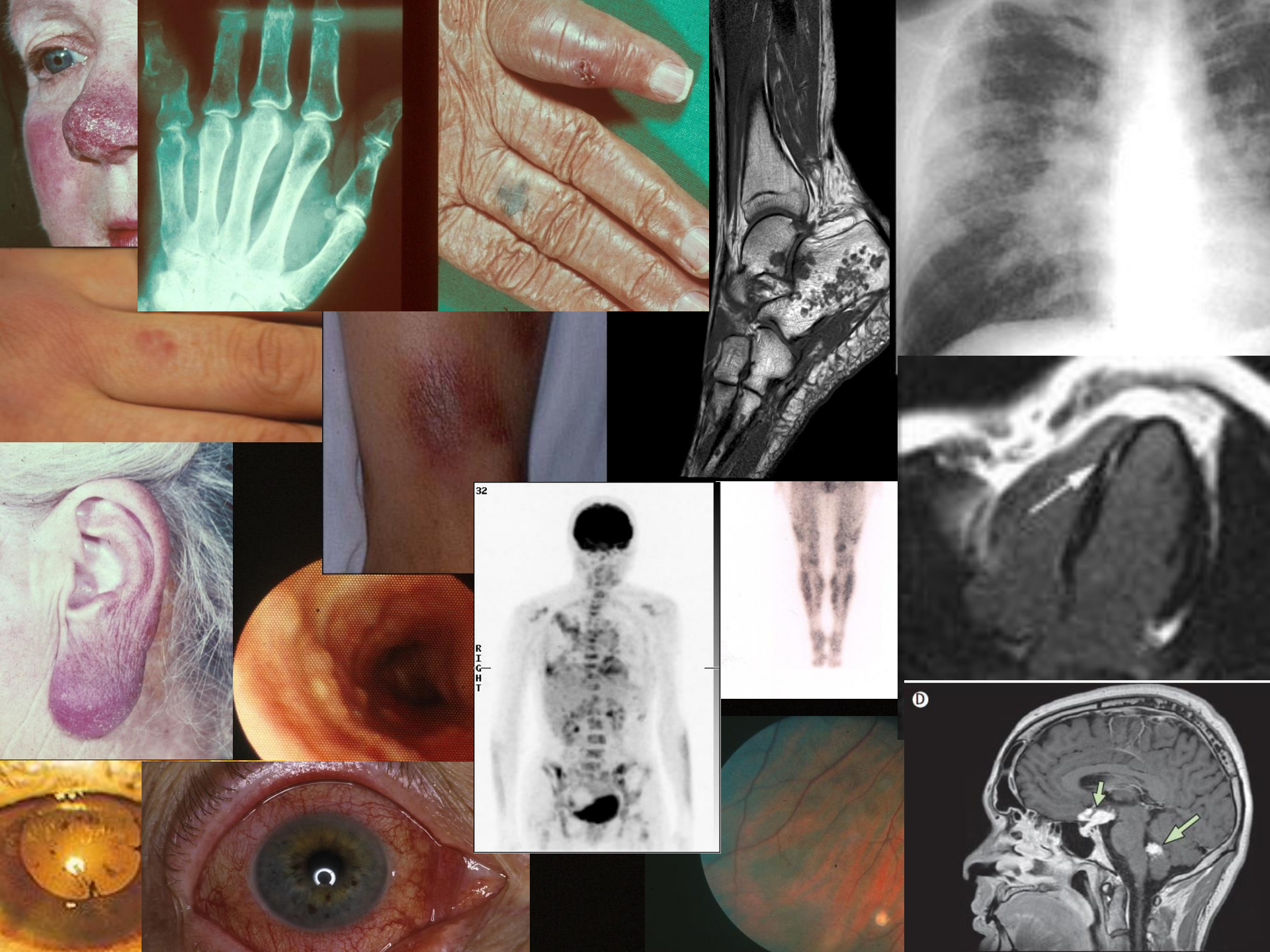


# The many faces of sarcoidosis: PET

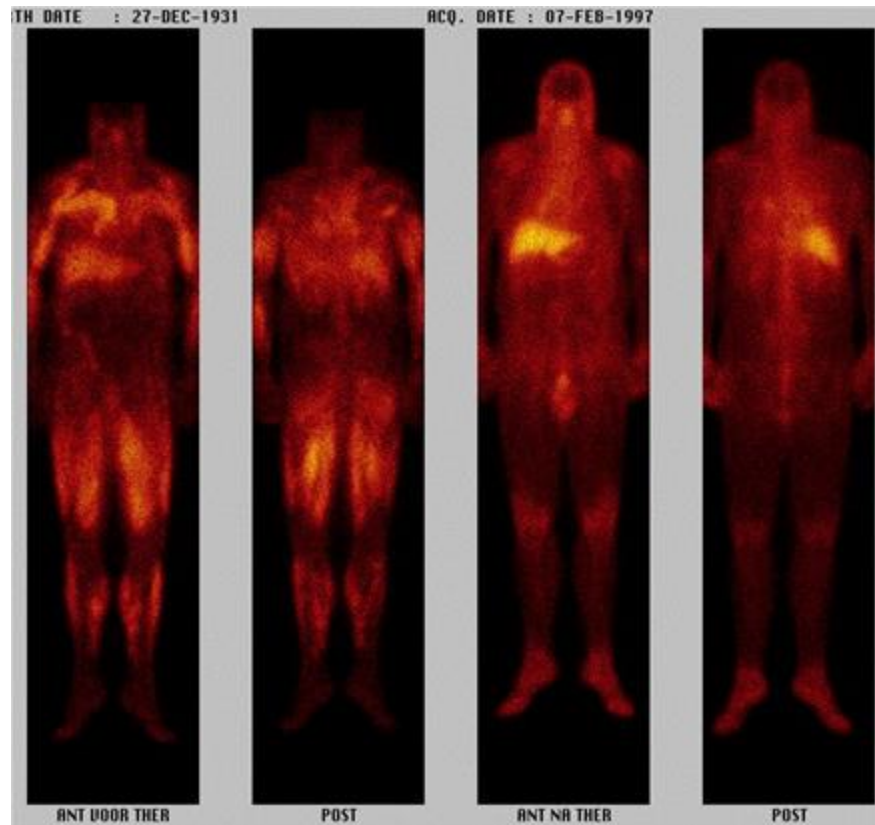
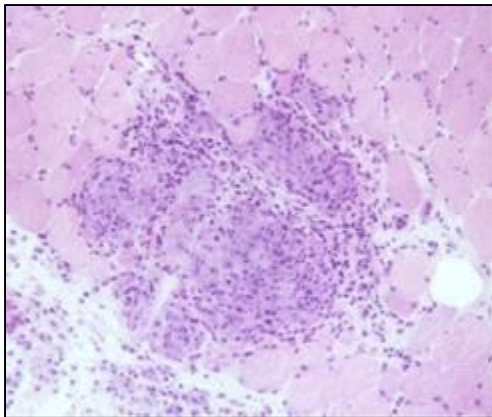


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# Gallium-67 scintigraphy in sarcoidosis: extrathoracic muscle uptake



Before treatment    After treatment

Liem et al J Nucl Med 1998; 39: 1605-07.

