



# RhAPP

RHEUMATOLOGY ADVANCED  
PRACTICE PROVIDERS

## Inaugural National Conference

**December 3 – 5, 2020**

VIRTUAL CONFERENCE



# RhAPP

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## Rheum/Pulm

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# Faculty Disclosures

## **Katie Springer, PA-C:**

- Speaker's Bureau: Amgen

## **Katie Rosen, RN, MSN, ANP-C:**

- There are no relationships to disclose



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# Methotrexate and Rheumatoid Arthritis Interstitial Lung Disease

Katie Rosen, RN, MSN, ANP-C  
& Katie Springer, PA-C

# Case

- 64-year-old male with seropositive RA, stable on Methotrexate 20 mg weekly for 4 years
- He developed dyspnea on exertion, basilar crackles on exam
- Referred to Pulmonology
- What do you do with his Methotrexate??

# Pulmonary Evaluation – HPI

- **Exposures:** occupational, vocational, home environment, birds
- **Family history:** Family history of RA?, pulmonary fibrosis?
- **Smoking history:** cigarette smoking ↑risk for ILD
- **Labs:** ↑CCP & ↑RF, ↑risk for ILD
- **Additional risks for RA-ILD:** Age, Gender (male)

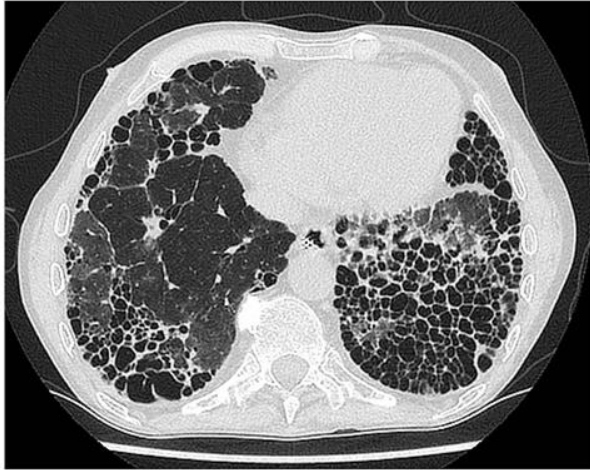
# Pulmonary Evaluation – PFT's



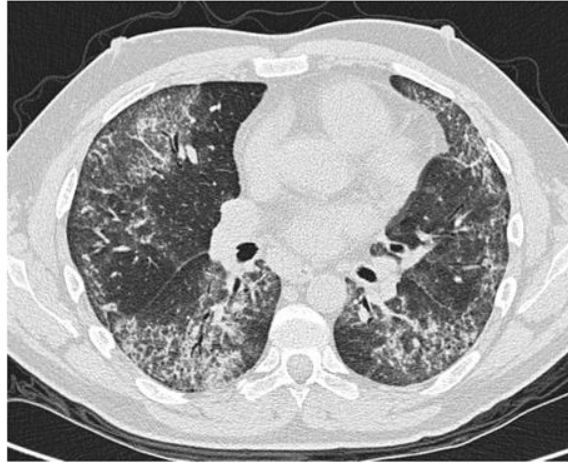
- **Obstructive?** FEV1/FVC <70
- **Restrictive?** FVC <80%, ↓DLCO
- **Our patient:**  
FVC: 2.77L 59%  
FEV1: 2.23L, 62%  
FEV1/FVC: 81  
DLCO 69%



# Pulmonary Evaluation – HRCT



(a)



(b)



(c)

IMAGE: Bendstrup E, Møller J, Kronborg-White S, Prior TS, Hyldgaard C. Interstitial Lung Disease in Rheumatoid Arthritis Remains a Challenge for Clinicians. *J Clin Med.* 2019 Nov 21;8(12):2038. doi: 10.3390/jcm8122038. PMID: 31766446; PMCID: PMC6947091.

# Pulmonary Evaluation – Oxygen

**Oxygen titration:** Evaluate peripheral oxygen saturation at rest, and with 6 minute walk. Eligible for supplemental oxygen if  $< 88\%$  at rest, or desaturation  $< 88\%$  with activity

**Six minute walk test:** Used for long term evaluation of functional capacity (distance in meters, heart rate, oxygen saturation)

