

REVIEW

## **A role for LKB1 gene in human cancer beyond the Peutz–Jeghers syndrome**

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Germline LKB1 mutations are responsible for Peutz–Jeghers syndrome (PJS). Tumors at several locations frequently arise in these patients, confirming that LKB1 is linked to cancer predisposition and is therefore a bona fide tumor-suppressor gene. In humans, the LKB1 gene is located in the short arm of chromosome 19, which is frequently deleted in many tumors of sporadic origin. However, LKB1 alterations in tumors other than those of PJS are rarely reported. Notably, this is not the case for non-small-cell lung cancer, where nearly half of the tumors harbor somatic and homozygous inactivating mutations in LKB1. The present review considers the frequency and pattern of LKB1 gene mutations in sporadic cancers of various origins, and the role of the encoded protein in cancer development.

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