

CHAPTER 3: SEGMENTATION OF IMAGED PATHOLOGY SPECIMENS

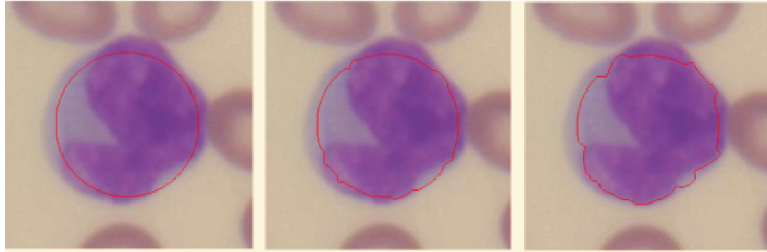


Figure 1. The image segmentation result of a Follicular Center Cell Lymphoma (FCC) applying traditional deformable model. The left panel shows the initial position, the center panel shows one snapshot of the evolving contours, and the right panel shows the final segmentation results after 150 iterations.

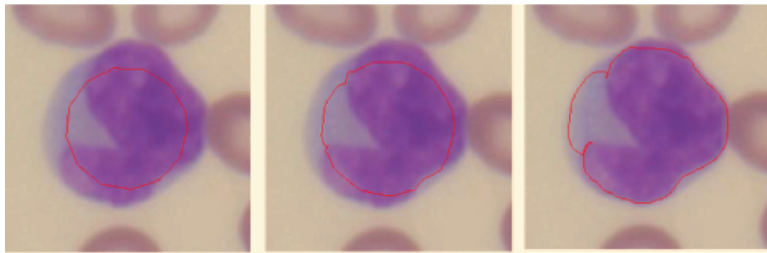


Figure 2. The image segmentation result of a Follicular Center Cell Lymphoma (FCC) applying the balloon deformable model. The left panel shows the initial position, the center panel shows one snapshot of the evolving contours, and the right panel shows the final segmentation results after 150 iterations.



Figure 3. The image segmentation result of a Follicular Center Cell Lymphoma (FCC) applying the GVF deformable model. The left panel shows the initial position, the center panel shows one snapshot of the evolving contours, and the right panel shows the final segmentation results after 150 iterations.



Figure 4. The image segmentation result of a Follicular Center Cell Lymphoma (FCC) applying robust color GVF deformable model. The left panel shows the two initial positions for the segmentation of both nuclei and cytoplasm, the center panel shows one snapshot of the evolving contours, and the right panel shows the final segmentation results after 125 iterations.

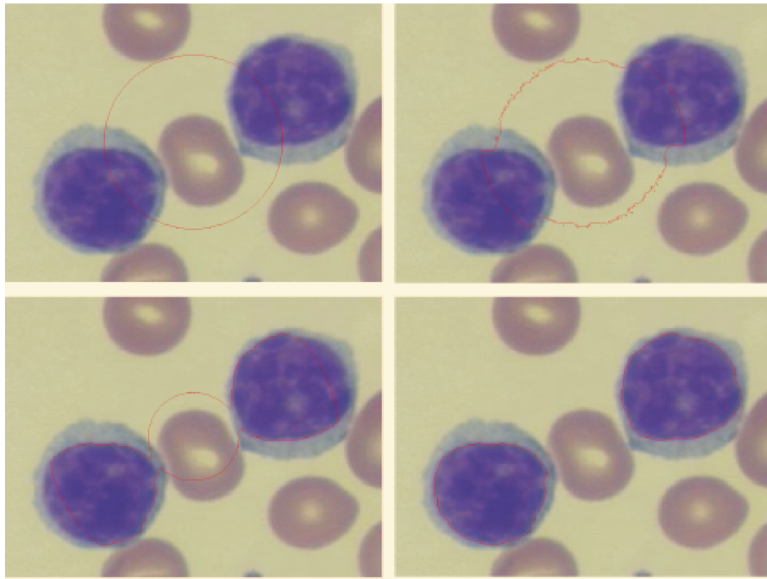


Figure 5. The image segmentation result of the nuclei of two Benign (BEN) cells simultaneously applying a level set-based deformable model. The top left panel shows the initial curve, the top right and bottom left panels show two snapshots of the evolving contours, and the bottom right panel shows the final segmentation results after 1000 iterations.

