

BRAIN TUMOUR AND BRAIN CANCER

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Primary brain cancer, or cancer that arises in the brain tissue, is one of the most devastating of all diseases. The disease often has few warning signs, with sudden onset of a first-ever seizure, rapid development of neurological problems such as weakness, visual loss, or headache, or insidious changes in personality and higher-level function. Suspicion of brain cancer is most commonly confirmed by CT scan, which will be followed up by an MRI scan to fully define the parts of the brain affected by the disease, look at the possible diagnosis, and plan surgery. A confirmed diagnosis of brain cancer is usually made following surgery.

There are a number of different types of primary brain cancer. The most common types are known as the 'glial series tumours', and include grades I to IV astrocytoma, with grade I being the least aggressive, and grade IV being the most aggressive. Another common type of brain tumour is meningioma; fortunately, most meningiomas are slow growing and benign, and can be cured with surgical treatment. There are a number of other rare types of brain cancer which can occur in just 10 or 20 people per year in Australia, meaning that many individual doctors will not see many people with that type of brain cancer, and that patients may feel isolated and need more information than is available.

Once a surgical biopsy or removal of the tumour has been done, it often takes a week or more to confirm the type of tumour. This can be a very worrying and frustrating wait for patients and their families, but is critical to get the diagnosis right, because subsequent treatment depends on the diagnosis. Patients with meningioma or grades I and II astrocytoma may not need any further treatment at the time of diagnosis. However people with grade III and IV astrocytoma need follow-on treatment with radiotherapy and/or chemotherapy to help them to do better and live longer.

Radiotherapy is treatment given locally to the brain to prevent growth of cancer cells. It is an important part of slowing the growth of grade III and IV astrocytoma and some other brain cancers, and is usually done over 6 to 7 weeks. Often, people have to travel within their state to attend a radiotherapy centre, because the specialised machines used are not available everywhere. People have a consultation with a radiation oncologist, then have a mask made to keep their head in place during the treatment. Once this has been done, there are a couple of weeks of behind-the-scenes 'planning' to be done before treatment can get started. This is because of the complex computer modelling that must be done to get treatment localised to exactly the right spot in the brain. Usually radiotherapy can only be used once, but occasionally further very localised treatment can be given some months to years later.

Chemotherapy for brain cancers, particularly grade III and IV astrocytoma, is usually given as a tablet. This doesn't mean it is less effective than intravenous chemotherapy, or less of a 'real' chemo, but it does make it more convenient for people. Nevertheless, treatment with tablet chemotherapy can have a number of side effects. People need to take antinausea

medication each day while they are on treatment, and may experience low blood counts as the body stops making enough white blood cells to fight infection and platelets to clot the blood. Some people feel very tired on chemotherapy. The most commonly used treatment, temozolomide, is initially taken daily while people are on radiotherapy, and is then taken for a few days every 28 days for a number of repeating 'cycles'. While there are side effects, most commonly they are not severe, and people can carry on most of their daily activities as normal. There are other chemotherapies available once temozolomide stops working, or for other types of brain cancers. Sometimes clinical trials researching new treatments are available.

One of the unique aspects of brain cancer is the devastating effect it has on everyday life and function, often more so than many other cancers. Surgery involves risks, and while sometimes symptoms may improve following surgical treatment, at other times they may be left with permanent neurological problems. From the time of diagnosis, people are usually unable to drive, leading to substantial lifestyle compromise even if they feel well. This often means that it is difficult to work, or to carry out normal family duties. People may also find it difficult to work due to personality or thinking changes, or changes brought on by necessary seizure medications. Many people with brain cancer are also prescribed steroid medications such as dexamethasone, with side effects like weight gain, diabetes, and change in appearance. All these aspects can also have a profound effect on carers and families.

Throughout this challenging journey, it is important that people with brain cancer, and their families, seek help and support from wherever it may be available. Every state has different medical and support systems. Some states or hospitals may have a senior nurse who is a brain cancer nurse co-ordinator. Help to manage distress, worry, and sadness should be available. Patients may be able to access physiotherapy or occupational therapy services to help them with daily living. There may be support groups close to home or in your state. Your doctor is your partner in this, and should be able to guide you through an unfamiliar maze. Because everyone's situation is different, you will notice that I have not made any comments here about prognosis. Again, your doctor is the best person to discuss this with. Most importantly, remember that people with brain cancer and their families can ask for help, ask for information, and expect compassion from their health care professionals.