



CLINICAL PROBLEM SOLVING CONFERENCE

HX & PH/E

STEP 1:

ID: 65 Y/O Female, Married, Tehran

CC: Chest pain and dyspnea

PRESENT ILLNESS

- The PT is a 65 Y/O Female with no significant past medical history who presented with **chest pain** and **dyspnea**.
- Symptoms began approximately 1 month PTA with progressive worsening of both complaints.

The patient had NYHA functional class III dyspnea / which had progressively worsened over the preceding week/ The chest pain was pleuritic that worsened with exertion The patient also reported a dry cough for the past month. The patient denied orthopnea and paroxysmal nocturnal dyspnea (PND).

The patient also reported occasional abdominal pain.

The patient reported unintentional weight loss of 6Kg over the past month

There was decreased appetite

BACKGROUND HISTORY

PMHx: The patient had a history of psychiatric illness.no history of surgery

DHx: Asentra 50

SHx: Non-smoker; no substance use reported

FHx: Family history was significant for colon cancer in her sister and heart disease in her brother.



PHYSICAL EXAM

- Alert, oriented, in mild distress on presentation
- **V/S:** BP 115/70, PR 82, RR 17, T 36.7°C, SpO₂ 94% on room air
- **Chest:** Decreased breath sounds at the right lung base
- **Heart:** Regular rate and rhythm; no significant murmur appreciated
- **Abdomen:** Soft, non-tender, no distension, no guarding
- **Extremities:** No peripheral edema; pulses symmetric



H & P

PRIMARY PARACLINICS

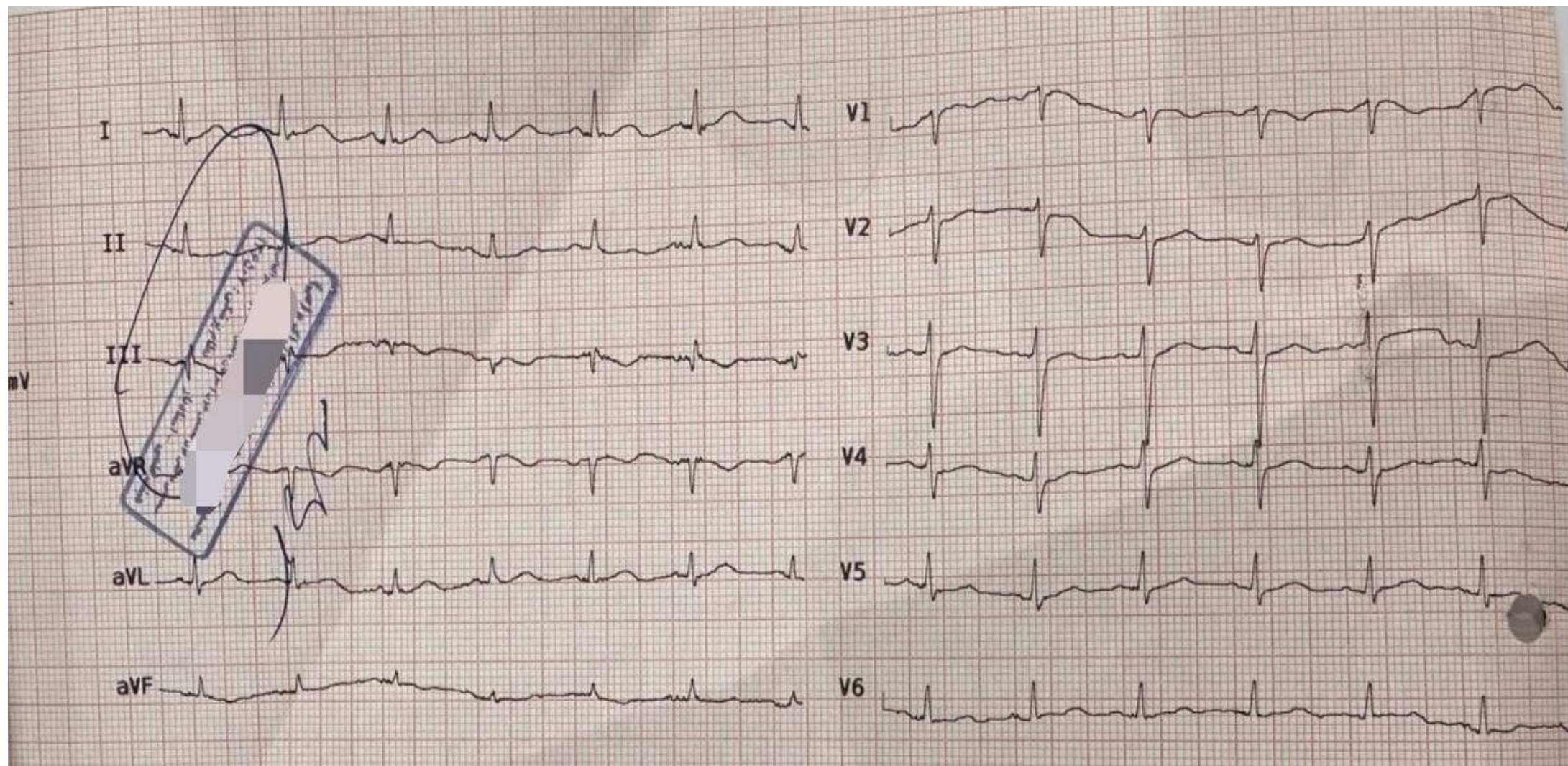
Test	Result	Test	Result
WBC	$8/3 \times 10^3/\mu\text{L}$	BUN	22mg/dL
Hb	11.9 g/dL	Creatinine	1.6 mg/dL
Platelet	$232 \times 10^3/\mu\text{L}$	Ca / P/ mg	9.3 / 5.1 mg/dL/2/4
MCV	88/9 fL	Na / K	134 / 3.7 mEq/L
PT / INR	14.1 / 1.06	LDH	3650 U/L
PTT	38 sec	PT Activity	100%