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# $^{67}\text{Ga}$ scintigraphy

- Radiation dose: 18.5 mSv
- Acquisition after 48 hours
- Moderate resolution
- Kappa 0.19-0.59

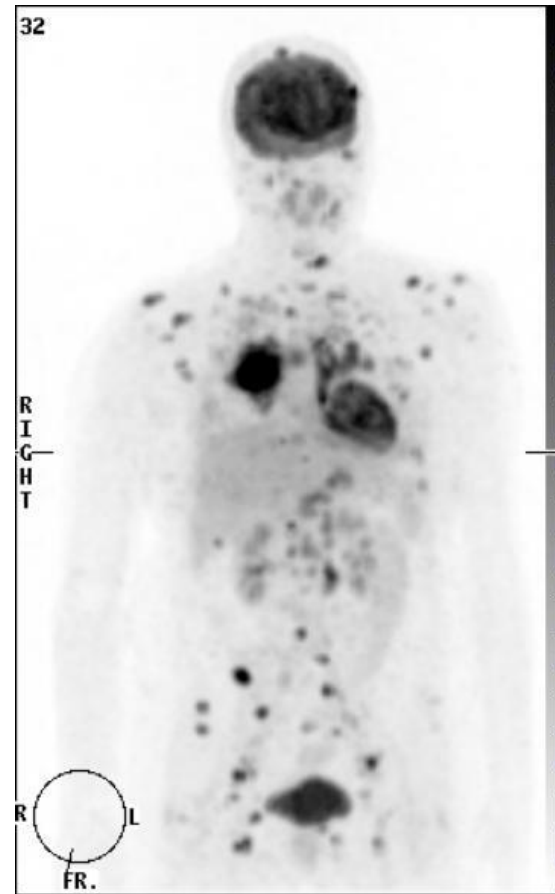
# FDG PET/CT

- Radiation dose: 5 mSv
- Completed within 2 hours
- Excellent resolution
- Kappa 0.65-0.84
- Significantly more lymph node and spleen involvement than  $^{67}\text{Ga}$  scintigraphy

