Case report

Case female, 50 years old

nurse

non-smoker

no immunosuppression

Symptoms:

- fatigue

- dyspnea
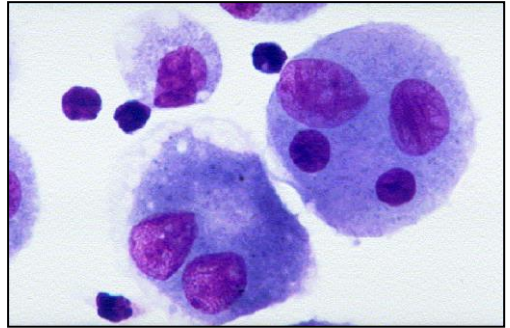
- fever

Case male, 50 years old

Recovered volume: 165 ml

Total cell count: 204.000 /ml

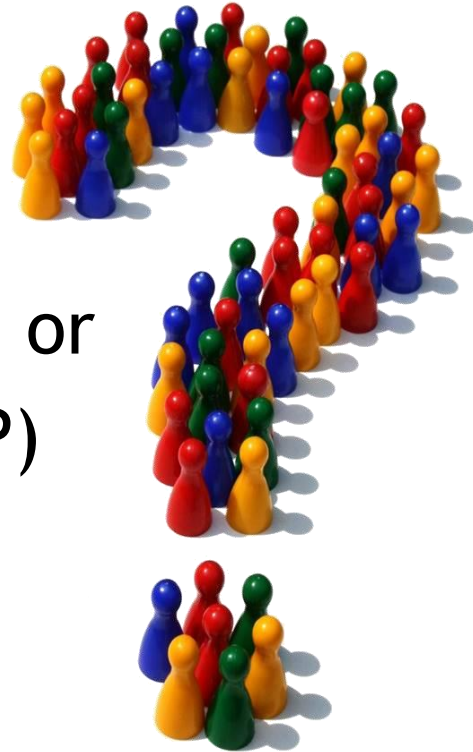| AMs	80.0%	SEC	0/500
Lym	17.6%	BEC	20/500
PMN	2.2%	ICO	0.0%
EOS	0.2%		

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?

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