PRIMARY PARACLINICS

Test	Result
ALT	24
AST	35
ALKP	222
uric acid	13/7
Bs	106
ESR/CRP	40/7.2

ECG



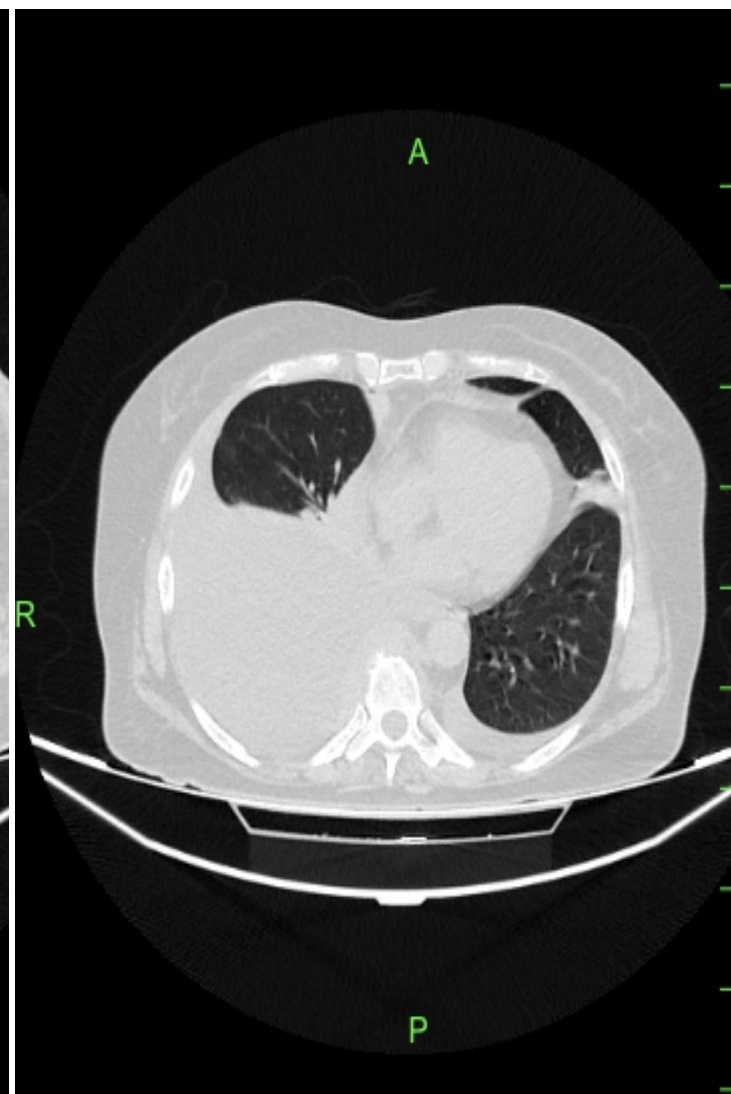
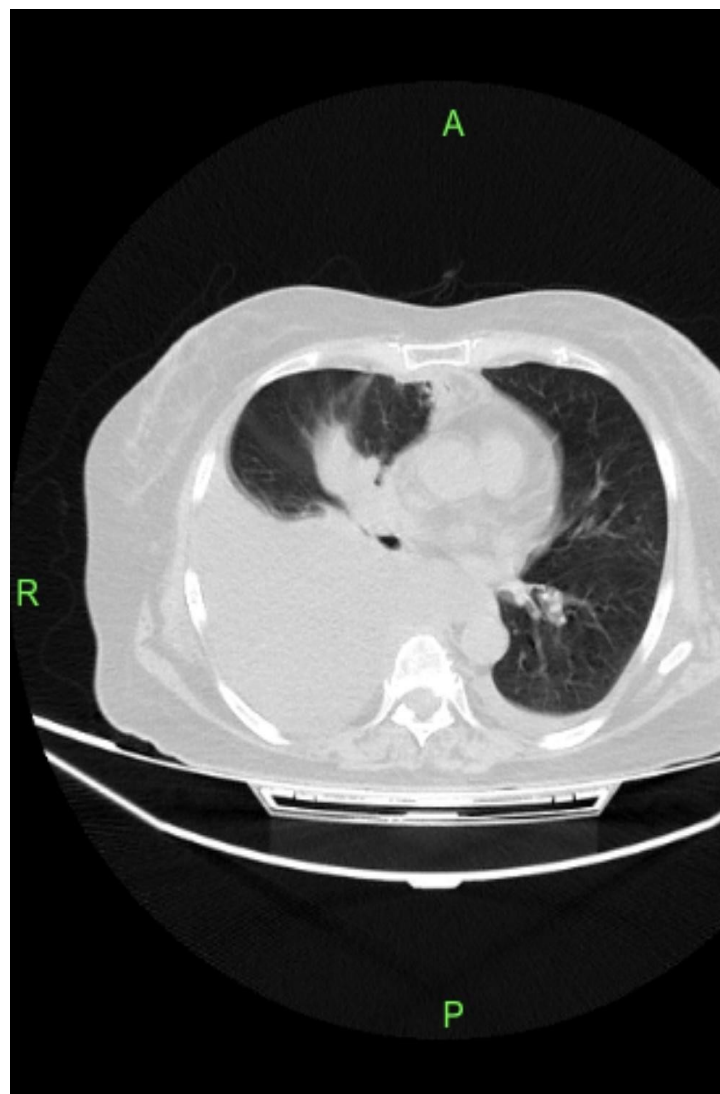
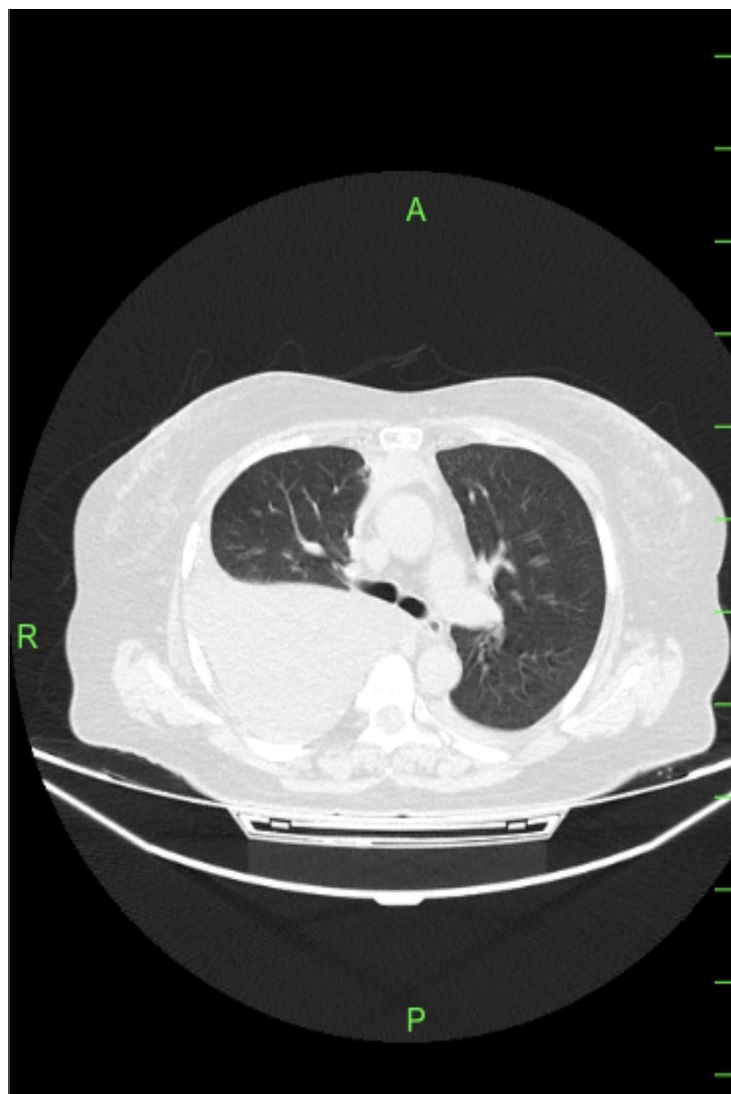


