

The New Standard in Ergonomics and Productivity

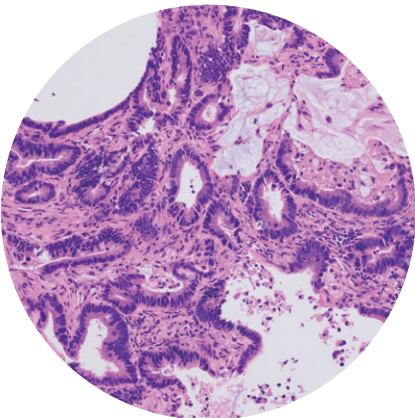




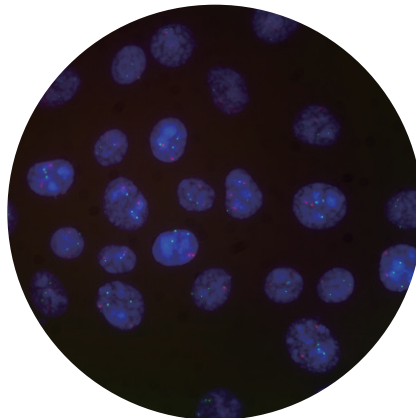
# Your Choice for Clinical Applications

BX3 series combines ergonomics with Olympus' optical technology in three models— the BX53, BX43, and BX46 microscopes. BX3 series microscopes have an ergonomic design that helps keep users comfortable during extended periods of use and an intuitive control layout for fast, efficient observation and imaging.

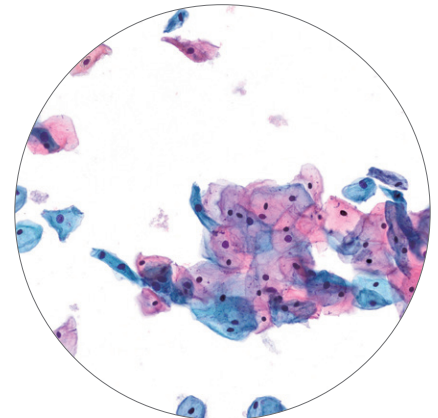
Designed for laboratory and clinical applications, white LED illumination has a high luminosity and color-rendering index so users can see their samples in true-to-life colors.



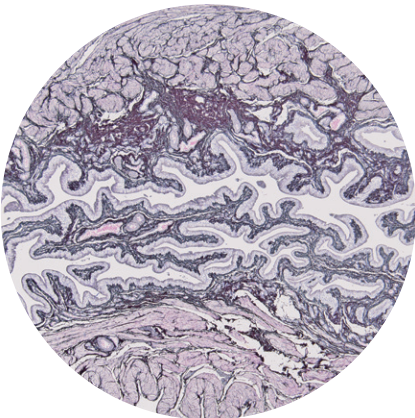
Lung (Haematoxylin and Eosin Stain)



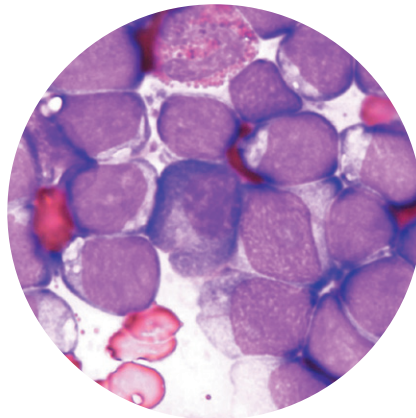
HeLa Cells (FISH Stain)



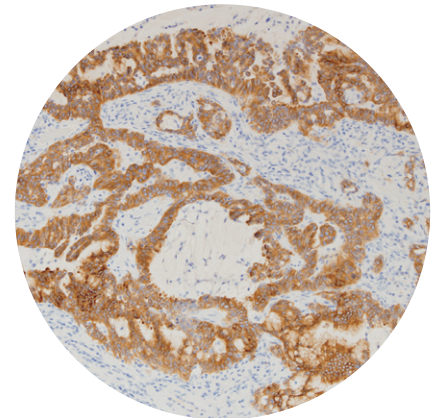
Cervical Cells (Papanicolaou Stain)



Rat Kidney (PAS)



Blood Sample (Giemsa Stain)



EML4-ALK Fused-gene Lung (Immunostaining)



# BX53

## For Teaching and Challenging Applications

With an LED illuminator equivalent to or better than a 100 W halogen lamp, the BX53 microscope delivers brightness that's appropriate for teaching and various contrast methods. Customize your microscope with modular units based on the observation methods you want to use. Choose from options including condensers, nosepieces, a rotating stage, objectives, and intermediate optics optimized for various observation methods, including phase contrast and fluorescence.