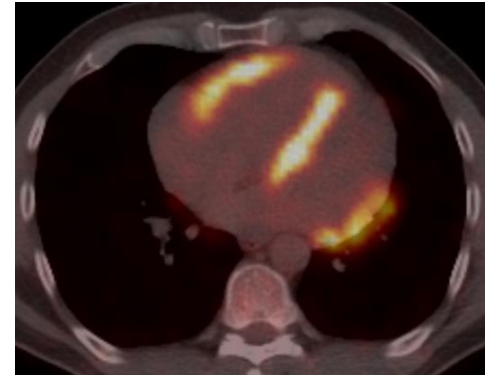
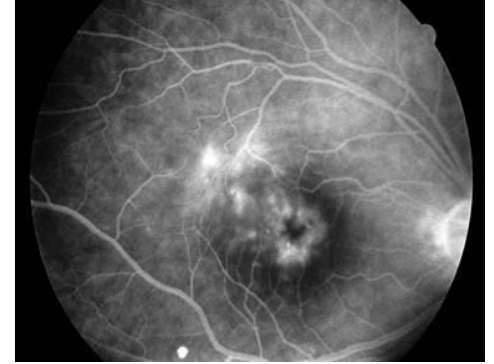
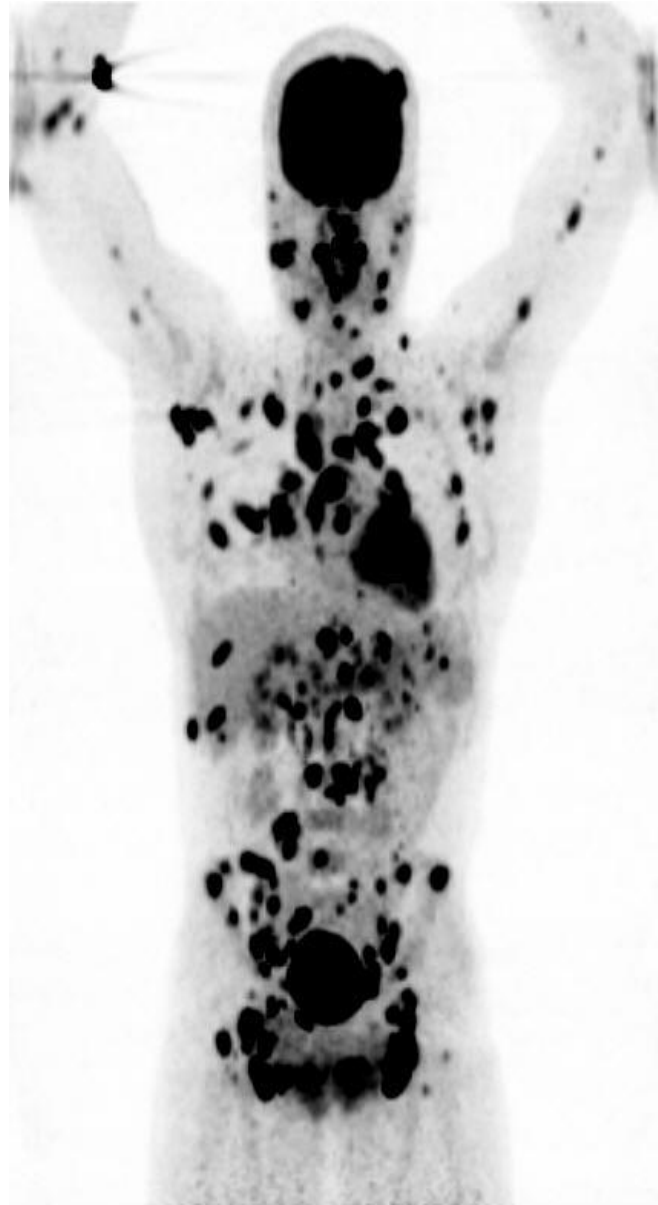
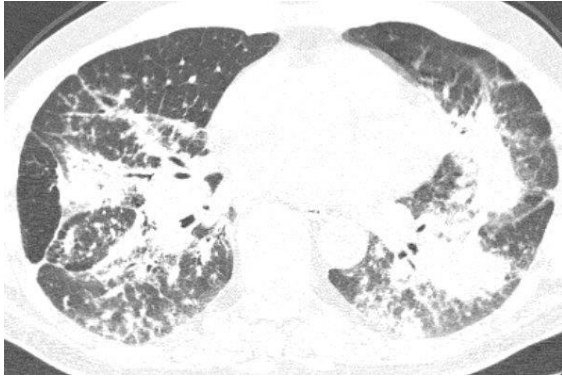
# $^{67}\text{Ga}$ scintigraphy



