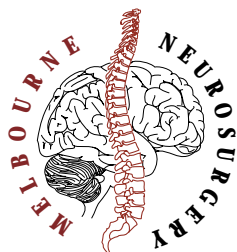


INFORMATION LEAFLET

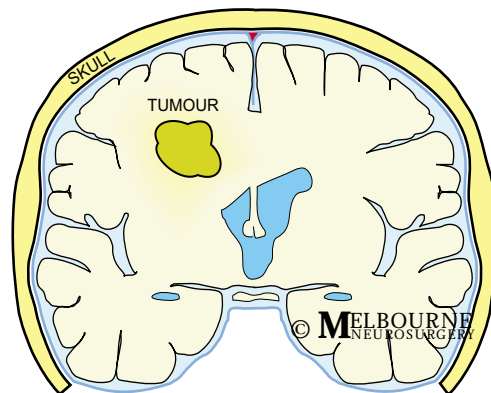
BRAIN METASTASIS



WHAT IS A METASTASIS ?

(Secondary)

This is a tumour that has grown in a location that is remote from the site that the tumour started from (Primary). It is thought that the original tumour sheds cells that travel in the bloodstream until they are either destroyed by the body or settle in a blood vessel and grow. The commonest place for the cells to settle is the lungs. Certain types of tumours tend to spread to the brain.



HOW DO WE KNOW IT IS THERE ?

If we have a known tumour elsewhere then we may have been checking the brain with a CAT scan to see if a secondary develops so that we can treat it early.

The tumour often causes problems with the brain and that is how we know it is there. You may have had a seizure, it may be preventing part of the brain working or it may be causing headaches. Sometimes this is how we find out that there is a tumour somewhere else because the metastasis appears.

The CAT scan is the first test and shows most tumours. If it does not show on the CAT scan an M.R.I. will be performed. Even when we know there is a tumour on the CAT scan we still do an M.R.I. (more sensitive) to see if there are any other tumours in the brain.

WHAT DECIDES THE TREATMENT OPTIONS ?

How well you are
Where else the tumour is
What the primary tumour is (where it came from)
How badly affected the brain is
How many tumours there are in the brain
Where the tumours are in the brain.

WHO DECIDES WHICH OPTIONS ?

This is a joint decision between your managing specialists. If you are being managed by a Neurosurgeon then he will discuss it with an Oncologist or the other way around.

THE OPTIONS

RADIOTHERAPY

X-ray therapy which is usually to the whole brain not only to treat the known lesion but any that we cannot see. The course and the number of treatments depends on the specialist Radiation Oncologist you see.

STEREOTACTIC RADIOSURGERY

High dose X-ray therapy in a single dose just to the tumour and aiming to kill all tumour cells.

CHEMOTHERAPY

This is only useful for certain tumour types because it is difficult to get the drug into the brain.

SURGICAL REMOVAL

Lots of factors decide if this is possible. The tumour needs to be in a position that we can get to safely. If there are multiple lesions surgery is less likely but if one is very large then surgery may be appropriate. If we know that the tumour will not respond to other treatment options surgery is more likely. If there is only one lesion on the M.R.I. and there is a chance of cure with complete resection then surgery is usually the first option.

What normally happens ?

Normally you already know that you have a Primary tumour. You will already have an Oncologist. When the secondary is diagnosed they will either decide what is the next step or refer you to a Neurosurgeon for consultation. Often they will show your X-rays to the Neurosurgeon and ask for an opinion.

If you have no primary lesion it is likely that your local doctor discovered the lesion in the brain and has sent you for an opinion. At this stage it is only presumed that the lesion is a metastasis (it could be infection or something else). In this case surgery is always needed to find out exactly what the lesion is and the best way to treat it. You may either have a biopsy or total removal of the lesion depending on where it is in the brain.

Firstly you are started on DEXAMETHASONE. This is a steroid drug that will reduce the swelling around the tumour. Some of its' side effects are to make you hungry and also to give you the hiccups. Your symptoms of e.g. headache / weakness usually improve on these. The other drug we give you is an ANTI - EPILEPTIC. This is because the tumour may irritate the brain and cause a seizure (fit).

If you have not had an M.R.I. then this is organised. If you are not well and need urgent treatment the M.R.I. may be done after surgery and the CAT scan used for the procedure.

After the M.R.I: (i) If you have multiple small lesions then radiotherapy is the treatment of choice. (ii) If you have one small lesion and it is difficult to reach surgically and we know the primary then Stereotactic Radiosurgery is used. (iii) If you have one small lesion even if it can be reached surgically then Radiosurgery is still very much an option (ask your surgeon or oncologist). More than one lesion can be removed with surgery or by a combination of surgery and Radiosurgery

If you are having surgery and only have one lesion in the brain the aim is to remove it all. This is possible if the lesion is not in an important part of the brain and if it does not involve an important artery (blood vessel, removal sometimes causes a stroke). If you have multiple lesions and some or all are being removed the above still holds.

The Surgery is usually a Craniotomy and Excision of the tumour (see Operation Leaflet CRANIOTOMY FOR METASTASIS). Sometimes because of location only a biopsy is done. This is usually a Stereotactic Biopsy and a computer is used to localise the tumour.

After the surgery

If you have multiple lesions then it is likely you will have whole brain radiotherapy.

If you had a single lesion on the M.R.I. and we feel that we have totally removed it then we may not give radiation. If there is any left or it is the type of tumour that usually produces multiple lesions then we will give you radiation therapy. The choice about chemotherapy will depend on the type of tumour the secondary came from.

Sometimes if the resection of a large tumour is not complete you will be given radiosurgery to the remnant.

The Dexamethasone will be slowly reduced post operatively but will stay at a small dose if you have radiotherapy or other lesions.

The Anticonvulsant usually remains for life.

After the radiotherapy (and if it is not used) we will follow you up on a regular basis with scans to monitor the progress of your disease.

Who follows you up ?

Normally everybody involved. If you are stable the Neurosurgeon may have the Oncologist look after you but if there are any problems you will be sent back to the Neurosurgeon. You will probably have three specialists watching your brain.

Neurosurgeon
Medical Oncologist
Radiation Oncologist

What happens if it comes back after radiotherapy ?

You can have further surgery or radiosurgery but radiotherapy can only be given once.

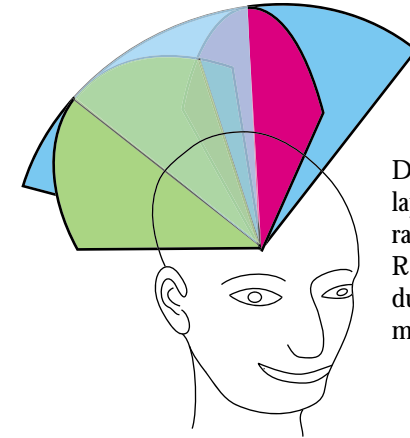


Diagram of arcs of overlapping pencil beams of radiation in Stereotactic Radiosurgery to produce small area of treatment in the brain

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