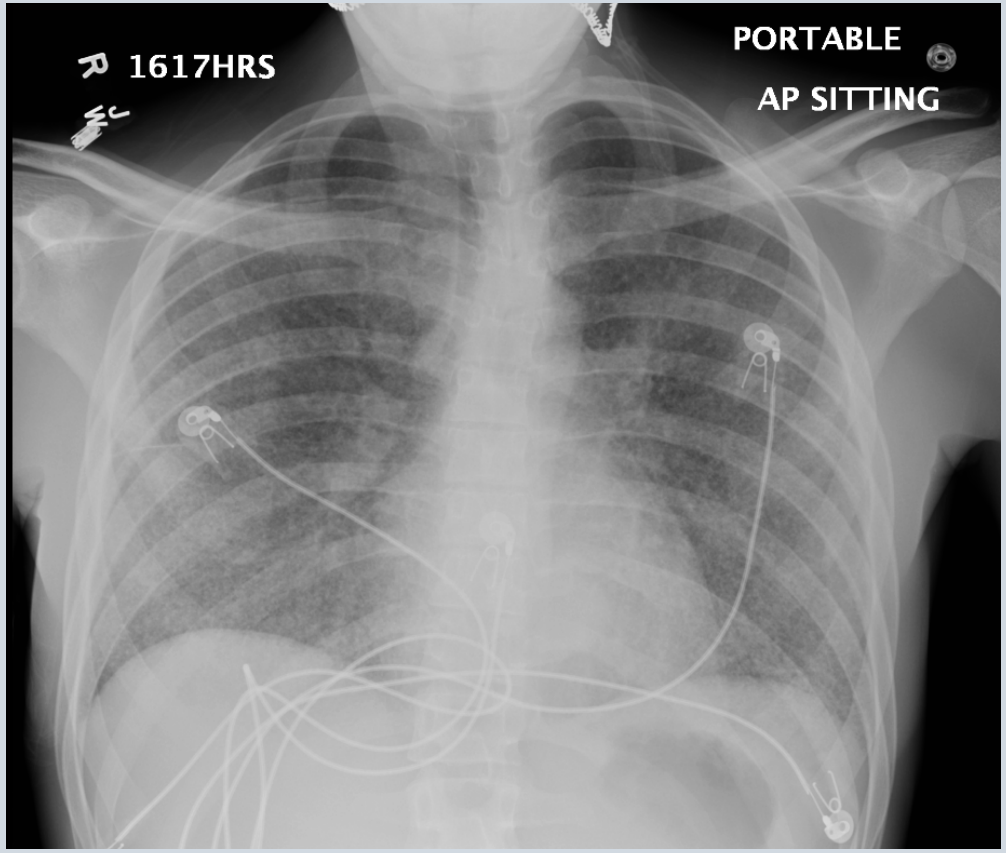
Medications: None

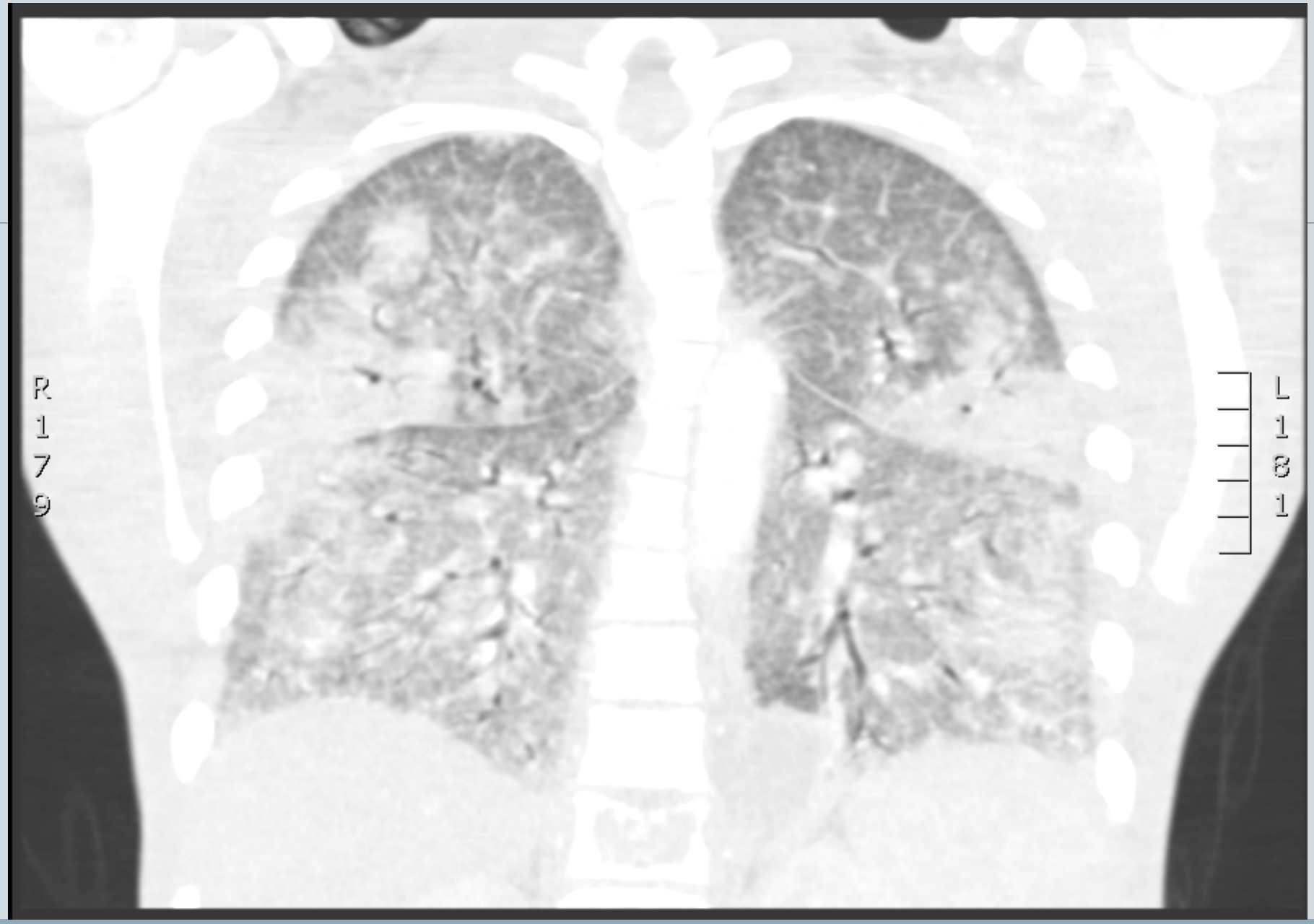
Allergies: NKDA

Social History:
Single, heterosexual male
Currently a college student living in Los Angelas California, visiting father in El Paso. 5 cigs per day, occasional alcohol and marijuana use.