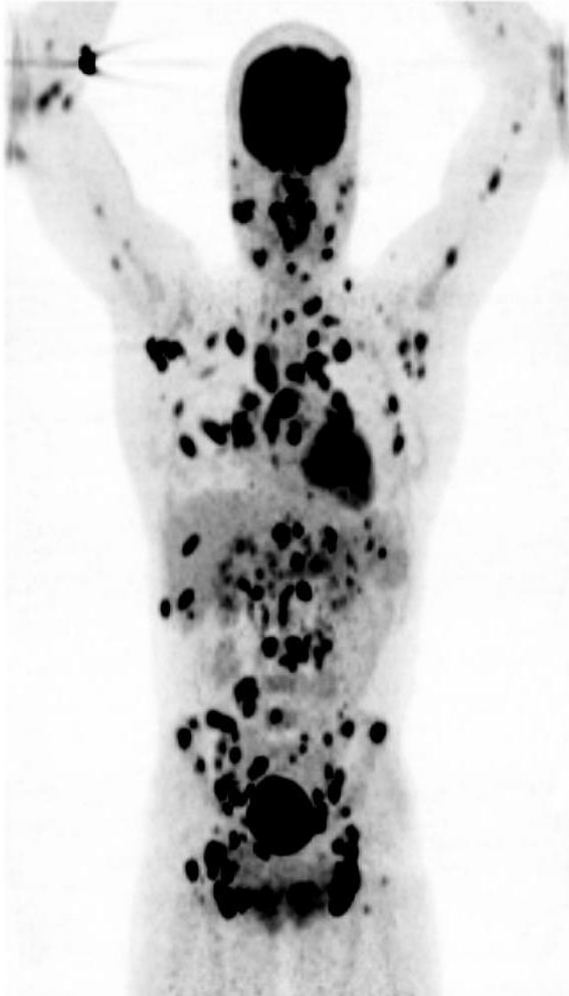
# FDG PET



# Organs involved in sarcoidosis

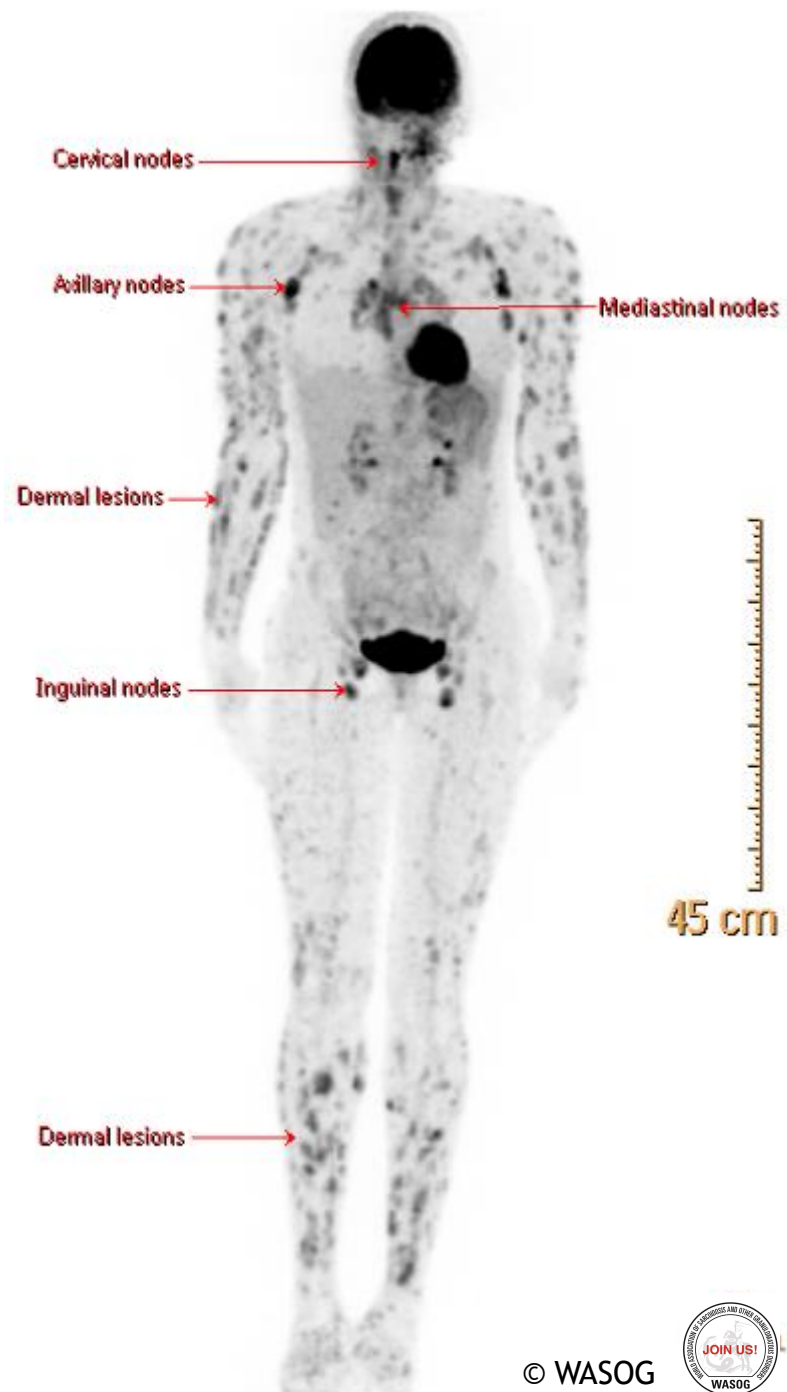


# Usefulness of a PET-scan in the management of sarcoidosis



- PET sensitive to assess inflammatory activity and extent of disease
- not indicated in the standard work-up
- PET appears especially helpful in:
  - persistently symptomatic patients without serological signs of inflammatory activity
  - the detection of active cardiac sarcoidosis
  - uncover a suitable location for biopsy
  - explaining (mainly extrathoracic) symptoms
  - offering prognostic value

