

Ependymal tumours of the brain and spinal cord: survival rates in England

NCIN Data Briefing

Tumour details

Ependymal tumours are a group of central nervous system (CNS) tumours, where the tumour contains some cells that resemble ependymal cells. These tumours often arise in the walls of the ventricles (fluid-filled spaces of the brain) or the spinal cord central canal (fluid-filled space down the centre of the spinal cord).

Ependymal tumours include a range of histological types* from the least aggressive Subependymomas and Myxopapillary ependymomas which are always WHO grade I, to Papillary, Clear cell and Tancytic ependymomas which can be either WHO grade II or the more aggressive WHO grade III. The WHO grade III tumours are called anaplastic ependymomas. Some of these subtypes are location specific, for instance Myxopapillary ependymomas generally occur at the base of the spine.

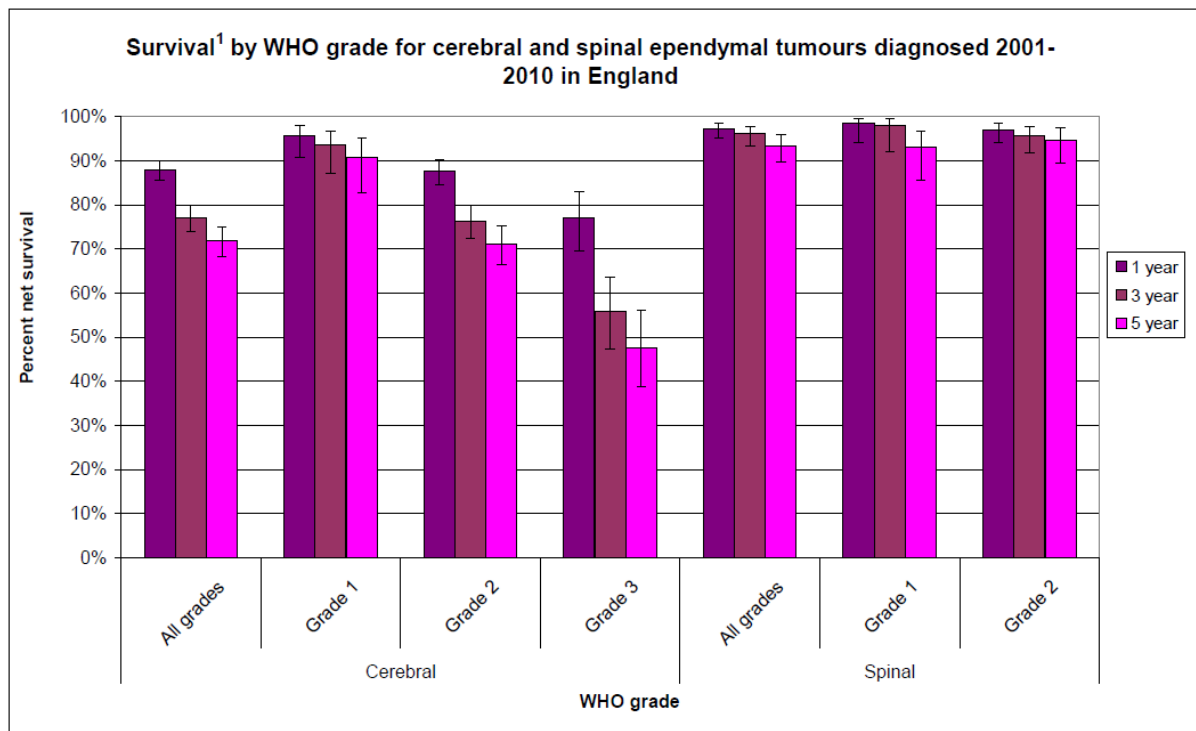
It is difficult to estimate incidence of ependymal tumours due to variable precision in the historic registration and coding of brain and CNS tumour types, but they probably make up around 1.5% of brain tumours and around 25% of spinal tumours. Ependymal tumours tend to be diagnosed in relatively young people with the occurrence of cerebral ependymal tumours peaking at an age of around 5 years and again at around 45 years, while the spinal ependymal tumours are less common in children and their occurrence peaks at an age of around 45 years.

Survival rates

One-, three- and five- year net survival rates (1, 2) were estimated for all ependymal tumours diagnosed in residents of England between 2001 and 2010. Net survival is an estimate of how survival is affected only by the disease of interest, based on the probability of survival of a person with cancer when compared with people of the same age and sex in the whole population of England.

KEY MESSAGES:

- *Ependymomas are a group of CNS tumours with moderately good prognosis, though higher grade tumours have slightly poorer survival.*
- *The prognosis for spinal ependymomas is better than that for cerebral tumours.*



Cerebral ependymal tumours generally have a better prognosis than the majority of other types of brain tumour, but survival is somewhat poorer in higher grade tumours. Survival for spinal ependymal tumours is better than for cerebral ependymal tumours, being close to 100% and is not affected by WHO grade.

It should be noted that the survival figures here do not include any measure of the disability and/or loss of quality of life which may be associated with brain and CNS tumours. Survival estimates may differ to those presented in other sources. This may be due to different populations, methods used or time periods of diagnosis studied.

References

1. Maja Pohar Perme, Janez J Stare, and Jacques J Estève; On estimation in relative survival; *Biometrics* 68(1):113-20 (2012), PMID 21689081
2. Estimating and modelling relative survival using Stata; Paul Dickman, Enzo Coviello, and Michael Hills; http://www.pauldickman.com/rsmode/stata_colon/

*Histological type is the type of tumour observed by detailed microscopic examination of tumour cells.

The National Cancer Intelligence Network (NCIN) is a UK-wide partnership operated by Public Health England. The NCIN coordinates and develops analysis and intelligence to drive improvements in prevention, standards of cancer care and clinical outcomes for cancer patients.