# Further Evaluation?



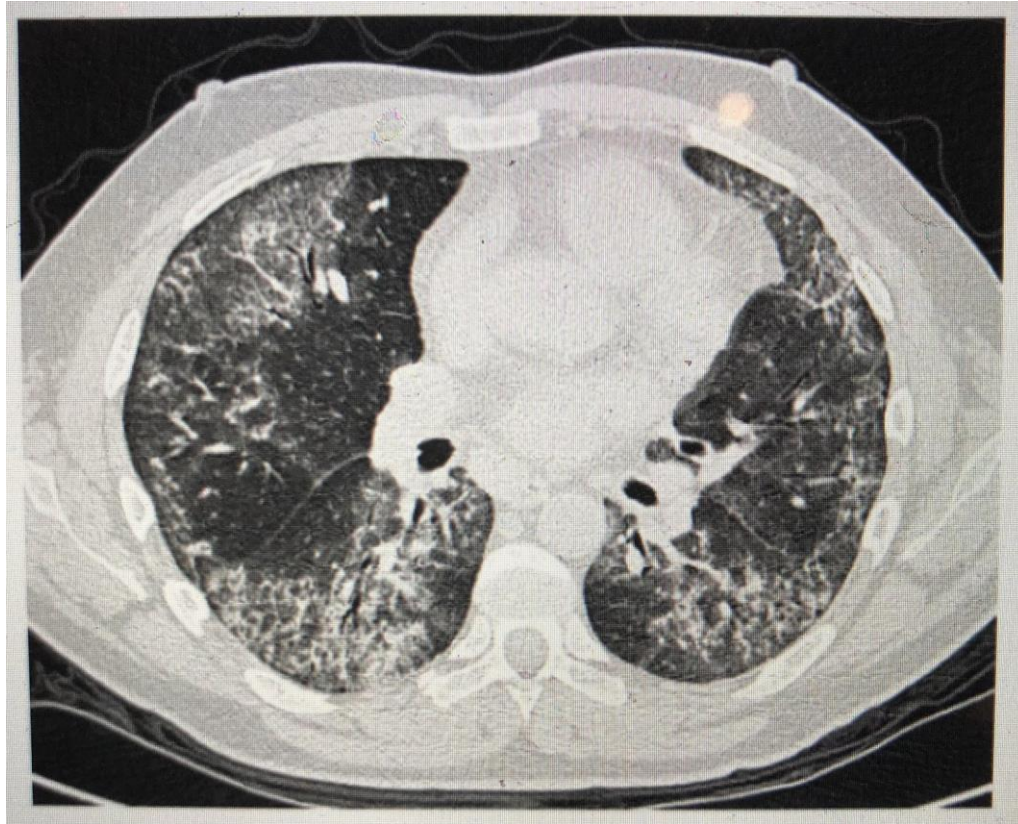
## BRONCHOSCOPY

- Useful to r/o infection

## SURGICAL BIOPSY

- Not usually required
- CT correlates with path.
- Consider: if diagnosis uncertain or concern for malignancy

# Our Patient – What's the Diagnosis?



# Diagnosis – RA ILD

- **HRCT – NSIP**

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- Methotrexate is *NOT* the problem
- This is RA-ILD

# Methotrexate – Friend or Foe

## MTX pneumonitis

- Usually within first year, can be up to 3 years of treatment
- Presents as a hypersensitivity pneumonitis
- Acute onset of symptoms (other ILD progress more slowly)
- Rare

## CURRENT DATA MTX and ILD

- [Serrano et al, 2017](#): MTX associated with survival in RA ILD
- [Kiely et al, 2019](#): No association for development of RA-ILD and MTX may delay onset
- [Juge et al, 2020](#): MTX not associated with RA-ILD, and ILD detected later in patients treated with MTX

# Treatment Guidelines?

- No guidelines from ACR, or ATS, for RA-ILD
  - Recommendations being considered
- NICE and Spanish Society of Rheumatology
  - Proposed guidelines
  - Suggestions for abatacept and rituximab

# RA-ILD Treatment

- **Corticosteroids**
- **Mycophenolate** – Fischer et al, 2013 – FVC stable or improved
- **Azathioprine** – Oldham et al, 2016 – CTD-ILD, improved FVC compared w/MMF *consider: TPMT, tolerability*
- **Rituximab** – Md Yusof et al, 2017, 10 year study, majority of RA-ILD stable/improved. Druce et al, 2017 – Improved survival with RTX as first biologic compared with TNFi

# Antifibrotic – Fibrotic ILD (NSIP/UIP)

- **Nintedanib** – Flaherty et al, 2019 – Decreased rate of decline in FVC in progressive *fibrosing ILD*
- **Pirfenidone** – ongoing Phase 2 trial in RAILD in 4 countries (TRAIL1 Trial)

# Plan

- MMF first line for lungs, not helpful for joints
- Azathioprine could treat lungs and joints
- Rituximab could treat lungs and joints
- MTX? Probably stop. Did not cause ILD, but needs different immune suppression
- Antifibrotic? If progressive fibrosis

## OTHER

- Vaccinations
- Oxygen to ensure SpO<sub>2</sub> >88%
- Monitor CBC and LFTs
- Spirometry every 3 months
- HRCT in 6 months
- Physical Therapy
- Transplant eval if progressive

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