



SOLUNUM BULUŞMALARI  
İZMİR

23-24 Eylül 2023  
Mövenpick Hotel, İzmir

# Klinik Radyolojik Olgular

Dr. Ceyda Anar

İzmir Katip Çelebi Üniversitesi Atatürk Eğitim ve Araştırma  
Hastanesi;

Göğüs Hastalıkları Anabilim Dalı

# Olgu

- 48 yaşında bayan hasta
- 10 gün önce başlayan halsizlik, eklem ağrıları ve ateş yakınması ile acil servise başvurmuş
- Acilde covid PCR testi negatif gelen hastaya Klatromisin ve parol reçete edilip gönderilmiş.
- Şuanda halsizlik devam ediyor ve nefes darlığı da başlamış.

# Özgeçmiş

- Ek hastalık yok
- Sigara yok
- Kullandığı ilaç yok
- Hobi yok
- Meslek : ev hanımı

# Soygeçmiş

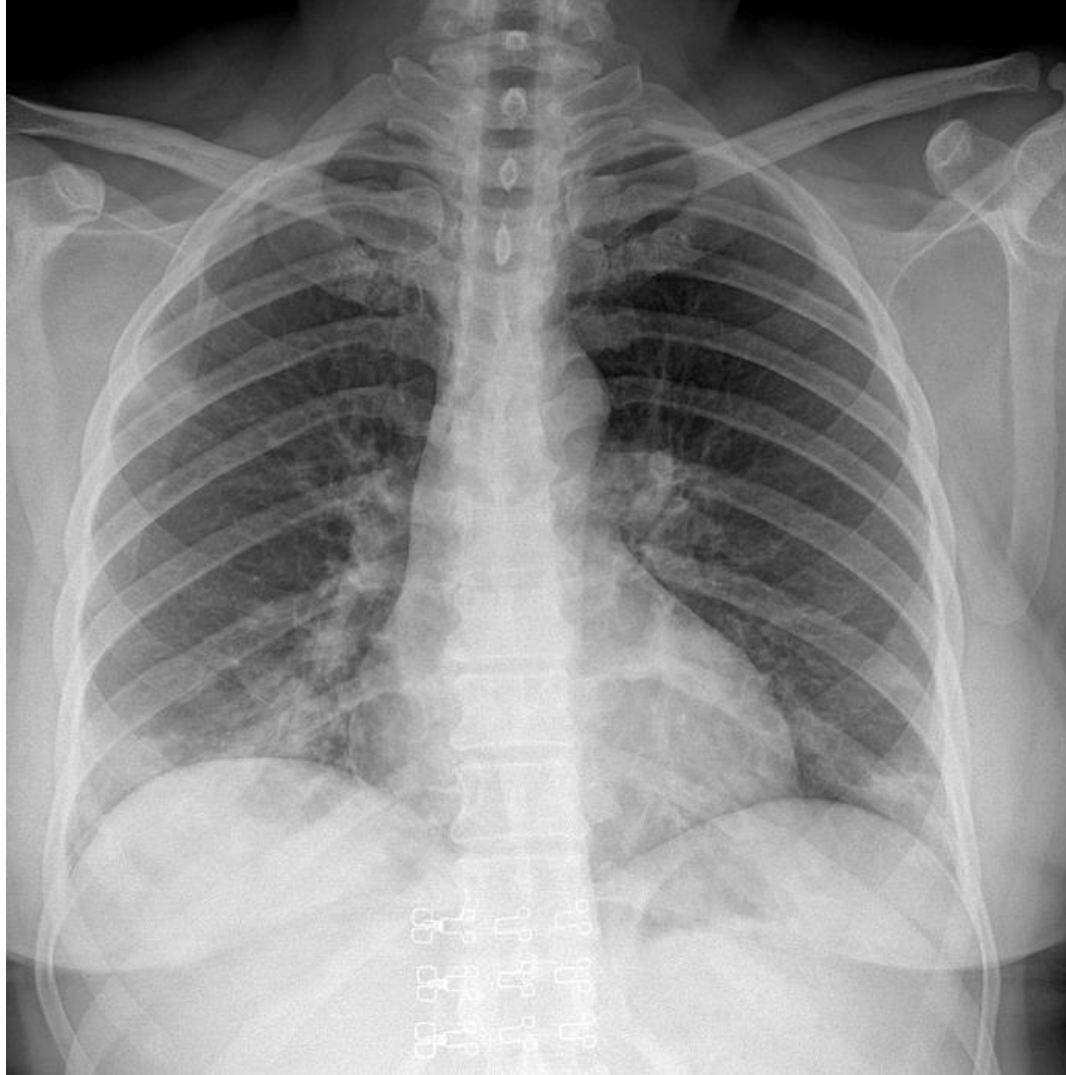
- Özellik yok

# Laboratuvar Bulguları

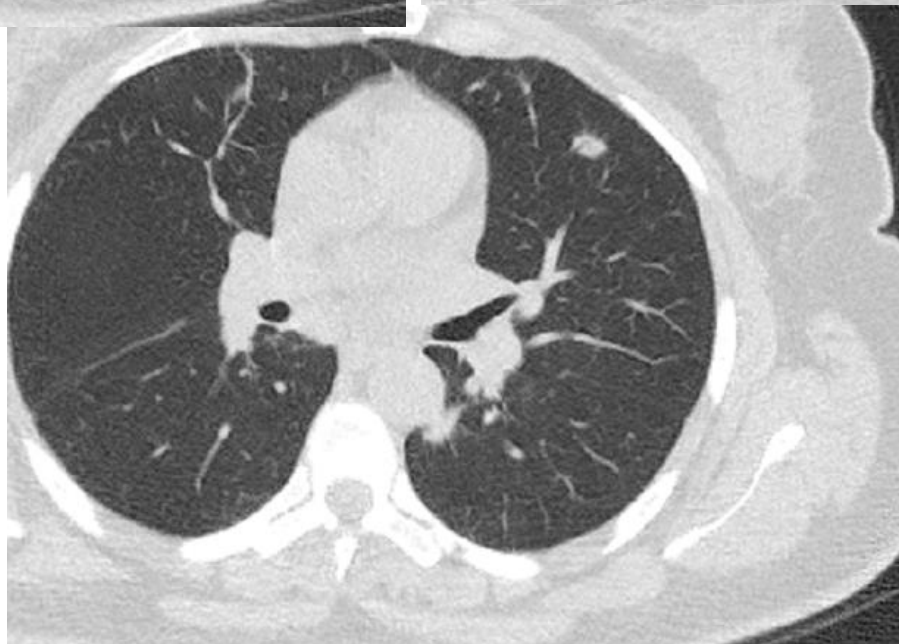
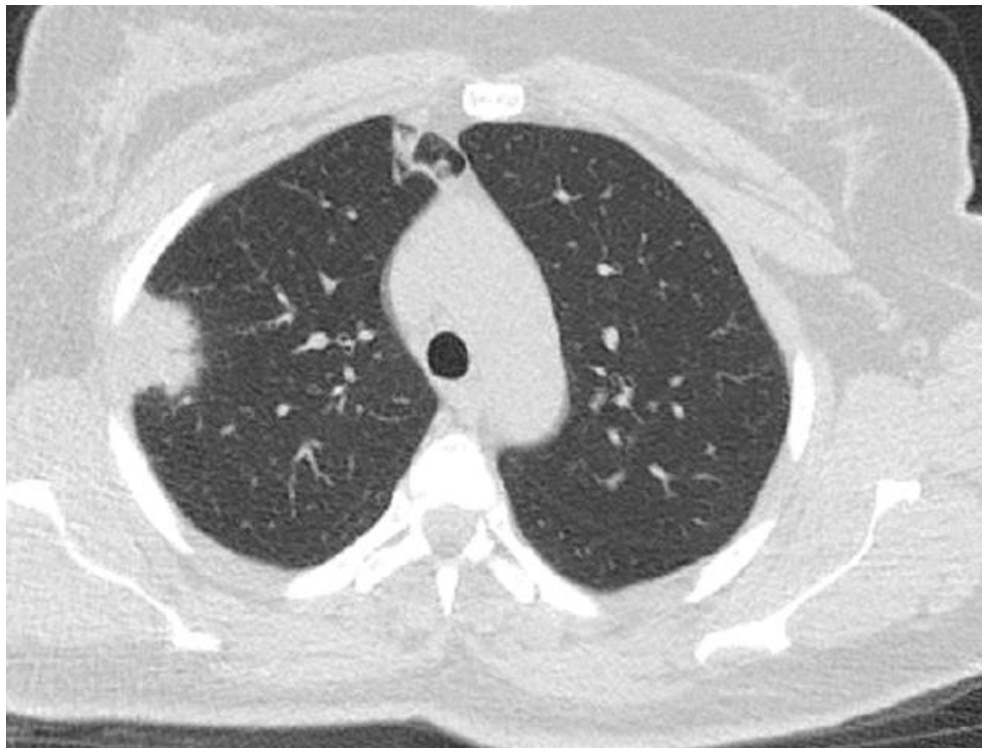
- WBC: 8930
- Hemoglobin: 9.7
- Lenfosit:1940
- Nötrofil:6210
- Trombosit:510000
- **CRP:135**
- Prokalsitonin: 0.003
- Glukoz:90
- Üre:8
- Kreatin:0.79
- Sodyum: 136
- POTASYUM: 4.2
- AST:13
- ALT:12
- D –DİMER:680

# Kan gazi

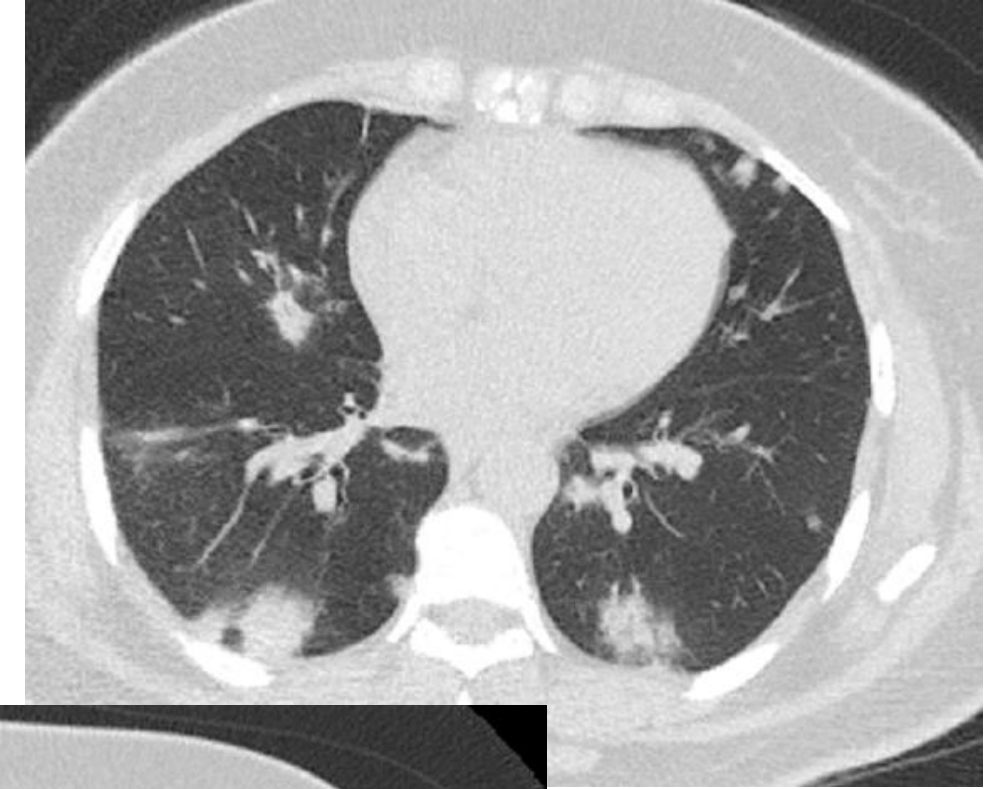
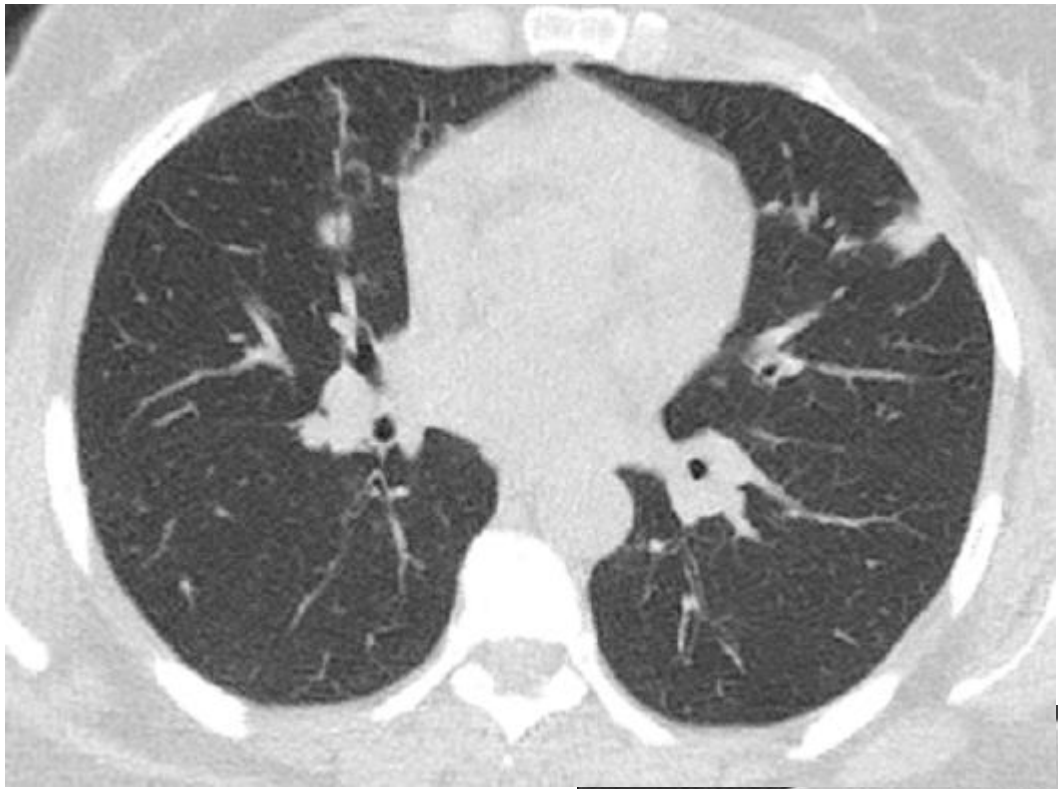
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- Po<sub>2</sub>: 75 mmhg
- Pco<sub>2</sub>: 45 mmhg
- Sat : %94

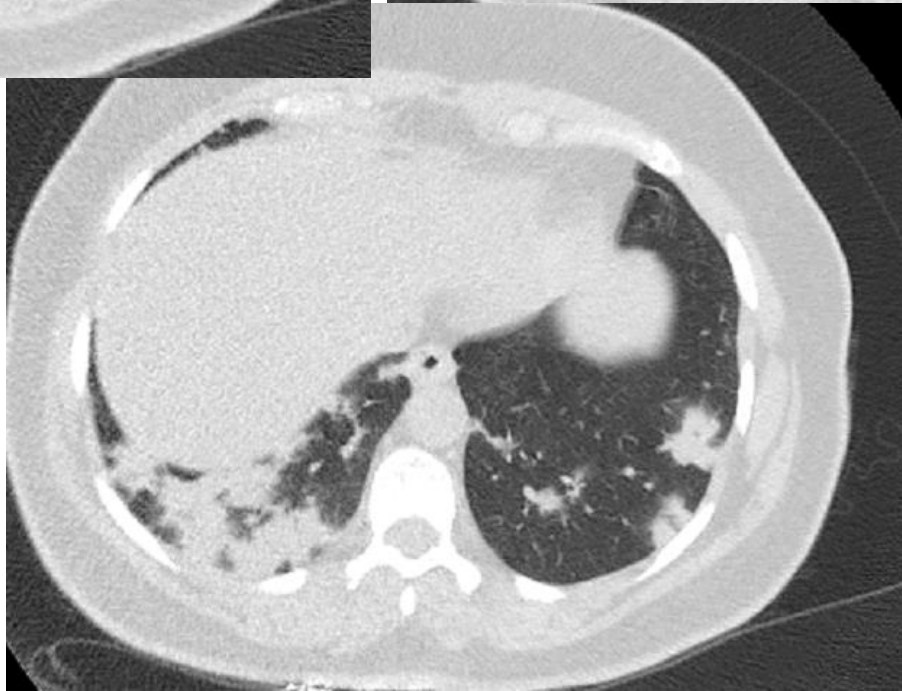
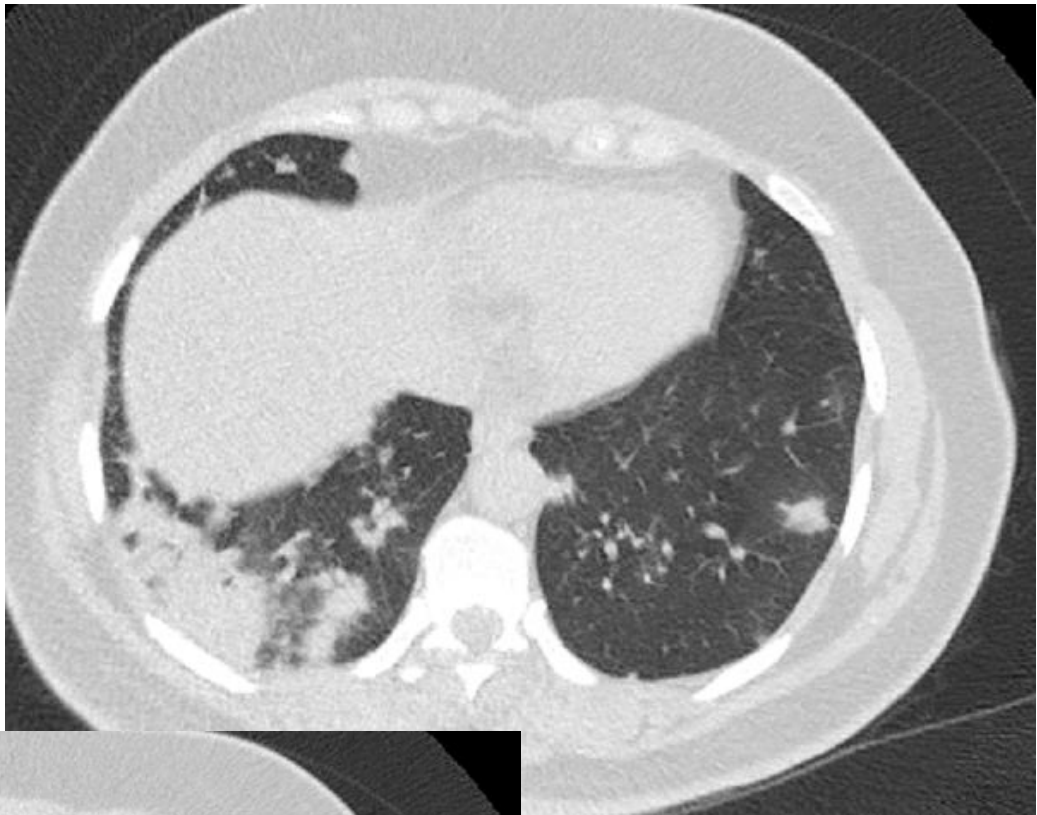
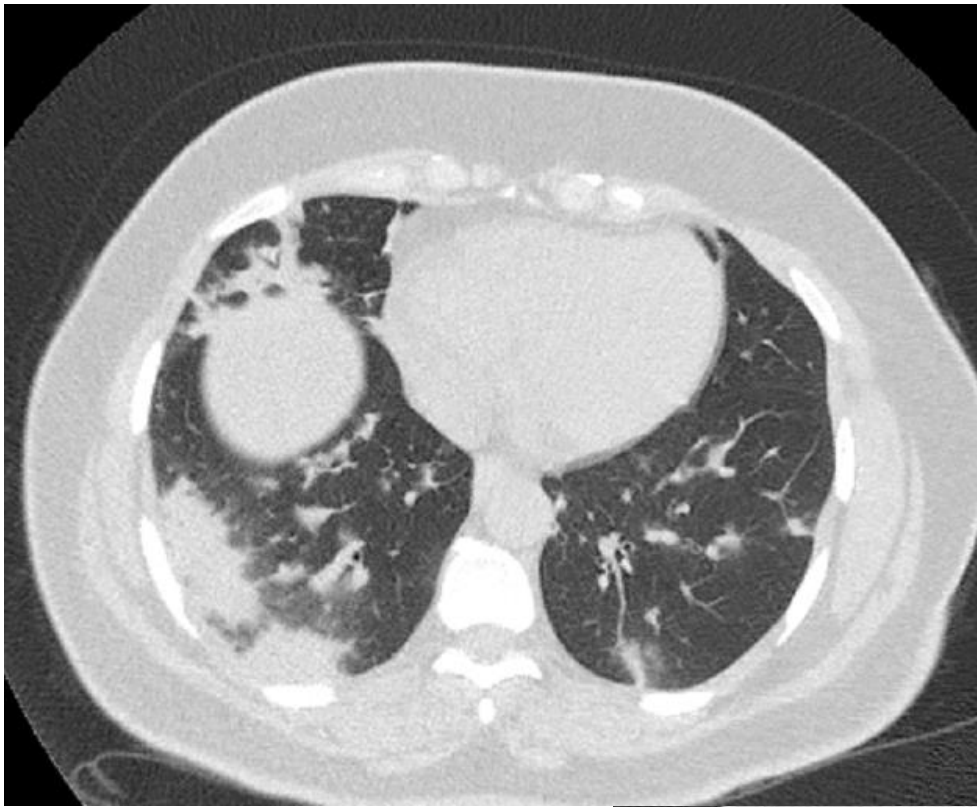


Klatromisin tedavi sonrası PA akciğer grafisi  
10/09/2022









# Radyolojik Bulgularla Ön Tanınız Nedir ?

- Bilateral pnömoni
- Covid 19 sonrası gelişen lezyonlar
- Organize pnömoni
- Romatolojik Hastalığın Akciğer Tutulumu
- Akciğer Adenokarsinom
- İlaç Akciğeri

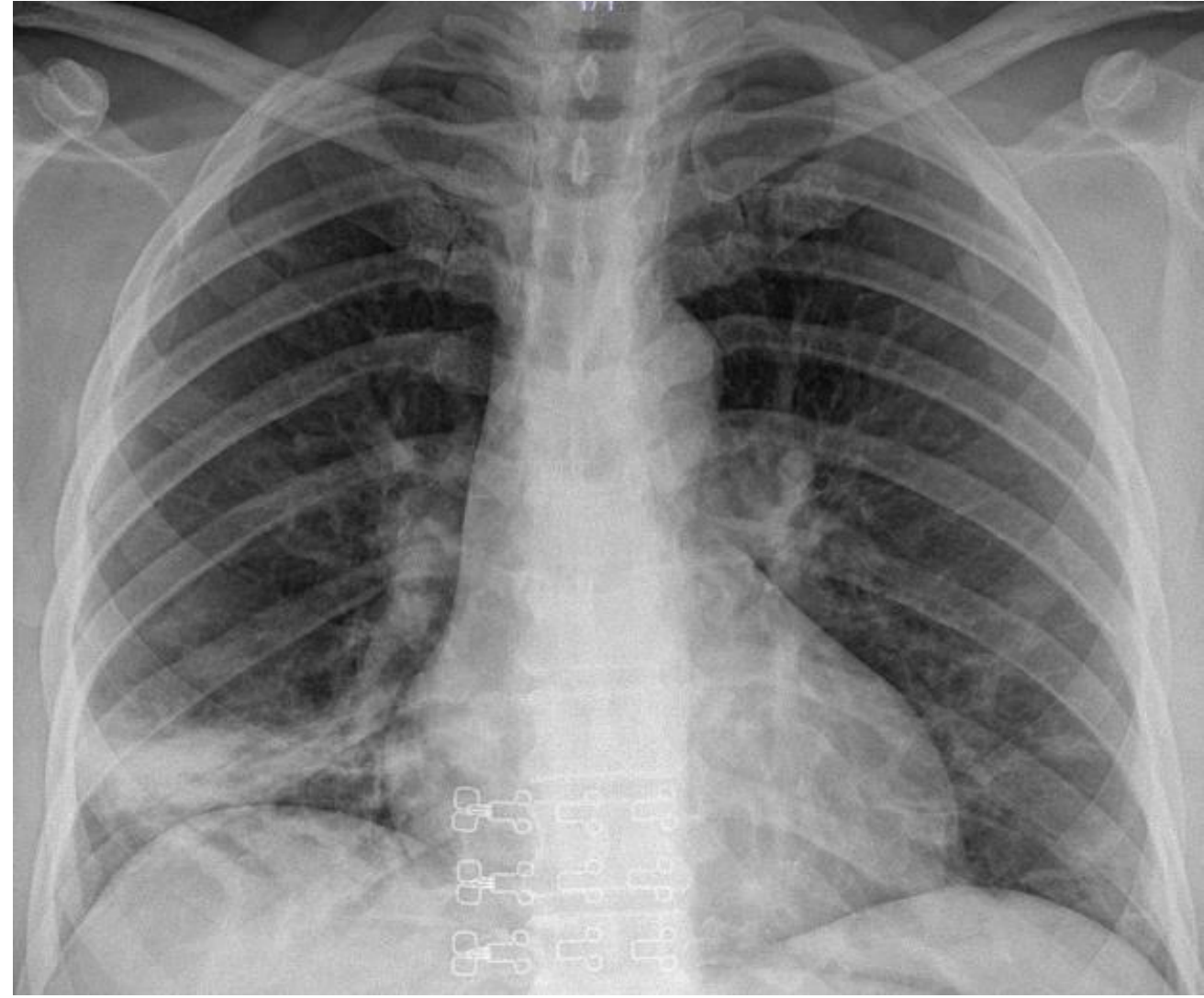
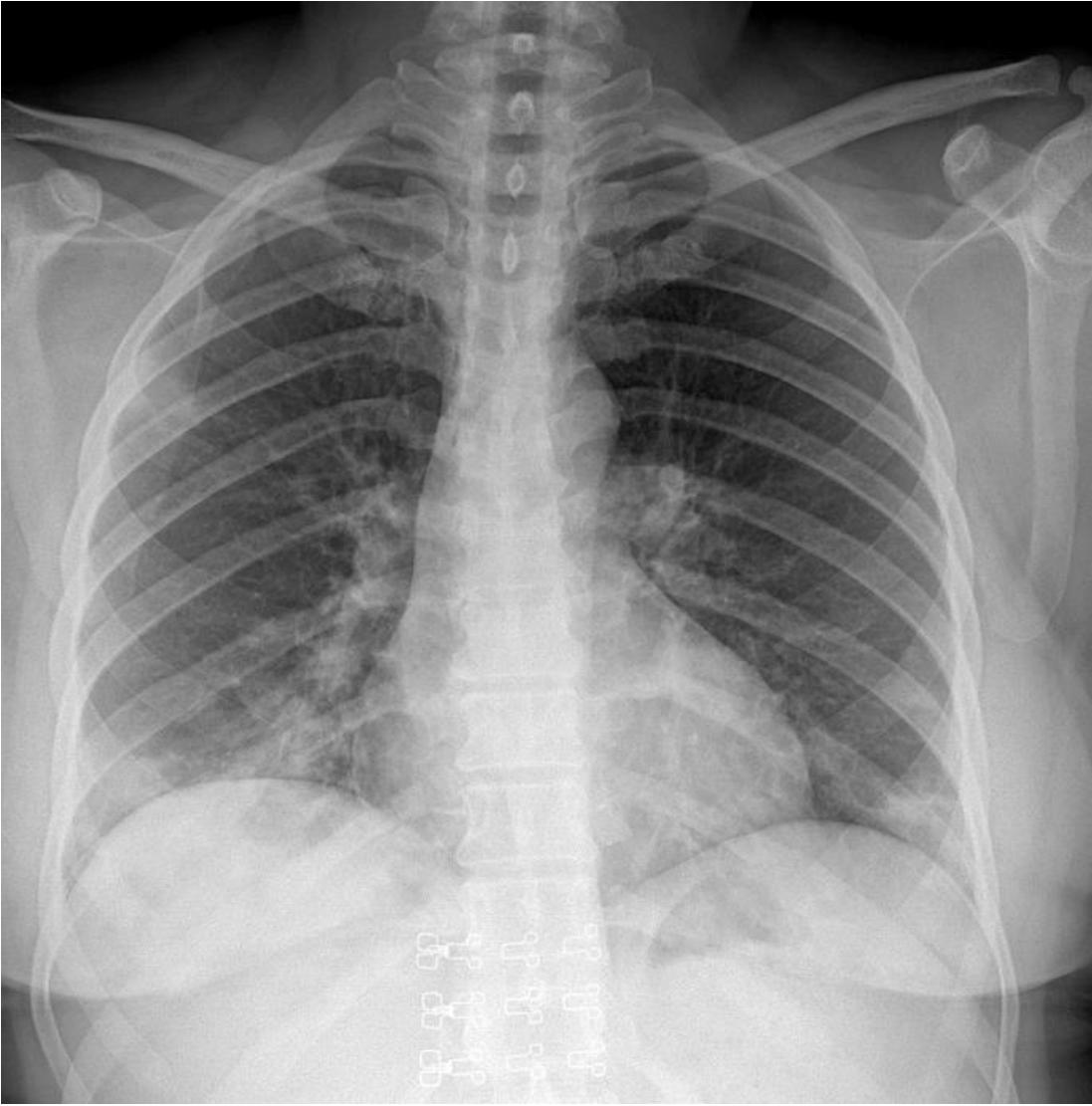
# Laboratuvar Bulguları

- ANA: 1/100 dilüsyonda (-)
- Anti ds-DNA: Negatif
- RF: Negatif
- CCP: Negatif

**Romatoloji konsültasyonu:  
romatolojik hastalık  
düşünülmedi**

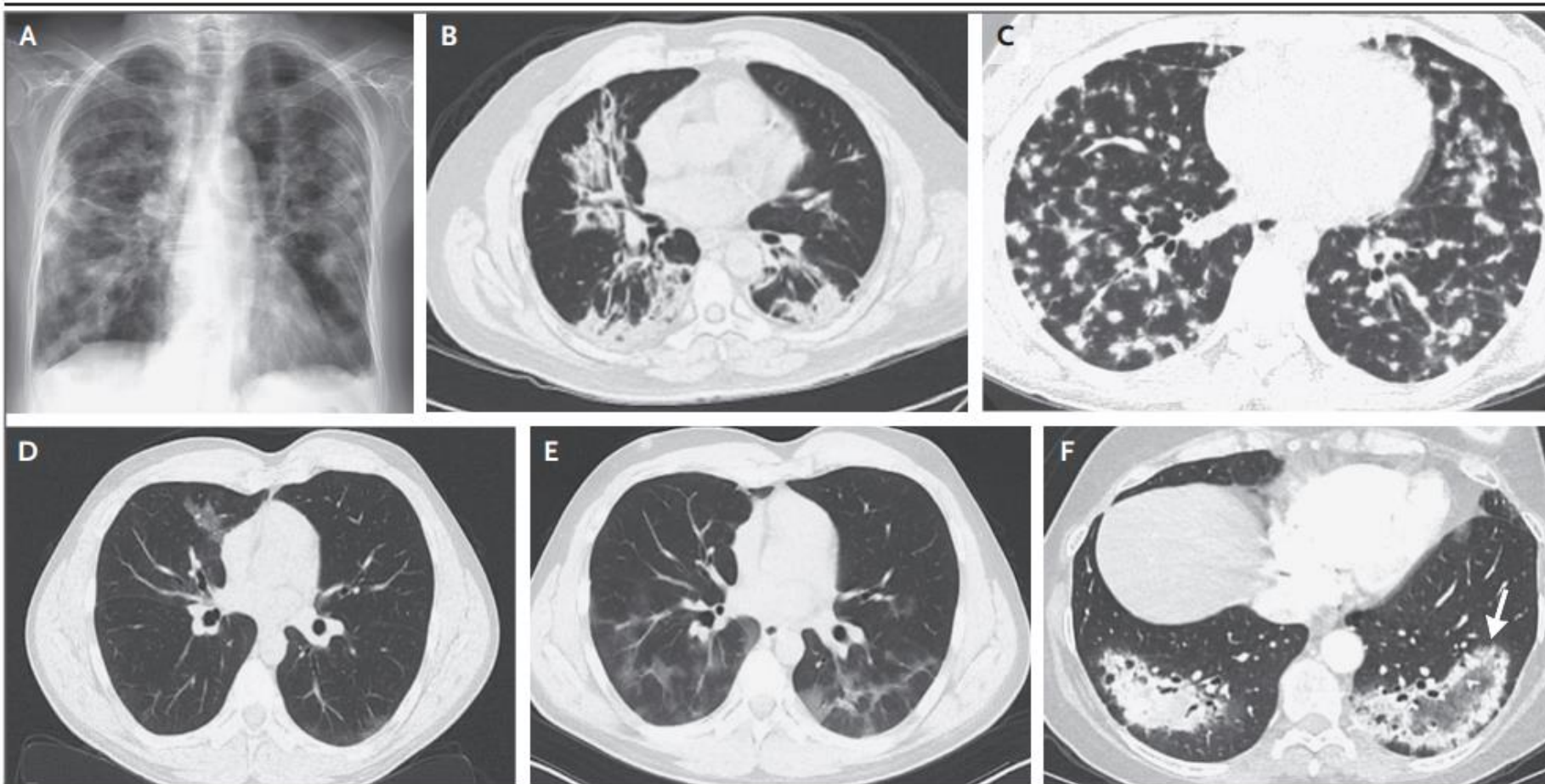
# Laboratuvar bulguları (Antibiyotik sonrası )

- WBC: 8930
- Hemoglobin: 10.2
- Lenfosit:2900
- Nötrofil:5130
- Trombosit:510000
- **CRP:26**



15 gün sonra kontrol

Radyolojik Bulgularla Organize Pnömoni Düşünür Müsünüz ?



**Figure 2. Chest Radiograph and High-Resolution CT Images Showing Various Cryptogenic Organizing Pneumonia (COP) Patterns.**

The posteroanterior radiograph of the chest in Panel A shows bilateral, diffuse, consolidative opacities in the presence of normal lung volumes. The high-resolution CT (HRCT) scan of the chest in Panel B shows peripheral and multifocal consolidation in the middle and lower lobes. The HRCT scan in Panel C shows diffuse peripheral nodules. The HRCT scans in Panels D and E show migratory opacities: a patchy, ground-glass opacity in the right upper lobe (Panel D) and new areas of patchy, ground-glass opacities in the same patient 1 month later (Panel E). The HRCT scan in Panel F shows the reversed halo, or atoll, sign, characterized by a rim of consolidation with more central clearing or ground-glass opacities (arrow).



**TABLE 2 ] An Organizational Approach to OP Imaging Findings With Main Chest Radiography and CT Scanning Differential Diagnoses<sup>33-36</sup>**

Imaging Finding	Differential Diagnosis
<b>Predominant consolidation</b>	
Peripheral	Chronic eosinophilic pneumonia, infection (eg, COVID-19), hemorrhage, infarction, vasculitis, aspiration, postradiation pneumonitis, drug toxicity, electronic cigarettes (EVALI), adenocarcinoma, primary pulmonary lymphoma
Peribronchovascular	Solitary vs multicentric adenocarcinoma, primary pulmonary lymphoma, sarcoidosis, vasculitis, CVD (especially polymyositis or dermatomyositis), Kaposi sarcoma, chronic eosinophilic pneumonia, granulomatosis with polyangiitis
Ground-glass attenuation, crazy paving	Acute: infection, hemorrhage, edema, drug toxicity Chronic: Pulmonary alveolar proteinosis, infection, exogenous lipid pneumonia, drug toxicity (eg, nitrofurantoin), mucinous adenocarcinoma
<b>Predominant nodular pattern</b>	
Solitary	Bronchogenic carcinoma, infection (granuloma), metastatic disease
Multiple	Metastatic disease, multicentric adenocarcinoma, sarcoidosis, invasive fungal disease
<b>Predominant linear or reticular pattern</b>	
Subpleural, basilar reticulation with or without traction bronchiectasis	NSIP, UIP or IPF
Bands	Asbestosis, scars or sequelae of ARDS, infection (eg, paracoccidioidomycosis), atelectasis
Perilobular thickening	UIP or IPF, hemorrhage, atypical pneumonia, chronic eosinophilic pneumonia, lymphoproliferative disorders
Reverse halo	Granulomatosis with polyangiitis, sarcoidosis, lipid pneumonia, adenocarcinoma in situ, infection (COVID-19, invasive fungal disease), infarction, radiation pneumonitis, drug toxicity

CVD = collagen vascular disease; EVALI = e-cigarette or vaping product use-associated lung injury; IPF = idiopathic pulmonary fibrosis; NSIP = nonspecific interstitial pneumonia; OP = organizing pneumonia; UIP = usual interstitial pneumonia.

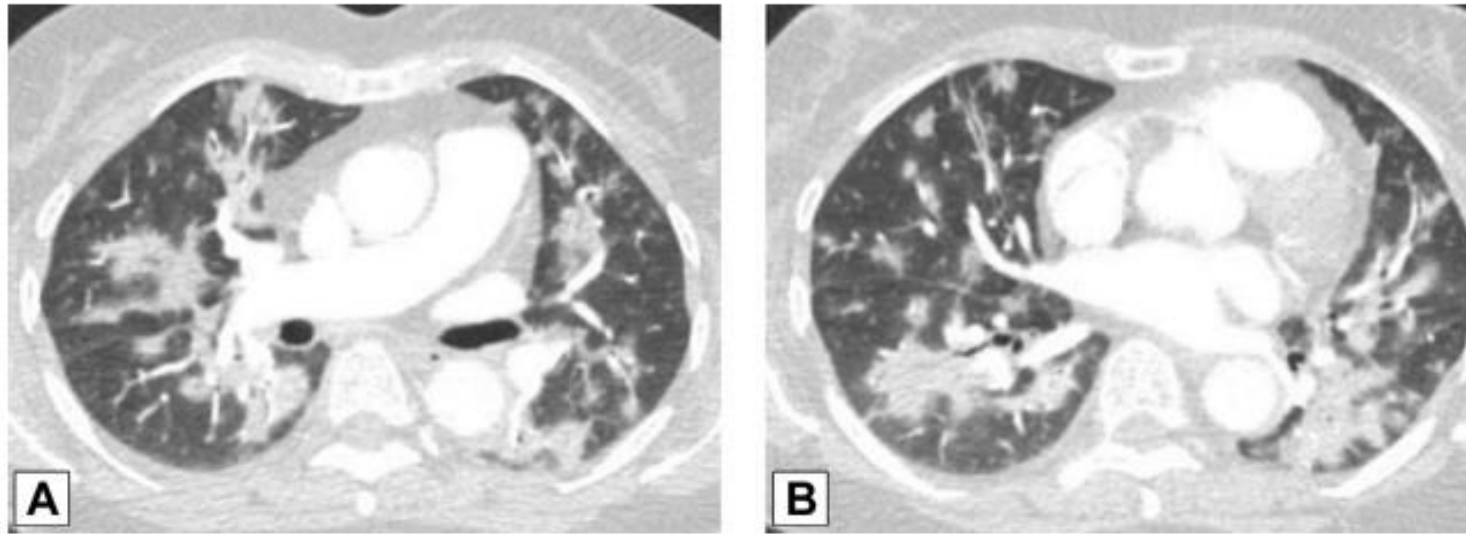


Figure 3 – A, B, *Peribronchovascular consolidation. Axial contrast-enhanced CT scan images through the middle (A) and lower (B) lung zones show multifocal, bilateral foci of peribronchovascular consolidation in a patient with biopsy-proved organizing pneumonia.*

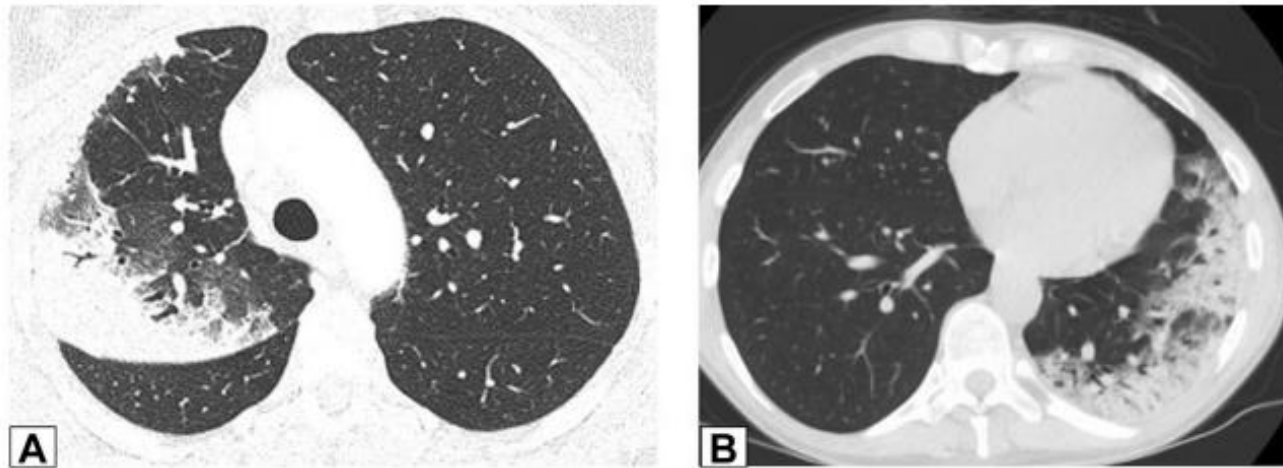


Figure 2 – A, B, *Peripheral consolidation. Axial unenhanced CT scan images obtained in two patients. A, This image shows peripheral consolidation in the right upper lobe in a woman previously treated with radiation for breast cancer and biopsy-proved organizing pneumonia (OP). B, This image shows peripheral consolidation in the left lower lobe and lingula and biopsy-proved OP secondary to chemotherapy for treatment of lymphoma.*

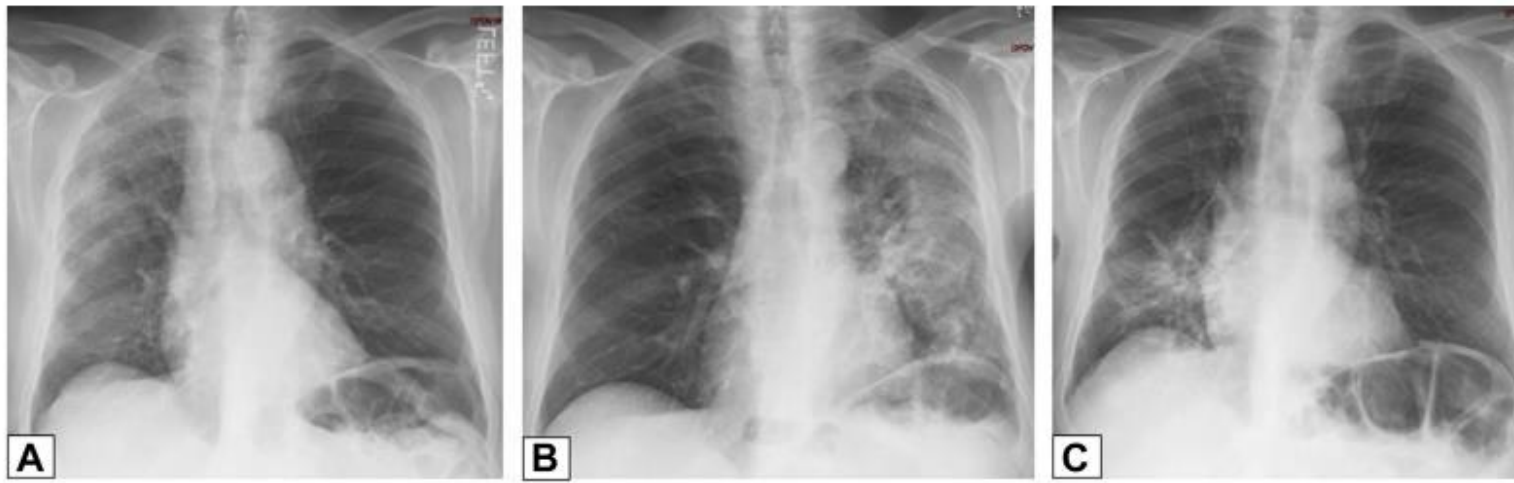


Figure 4 – A-C, Migratory manifestation of organizing pneumonia (OP). A, Posteroanterior chest radiograph in a 71-year-old man presenting with dyspnea on exertion in July 2011 shows peripheral right upper lobe (RUL) consolidation. B, Repeat study from June 2012 shows that the RUL abnormality had resolved and that there is now extensive consolidation in the left lung. C, In June 2013, the left lung is now clear, but there is now new right lower lobe consolidation. These findings are typical of a migratory manifestation of OP.

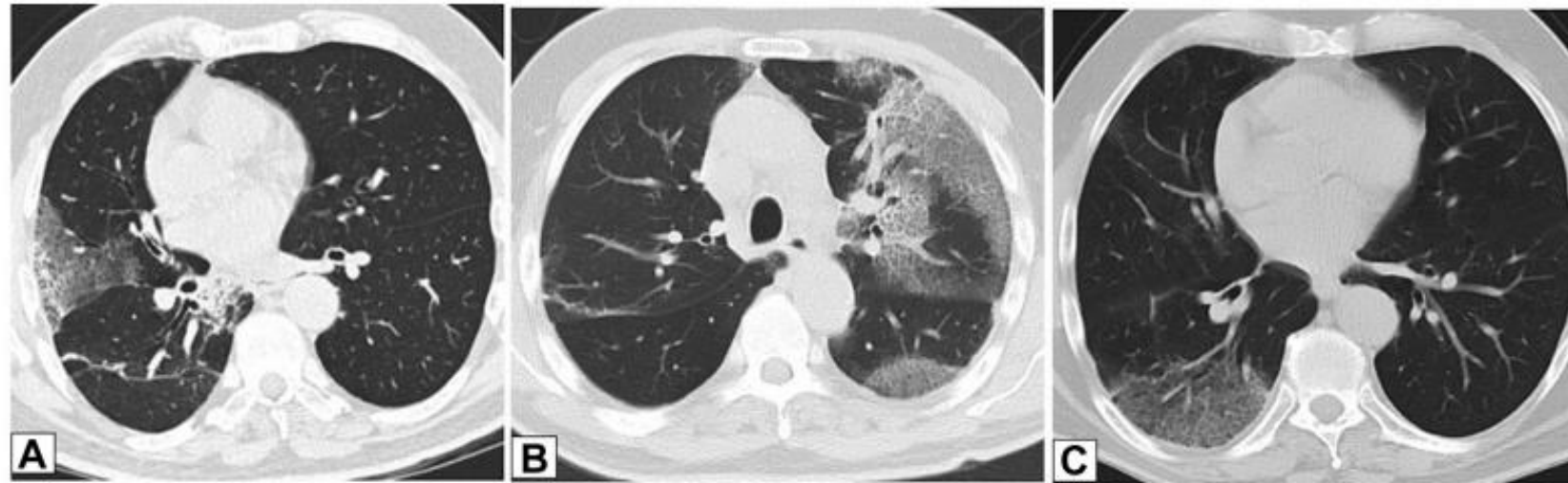


Figure 5 – A-C, Migratory manifestation of organizing pneumonia (OP). Axial unenhanced CT scans were obtained in a 71-year-old man with dyspnea on exertion, the same patient as in [Figure 4](#). The CT scanning sections, which correspond with [Figures 4A](#), [4B](#), and [4C](#), respectively, show that foci of consolidation on the chest radiographs in this case are due to migratory foci of ground-glass opacification with interlobular septal thickening and intralobular lines (crazy paving). Surgical lung biopsy results were consistent with OP.