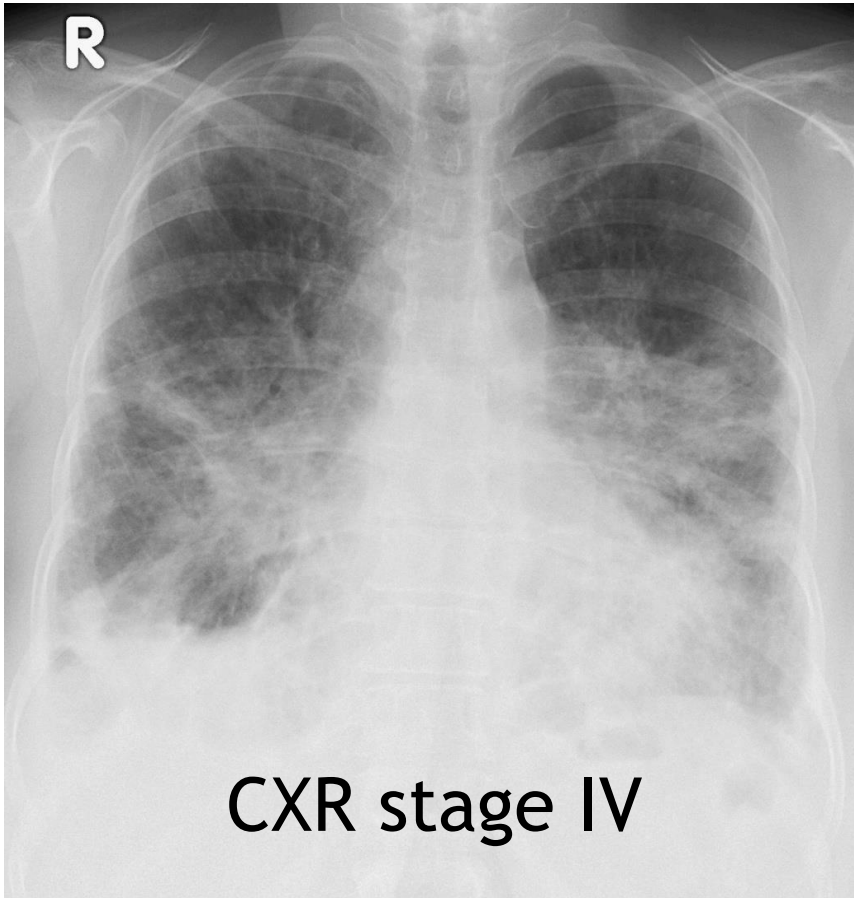




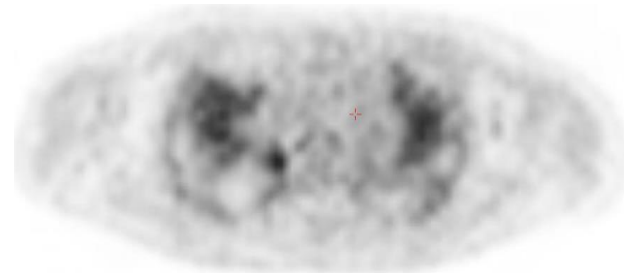
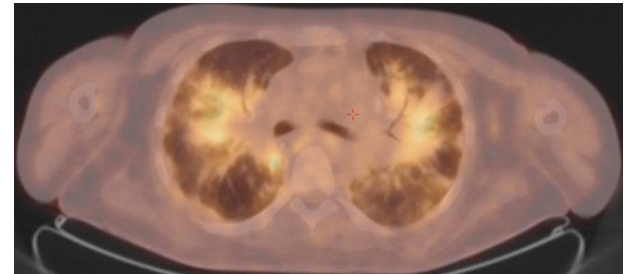
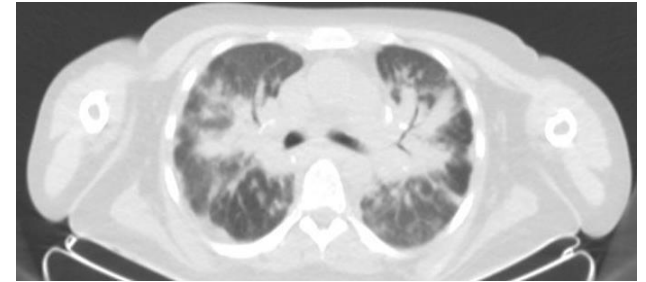


