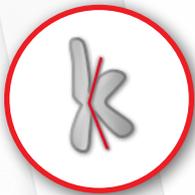




# Karyotyping

## LUCIA Cytogenetics





### Optimized hardware configurations

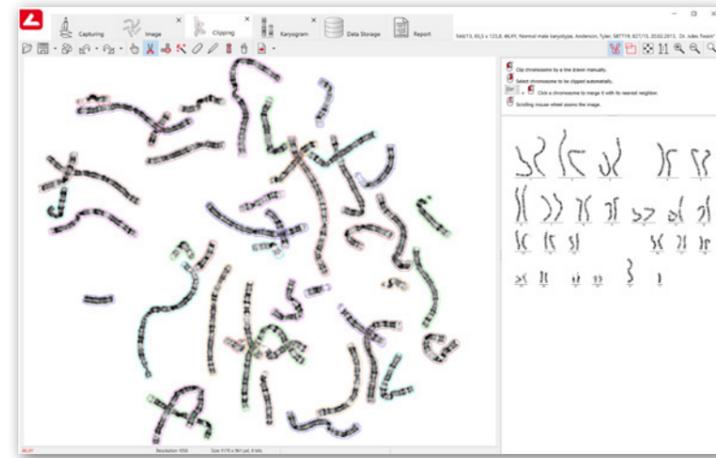
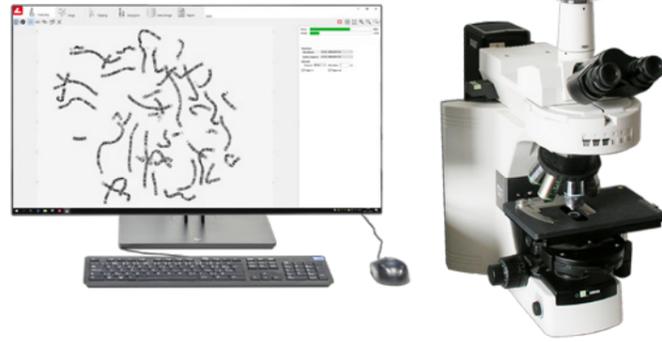
Variety of computer-controlled devices such as motorized microscopes, filter wheels, or scanning stages are available.

### Carefully selected cameras

Modern camera models, cooled and highly sensitive digital cameras are available and will be recommended to you based on your requirements.

### Let the system optimize the scene

The continuous auto-exposure algorithm balances intensity of the scene while the automatic image quality assessment system leads you to get the maximum of details.

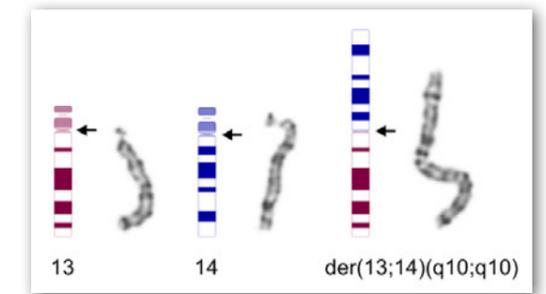
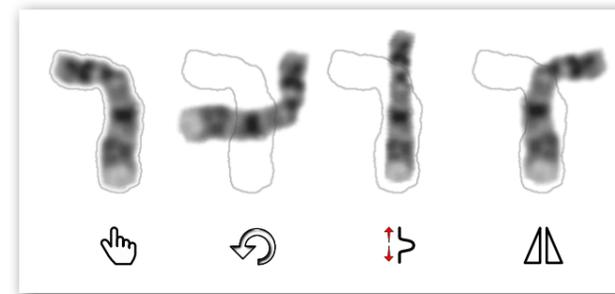
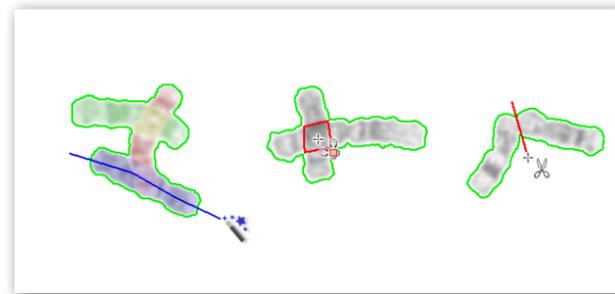
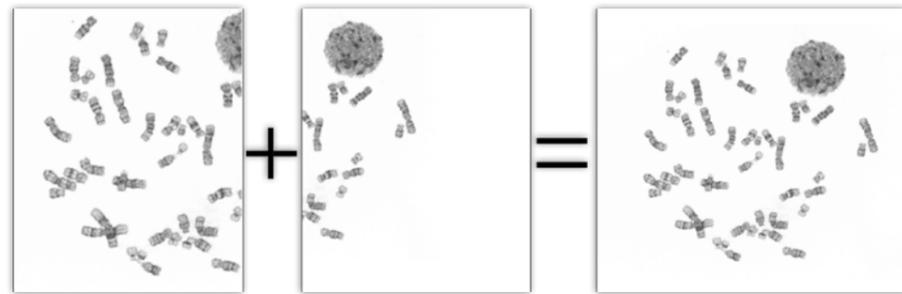
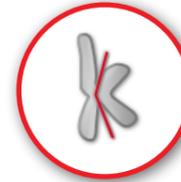