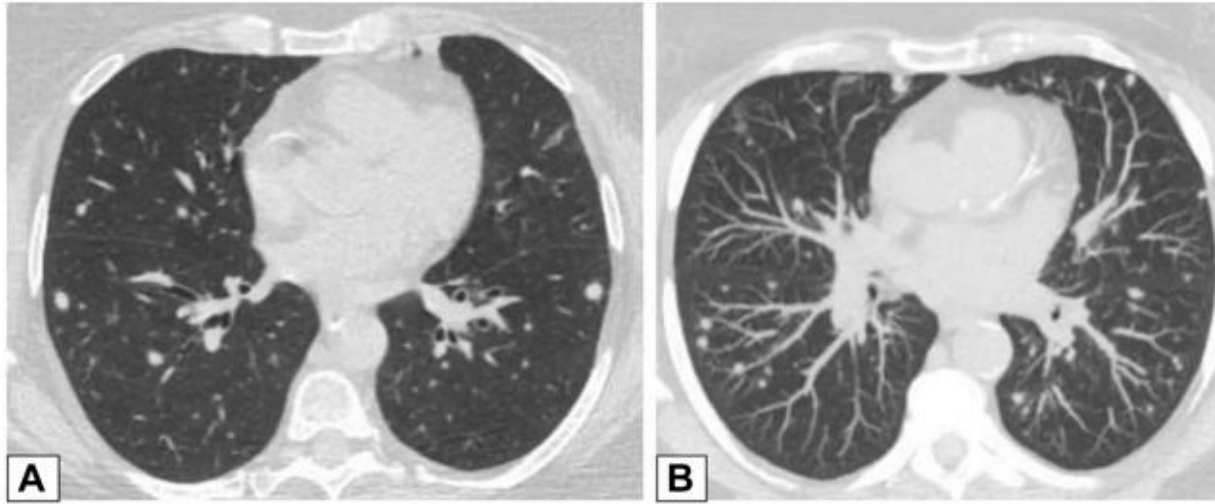


Figure 9 – A, B, Small micronodules. Axial high-resolution CT scanning section (A) and maximum intensity projection image (B) in the same patient. CT scan images demonstrate multiple small, solid lung nodules bilaterally that are suggestive of possible malignancy or infection. CT scanning-guided core biopsy results were consistent with a diagnosis of organizing pneumonia.

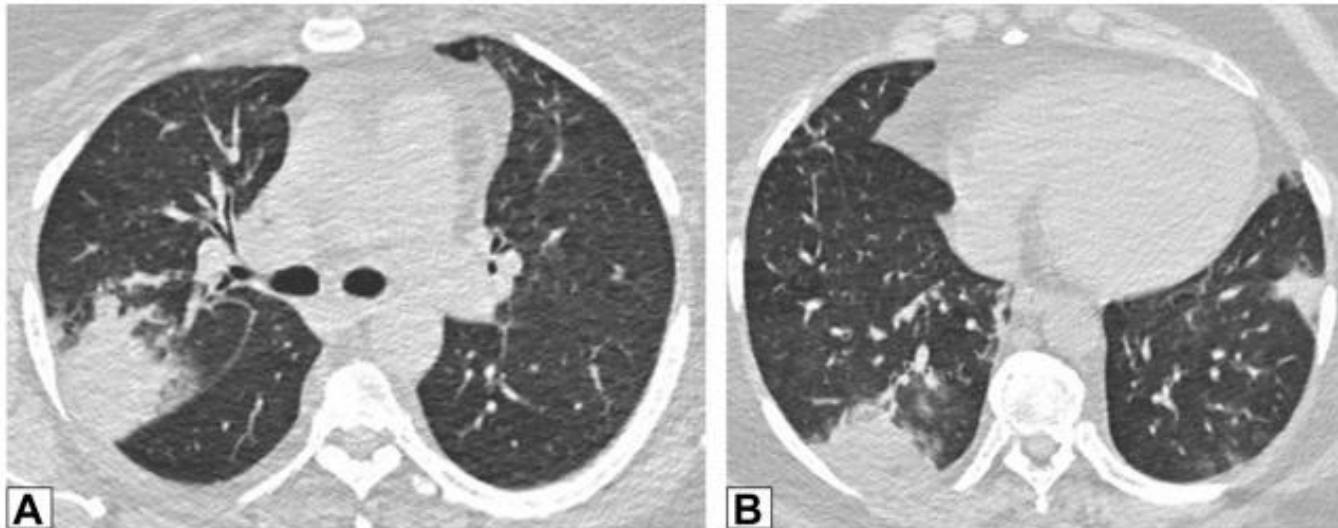


Figure 10 – A, B, Masses. Axial unenhanced CT scan images through the right upper lobe (A) and right lower lobe (B) in a 42-year-old patient who was morbidly obese and had dyspnea show bilateral, subpleural or peripheral mass-like areas of consolidation. The findings are nonspecific; subsequent biopsy results documented organizing pneumonia, and findings resolved after treatment with steroids.

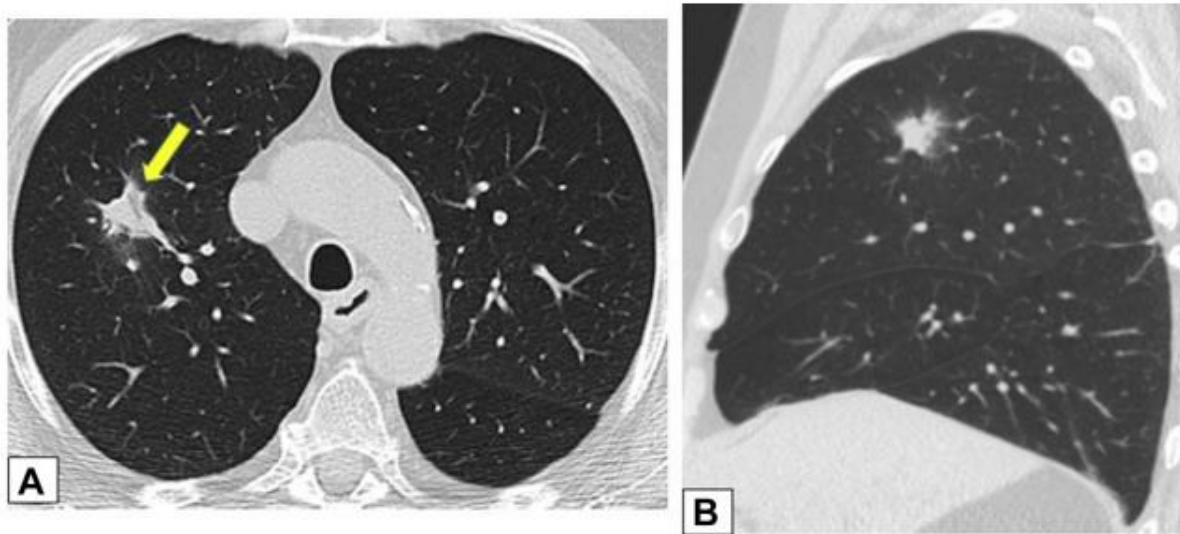


Figure 12 – A, B, Solitary nodules. Axial (A) and sagittal (B) unenhanced images from low-dose CT scanning lung cancer screening in a 73-year-old male smoker show a solitary, irregular right upper lobe nodular opacity associated with subtle dilated airways (arrow in A). Endobronchial ultrasound-guided fine-needle biopsy results were consistent with focal organizing pneumonia. The opacity resolved without treatment on a follow-up scan (not shown).

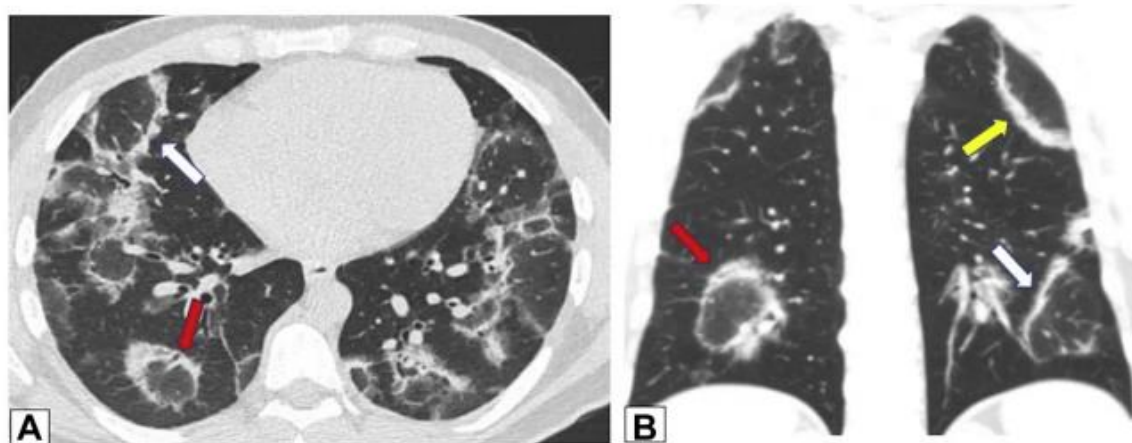


Figure 16 – A, B, Reverse halo or atoll sign. CT scan images obtained in a 32-year-old man with chronic persistent cough and dyspnea on exertion for 1 year and 20-pound weight loss. Axial (A) and coronal (B) images show bilateral foci of central ground-glass opacification completely surrounded by dense peripheral consolidation—the reverse halo or atoll sign (red arrows in A and B). Also present are foci of incomplete halo signs (white arrows in A and B) and peribronchovascular thickening (yellow arrow in B). Overlap of these findings is clearly present. Lung biopsy results documented organizing pneumonia.

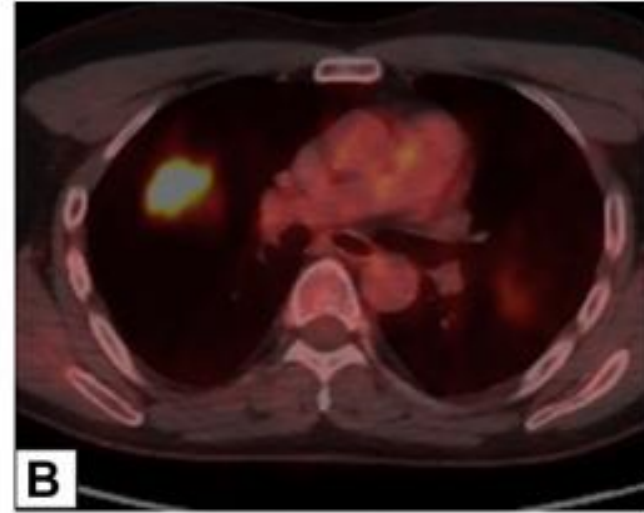


Figure 7 – A-C, Ground-glass opacification (GGO). A, Axial unenhanced CT scan image in a 47-year-old man with a history of papillary thyroid cancer, 4 months after treatment with iodine-131, shows right upper lobe peribronchovascular GGO. The GGO is hypermetabolic on a fluorine-18 fluorodeoxyglucose-PET/CT scan (B), with less intense activity also noted in a new smaller area of GGO in the left upper lobe in an axial unenhanced CT scan image (C). Transbronchial biopsy results were consistent with organizing pneumonia.

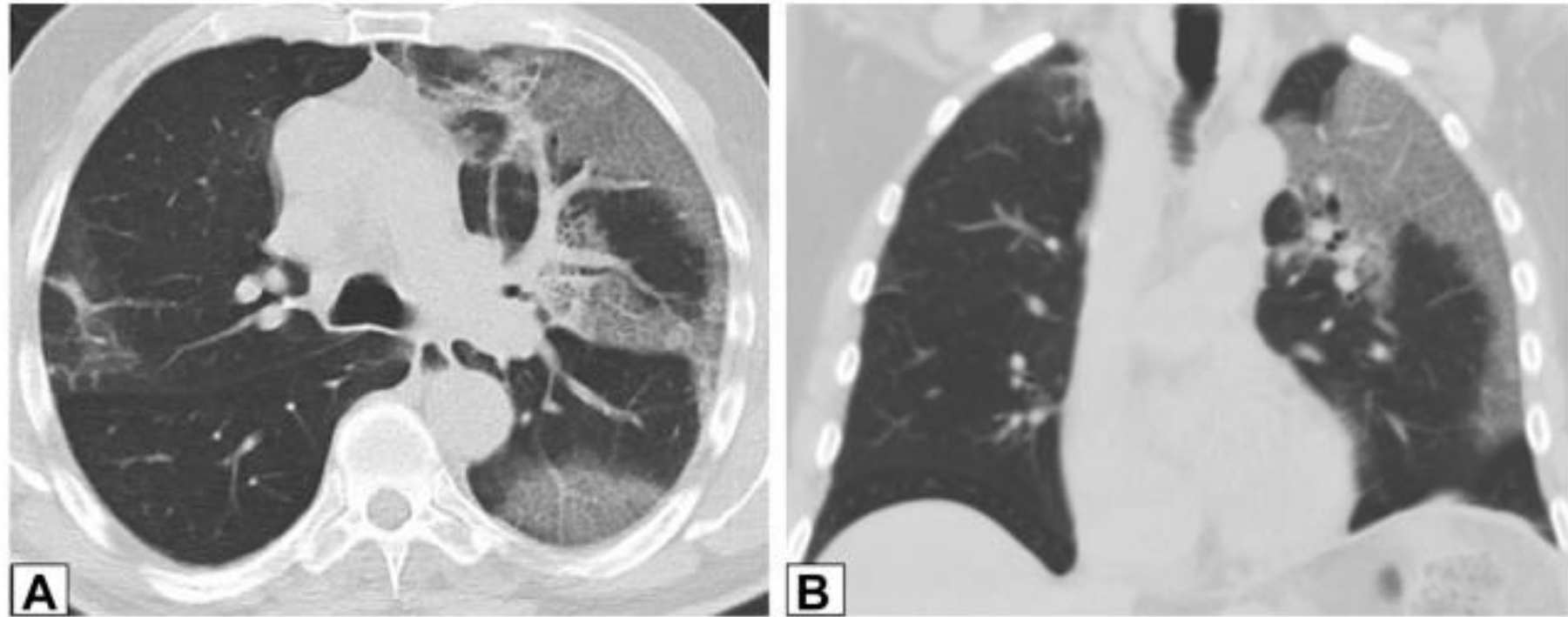


Figure 8 – A, B, Crazy-paving pattern. Axial (A) and coronal (B) unenhanced CT scan images in a 71-year-old man who had secondary organizing pneumonia due to amiodarone use. There is extensive ground-glass opacification in the left lung with superimposed interlobular septal thickening and intralobular lines (crazy paving).

## Biz Ne Yaptık ?

- Hastanın klinik bulguları ve radyolojik bulguları göz önüne alınarak enfeksiyon ardından gelişen organize pnömoni düşünülerek hastaya steroid tedavisi başlandı. (0.5 mg/kg dozunda prednizolon).



Table I. Cases of COVID-19-associated organizing pneumonia identified in the literature.

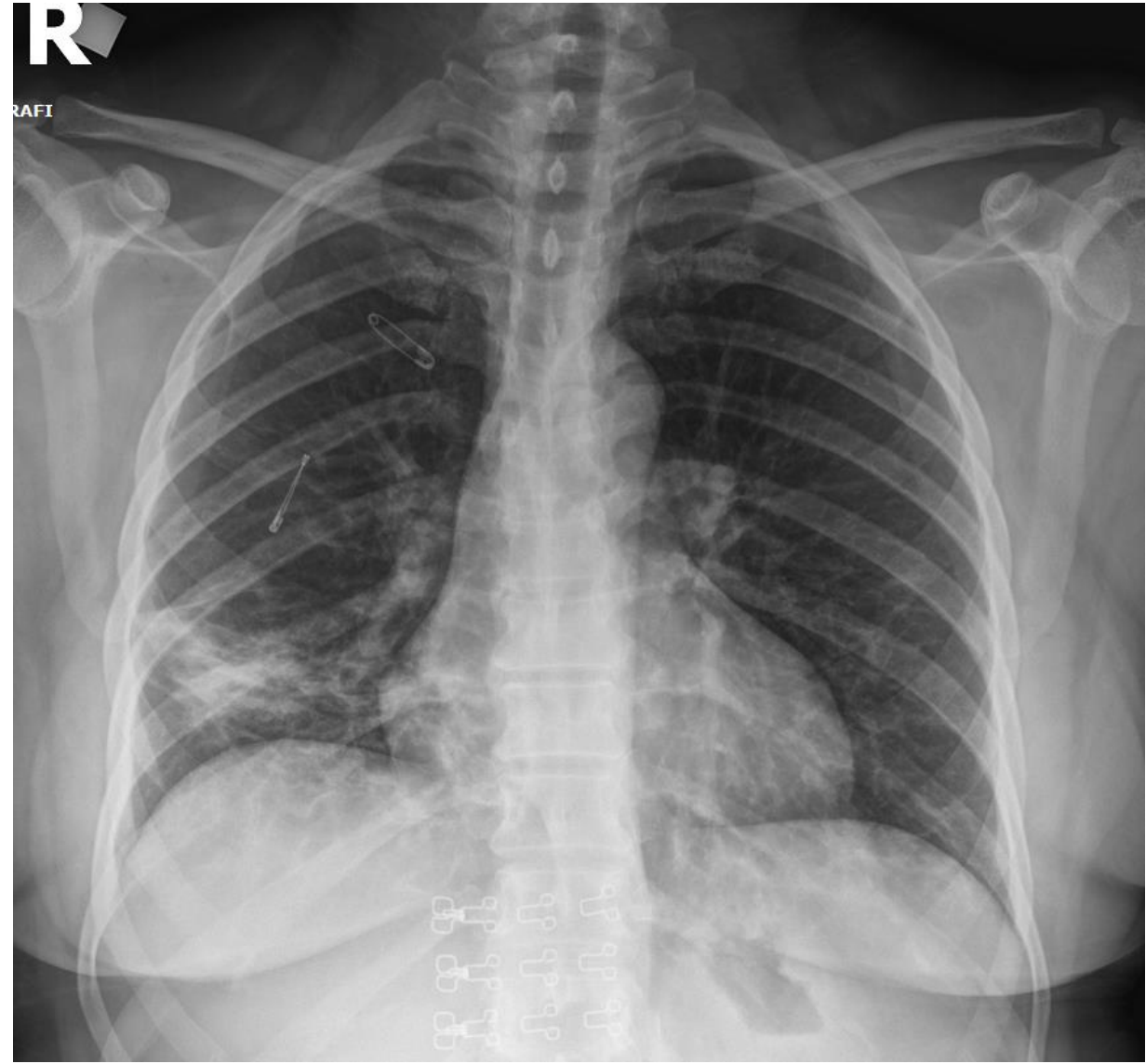
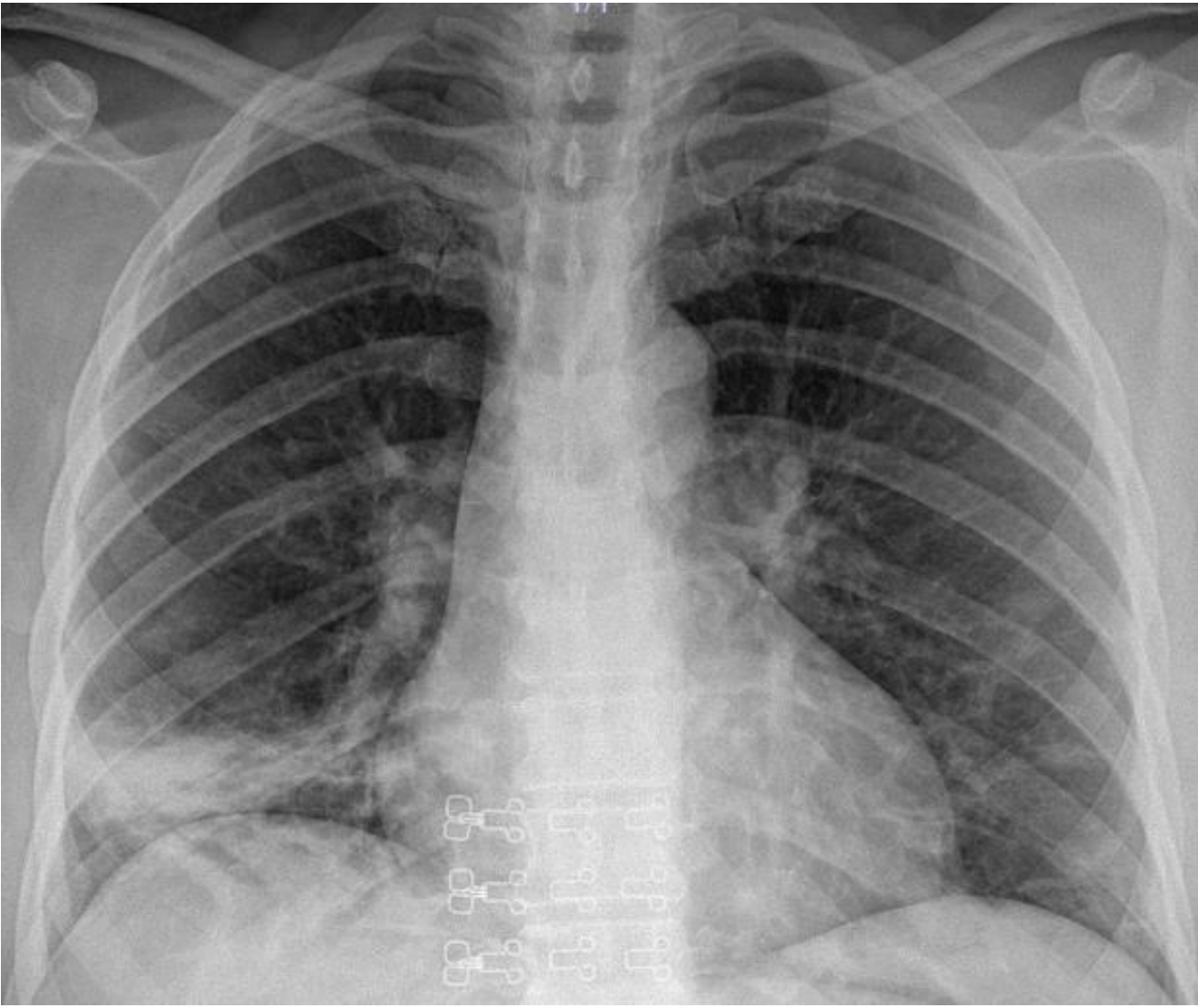
Case no.	Author/(Refs.)	Age (years)/sex	Diagnosis	Management	Outcome
1	Alsulami <i>et al</i> (13)	71/M	Radiological	Corticosteroids	Recovery
2	Alsulami <i>et al</i> (13)	54/M	Radiological	Corticosteroids	Recovery
3	Alsulami <i>et al</i> (13)	57/M	Radiological	Corticosteroids	Recovery
4	Alsulami <i>et al</i> (13)	49/M	Radiological	Corticosteroids	Recovery
5	Alsulami <i>et al</i> (13)	56/F	Radiological	Corticosteroids	Recovery
6	Alsulami <i>et al</i> (13)	83/F	Radiological	Corticosteroids	Recovery
7	Ng <i>et al</i> (14)	58/F	Radiological	Corticosteroids	Recovery
8	de Oliveira Filho <i>et al</i> (15)	52/M	Radiological	Corticosteroids	Recovery
9	de Oliveira Filho <i>et al</i> (15)	60/F	Radiological	Corticosteroids	Recovery
10	de Oliveira Filho <i>et al</i> (15)	63/F	Radiological	Corticosteroids	Recovery
11	Horii <i>et al</i> (16)	70/F	Radiological	Corticosteroids	Recovery
12	Okamori <i>et al</i> (17)	60/M	Radiological	Corticosteroids	Recovery
13	Okamori <i>et al</i> (17)	61/F	Radiological	Corticosteroids	Recovery
14	Kim <i>et al</i> (18)	71/M	Radiological	Corticosteroids	Recovery
15	Simões <i>et al</i> (19)	71/M	Radiological	Corticosteroids	Recovery
16	Simões <i>et al</i> (19)	83/M	Radiological	Corticosteroids	Recovery
17	Ng <i>et al</i> (14)	81/M	TBLB, histopathological examination	Corticosteroids	Recovery
18	Seo <i>et al</i> (20)	50/M	TBLB, histopathological examination	Spontaneous remission	Recovery
19	Funk <i>et al</i> (21)	49/M	TBLB, histopathological examination	Spontaneous remission	Recovery
20	Golbets <i>et al</i> (22)	36/M	TBLB, histopathological examination	Corticosteroids	Recovery
21	Kanaoka <i>et al</i> (23)	56/M	TBLB, histopathological examination	Corticosteroids	Recovery
22	Kanaoka <i>et al</i> (23)	84/F	TBLB, histopathological examination	Corticosteroids	Recovery
23	Cortés Colorado <i>et al</i> (24)	62/M	TBLB, histopathological examination	Corticosteroids	Recovery
24	Vadász <i>et al</i> (25)	57/M	TBLB, histopathological examination	Corticosteroids	Recovery
25	Vadász <i>et al</i> (25)	70/M	TBLB, histopathological examination	Corticosteroids	Recovery
26	Vadász <i>et al</i> (25)	76/M	TBLB, histopathological examination	Corticosteroids	Recovery

F, female; M, male; TBLB, transbronchial lung biopsy.

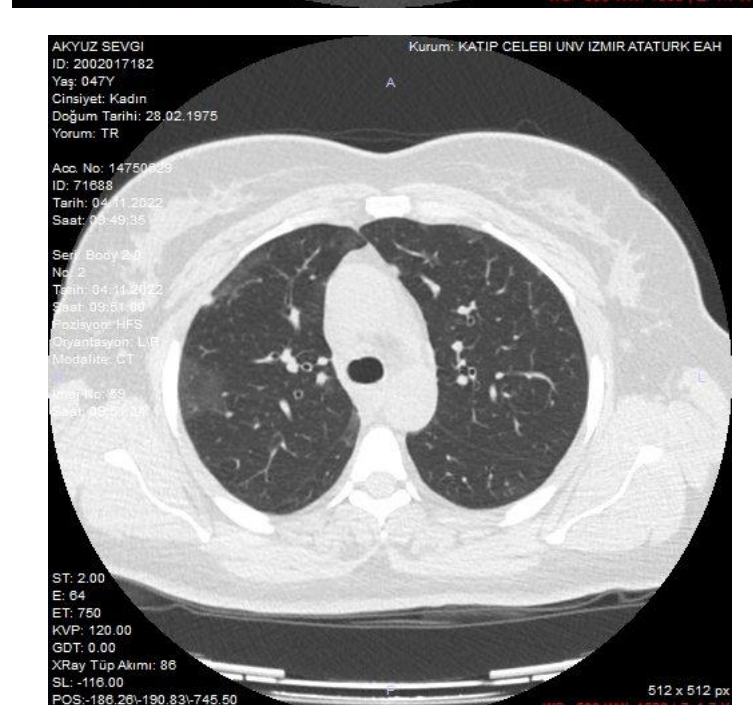
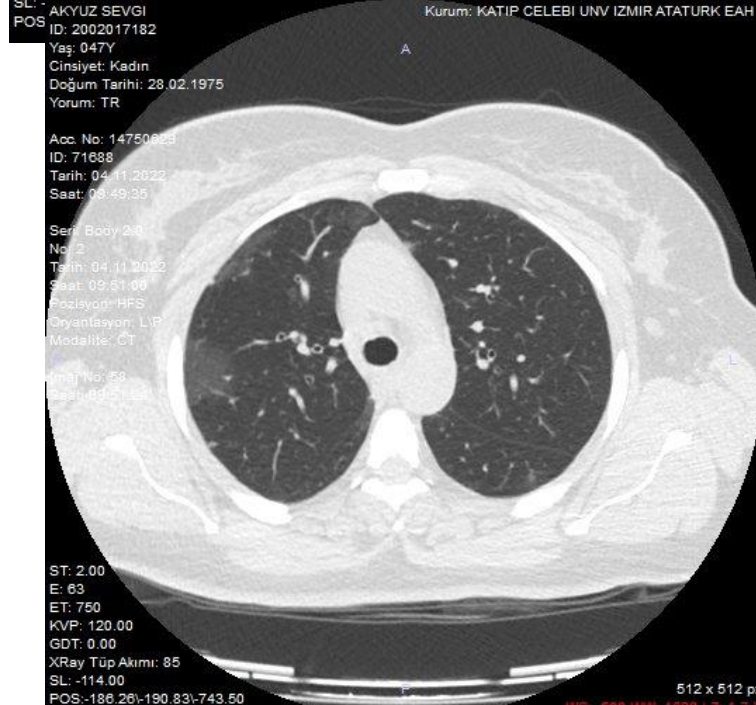
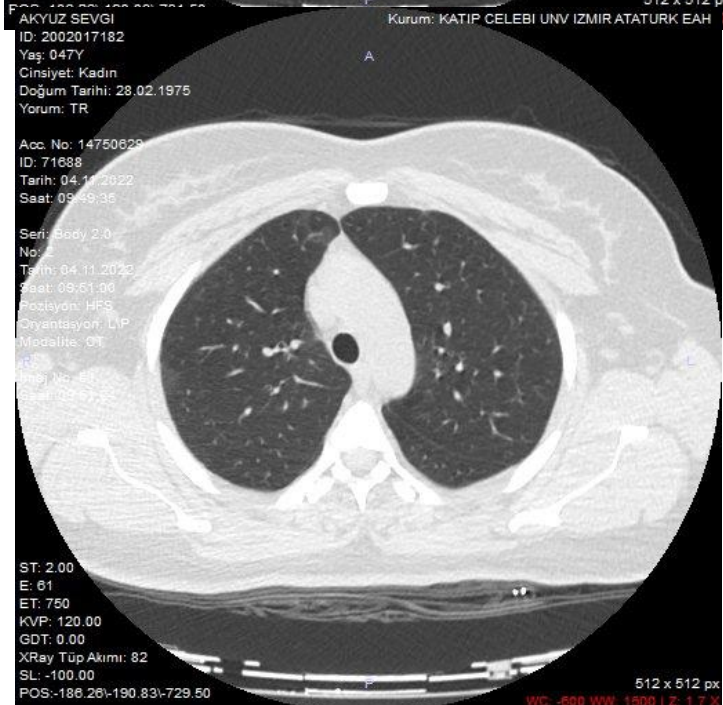
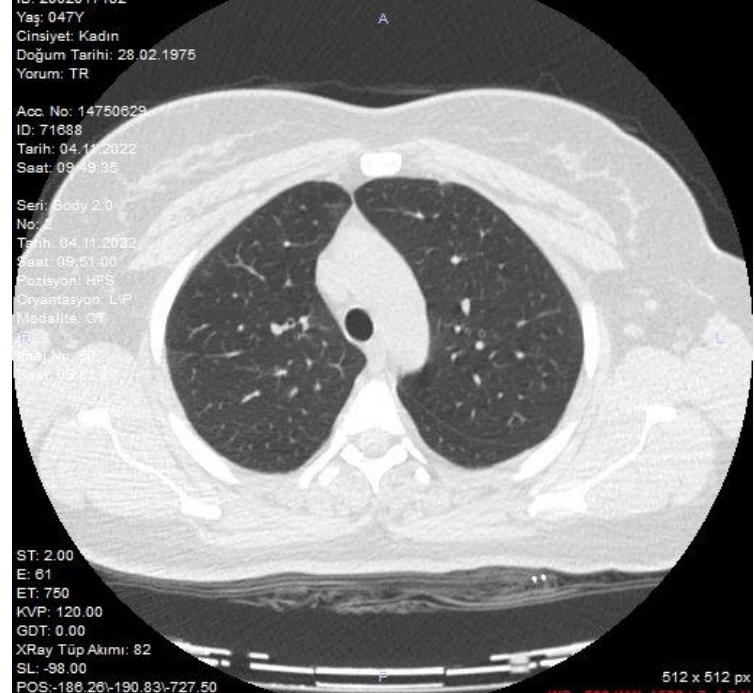
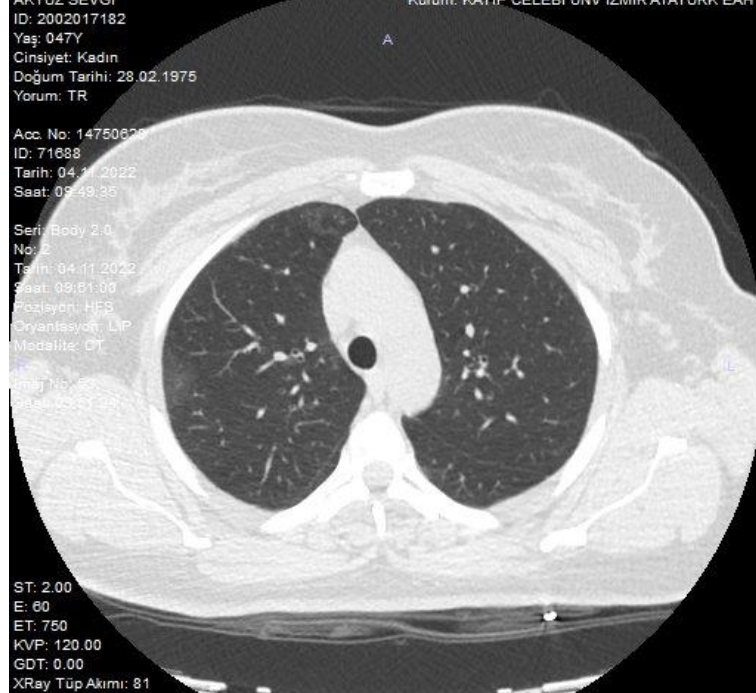
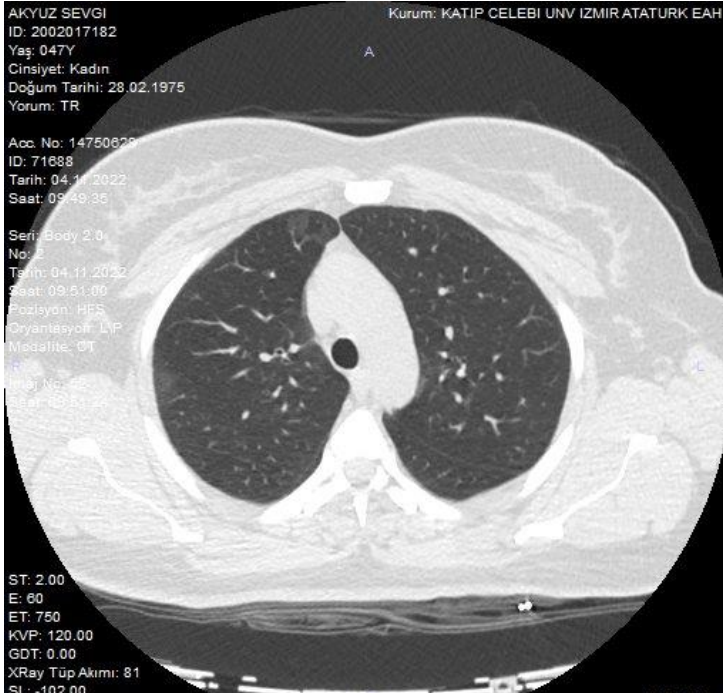
EXPERIMENTAL AND THERAPEUTIC MEDICINE 24: 453, 2022

## Radiologically suspected COVID-19-associated organizing pneumonia responding well to corticosteroids: A report of two cases and a review of the literature

CHRISTOS SIAFARIKAS<sup>1\*</sup>, CHRISTOS STAFYLIDIS<sup>2\*</sup>, ANASTASIOS TENTOLOURIS<sup>1\*</sup>, STAMATIA SAMARA<sup>3</sup>, IRENE ELIADI<sup>3</sup>, SOTIRIA MAKRODIMITRI<sup>3</sup>, DEMETRIOS A. SPANDIDOS<sup>4</sup>, NIKOLAOS MATHIOUDAKIS<sup>5</sup>, PANAGIOTIS KARAMICHALOS<sup>6</sup>, PETROS PAPALEXIS<sup>7,8</sup>, SERAFEIM CHLAPOUTAKIS<sup>9</sup>, PAGONA SKLAPANI<sup>10</sup>, NIKOLAOS TRAKAS<sup>11</sup> and VASILIKI EPAMEINONDAS GEORGAKOPOULOU<sup>3</sup>



Tedavinin 10. günü



AKYUZ SEVGI  
ID: 2002017182  
Yaş: 047Y  
Cinsiyet: Kadın  
Doğum Tarihi: 28.02.1975  
Yorum: TR

Acc. No: 14756629  
ID: 71688  
Tarih: 04.11.2022  
Saat: 09:49:35

Señ: Body 2.0  
Nr: 2  
Tarih: 04.11.2022  
Saat: 09:51:00  
Pozisyon: HFS  
Oryantasyon: LIP  
Modalite: CT

Imaj No: 83  
Saat: 09:51:23

ST: 2.00  
E: 05  
ET: 750  
K: AKYUZ SEVGI  
K ID: 2002017182  
G Yaş: 047Y  
XI Cinsiyet: Kadın  
SI Doğum Tarihi: 28.02.1975  
P Yorum: TR

Acc. No: 14756629  
ID: 71688  
Tarih: 04.11.2022  
Saat: 09:49:35

Señ: Body 2.0  
Nr: 2  
Tarih: 04.11.2022  
Saat: 09:51:00  
Pozisyon: HFS  
Oryantasyon: LIP  
Modalite: CT

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Saat: 09:51:24

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XRay Tüp Akımı: 81  
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POS: -186.26\190.83\775.50

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WC: -600 WW: 1500 | Z: 1.7 X

AKYUZ SEVGI  
ID: 2002017182  
Yaş: 047Y  
Cinsiyet: Kadın  
Doğum Tarihi: 28.02.1975  
Yorum: TR

Acc. No: 14756629  
ID: 71688  
Tarih: 04.11.2022  
Saat: 09:49:35

Señ: Body 2.0  
Nr: 2  
Tarih: 04.11.2022  
Saat: 09:51:00  
Pozisyon: HFS  
Oryantasyon: LIP  
Modalite: CT

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Saat: 09:51:24

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ET: 750  
K: AKYUZ SEVGI  
K ID: 2002017182  
G Yaş: 047Y  
C Cinsiyet: Kadın  
X Doğum Tarihi: 28.02.1975  
S Yorum: TR

Acc. No: 14756629  
ID: 71688  
Tarih: 04.11.2022  
Saat: 09:49:35

Señ: Body 2.0  
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Tarih: 04.11.2022  
Saat: 09:51:00  
Pozisyon: HFS  
Oryantasyon: LIP  
Modalite: CT

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Saat: 09:51:24

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GDT: 0.00  
XRay Tüp Akımı: 80  
SL: -150.00  
POS: -186.26\190.83\779.50

512 x 512 px  
WC: -600 WW: 1500 | Z: 1.7 X

AKYUZ SEVGI  
ID: 2002017182  
Yaş: 047Y  
Cinsiyet: Kadın  
Doğum Tarihi: 28.02.1975  
Yorum: TR

Acc. No: 14756629  
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Tarih: 04.11.2022  
Saat: 09:49:35

Señ: Body 2.0  
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Tarih: 04.11.2022  
Saat: 09:51:00  
Pozisyon: HFS  
Oryantasyon: LIP  
Modalite: CT

Imaj No: 87  
Saat: 09:51:24

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ET: 750  
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K ID: 2002017182  
G Yaş: 047Y  
XF Cinsiyet: Kadın  
SL Doğum Tarihi: 28.02.1975  
PC Yorum: TR

Acc. No: 14756629  
ID: 71688  
Tarih: 04.11.2022  
Saat: 09:49:35

Señ: Body 2.0  
Nr: 2  
Tarih: 04.11.2022  
Saat: 09:51:00  
Pozisyon: HFS  
Oryantasyon: LIP  
Modalite: CT

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KVP: 120.00  
GDT: 0.00  
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SL: -148.00  
POS: -186.26\190.83\775.50

512 x 512 px  
WC: -600 WW: 1500 | Z: 1.7 X

AKYUZ SEVGI  
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Yaş: 047Y  
Cinsiyet: Kadın  
Doğum Tarihi: 28.02.1975  
Yorum: TR

Kurum: KATIP CELEBI UNV IZMIR ATATUF AKYUZ SEVGI  
ID: 2002017182  
Yaş: 047Y  
Cinsiyet: Kadın  
Doğum Tarihi: 28.02.1975  
Yorum: TR

Acc. No: 14760829  
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Saat: 09:49:35

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No: 2  
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Saat: 09:51:00  
Pozisyon: HFS  
Oryantasyon: L/P  
Modalite: CT

Imaj No: 84  
Saat: 09:51:24

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GDT: 0.00  
XRyay Tüp Akımı: 76  
SL: -158.00  
POS:-186.26\190.83\787.50

512  
WC: -600 WW: 1500

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ID: 2002017182  
Yaş: 047Y  
Cinsiyet: Kadın  
Doğum Tarihi: 28.02.1975  
Yorum: TR

Acc. No: 14760829  
ID: 71685  
Tarih: 04.11.2022  
Saat: 09:49:35

Sevi: Body 2.0  
No: 2  
Tarih: 04.11.2022  
Saat: 09:51:00  
Pozisyon: HFS  
Oryantasyon: L/P  
Modalite: CT

Imaj No: 84  
Saat: 09:51:24

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ET: 750  
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512  
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Kurum: KATIP CELEBI UNV IZMIR ATATURK E/ AKYUZ SEVGI  
ID: 2002017182  
Yaş: 047Y  
Cinsiyet: Kadın  
Doğum Tarihi: 28.02.1975  
Yorum: TR

Acc. No: 14760829  
ID: 71685  
Tarih: 04.11.2022  
Saat: 09:49:35

Sevi: Body 2.0  
No: 2  
Tarih: 04.11.2022  
Saat: 09:51:00  
Pozisyon: HFS  
Oryantasyon: L/P  
Modalite: CT

Imaj No: 79  
Saat: 09:51:24

ST: 2.00  
E: 57  
ET: 750  
KVP: 120.00  
GDT: 0.00  
XRyay Tüp Akımı: 77  
SL: -156.00  
POS:-186.26\190.83\785.50

512 x 512  
WC: -600 WW: 1500 | Z: 1

Kurum: KATIP CELEBI UNV IZMIR ATATURK EAH  
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Cinsiyet: Kadın  
Doğum Tarihi: 28.02.1975  
Yorum: TR

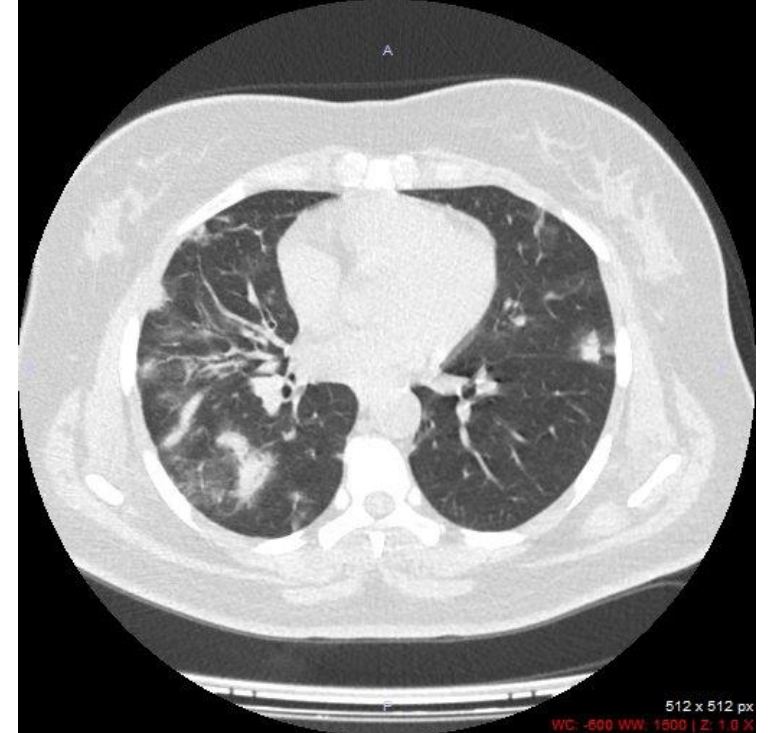
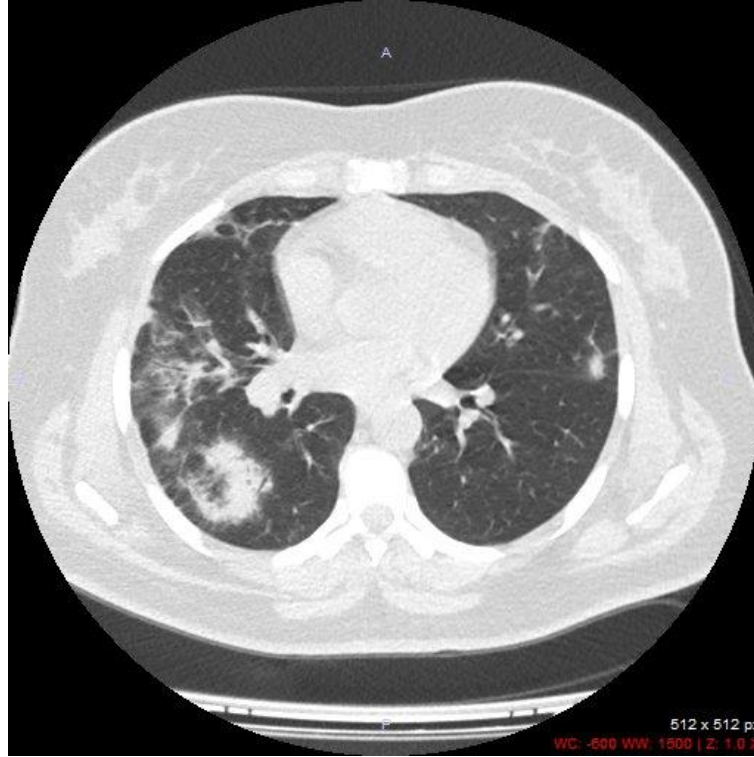
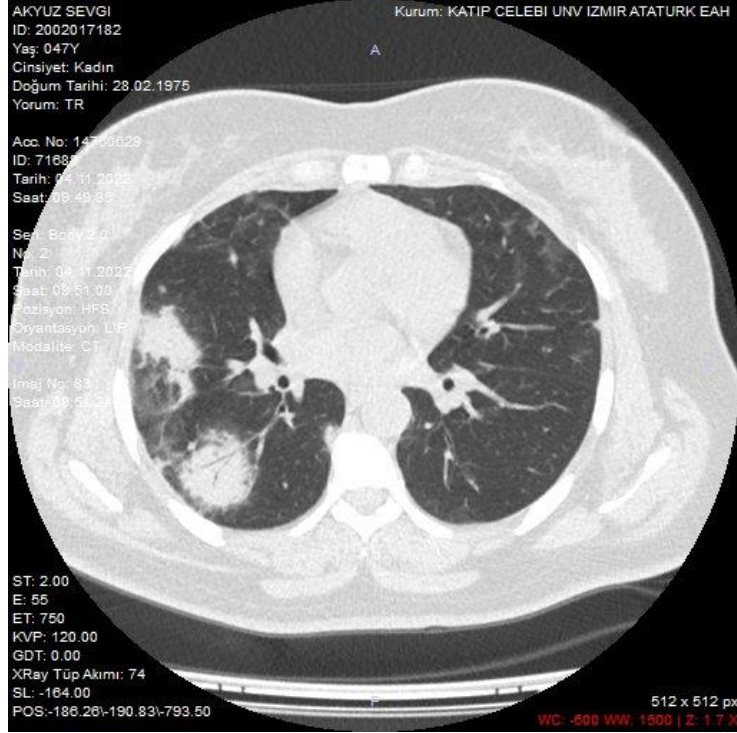
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Saat: 09:49:35