# Sarcoidosis patient with inflammation

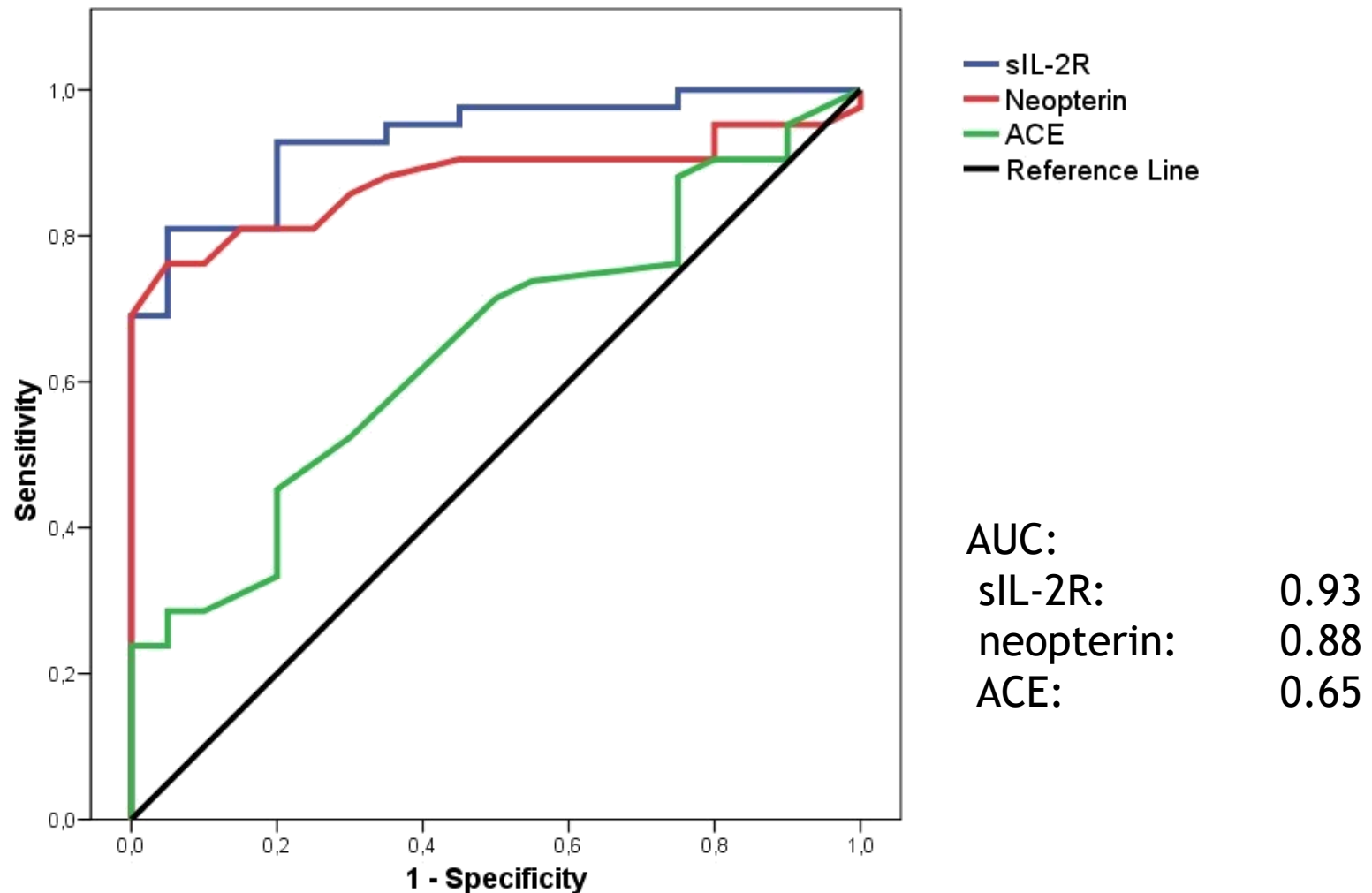
## Chest X-ray



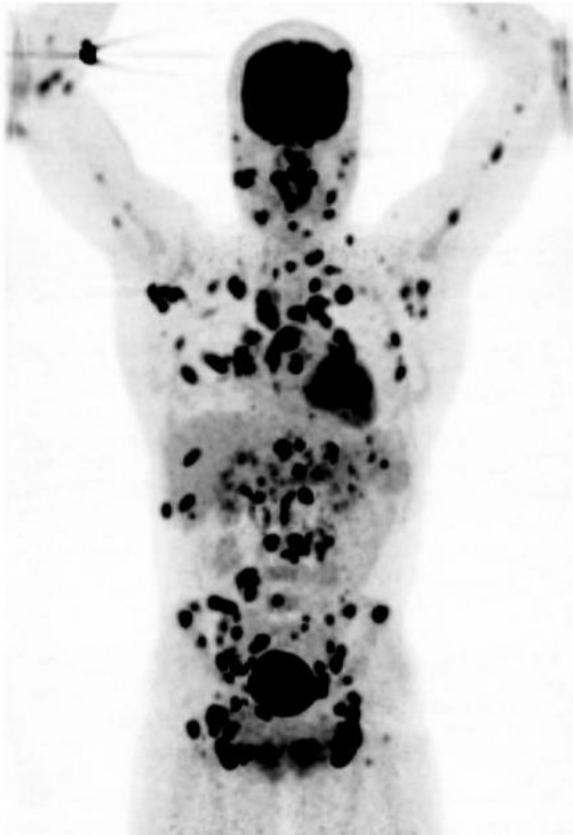
## PET/CT



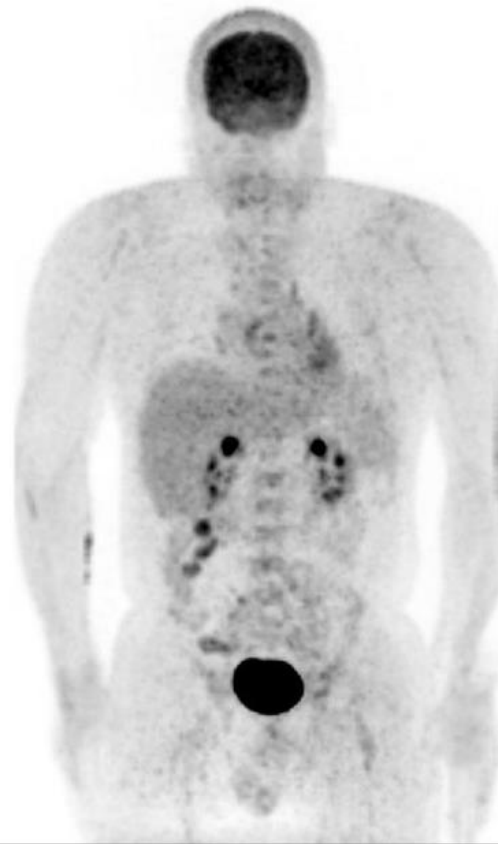