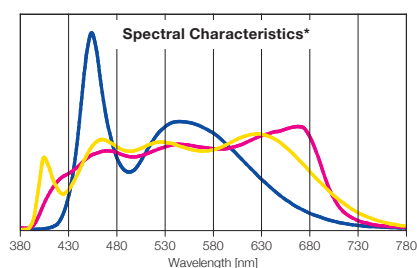
### Acquire Precise Images with X Line Objectives

Improved flatness, numerical aperture, and chromatic aberration combine to deliver clear, high-resolution images with excellent color reproduction. The objectives' superior chromatic aberration management delivers better color accuracy across the entire spectrum. The elimination of violet color aberration creates clear whites and vivid pinks, improving contrast and sharpness.



### Bright LED Lighting Designed for Pathology and Laboratory

Designed with spectral characteristics that mimic halogen light sources, the BX3 series' LED illumination enables users to clearly view the purple, cyan, and pink colors important in pathology, but typically difficult to see using LEDs. Users get the benefits of an LED, including consistent color temperatures and long use life, without the typical trade offs.



\* This graph shows the spectral characteristics of each light source regularized with the luminosity curve. It does not compare the strength of light for each light source.



### Bright Images in Multi-Head Configurations

Multi-head discussion systems are essential for training and education. With the BX53 microscope's LED illumination, up to 26 participants can view clear, bright images.

26 heads are only for brightfield observation.



### Coded units to integrate with imaging software

Add an optional coded nosepiece to your BX53 microscope to automatically record and share magnification setting information for post-imaging treatments. The metadata is automatically sent to cellSens software, helping minimize mistakes and scaling errors.

cellSens is not for clinical diagnostic use.



Magnification Setting Information

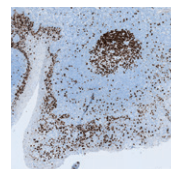
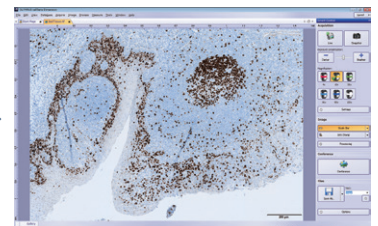


Image Data



Sent to cellSens

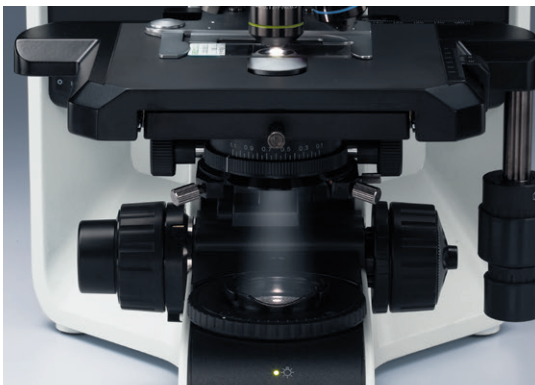
# BX43

## Excellent Performance in a Cost-Effective System

BX43 microscopes are modular, offering the versatility to change between cost-efficient and advanced configurations depending on your needs. Choose from a wide variety of modular components, including ergonomic observation tubes and stages, to customize your microscope to your application.

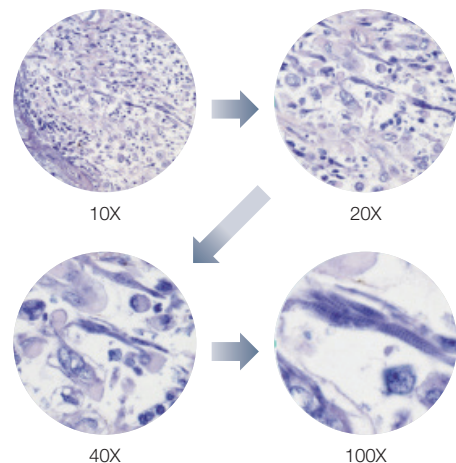
### White LED with High Color Rendering— Equivalent to a 30 W Halogen Lamp

The BX43 microscope utilizes a high color rendering white LED with a luminosity equivalent to a 30 W halogen lamp. The long-lasting LED provides a consistent color temperature at any brightness level.



