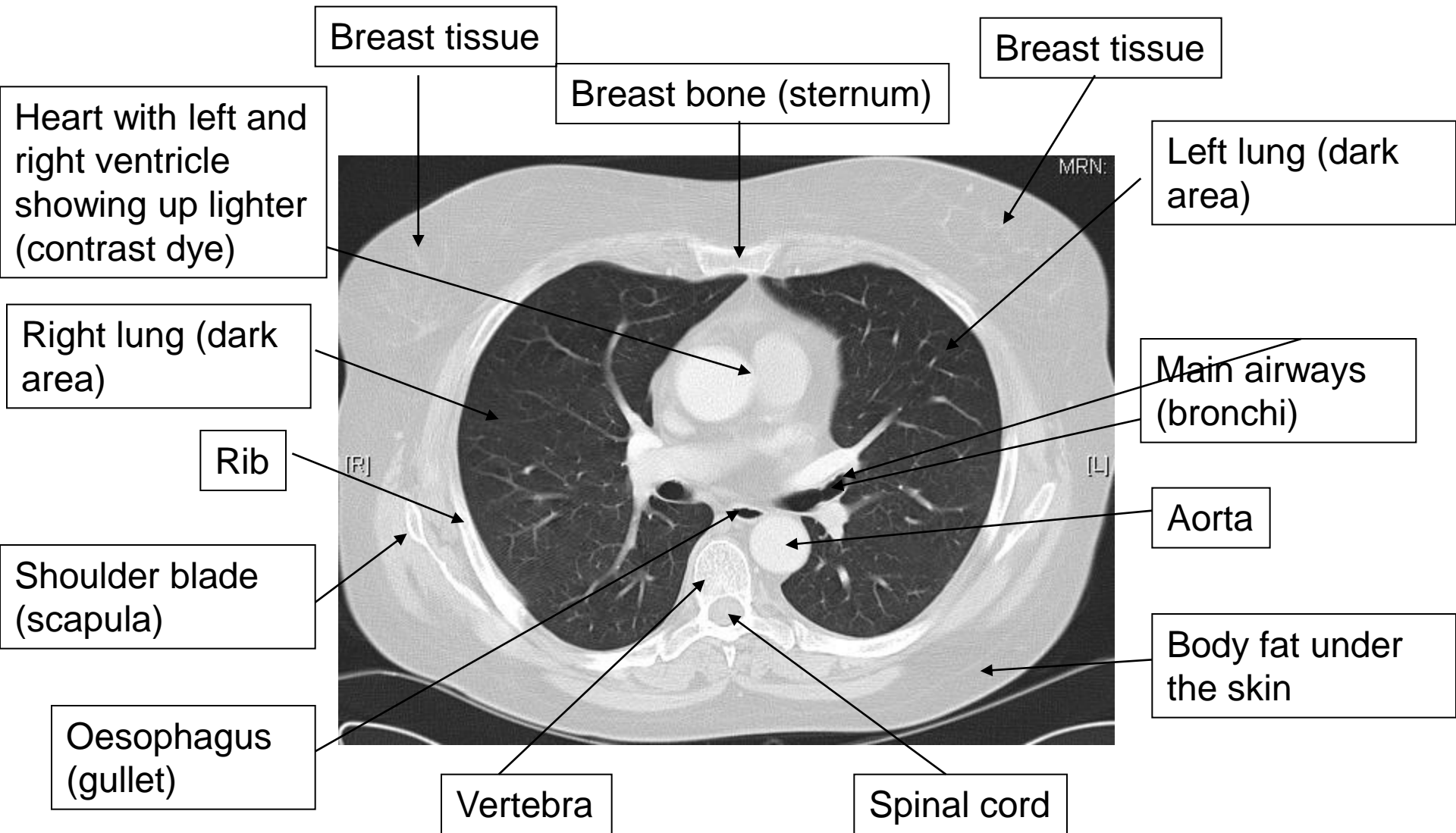
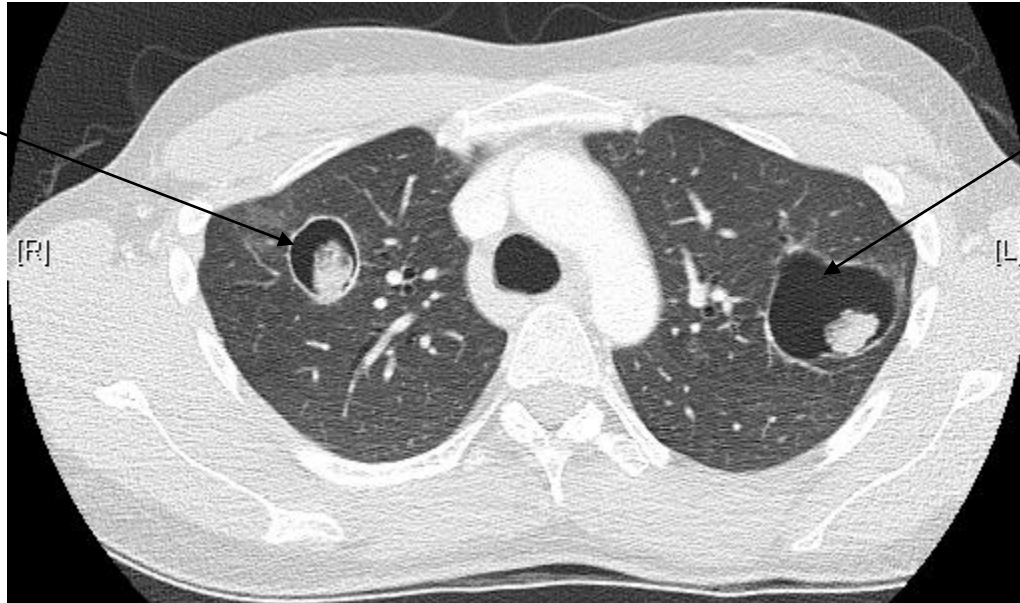


