Evolution on graphs and the genetics of vestibular schwannoma

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Vestibular schwannomas are benign central nervous system tumours. When treated with radiotherapy, the tumours may become malignant instead of being successfully treated. By developing a mathematical model in close collaboration with clinical geneticists, we can hypothesise that malignancy must be caused by at least one tumour suppressor, rather than an oncogene; and can also constrain the size and location of this unknown gene [1]. Futhermore, there should be an interesting mathematical relation between aneuploidy in schwannomas in the general population, and the risk of schwannoma in populations affected by a certain rare genetic disorder [2].

References

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