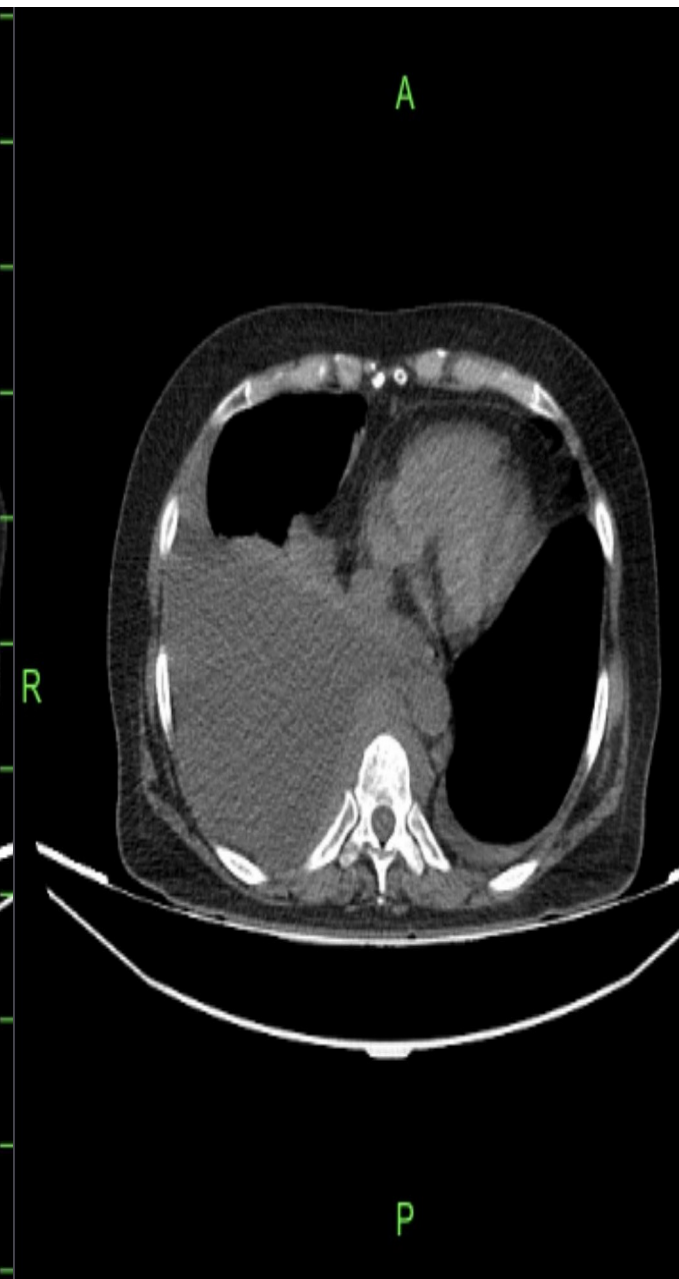
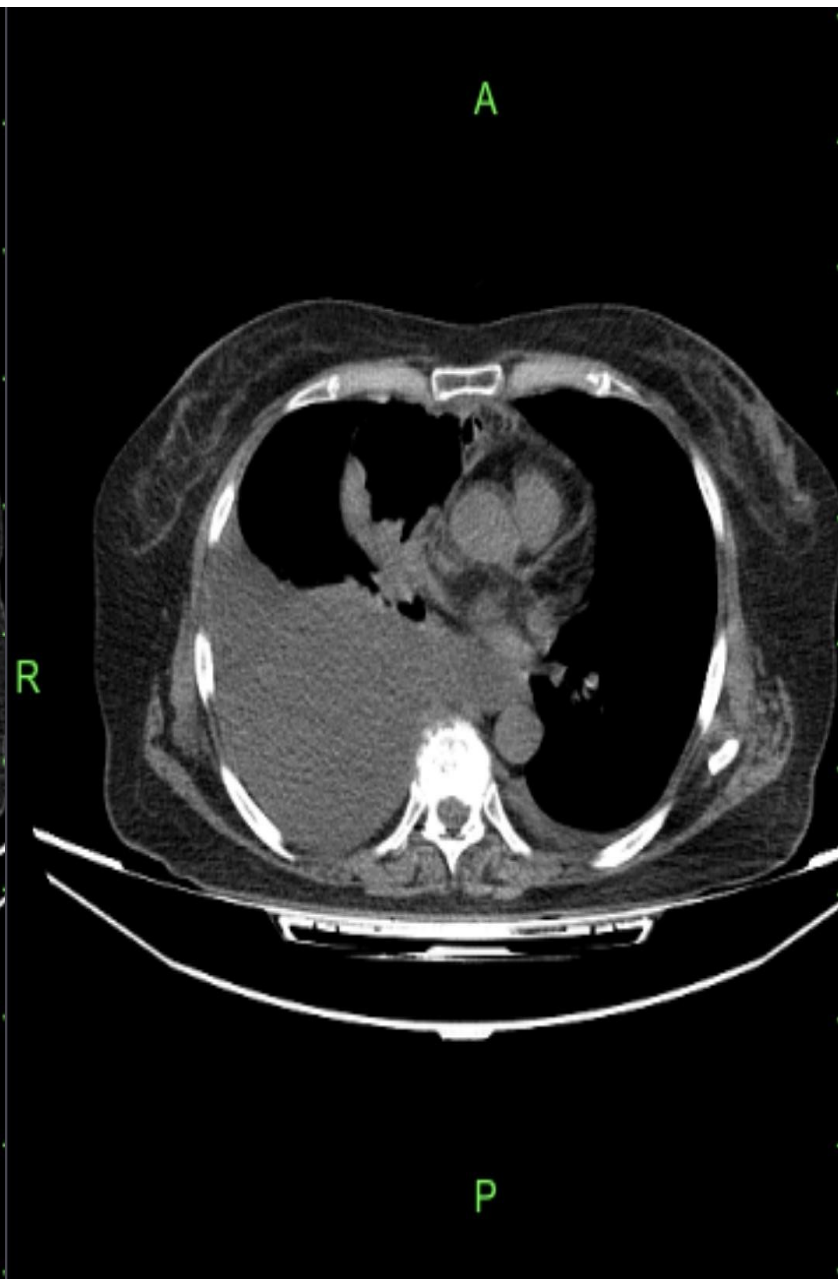
