Jefferson
Philadelphia University + Thomas Jefferson University

CityWide Conference

Division of Infectious Diseases
Thomas Jefferson University Hospital
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60’s yr old Caucasian male with SOB and orthopnea (difficulty breathing”) and fatigue since 6 months

History and Presentation

HPC :

- hospital admission ~ 3 months back, mechanical fall
- associated confusion
- investigations → R sided pleural effusion → thoracentesis → symptomatic improvement

History and Presentation

- confusion from hepatic encephalopathy (known cirrhosis)
- since discharge was having episodic SOB
- 3 further therapeutic thoracenteses as outpatient
- present admission (2/2019) for another thoracentesis and

further investigations

- b/l leg swelling and poor memory

History and Presentation

PMHx : HCV cirrhosis (MELD 20) s/p Ledipasvir/Sofosbuvir (Harvoni) Rx ~ 6 months back, was successful

- CKD stage 4 secondary to diabetic nephropathy
- on dual (liver + kidney) transplant list
- DM2 (A1c 6.5), obesity, OSA, essential HTN, TIA, MGUS
- L total hip replacement

History and Presentation

Pertinent medications :

Bumetanide 2 mg BID, Spironolactone 12.5 mg daily, Ciprofloxacin 250 mg BID (prophylaxis), Irbesartan 150 mg BID, Lactulose 30 g TID , Insulin 20 U BID

ROS :

- no CP
- no fever/chills
- no cough, night sweats, significant weight loss
- no HA, meningismus
- no bowel or bladder disturbance

History and Presentation

SH: born and raised in Puerto Rico; first moved to Brooklyn, NY in his 20s

- separated from his wife, currently lives alone
- remote alcohol use, ex-smoker since 10 years (1pack/week);

  crack cocaine in remote past
- not sexually active since many years, previously had multiple

  sexual partners with unprotected intercourse, no h/o STDs
- no sick contacts

History and Presentation

FH: non-contributory

Results of prior w/u –

Pleural fluid : exudative by both Light's criteria, cytology neg

Ascitic fluid : high SAAG

MRI abd 11/2018 – cirrhosis with portal HTN, no lymphadenopathy

HIV screen 2016 and 1/31 - neg

11/2018	rbc 439; wbc 27000; lymph 75%. routine : many wbc, no org, neg cx AFB stain neg, Cx neg, ADA 5.9 MTB Quant 11/4: neg
11/2018	rbc 4000; wbc 1197; lymph 26/macrophage 54 routine : mod wbc, no org, neg cx TB PCR neg, ADA 16 (<9.2)
12/2018	rbc 4000; wbc 286; lymph 66/mcrph 32, pH 7.48, glu 165 routine : few wbc, no org, neg cx AFB stain and Cx neg, ADA 6
1/2019	rbc 288; wbc 375; lymph 32/macroph 65, pH 7.61,glu 171, protein 3.8, LDH 124, trig 27, amylase 64 routine : few wbc, no org, neg cx