Family History:
Mother and Father are in good health

Initial Imaging at Outside Hospital

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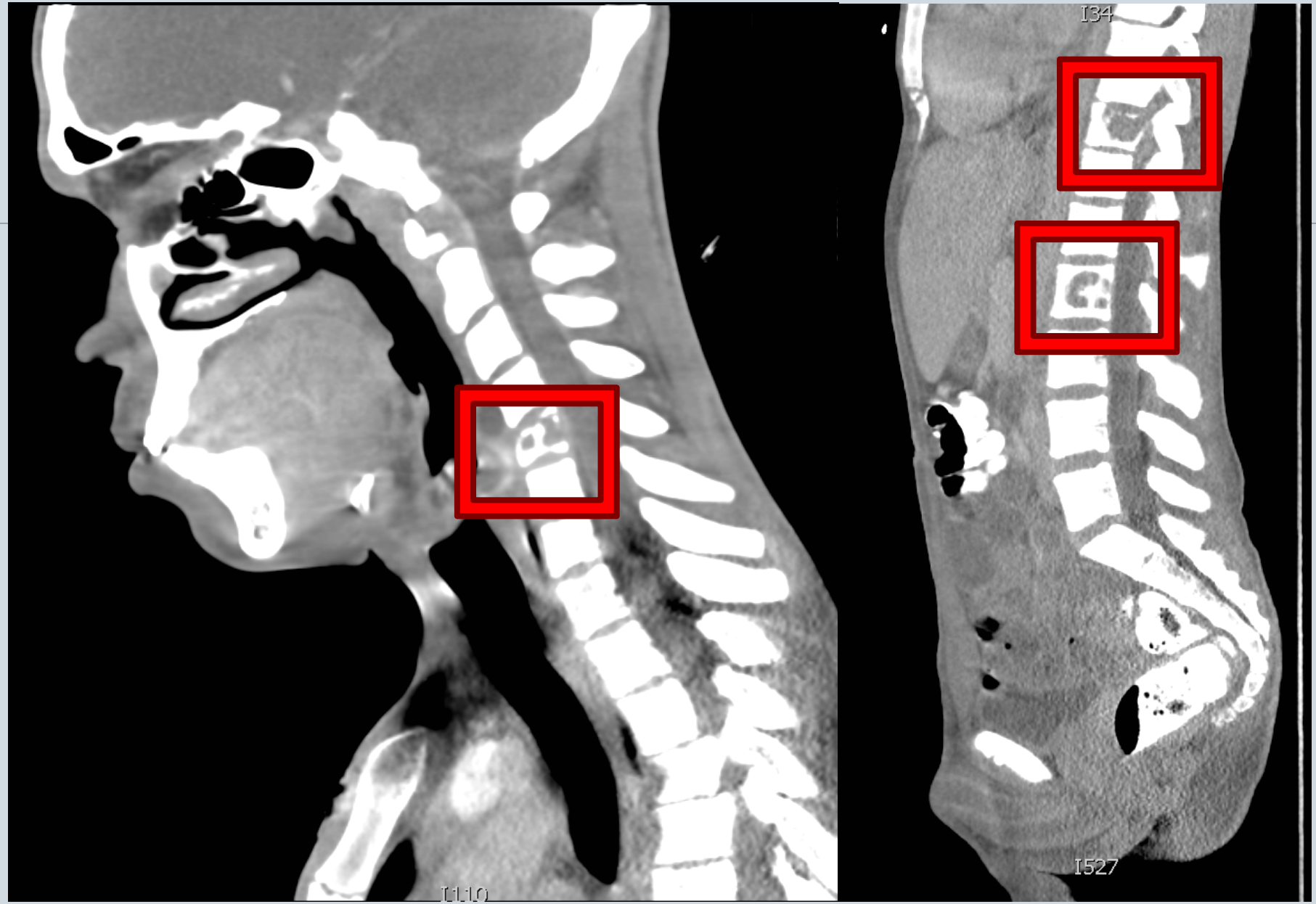
