

Detect Diseases on the Cellular Level

ZEISS Microscopes for Cytopathology

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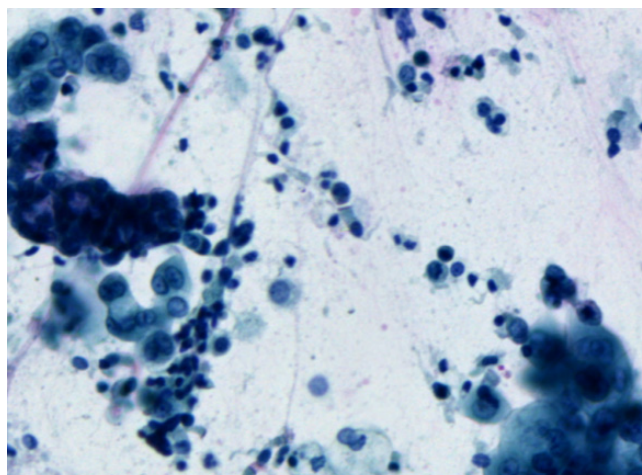
Seeing beyond

ZEISS Microscopes for Cytopathology

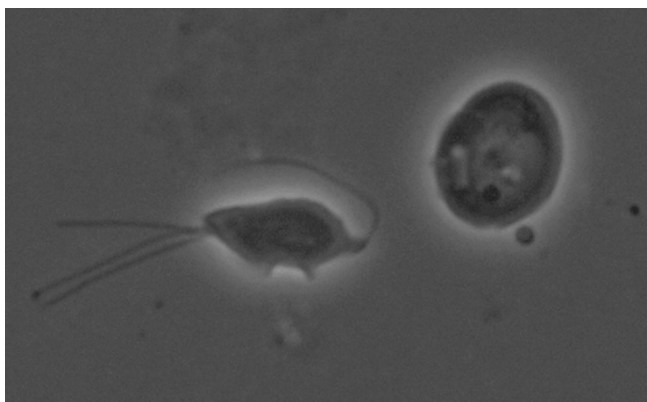
Cytology or Cytopathology is the science of interpreting cells removed from the human body through clinical procedures such as exfoliation. The optimum goal is to detect diseases and reach a definitive diagnosis by the study of single cells and cell structures.

This pathology discipline was founded in 1928 by the Greek medicine pioneer George Papanicolaou who also invented the "Pap smear". More detailed information on characteristics of staining, sample preparation, PAP staining and common dyes used in PAP staining can be found in the whitepaper by ZEISS on "A Quick Guide to Cytological Staining".

[Download Whitepaper](#)



Lung, acquired in brightfield

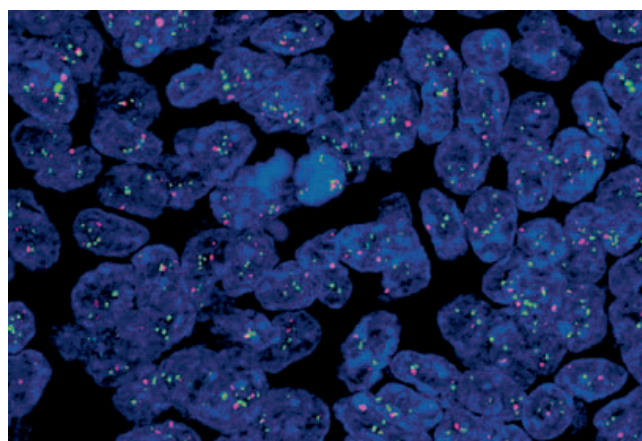


Trichomonas vaginalis live image Phase contrast with the EC Plan-NEOFLUAR 40x / 0.75 Ph2 objective

Microscope Requirements for Cytopathology – Your Checklist

- Different contrasting techniques such as brightfield, phase contrast, DIC or fluorescence.
- Ergonomic design with all microscope controls easy to reach.
- Digital documentation with microscope camera.

A very good cellular differentiation and clearly visible nuclear details are absolute prerequisites in cytology for carcinoma and tumor cell diagnosis. Cytologists and pathologists rely on crystal-clear images of their samples with the highest color fidelity in brightfield, phase contrast, DIC, or fluorescence. While cytological stains such as Papanicolaou's (PAP stain), Giemsa, or Romanowski-type result in specific staining of cellular features, it is the optical quality of the microscope, the fidelity of the attached camera for digital documentation, and the ergonomic design of the instrument that can make all the difference when screening patient samples.



Detection of the human HER2/neu gene (green) and centromere (red) on chromosome 17 by means of Fluorescence-In-Situ-Hybridization (FISH) in mammary tumor tissue using probes from ZytoVision GmbH, Bremerhaven, Germany

Recommended Microscopes

	ZEISS Primostar 3	ZEISS Axiolab 5	ZEISS Axioscope 5
Microscope			
Key users	Use this rugged and compact routine microscope to advance your teaching and training or your clinical laboratory routine.	Smart microscope for clinical laboratory – a single button for crisp images in true color, already with the correct scaling information.	Smart clinical and laboratory microscope – above and beyond, option to acquire fluorescent images consisting of up to four different channels.
Suggested	Full Koehler package ■ 415501-0021-000 Or ■ 415501-0031-000	■ 490980-0006-000	490040-0044-000
Condenser	■ Abbe condenser with Ph-slider Or ■ Turret condenser	■ Condenser 0.9/1.25 H + Low-power system for objectives 2.5x/4x	■ Condenser, achromatic-aplanatic 0.9 H + Low-power system for objectives 2.5x/4x
Objective	■ iPlan-Achromat 4x/0.1, 10x/0.25, 40x Ph2/0.65 Option for ■ iPlan-Achromat 20x/0.45 ■ iPlan-Achromat 100x Oil/1.25	■ Objective N-Achroplan 2.5x/0.07 ■ Objective N-Achroplan 5x/0.15 ■ Objective N-Achroplan 10x/0.25 ■ Objective EC Plan-Neofluar 40x/0.75 Option for ■ Objective EC Plan-Neofluar 20x/0.5	■ Objective N-Achroplan 2.5x/0.07 ■ Objective N-Achroplan 5x/0.15 ■ Objective EC Plan-Neofluar 10x/0.3 ■ Objective EC Plan-Neofluar 40x/0.75 Option for ■ Objective EC Plan-Neofluar 20x/0.5
Camera	ZEISS AxioCam 212 color	ZEISS AxioCam 212 color/ZEISS AxioCam 305 color	

To complete your microscope system we additionally recommend:

- **ZEISS Labscope Fast Panorama module:** With Fast Panorama you turn your manual microscope into a whole slide imaging system. By manually moving the stage of your microscope, images of the sample will be stitched together automatically into a panorama microscope image. It is your perfect choice if you have to scan whole slide image (WSI) occasionally.
- **Barcode scanner and foot pedal for routine usage:** Your smart microscope from ZEISS lets you assign microscope images with the correct scaling information to barcode-labelled samples. Just use an Axiolab 5 or Axioscope 5 microscope with Windows PC or iPad, connect a barcode reader to your AxioCam 212 color camera and start.
- **Twain driver plugin for ZEISS AxioCam 203 and 212 microscope cameras:** With TWAIN, the standardized interface you can control camera and image acquisition. TWAIN plugin opens a simple camera graphic user interface (GUI) within any TWAIN compatible app and allow you to snap images with ZEISS AxioCam 203 or 212 microscope cameras.
- **Multidiscussion microscope systems for consultation:** Imagine you have an interesting structure in your pathological sample, where you need a second opinion or advice. You simply add additional tubes and respective carriers to your microscope.



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