# Normal CT scan of the chest



# 2 fungal balls in the lung (2 aspergillomas)

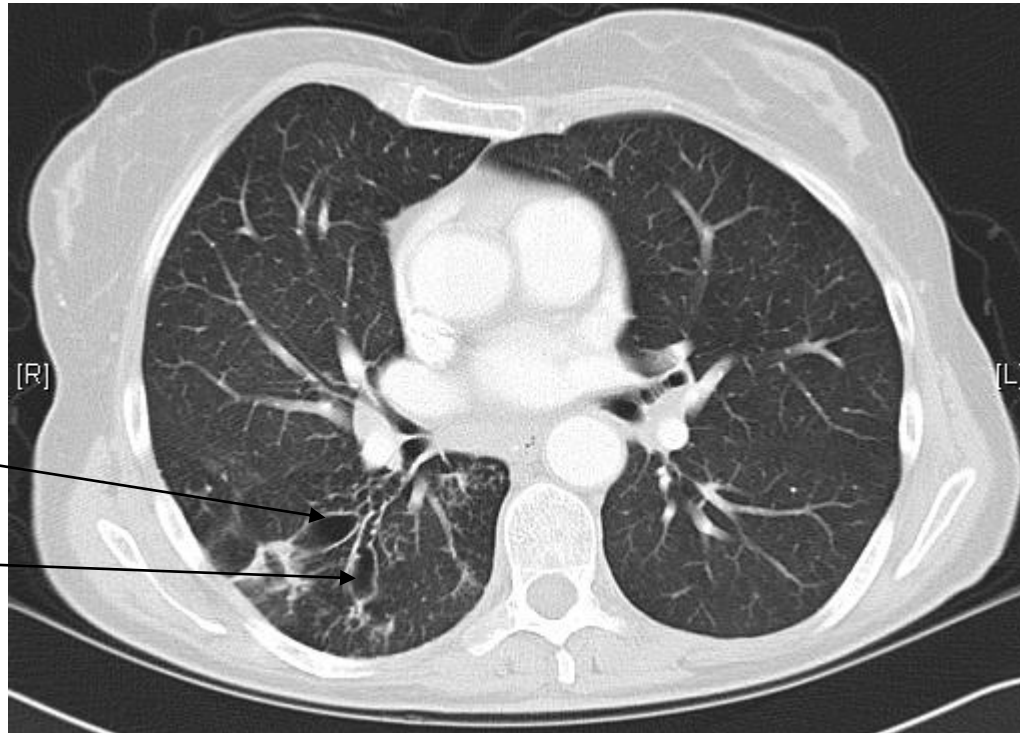
Moderate cavity in the lung with a thin surrounding wall containing a large fungal ball caused by *Aspergillus*



Large cavity in the lung with a thin surrounding wall containing a large fungal ball caused by *Aspergillus*

