

# Case report



# Case female, 50 years old

nurse

non-smoker

no immunosuppression

## Symptoms:

- fatigue
- dyspnea
- fever

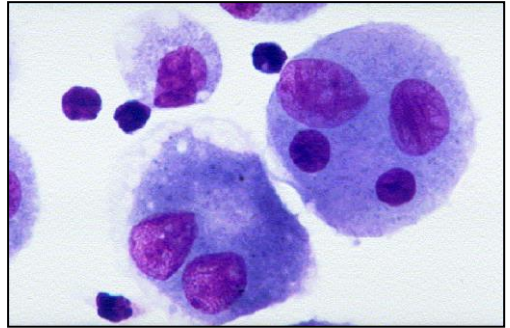


# Case male, 50 years old

Recovered volume: 165 ml

Total cell count: 204.000 /ml

AMs	80.0%	SEC	0/500
Lym	17.6%	BEC	20/500
PMN	2.2%	ICO	0.0%
EOS	0.2%		

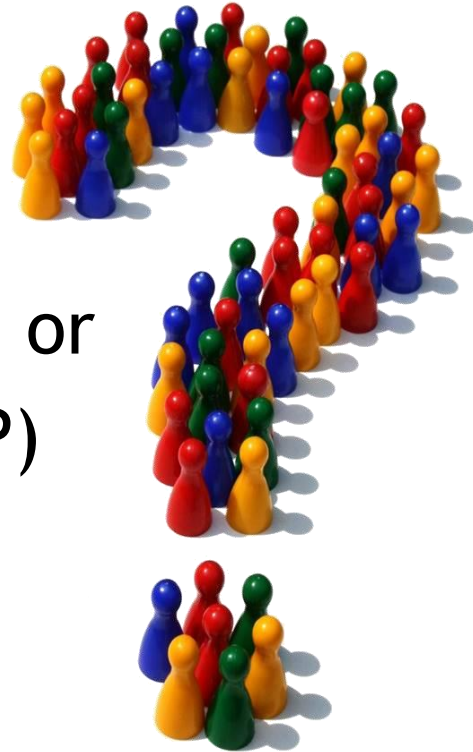


Presence of multinucleated macrophages

TBC: negative, PCP: negative

# Differential diagnosis

1. Infection
2. Extrinsic Allergic Alveolitis (EAA) or Hypersensitivity Pneumonitis (HP)
3. Idiopathic pulmonary fibrosis
4. Sarcoidosis



Which diagnosis is most likely?

A microscopic image of bronchoalveolar lavage fluid cytology. The image shows a variety of cells, including large, flat, squamous cells with thin cytoplasm and large, centrally located nuclei. There are also smaller, more rounded cells with granular cytoplasm and some cells with multiple lobes. The background is a light, slightly hazy blue, suggesting a fluid medium. The text "Interpretation of bronchoalveolar lavage fluid cytology" is overlaid in the center in a bold, black, sans-serif font.

# Interpretation of bronchoalveolar lavage fluid cytology

Name patient: X  
Age (15-80): 50  
Sex:  Male  Female  
Smoking?  Yes  No  
Date of birth (DD-MM-YYYY): 30-04-58  
Patient number: 0000000

Fluid in (30-300ml) 200  
Fluid out (0-300ml) 165  
Cell count  $\times 10^4$ /ml (0.1-9999.9) 20.4  
Eosinophils (0 - 99.9%) 0.2  
Neutrophils (0 - 99.9%) 2.2  
Lymphocytes (0 - 99.9%) 17.6  
Macrophages (0 - 99.9%) 80.0

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## The outcome is:

Name patient: X  
Age (15-80): 50  
Sex:  Male  Female  
Smoking?  Yes  No  
Date of birth (DD-MM-YYYY): 30041958  
Patient number: 0000000

Fluid in (30-300ml) 200  
Fluid out (0-300ml) 165  
Cell count  $\times 10^4$ /ml (0.1-9999.9) 20.4  
Eosinophils (0 - 99.9%) 0.2  
Neutrophils (0 - 99.9%) 2.2  
Lymphocytes (0 - 99.9%) 17.6  
Macrophages (0 - 99.9%) 80.0

Probability of bacterial infection = 0.0 %

In case of a bacterial infection (probability: > 50%) just ignore the following prediction!

In case of no bacterial infection, the outcomes are:

1 = Sarcoidosis = 97.1 %

2 = Extrinsic Allergic Alveolitis (EAA), Hypersensitivity Pneumonitis (HP) or Drug-Induced Pneumonitis (DP) = 0.0 %

3 = Idiopathic Pulmonary Fibrosis (IPF) = 2.8 %

Predicted diagnosis thus becomes Sarcoidosis, in case of no bacterial infection.

The BAL fluid analysis results have to be interpreted with care, and, clinical data are mandatory to make up the final decision about the most probable diagnosis. The intention of this prediction is to support other important clinical diagnostic procedures.

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# PhD theses dealing with BAL

