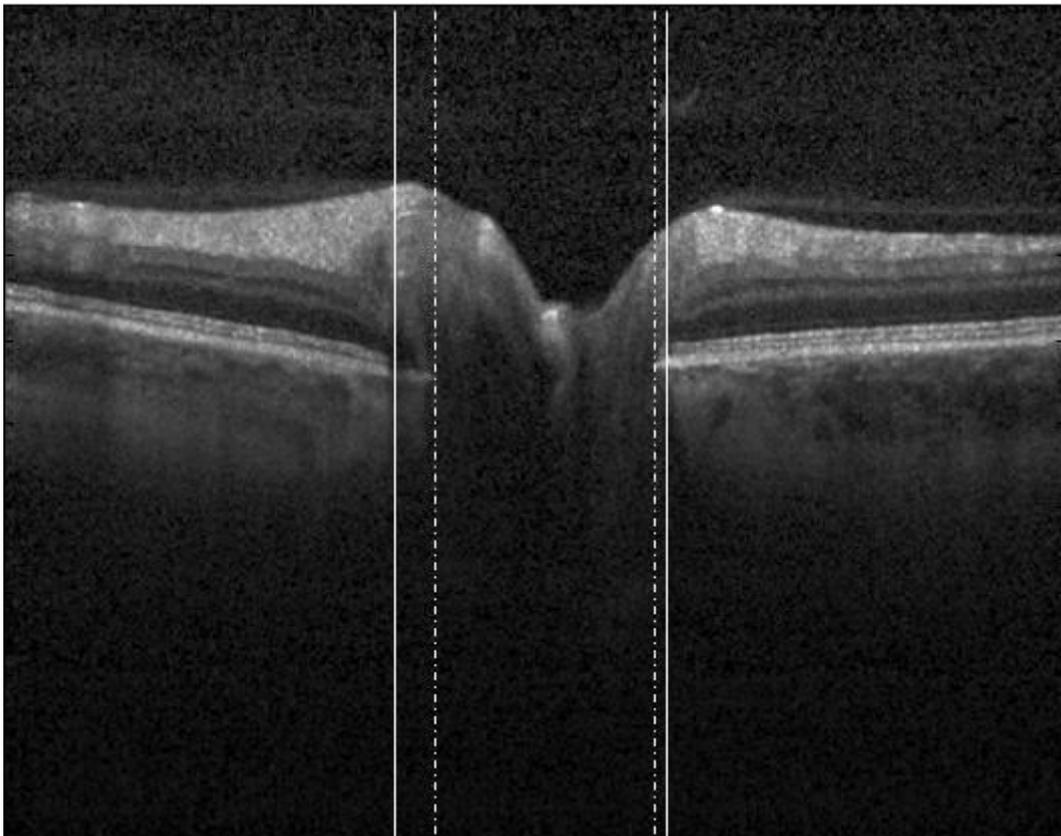# Manual detection of the optic disk in OCT images.

Glaucoma, which is the second leading cause of blindness worldwide, is characterised by damage of the optic nerve. The patient cannot realise his problem until this damage is very severe (25%-40% of the optic nerve's axons are destroyed before any field loss is measurable). This fact makes the early detection of this irreversible disease very important. There are several changes in the geometry of the disk caused by the destruction of the optic nerve (e.g. larger cup to disk ratio, because the optic cup sinks and expands). Optical Coherence Tomography (OCT) is a relatively new imaging modality that offers imaging of tissues at the histological level. The micrometer-level resolution makes it promising for the accurate extraction of the optic disk boundaries.

We apply fully automated techniques for the detection of the optic disk in OCT images. An evaluation of their accuracy is of major importance, since we have to be confident about the robustness of the algorithms. As long as there is no ground truth data for their quantitative evaluation, we need manual segmentation data that will serve as our ground truth.

Example of automatic (solid lines) and manual (dashed lines) detection of the optic disk boundaries in an OCT image.

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