Audience Questions

Examination

Vitals: afebrile, 65, 150/76, 16/min, 98% RA

Gen : obese, oriented x 3, not in any distress

CVS: RRR, no murmurs, 2+ b/l pitting pedal edema

RS: decreased breath sounds R lung base

PA: abdomen distended, no tenderness

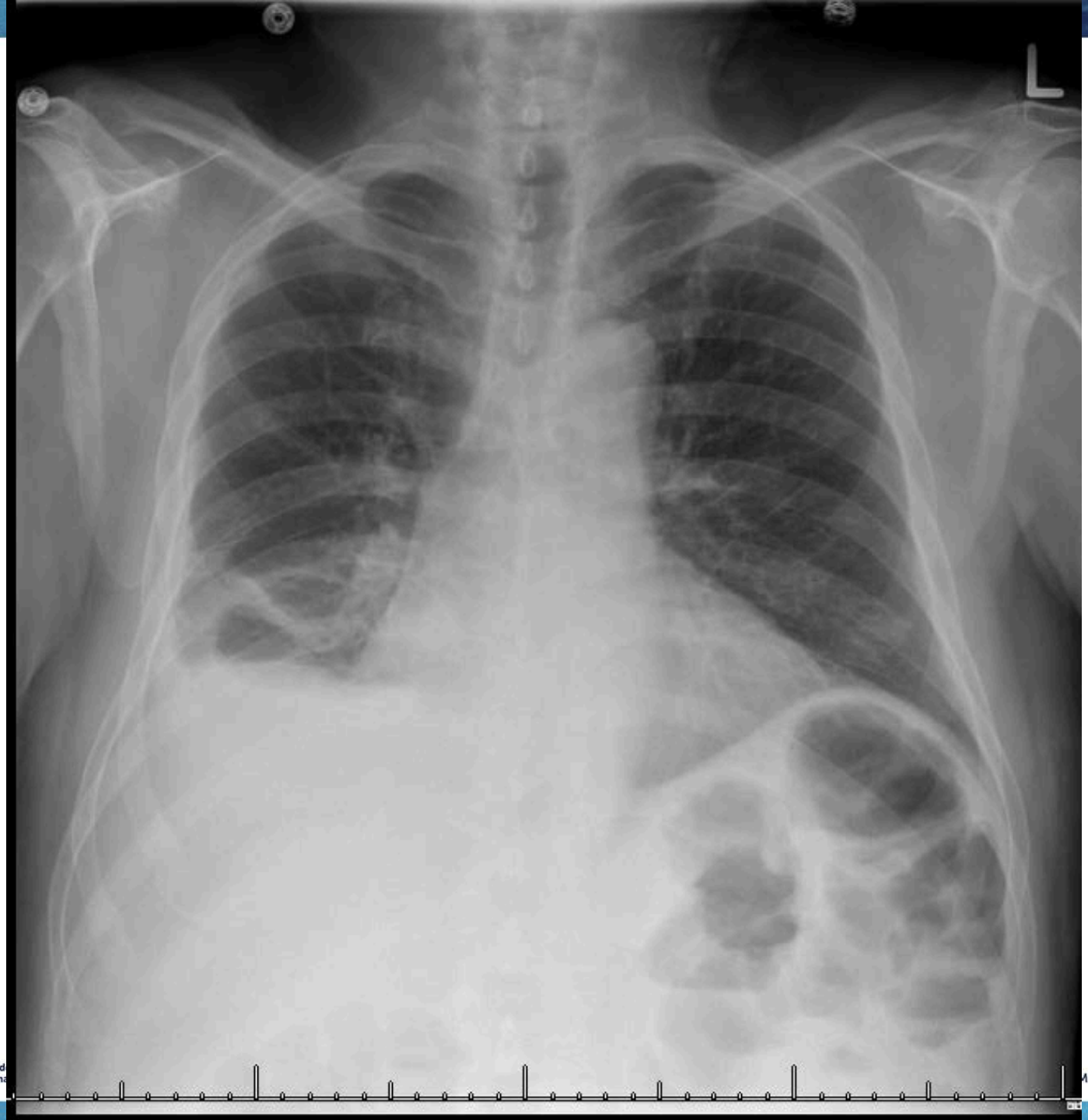