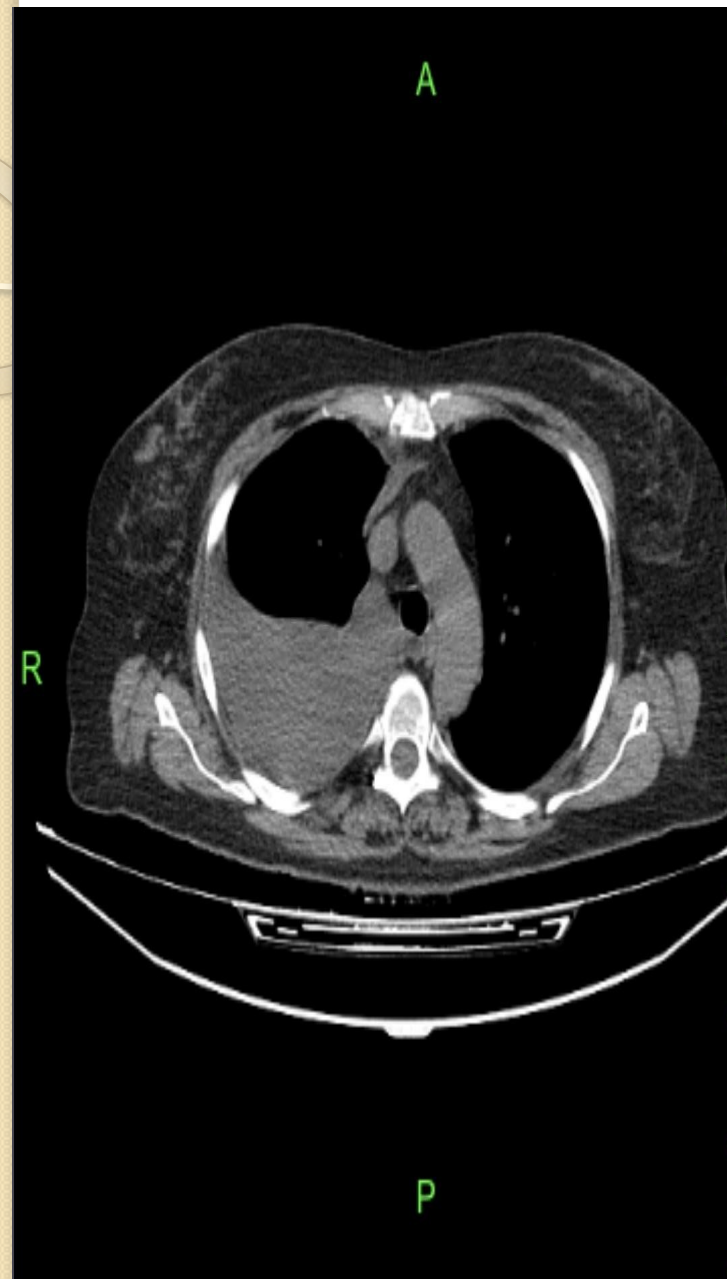
ECHOCARDIOGRAPHY

