

**The observation indicator induced from gastrointestinal stromal tumor under long-term monitoring by endoscopic ultrasonography**

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**Introduction:** We report a case of low-risk stomach gastrointestinal stromal tumor (GIST) which has been under a long-term observation, obtaining from

this experience knowledge useful in determining the treatment formula for this disease.

**Results:** During the observation for 6 years, no such change as ulcer formation was observed in the appearance of the tumor. The measurement of tumor diameter, however, showed gradual growth of maximum tumor diameter from 2.7 to 5.0 cm. When the changes in the diameter of tumor during this period is plotted, taking the time on the horizontal axis and the tumor diameter on the vertical axis, the growth of the tumor can be approximated with a secondary function, making it possible to estimate the developmental period of the GIST concerned from the approximated secondary function. Thus, the developmental period in this case was estimated to go back 19 years before the time when it was discovered for the 1<sup>st</sup> time. Further, it was considered that the coefficient of the secondary function represents the rate of tumor growth, and that comparison with this coefficient contributed to the evaluation of malignancy stage of the GIST concerned.

**Conclusion:** The growth curve predicting the growth of tumor could be depicted by measuring the diameter of the tumor in GIST twice or more at an interval of 6-12 months with EUS, and it was thought that this was utilizable for determining treatment formula for GISTs.

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**The authors declare:** No significant relationship.