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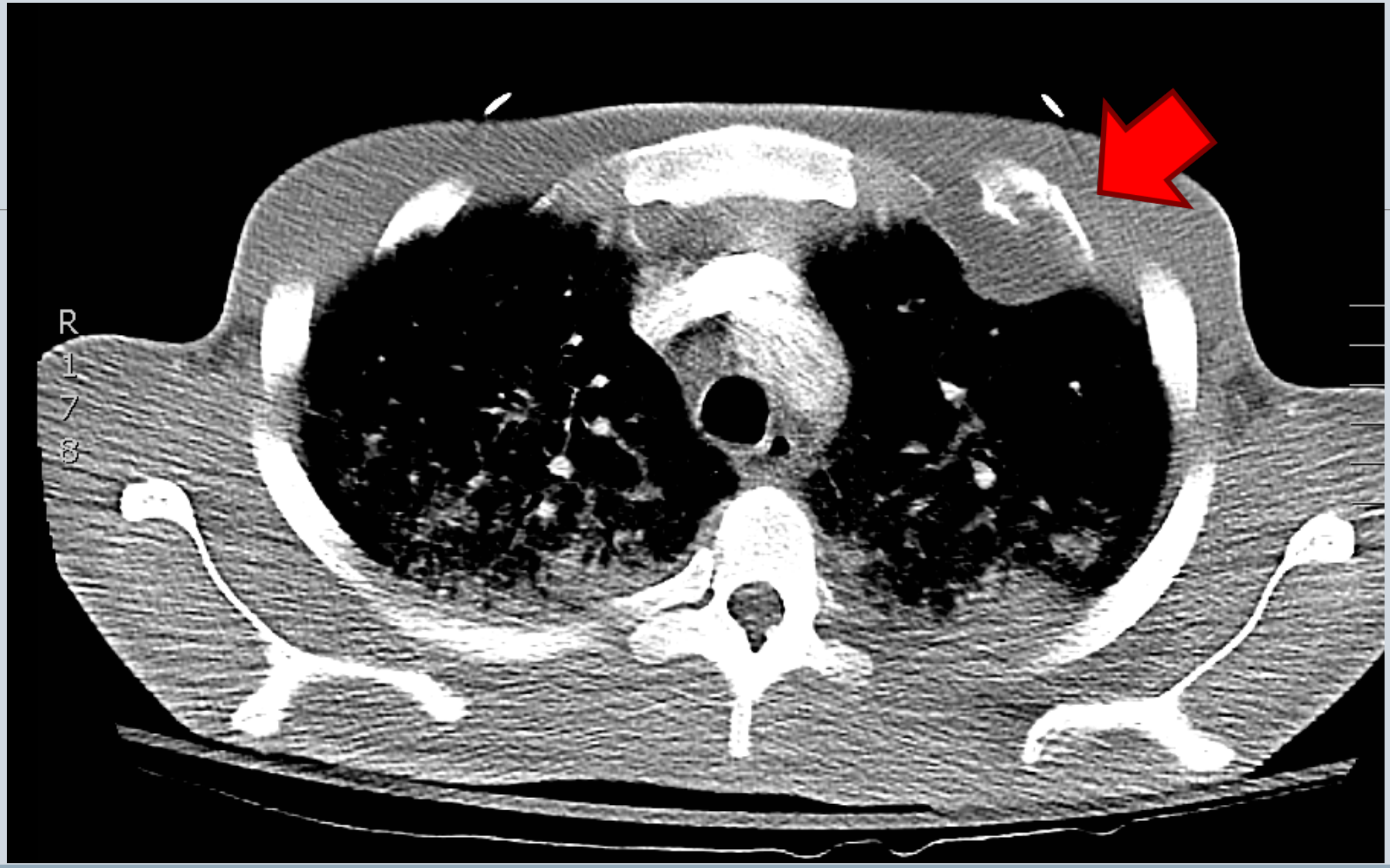
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Biopsy data

