

## Neuro-Oncology Service

# Living with a brain tumour:

## Brain tumour diagnosis and tests

This leaflet answers some common questions about brain tumours and explains what you can expect at Addenbrooke's hospital.

### What is a brain tumour?

A brain tumour is an abnormal growth of cells found in the brain. There are many different types of brain tumour.

**Primary tumours** develop from brain cells. Many primary brain tumours are **benign**. This means they stay in the part of the brain in which they started and do not spread into and destroy other areas of the brain. Benign brain tumours are not classed as cancerous.

**Malignant** brain tumours spread into normal brain tissue. This means they cannot usually be completely removed. They do not spread outside of the brain. Malignant brain tumours are cancerous and are a form of brain cancer.

**Secondary brain tumours** occur when cancer cells from other parts of the body spread to the brain.

### How can you be sure I have a brain tumour?

Your doctor organised for you to have a scan of your head. This showed that you have a brain tumour.

### What kind of brain tumour do I have?

A diagnosis of a tumour can usually be made with a Magnetic Resonance Imaging (MRI) Scan or Computerised Tomography (CT) scan. However, the only way to diagnose the type of tumour you have is to take a sample and examine this under a microscope. This sample is called **a biopsy**. Further information on biopsies can be found in the leaflet, '*Undergoing neurosurgery for a brain tumour*'.

We have more specific information about brain tumours that will be available to you once we know the type of tumour you have and whether it is cancerous or not.

## What treatments are available for brain tumours?

This will depend on the type of tumour, its size and where it is. Some people will need treatments other than surgery, such as radiotherapy or chemotherapy, which will be discussed with you. This treatment may be at Addenbrooke's or another hospital, depending upon where you live. We will make referrals on your behalf if necessary, but only once we have discussed this with you.

## What has caused my brain tumour?

Secondary brain tumours occur when cancer cells from other parts of the body spread to the brain. The cause of most primary brain tumours is not known.

## Tests that provide more information on brain tumours

The number and types of tests we recommend will depend upon the size, type and position of your tumour. Your doctor will advise you on the tests that you need.

## Magnetic Imaging (MRI or MR) scan

This scan uses a magnetic field to build up a picture of the brain. Sometimes a dye is injected into a vein, usually in the back of the hand. This provides more information about the tumour. During the test you will be asked to lie on a couch inside a long chamber. The magnets make a loud noise so you will be given headphones to wear. The scan may take up to one hour. Please let the person who is performing the scan know if you have difficulty with enclosed spaces.

## Can I eat and drink before the scan?

You can eat and drink and should continue to take your medicines as prescribed.

## What are the side effects of an MRI?

There are no known side effects or risks. The scan uses strong magnets so you will be asked to remove metal items such as jewellery and piercings. An MRI scan is not suitable for people with metal implants such as a pacemaker, metal clips in the head from a previous aneurysm repair or certain ear implants. If you think you may have any of these, please discuss it with your doctor before the scan. Most surgical wound clips are today MRI and CT compatible.

## Stealth-MRI scan

In order to plan your surgery in more detail, the neurosurgeon will often want a more detailed three dimensional image of your brain and your tumour. This will guide him/her more precisely to the tumours location, helping them avoid healthy areas of the brain.

To do this, you will have *fiducials* (markers) placed on various locations on your head that will help the surgeon align the images from the MRI scan to your head in a pin-point fashion. To place these markers it may be necessary to shave a bit of hair off.

## Computerised Tomography (CT or CAT) scan

This scan uses x-rays to build a 3-dimensional picture of the inside of your head. Sometimes a dye is injected into a vein, usually in the back of the hand. The dye contains iodine so please tell the person doing the scan if you are allergic to iodine. During the test you will be asked to lie on a couch inside a chamber. The scan usually takes around 15 minutes. Please let the person doing the scan know if you have difficulty with enclosed spaces

### Can I eat and drink before the scan?

You can eat and drink and you should continue taking your medicines as prescribed.