### Automation

Chromosome classification and other tasks are performed automatically.

### Correct imperfections of the image

Automatic zooming and panning of the image help to get an overview of the chromosomes for easier correction of details such as deletion of attached artifacts, chromosome cropping, or telomere region redefinition.



### Acquire extra large scenes

The seamless image stitching algorithm enables you to merge several fields of view of the camera together.

### No chromosome escapes!

The chromosomes which escaped too far from the metaphase can be easily moved to the metaphase image. The Capture Chromosome feature lets you easily acquire a missing chromosome even after karyotyping.



### Chromosome clipping

Easy chromosome separation using automatic and semi-automatic functions. Chromosome clipping, and overlap resolving tools will help you to create karyograms fast and comfortably.

### Chromosome classification

Highly efficient banding pattern classifier developed by artificial intelligence with the possibility of further training. The classifier detects bands on each chromosome for the most accurate automatic karyogram arrangement.

### Arrange the karyogram

A variety of functions including a multifunctional tool that allows for alignment, smooth rotation, 180° chromosome flipping or chromosome alignment on the centromere.

### See where chromosomes originate from

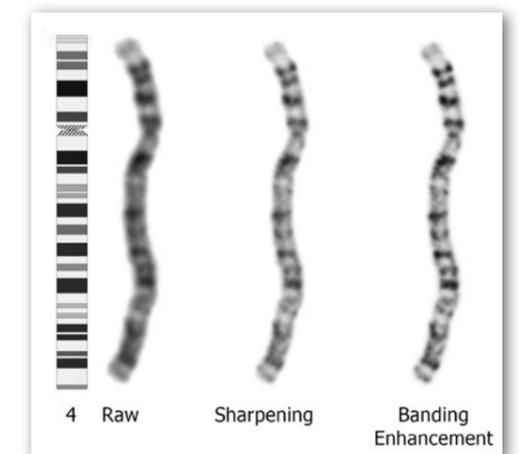
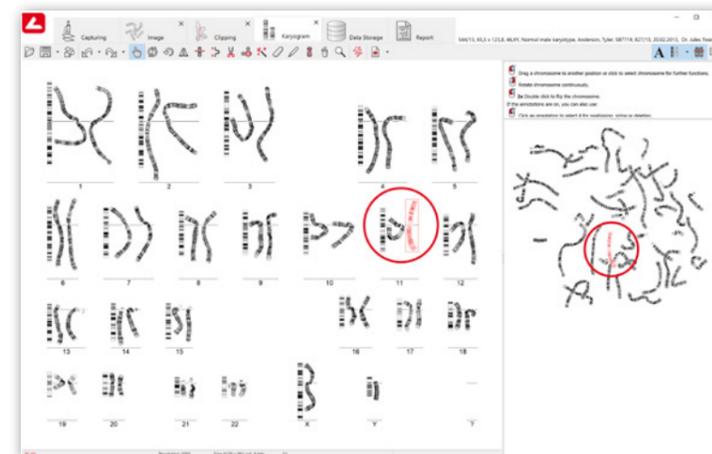
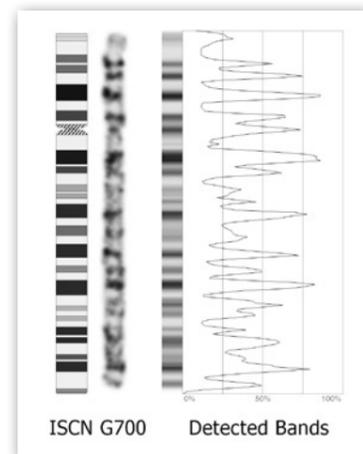
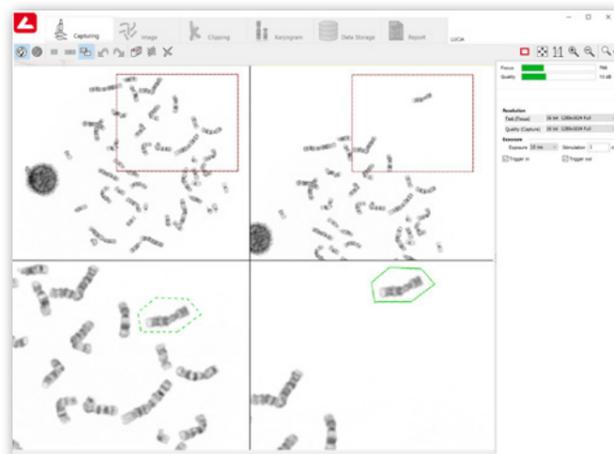
Simultaneous display of the karyogram and the metaphase image couples the corresponding chromosomes.

### Use predefined ideograms or create your own

Ideograms for different techniques and banding resolutions are provided (G300, G400, G550, G700, G850, R400) according to the latest ISCN, and custom ideograms can be created as well.

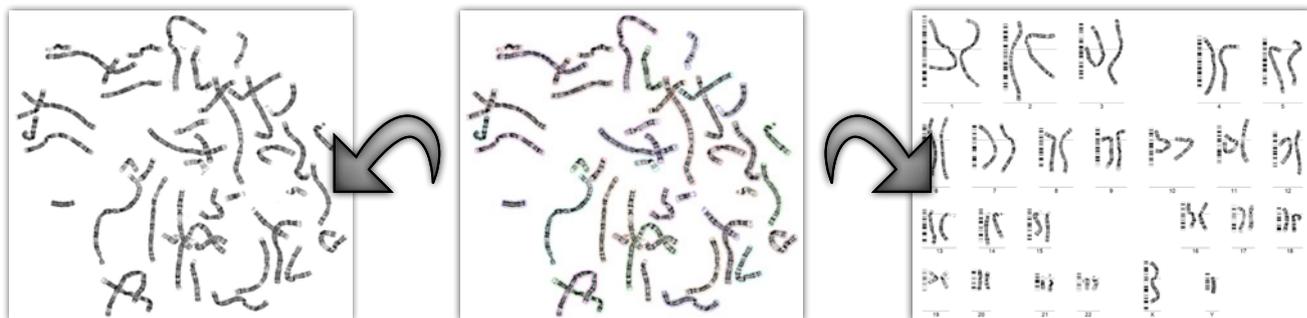
### Chromosome enhancement

A selection of multiple functions to improve the quality of chromosome staining and banding pattern on the whole karyogram or a single chromosome.



## Browse the history of actions comfortably

Use the multiple-step back and forth ability. The number of steps remembered is not limited and is saved into the database together with the document.



## Audit trail module

Enables to fully manage document history and patient data including examinations.



## Integration with other LUCIA products

LUCIA Cytogenetics - Karyo is fully compatible and can be integrated with other LUCIA products:

LUCIA Cytogenetics - Metaphase Finder

LUCIA Cytogenetics - Database

LUCIA Cytogenetics - Report Tool