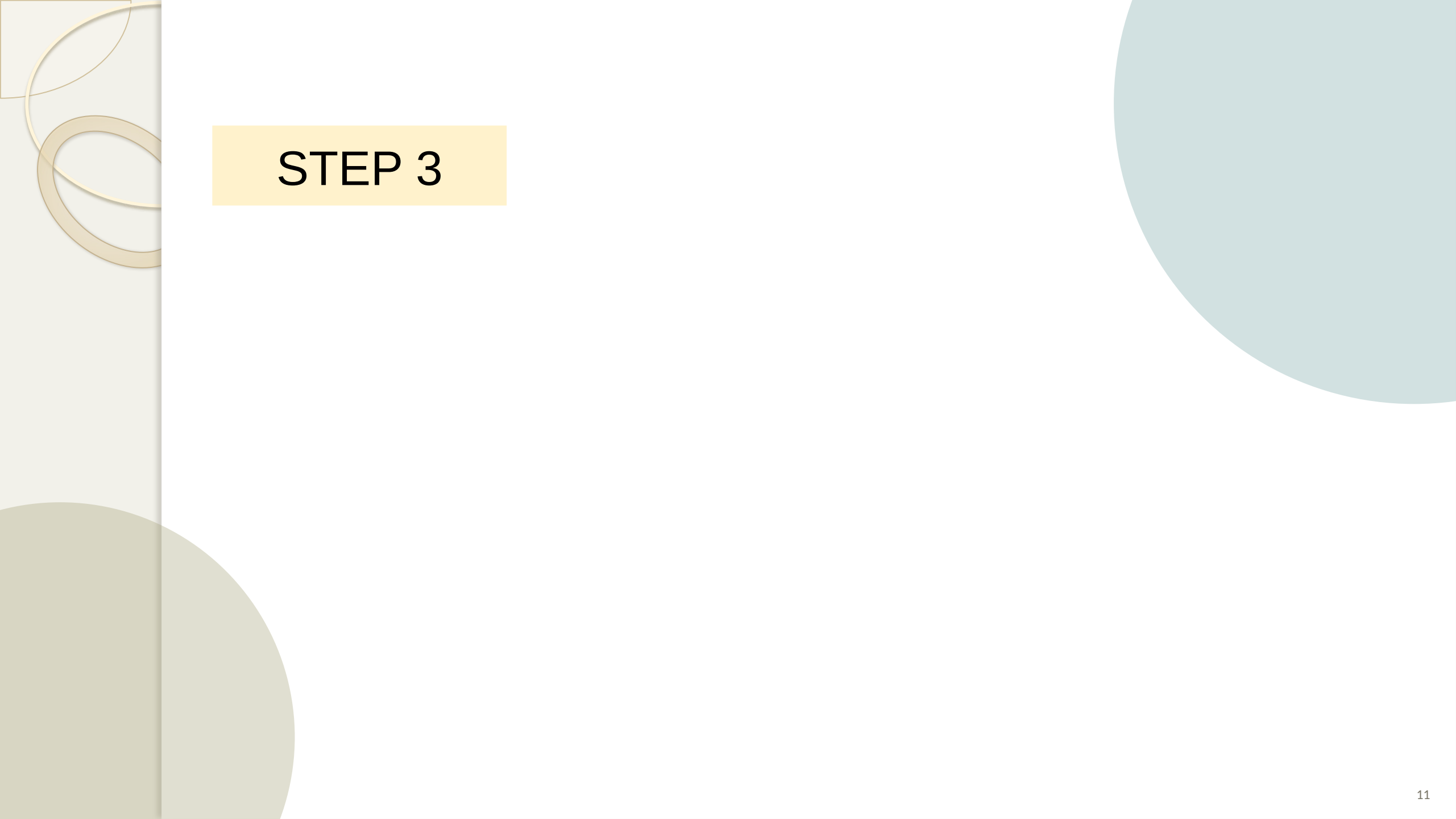
- Normal LV size with normal systolic function (**LVEF 55%**).
- No RWMA at rest; no LVH; normal RV size with normal systolic function.
- Mitral valve normal, **mild MR**, no MS. Tricuspid valve normal, **mild TR**, no stenosis.
- Aortic and pulmonary valves normal; no AR, AS, PS, or PI.
- No ASD, no VSD. IVC normal size with >50% respiratory variation — **low probability of significant pulmonary hypertension.**
- No pericardial effusion.