# ROC Curve: association of PET positivity and serological markers



# Multiorgan involvement monitoring with PET F<sup>18</sup>-FDG

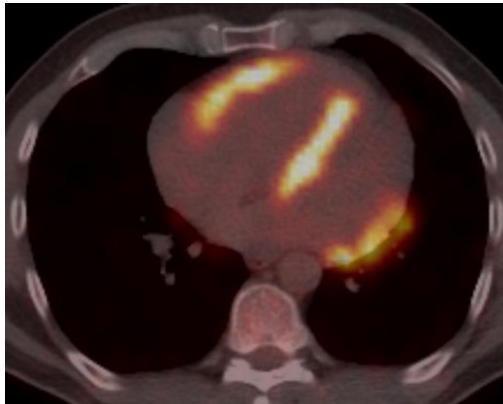
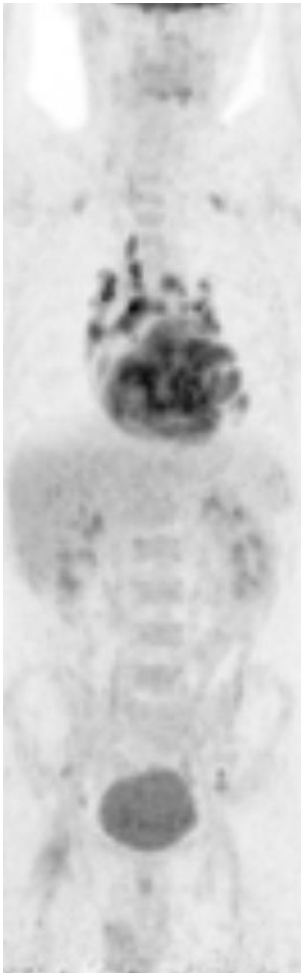