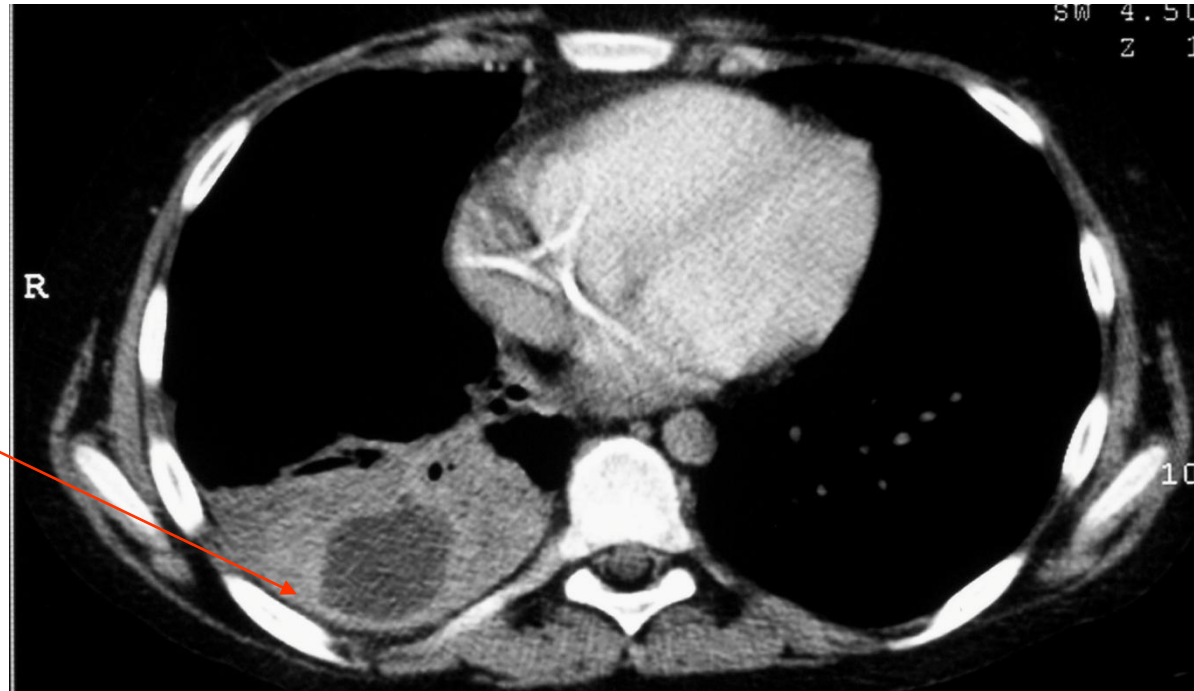
# Allergic bronchopulmonary aspergillosis and bronchiectasis

Enlarged and irregular airways in the right lung caused by long term *Aspergillus* allergy and repeated infection (bronchiectasis)



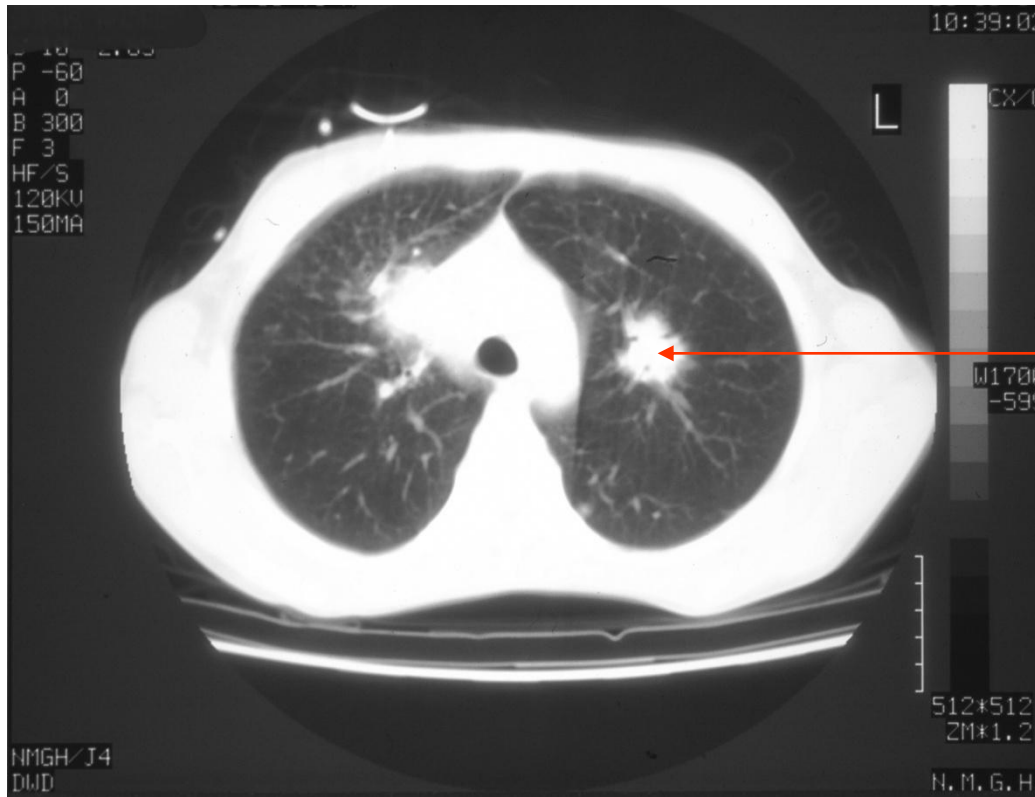
# Invasive fungal infection of the lung caused by *Aspergillus*

