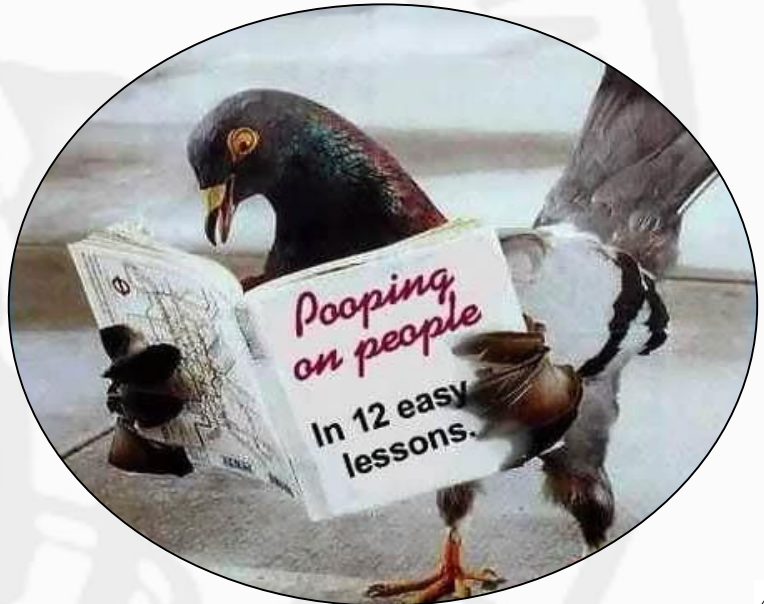


# Role of bronchoalveolar lavage (BAL) in the diagnostic work-up of patients with interstitial lung disease (ild)



# Extrinsic Allergic Alveolitis (EAA)









Farmers lung  
Bird breeders lung  
Pigeon breeders lung



# Etiology of Hypersensitivity Pneumonitis (HP) or Extrinsic Allergic Alveolitis (EAA)

## Antigen

### *Animal Proteins*

Avian proteins

Urine, serum, pelts

Wheat weevil

*(Sitophilus granarius)*

## Exposure

Bird droppings,  
feathers

Rats, gerbils

Infested flour

(by small beetles)

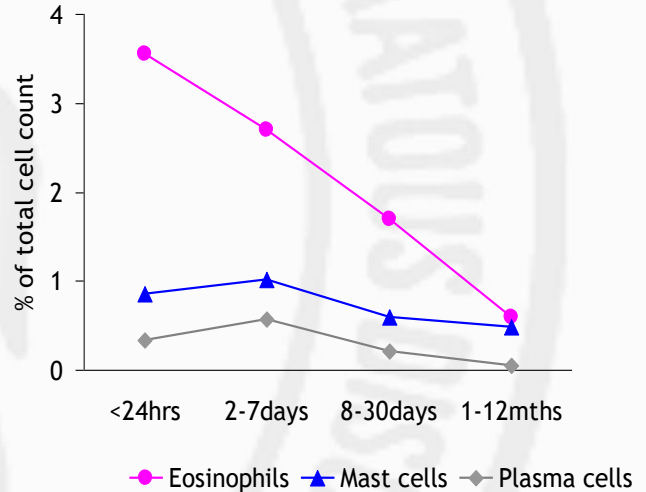
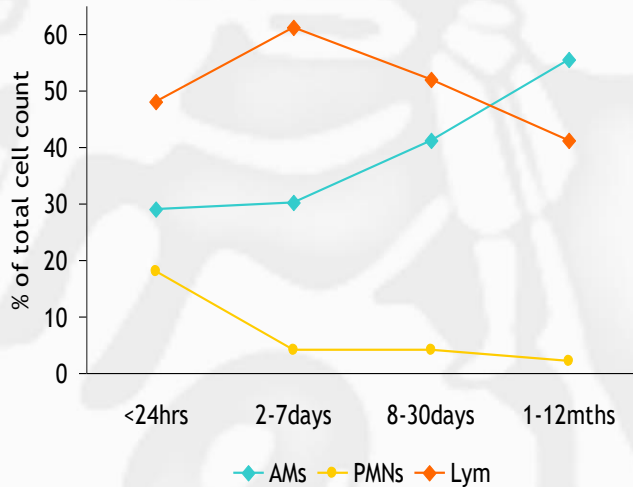
## Syndrome