Bone marrow, 2nd rib biopsy

Disseminated Coccidioidomycosis

Initiated on Fluconazole 200 mg daily

Further history from OSH

Patient continued to have fevers with leukocytosis

Progressed to have hypoxic respiratory failure and required intubation

ARDS secondary to disseminated coccidioidomycosis

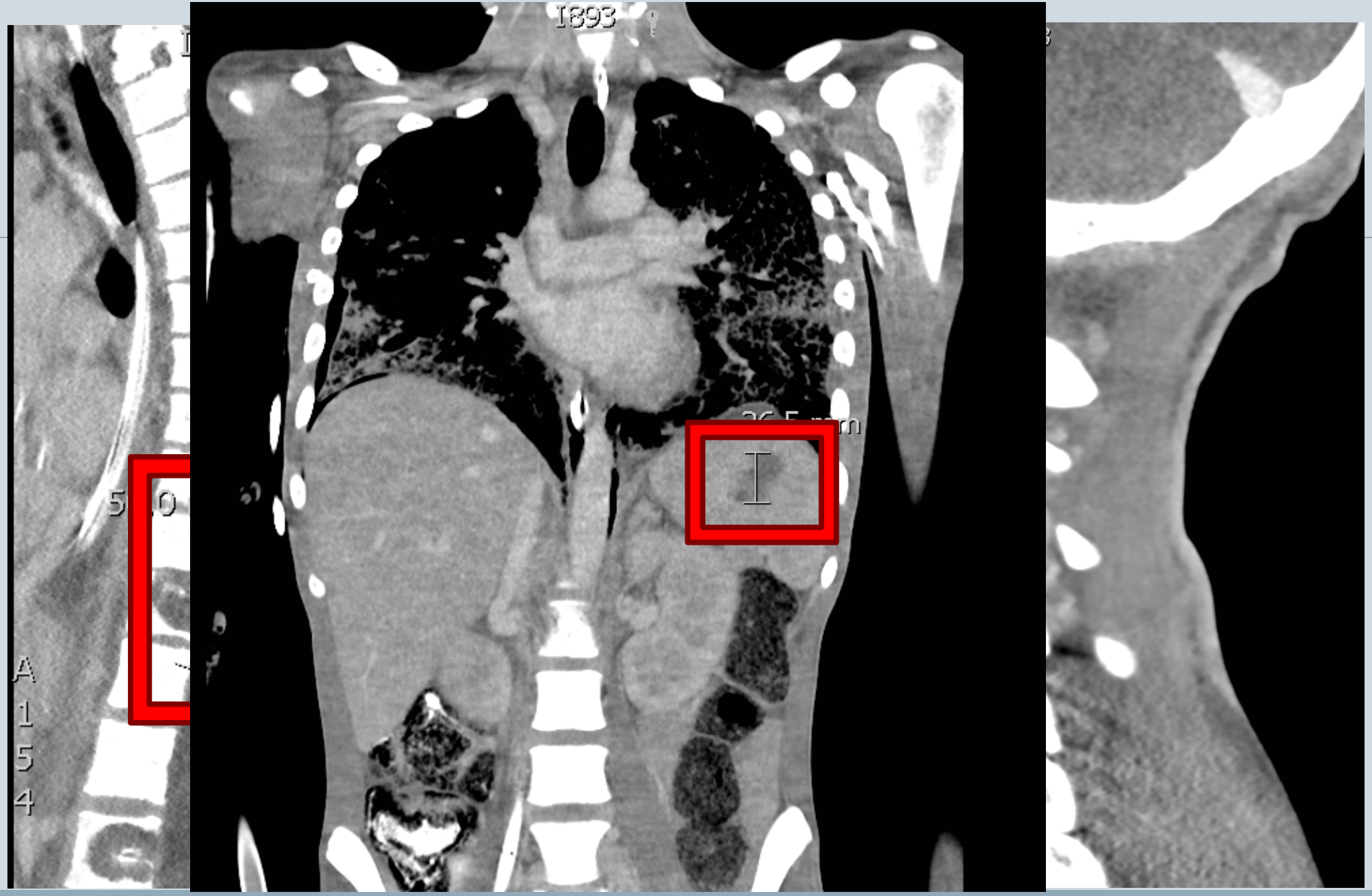
Transfer to BAMC