Lymph: no lymphadenopathy

Skin: no rashes

CNS: no focal deficits

Labs and imaging 2/2019

- WBC 7.2 (N 68%), Hb 8.5, plt 110 (at baseline)
- NA 137, K 4.9, CO2 17, BUN 47, Cr 3.5 (baseline 2.5)
- LFT 25/18/103/0.2/7.1/3
- US abd: cirrhosis with portal HTN and ascites, large right pleural effusion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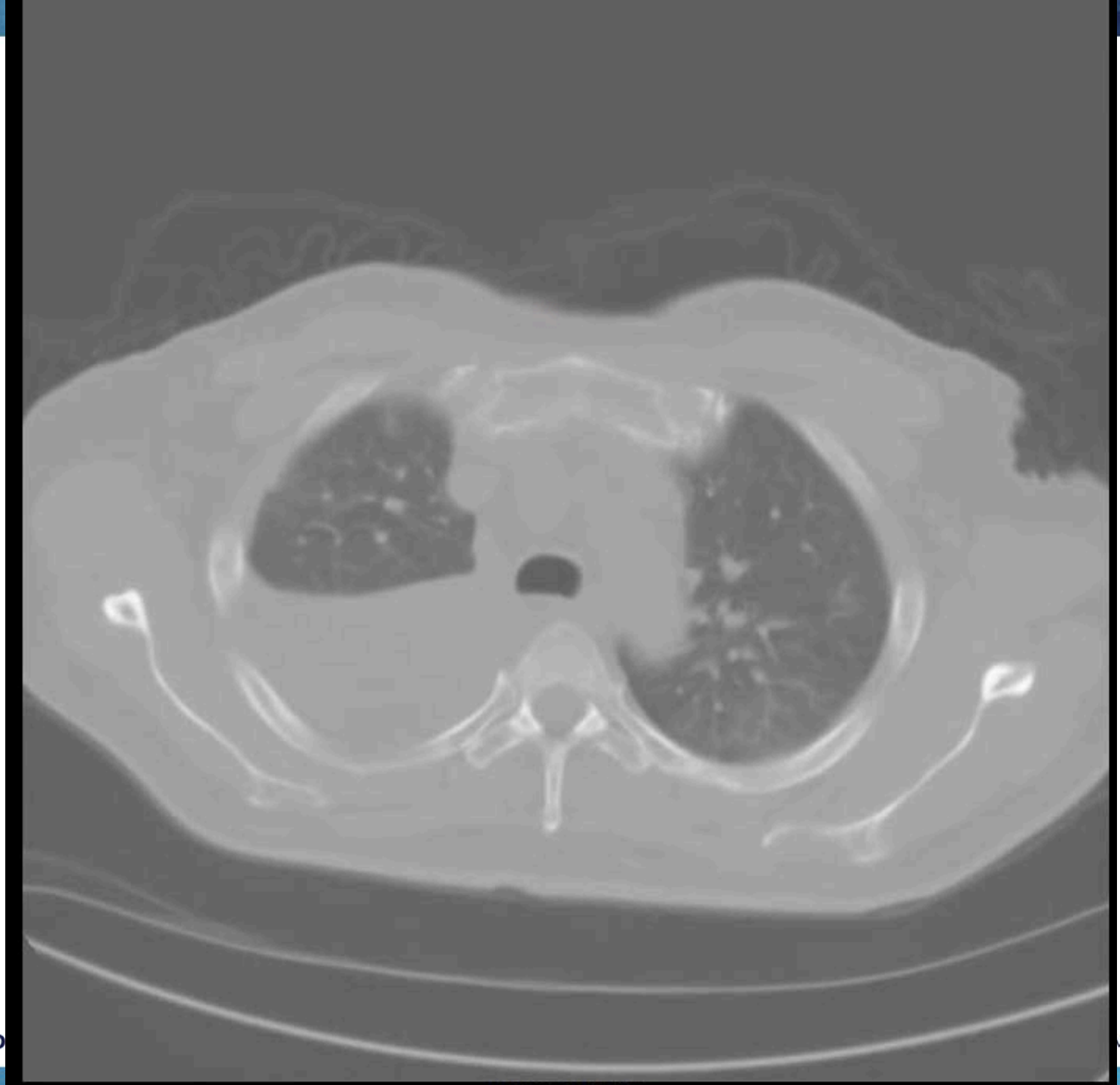
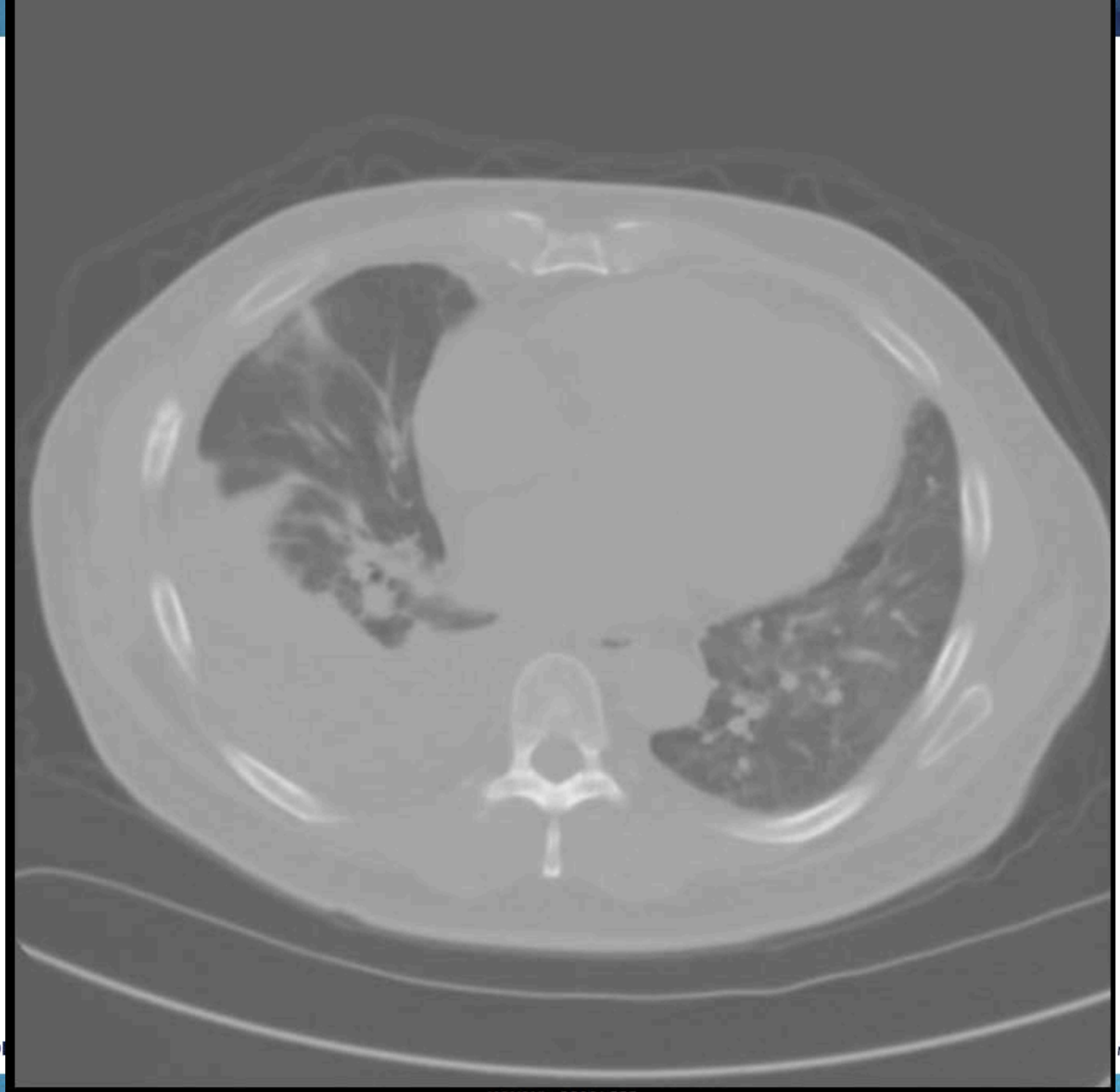