CHEST CT REPORT

- Pleural thickening was noted along the right pleura adjacent to the vertebral bodies. A large right-sided pleural effusion and a mild left-sided pleural effusion were observed. Collapse of the right middle lobe (RML) was also noted.
- The lung parenchyma showed normal density and aeration. The pulmonary vessels and airways were unremarkable, and no pulmonary nodules were identified.
- The mediastinum, cardiac chambers, and major mediastinal vessels were normal in size, with no focal lesions detected.
- Both pulmonary hila were normal in size and density, and the main bronchi appeared normal.
- The thoracic vertebrae and visualized soft tissues appeared unremarkable





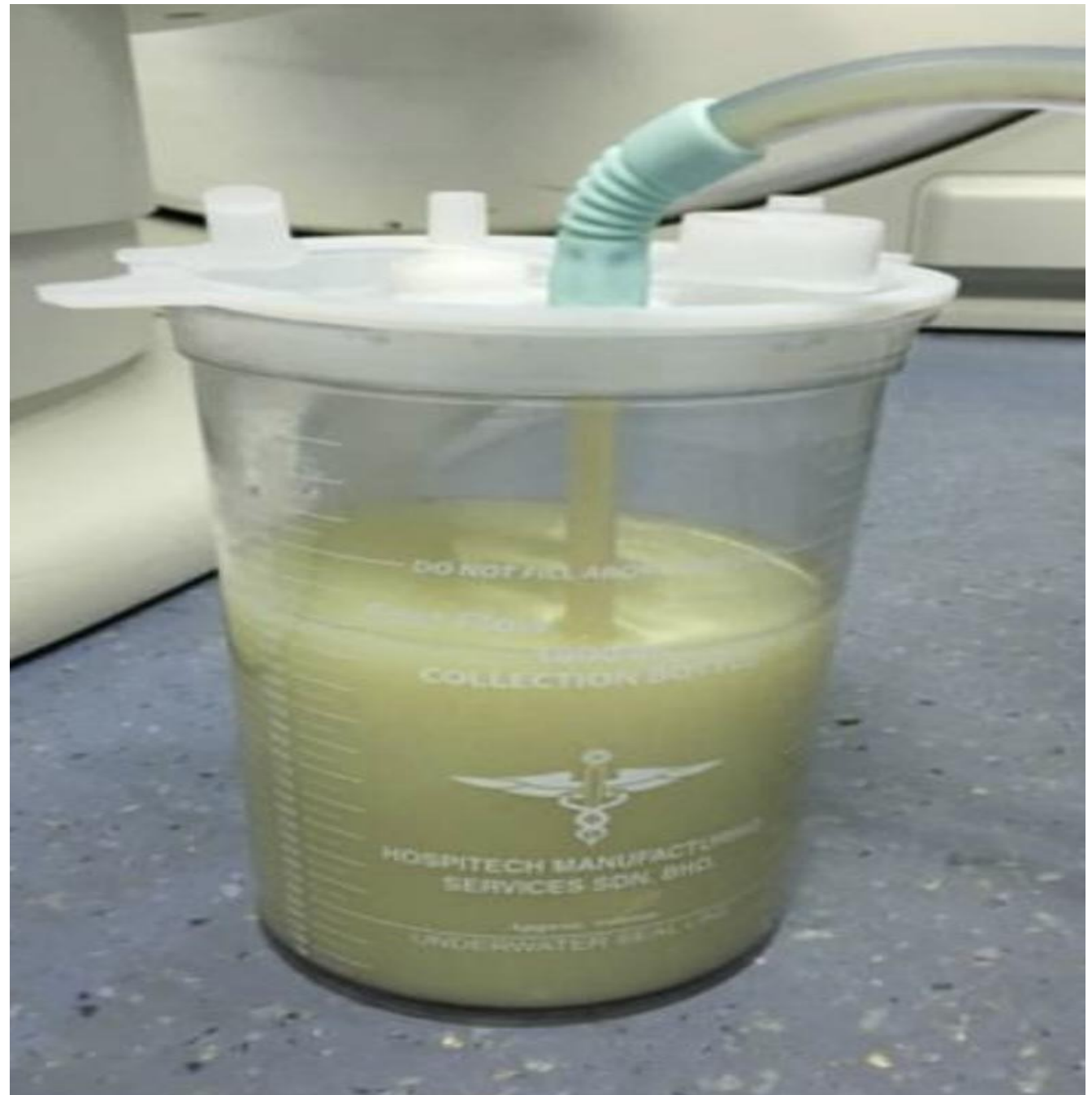


STEP 3

PROGRESS

- During hospitalization the patient's course was complicated by **massive right-sided PE** and worsening pleural effusion, managed with anticoagulation and chest-tube drainage.
- **Pulmonology** performed pleuroscopy and bronchoscopy for direct visualization and biopsy of pleural lesions.
- **Gastroenterology** performed upper endoscopy and colonoscopy as part of the malignancy work-up.

Chest tube





PLEURAL FLUID ANALYSIS

Glucose	92
protein	5.3
Alb	3.3
LDH	1085
TG	505
chlolestrol	79



PLEURAL FLUID ANALYSIS

appearance	semi- turbid
wBC	4000
RBC	3000
segman	5
lymphocyte	95
culture	negative
bacteria	negative



IMAGING & ENDOSCOPIC PROCEDURES

PLEUROSCOPY

Multiple pleural nodules of variable size with yellow, reddish, and black appearance noted over the parietal pleura. Pleural biopsy sent for histopathology. No procedure-related complication.