Respiratory status continued to decline despite intubation, paralysis and prone positioning

Extra corporeal membranous oxygenation (ECMO) team flew out to El Paso, Tx

Cannulated the patient in the field – Right IJ and Right Fem. Veins

Patient was stabilized on Veno-Venous ECMO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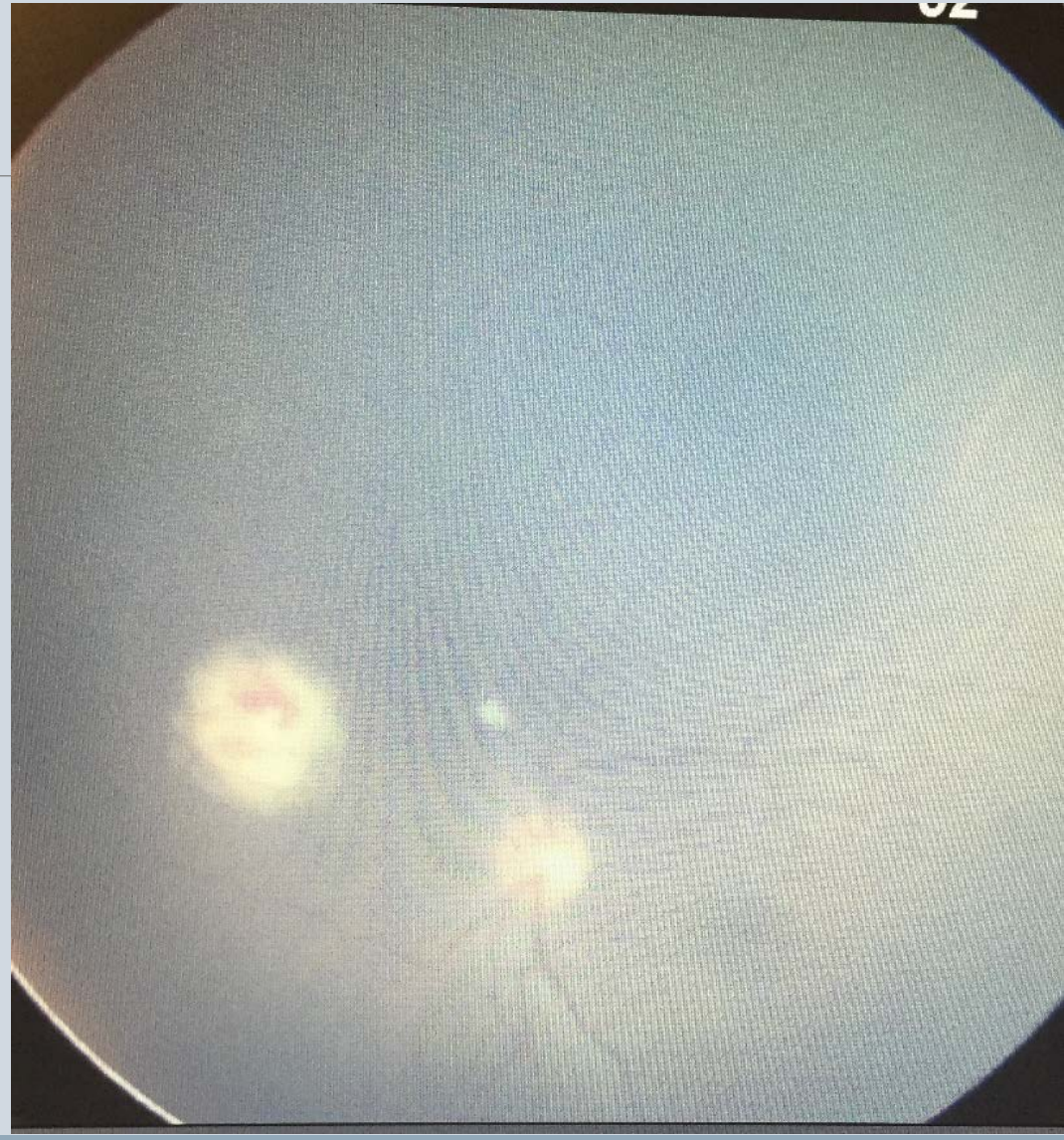
Further dissemination