Bird breeder's lung

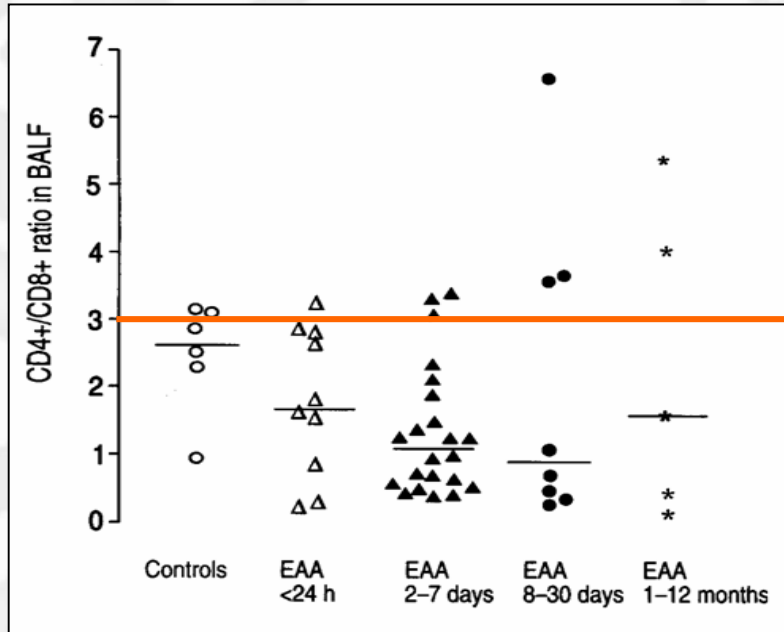
Animal handler's lung

Wheat weevil lung

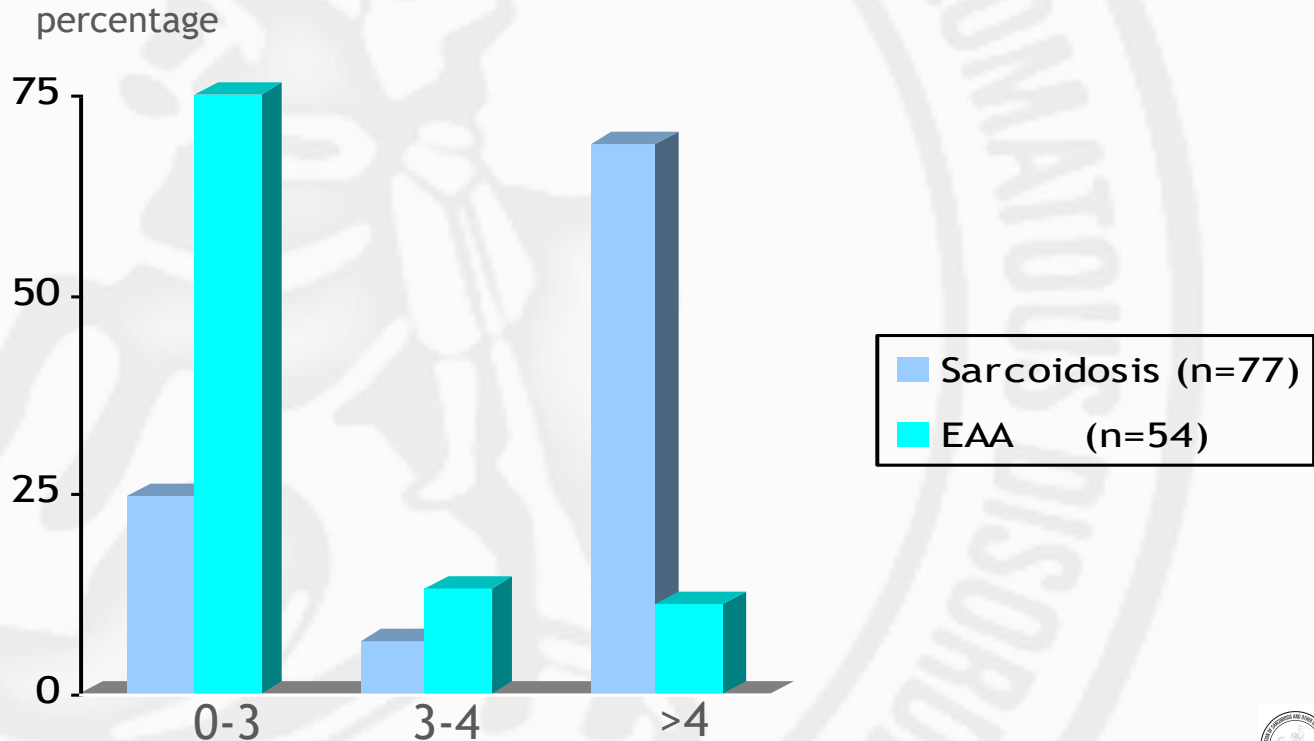
# Influence time between last antigen exposure and BAL on the BALF cell profile in EAA