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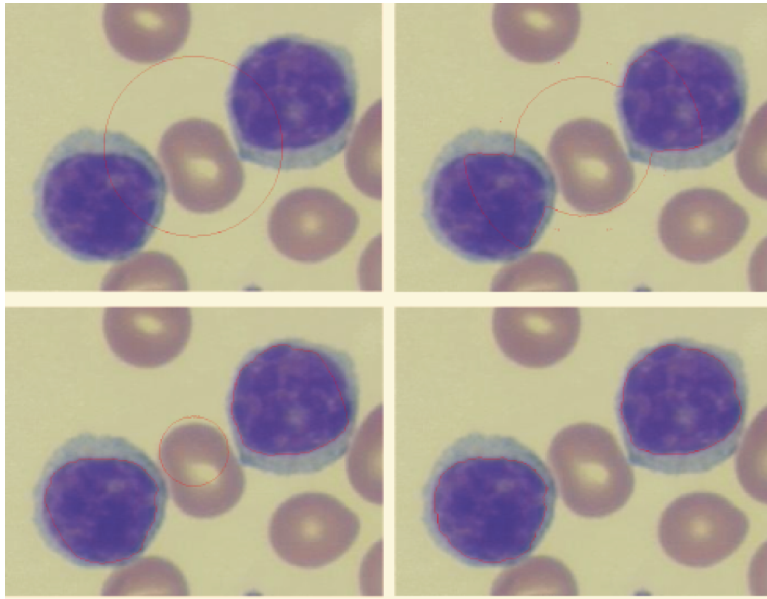


Figure 6. The image segmentation result of the nuclei of two Benign (BEN) cells being detected and delineated simultaneously by applying the geodesic deformable model. The top left panel shows the initial curve, the top right and bottom left panels show two snapshots of the evolving contours, and the bottom right panel shows the final segmentation results after 1000 iterations.

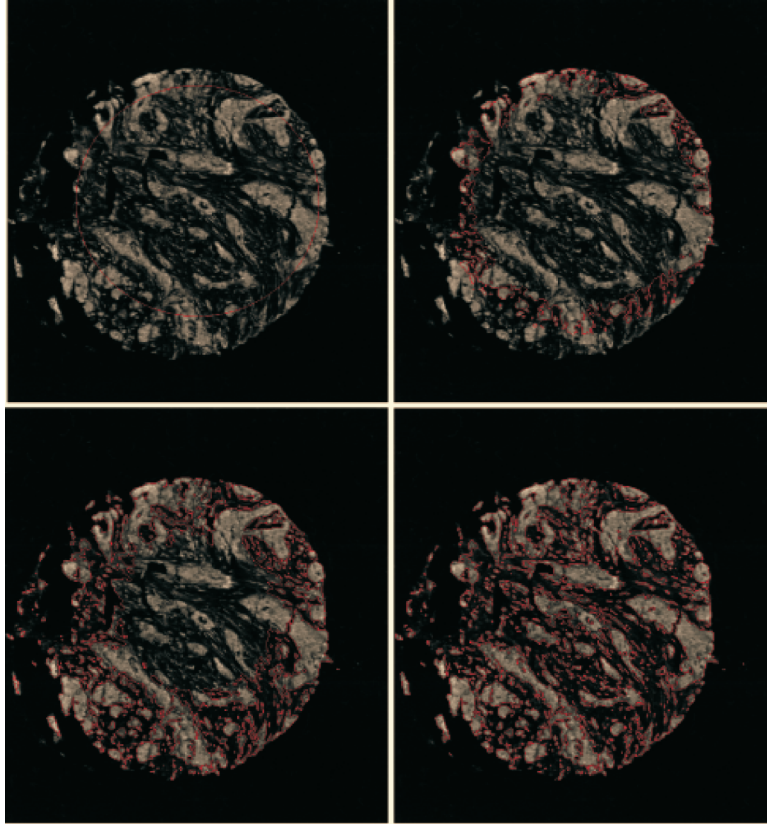


Figure 7. The image segmentation result with breast tissue applying the geodesic deformable model. The top left panel shows the initial curve, the top right and bottom left panels show two snapshots of the evolving contours, and the bottom right panel shows the final segmentation results after 8000 iterations.