### Maintain Brightness when Changing Magnifications

The BX3 series' light intensity manager eliminates the step of adjusting lamp brightness when changing magnification. By maintaining uniform brightness at any magnification, users can achieve their observations quickly and with reduced eye strain.





**Advanced Optical Performance Accommodates Various Observation Styles**

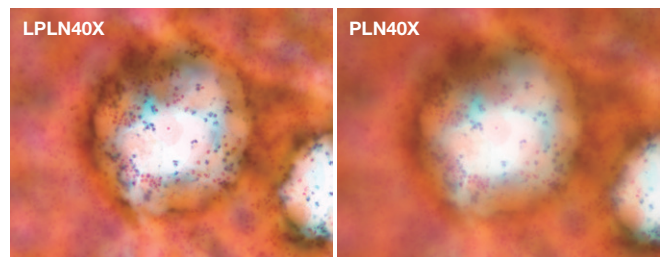
Customize your BX43 microscope with modular units. Choose from options including condensers, nosepieces, a rotating stage, objectives, and intermediate optics optimized for various observation methods.



Flexibly combine units according to the application

**Observe Cellular Tissue (LPLN40X)**

This objective is appropriate for imaging thick, clear samples, even at 40X magnification. The LPLN40X is equipped with a correction collar so users can adjust the spherical aberration caused by differences in cover glass thickness to get clear images.



Cervical Cell (Papanicolaou Stain)

# BX46

## Designed for Routine Pathology and Cytology

The BX46 is designed to meet the demands of repetitive routine microscopy. Unlike conventional microscopes where samples are focused by moving the stage, the BX46 microscope's movable nosepiece enables the stage to be fixed in the Z-plane very close to the desk's surface, keeping it closer to your hands. This design helps provide greater comfort when screening samples for long periods of time.

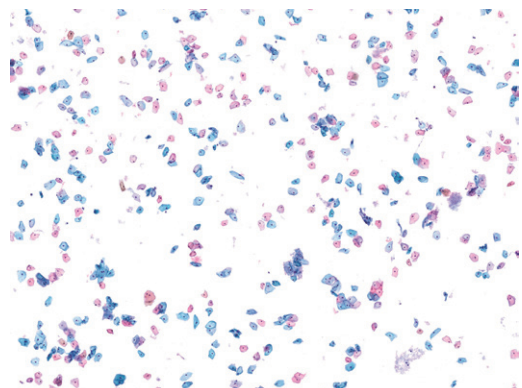
### Easy, Ergonomic Manual Stage Movement

A simple finger tap is all that is needed to move the specimen. The low-position handles and low torque stage make it easy to move the specimen while keeping your arms and hands in a comfortable position.



### Long-Lasting LED with High Color Rendering

Olympus' LED technology provides a color rendering index similar to that of a halogen bulb with a daylight filter. Under True Color LED illumination, stain colors appear as they do under a daylight-filtered halogen, and similar colors can be clearly differentiated. The LED provides consistent illumination throughout its long lifetime (20,000 hours).



Cervical Cell (Papanicolaou Stain)





### Adjust the Scope to Fit Your Posture

Our most ergonomic option moves up and down, tilts, and extends forward and back so you can move it closer to you. With this one component, users of nearly any height can adjust the scope so that they're comfortable. The flexible ergonomic tube is suitable for labs where multiple users share a microscope since each can adjust it to accommodate their height and posture.