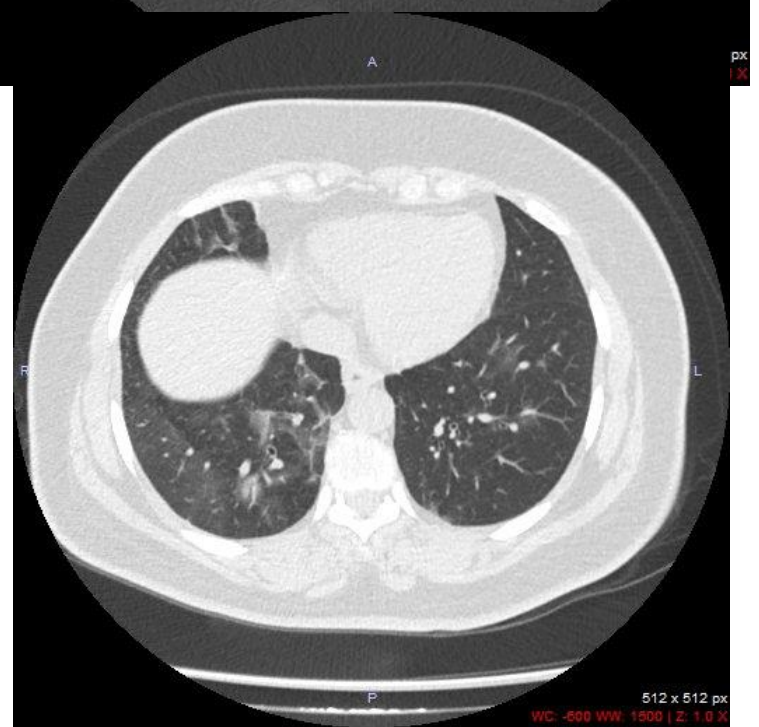
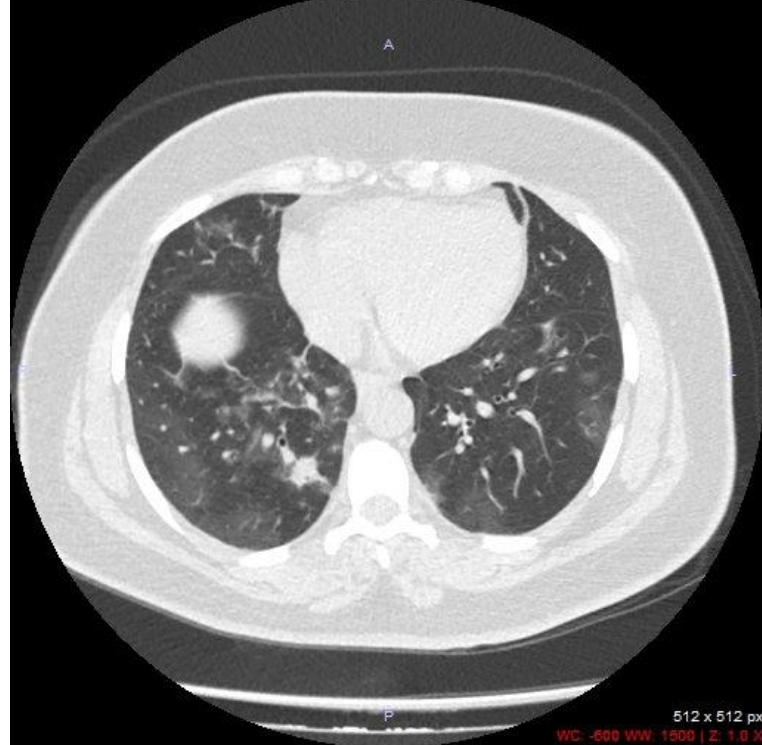
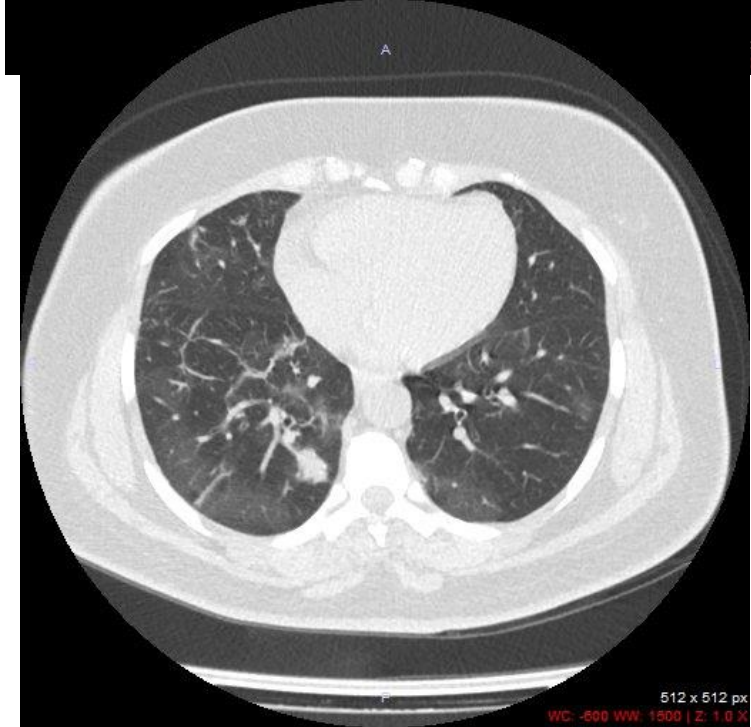
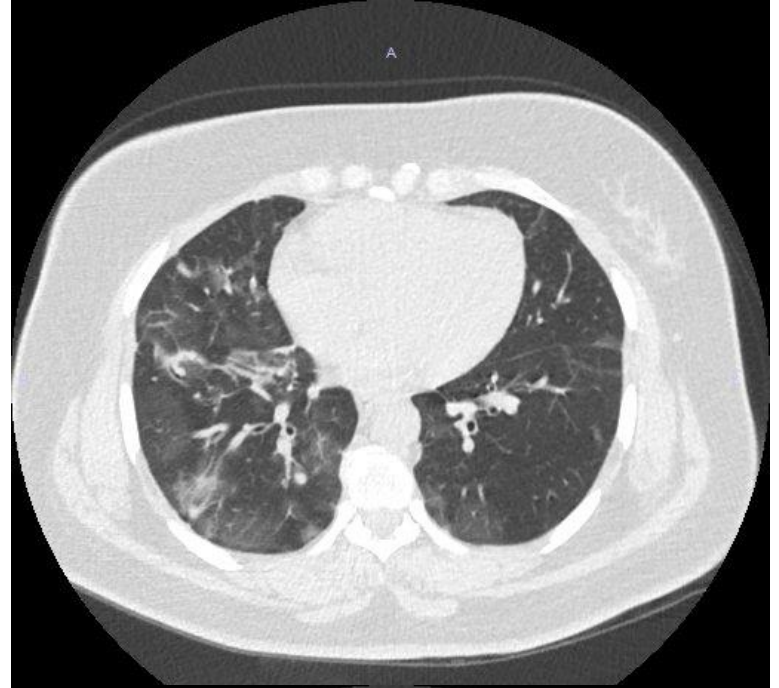
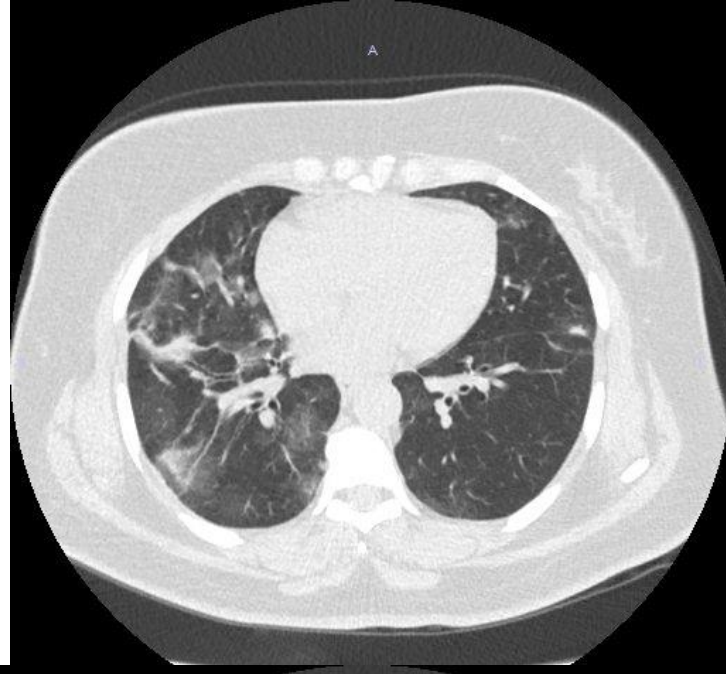
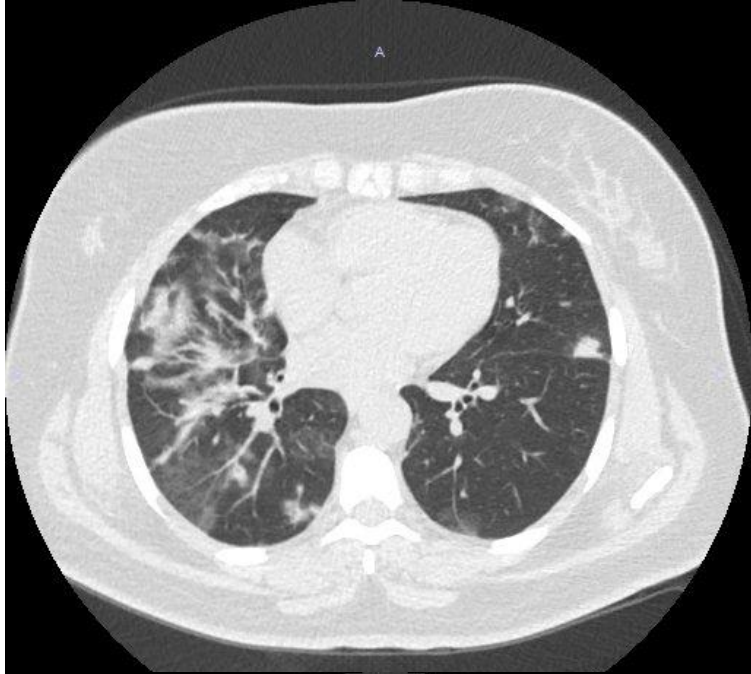
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No: 2  
Tarih: 04.11.2022  
Saat: 09:51:00  
Pozisyon: HFS  
Oryantasyon: L/P  
Modalite: CT

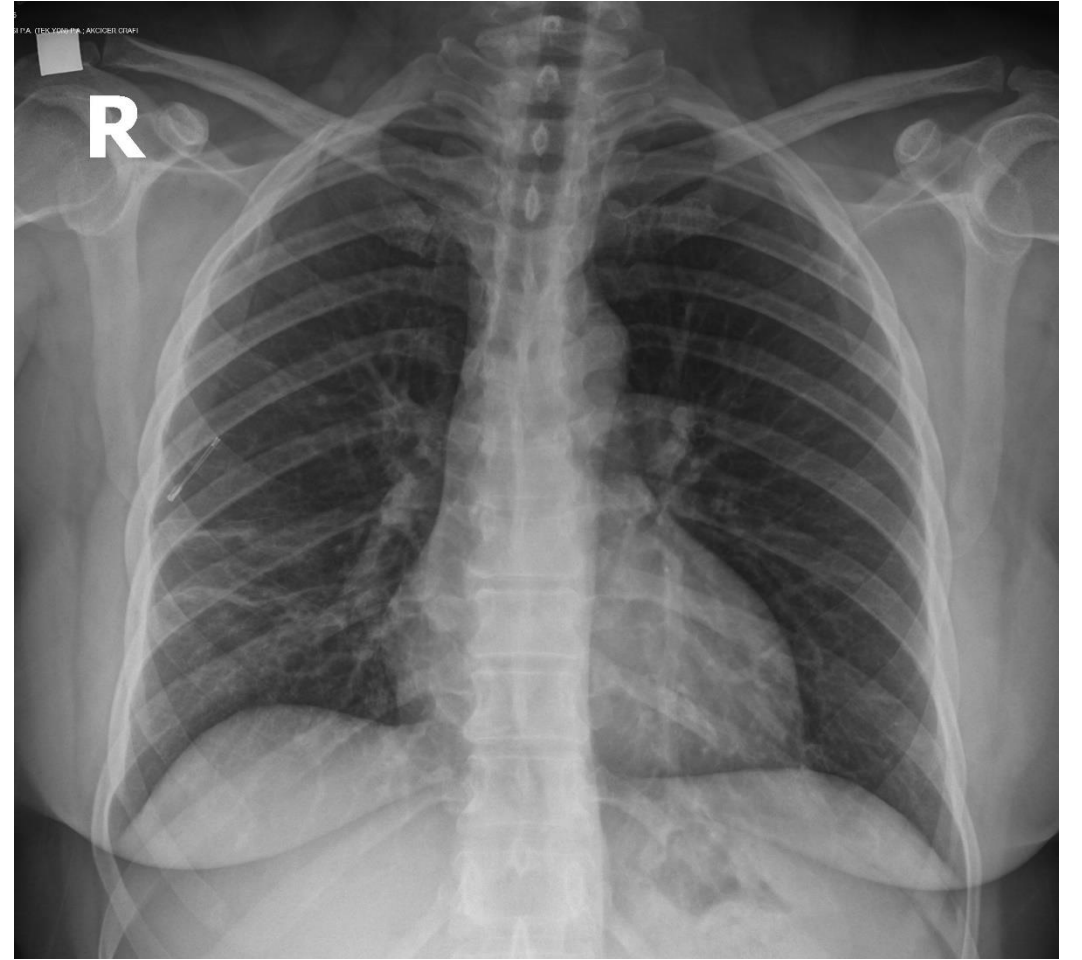
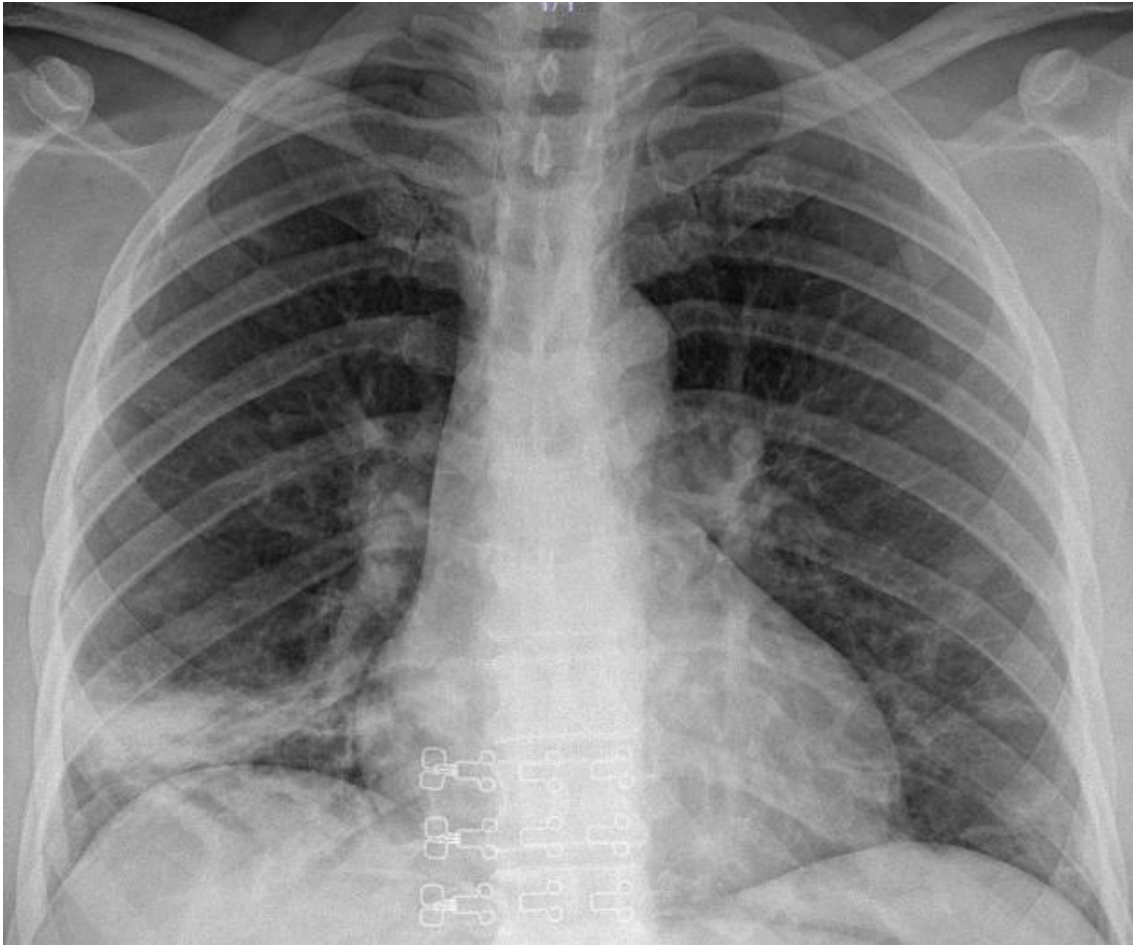
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GDT: 0.00  
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POS:-186.26\190.83\785.50

512 x 512 px  
WC: -600 WW: 1500 | Z: 1.7 X





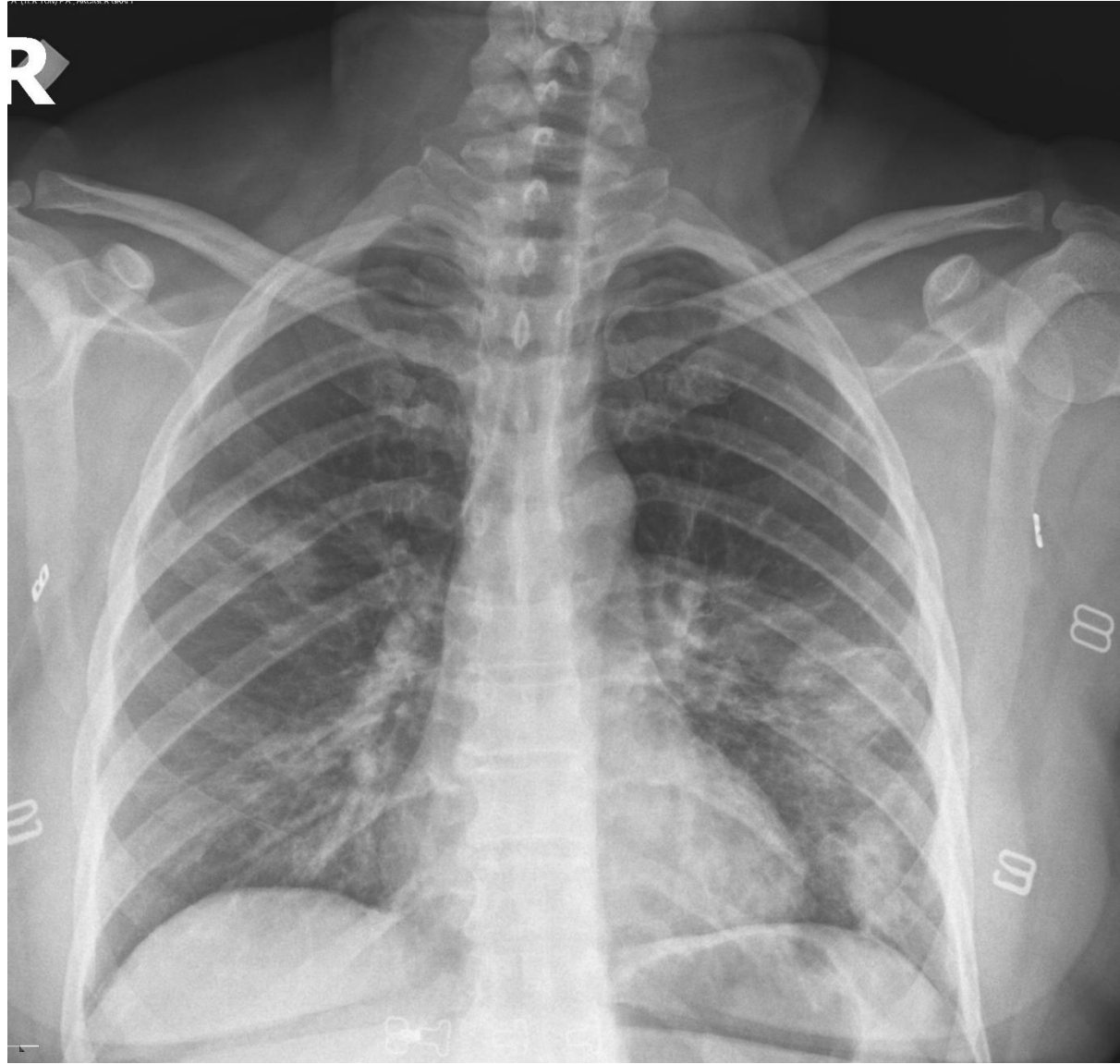


Tedavinin 3. ayında

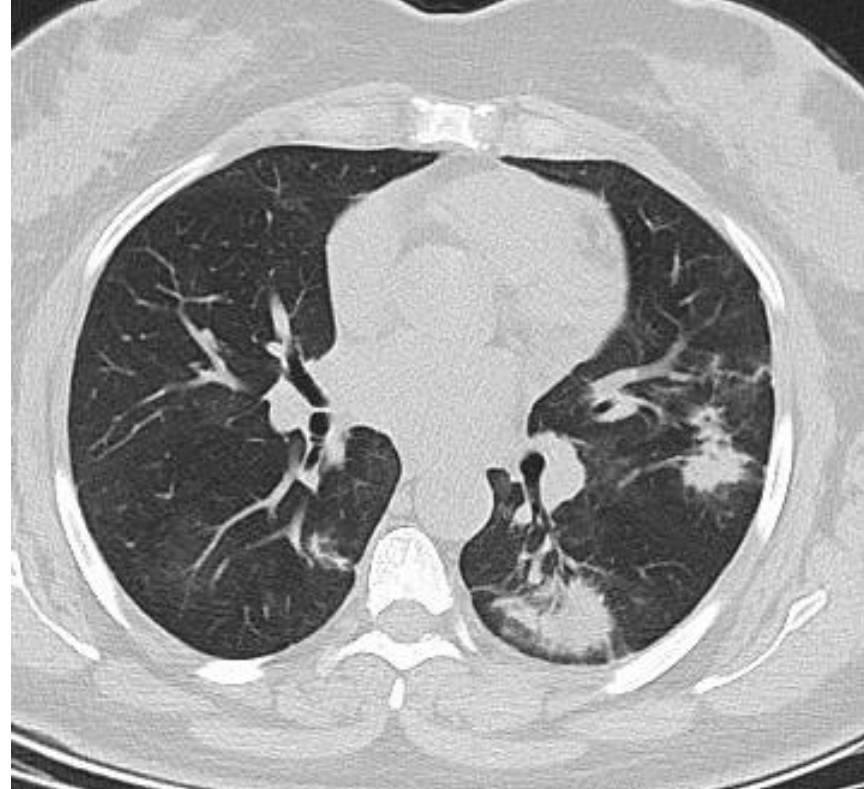
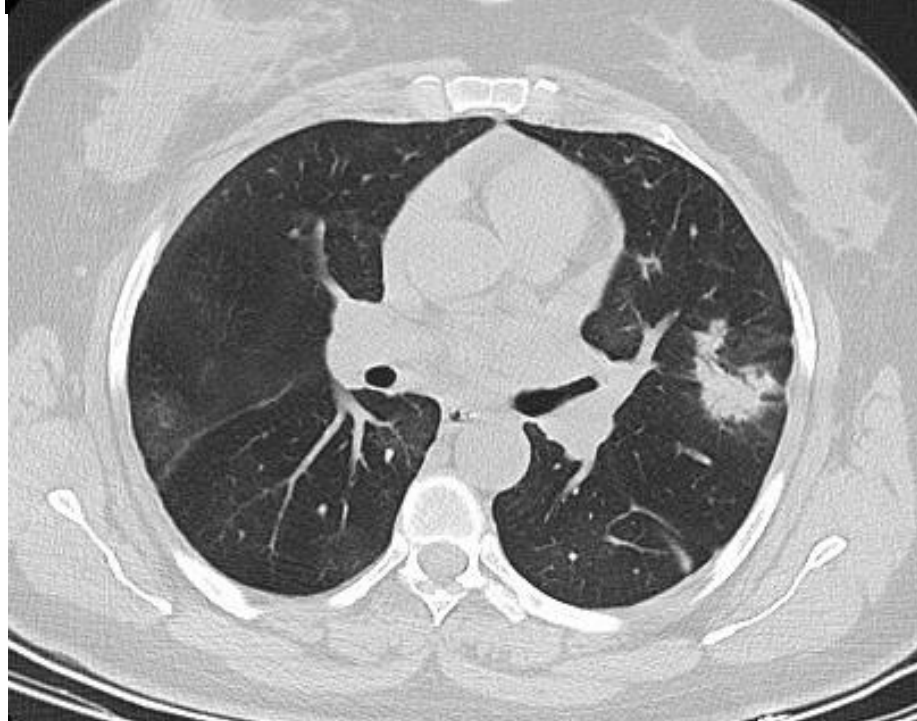
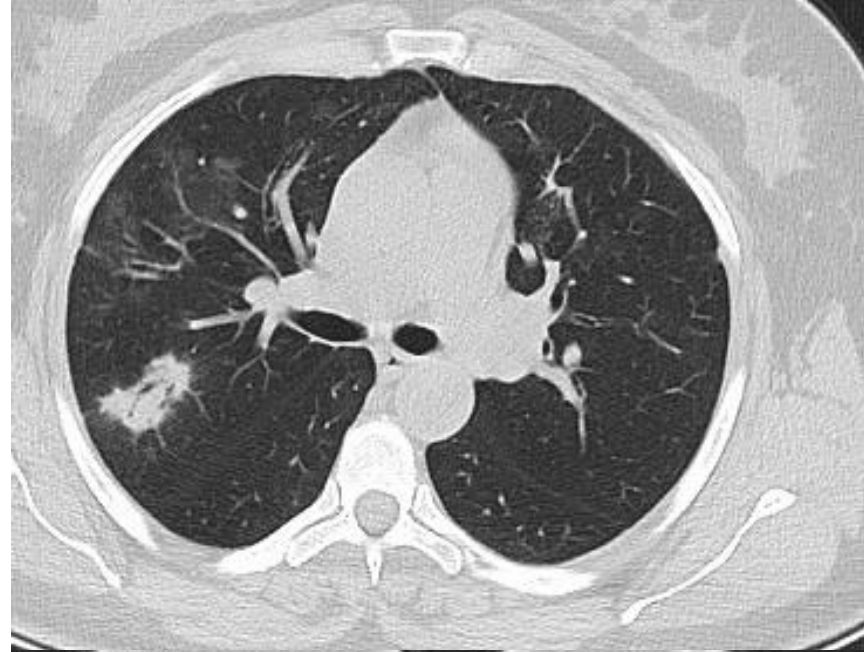


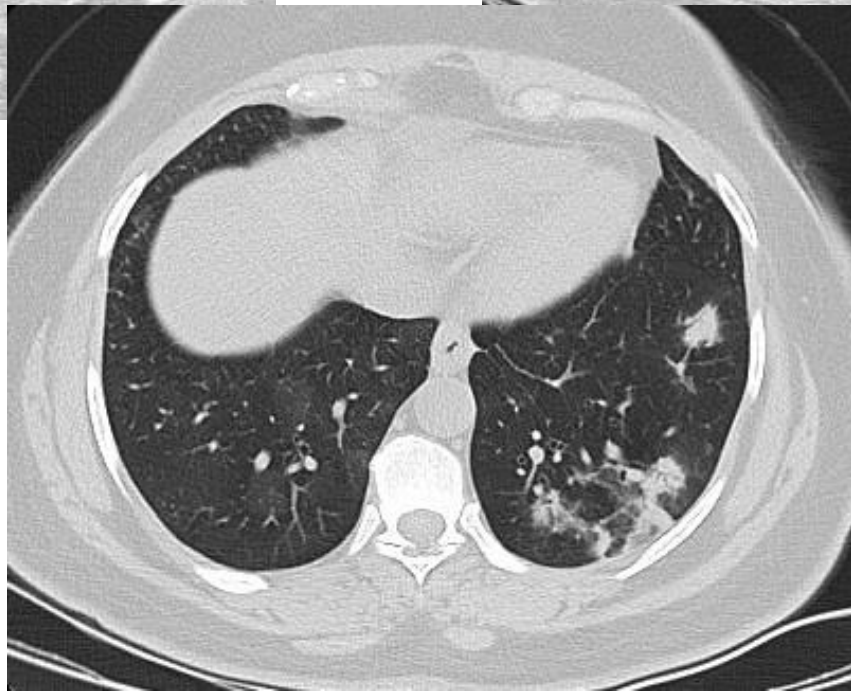
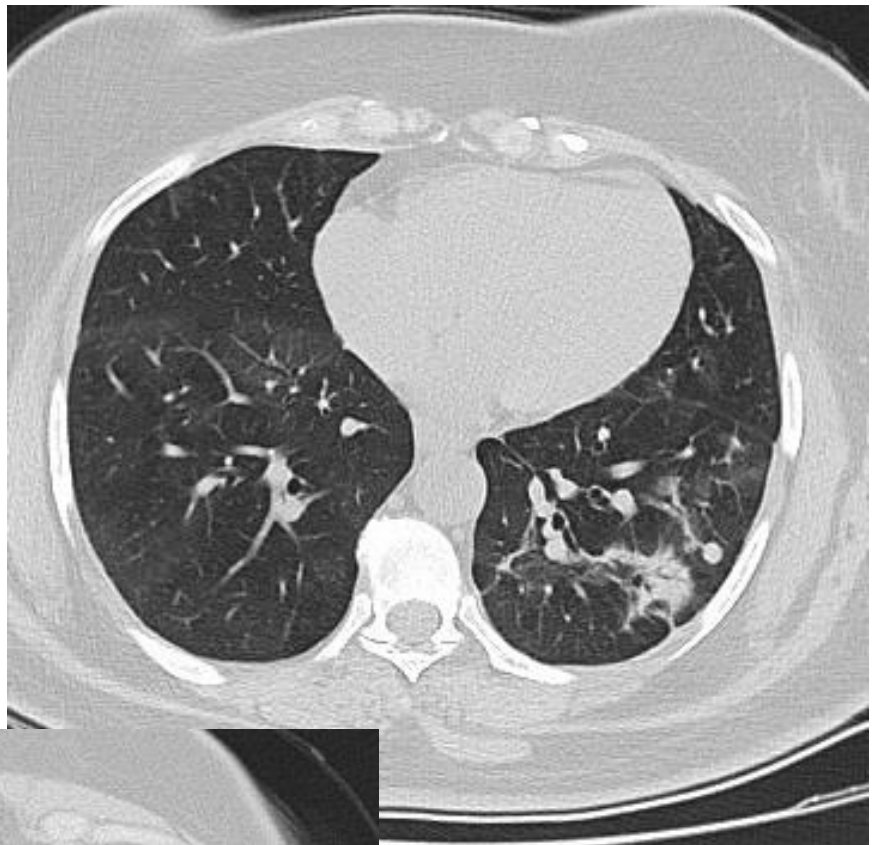
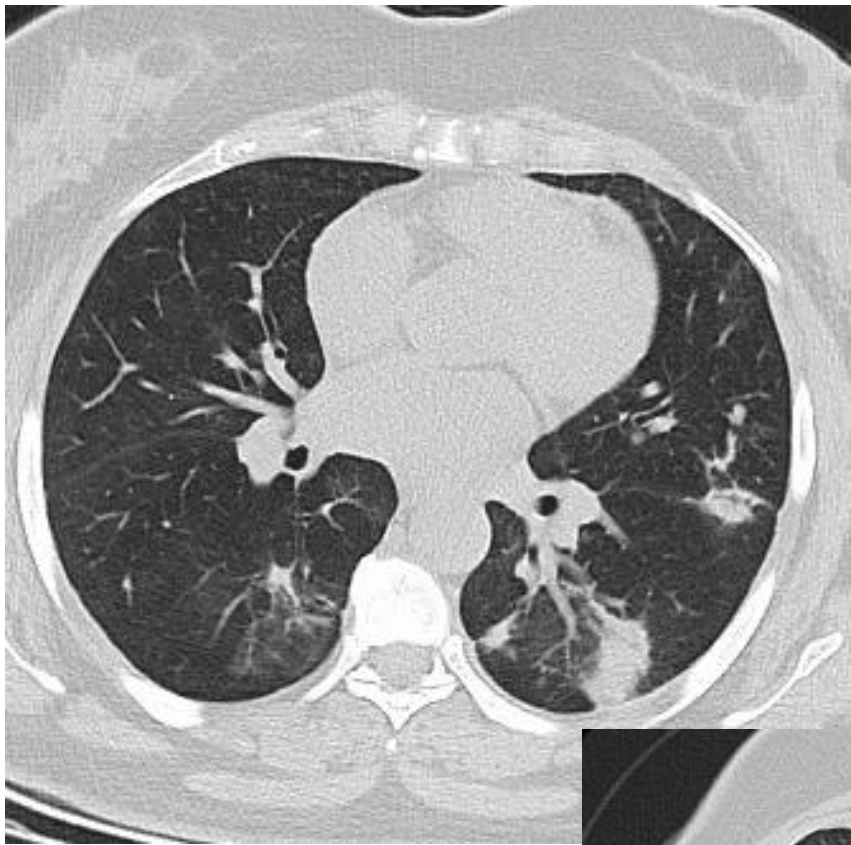
Tedaviye Devam Edelim Mi? Ne kadar Daha ?

- Hasta 2 ay sonra öksürük ve nefes darlığı yakınması ile tekrar başvurdu .
- WBC: 9000 , Hb : 10.5, PLT: 508000
- Sedimentasyon: 46 CRP: 20
- SFT: FEV1 : %79 FVC: %68 ORAN : %82



15130332  
02.2023  
30:23  
mm Lung  
02.2023  
31:13  
HFS  
igest. CHEST  
CT  
38  
31.23





- Nüks Organize Pnömoni ?

## Bu Durumda Ne Yaparsınız ?

- A) Steroid tedavisinden daha önce fayda gören hastaya tekrar steroid başlarım bu sefer tedavi süresini uzatırım
- B) Bronkoskopi planlarım
- C) Tekrar romatoloji markerlarını ister ve romatoloji konsültasyonu isterim
- D) Klatromisin tedavisi 500 mg 2x1 3 ay veririm.
- E) VATS yapılması için göğüs cerrahisine konsülte ederim .

- Hastaya bronkoskopi yapıldı .
- Bronkoskobisinde EBL izlenmedi.
- Sağ orta lobtan BAL yapıldı .
- Sağ alt lobtan da parenkim biyopsisi yapıldı.



# Patoloji

- Benign BAL sitolojisi
- Bronkoskopik biyopsi materyali çok küçük ve suboptimal nitelikte olup, seri kesitlerde fokal yüzey epiteli ve seyrek lenfosit içeren submukoza izlenebilmiştir.

Taniyı netleřtirmek için biyopsi yapalım mı ?

# Ayırıcı tanı

- TKP
- KEP
- HP
- Pulmoner lenfoma ve lenfomatoid granülomatoz
  - **Diğer akciğer hastalıklarında organize pnömoni**
  - **İdiopatik interstisyel pnömoniler** Bazen, spesifik olmayan interstisyel pnömoni (NSIP) veya idiyopatik pulmoner fibroz) gibi başka bir IIP'nin daha geniş görünümü içinde küçük OP alanları (<yüzde 10) görülür . Doğru tanıyı belirlemek için klinikopatolojik işbirliği gereklidir.
  - **Diffüz alveolar hasar** – Diffüz alveolar hasar (DAD), en çok akut respiratuar distres sendromu (ARDS) olan hastalarda görülen, akciğer hasarına karşı spesifik olmayan histopatolojik bir reaksiyondur.
  - Nadiren COP vakaları fulminan bir başlangıca sahiptir ve hızla solunum yetmezliğine ilerler
  - Bu hastalarda COP, DAD alanları ile baskın paterndir.
  - Tersine, ARDS'nin proliferatif fazı sırasında başka nedenlere (örn. akut interstisyel pnömoni) bağlı olarak alınan akciğer biyopsi örneklerinde OP'nin bir bileşeni görülebilir.

# Organize pnömoni Nedenleri

**TABLE 1.** Infectious causes of organizing pneumonia<sup>16,18,19,21,26</sup>

**Bacterial**

*Burkholderia cepacia*, *Chlamydia pneumoniae*, *Coxiella burnetii*, *Legionella pneumoniae*, *Mycobacterium abscessus*, *Mycoplasma pneumoniae*, *Nocardia asteroides*, *Pseudomonas aeruginosa*, *Serratia marcescens*, *Staphylococcus aureus*, *Streptococcus* group B, *Streptococcus pneumoniae*

**Viral**

Adenovirus, COVID-19, cytomegalovirus, human herpesvirus 7, HIV, influenza (A and B), parainfluenza, respiratory syncytial virus

**Fungal**

*Cryptococcus neoformans*, *Penicillium janthinellum*, *Pneumocystis jirovecii*

**Parasitical**

*Plasmodium vivax*, *Dirofilaria immitis*

**TABLE 2.** Noninfectious causes of organizing pneumonia<sup>20,22,26-29</sup>

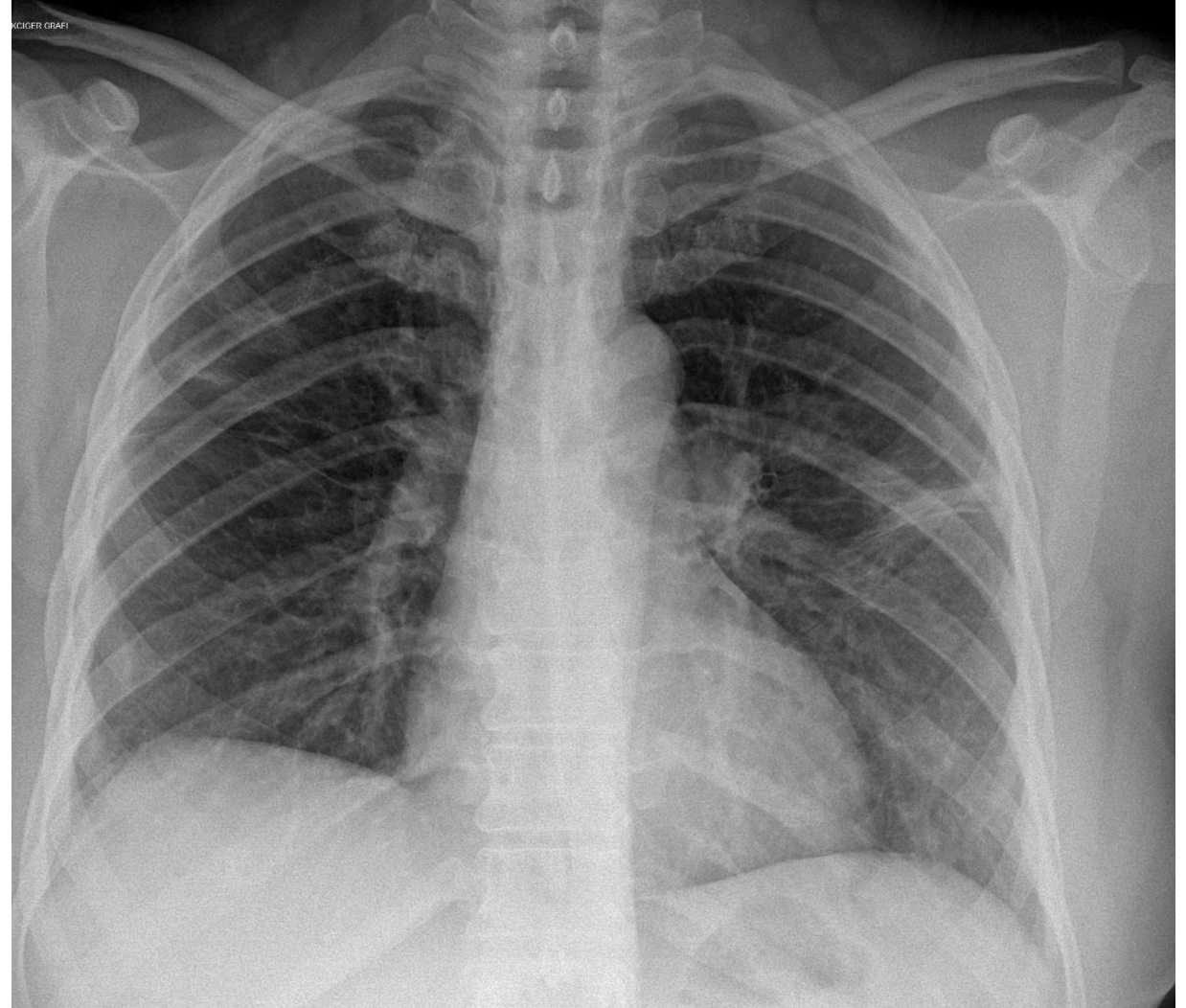
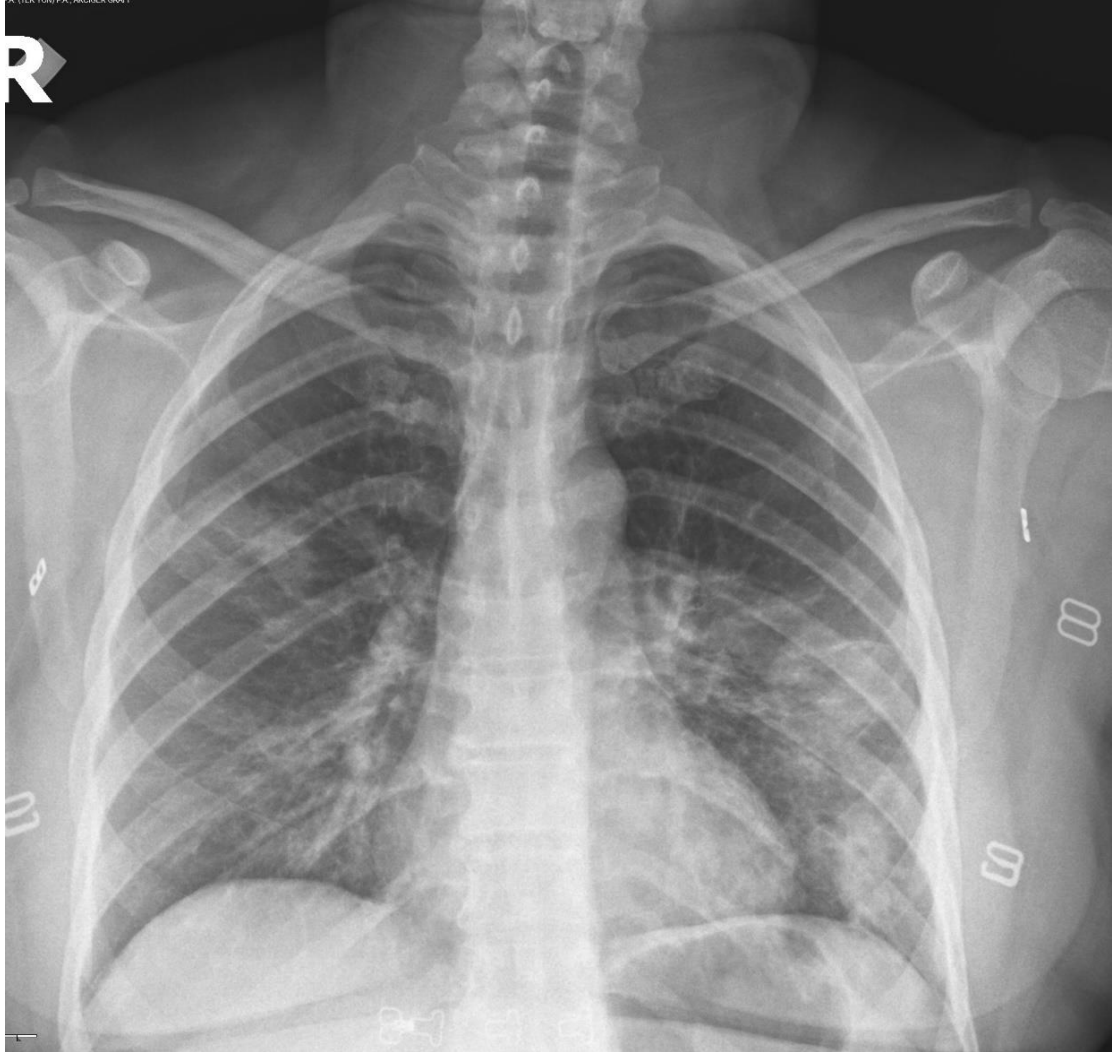
**Drug toxicities**

5-aminosalicylic acid, amiodarone, amphotericin B, bleomycin, bisulfan and cyclophosphamide, carbamazepine, cephalosporin, cocaine (inhaled), dasatinib, doxorubicin, gold salts, interferon alpha and alpha 2b, interferon plus ribavirin, interferon beta1alpha, L-tryptophan, meslazine, methotrexate, minocycline, nitrofurantoin, phenytoin, sirolimus, sotalol, sulfasalazine, tacrolimus, ticlopidine, trastuzumab, vancomycin, vinbarbital-aprobarbital

**Inflammatory/autoimmune**

Allogenic hematopoietic stem cell transplant, anti-JO-1 auto antibodies, CREST syndrome (calcinosis, Raynaud phenomenon, esophageal dysmotility, sclerodactyly, telangiectasia), dermatomyositis-polymyositis, lung transplant, primary biliary cirrhosis, rheumatoid arthritis, scleroderma, Sjögren syndrome, systemic lupus erythematosus

- **Hasta Göğüs Cerrahisi ile konsülte edildi ve VATS biyopsi yapıldı.**
- **Patoloji sonucu:**
- **1-Non-spesifik Organize Pnömonik Değişiklikler, Subplevral Amfizematöz Değişiklikler, Konjesyon, Sağ Akciğer Üst Lob, Wedge Rezeksiyon**
- **2-Reaktif Lenf Nodları , 4R Mediastinal Lenf Nodları, Diseksiyon**
- **3-Kronik Plörit, Mezotel Proliferasyonu, Antrakozis, Plevra, Biyopsi**



# Tedavi Edelim Mi ?

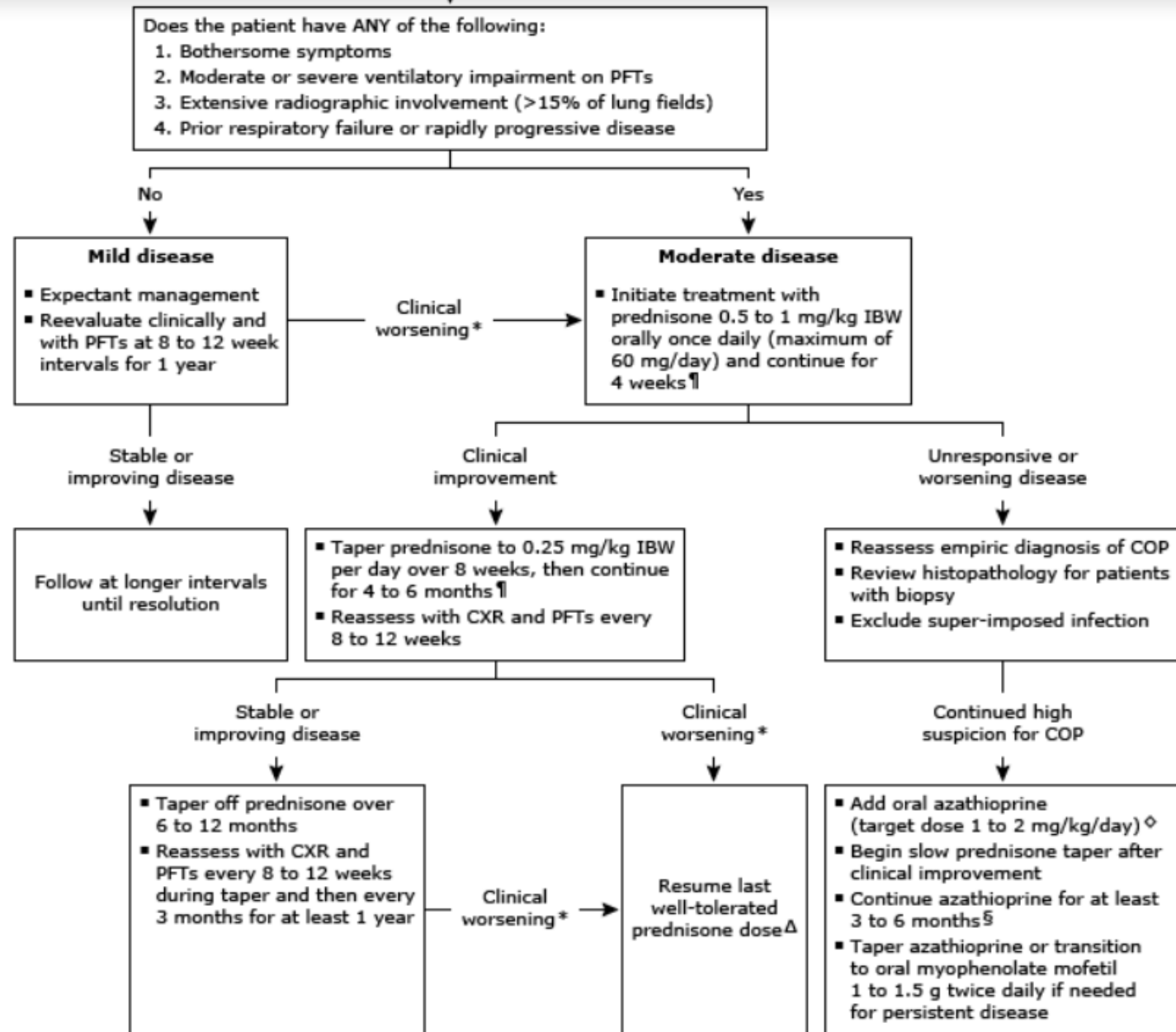
A) Semptomu azalmış, radyolojik progresyonu yok ,  
tedaviye gerek yok , izlem

B) Steroidden yarar görmüş, steroid tedavisine başlayıp,  
nüksü önlemek adına daha uzun süreli tedavi yapalım

C) Sadece öksürük yakınması olan hastada Klacid 500 mg  
3x1 3 ay verelim

D) Kararsız kaldım.

