



# Incidental findings on MRI brain scans

## Introduction

The aim of this leaflet is to provide information on incidental findings on CT or magnetic resonance imaging (MRI) of the brain.

## Background

Before the discovery of X-rays, people usually only called on doctors when they had symptoms. However, as doctors became better at using X-rays, they began to discover things that they were not looking for. They called these discoveries 'incidental findings'. Doctors then started investigating and treating some of the incidental findings, even though the patient had no symptoms.

## What is an incidental finding?

An incidental finding is something that is discovered that is unrelated to the present illness, and is discovered unintentionally.

An example would be inflammation in the sinuses, found on an MRI or CT scan of the brain that was done to confirm the diagnosis of a stroke.

## How have things changed?

MRI of the brain is being used more often and the scanners are constantly being improved. This means that unexpected brain abnormalities, which are not causing symptoms, will be discovered in some patients.



### How common are incidental findings?

Recent research amongst the general population on MRI of the brain showed several incidental findings that were without symptoms:

- Infarcts (areas of dead tissue) were found in about 1 person in 14
- Cerebral aneurysms (a bulge in the wall of a blood vessel) were found in about 1 person in 55
- Benign primary tumours were found in about 1 person in 62

In the case of infarcts and benign primary tumours, the occurrence increased with age. These results show that incidental findings are common, and are more common in older people.

### How significant are incidental findings?

Broadly there are four types of incidental findings:

- 1) The vast majority of incidental findings are of no consequence to the patient, and will never cause any problems. Even a benign tumour can fall into this category; (though such a finding can understandably result in anxiety)
- 2) Others may need further investigation or more scans to make sure that everything is fine
- 3) Admittedly however, some incidental findings can be associated with the development of symptoms in the future. In these, further scans over time are sometimes needed.
- 4) A very tiny proportion of incidental findings could be life-threatening and may need intervention. The probability of this can be likened to the chance of being hit by lightning.

### Conclusion

Before you agree to have a brain scan, you should be aware that it may show incidental findings that could need further investigation.