Tilts: 0 to 27 degrees



Extends: 55 mm



Lifts: 45 mm

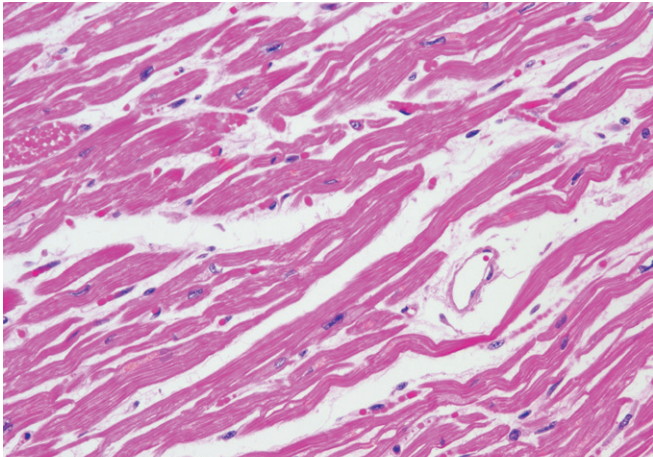


# Various Observation Methods

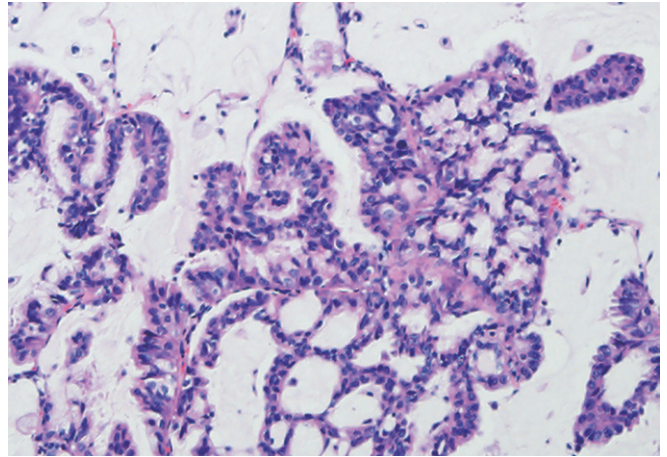
## Brightfield

### Get Bright Images with Excellent Resolution/Flatness at All Magnifications

Olympus' diverse line of condensers enables users to choose what they need for their application. For example, the U-SC3 swing-out condenser is suitable for observations from 1.25X to 100X, the U-LC is optimized for consecutive observations from 2X to 100X (dry).



Heart Tissue (Haematoxylin and Eosin Stain)

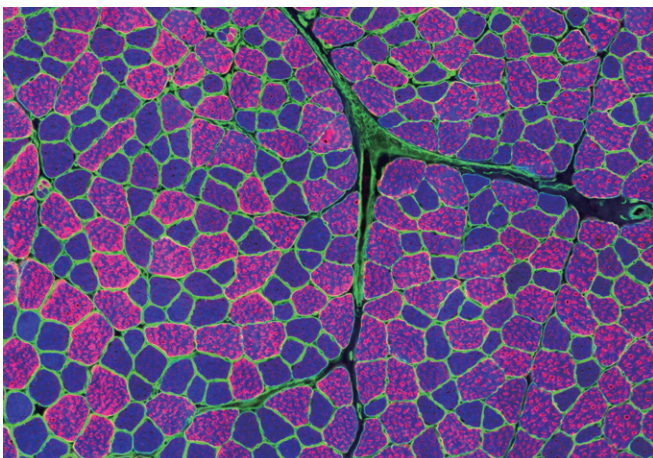


Lung Tissue with EML4-ALK fusion gene (Haematoxylin and Eosin Stain)

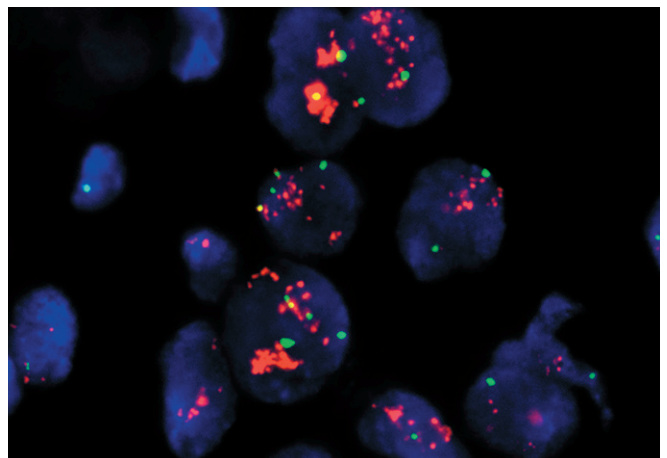
## Fluorescence

### Bright Fluorescence Imaging

Users can choose from a universal reflected illuminator or a coded fluorescence illuminator. Eight fluorescence mirror units can be attached to the microscope for efficient multi-color fluorescence observations. High performance filters provide efficient and bright fluorescence images.