## Initial outpatient management of confirmed or presumed COP in adults





## RESEARCH ARTICLE

## Cryptogenic organizing pneumonia—Results of treatment with clarithromycin versus corticosteroids—Observational study

Elżbieta Radzikowska<sup>1\*</sup>, Elżbieta Wiatr<sup>1</sup>, Renata Langfort<sup>2</sup>, Iwona Bestry<sup>3</sup>,  
Agnieszka Skoczylas<sup>4</sup>, Ewa Szczepulska-Wójcik<sup>2</sup>, Dariusz Gawryluk<sup>1</sup>, Piotr Rudziński<sup>5</sup>,  
Joanna Chorostowska-Wynimko<sup>6</sup>, Kazimierz Roszkowski-Śliż<sup>1</sup>

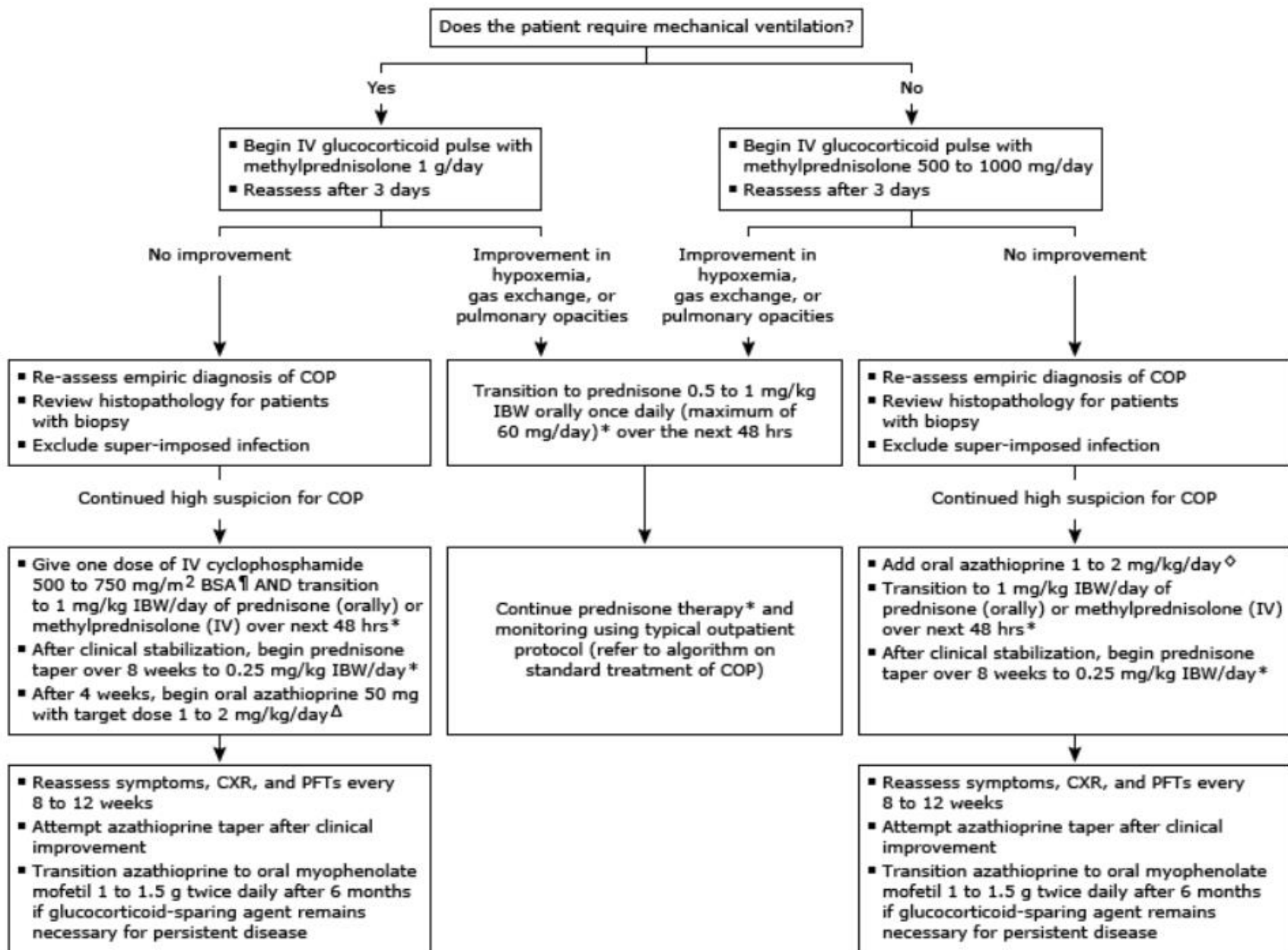
- 15 yıllık bir dönemde 40 hasta KLATROMİSİN (3 ay boyunca günde iki kez 500 mg)
- **22 hasta PREDNİZOLON** (ortalama başlangıç dozu  $0.67 \pm 0.24$  mg/kg/gün, ortalama  $8.59 \pm 3.05$  ay)
- Klinik prezentasyon, laboratuvar ve radyolojik bulgular, CAM ve PRE ile tedavi edilen hastalar arasında belirgin bir farklılık göstermemiştir.
- K ile tedavi edilen 35 (%88) hastada ve PRE ile tedavi edilen tüm hastalarda tam bir yanıt
- PRE ile tedavi edilen hastalar K ile tedavi edilenlere göre daha sık nüks etti (%54.5'e karşı %10;  $p <$

KLATROMYCİN, solunum fonksiyon parametreleri normal sınırlarda olan COP hastalarının tedavisinde kullanılabilir. Bu tür bir tedavi PRE'den daha kısadır, daha iyi tolere edilir ve daha az yan etki ve nüks ile ilişkilidir. Bununla birlikte, tedavi bazı hastalarda etkisizdir.

- Biyopsi ile kanıtlanmış COP'u olan 87 hastanın yer aldığı uzun süreli retrospektif bir çalışmada, 11 hasta makrolid almıştır (ortalama süre 4,2 ay, dağılım 3 ila 12 ay); 7 'si relaps olmadan remisyona ulaşırken, 4'ünde remisyon sağlanamamış.

[Zhou Y, Wang L, Huang M, et al. A long-term retrospective study of patients with biopsy-proven cryptogenic organizing pneumonia. Chron Respir Dis 2019; 16:1479973119853829.](#)

# Management of respiratory failure or rapidly progressive disease in adults with confirmed or presumed COP

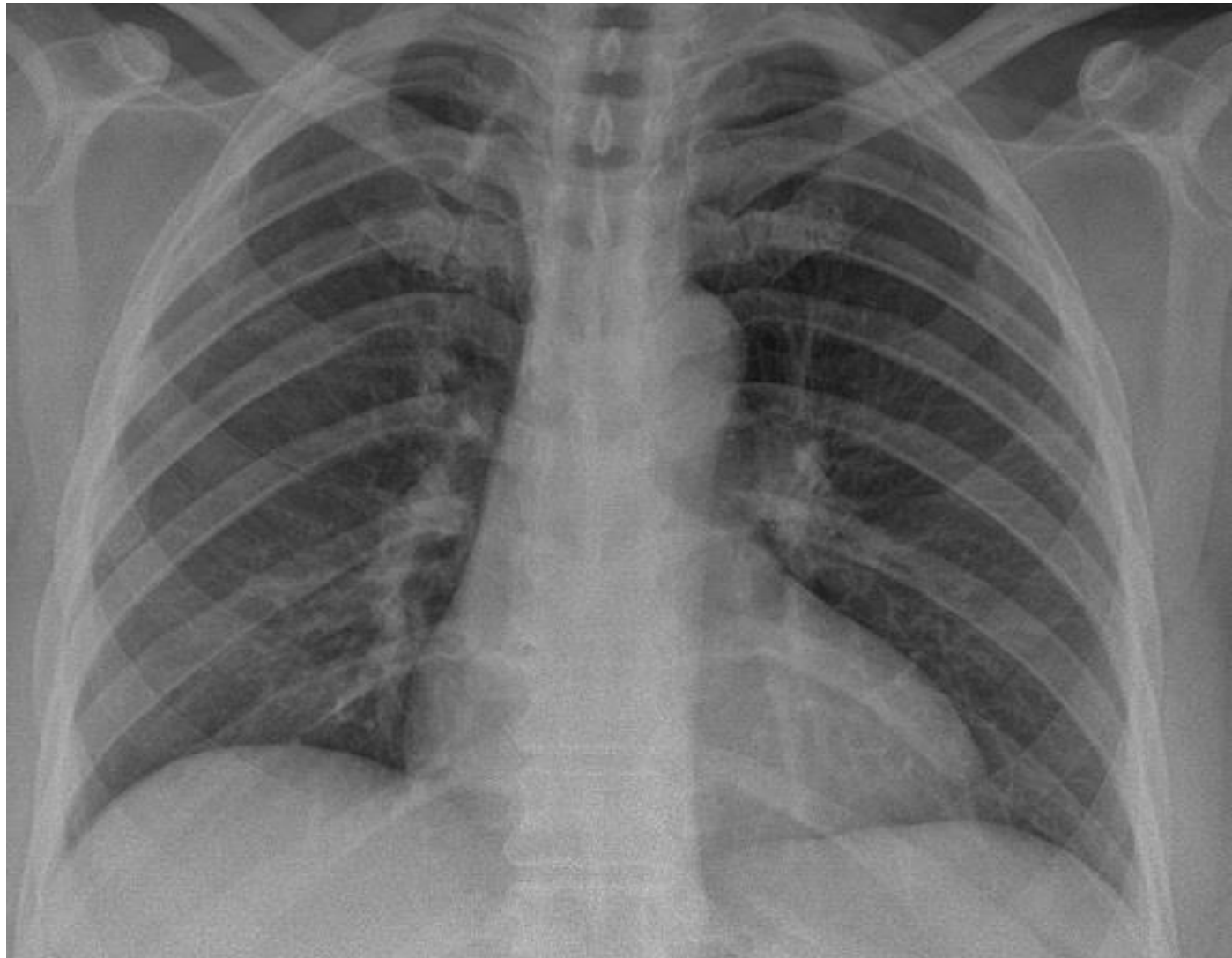


# Glukokortikoidlere Yanıt Vermeyen Hastaların Tedavisi

- İlk olarak tanıyı gözden geçirin.
- Özellikle başlangıçtaki iyileşmeyi kötüleşme izlediye, enfeksiyon da dışlanmalı.
- Fırsatçı enfeksiyonlar için BAL yapılmalı
- Genellikle oral prednizolon sürdürülürken sitotoksik bir ajan başlanır
- **AZATIOPRİNE** normal böbrek fonksiyonu olan hastalarda günde 50 mg ile başlanır
- Doz iki ila dört hafta içinde yavaşça arttırılır.
- Başlangıç hedef azatiyoprin dozu günde 1 ila 2 mg/kg'dır
- **Klinik yanıt için en az üç aylık kullanma**
- **Altı ay sonra sitotoksik ajanlar kesilir ve gerekirse hastalık kontrolü için günde iki kez mikofenalat mofetil 1000 ila 1500 mg'a geçilebilir..**
- Glukokortikoidler, genellikle hasta alternatif bir ajanla iyileştikten sonra yavaş yavaş azaltılır.

# Glukokortikoid Azaltımı Sırasında Nükslerin Tedavisi

- Genellikle glukokortikoidler azaltıldığında, **en sık olarak doz 15 mg veya altına düşürüldüğünde ortaya çıkar.**
- Bazı serilerde, hastaların yarısından fazlası hastalıkları sırasında en az bir klinik nüks yaşar
- **Nüksün ilk belirtisinde son iyi tolere edilen glukokortikoid dozunun eski haline getirilmesi**
- Bazı vaka sunumları ve vaka serileri, nüks durumunda bir makrolid antibiyotığın eklenmesinin faydasını da öne sürmüştür
- **Gecikmiş tanı, geç tedaviye başlama (semptom başlangıcından 2 ay sonra), şiddetli hastalık ve radyolojik olarak traksiyon bronşiektazileri olması, DLCO (<50%), hipoksemi artmış nüks riski ile ilişkili.**



# Olgu Sunumu-2

43 yaşında, kadın hasta, ev hanımı

**Yakınma:** Nefes darlığı, öksürük

**Hikaye:** Bir aydır yakınmaları mevcut

Dış merkezde viral pnömoni ön tanısıyla tedavi edilmiş, ancak yakınmaları devam etmesi üzerine sevk edilmiş

# Olgu Sunumu-2

**Özgeçmiş:** Diabetes mellitus

**Soygeçmiş:** Özellik yok

**Kullandığı ilaçlar:** Diamicron, metformin

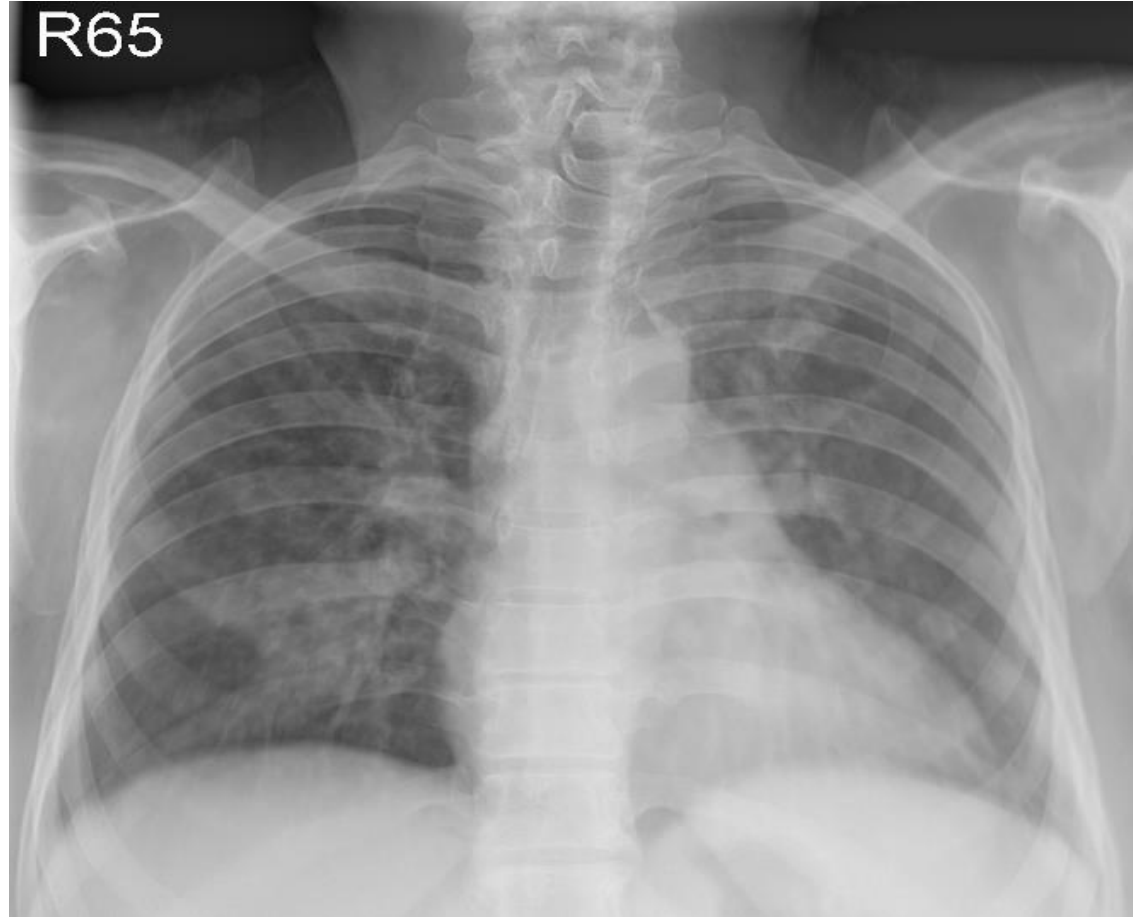
**Alışkanlıklar:** Sigara (-)  
Alkol (-)

**Fizik muayene:**

Solunum muayenesinde whezing, bilateral ral  
Diğer sistem muayeneleri normal



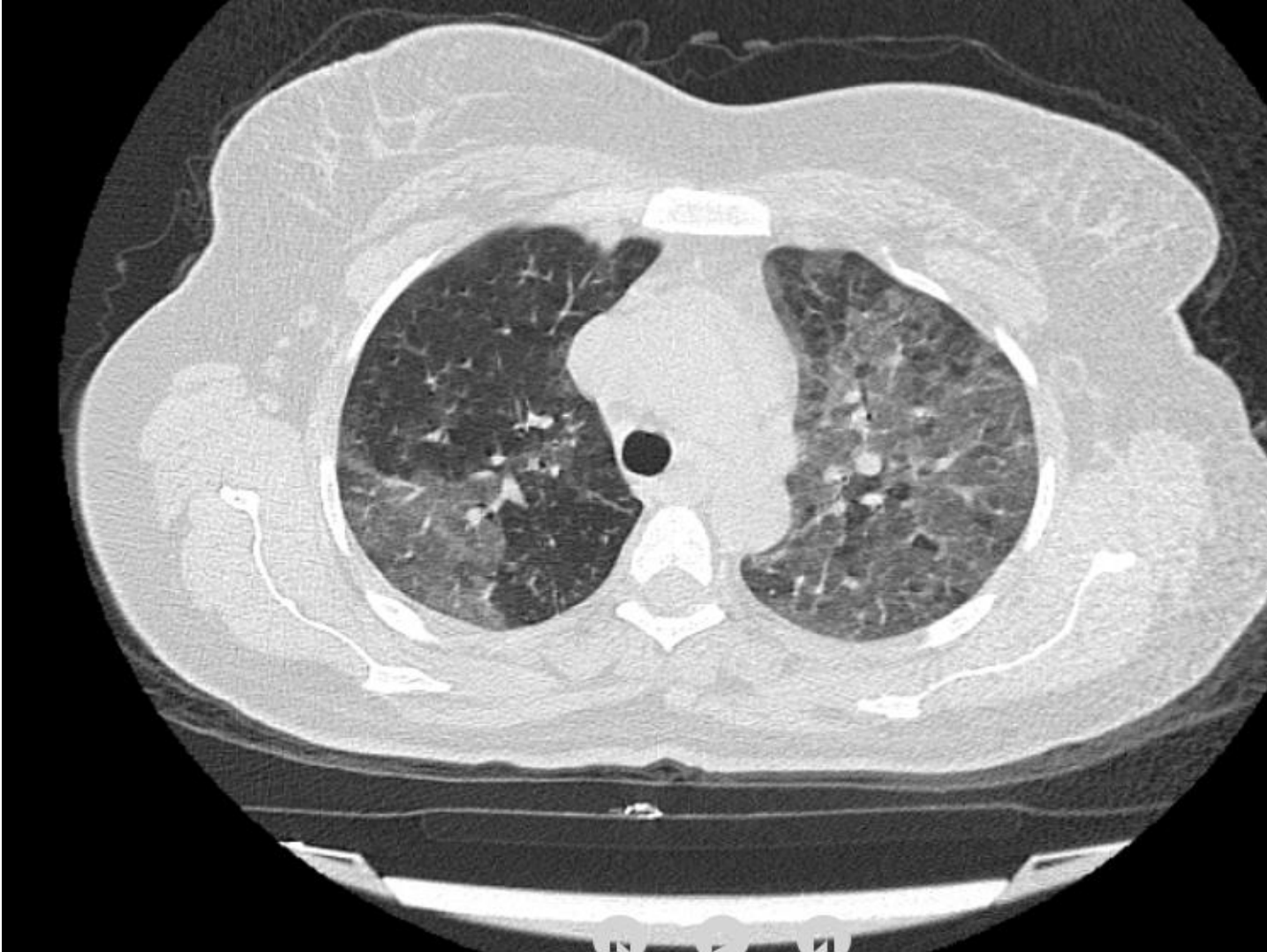
# Olgu Sunumu-2



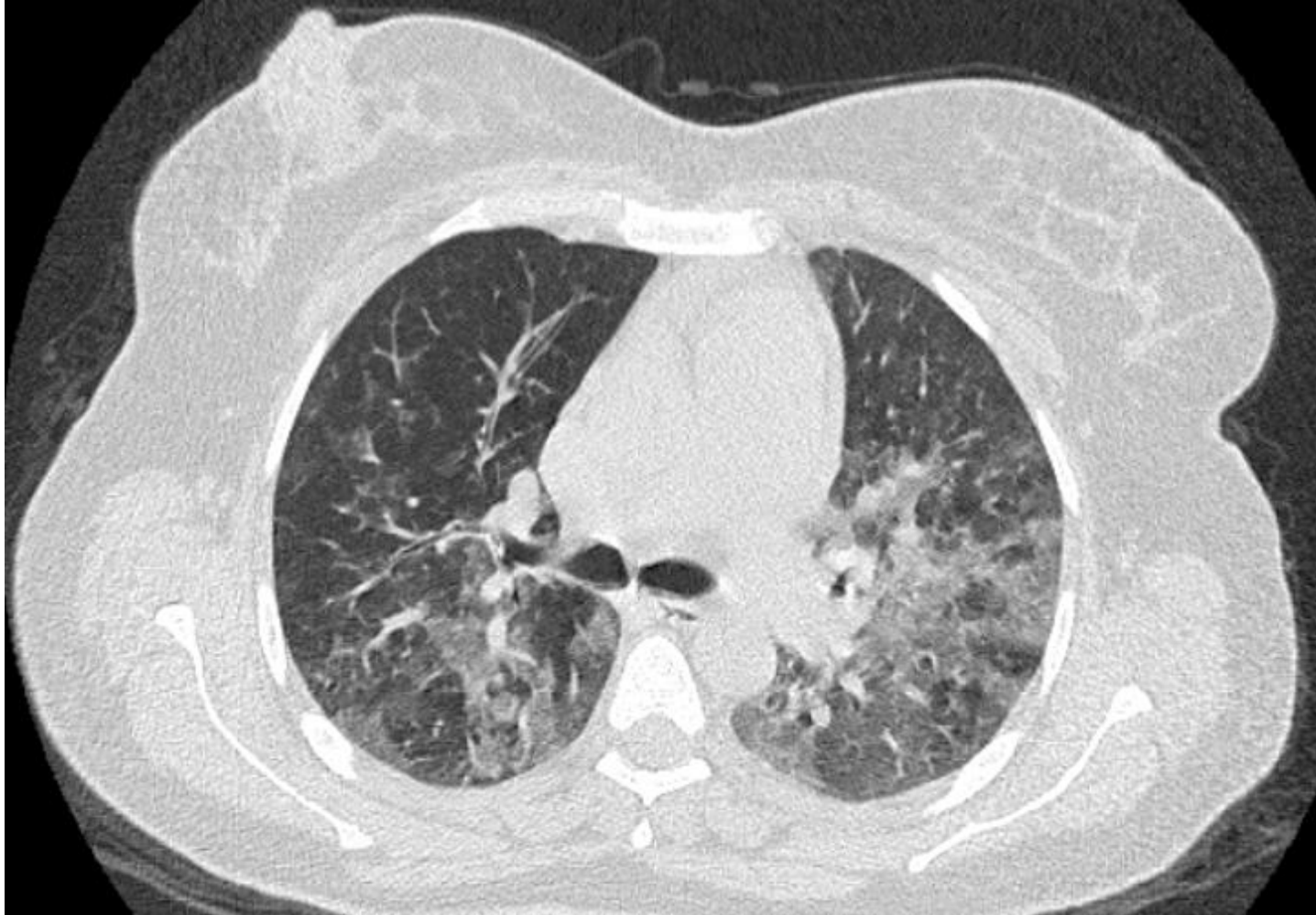
# Olgu Sunumu-2



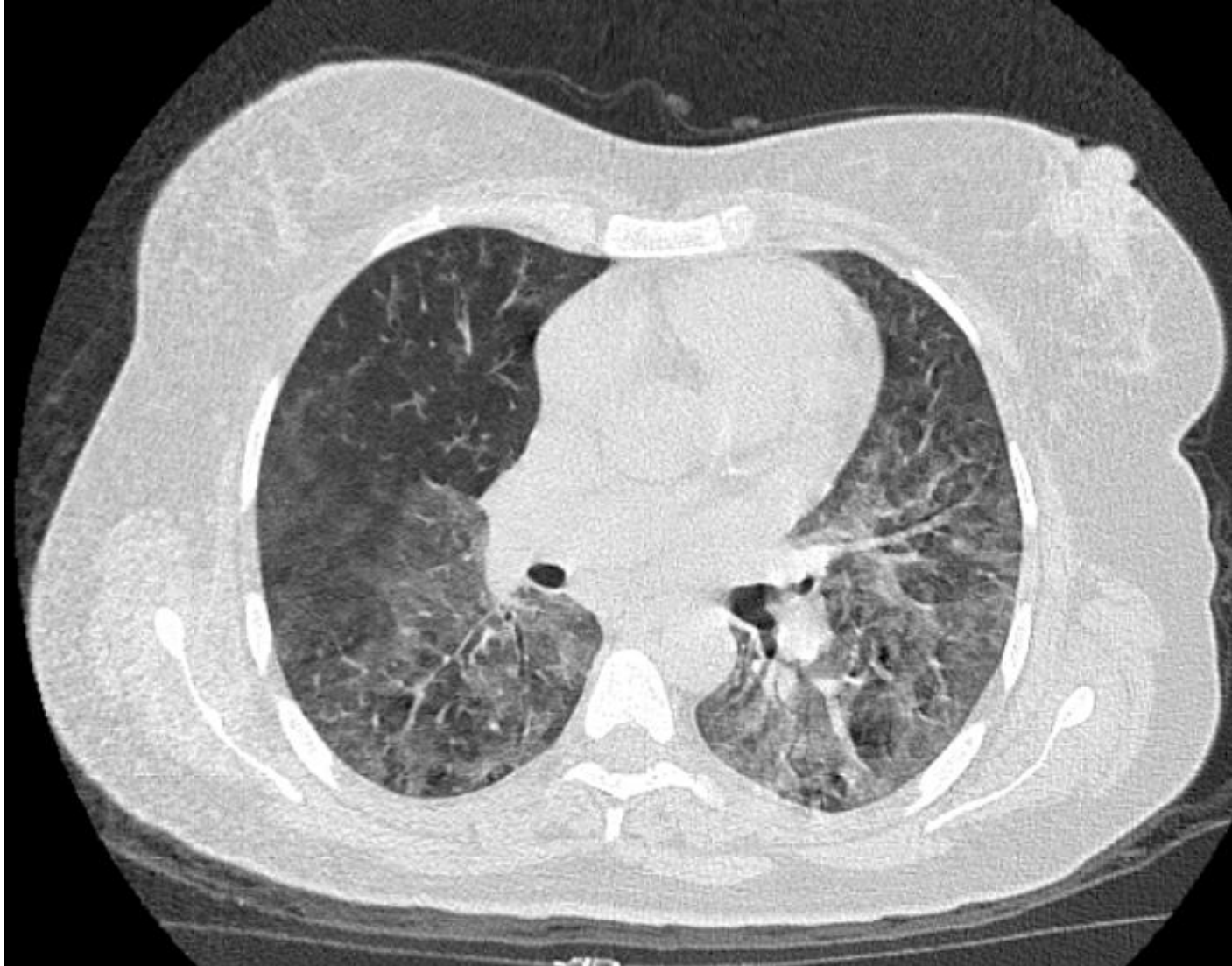
# Olgu Sunumu-2



# Olgu Sunumu-2



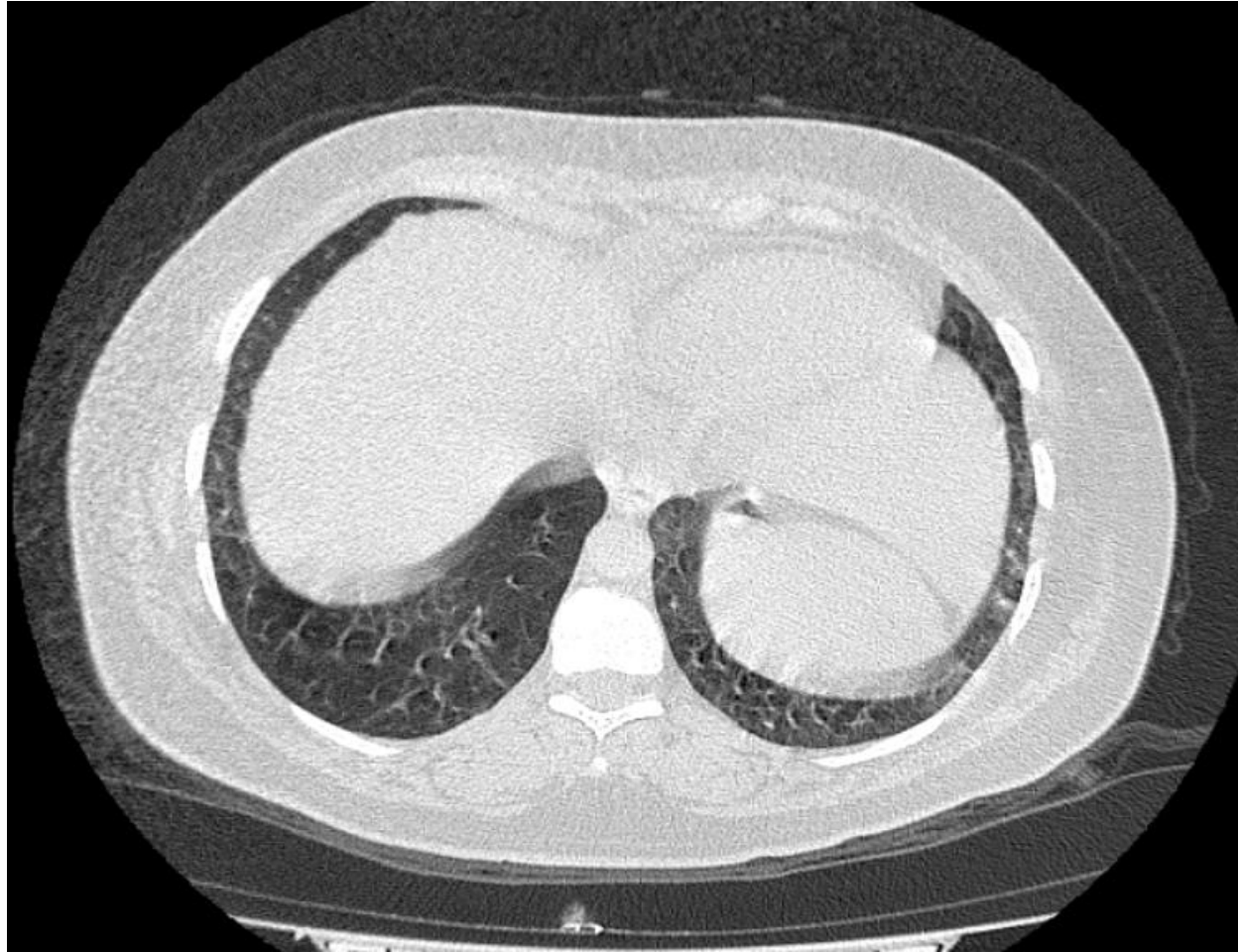
# Olgu Sunumu-2



# Olgu Sunumu-2



# Olgu Sunumu-2



# Olgu Sunumu-2

## Laboratuvar

- Htc:48,6
- Biyokimya: N
- HbA1c: 7,1
- CRP:6,99
- Sedimantasyon:31
- RF: (-)
- Komleman3: N
- Kompleman 4: N



# Olgu Sunumu-2

Radyolojik ön tanılarınız ?

- A) Eozinofilik Pnömoni
- B) Diffüz Alveolar Hemoraji
- C) Deskuamatif İnterstisyel Pnömoni
- D) Akut Hipersensitivite Pnömonisi
- E) Akut İnterstisyel Pnömoni
- F) Sarkoidoz

# Olgu Sunumu-2

## Laboratuvar

- ANA: Negatif
- Anti-ds-DNA: Negatif
- Kollojen doku markerleri
- **Ph:7,38 pCO<sub>2</sub>: 57,6 pO<sub>2</sub>:52,9 sO<sub>2</sub>:85,4 (oda havasında)**

# Olgu Sunumu-2

## Bronkoskopi:

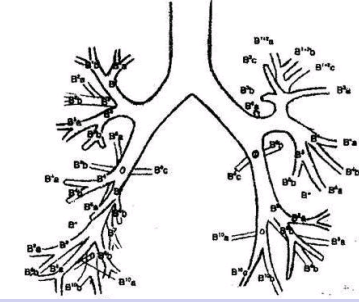
Vokal kordlar ve trakeadoğal.

Her iki bronşial sistemde endobronşial oluşuma rastlanmadı. Sağ alt lob anterior segmentten **BAL** yapıldı. Sitoloji, mikrobiyoloji ve flow sitometrik incelemeye gönderildi. Sağ alt lobdan **TBB** yapıldı.

**Endoskopik Bulguları** :Nazal yolla girildi. Vokal kordlar ve trakea doğaldı. Her iki bronşial sistemde endobronşial oluşuma rastlanmadı. Sağ alt lob anterior segment içinden bronkoalveoler lavaj yapıldı. Sitoloji ve Flow sitometrik incelemeye gönderildi. Sağ orta lobdan 3 adet transbronşial akciğer biyopsisi alındı. İşlem sonlandırıldı.

**Endoskopik Tanı**

:Tanı Okuyunuz.



# Olgu Sunumu-2

## BAL:

Berrak görünümde

- **Hücre analizinde: Lenfosit hakim (%60)**  
CD4: %40 CD8:%20
- **Sitolojik inceleme:** malignite negatif
- **Mikrobiyolojik inceleme:** kültür negatif

İlaç akciğerini  
de akılda  
tutalım

- Dispnö - hipoksemi -  $\leq 4$  hafta öykü
- HRCT'de yaygın buzlu cam opasitesi
- **BAL  $\geq$  %50 lenfosit varlığı**

BAL:  $\geq$  %25  
Eozinofil

BAL: Hemorajik

BAL: Alveolar  
makrofai artışı

BAL: Nötrofilik

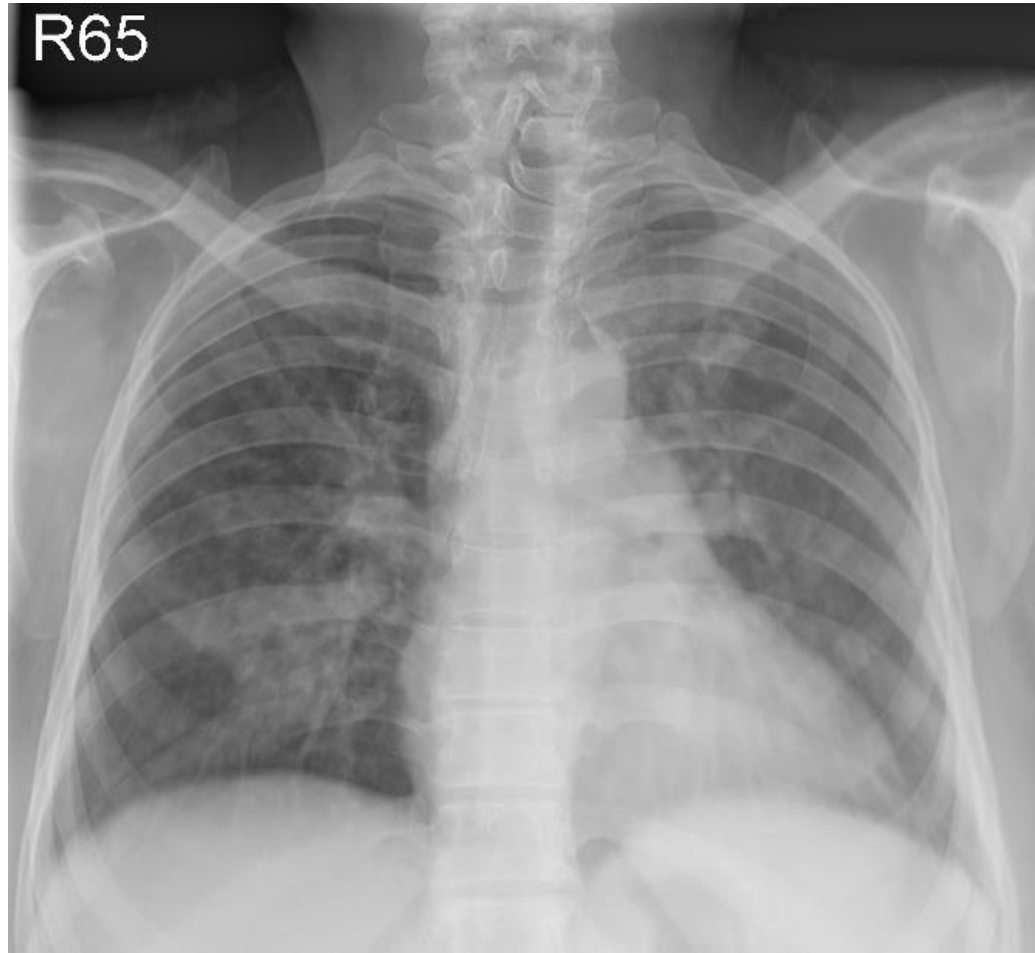
- A) Eozinofilik pnömoni
- B) Diffüz alveolar hemoraji
- C) Deskuamatif İnterstisyel pnömoni
- D) Akut hipersensitivite pnömonisi**
- E) Akut interstisyel pnömoni

# Olgu Sunumu-2

**TBB:** Parankimde alveoler septalarda hafif kalınlaşma ve konjesyon

Hastamızın ođlu güvercin  
besliyor

# Olgu Sunumu-2



# AMERICAN THORACIC SOCIETY DOCUMENTS

## Diagnosis of Hypersensitivity Pneumonitis in Adults

### An Official ATS/JRS/ALAT Clinical Practice Guideline

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*This guideline is dedicated to the memory of Prof. Jean-Charles Dalphin<sup>†</sup> (June 2, 1956–October 17, 2019)*

THIS OFFICIAL CLINICAL PRACTICE GUIDELINE WAS APPROVED BY THE AMERICAN THORACIC SOCIETY, JAPANESE RESPIRATORY SOCIETY, AND ASOCIACIÓN LATINOAMERICANA DE TÓRAX MAY 2020

**Background:** This guideline addresses the diagnosis of hypersensitivity pneumonitis (HP). It represents a collaborative effort among the American Thoracic Society, Japanese Respiratory Society, and Asociación Latinoamericana del Tórax.

**Methods:** Systematic reviews were performed for six questions. The evidence was discussed, and then recommendations were formulated by a multidisciplinary committee of experts in the field of interstitial lung disease and HP using the GRADE (Grading of Recommendations, Assessment, Development, and Evaluation) approach.

**Results:** The guideline committee defined HP, and clinical, radiographic, and pathological features were described. HP was classified into nonfibrotic and fibrotic phenotypes. There was limited evidence that was directly applicable to all questions. The need for a thorough history and a validated questionnaire to identify potential exposures was agreed on. Serum IgG testing against potential antigens associated with

HP was suggested to identify potential exposures. For patients with nonfibrotic HP, a recommendation was made in favor of obtaining bronchoalveolar lavage (BAL) fluid for lymphocyte cellular analysis, and suggestions for transbronchial lung biopsy and surgical lung biopsy were also made. For patients with fibrotic HP, suggestions were made in favor of obtaining BAL for lymphocyte cellular analysis, transbronchial lung cryobiopsy, and surgical lung biopsy. Diagnostic criteria were established, and a diagnostic algorithm was created by expert consensus. Knowledge gaps were identified as future research directions.

**Conclusions:** The guideline committee developed a systematic approach to the diagnosis of HP. The approach should be reevaluated as new evidence accumulates.