Nodular mass in the left lung which had a needle placed in it to remove tissue and *Penicillium* was grown



Large area of 'pneumonia' caused by *Aspergillus* in a 14 year old boy with a T cell lymphoma receiving chemotherapy and low white blood cells. He first noticed this when he developed sudden onset of severe chest pain. His phlegm sputum grew *Aspergillus*. Later he developed a thyroid swelling and a needle aspiration grew *Aspergillus* as well, indicating dissemination of invasive aspergillosis. He then underwent a right lower lobe removal which confirmed the diagnosis of invasive pulmonary aspergillosis.

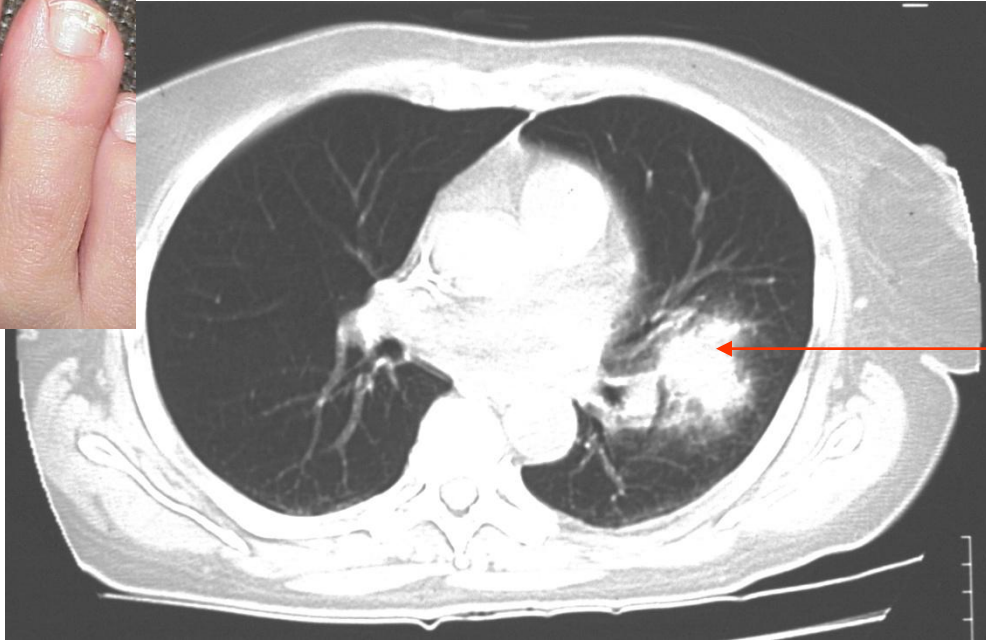
# Invasive fungal infection of the lung caused by *Penicillium*



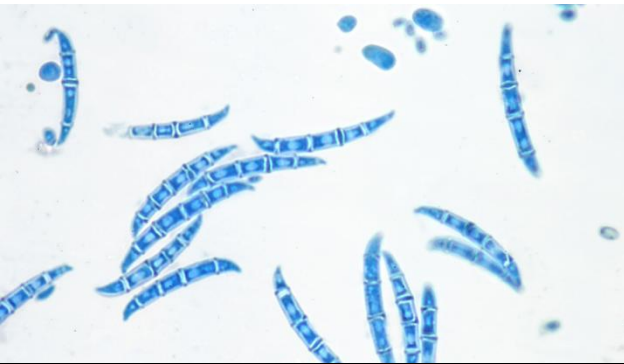
Nodular mass in the left lung which had a needle placed in it to remove tissue and *Penicillium* was grown

This disease occurred in a 22 year old lad with an inherited immune deficiency in which his white cells were poor at killing bacteria and fungi (Chronic Granulomatous Disease). He had previously suffered from an *Aspergillus* infection of his left lung and both feet, and had been taking oral antifungals for 4 years when this *Penicillium* infection occurred.

