

Mitotic count (Core)

Mitotic count is the most important feature for the assessment of risk of malignant behaviour.¹ The mitotic count should be determined in the most mitotically active area of the tumour. The mitotic count should be reported per 5 mm². With older microscopes, 5 mm² is equivalent to 50 high power fields (HPF). However, with most modern microscopes with wider fields, 5 mm² requires 20 to 25 HPFs using 40X lenses. The number of fields required to be counted to encompass 5 mm² should be calculated on individual microscopes.

In limited biopsy specimens, mitotic count often cannot be reliably assessed. In such cases, it is appropriate to include a disclaimer statement to that effect; for example: “accurate assessment of mitotic count cannot be made based on this limited biopsy sample and is deferred to surgical resection.” However, if the mitotic count in a limited biopsy sample is high, that information is helpful for prognostication.

Reference

- 1 Miettinen M and Lasota J (2006). Gastrointestinal stromal tumors: pathology and prognosis at different sites. *Semin Diagn Pathol* 23(2):70-83.