**Keywords:** hypersensitivity pneumonitis; fibrotic hypersensitivity pneumonitis; nonfibrotic hypersensitivity pneumonitis; interstitial lung disease; pulmonary fibrosis



## Yeni sınıflama

- Fibrotik olmayan (Nonfibrotik)
- Fibrotik

## Eski sınıflama

- Akut
- Subakut
- Kronik

## HP'de 3 önemli nokta

- 1. Maruziyetin tanımlanması
- 2. HRCT'de tipik HP paterni
- 3. BAL' da lenfositoz

# Radyoloji

- AC grafisi %20-30 olguda normal
- Üst lob tutulumu

## **HRCT Bulguları**

- Buzlu cam opasiteleri
- Sentriasiner noduller
- Hava hapsi, mozaik patern
- Üç dansite işareti (Headcheese işareti)

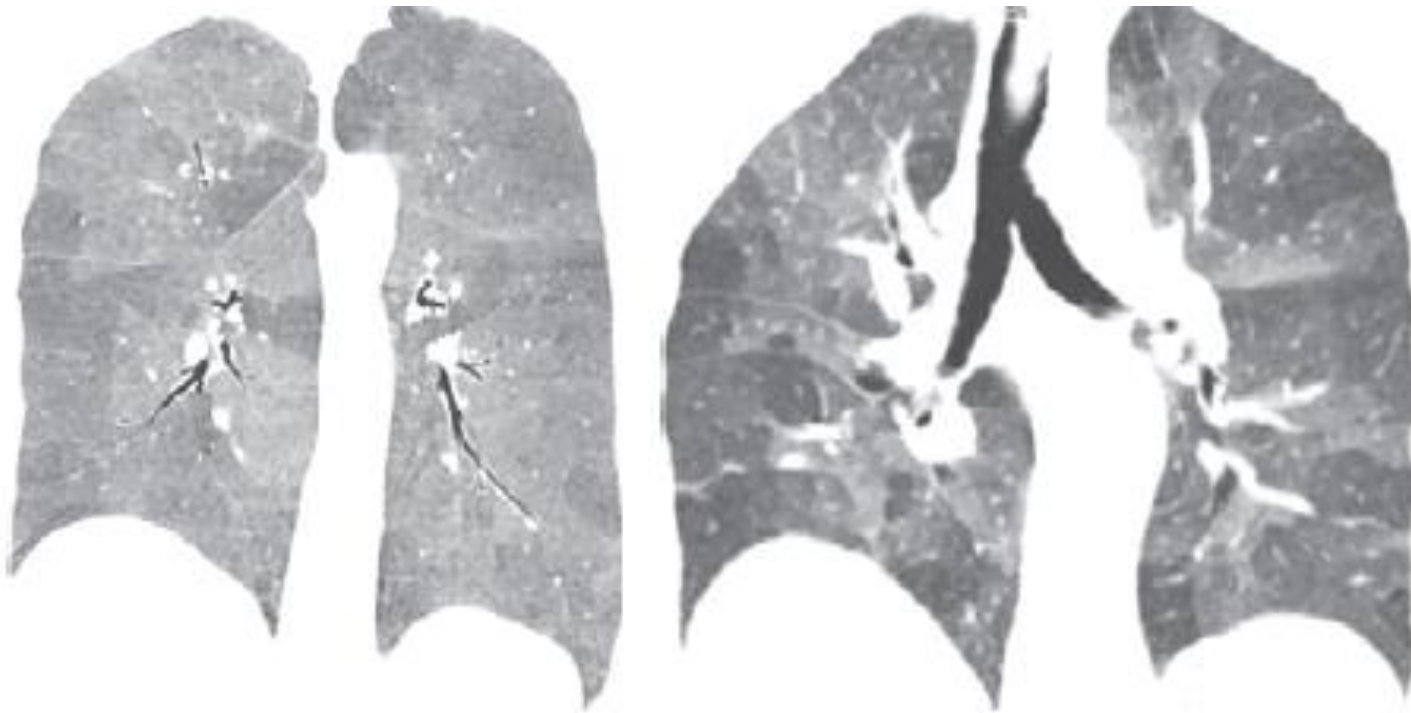
## Nonfibrotik HP: Sentrilobuler noduller



## Nonfibrotik HP

Inspiratuar faz: mozaik atenuasyon

Expiratuar faz: hava hapsi



# Fibrotik HP

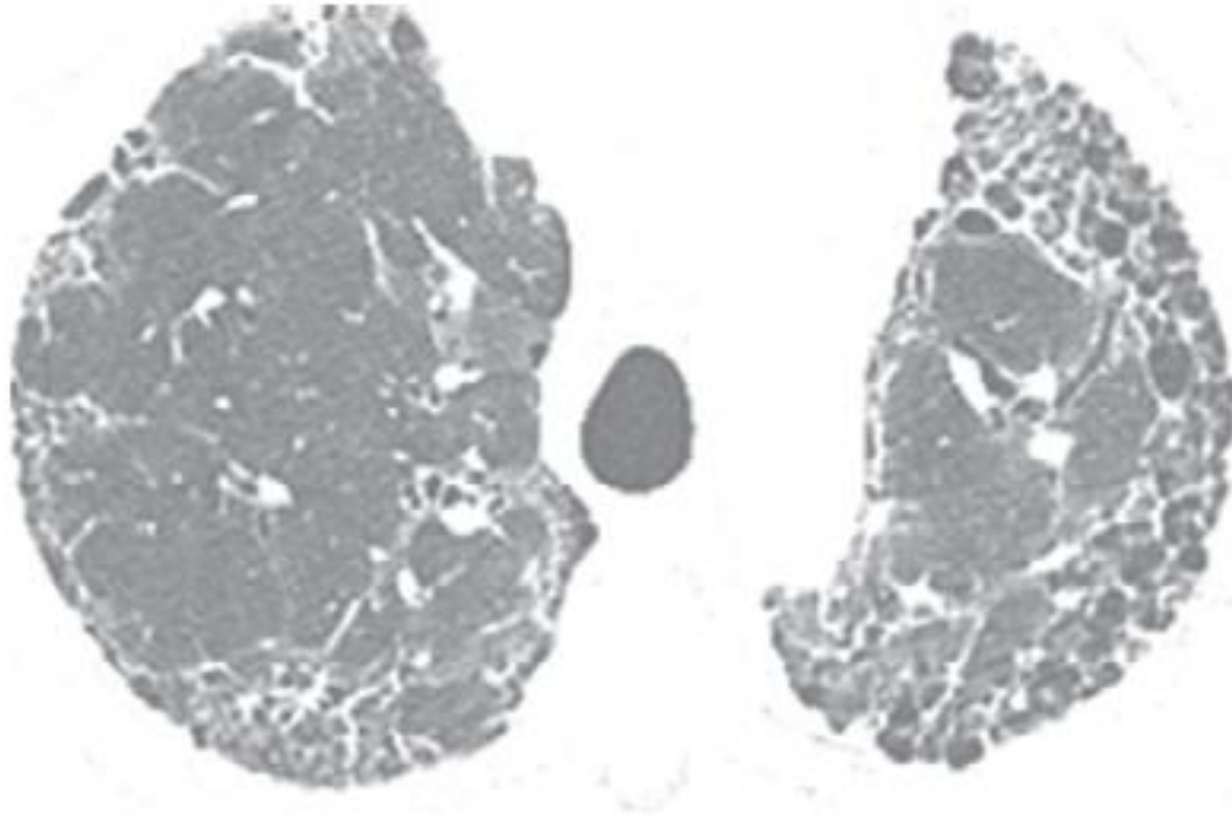
- **Fibrozis bulguları:**
  - İnterlobuler septal kalınlaşma
  - Traksiyon bronşektazileri
  - Balpeteği
- **HP lehine bulgular:**
  - Üst-orta zon tutulumu**
  - Buzlu cam, sentrilobuler noduller, mozaik perfüzyon

## Fibrotik HP

Kaba retikulasyon ve minimal balpeteđi: random axial dađılım

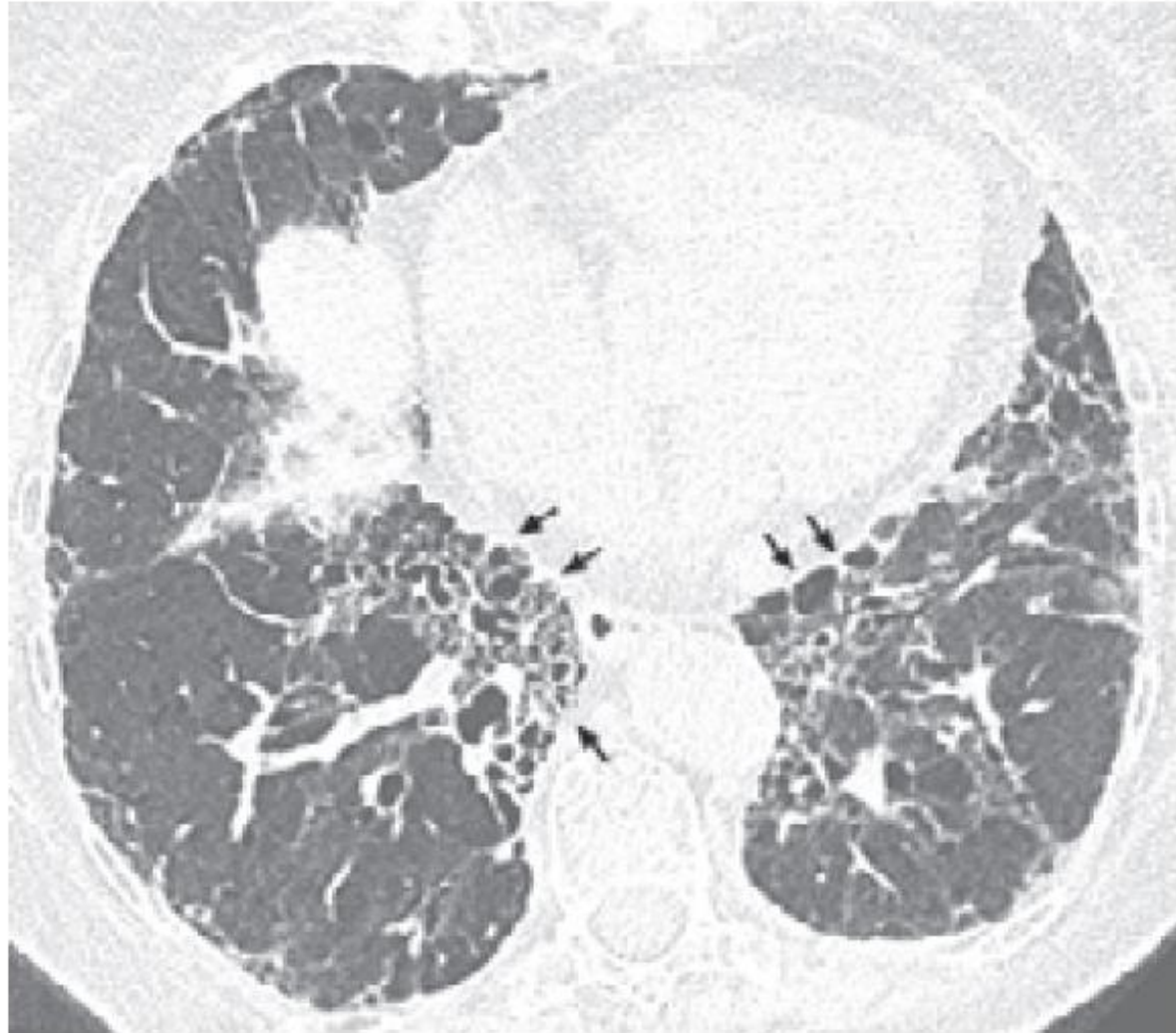


## Fibrotik HP; üst zon baskın

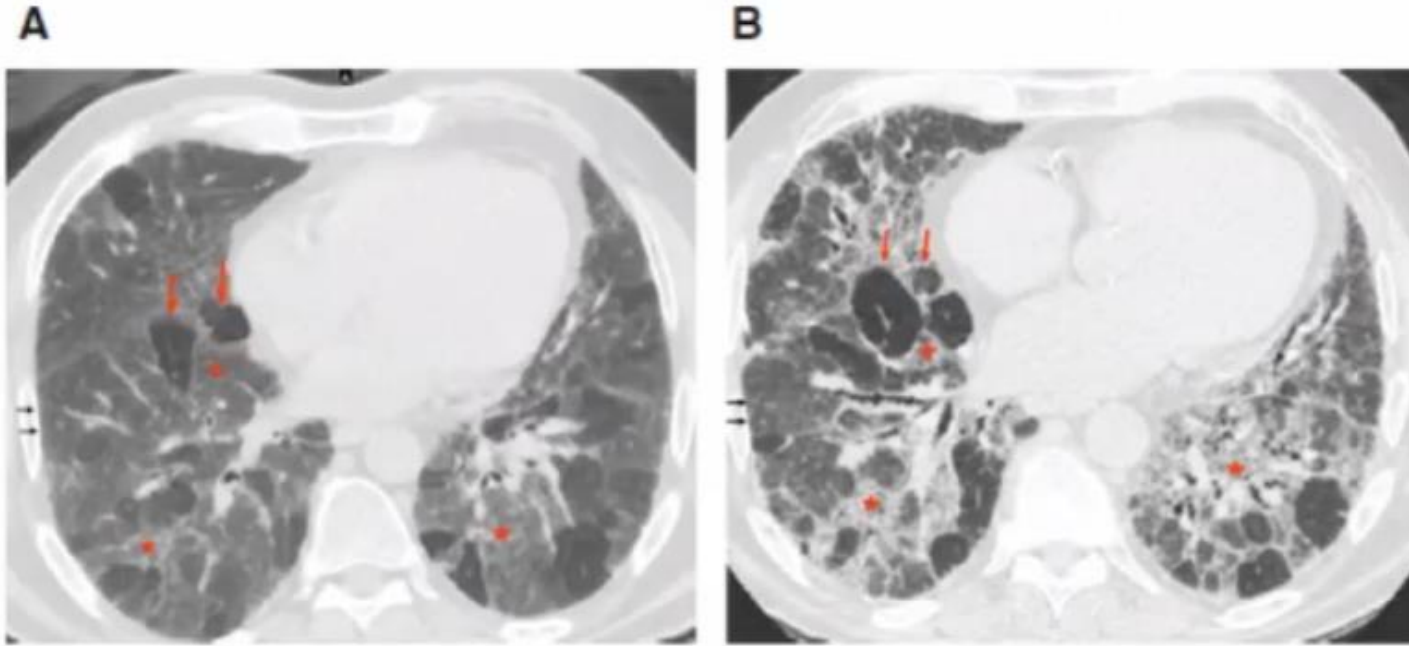




## Fibrotik HP; santral bronkovaskuler baskın



# Fibrotik HP, Headcheese sign paterni



A: İspiratuar B: Ekspiratuar  
Kırmızı yıldız: buzlu cam  
Kırmızı ok: hiperlüsen alan  
Siyah ok: normal AC

# Diagnosis of Hypersensitivity Pneumonitis in Adults

## An Official ATS/JRS/ALAT Clinical Practice Guideline

HRCT

Typical for HP

Compatible with HP

Indeterminate for HP

History of exposure and/or serum IgG testing	Exposure +	Exposure -	Exposure +	Exposure -	Exposure +	Exposure -
No BAL or BAL without lymphocytosis <u>and</u> either no histopathology or indeterminate histopathology	Moderate confidence	Low confidence	Low confidence	Not excluded	Not excluded	Not Excluded
BAL lymphocytosis without histopathology sampling	High confidence	Moderate confidence	Moderate confidence	Low confidence	Low confidence	Not excluded
BAL lymphocytosis with indeterminate histopathology	Definite	High confidence	Moderate confidence	Moderate confidence	Low confidence	Not excluded
Probable HP histopathology	Definite	High confidence	High confidence	Moderate confidence	Moderate confidence	Low confidence
Typical HP histopathology	Definite	Definite	Definite	Definite	Definite	High confidence*

- OLGU 3

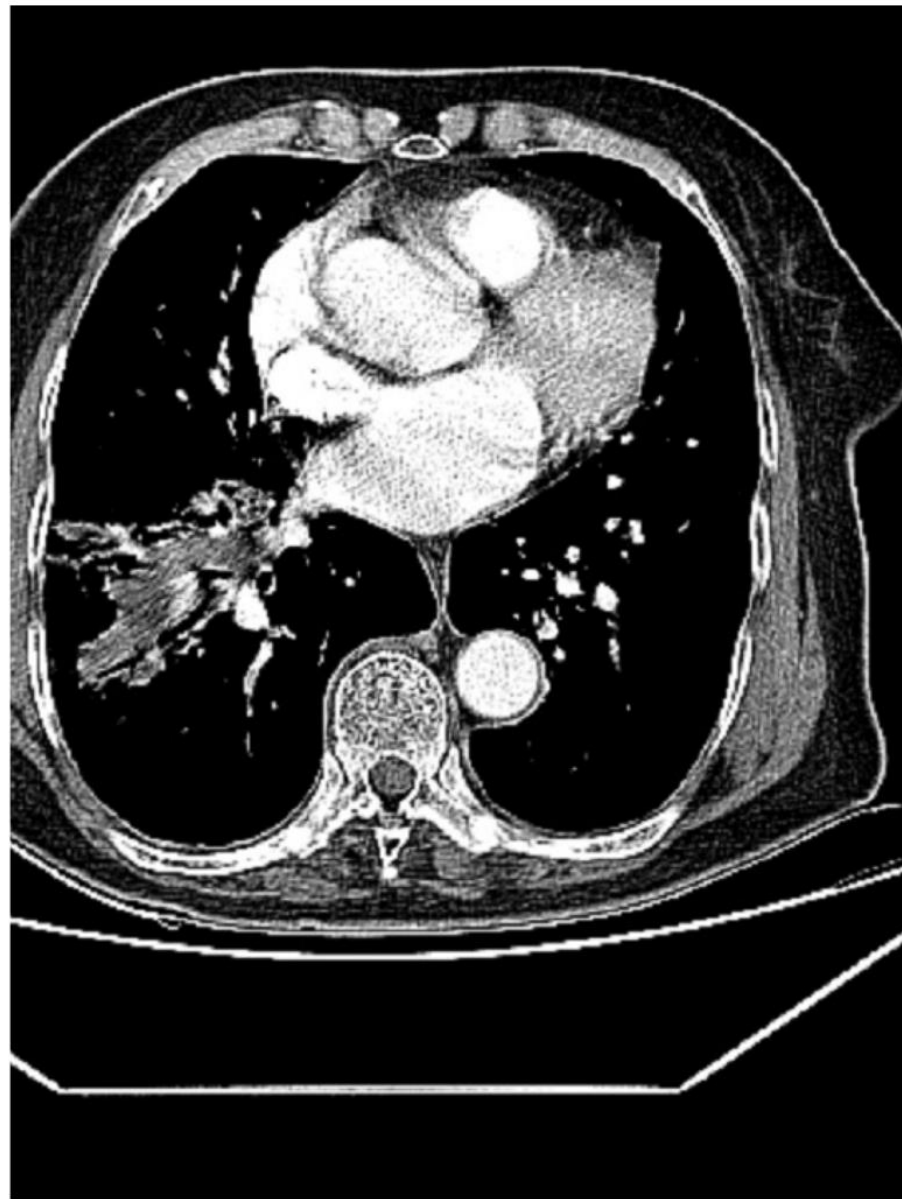
- 77 yaşında kadın hasta
- öksürük, iştahsızlık, halsizlik, kilo kaybı şikayetleri
- pnömoni tanısı ile 10 günlük ampirik antibiyotik tedavisi kullanımı
- Yakınmalarında geçme yok

- TA: 110/70 mmHg, Nabız: 80/dk, Ateş: 37°C
- Solunum sistemi muayenesinde sağ akciğer altta solunum sesleri azalmış ,
- Wbc: 11000/ $\mu$ L, Hb:13g/dL, Hct:33, PLT: 250/ $\mu$ L, sedimentasyon hızı: 33mm/saat, CRP:30.
- Hastanın özgeçmişinde bilinen deri bazal hücreli karsinomu ve hipertansiyon dışında ek hastalığı yok



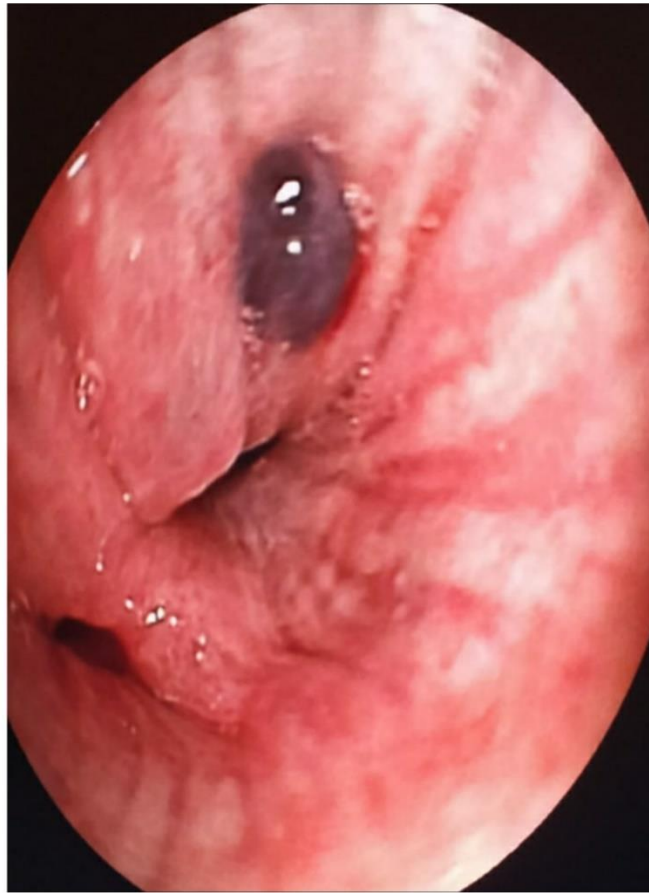
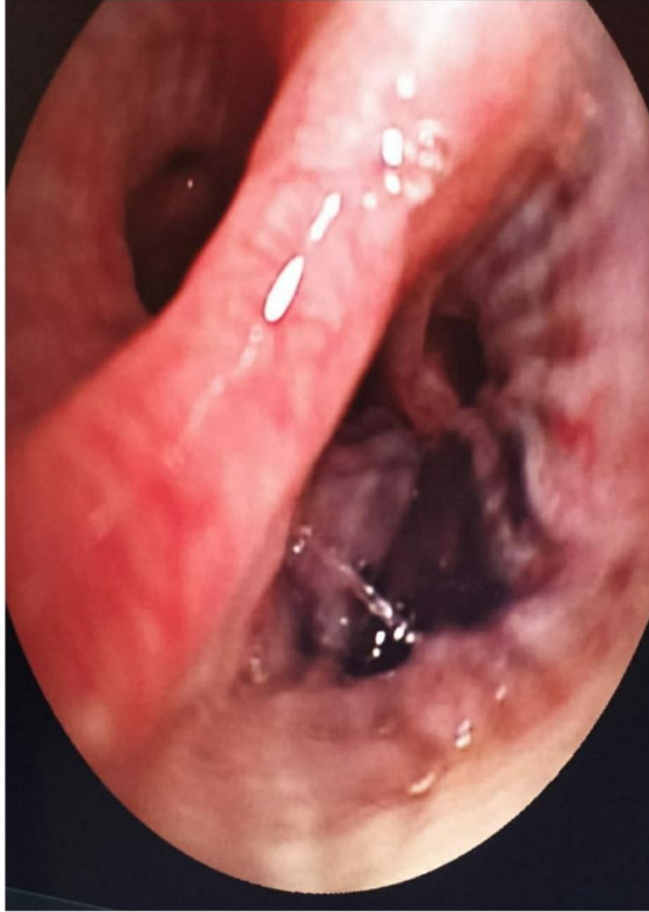


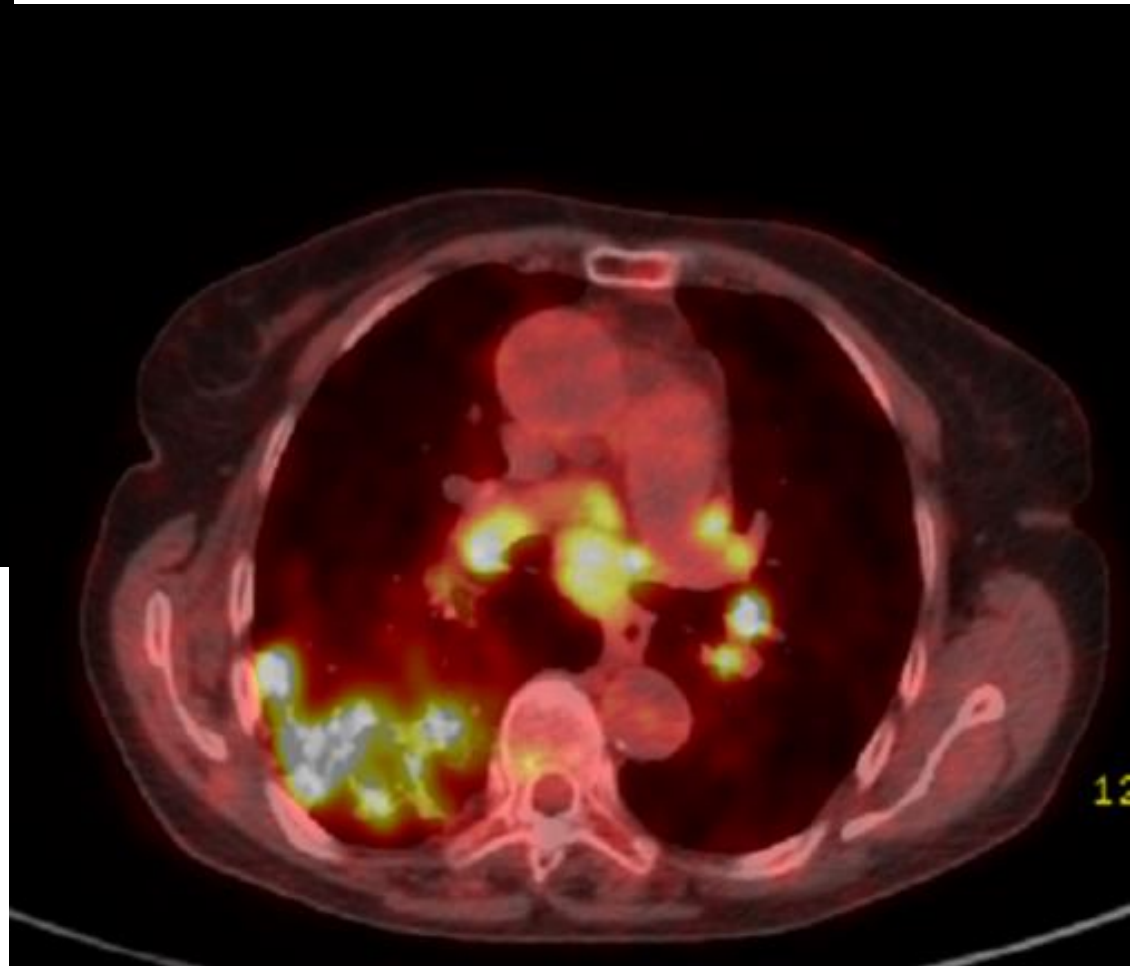
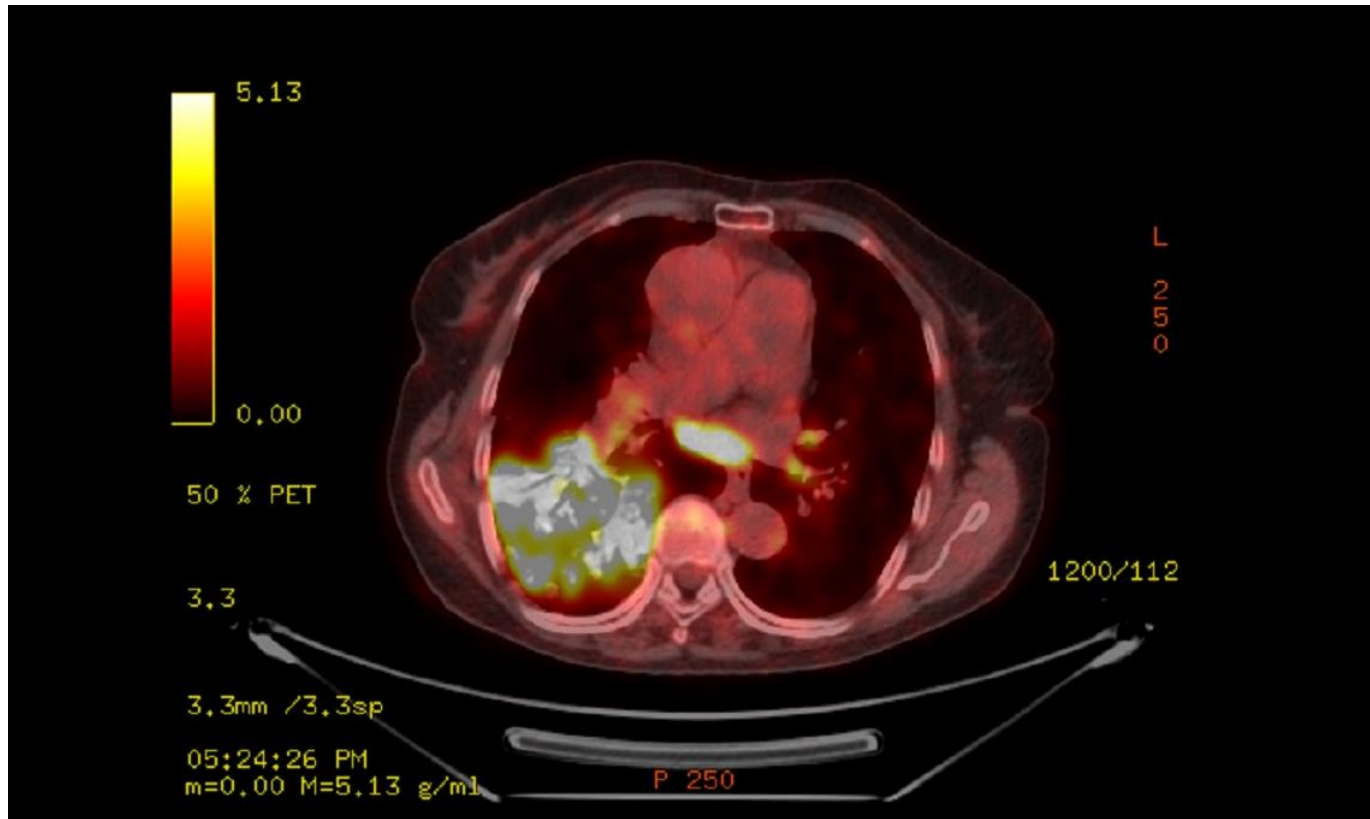




# Ön tanılarınız

- Pnömoni
- Organize pnömoni
- Akciğer karsinomu
- Başka organın akciğere metastazı
- Tüberküloz





# PATOLOJİ

- patoloji sonucu bronş mukozasında, yoğun lenfoplazmositik inflamasyon içinde **granulom yapıları** (santralinde **kazeifikasyonla uyumlu** olabilecek nekroz), parçaların bir kısmı hyalinize, fibrotik, antrakotik ve kısmen nekrobiotik asellüler bağ dokudan oluşmakta olarak raporlandı.
- Bu arada BAL PCR pozitif ve ARB pozitif saptandı .
- 1 ay sonraki kültürde de M. Tuberculosis complex üredi .



Tedavinin 6. ayında

OLGU -4

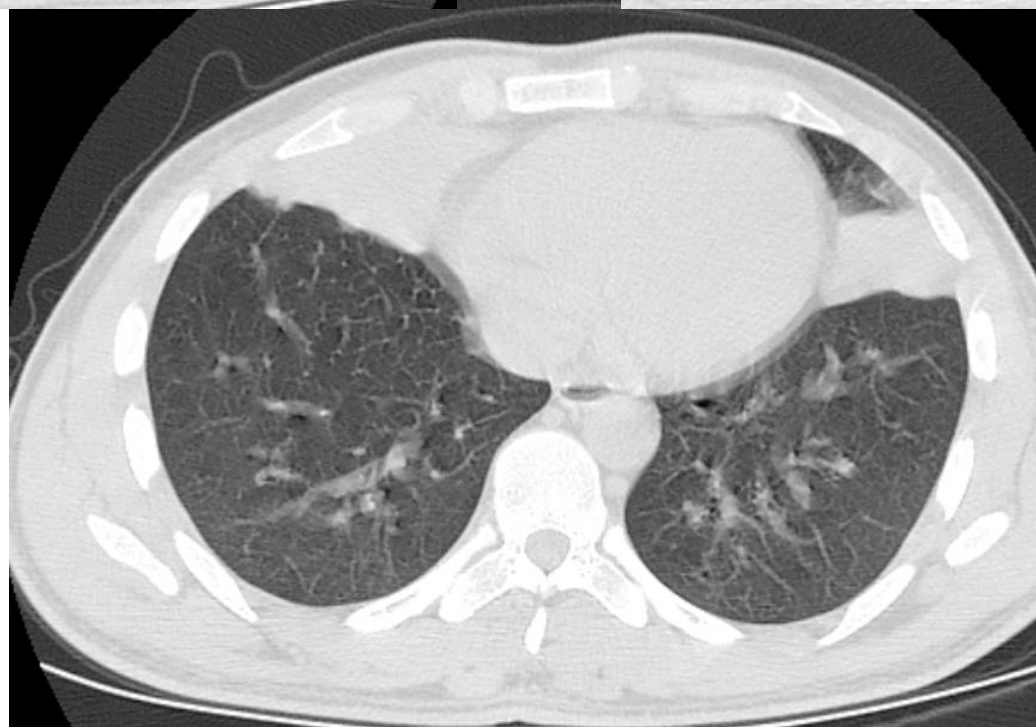
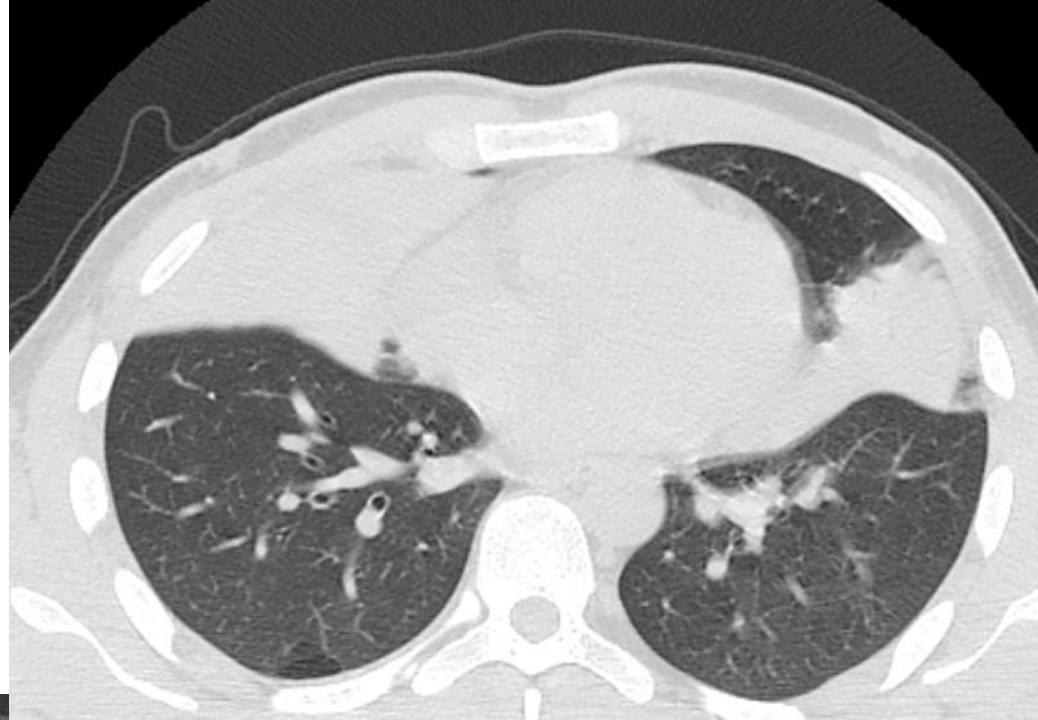
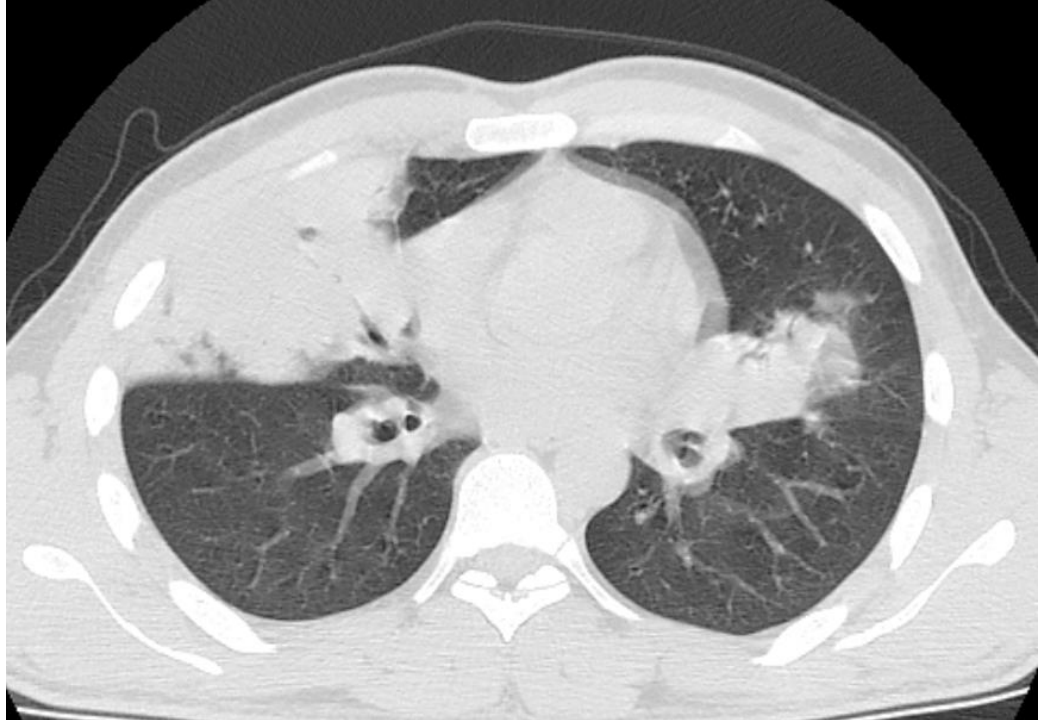
- 22 yaşında erkek hasta
- Ateş, öksürük yakınması ile dışmerkeze başvuruyor
- Ek hastalık yok
- Kullandığı ilaç yok
- Özgeçmiş özellik yok





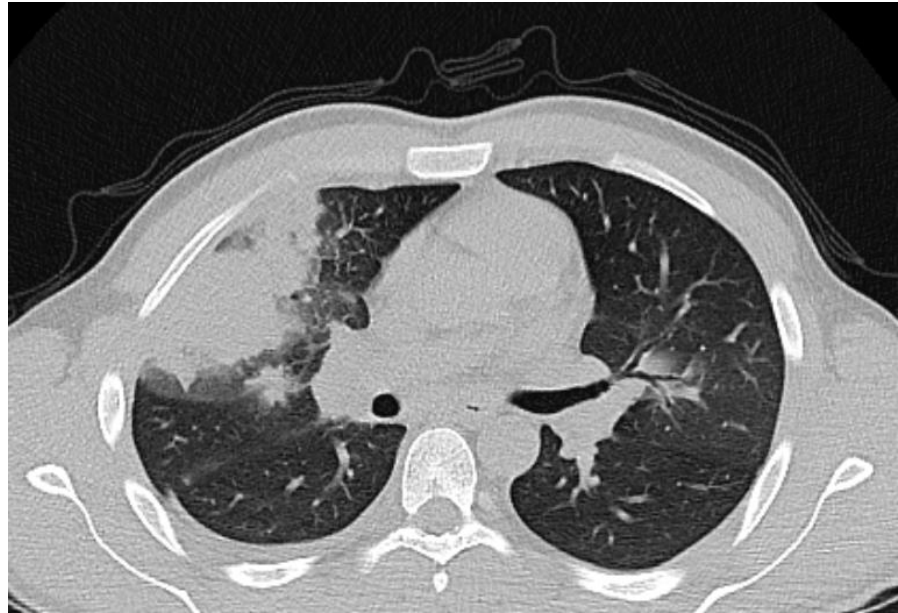
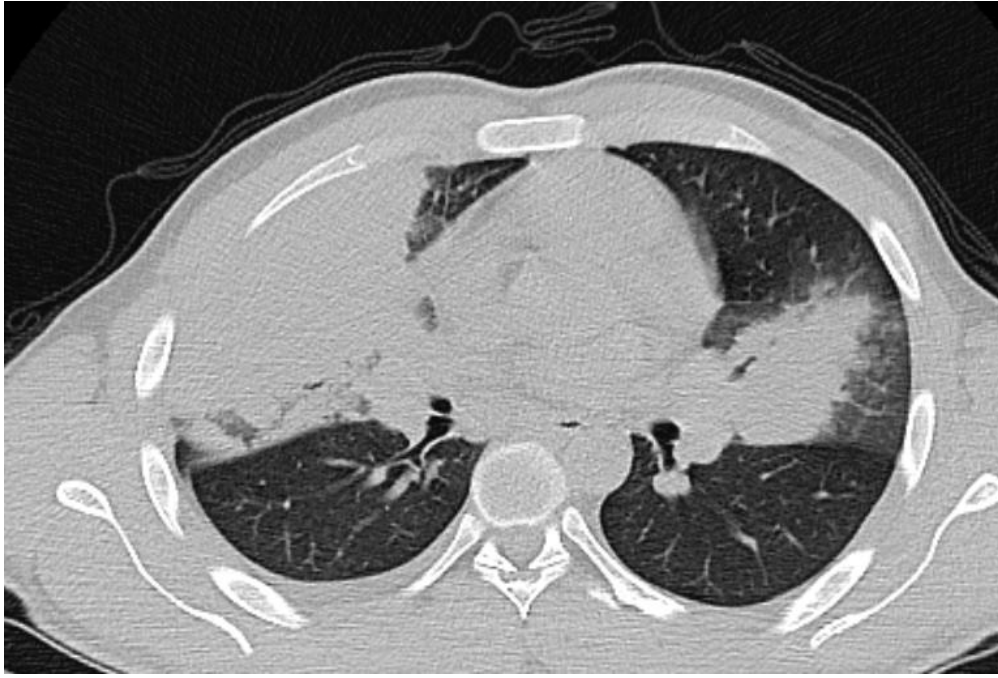
16.11.2022

- Hasta antibiyotik tedavisi kullanıyor (gemifloksasin 1x1)
- Yakınmaları bir miktar azalıyor



19.12.2022

- Dış merkezde bronkoskopi ve EBUS
- Hasta bu arada moksifloksasin ve 3. kuşak sefalosporin tedavisi daha almış.



Şubat 2023



Şubat 2023



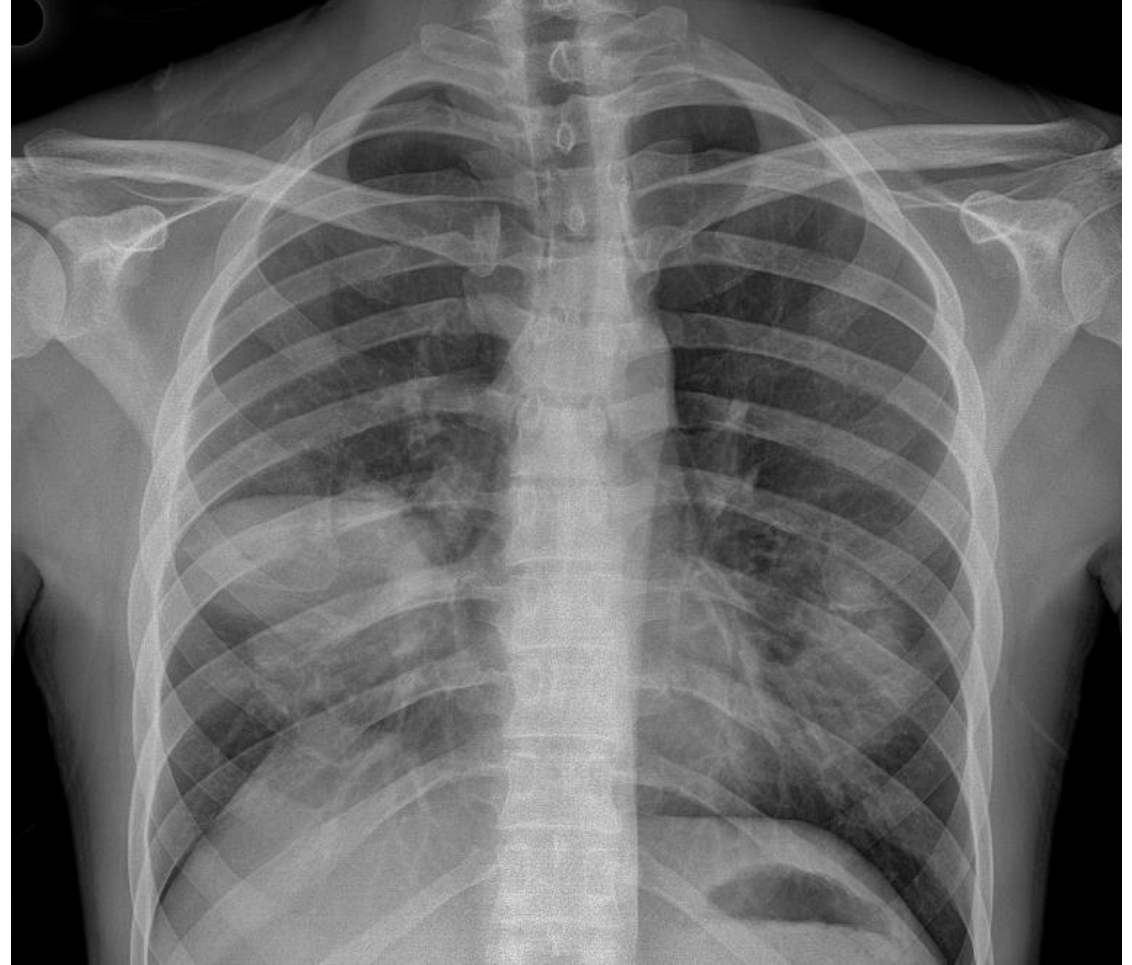
- Dış merkez sonuçları : Hastanın Tbc Balgam ARB Negatif.
- BAL: ARB Negatif.
- Mikobakter PCR Eser Miktarda M.Tbc Complex DNA'sı saptandı.
- Dış Merkez Kurumunda Göğüs Hastalıkları Konsey kararı ile hastaya Anti Tb Tedavi Başlanıyor.

