Overview:

Tumour Group:
Glioma

Can be classified as low-grade or high-grade.

WHO Grade:
An oligodendroglioma is considered Grade III; an anaplastic oligodendroglioma is Grade III.

Prevalence/Incidence:
Oligodendroglioma accounts for approximately 2.5% of all primary brain tumours and 5-6% of all gliomas. The incidence of oligodendroglioma has significantly increased over the past years.

Typical Age Range:
This tumour type is more common among men and women in their 20s to 40s, but can occur in children.

Description of Tumour:
Oligodendrogliomas come from oligodendrocytes, one of the types of cells that make up the supportive, or glial, tissue of the brain.

• May be associated with 1p or 19q chromosomal losses
• More common in men than women
• Occurs frequently in the frontal or temporal lobes

Symptoms:
Common symptoms include, but are not necessarily limited to:

• Behavioural and cognitive changes
• Headaches
• Seizures
• Weakness or paralysis

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**Treatment/Standard of Care:**

Treatment options depend on the grade of the tumour. If the tumour is low-grade and symptoms are not severe, the doctor may decide not to perform surgery, then “watch and wait” and evaluate tumour growth through MRIs.

There is a malignant form of this tumour called anaplastic oligodendroglioma and a mixed malignant astrocytoma-oligodendroglioma. The common treatment for these high-grade tumours is surgery followed by radiation therapy and/or chemotherapy.

Both low and high-grade oligodendrogliomas can recur. If a tumour recurs, the doctor will evaluate it for a second surgical procedure, radiation, and/or chemotherapy.

Gene expression studies are used to classify gliomas based on certain characteristics or genetic profiles. Oligodendrogliomas can be identified by deficiencies in certain chromosomes named 1p and 19q. Genetic profiling of oligodendrogliomas provides a more accurate predictor of prognosis and treatment options than does standard pathology.

**Prognosis:**

Oligodendrogliomas are generally felt to be incurable using current treatments. However compared to the more common astrocytomas, they are slowly growing with prolonged survival. In one series, median survival times for oligodendrogliomas were 11.6 years for grade II and 3.5 years for grade III. However, such figures can be misleading since they do not factor in the types of treatment nor the genetic signature of the tumours.

Oligodendrogliomas, like all other infiltrating gliomas, have a very high (almost uniform) rate of recurrence and gradually increase in grade over time. Recurrent tumours are generally treated with more aggressive chemotherapy and radiation therapy. Recently, stereotactic surgery has proven successful in treating small tumours that have been diagnosed early.

**For more details, please refer to braintumour.ca.**