BRONCHOSCOPY

Performed for evaluation of undiagnosed exudative pleural effusion. Similar yellow/red/black nodules confirmed; biopsies taken. Histopathologic follow-up pending.



Spiral CT scan of the abdomen and pelvis with and without intravenous contrast

Multiple mesenteric lymphadenopathies with malignant morphology were noted, with the largest measuring 15×35 mm, located anterior to the third portion of the duodenum (D3).

Multiple para-aortic lymphadenopathies were also observed, with the largest measuring 29×58 mm, adjacent to the right side of the infrarenal aorta.

An oval hyperdense soft-tissue lesion measuring 8×7.5 mm was noted in the mid pole of the left kidney, which is primarily suggestive of a complicated cyst. A contrast-enhanced CT scan is recommended for further evaluation.

A conglomerated and necrotic lymph node mass measuring approximately 49×85 mm was noted in the left upper quadrant (LUQ), anterior to the third portion of the duodenum and on its left side. Biopsy of the mesenteric lymph node is recommended.



Spiral CT scan of the abdomen and pelvis with and without intravenous contrast

Heterogeneity of the vertebral bodies and bilateral iliac bones was noted. .

The liver, spleen, and pancreas were normal in size and density.

The urinary bladder demonstrated smooth and regular walls.

PELVIC SONOGRAPHY

- Uterus measures **67 x 38 x 50 mm** with normal echo pattern; endometrial thickness 3 mm.
- Multiple **myomas**, the largest an intramural lesion measuring 14 mm on the posterior uterine wall (FIGO = 4).
- Right ovary 17 x 15 mm; left ovary 12 x 15 mm — **no adnexal mass identified**.
- Findings do not independently confirm an ovarian primary despite the markedly elevated CA-125.

Endoscopy/Colonoscopy Report



Reason for endoscopy : Malignancy workup

Premedication : Propofol

Description of procedure: The video endoscope was introduced Up to the 2nd part of the duodenum with the following findings

Esophagus: Crico-pharyngeus, Upper third and Middle third were normal , Medium-sized hiatal hernia - sliding was seen in lower third

Stomach : One linear clean base ulcer about 8mm was seen in cardia (retro-vision maneuver) , Mucosa of fundus and body were diffuse erythematous . Mucosa of antrum was patchy erythematous , Antral fold hypertrophy was seen

Duodenum : Bulb, D1 to D2 and 2nd part of the duodenum were normal

Diagnostic and therapeutic operations : Cold Biopsy by Forceps for Histology was performed in Body and Antrum

Final Diagnosis

Esophagus : Sliding Hiatal Hernia(Medium Size)

Stomach : Gastric Ulcer (Forrest III), Gastritis - Erythematous , Antral fold hyper trophy

Duodenum : Normal

Recommendation : Re-Endoscopy after 4 month , PPI and Follow up pathology



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ADVANCED PARACLINICS

Tumor Marker	Result	Reference Range	Flag
CA-125	589.7 U/mL	0–35	ELEVATED
CA 15-3	16.9 U/mL	0–25	Normal
CA 19-9	<2.0 U/mL	0–37	Normal
CEA	0.87 ng/mL	0–5	Normal

INTERPRETATION

CA-125 is markedly elevated, which can be seen in ovarian malignancy but also in pleural effusion and benign gynecologic conditions. CA 15-3, CA 19-9, and CEA are within normal limits, lowering suspicion for breast, pancreatic/GI, or colorectal primaries. Combined with pleural nodules and a mediastinal mass, these findings prompted multidisciplinary biopsy-based work-up.



PATHOLOGY

STEP 5:



Pathology Report

IHC Markers

CD5: Negative in medium to large lymphoid cell.

-CD23: Negative in medium to large lymphoid cells.

CD10: Positive in medium to large lymphoid cells.

BCL2: Positive in medium to large lymphoid cells.

-BCL6: Positive in medium to large lymphoid cells

-C-MYC: Positive in medium to large lymphoid cells.

-Ki67: Positive in upto 60% of large lymphoid cells



Pathology Report

- CD20:Positive in small to medium sized lymphocytes.
- CD3:Positive in background lymphocytes.
- BCL2:Positive in small in medium sized lymphocytes.
- CD10:Positive in small in medium sized lymphocytes.
- Bcl6:Positire in small in medium sized lymphocytes.
- Cyclin-D1:Negtive in small to medium sized lymphocytes.
- CD30:Negative in large suspicious cells.
- CD15:Negative in large suspicious cells.
- Ki67:Positive in 30% of small to medium sized lymphoid cells.



Pathology Report

- CDX2:Negative.
- WT1:Positive in mesothelial cells.
- CD3:Positive in some mature lymphocyte.
- CD20:Positive in some mature lymphocyte.



Pathology Report

GASTRIC BODY MUCOSA, BIOPSY:

- MILD CHRONIC INACTIVE GASTRITIS.
 - NEGATIVE FOR INTESTINAL METAPLASIA, ATROPHY OR DYSPLASIA.
 - NEGATIVE FOR H.PYLORI BACILLI.
- B: GASTRIC ANTRAL MUCOSA, BIOPSY:
- MILD CHRONIC INACTIVE GASTRITIS.
 - NEGATIVE FOR INTESTINAL METAPLASIA, ATROPHY OR DYSPLASIA.
 - NEGATIVE FOR H.PYLORI BACILLI.