- 2 ay sonra kültür sonuçları negatif
- Yakınmalarında azalma yok

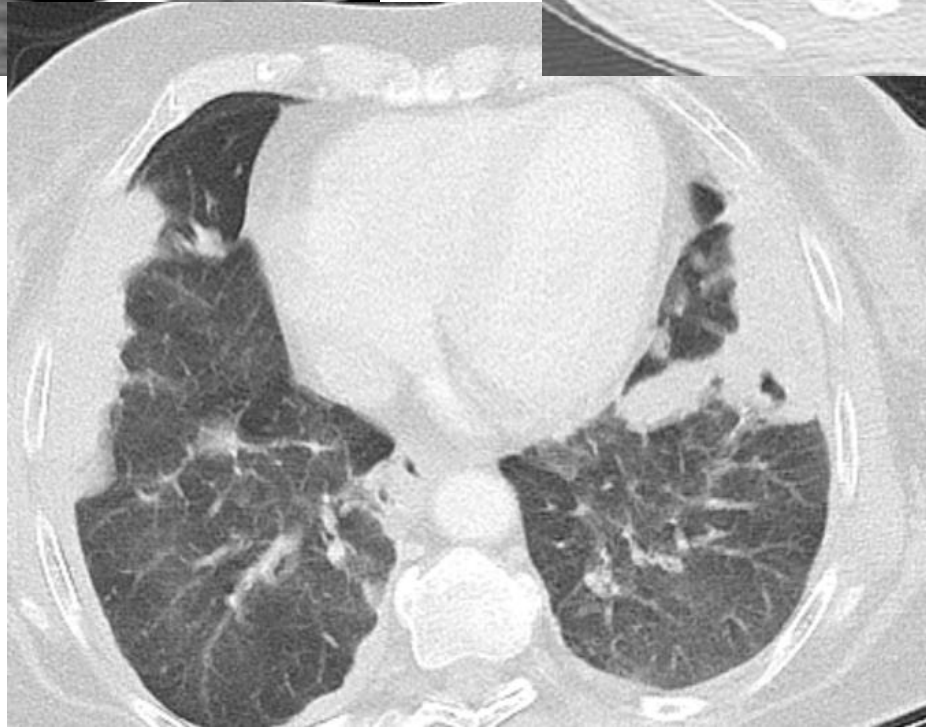
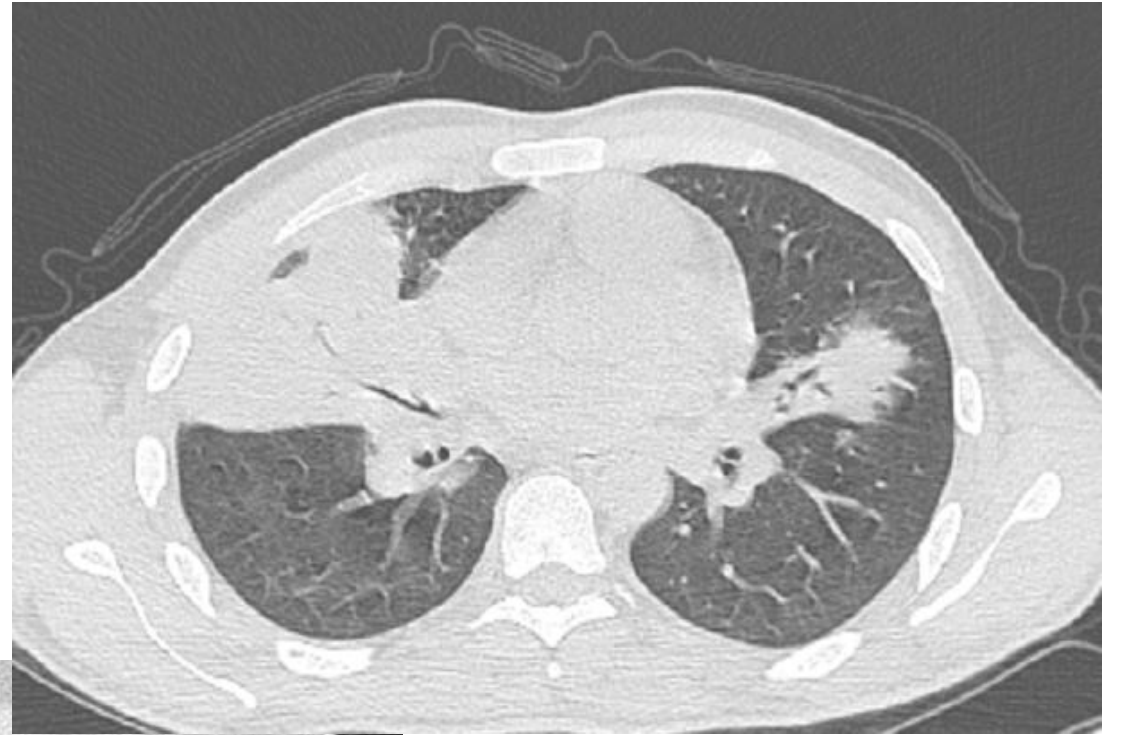
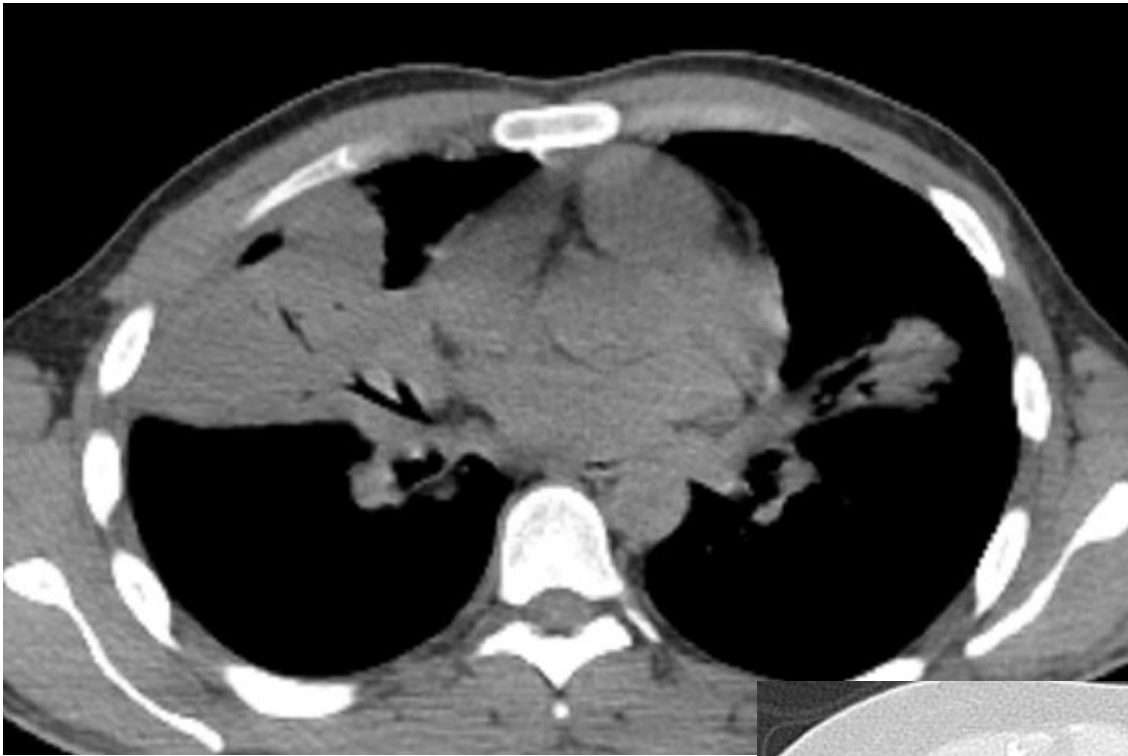




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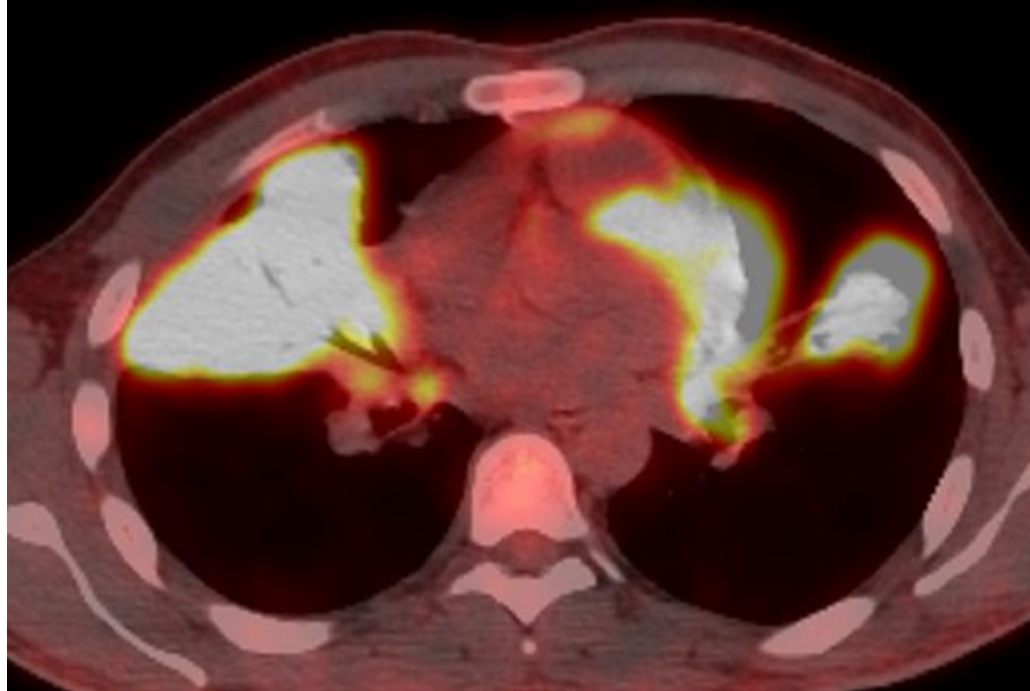
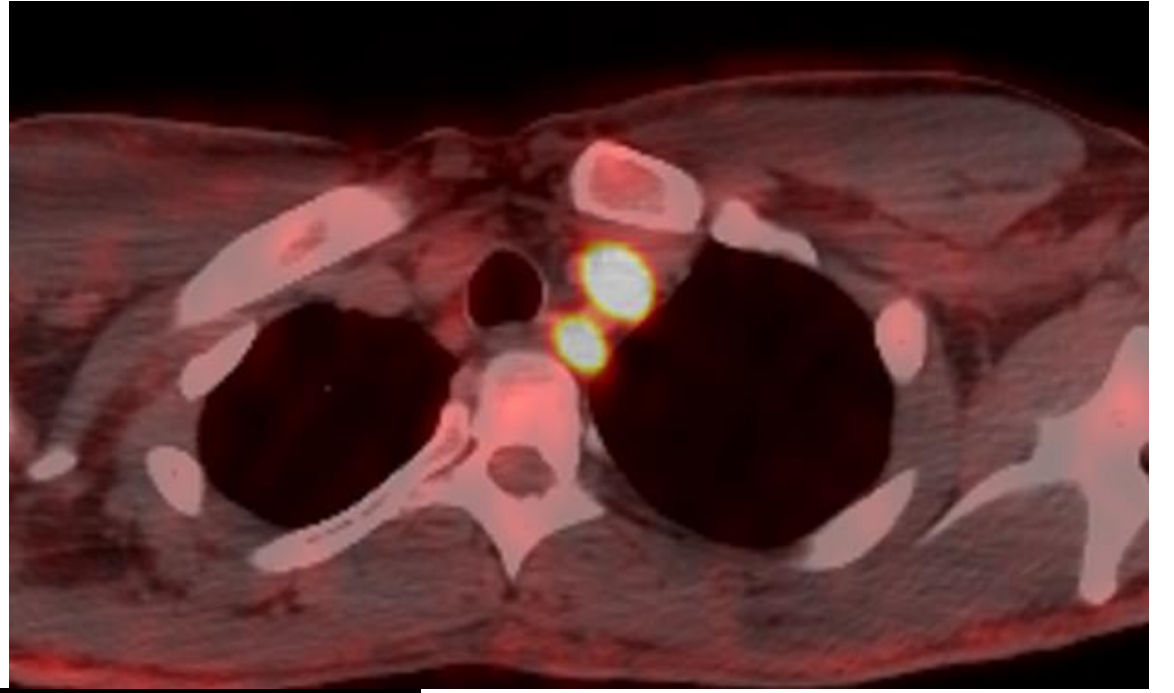
Nisan 2023



Nisan 2023

# Ön tanılar

- Lenfoma
- Sarkoidoz
- Organize pnömoni



Servikal, mediastinal, torakal ve abdominal multipl hipermetabolik lenf nodları.

\*\*Sağ akciğerde orta lobu dolduran, sol akciğerde linguler segmentte, içerisinde hava bronkogramları izlenen, santral alandan periferik uzanan hipermetabolik konsolidasyon alanları.

\*\*Axial ve proksimal appendiküler iskelet sisteminde hafif artmış kemik iliği aktivitesi.

# Diagnostic yield of EBUS-TBNA for lymphoma and review of the literature

Onur Fevzi Erer, Serhat Erol, Ceyda Anar, Zekiye Aydođdu<sup>1</sup>, Serir Aktođu Özkan

Departments of Chest Diseases and <sup>1</sup>Pathology, İzmir Dr. Suat Seren Chest Diseases and Surgery Training Hospital, İzmir, Turkey

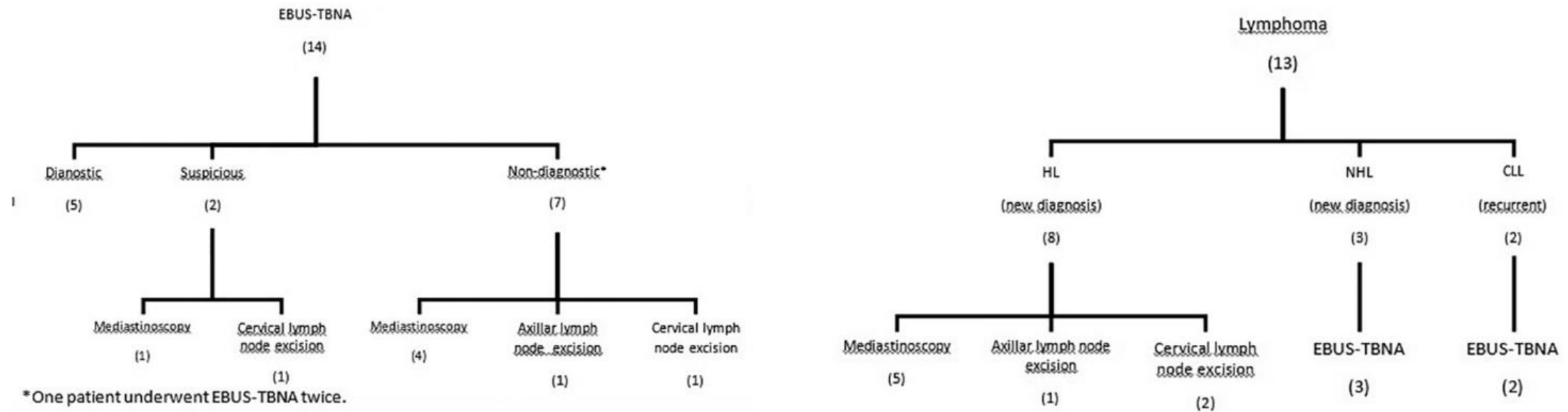


Figure 3. Results of EBUS-TBNA and confirmation method

HL: Hodgkin lymphoma, NHL: non-hodgkin lymphoma, CLL: chronic lymphocytic leukemia

**Table 3. Results of previous studies**

Studies	Number of cases	EBUS-TBNA results						Sens %	Spes %	PPV %	NPV %	DA %
		Diagnostic		Suspicious		Nondiagnostic						
		HL	NHL	HL	NHL	HL	NHL					
Kennedy <i>et al.</i> <sup>[10]</sup>	11	1 (N) 1 (R)	7 (R)	1 (N)			1 (N)	90.9	100	100	92.6	96
Steinfort <i>et al.</i> <sup>[11]</sup>	21	2	10	1	3	3	2	57	100	100	87	
Marshall <i>et al.</i> <sup>[12]</sup>		1 (N) 1 (R)	1 (N) 5 (R)	3								
Iqbal <i>et al.</i> <sup>[13]</sup>	62	1 (N)	18 (R) 6 (N)	2 (N)	2 (R) 2 (N)	3(R) 8(N)	8 (R) 12 (N)	G:38 N:22 R:55				
Moomin <i>et al.</i> <sup>[14]</sup>	65	13	10 (HgL) 30 (LgL)	11	1		1	89	97	98	83	91
Ko <i>et al.</i> <sup>[15]</sup>	10	1(N)	6	1(N) 1(R)	1(R)							
Şentürk <i>et al.</i> <sup>[16]</sup>	15	9 (N)	2 (N) 2 (R)				2 (N)	86.7	100	100	96.4	97

HL: Hodgkin lymphoma, NHL: Non-Hodgkin lymphoma, Sens: Sensitivity, Spes: Specificity, PPV: Positive predictive value, NPV: Negative predictive value, DA: Diagnostic accuracy, N: New diagnosis, R: Recurrent, G: General, HgL: High-grade lymphoma, LgL: Low-grade lymphoma

- EBUSTBNA, tekrarlayan lenfomaların tanısında ilk tanı yöntemi olabilir.
- Ancak şüphelenilenler için,yeni vakalarda, özellikle HL için, EBUS-TBNA'nın tanısal verimi düşüktür ve negatif sonuçlar lenfomayı dışlamaz.
- Şüphesi yüksek olan hastalara mediastinoskopi gibi ileri girişimler yapılmalıdır.

- Hastaya VATS ve mediastinoskopi
- Tanı : Hodgkin Lenfoma



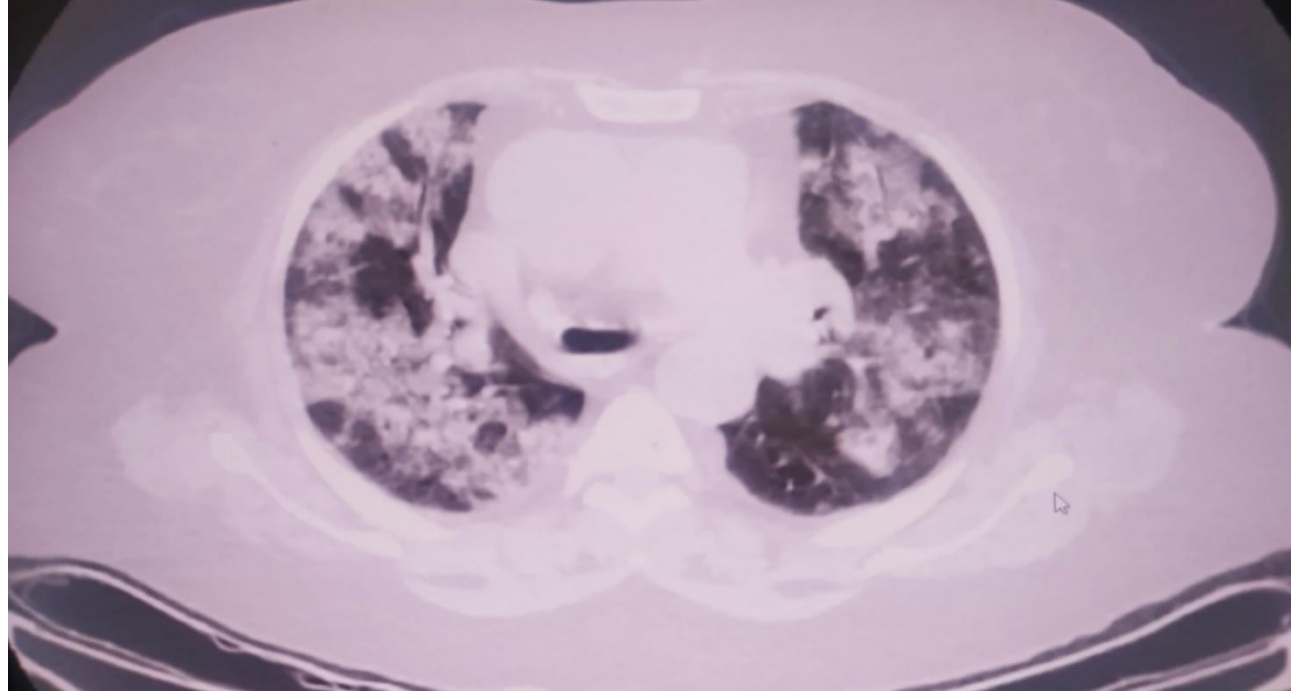
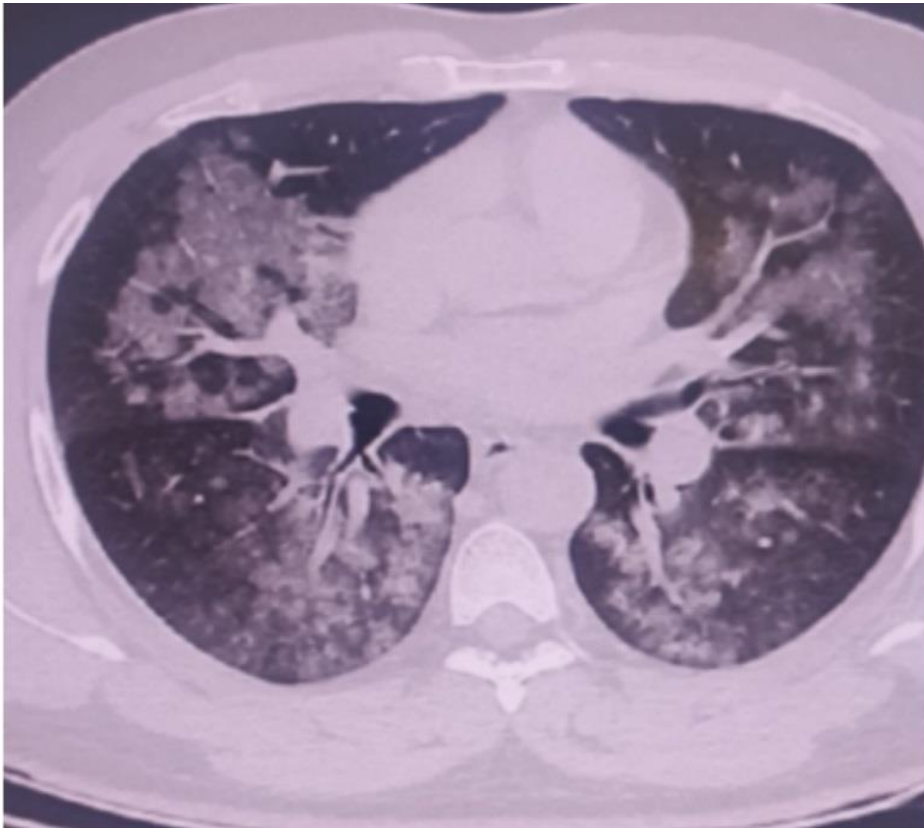
- **OLGU -5**

- 32 yaş erkek hasta
- Apandisit tanısı ile operasyon için genel cerrahi yatış
- Pulmoner semptomu yok
- ek hastalık yok
- Vitalleri olağan .
- Batın bt çekilirken toraksın alt kesitleri görülüyor.



- Midazolam 1mg ve 0.5mg/kg remifentanil verildi ve entübasyon yapıldı.
- Anestezi, 0.125 mg/kg/dakika ile sevofluran (%3) ve remifentanil ile sağlandı.
- Hastanın ameliyatı tamamlandıktan sonra ekstübasyon sırasında bronkospazm ve hipoksemi gelişti.

- PH: 7:36
- PCO<sub>2</sub>: 41.3 mmHg,
- PO<sub>2</sub>: 51.5 mmHg,
- HCO<sub>3</sub>: 22.6
- sat: 80.4%



# Ön tanılar

- Covid pnömonisi
- HKP
- İlaç akciğeri
- DAH





**OLGU -6**

# Anamnez

- 55 yaşında erkek hasta
- Yaklaşık 3 aydır önceleri eforla olan nefes darlığının gittikçe arttığını belirten hasta, son 3-4 haftadır gribal enfeksiyon sonrası mevcut nefes darlığının artması ile başvurdu
- Son 2-3 haftadır da nefes darlığına öksürük yakınması eşlik etmeye başlamış.
- Meslek: 10 yıldır mobilyacı
- Çiftçilik, hayvancılık yok
- Hobi yok

- **Fizik muayenesinde:**

- Sağ altta raller
- Clubbing yok
- Diğer sistem muayeneleri olađan.

# Laboratuvar Bulguları

WBC: 7600

Hb: 14.6 gr/dl

Htc: 42.8 %

PLT: 173000

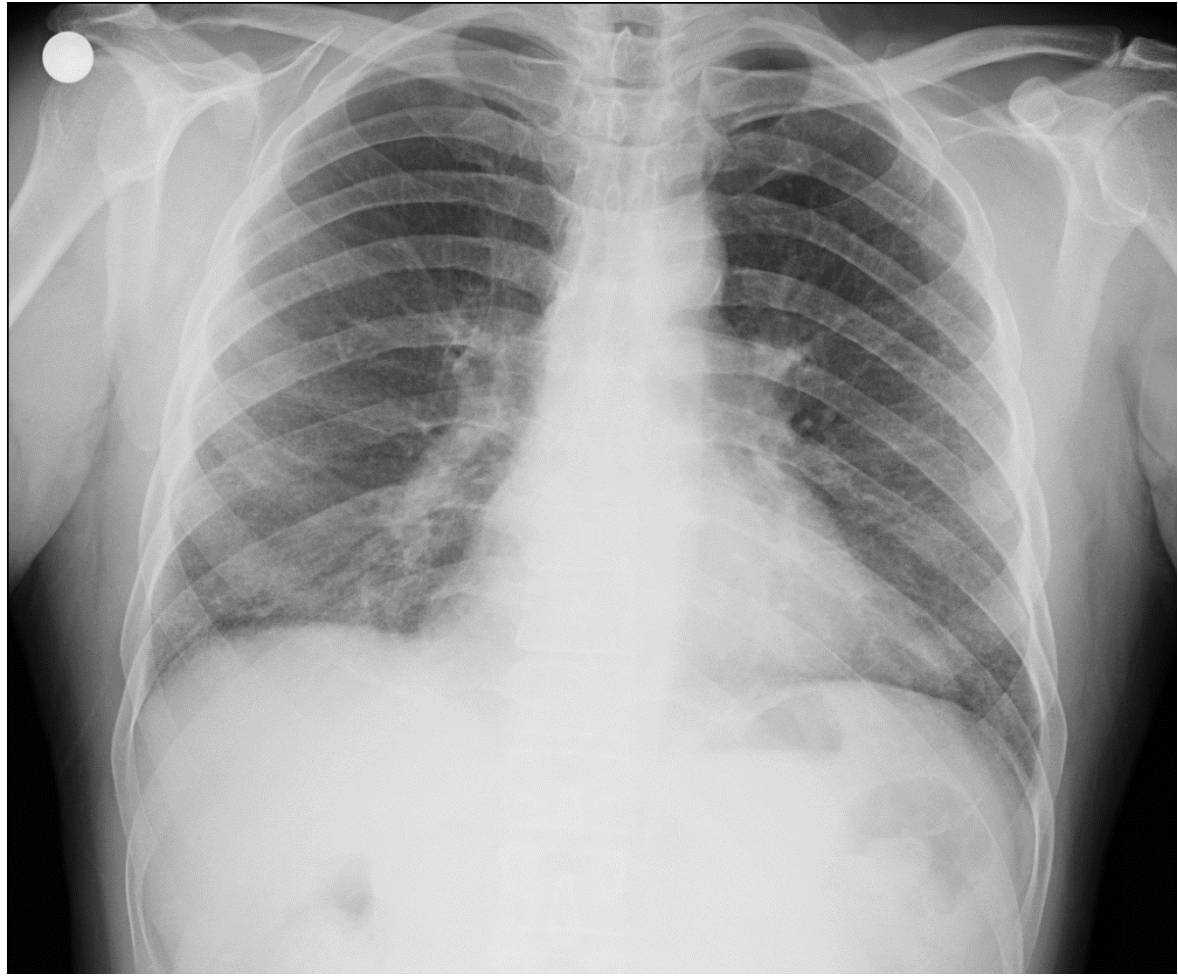
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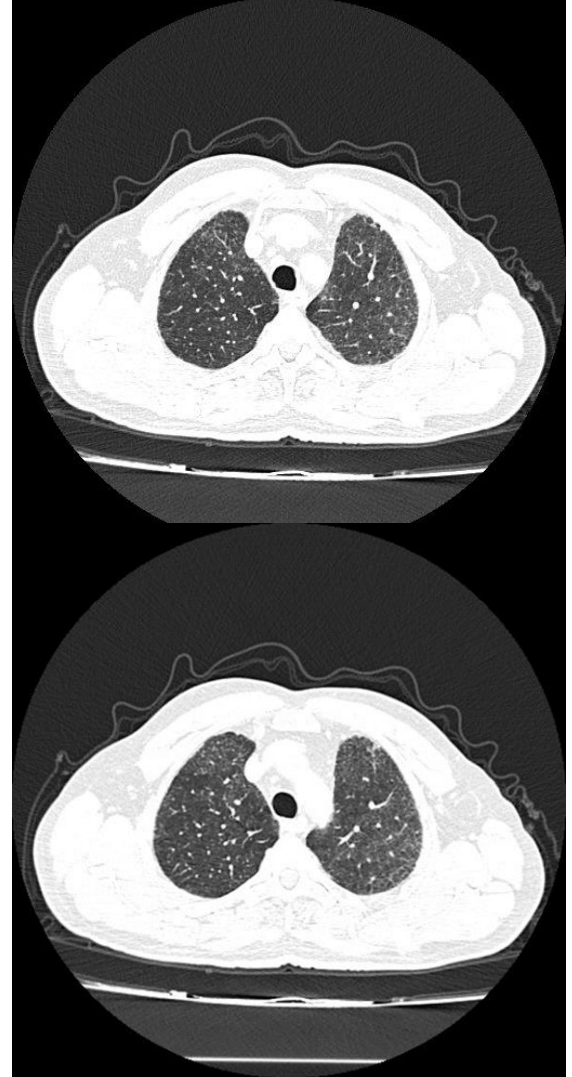
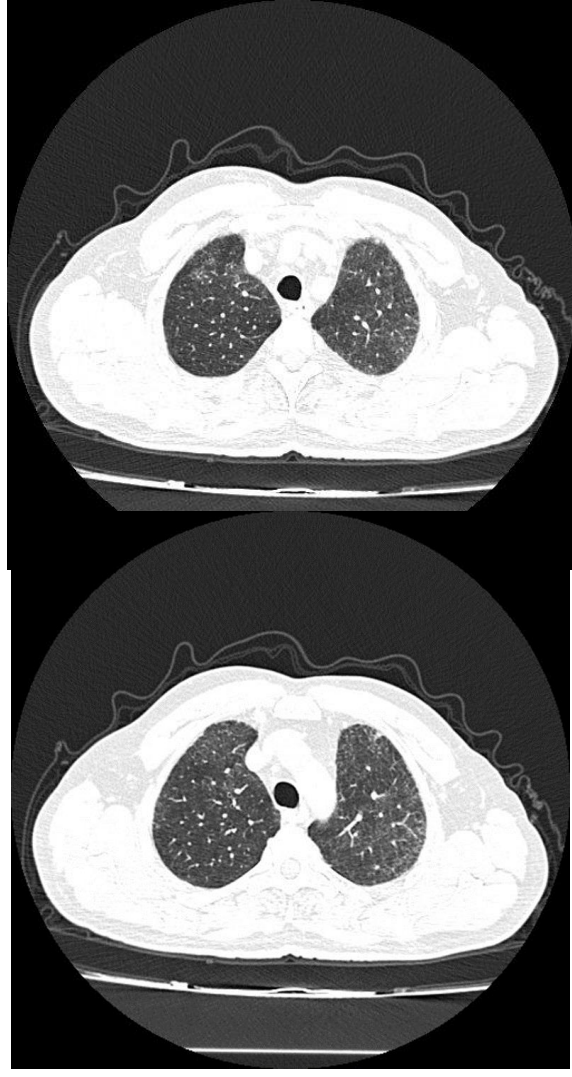
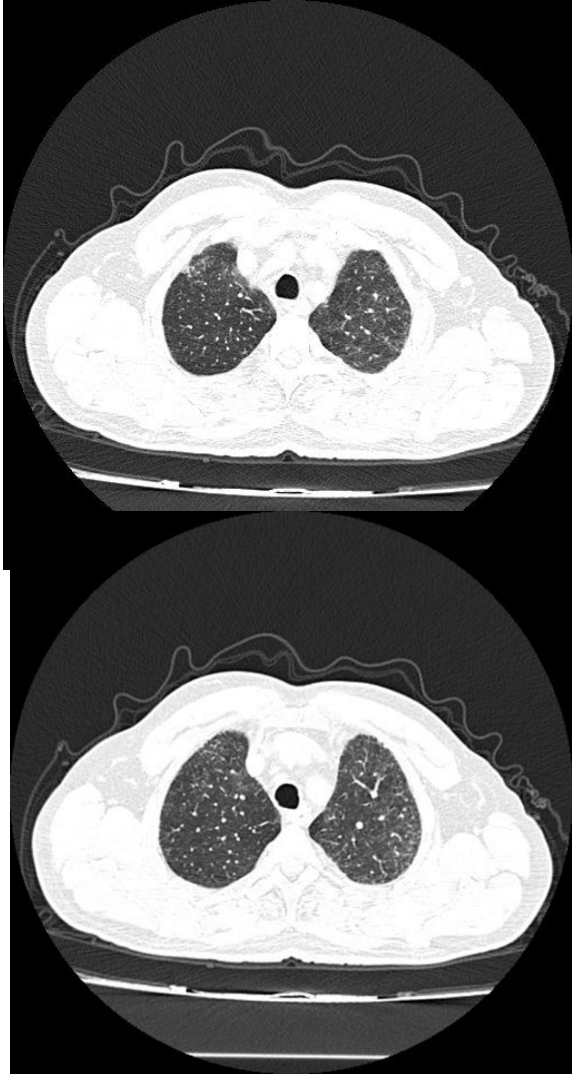
Glukoz: 106 mg/dl

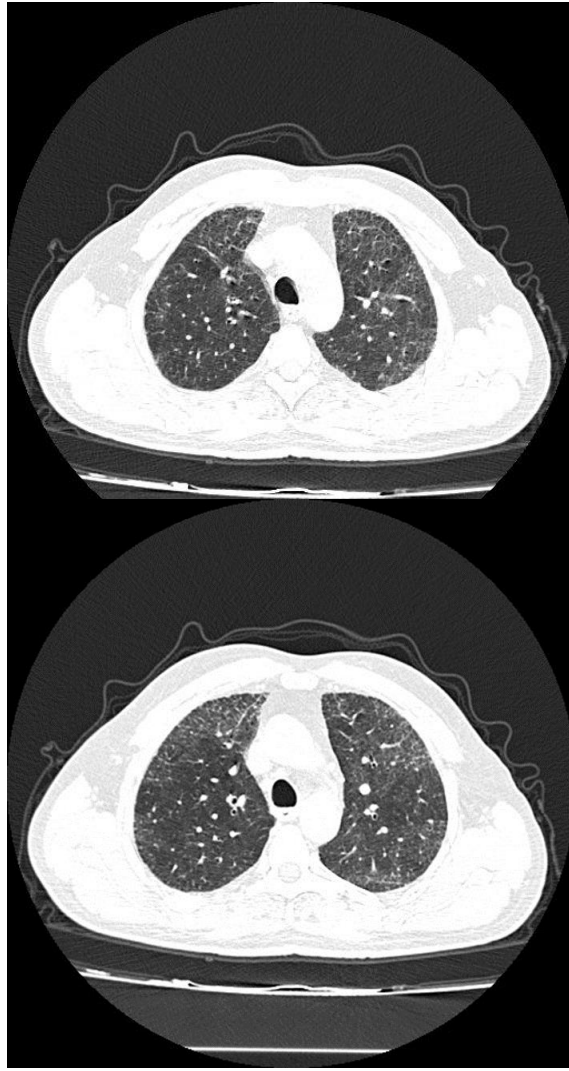
Kreatin: 0.9 mg/dl

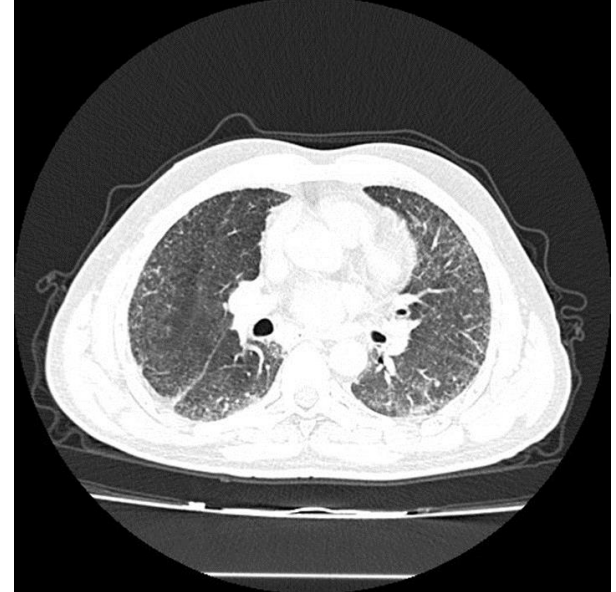
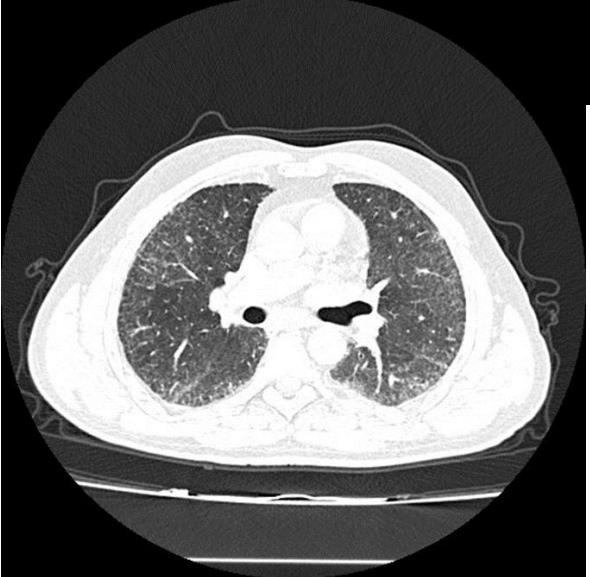
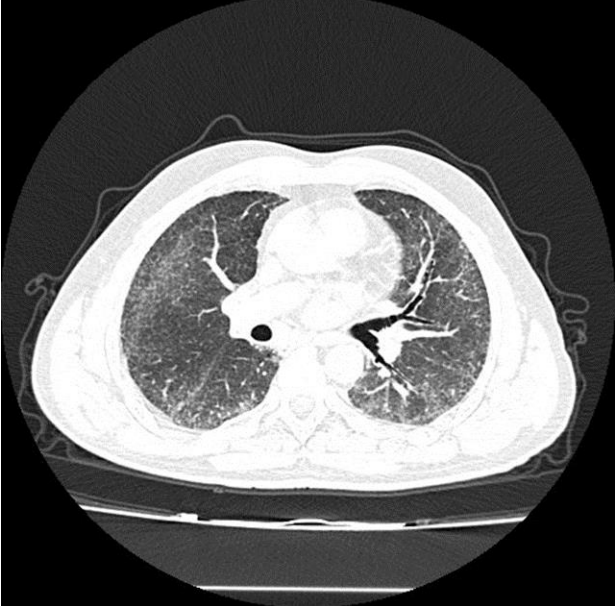
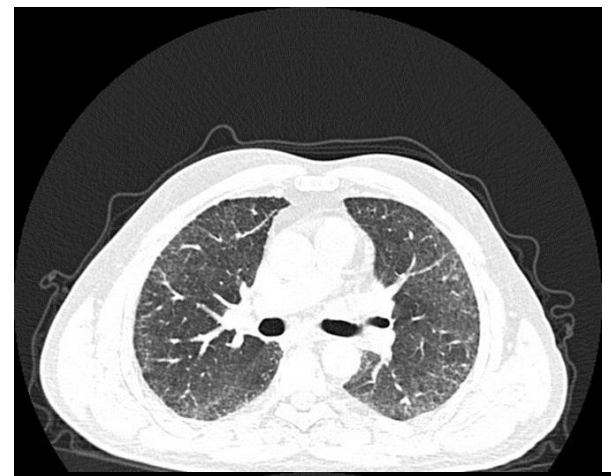
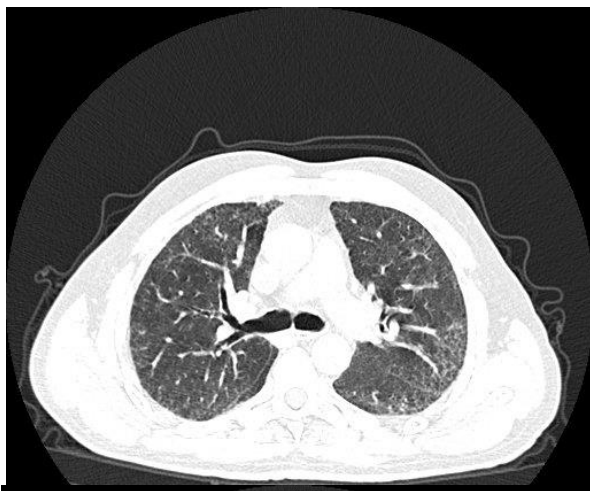
AST: 32 U/L

ALT:16 U/L

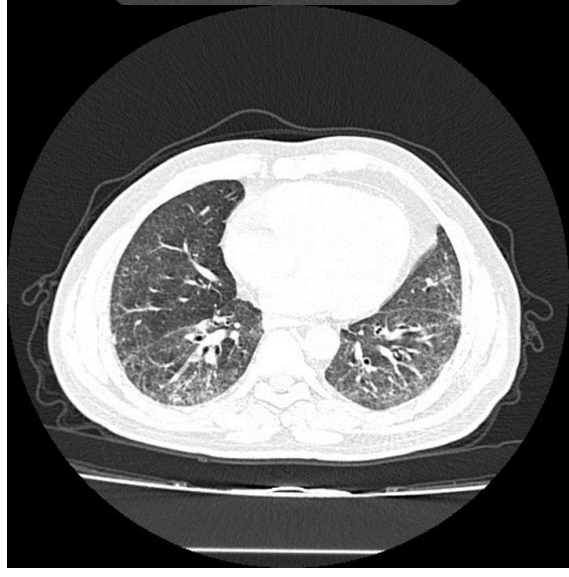
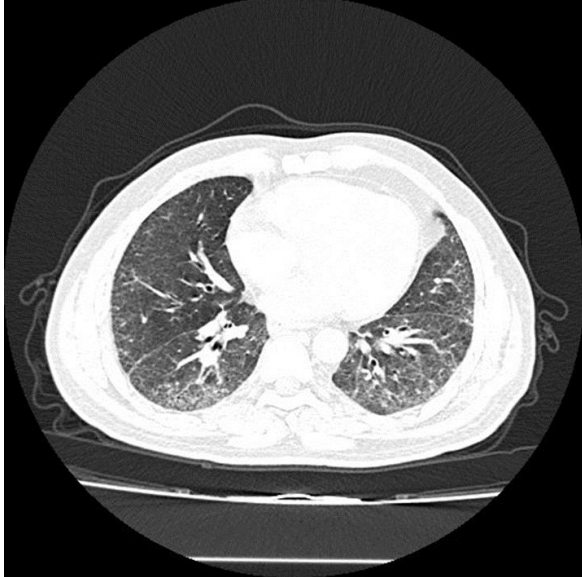
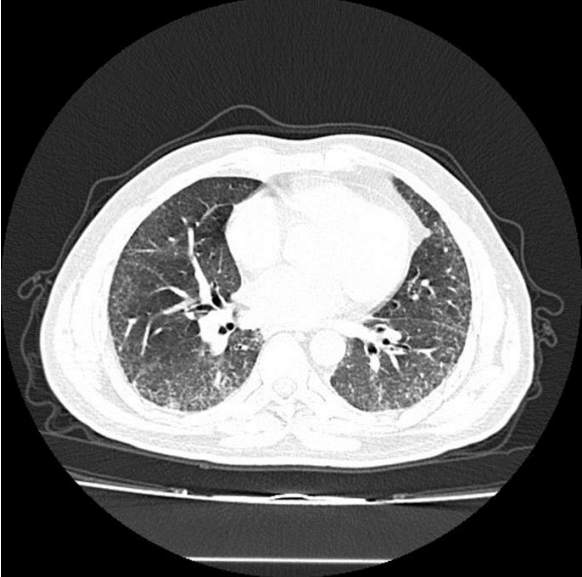
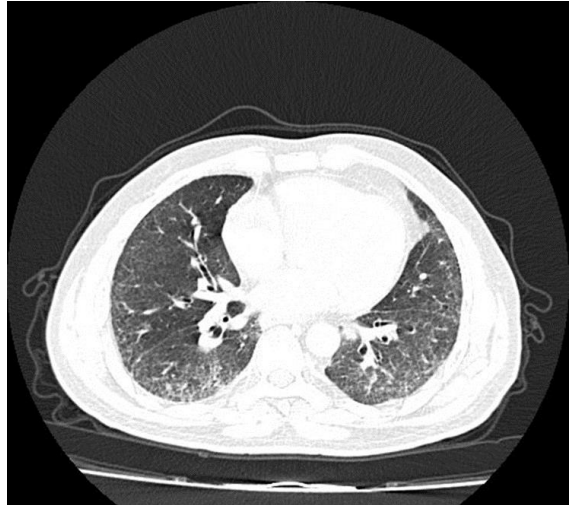
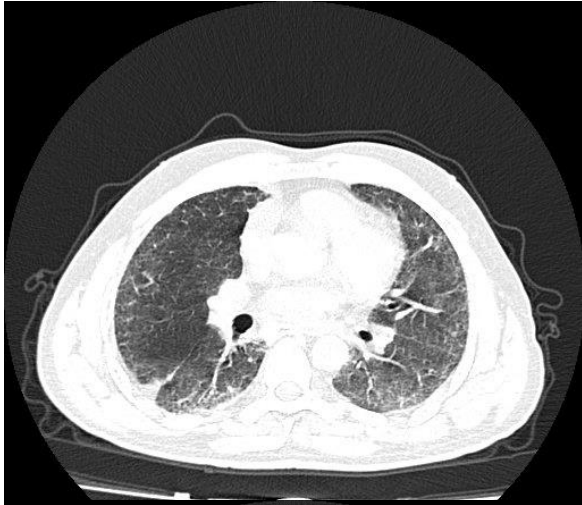


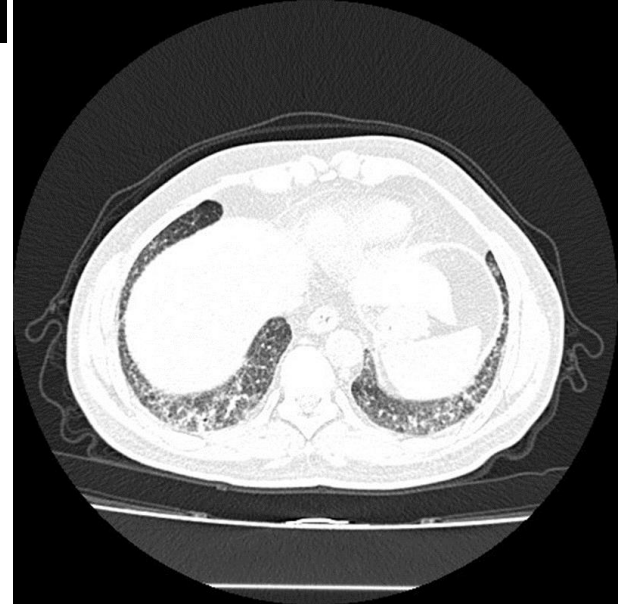
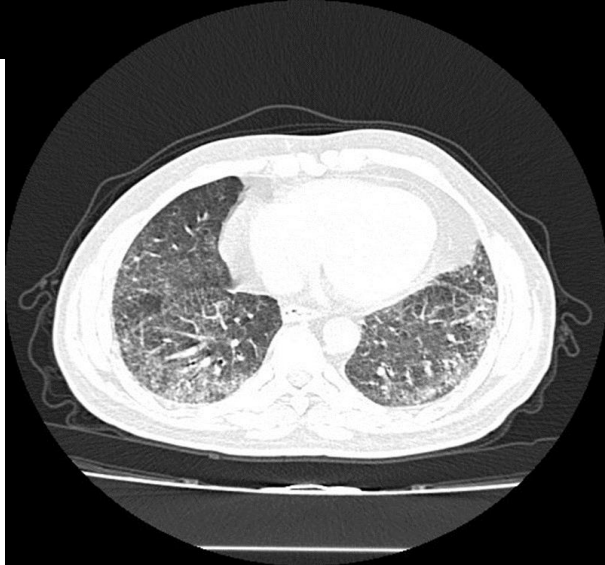
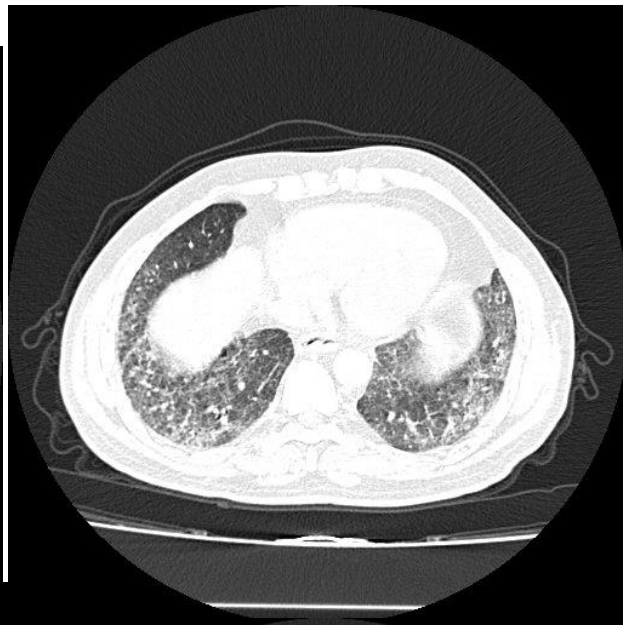
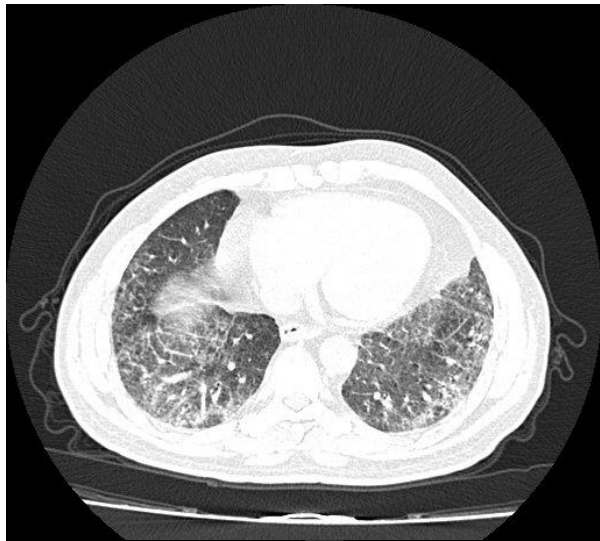












**Soru 1.** YRBT bulgularına göre radyolojik patern nedir?  
Radyolojik olarak intertisyel akciğer hastalıklarından  
hangisi ile uyumlu?