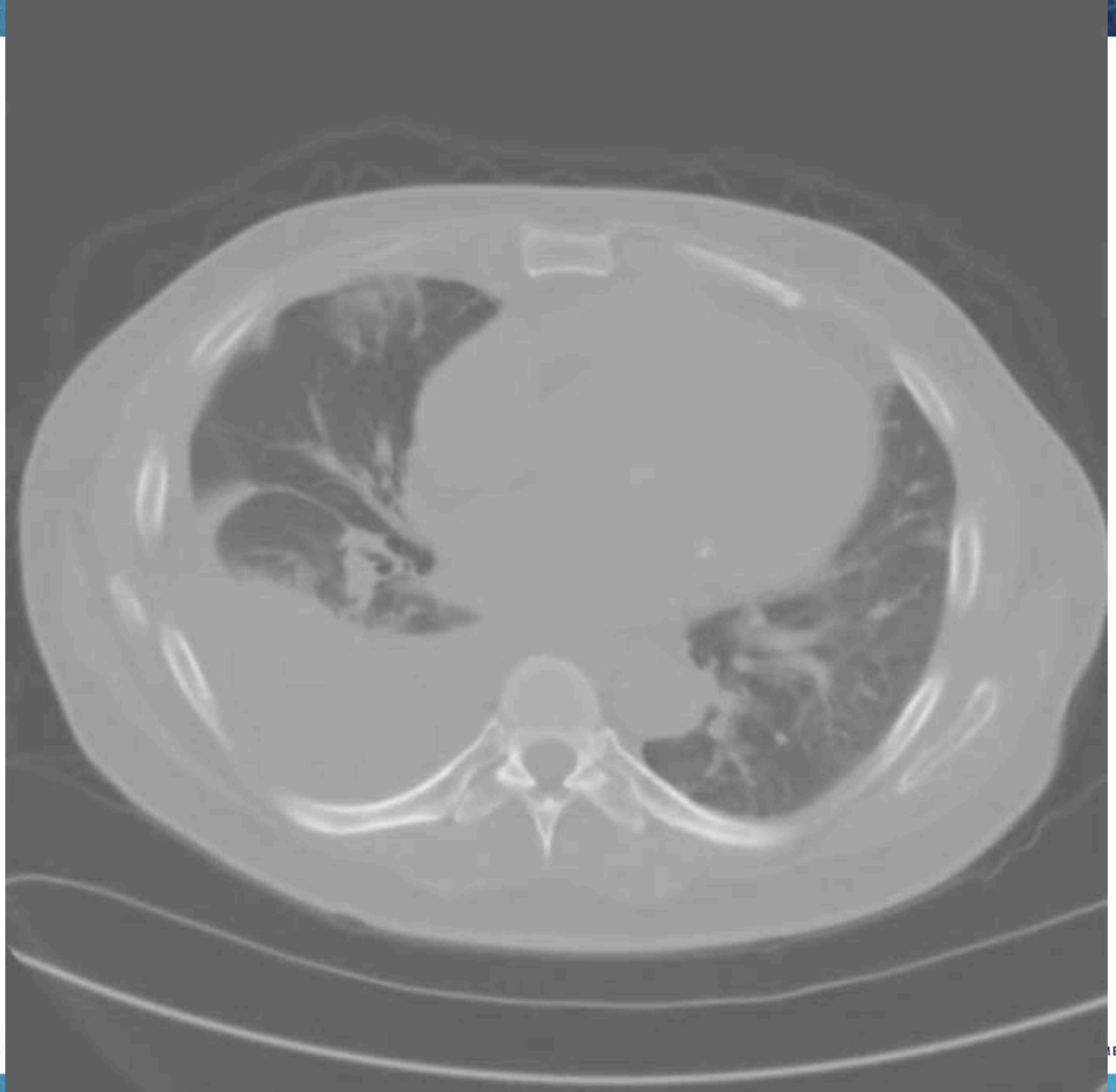
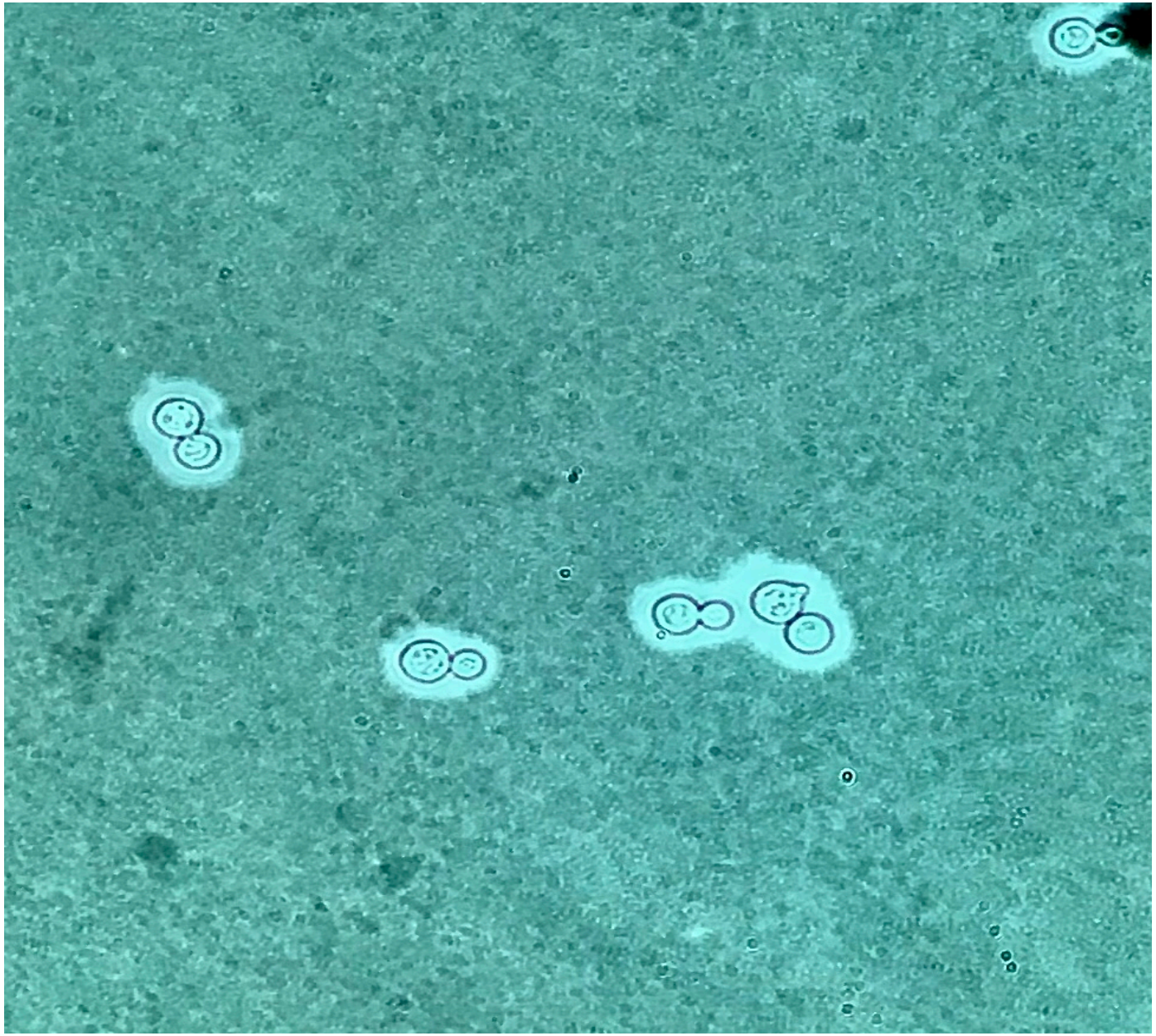
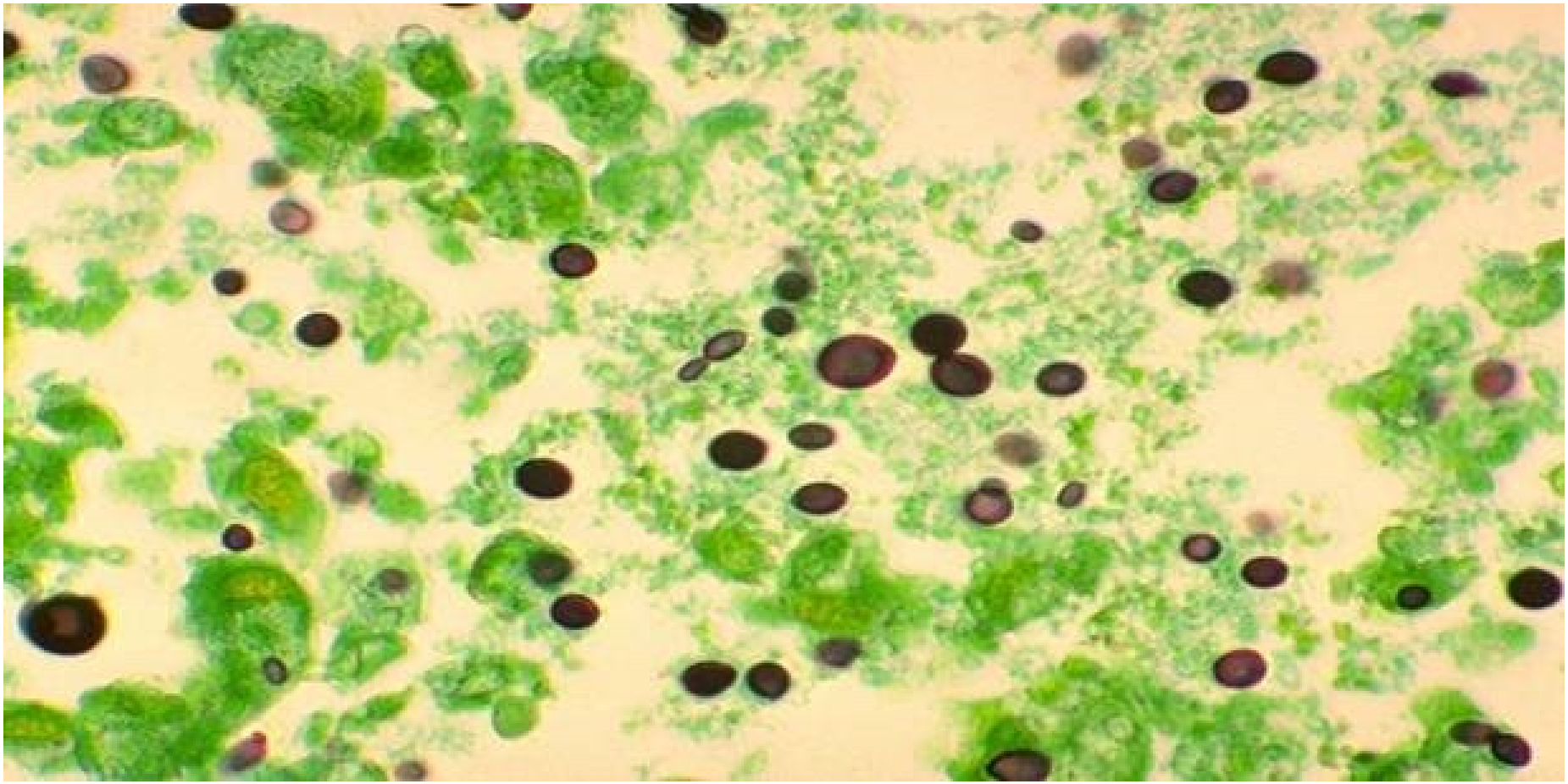