before treatment



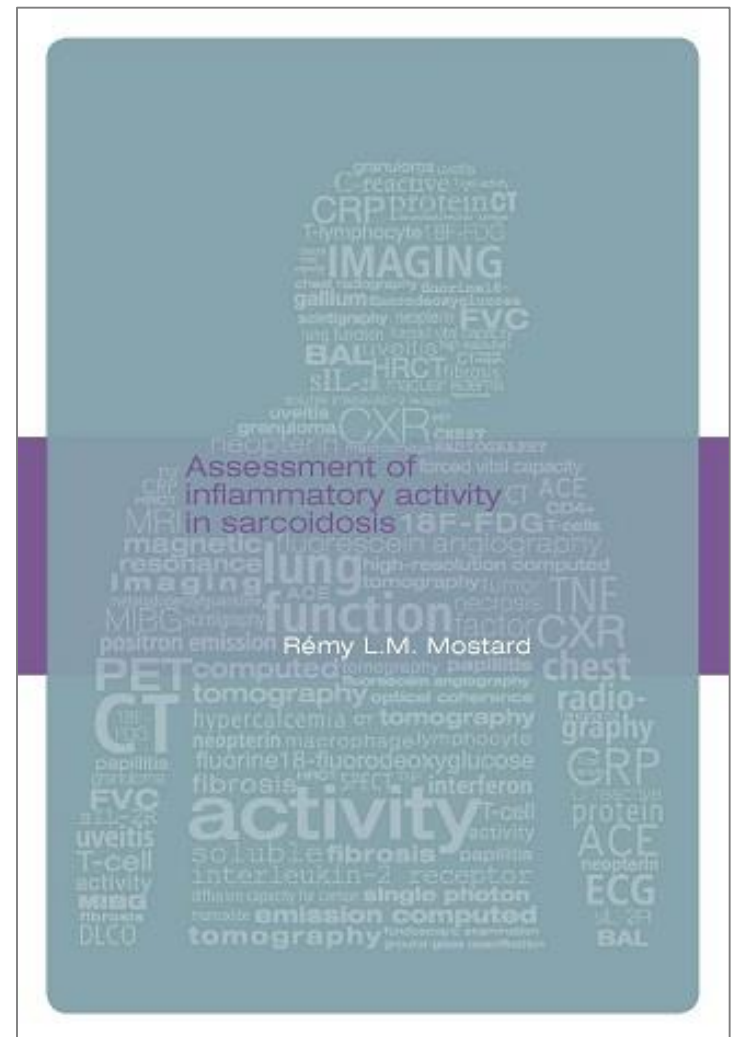
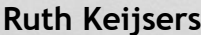
after 6 months treatment

# PET-scan cardiac involvement: pre and after treatment

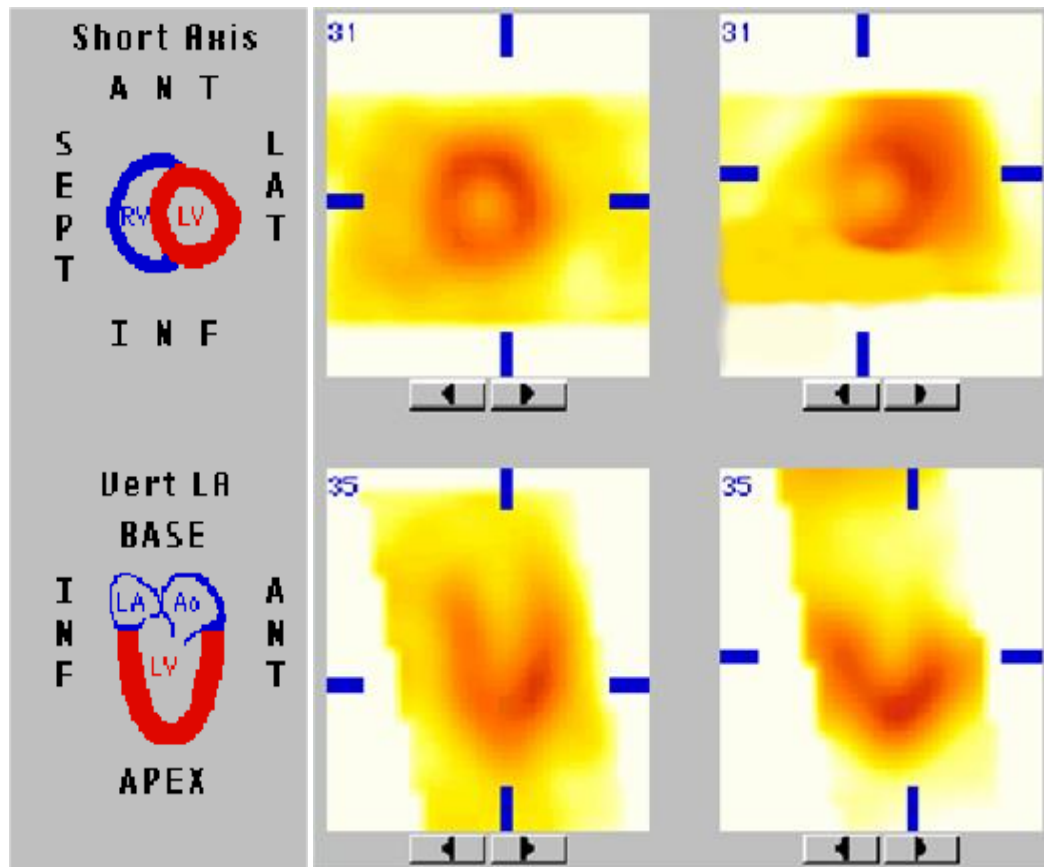




# assessment of inflammatory activity in sarcoidosis



# MIBG versus Thallium scintigraphy in a sarcoidosis patient



Impaired I-123  
Metaiodobenzylguanidine  
(MIBG) uptake  
**without** myocardial  
perfusion disturbances  
assessed by Thallium  
scintigraphy

Thallium

MIBG

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**O**ther  
**G**ranulomatous Disorders



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