# Extrinsic Allergic Alveolitis (EAA): BALF CD4/CD8 ratio

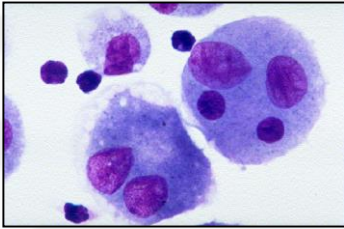


# Distribution CD4/CD8 ratio in BALF in sarcoidosis and Extrinsic Allergic Alveolitis (EAA)

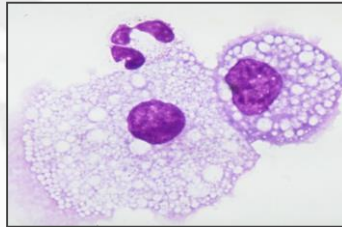




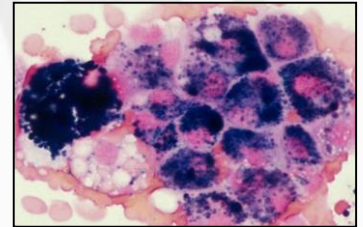
# Cytological BAL fluid features in various lung diseases



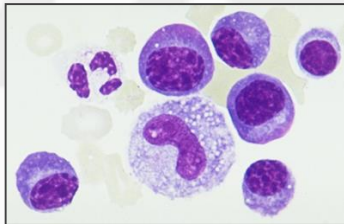
Multinucleated AMs



Foamy AMs



Iron laden AMs



Plasma cells



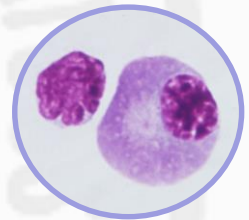
Reactive PII cells



Increased PMNs

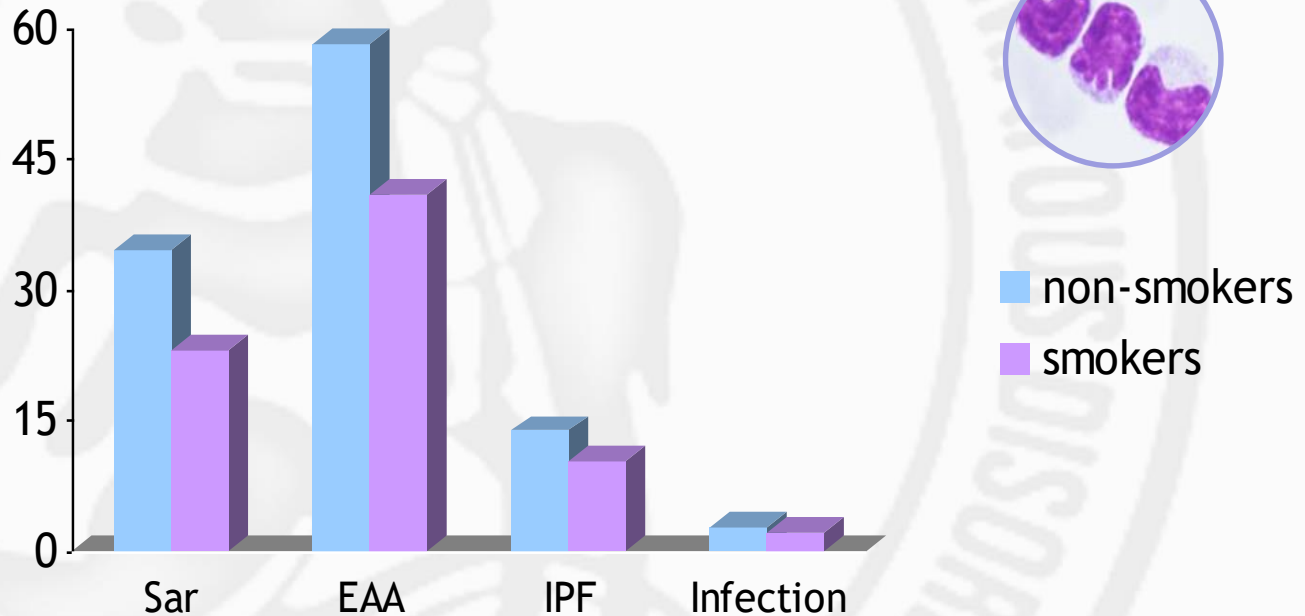
# Presence of plasma cells in BALF

Disorder	% of cases with PC
Extrinsic Allergic Alveolitis	50
Drug-induced Pneumonitis	35
BOOP	15
Eosinophilic Pneumonia	12
<i>Pneumocystis carinii</i> Pneumonia	25
Pulmonary aspergillosis	16
Haematologic malignancies	14
Malignant lymphomas	14