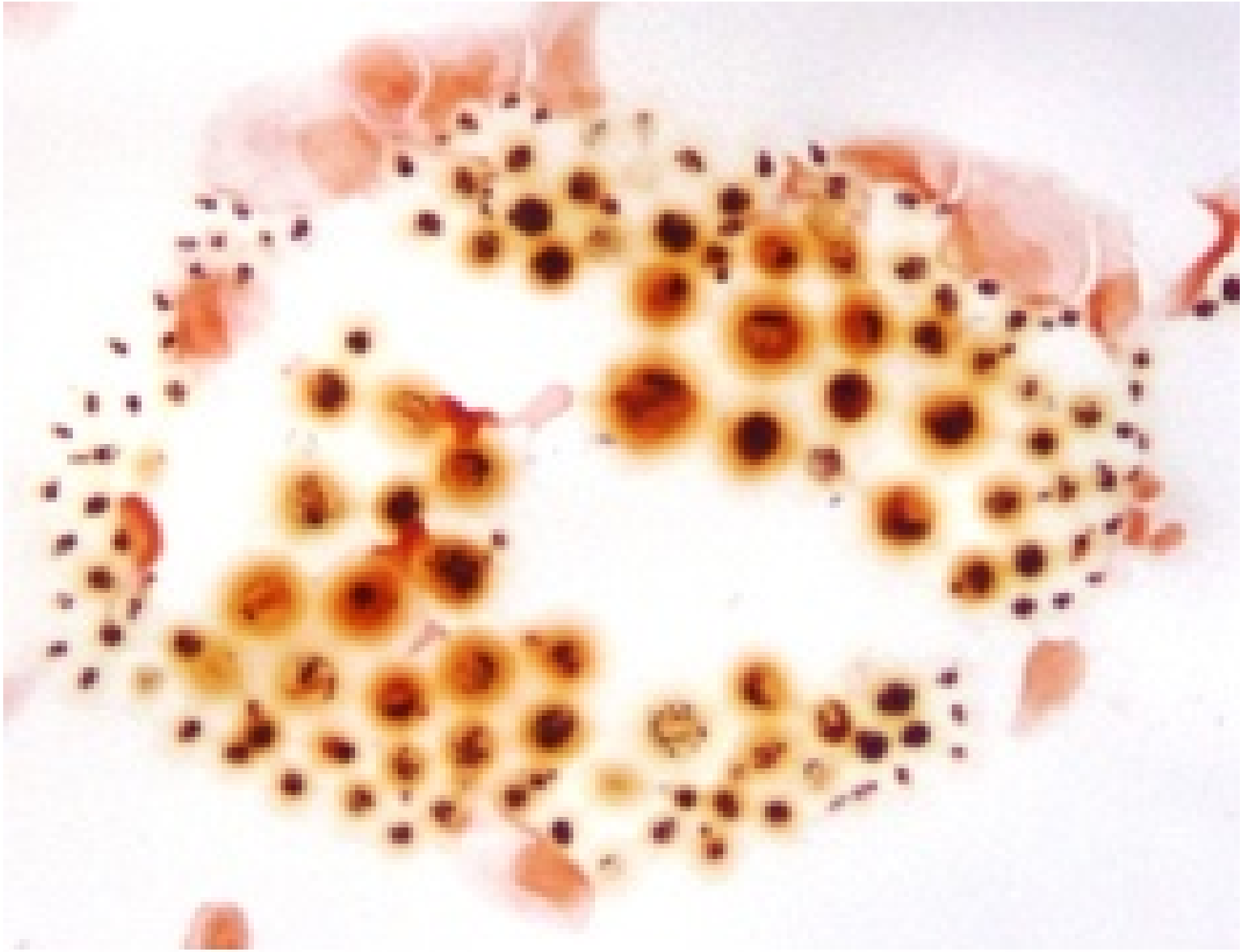




Differential Diagnosis Discussion







Further Labs

- Pleural fluid fungal cx 12/12 (result 1/16) – VL growth Cryptococcus neoformans/gattii
- Pleural fluid 1/31 – fungal stain and Cx neg
Serum CRAG 1/31 – reactive, titer 1:40
fungal BCx 2/5 - NGTD
- worked in Puerto Rico most of his adult life as a carer/cleaner on a farm raising fighting roosters, in later life as an elevator man in the US

Management Discussion

CNS Disease?

-2/6 LP with opening pressure 27, clear, normal protein and glucose, 0 WBC, CSF CRAG neg, fungal stain and Cx neg

- MRI brain: normal

- discharged on Fluconazole 200mg QD PO (renal dosing)

Cryptococcal Pleural Effusion

- cryptococcal pleural infection is rare with about 50 cases reported
- tends to occur in immunocompromised individuals
- can be misdiagnosed as TB
- cirrhosis and DM are known risk factors in non HIV patients for cryptococcal infection
- with improvement in immunity, IRIS can sometimes make latent disease apparent

IDSA Mx Guidelines (Nonmeningeal Cryptococcosis)

Pulmonary (immunosuppressed)

- CNS disease should be ruled out with LP

(dose and duration of induction treatment changes and need for ICP monitoring)

- PNA with CNS or documented dissemination and/or severe pneumonia (ARDS) is treated like CNS disease
- May use corticosteroid Rx if ARDS/IRIS
- mild-to-moderate symptoms, absence of diffuse pulmonary infiltrates, absence of severe immunosuppression, and neg results of a diagnostic evaluation for dissemination, use fluconazole (400 mg [6 mg/kg] per day orally) for 6–12 months

Pulmonary (nonimmunosuppressed)

- mild-to-moderate symptoms : fluconazole (400 mg PO) for 6–12 months
- severe disease, treat similarly to CNS disease
- for normal hosts with asymptomatic pulmonary nodule or infiltrate, no CNS symptoms, and neg/ very low serum cryptococcal antigen, LP can be avoided

Nonmeningeal, nonpulmonary cryptococcosis

- For cryptococcemia /dissemination (at least 2 noncontiguous sites or evidence of high fungal burden CRAG ⩾1:512), treat as CNS disease

- If CNS disease is ruled out, fungemia is not present, infection occurs at single site, and there are no immunosuppressive risk factors, consider fluconazole (400 mg [6 mg/kg] PO daily) for 6–12 months