### What are the side effects of having a CT scan?

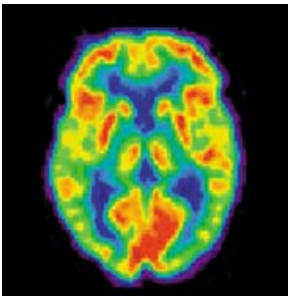
There are no known side effects or risks.



### Stealth CT scan

This is done in much the same way as a Stealth MRI described above and also involves placing fiducials onto your head. The only difference is that it is not as detailed in its anatomy as an MRI scan so is mainly used for certain types of operations and tumours. Which type of scan you will require will be discussed with you.

## Positron Emission Tomography (PET) scan



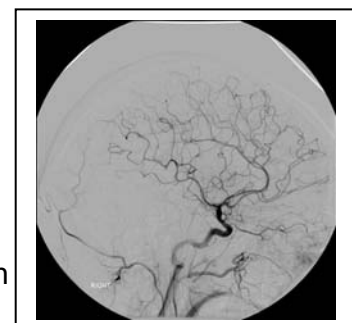
This scan shows how body tissues are working, as well as what they look like. A sugar-like substance (glucose) is injected into a vein, usually in the back of the hand. The glucose is attached to a very tiny amount of radioactivity. Tumour cells absorb more glucose than normal cells and the radioactivity shows up on the scan. The scan itself is similar to a CT scan.

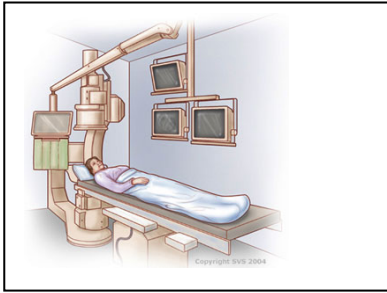
## Brain angiogram

This scan shows the structure of blood vessels.

It will show blood vessels inside the tumour and also any important blood vessels nearby and may be useful if an operation is planned.

Following a local anaesthetic a small tube is inserted into an artery, usually the groin, and a dye is injected into it. As the dye flows around the brain pictures are taken.

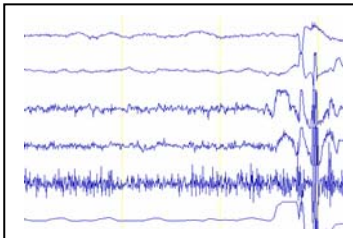




You will be required to lie on a bed with your head supported. The angiogram machine has arms that rotate around your head. It comes very close to you head but doesn't touch it.

## Electroencephalogram (EEG)

An EEG records electrical activity within the brain. Wires (called electrodes) are attached to small plastic discs. These discs have jelly on one side and are attached to your head using tape. The results are either printed out or displayed on a computer screen.



Different patterns of electrical impulses can help to identify various problems in the brain including different forms of seizures.

## What happens next?

We are part of a region-wide team who treat brain tumours. This means that you get the best care possible. When we have all your test results, we will decide with you on the best way forward. We may admit you straight to a ward in Addenbrooke's Hospital or we may decide to see you first in our clinic to plan your care and discuss all options with you – our location is in clinic seven, on level three in the outpatient department.

Your Addenbrooke's neurosurgery key worker will give you advice and support whilst you are under the care of the consultant neurosurgeon.

## Driving

**You should not drive until we have confirmation of the type of tumour you have.** Whether you will be allowed to drive in the future depends upon a number of factors, including the type of tumour, its position and the symptoms you have experienced. **Failure to notify the DVLA is a criminal offence and is punishable by a fine of up to £1,000.** For more detailed information about driving restrictions, please see our booklet entitled '*DVLA driving regulations*'. You can get more information from your consultant or hospital nurse.

## Coping with a brain tumour

A diagnosis of a brain tumour can lead to reactions such as shock, anger, fear and despair. Our leaflet, called '*coping with a brain tumour*' will help you understand these

reactions a bit more and will give you and your family or carers some useful tips on how to cope.

## Further help and information

### Brain Tumour UK

Tower House, Latimer Park, Chesham, Bucks HP5 1TU Tel: 0845 4500 386

Website: [www.braintumouruk.org.uk](http://www.braintumouruk.org.uk)

### Driver and Vehicle Licensing Agency (DVLA)

Drivers Medical group, Longview Road, Swansea, SA99 1DL.