# Invasive fungal infection of the lung caused by *Fusarium*



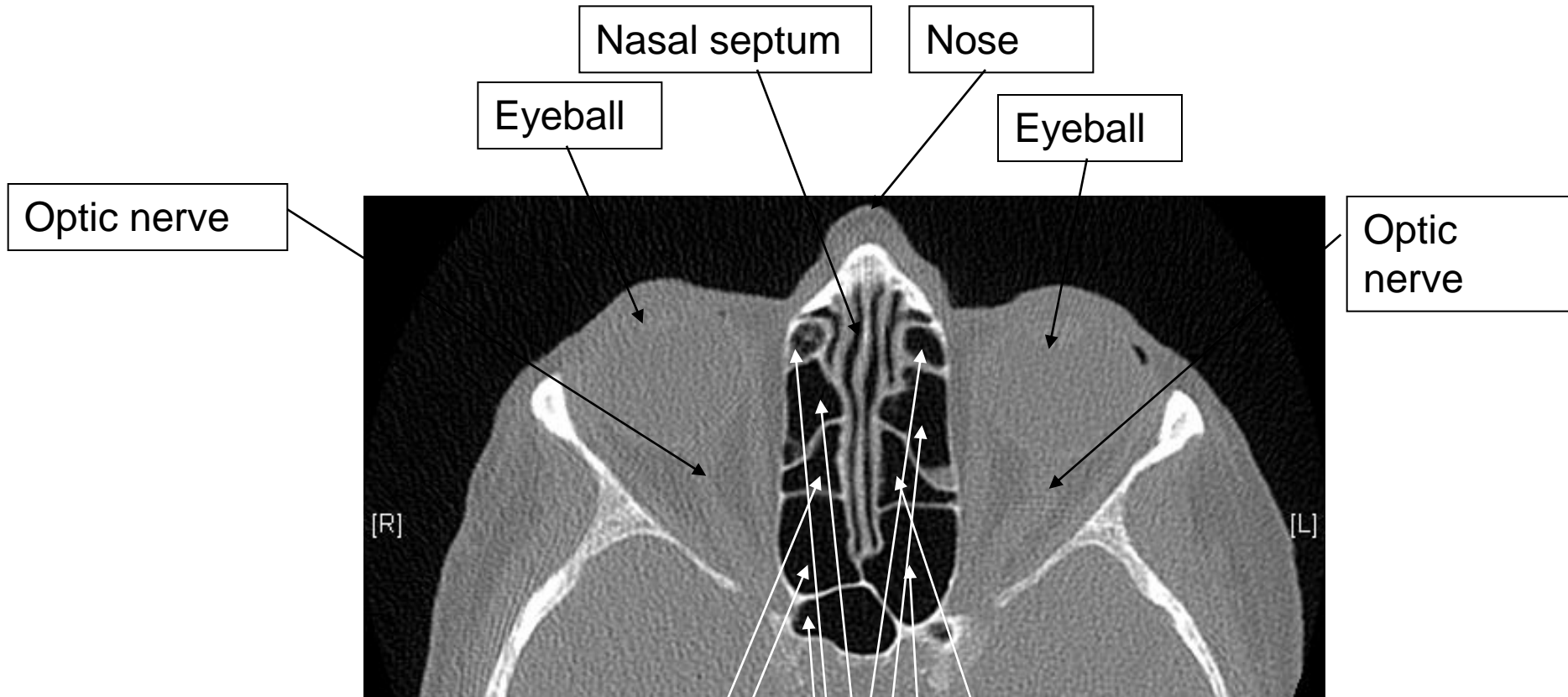
Nodular mass in the left lung which is typical of a fungal infection. This patient's blood culture grew *Fusarium* and he had toenail infection caused by the same infection.



Fungal infection of the toenails is usually not problematic but when it occurs in leukaemia, as in this man, it can spread through the bloodstream to the skin and lungs.