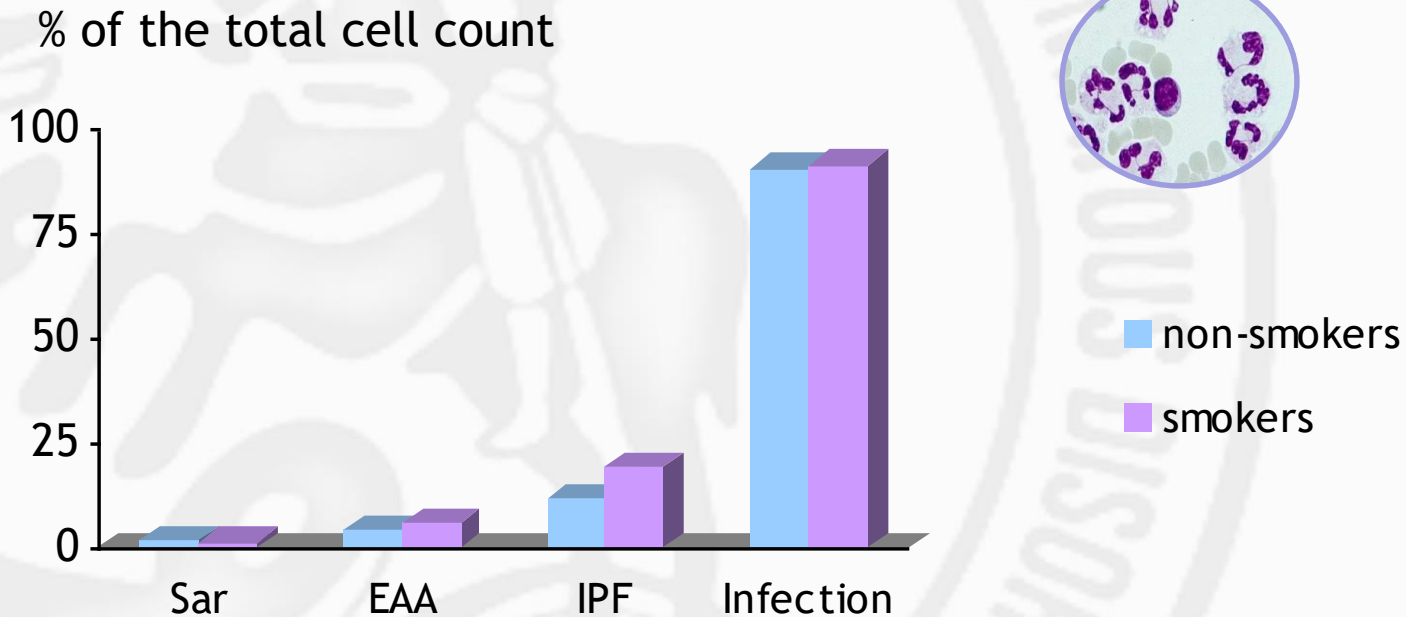


# Differential cell count in BALF: lymphocytes

% of total cell count

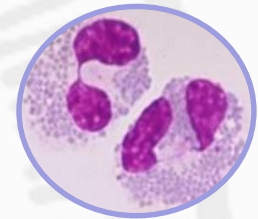
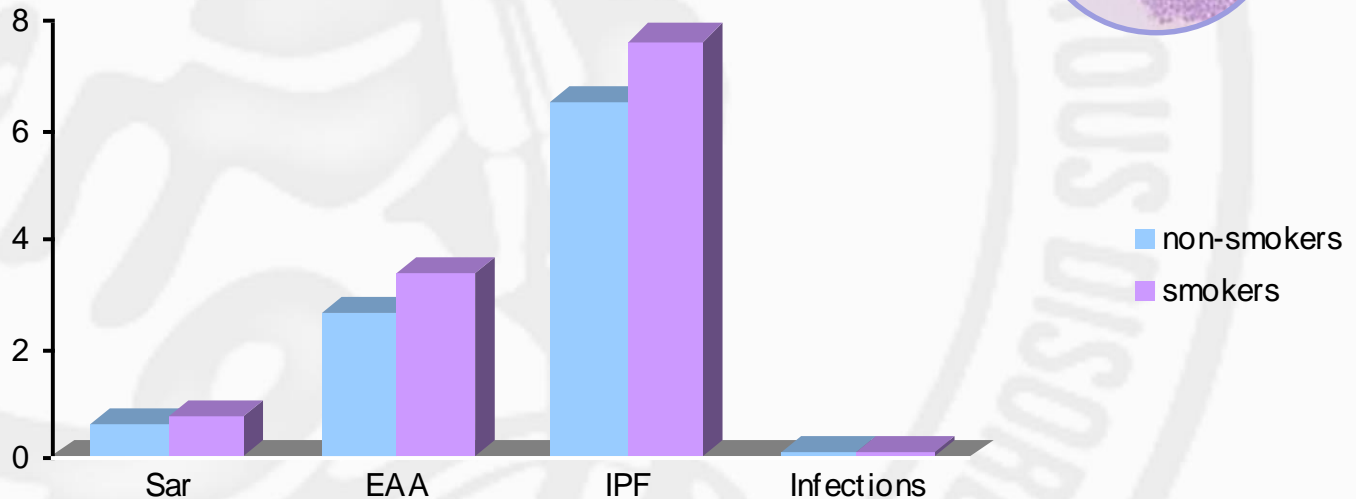


# Differential cell count in BALF: neutrophils



# Differential cell count in BALF: eosinophils

% of the total cell count



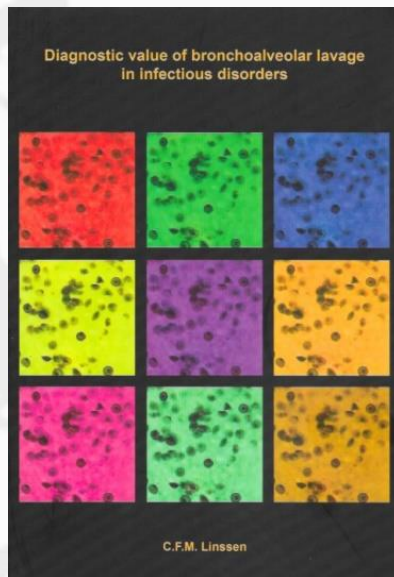
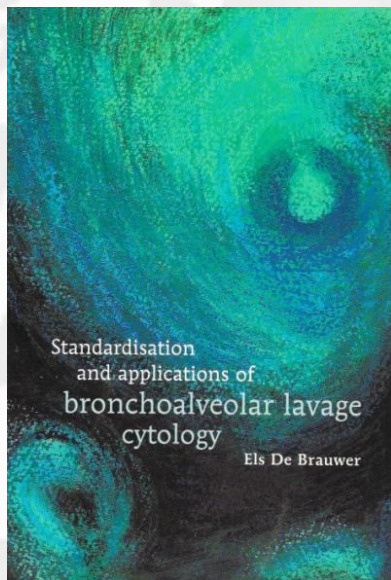


# Differential cell count BALF

Associated diseases	AMs	Lyms	PMNs	Eos	PCs	MCs	RPII
<b>Non-infectious diseases</b>							
Sarcoidosis		↑	=	=/↑	-	=/↑	-
Extrinsic allergic alveolitis	FAM	↑↑	↑	=/↑	+/-	↑↑	-
Drug-induced pneumonitis	FAM	↑↑	↑	↑	+/-	↑↑	-
Idiopathic pulmonary fibrosis		↑	↑/↑↑	↑	-	↑	+/-
BOOP*	FAM	↑	↑	↑	+/-	=/↑	
Eosinophilic pneumonia		↑	=	↑↑	+/-	=/↑	
Alveolar proteinosis	FAM	↑	=	=	-	=	
Diffuse alveolar haemorrhage		=/↑	↑	=/↑	-	=	+/-
ARDS**		↑	↑↑	↑	-	=/↑	+/-
Haematologic malignancies		↑	↑	=/↑	-	=/↑	
Astma		=	=	↑	-	=	
<b>Infectious diseases</b>							
Ventilator-associated pneumonia		=	↑↑	=	-	=	+/-
<i>Pneumocystis jiroveci</i> pneumonia		=/↑	↑	=/↑	+/-	=	+/-
Viral pneumonia		=	↑↑	=	-	=	+/-
Aspiration pneumonia	FAM	=	↑↑	=	-	=	+/-



**ild care**  
foundation



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