Tel: 01792 783686

Website: [www.dft.gov.uk/dvla](http://www.dft.gov.uk/dvla)

### Benefits Agency Enquiry Line

0800 88 22 00

## Your neurosurgery team

The following people make up your surgical neuro-oncology team:

Mr C Watts	Consultant Neurosurgeon
Mr S Price	Consultant Neurosurgeon
Ms J Hatchell	Clinical Nurse Practitioner
	Tel: 01223 216 189
Ms I Oberg	Macmillan Neuro-oncology Nurse Specialist
	Tel: 01223 256 246
Ms E Campbell	Team Secretary
	Tel: 01223 216 780



We are currently working towards a smoke free site. Smoking is only permitted in the designated smoking areas.

For advice and support in quitting, contact your GP or the free NHS stop smoking helpline on 0800 169 0 169

### Help with this leaflet:



If you would like this information in another language, large print or audio format, please ask the department to contact Patient Information: 01223 216032 or

[patient.information@addenbrookes.nhs.uk](mailto:patient.information@addenbrookes.nhs.uk)

### Polish

Jeżeli chciałbyś uzyskać te informacje w innym języku, w dużej czcionce lub w formacie audio, poproś pracownika oddziału o kontakt z biurem Informacji Pacjenta (Patient Information) pod numerem telefonu: 01223 216032 lub pod adresem

[patient.information@addenbrookes.nhs.uk](mailto:patient.information@addenbrookes.nhs.uk)

### Portuguese

Se precisar desta informação noutra língua, em impressão de letras grandes ou formato áudio, por favor peça ao departamento que contacte a secção de Informação aos Doentes (Patient Information) pelo telefone 01223 216032 ou através do e-mail

[patient.information@addenbrookes.nhs.uk](mailto:patient.information@addenbrookes.nhs.uk)

### Arabic

إذا كنت تود الحصول على هذه المعلومات بلغة أخرى، بالأحرف الكبيرة أو بشكل شريط صوتي، يمكنك أن تطلب من القسم الاتصال بمعلومات المريض على الرقم: 01223216032 أو عبر البريد الإلكتروني: [patient.information@addenbrookes.nhs.uk](mailto:patient.information@addenbrookes.nhs.uk)

### Cantonese

如您需以另一語言版本、特大字體或錄音形式索取本資料，請要求部門聯絡病人諮詢服務：電話 01223 216032，電郵地址 [patient.information@addenbrookes.nhs.uk](mailto:patient.information@addenbrookes.nhs.uk)

### Turkish

Eğer bu bilgileri başka bir dilde veya büyük baskılı veya sesli olarak isterseniz, lütfen bulunduğunuz bölümdeki görevlilere söyleyin Hasta Bilgilendirme servisini arasinlar: 01223 216032 veya [patient.information@addenbrookes.nhs.uk](mailto:patient.information@addenbrookes.nhs.uk)

### Urdu

اگر آپ کو یہ معلومات کسی دیگر زبان میں، بڑے الفاظ میں یا آڈیو طریقہ سے درکار ہوں تو برائے مہربانی اس شعبہ سے پیشینٹ انفارمیشن سے ذیل کے ذریعہ رابطہ کریں یا 01223 216032 یا [patient.information@addenbrookes.nhs.uk](mailto:patient.information@addenbrookes.nhs.uk) کرنے کی درخواست کریں:

### Bengali

আপনি যদি এই তথ্য অন্য কোন ভাষায়, বড় অক্ষরে বা অডিও রেকর্ডিং পেতে চান তাহলে 'প্যাশেন্ট ইনফরমেশন' এর সঙ্গে 01223 216032 নম্বরে ফোন করে বা [patient.information@addenbrookes.nhs.uk](mailto:patient.information@addenbrookes.nhs.uk) ঠিকানায় ই-মেইল করে যোগাযোগ করার জন্য ভিপিটিমেন্টটিতে অনুরোধ জানান।

### Document history

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