Semiautomatic segmentation

In one kind of segmentation, the user outlines the region of interest with the mouse clicks and algorithms are applied so that the path that best fits the edge of the image is shown.

The semi-automatic volumetric analysis showed a high interobserver agreement and should, therefore, be considered the gold standard for the assessment of EOR. The introduction of fluorescence has resulted in better resections [1]. Sezer et al. found it to increase the accuracy of the surgeons' estimate of fluorescence, whilst resulting in a tendency towards overestimation. Even though surgeons' estimate of the extent of resection has clearly improved since the report of Albert et al., the reliability of their estimation is statistically moderate. Therefore, early post-operative MRI scanning for evaluation of EOR remains paramount [2].

1)
Eljamel S (2015) 5-ALA fluorescence image guided resection of glioblastoma multiforme: a meta-analysis of the literature. Int J Mol Sci 16:10443–10456. https://doi.org/10.3390/ijms160510443
2)
Sezer S, van Amerongen MJ, Delye HHK, Ter Laan M. Accuracy of the neurosurgeons estimation of Glioblastoma extent of resection. Acta Neurochir (Wien). 2020 Feb;162(2):373-378. doi: 10.1007/s00701-019-04089-8. Epub 2019 Oct 28. PubMed PMID: 31656985.