Left Retina:
Retinal involvement without vitreous involvement

Lumbar Puncture:
Fungal, acid fast bacilli, and bacterial cultures all negative



EIOLIA Trial

Trial looking at VV-ECMO in severe ARDS when compared to traditional mechanical ventilator therapies

Trial ended early due to futility, failing to meet their primary outcome of mortality benefit

However there were a significant portion of the cross over patients to the ECMO arm, that survived salvage therapy with ECMO

Age (yrs)	Sex	Medical Conditions	CF Titer	ECMO Duration (days)	Tx
38	M	DM2, Obesity	1:2	14	Amp Flu
30	M	Obesity	< 1:2	8	Amp Flu
53	M	DM2, Obesity, HTN	1:16	16	Amp Itra
62	F	Obesity, HTN	1:8	12	Amp Flu
21*	M	None	1:32	90	Amp Flu, Vori Posa

*** Today's Case**

Heart Lung. 2018 May - Jun;47(3):261-263.
Am J Respir Crit Care Med 193;2016:A7130

Hospital Course Surgeries

Bone Marrow/Rib Biopsy

C5 Corpectomy

C4/C5 Anterior Fusion

C4-C7 Anterior longus coli I&D

Tracheostomy

T11 Corpectomy

T10-T12 Fixation

Retropleural Dissection

L2 Lumbar Kyphoplasty

Left hemisacrectomy

Left Medial Scapular border resection

IR aspiration of splenic abscess

L. Second Rib resection

PEG Placement

Percutaneous Cholecystectomy

Tracheostomy Removal

Hospital Course Complications

- Acute Renal Failure – requiring hemodialysis
- Pulmonary Embolism
- Venous thromboembolism, RLE
- Right Heart Failure
- Acalculous Cholecystitis
- Cardiopulmonary Arrest
- Ventilator Associated Pneumonia
- Multiple Line Associated Blood Stream Infections
- Pneumothorax
- Critical Care Myopathy
- Gastric Stress Ulcers
- Stage 3 Decubitus Ulcers
- Protein Calorie Malnourishment

Hospital Course

Patient was hospitalized for 146 days

ECMO Support for 90 days

Acute renal failure requiring hemodialysis MWF – NOW patient is off HD

Discharged on life-long triazole therapy

Take Home Points

ECMO can be used as viable option for rescue therapy for disseminated coccidioidomycosis, even for the most severe of cases

ECMO is not an absolute contra-indication to surgery

Multi-disciplinary approach is necessary when managing ECMO and surgical interventions, planning for holding anti-coagulation, and reinitiating therapy.

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Questions?