Pathology Report

Smears composed of many mature looking lymphocytes, few isolated and clusters of bland looking mesothelial cells rare PMN leukocytes set in proteinaceous background.

Smears show scattered bland looking mesothelial cells and mature small lymphocytes. H&E section of the presented tissue shows mesothelial lined mucosa moderately infiltrated by aggregates of lymphoid cells which on IHC shows polyclonal population of cells. Foci of anthracosis are also identified.



Bone Marrow Aspiration:

-INVOLVED BY HIGH GRADE B-CELL
LYMPHOMA, NOS.

-FOR EXCLUDING DOUBLE OR TRIPLE HIT
LYMPHOMA GENE REARRANGMENT STUDY
FOR C-MYC,BCL2 AND BCL6 IS
RECOMMENDED.

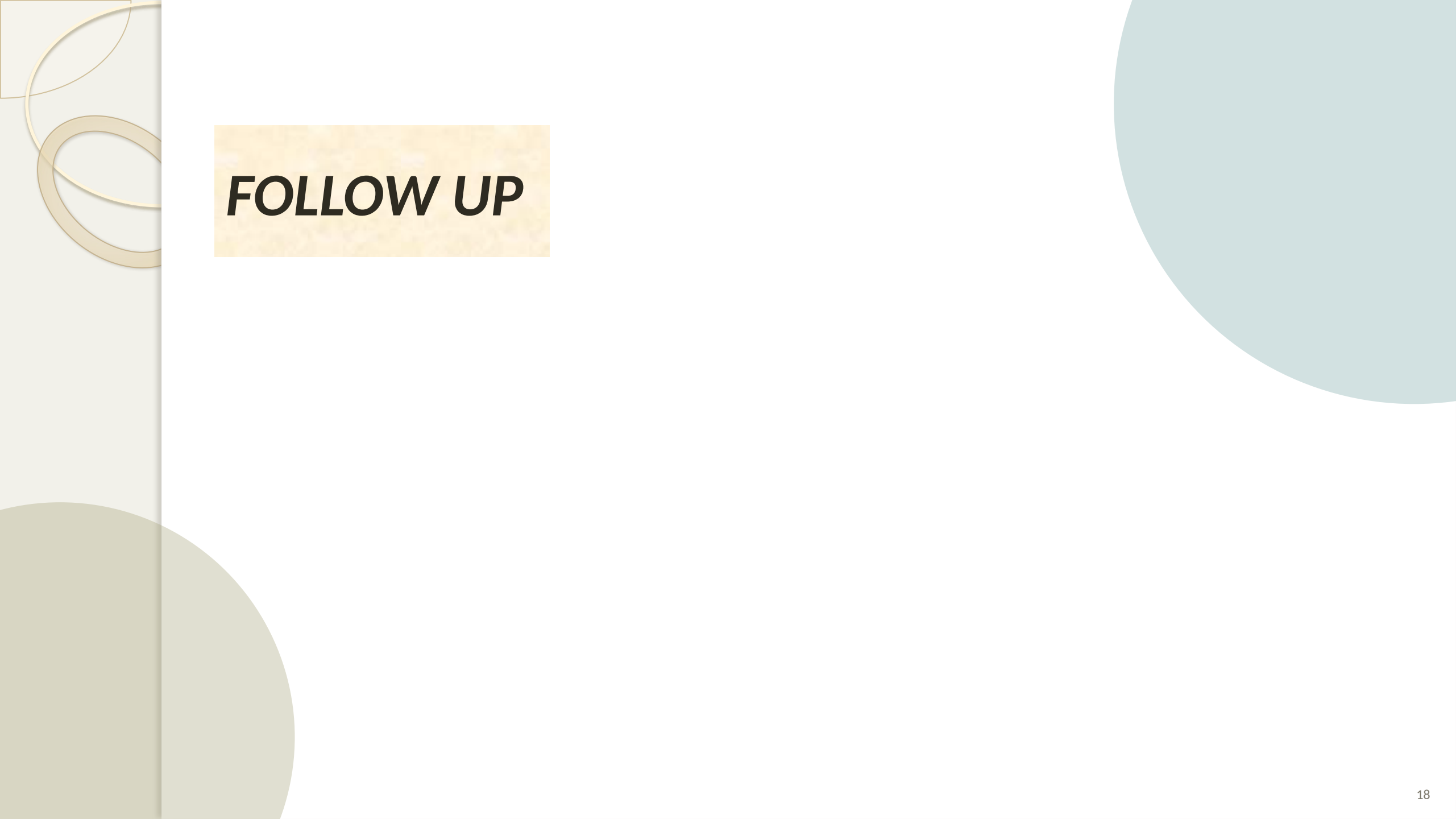
PMN:84% Lymph:10% Myelocyte:4%
Monocyte:2%



FINAL DIAGNOSIS:

High Grade Follicular
Lymphoma





FOLLOW UP

FOLLOW UP

- The patient was followed up and started on chemotherapy with the R-CHOP regimen. He tolerated the chemotherapy well and experienced no significant complications. A few days after chemotherapy, his general condition became stable. Three weeks after the first cycle of chemotherapy, the pleural effusion had completely resolved.



CURRENT STATUS

- **Chest pain and dyspnea:** Improved with chest-tube drainage and anticoagulation
- **Pleural effusion:** Decreased , chest tube removed prior to discharge
- **Hemodynamic status:** Stable throughout admission
- **Overall condition:** Stable, good general condition at discharge

THANK YOU FOR YOUR KIND ATTENTION