*Fusarium* under the microscope

# Normal paranasal sinuses

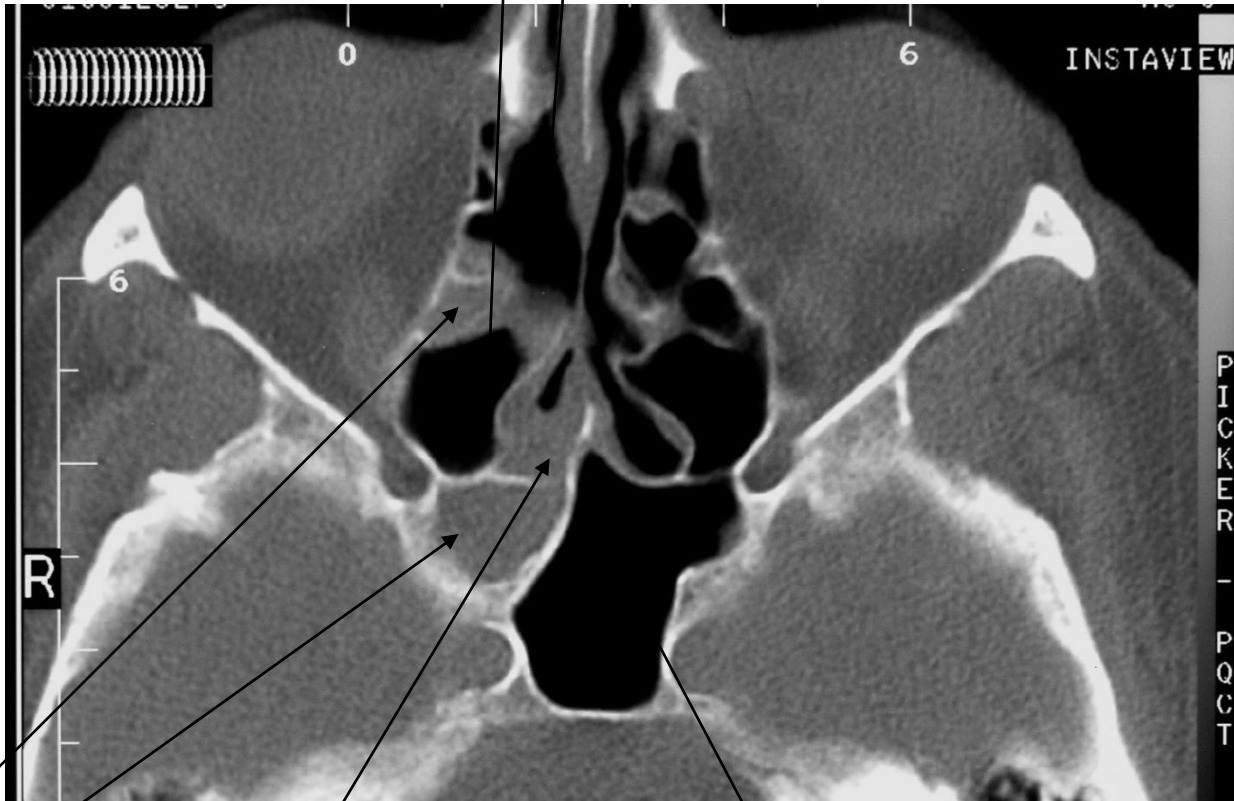


In each person there are maxillary, ethmoid, sphenoid and frontal sinuses

Ethmoid sinuses

# Allergic Aspergillus sinusitis

Clear ethmoid sinus

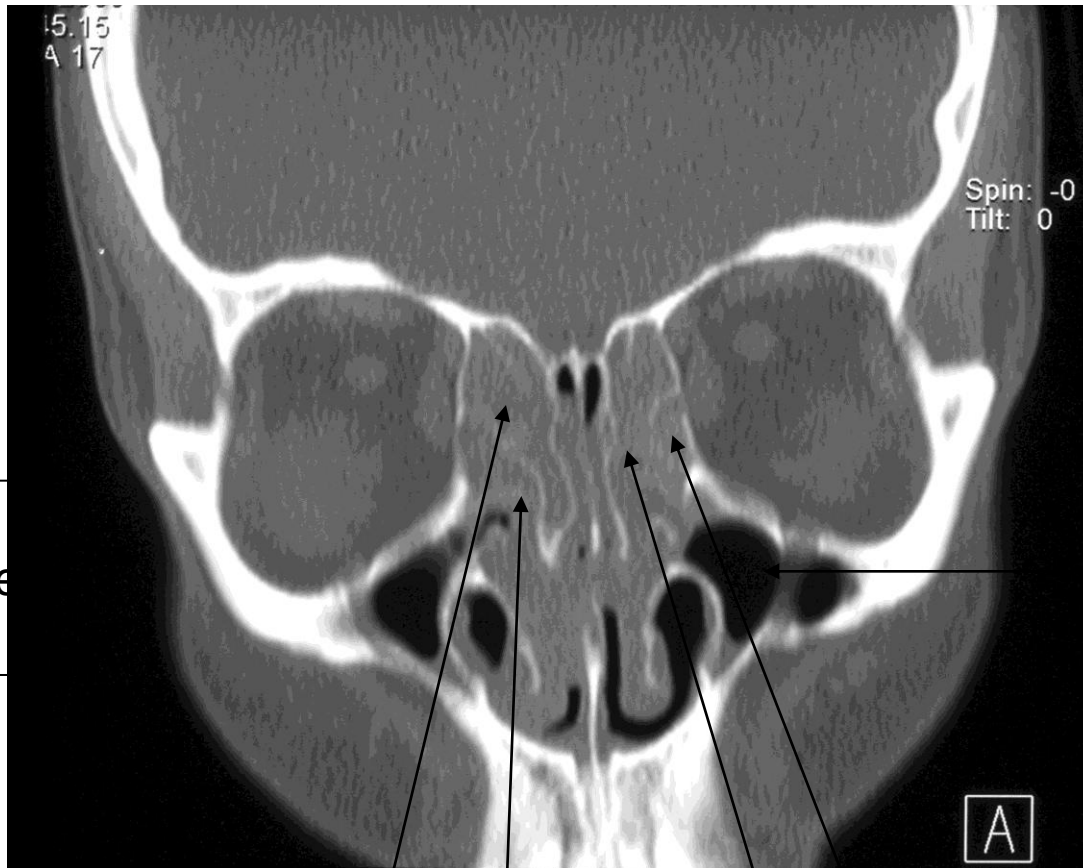


Ethmoid sinuses completely full of allergic mucin caused by *Aspergillus*

