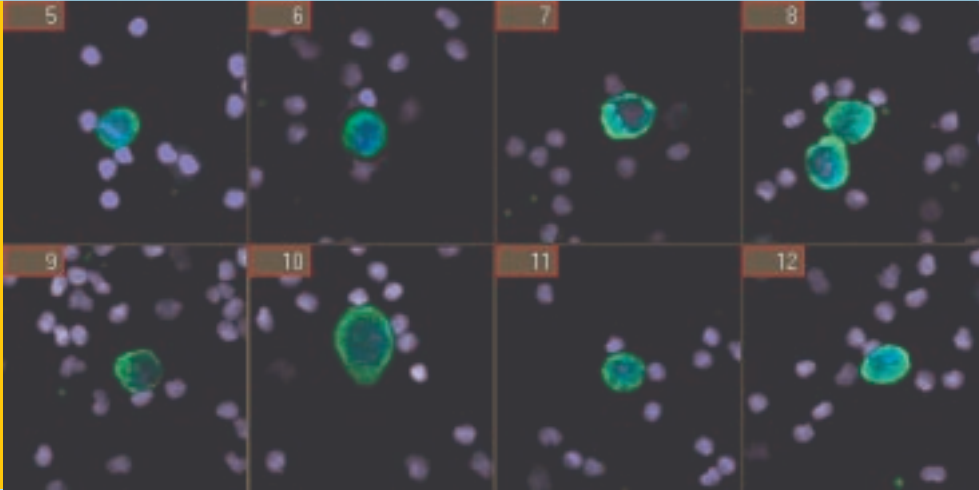


Metafer



RCDetect

Automatic
Rare Cell Detection

Automatic Detection
of Fluorescently Labeled Rare Cells

Simultaneous Multiple Label
Detection Capability

Reliable Object Recognition by
Intensity, Colour, and Shape Analysis

High Quality Cell Gallery for
On-Screen Review and Cell Relocation

Sequential Assays for
Complete Cell Characterization



M E T A
S Y S T E M S

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RCDetect

Automatic Rare Cell Detection

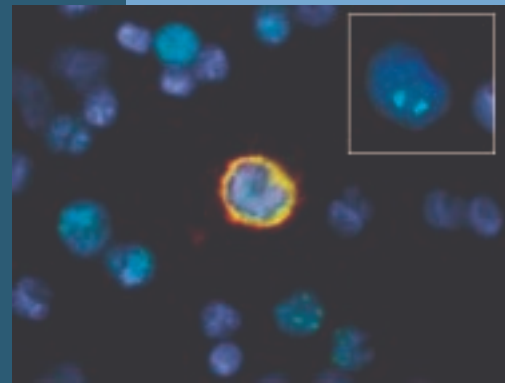
RCDetect, an application of the versatile scanning platform **Metafer**, provides ultra high throughput in rare cell detection. **Metafer - RCDetect** finds and records fluorescently labeled rare cells. Quantitative occurrence rates are calculated by assessing the total number of cells within the scanning area during the scan.

Metafer - RCDetect performs a multiple-level object analysis. Intensity as well as shape recognition of both cell labels and counterstain assure high specificity. Staining artifacts and unspecifically labeled cell populations can be rejected. The unique training feature allows for automatic adaptation to different labeling techniques or cell types.

Metafer - RCDetect's precise relocation of each individual candidate cell guarantees the rapid and reliable correlation of sequentially performed additional assays like FISH - the key to unsurpassed specificity in cell characterization.

All this functionality comes at an amazing speed of up to 7000 cells per second. Cells as rare as 1 in 10 million can now be detected, opening up totally new perspectives in applications like minimal residual disease or fetal cell detection in maternal blood.

Front page: Image gallery of breast cancer cells in peripheral blood detected by a PAN-CK monoclonal mouse anti-cytokeratins antibody cocktail and a FITC goat anti-mouse IgG.
Courtesy of the Dept. of Oncology at the University Hospital Lund, Sweden.



Automatic detection of neuroblastoma cells in a bone marrow preparation. The cell in the center was detected by a combination of GD2 (disialo-ganglioside) specific antibody (red) and KI-67 proliferation marker (green).

Insert: sequential FISH analysis of the same cell confirming the neuroblastoma phenotype by showing amplification of the NMyC gene (green).



Sequential analysis of the same neuroblastoma cell with GD2 specific antibody and KI-67 proliferation marker (left), TUNEL assay (center) and FISH (right) showing a trisomy of chromosome #1 in the GD2-positive cell (FISH-signals: red=D1Z2 [1p36]; green=D1Z1 [centromere 1]). The white lines in the center and right image mark the cell borders.

Images: courtesy of G. Méhes, University of Pécs, Hungary.

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