- A)Subplevral ve bazal predominans, ince retikülasyon ve buzlu cam paterni, indeterminate OİP
- B)Subplevral ve bazal predominans, heterojen dağılım ve traksiyon bronşiyolektazi, muhtemel OİP
- C) Retikülasyon ve buzlu cam görünümü, NSIP
- D) Retikülasyon, mozaik patern, HP
- E)Predominans buzlu cam görünümü, AIP

**Soru 1.** YRBT bulgularına göre radyolojik patern nedir? Radyolojik olarak intertisyel akciğer hastalıklarından hangisi ile uyumlu?

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- D) Retikülasyon, mozaik patern, HP
- E) Predominans buzlu cam görünümü, AIP

- Hasta romatoloji ile konsülte edildi.

ANA: Negatif

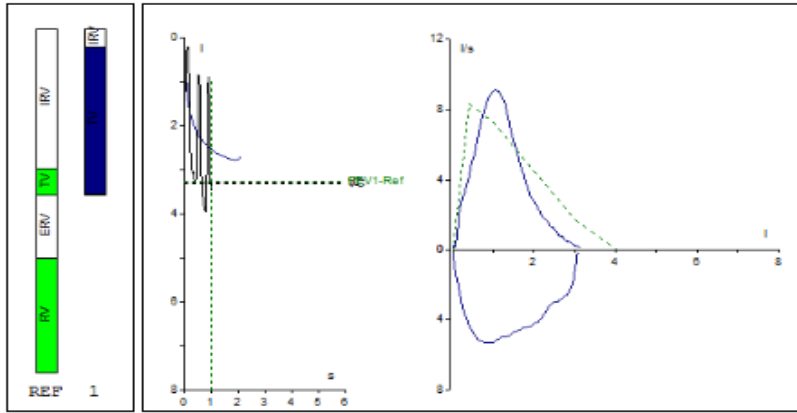
C-Anca: Negatif

P-ANCA: Negatif

Anti CCP: < 1

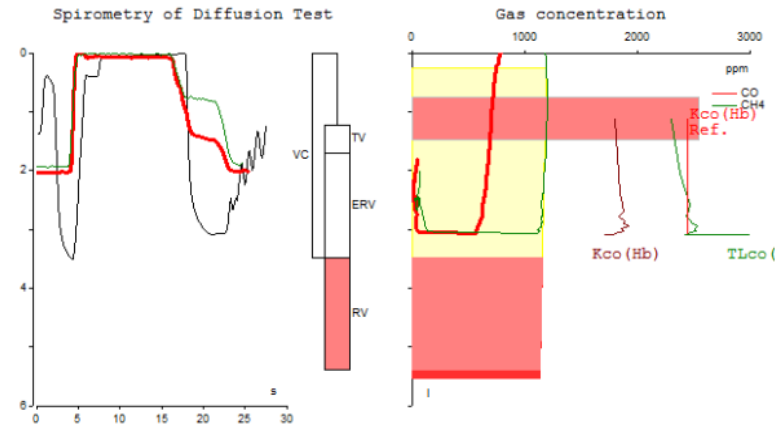
RF: Negatif

Romatolojik hastalık düşünülmedi.



parameter	unit	pred	act.	%pred
VC	l	4.24	3.12	74
ERV	l	1.20	0.02	2
IRV	l		0.34	
TV	l		2.76	
IC	l	3.13	3.10	99
FVCex	l	4.07	3.12	77
FEV1	l	3.28	2.83	86
FEV1/FVC	%	78	91	117
FEV1/IVC	%	78	91	117
PEF	l/s	8.31	9.10	110
MEF75	l/s	7.28	7.96	109
MEF50	l/s	4.45	5.68	128
MEF25	l/s	1.72	1.62	94
MEF25-75	l/s	3.72	4.25	114
PIF	l/s	3.87	5.31	137
MIF50	l/s	4.90	4.63	95

### CO Diffusion



parameter	unit	pred	act.	%pred
HB	g/dl		14.9	
TLC	l	6.50	5.38	83
TLco(Hb)	mmol/kPa/min	9.37	5.31	57
Kco	mmol/kPa/min/l	1.44	1.03	71
Kco(Hb)	mmol/kPa/min/l	1.44	1.02	71
FRC	l	3.36	3.66	109
RV	l	2.16	1.89	87
RV/TLC	%	34	35	102
IVC CH4	l	4.24	3.49	82
FRC (fs)	l	3.36	3.82	114
RV (fs)	l	2.16	2.04	94
RV/TLC (fs)	%	34	37	108
TLC (fs)	l	6.50	5.53	85

**6DYT: 420 m**

## Soru 2: Bu aşamada nasıl bir yol izlersiniz?

- A) Fiberoptik bronkoskopi (BAL, TBB)
- B) Kriyobiyopsi
- C) VATS biyopsi
- D) Radyolojik görünümü ile NSIP düşünerek steroid tedavisi veririm
- E) Hiçbiri

## Soru 2: Bu aşamada nasıl bir yol izlersiniz?

- A) Fiberoptik bronkoskopi (BAL, TBB)
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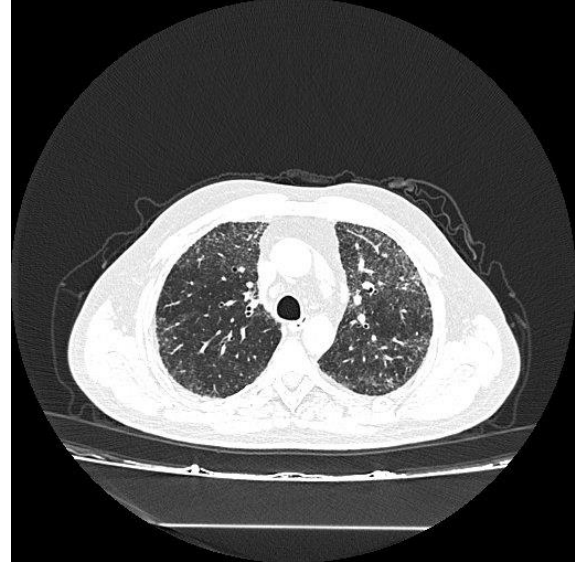
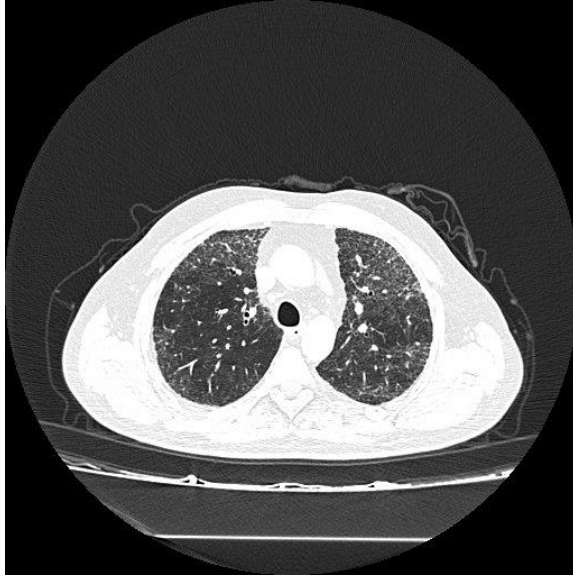
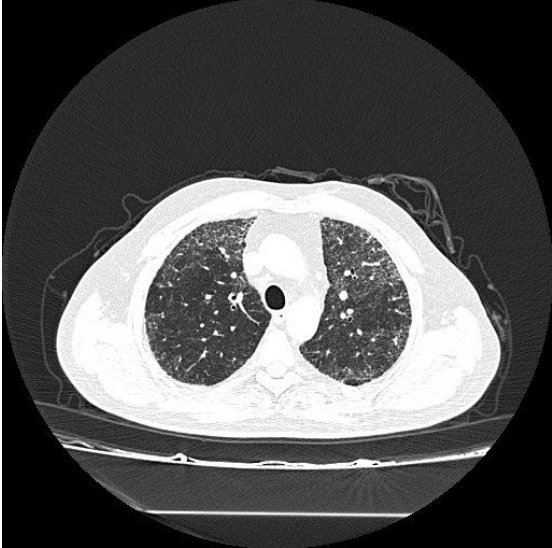
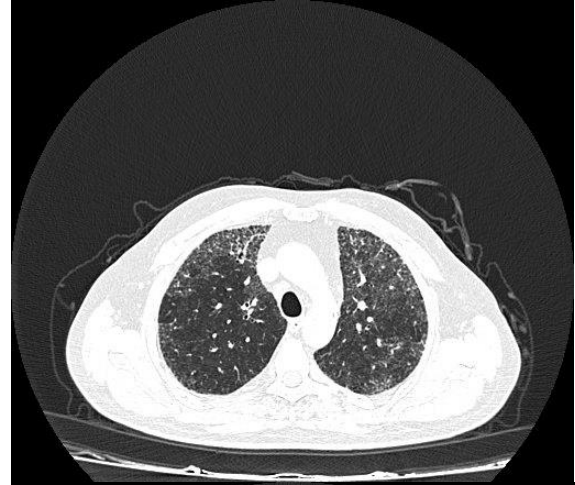
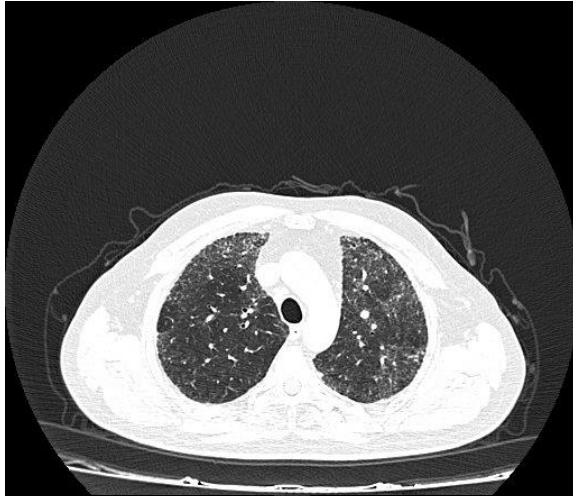
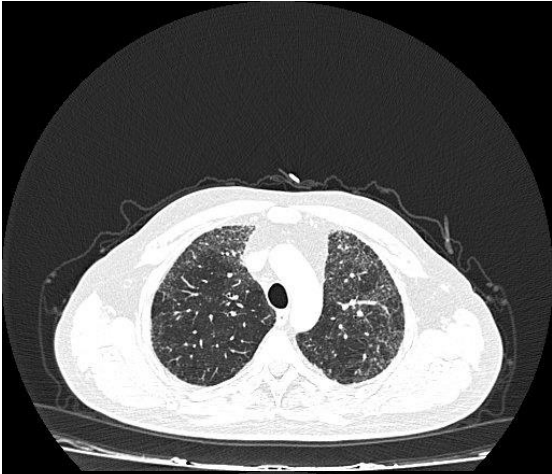


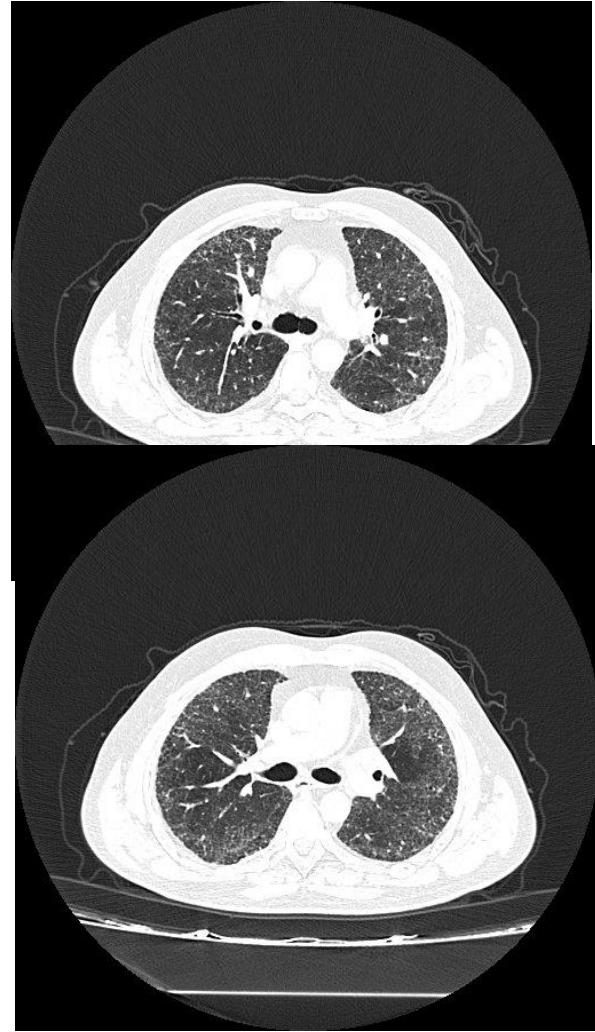
- Hastaya bronkoskopi yapılması planlandı.
- Hasta bronkoskobiyi istemedi.
- Yakınmalarının olması ve radyolojik olarak NSIP paterni düşünülmesi üzerine hastaya steroid tedavisi başlandı.

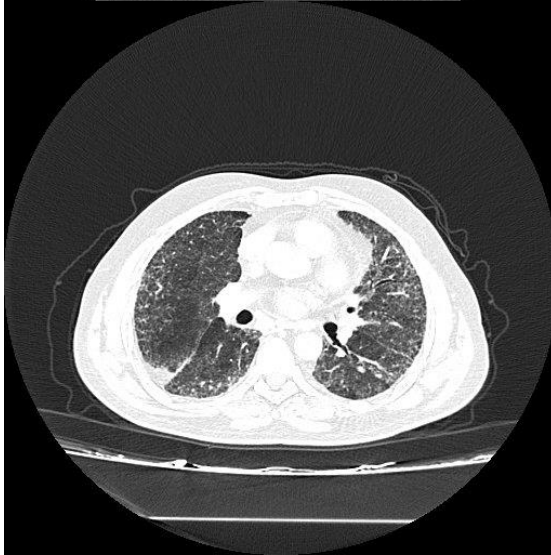
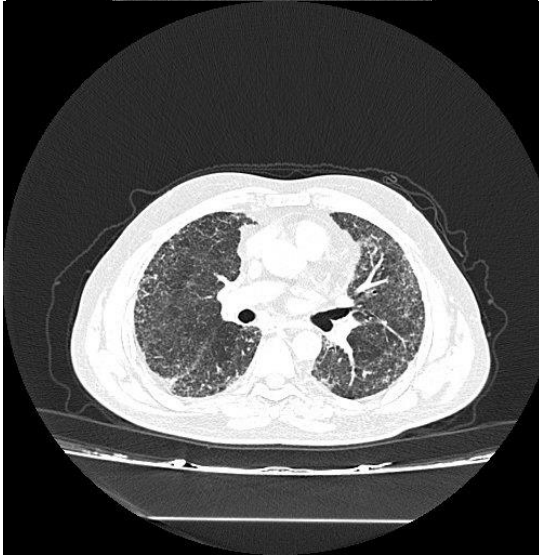
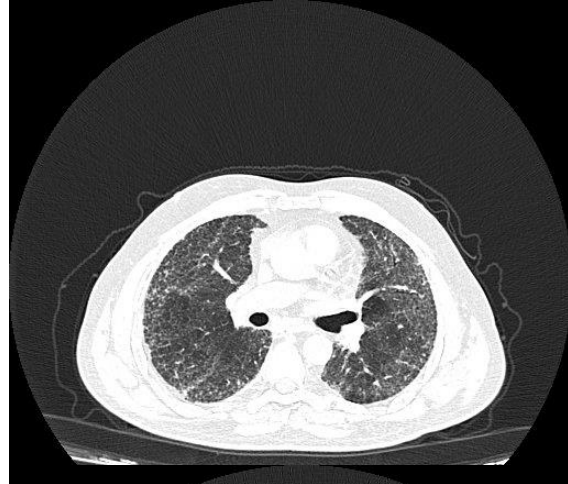
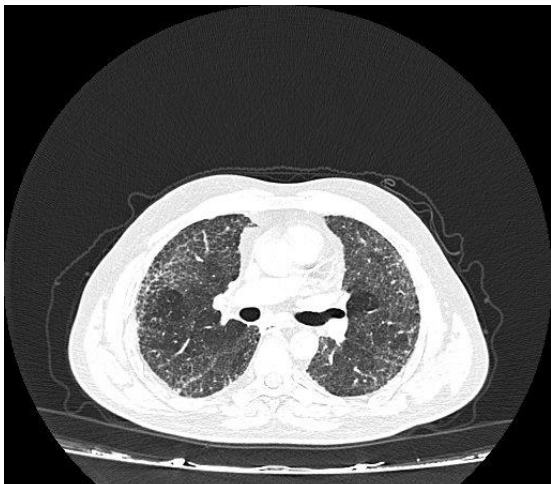
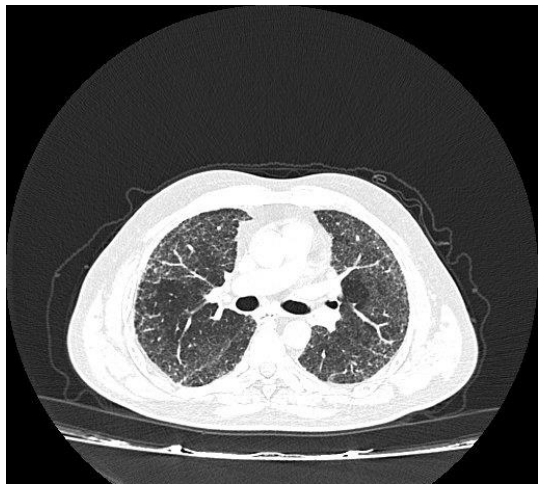
## (Tedavisinin 6. ayında)

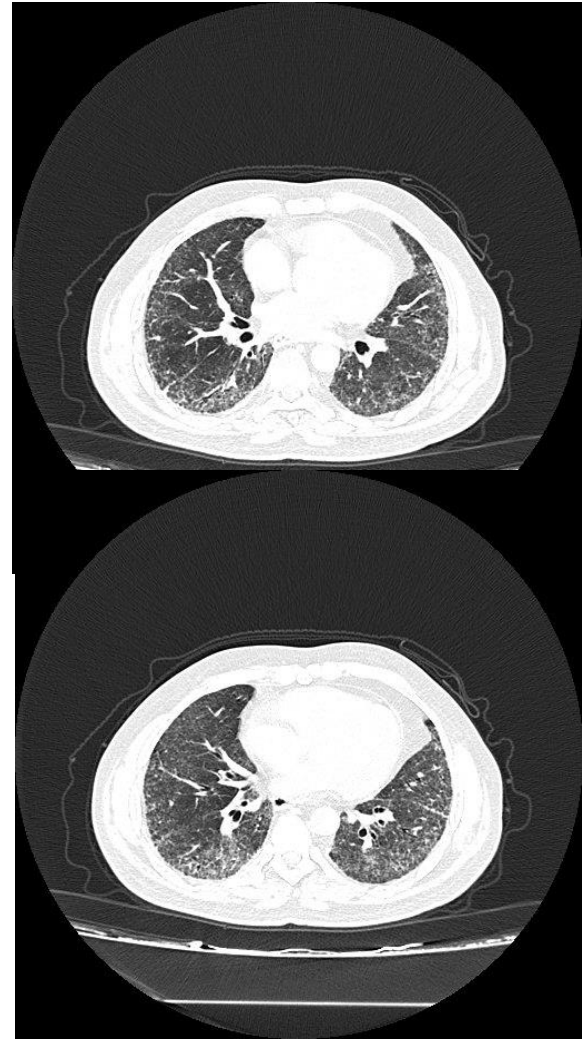
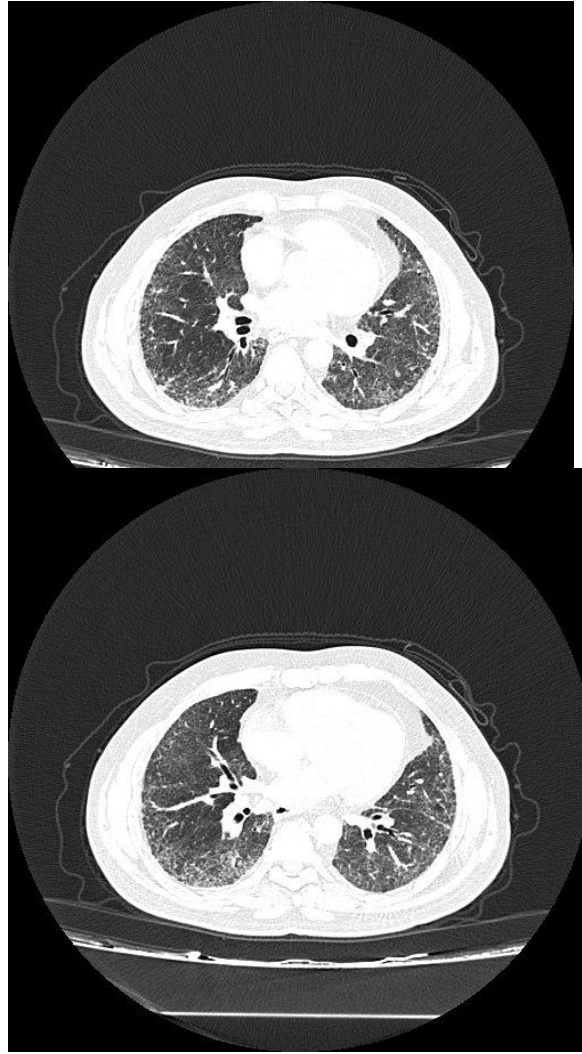
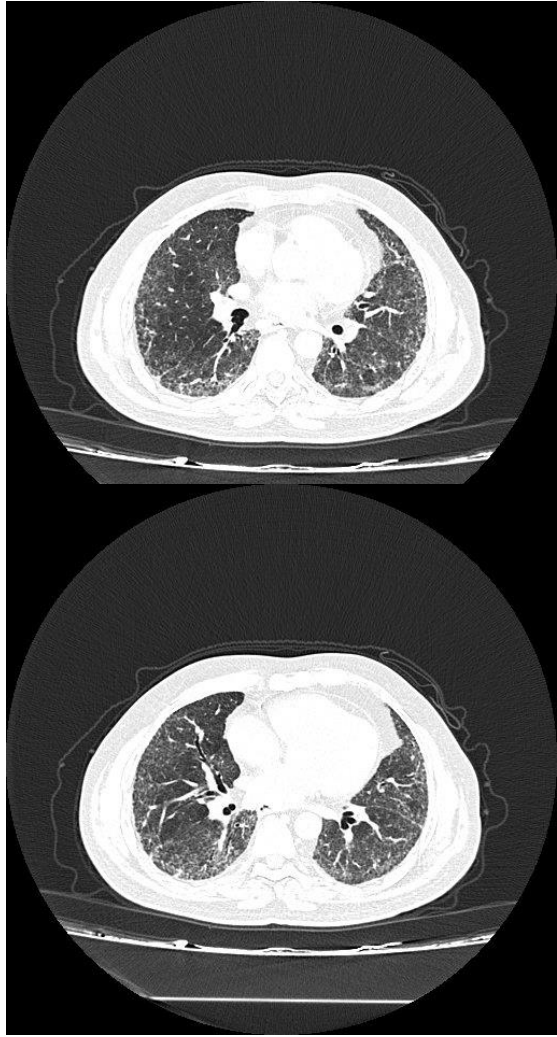
- Semptomlarda belirgin düzelme yok .
- SFT

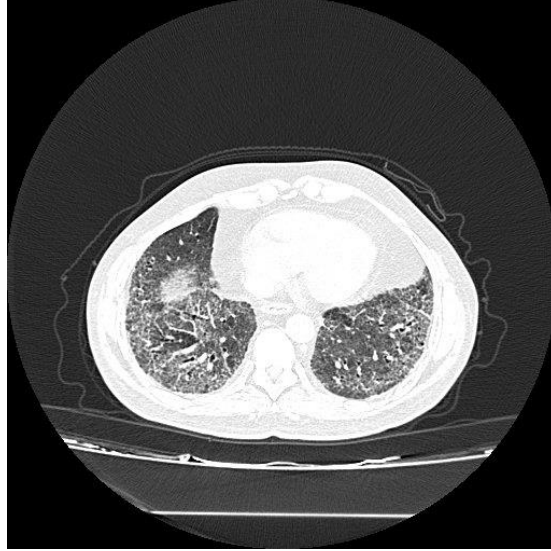
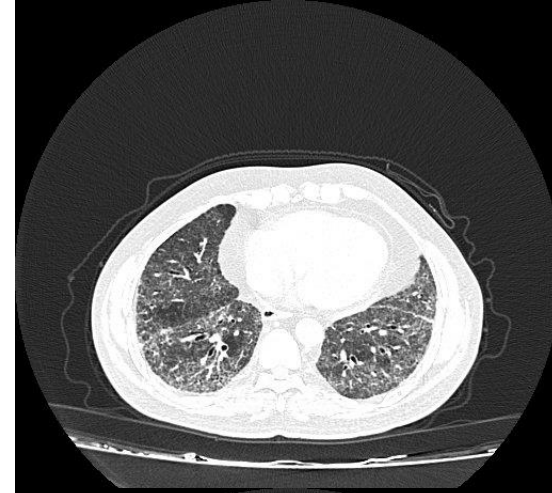
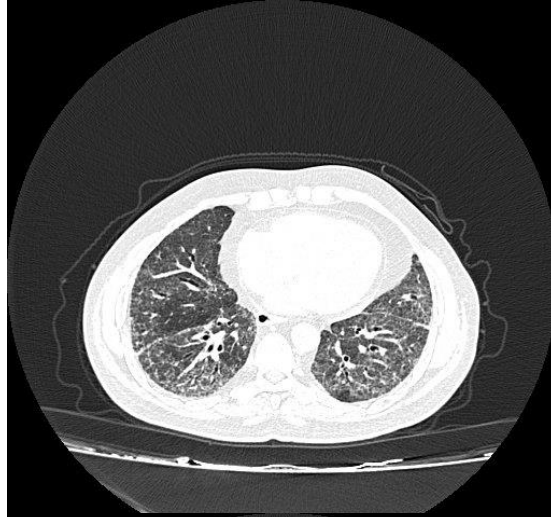
FVCex	1	4.05	2.63	65
FEV1	1	3.26	2.45	75
FEV1/IVC	%	77	90	116
FEV1/FVC	%	77	93	120
PEF	l/s	8.27	7.41	90
MEF75	l/s	7.25	6.94	96
MEF50	l/s	4.42	6.64	150
MEF25	l/s	1.69	1.92	113
MEF25-75	l/s	3.68	4.76	130
PIF	l/s	3.84	6.14	160
MIF50	l/s	4.88	5.51	113

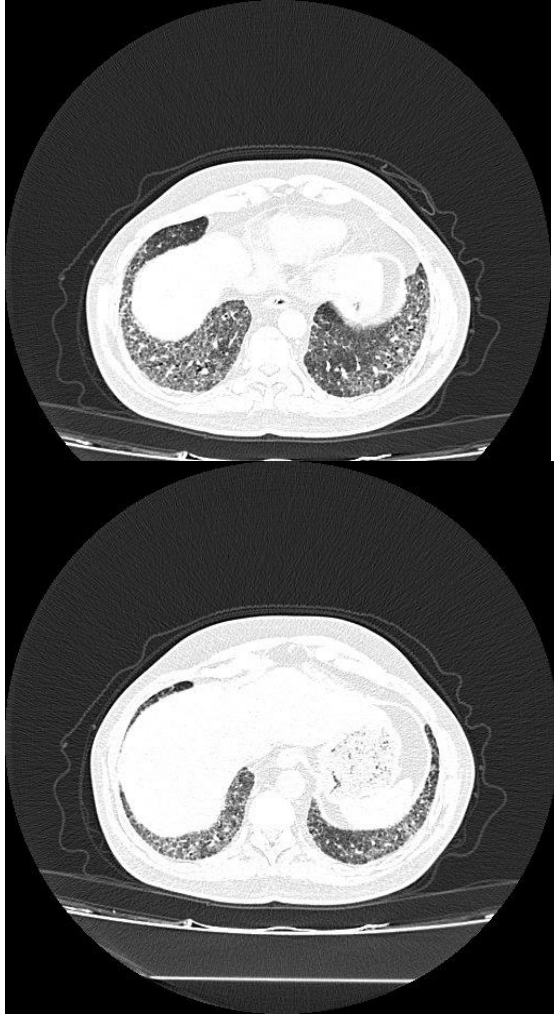
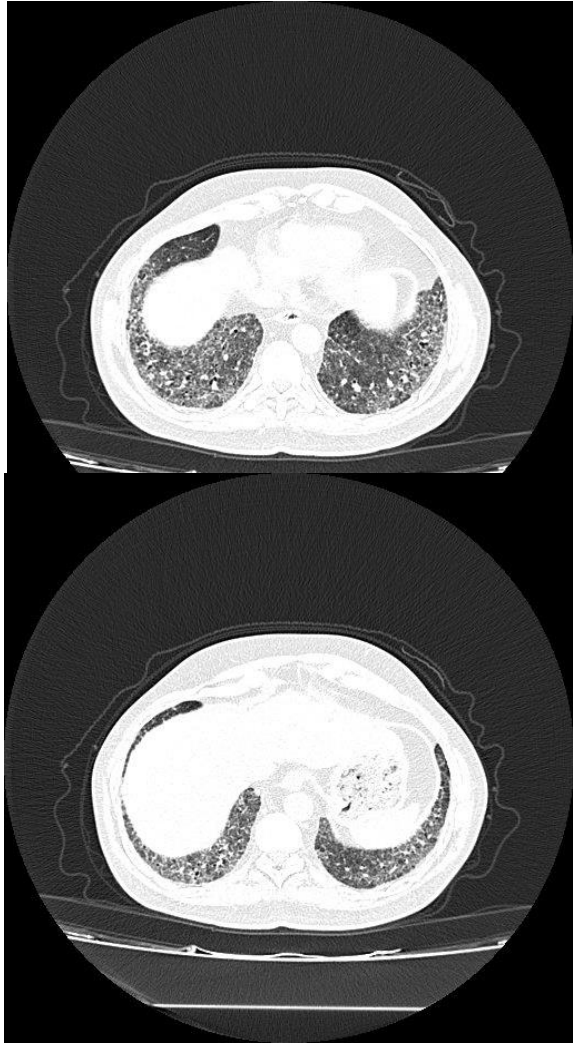














## Radyolojinin yorumu

- Eski tetkikle birlikte yapılan deęerlendirilmede her iki akcięerde aęırlıklı olarak periferik zonlarda yoęunlařan intertisyel tutulum paterni aęırlıklı olarak retiküler form aldıęı ve periferik zonlarda traksiyon bronęiektazilerinin belirginleřtięi izlenmektedir. Bazal-subplevral alanlarda yoęun tutulum olmamasına karřın lezyonların klinik seyri dikkate alındıęında **olası UIP paterni** ön planda düşünölmelidir.

**Soru 3.** Steroid tedavisine rağmen fibrozis bulgularında artış izlenen olguda ne yaparsınız?

- A) Bronkoskopi (BAL, TBB)
- B) Kriyobiyopsi
- C) VATS biyopsi
- D) Antifibrotik tedaviye başlarım
- E) Hiçbiri

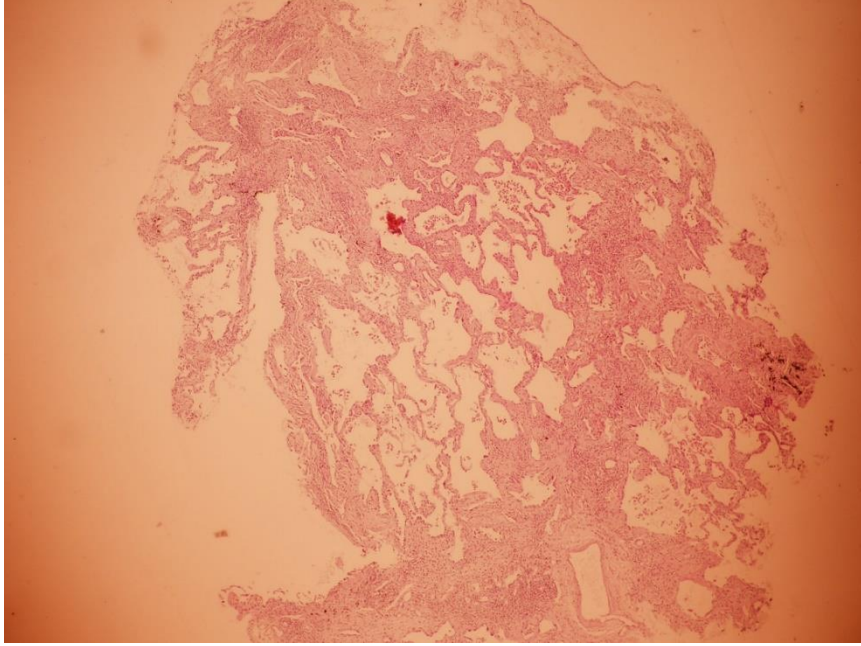
**Soru 3.** Steroid tedavisine rağmen fibrozis bulgularında artış izlenen olguda ne yaparsınız?

- A) Bronkoskopi (BAL, TBB)
- **B) Kriyobiyopsi**
- C) VATS biyopsi
- D) Antifibrotik tedaviye başlarım
- E) Hiçbiri

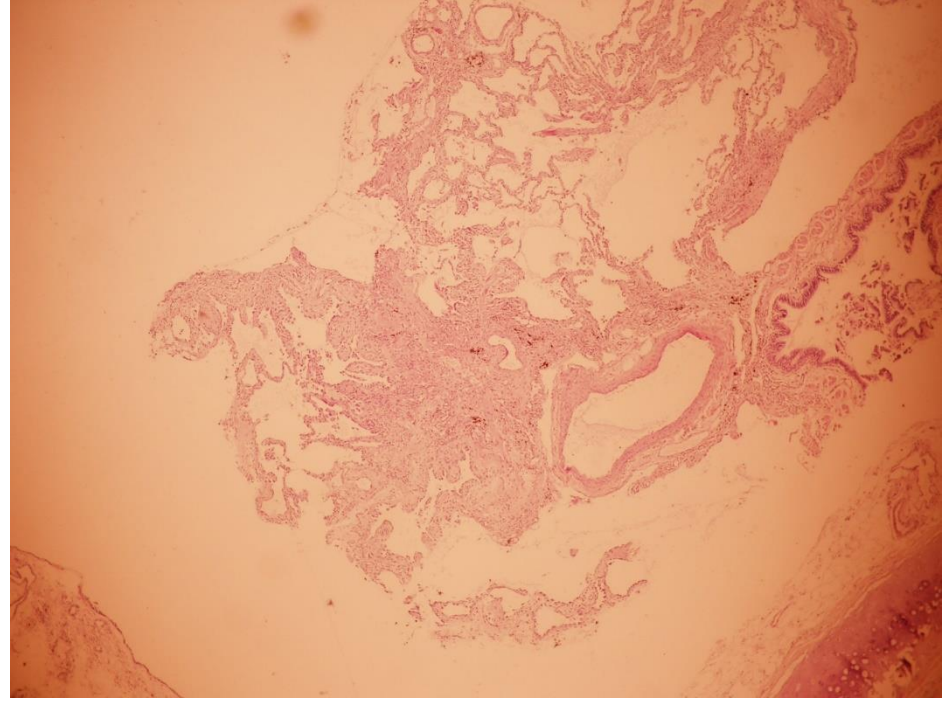
- Hastaya BAL ve kiryobiyopsi yapıldı.
- BAL materyalinde %60 alveoler makrofaj, %30 n6trofil, %8 lenfosit ve % 2 eozinofil mevcuttu.
- Sađ akciđer alt lob lateral ve posterior segmentlerden kiryobiyopsi probuyla 4 adet 6rnek alındı.

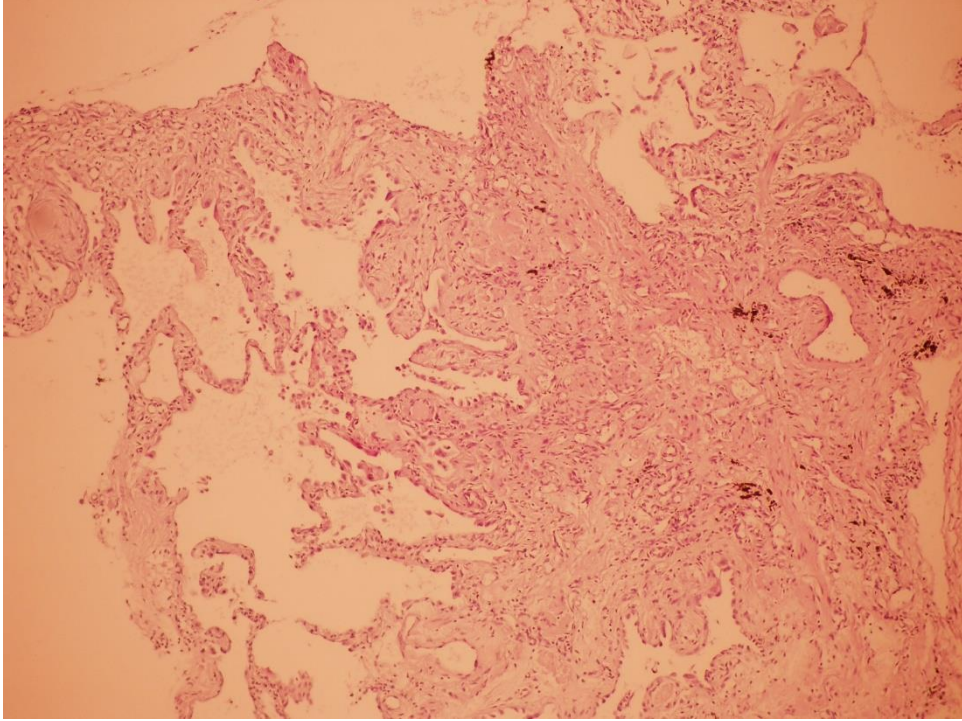
# Patoloji

- İntertisyel alanda heterojen patern gösteren, **bağ dokusu artışı**, minimal yarımsal infiltrasyon, **birkaç fibroblast odağı** ve bir alanda **bronşiolizasyon** izlenmektedir. Bulgular olağan intertisyel pnömoni ile uyumludur.

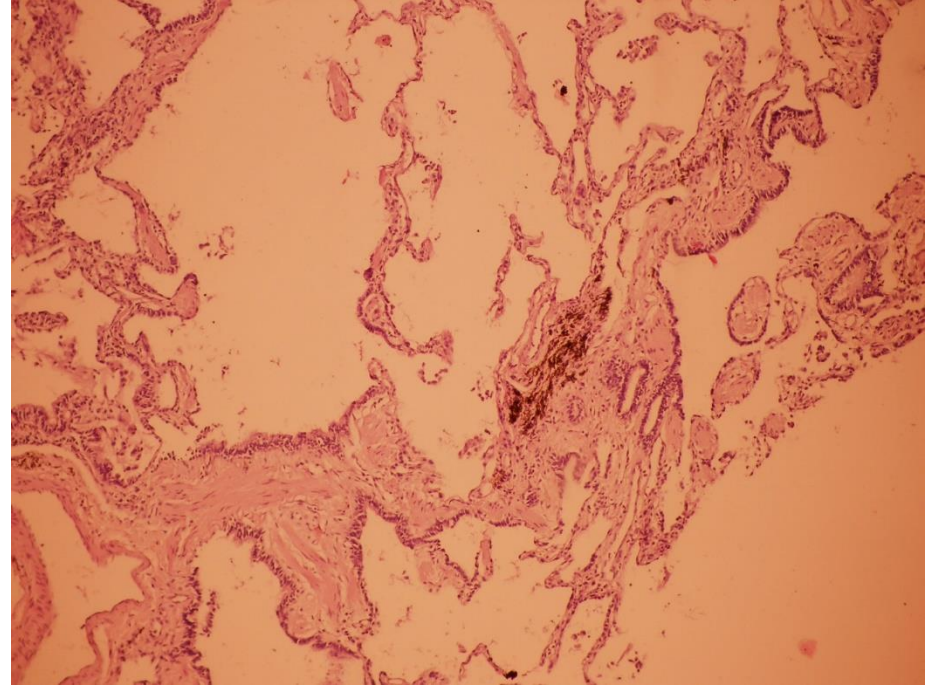


Heterojenite, intertisyel alanda kalınlaşma





Fibroblast artışı, fibroblast odağı



Bronşiolizasyon

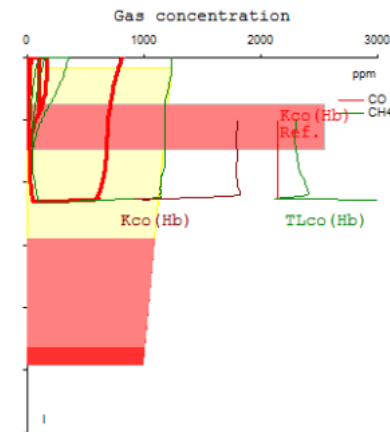
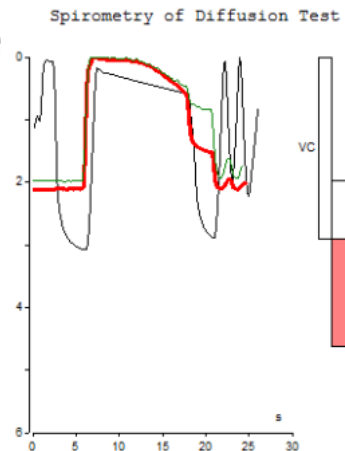
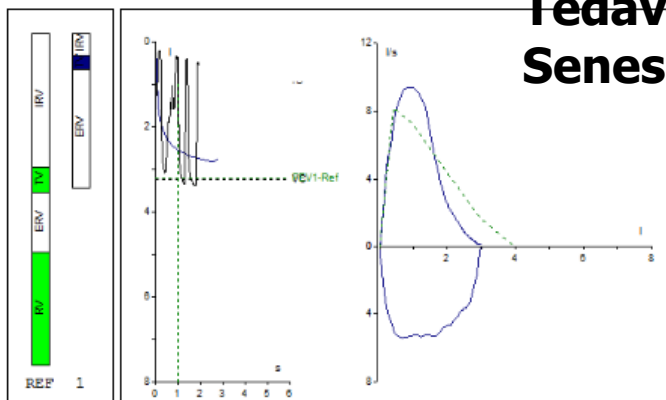
**Soru 4:** Radyoloji ve patolojik bulgularla IPF tanısını koyabilir miyiz?



IPF Şüphesi*		Histopatoloji Paterni			
		UIP	Muhtemel UIP	Tanımlanmamış UIP	Alternatif Tanı
HRCT Paterni	UIP	IPF	IPF	IPF	IPF değil
	Muhtemel UIP	IPF	IPF	IPF (muhtemelen)**	IPF değil
	Tanımlanmamış UIP	IPF	IPF (muhtemelen)**	IPF için Belirsiz ***	IPF değil
	Alternatif Tanı	IPF (muhtemelen)**/ IPF değil	IPF değil	IPF değil	IPF değil

- Hastaya antifibrotik tedavi başlandı.
- Yaklaşık 2 yıldır tedavi altında.