Sphenoid sinus with good drainage into the ethmoid sinuses



# Allergic Aspergillus sinusitis

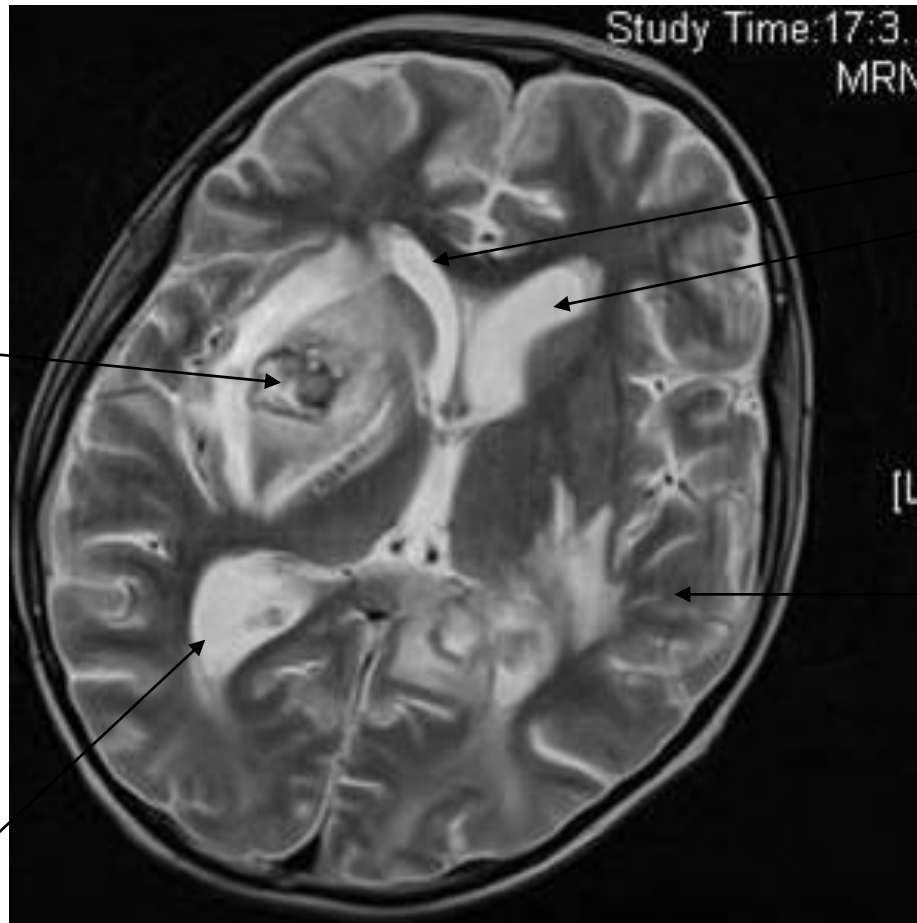


Maxillary sinus containing some allergic mucin

Maxillary sinus almost clear of allergic mucin

Ethmoid sinuses on both sides completely full of allergic mucin caused by *Aspergillus*