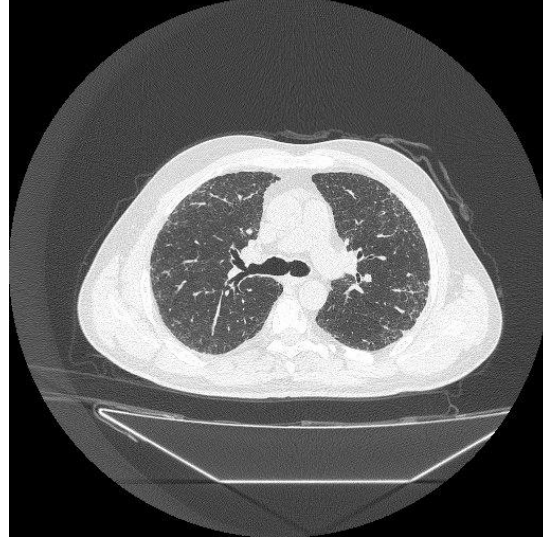
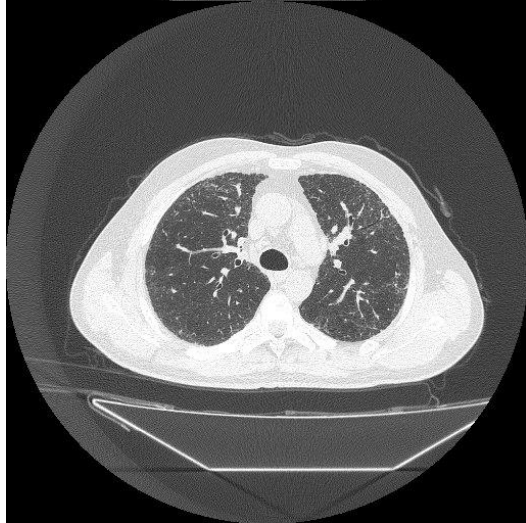
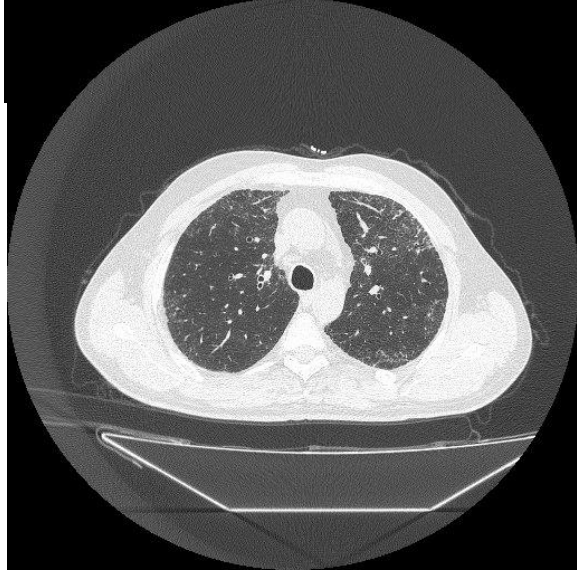
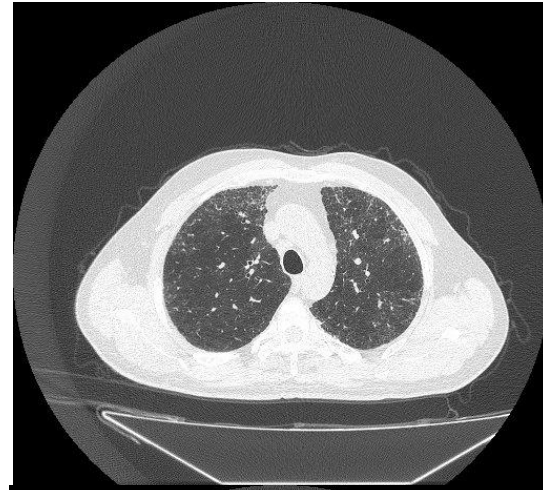
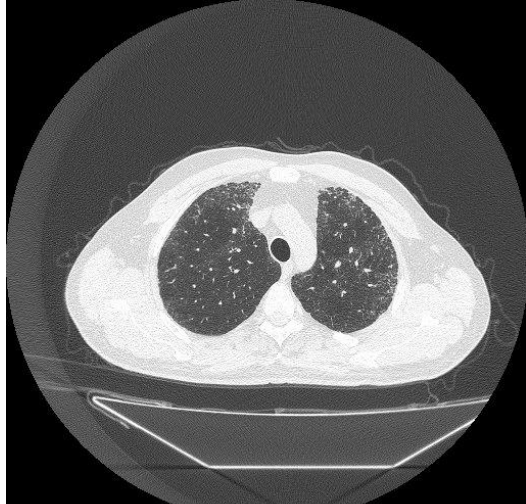
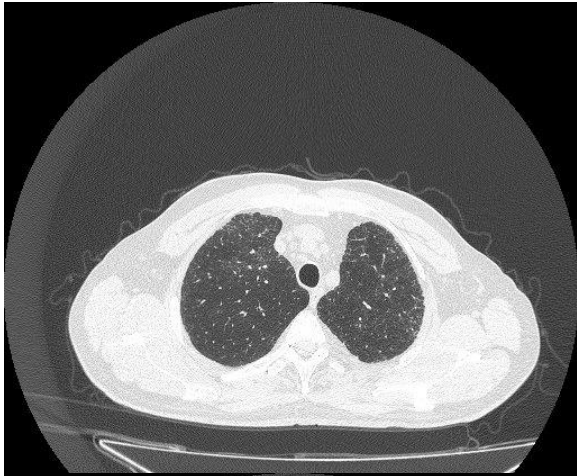
## Tedavinin 2. Senesinde

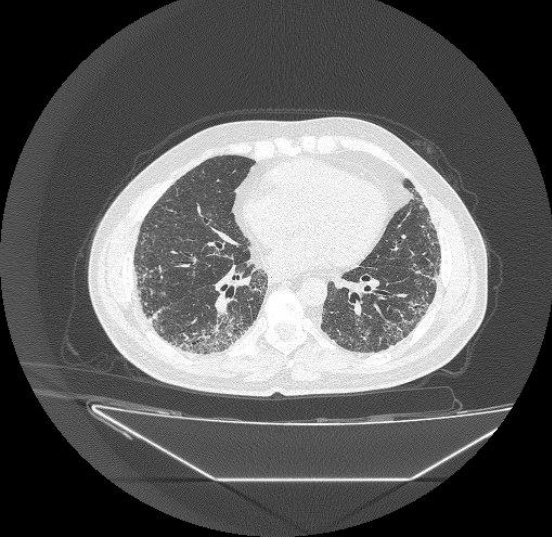
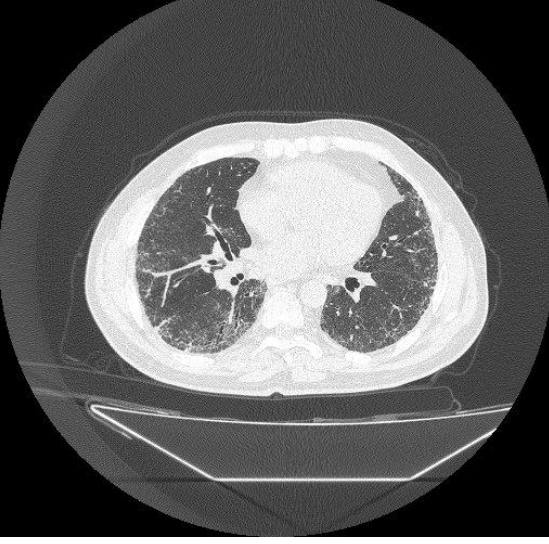
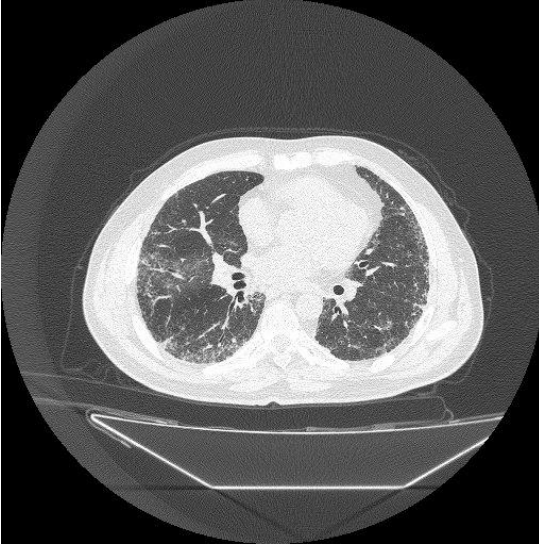
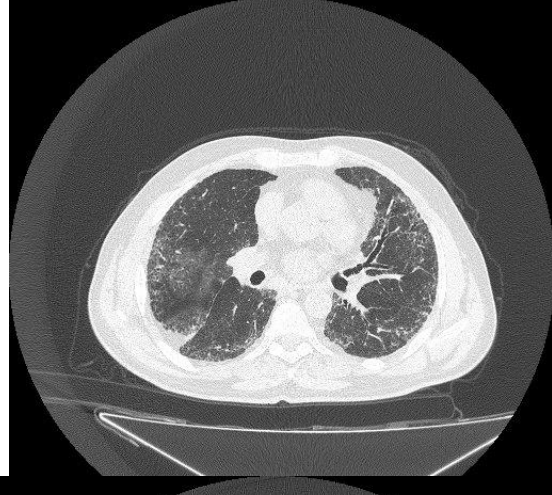
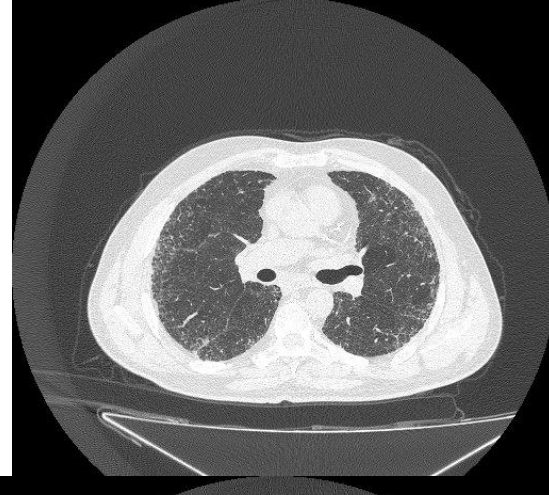
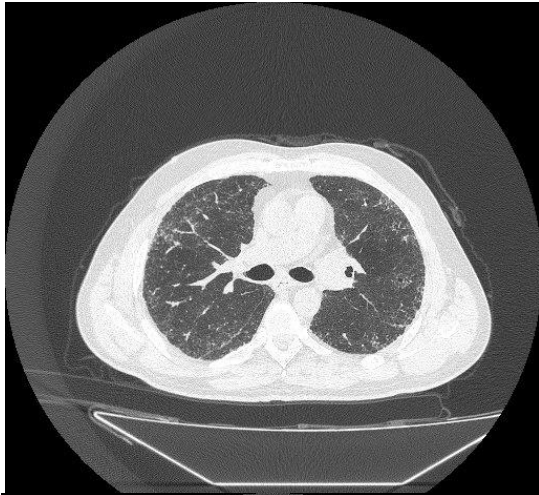


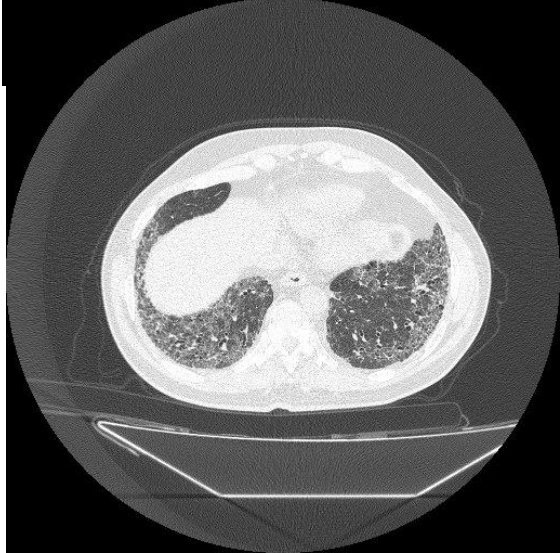
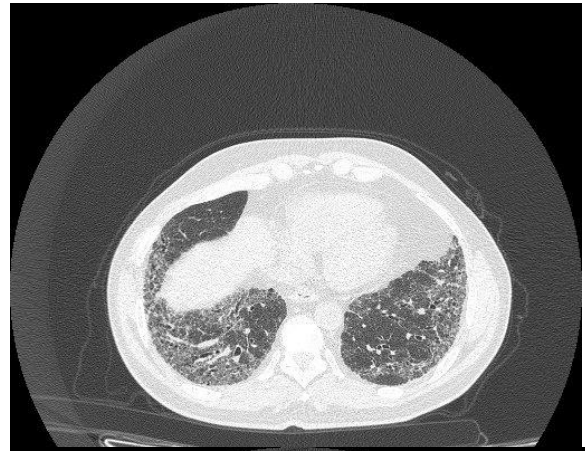
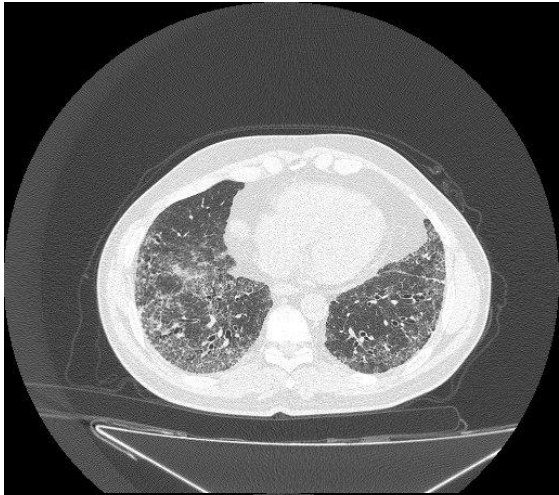
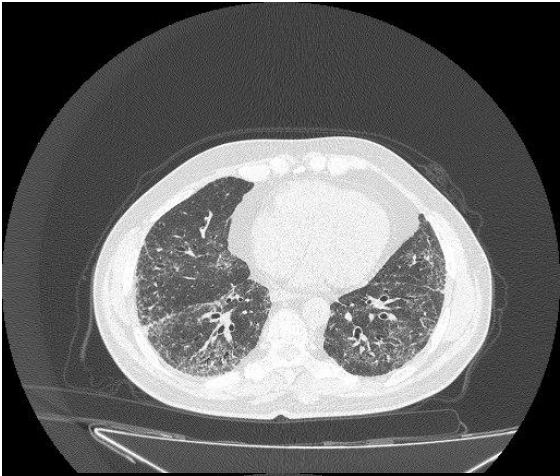
parameter	unit	pred	act.	%pred
VC	l	4.18	3.04	73
ERV	l	1.18	2.31	197
IRV	l		0.44	
TV	l		0.29	
IC	l	3.11	0.72	23
FVCex	l	4.02	3.04	76
FEV1	l	3.23	2.75	85
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MEF25	l/s	1.67	1.59	95
MEF25-75	l/s	3.63	4.25	117
PIF	l/s	3.83	5.43	142
MIF50	l/s	4.85	5.27	109

parameter	unit	pred	act.	%pred
HB	g/dl		14.1	
HbCO	%			
TLC	l	6.50	4.61	71
TLco	mmol/kPa/min	9.23	5.09	55
TLco(Hb)	mmol/kPa/min	9.23	5.17	56
Kco	mmol/kPa/min/l	1.42	1.15	81
Kco(Hb)	mmol/kPa/min/l	1.42	1.16	82
FRC	l	3.38	2.64	78
RV	l	2.21	1.70	77
RV/TLC	%	35	37	105
IVC CH4	l	4.18	2.91	70
VCex	l		3.04	
BMI	kg/m <sup>2</sup>	28		
T90 in	s		0.99	
t diff.	s		12.02	

6 DYT: 520 M







OLGU -7

- **68 y / E / Emekli trafik polis amiri**
- **Şikayet:** Efor dispnesi (1 yıldır )  
Kuru öksürük
- **Özgeçmiş:** Diabetes Mellitus  
Hiperlipidemi  
Koroner Arter Hastalığı : (LLD- Stent -17/5/2017)
- **Operasyon:** Tiroidektomi (17 yıl önce )
- **Alışkanlık :** Sigara : 40 paket / yıl - 1 yıldır ex-smoker.



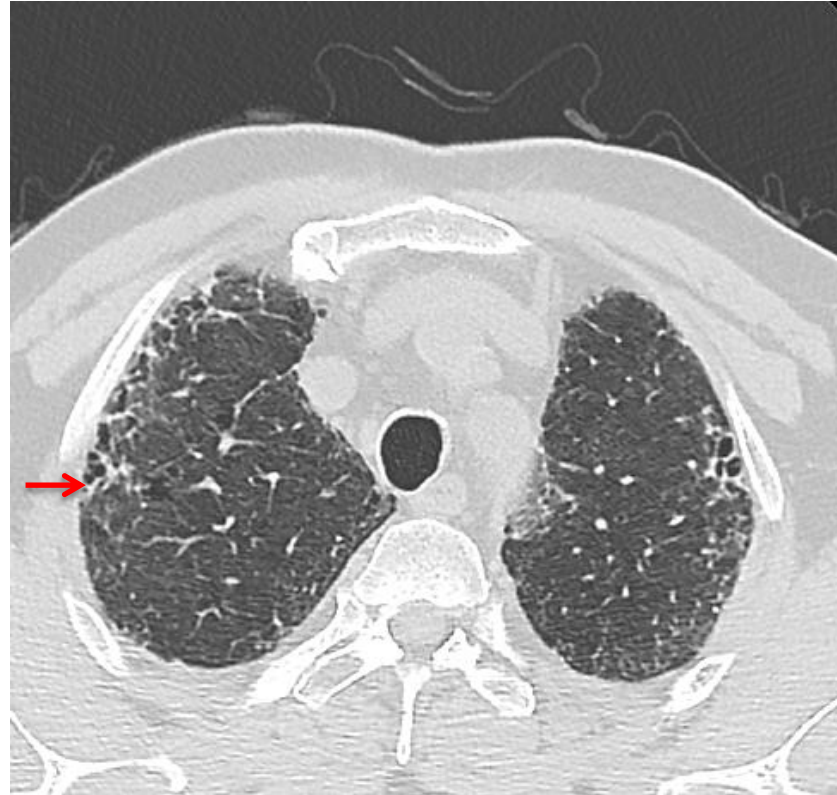
- **Soygeçmiş:** Ablası 2014'de exitus (Tanı ??, Akciğerlerde kalınlaşma??)
- **İlaç:** Sitagliptin / metformin hidroklorür 50 / 500 mg tb 2x1  
Atorvastatin 20 mg tb -1x1  
Levotiron 100 mg tb-1x1  
Metoprolol 50 mg tb -1x1  
Coraspirin 100 mg tb -1x1  
Klopidogrel 75 mg -1x1 (İPF tanısı sonrası stent : 5/2017' eklendi)
- **Mesleki ve aspest maruziyet öyküsü yok.**

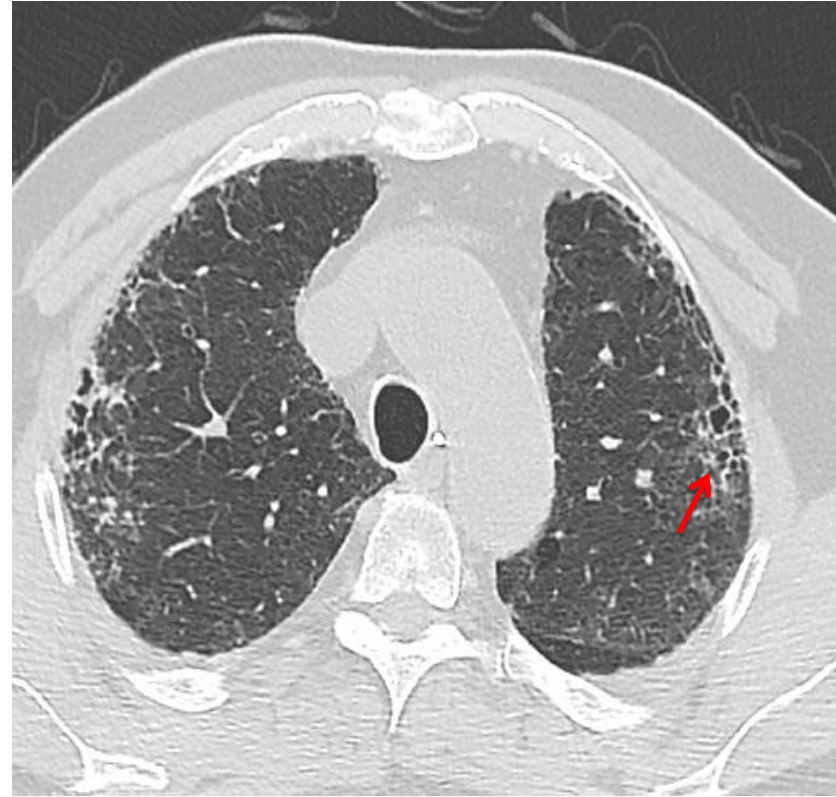
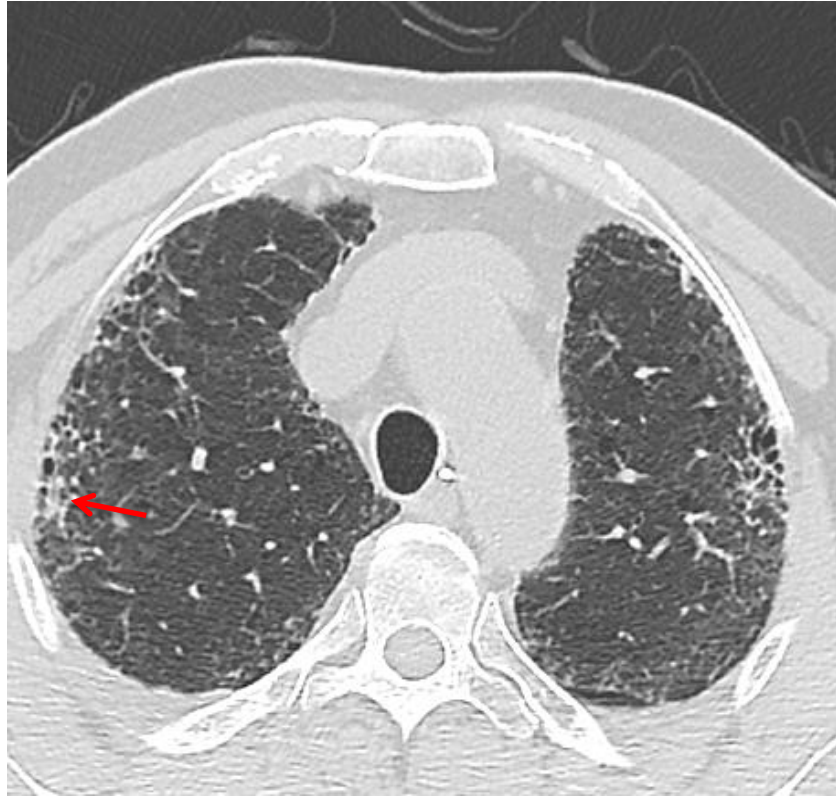
### **Fizik Muayene:**

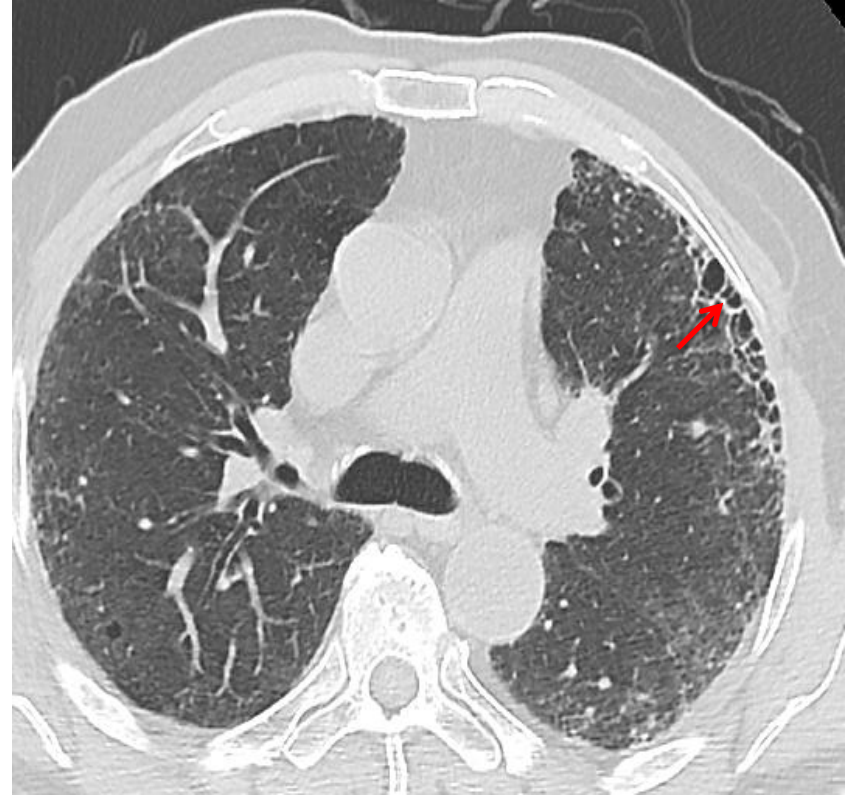
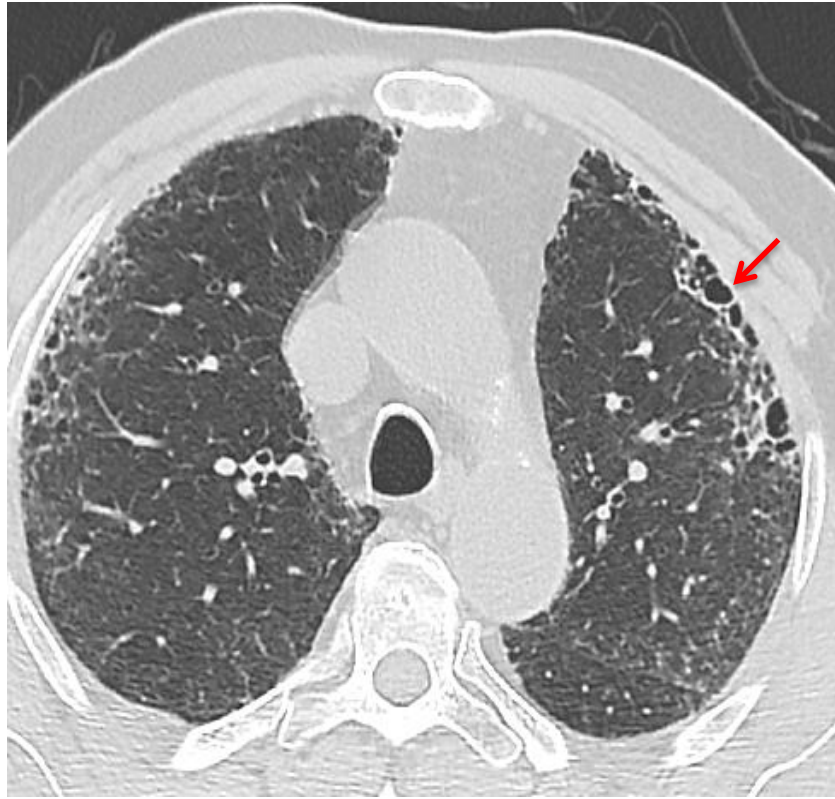
- Vital bulguları normal, O<sub>2</sub> Sat % 96.
- Solunum sistemi : Her iki hemitoraks solunuma eşit katılıyor; dinlemekle bileteral özellikle alt zonlarda velkro raller.
- Diğer sistem muayenesi olağan.

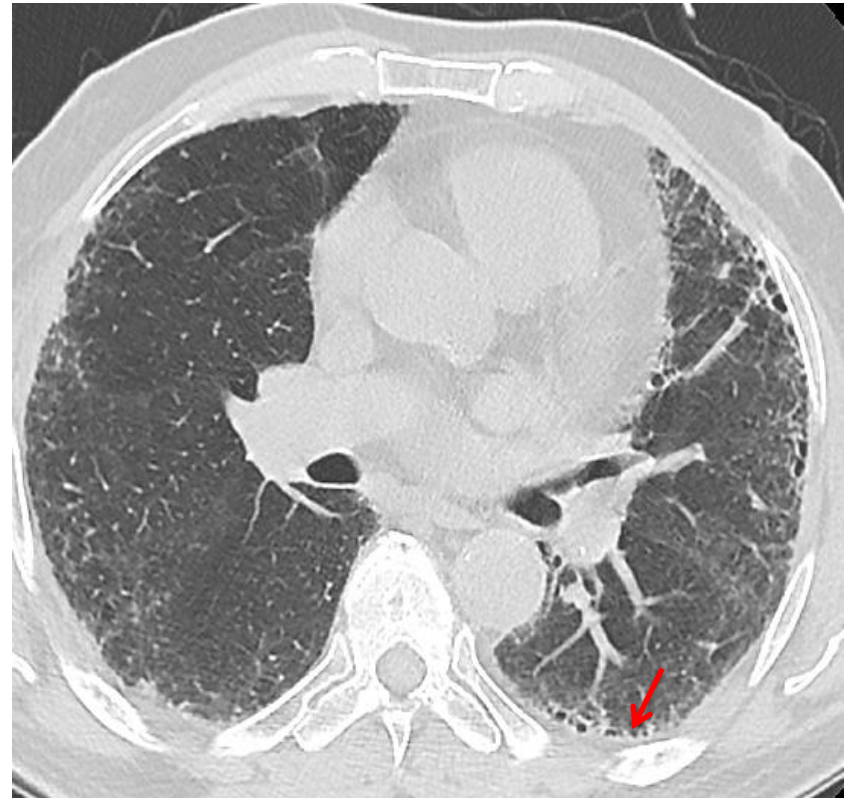
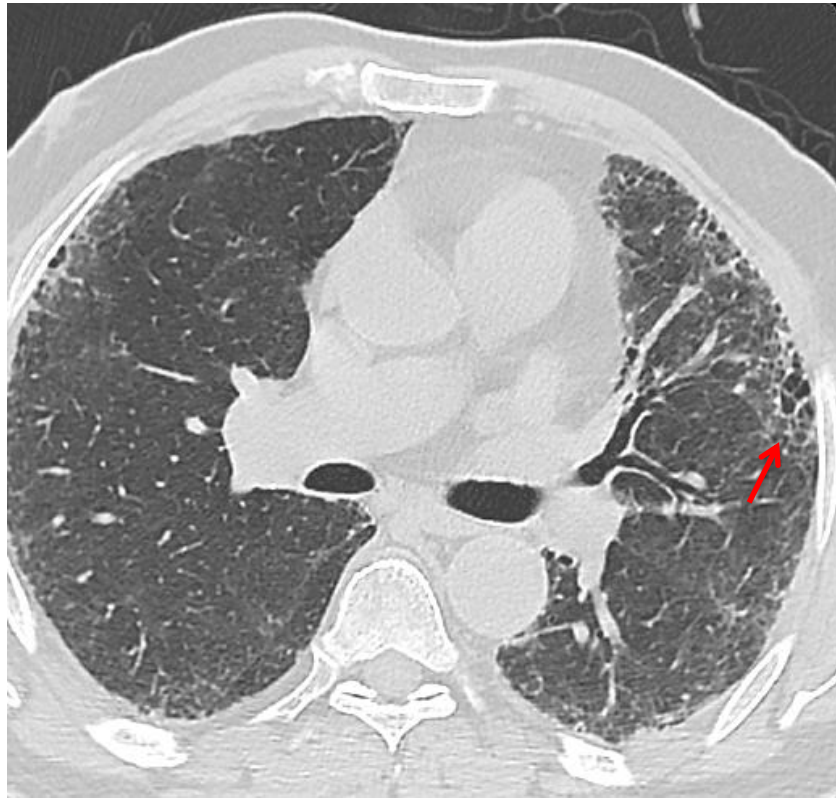


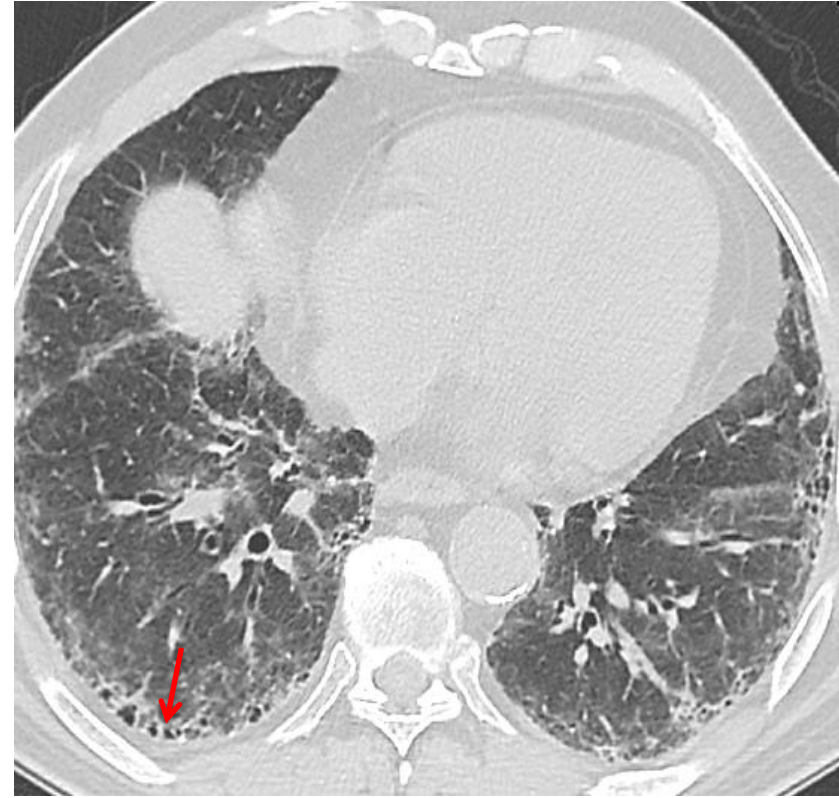
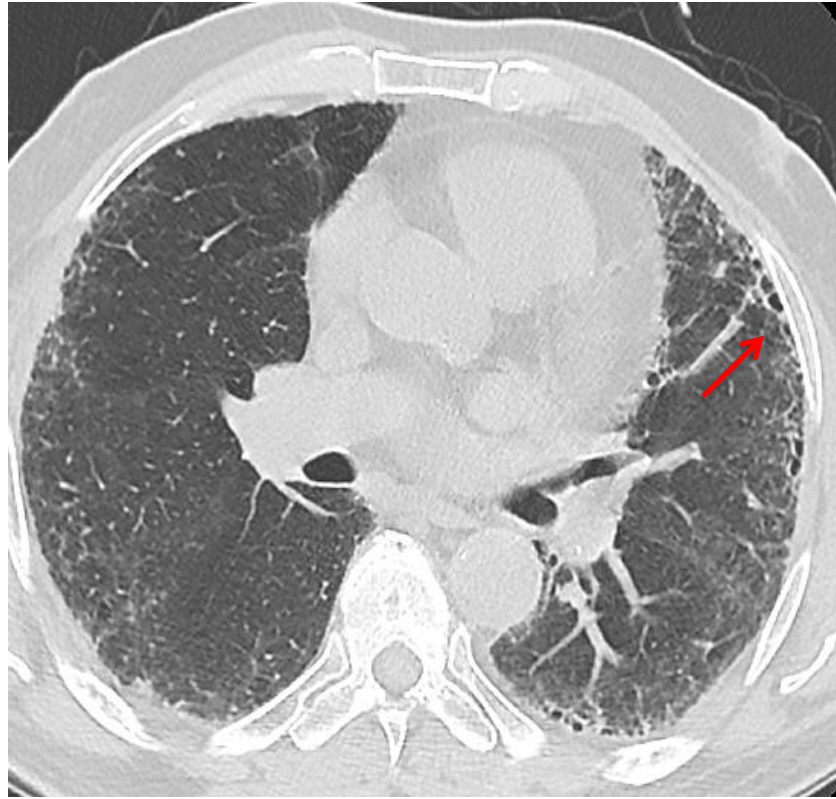
HRCT

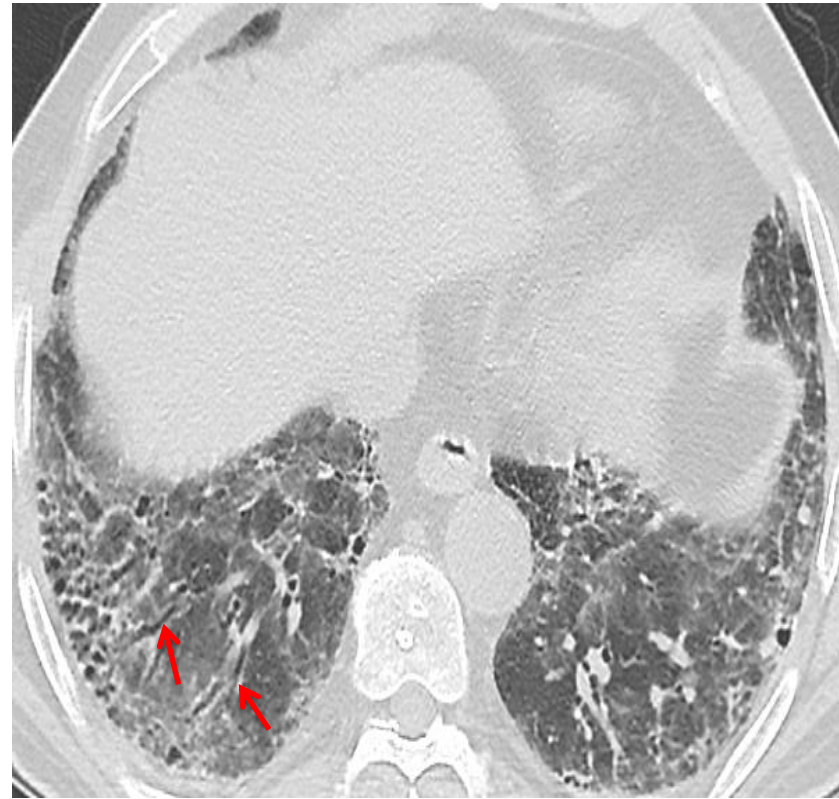
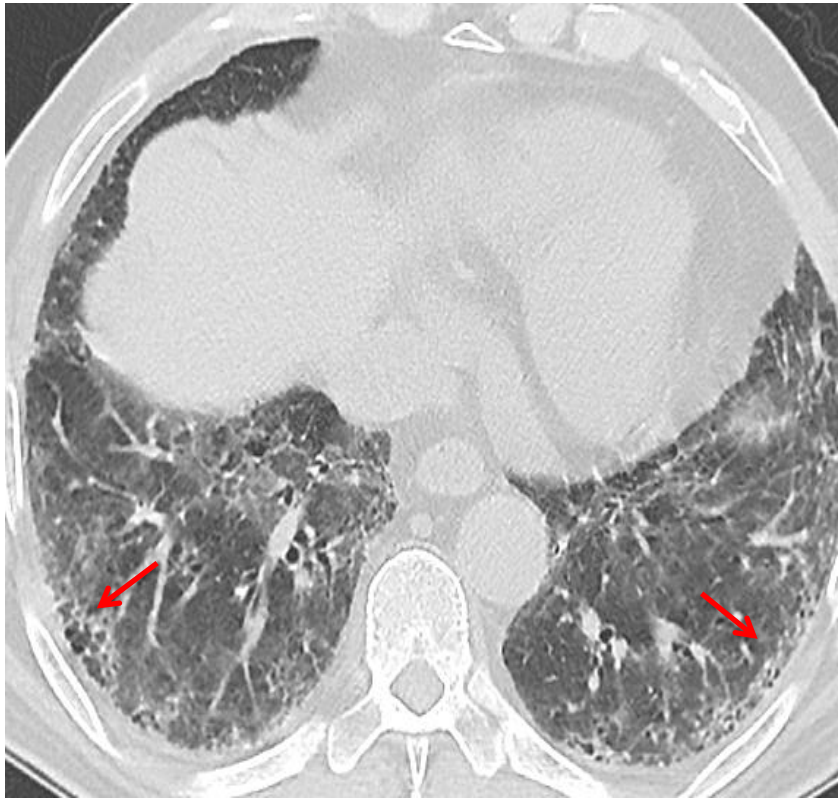




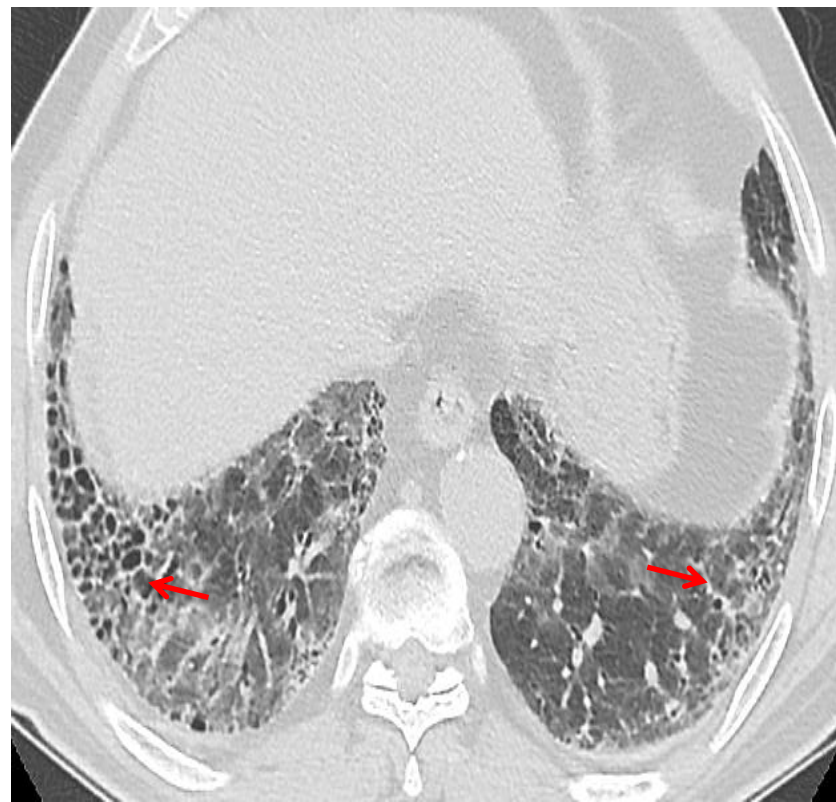
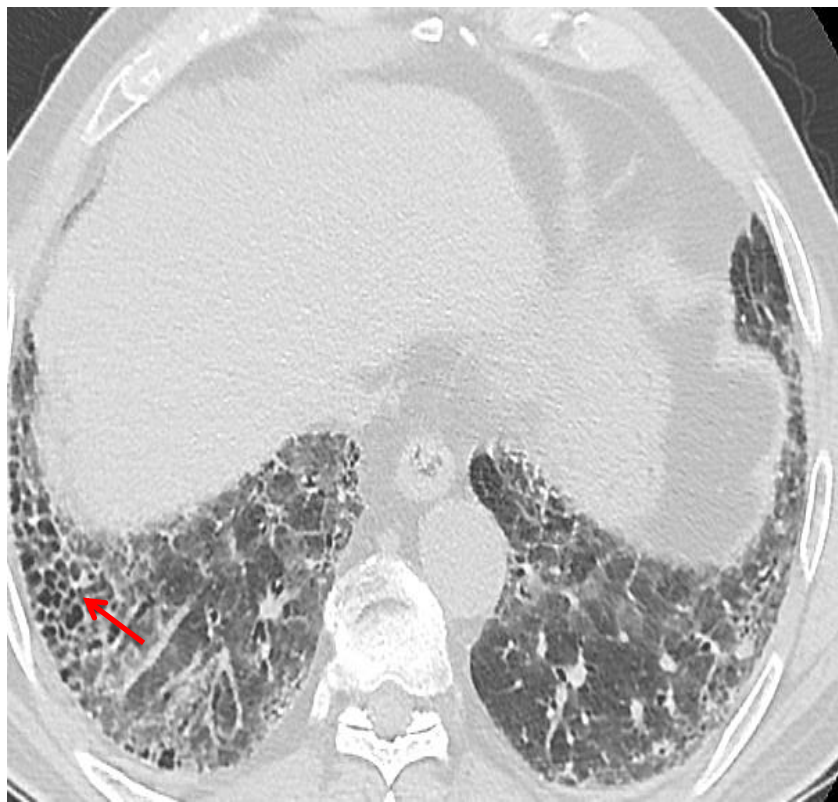


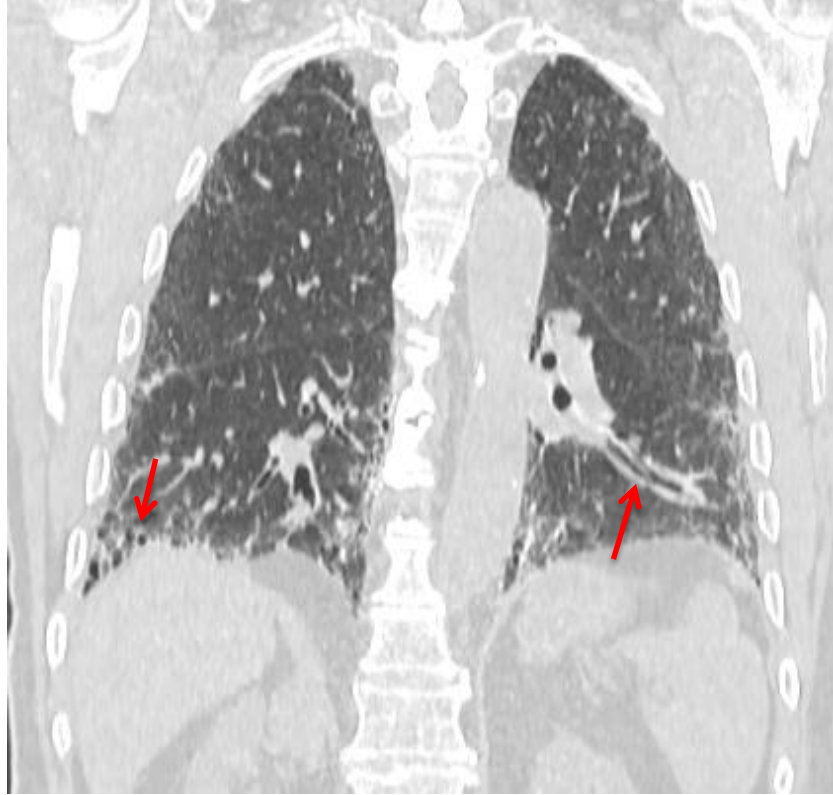












## Laboratuvar

- Hb:11.00 g/dL
- Lökosit: 9.700
- Sedimentasyon: N
- CRP : N
- Bun, kreatinin: N
- Diğer tüm biyokimya : N

## SFT

- FVC:% 87 (2.96 L)
- FEV: % 90 (2.38 L)
- FEV/ FVC :% 80.50
- **TLC:% 65 (3.99L)**
- **RV : % 49 (1.19 L)**
- **DLCO: % 59**
- **DLCO/VA:% 85**
- **DLCO/VA/ADJ: % 90**

**İPF şüphesi ?**



**İAH için saptanabilen nedenler dışlanmalı !!!**

- Sistemik kollojen hastalıklar
- Çevresel ve mesleksi maruziyet
- İlaç
- Aspestozis



- ANA (Anti-Nükleer Antikor)
- RF
- Anti CCP
- Otoimmün İmmunblot profil panel

**Negatif**

Otoimmün İmmunblot Profil Panel

anti-nRNP-Sm :  
Negatif  
anti-Sm: Negatif  
anti-SSA: Negatif  
anti-Ro52: Negatif  
anti-SSB: Negatif  
anti-Scl70: Negatif  
anti-PM-Scl: Negatif  
anti-Jo-1: Negatif  
anti-Centromere B:  
Negatif  
anti-PCNA: Negatif  
anti-DsDNA: Negatif  
anti-Nucleosomes:  
Negatif  
anti-Histones:  
Negatif  
anti-Ribosomal-P-Protein:  
Negatif  
anti-AMA-M2:  
Negatif  
anti-DFS70:Negatif

# Radyolojik görüntüleme göre bu olguda hangi patern hakim ?

- UIP
- Olası UIP
- UIP dışı bulgular

# Radyolojik Patern :

- Akciğer bazallerine doğru artan balpeteđi görünümü/ subplevral yerleşimli
- Önden arkaya yukarıdan aşağıya doğru bulgularda artış
- Buzlu cam diğer bulgulardan daha az

UIP İLE UYUMLU

**Tanı**

**UIP - İPF**





Teşekkürler