# Aspergillus abscess in the brain



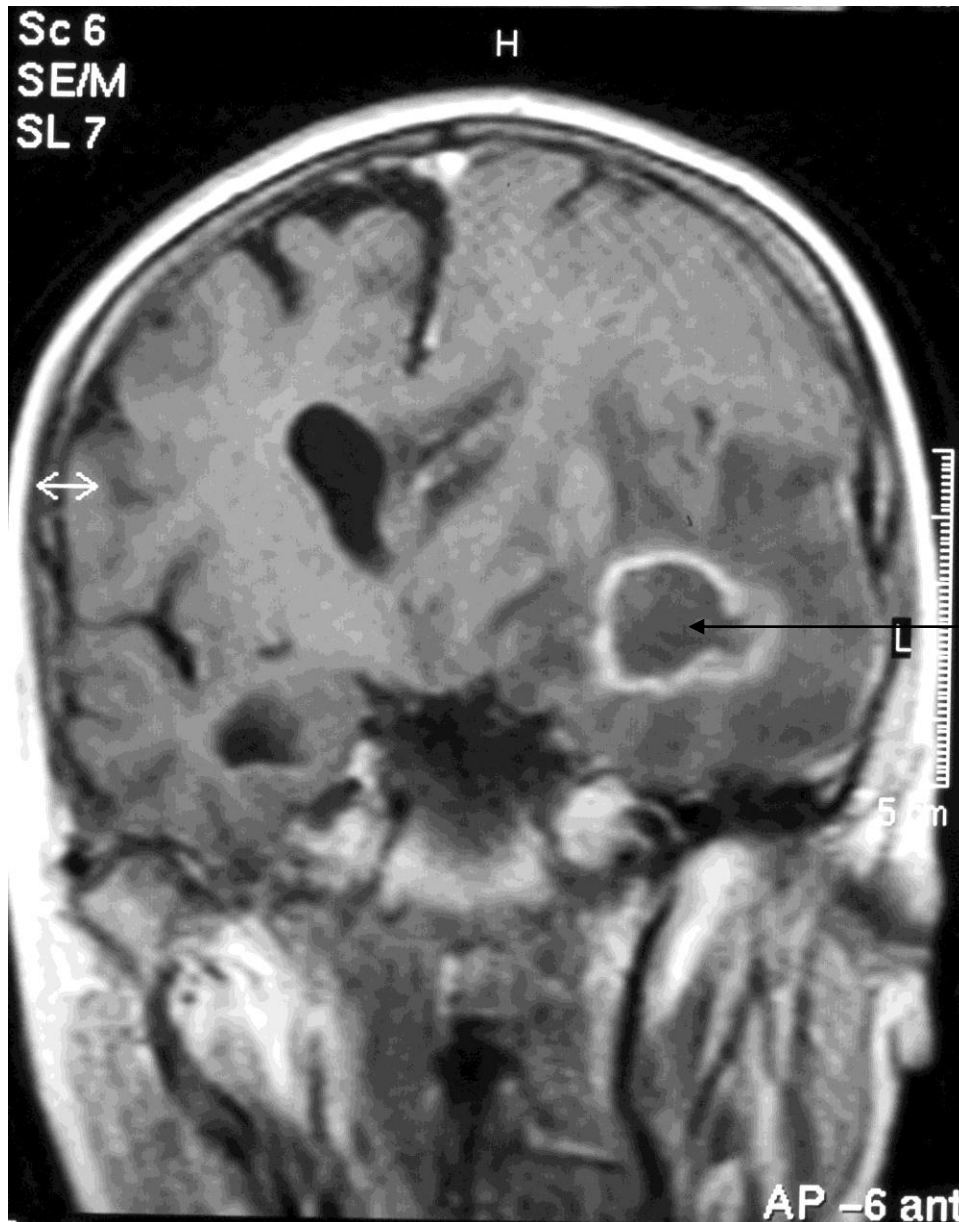
Large abscess in the right parietal area of the brain, with much surrounding swelling of the brain

Cerebrospinal fluid (CSF) in the posterior right horns of the ventricular system

Cerebrospinal fluid (CSF) in the anterior horns of the ventricular system with an image density similar to water.

Small abscess in the left occipital lobe, obliterating the posterior horn of the ventricular system, with much surrounding swelling of the brain

# Aspergillus abscess in the brain



Abscess surrounded by a wall of inflammation, itself surrounded by brain swelling

A 44 year old woman developed confusion while in hospital and an MRI scan showed this abscess. She was operated on and the abscess drained. The fluid grew *Aspergillus*.