Muscle Tissue (Fluorescence)



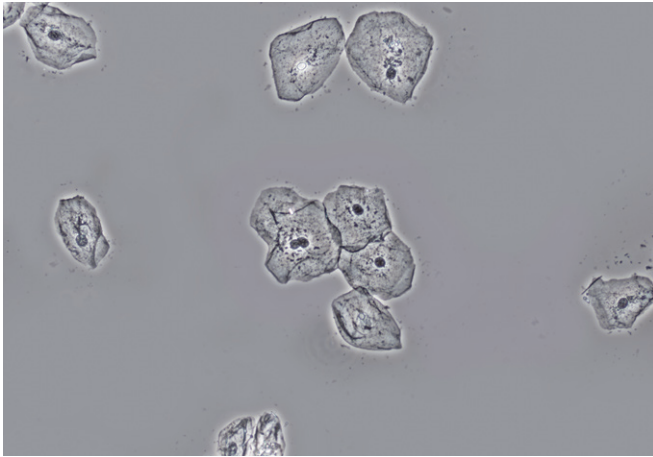
Mammary Gland Tissue (Fluorescence)



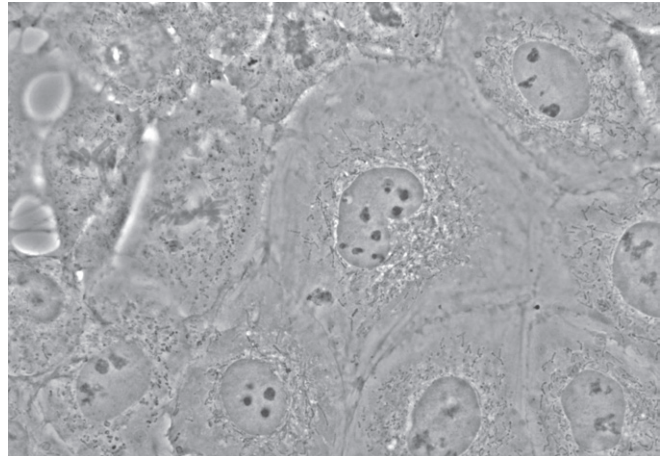
## Phase Contrast

### High-Contrast, High-Resolution Imaging

High-contrast phase imaging enables close observation of the interior of a cell and live bacteria. Use the UPLFLN-PH or PLN-PH objectives for phase contrast observation from 10X to 100X. With the U-PCD2 phase/darkfield condenser, users can view specimens in brightfield or darkfield. Simultaneous observation with reflected light fluorescence microscopy is also possible.



Endothelial Cells

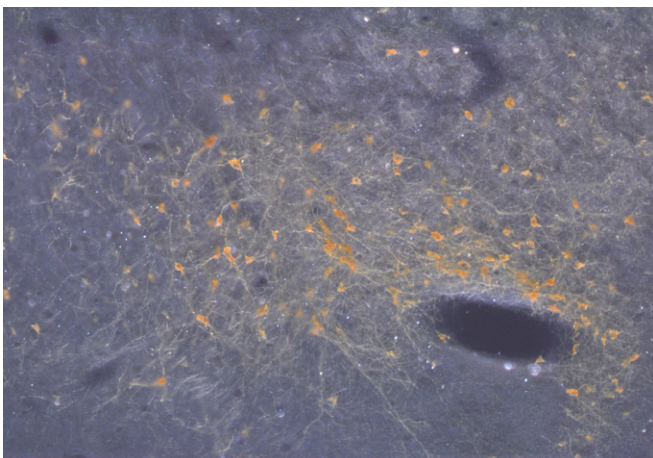


NRK-52E Cells

## Darkfield

### Excellent Darkfield Effect from Low to High Magnification

Choose from a 10X to 100X dry darkfield condenser or a 20X to 100X oil immersion darkfield condenser.

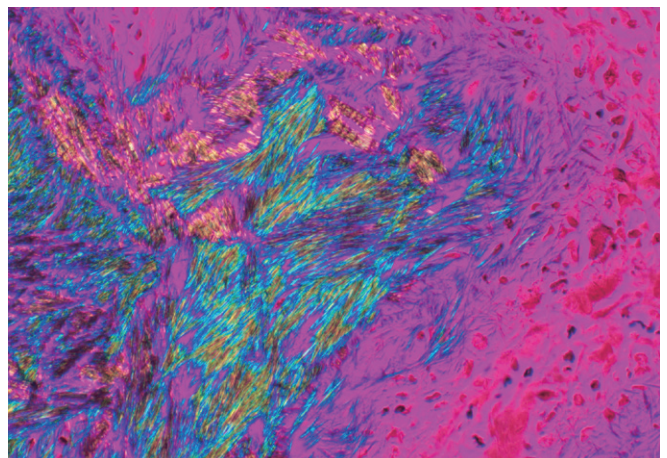


DAB-stained brain section, 30 um thick, 20x UPLSAPO Darkfield, DAB specimen showing anterograde and retrograde transport of Cholera Toxin B tracer in a chick brain with an injection of tracer in the medial Arcopallium (amygdala)

## Polarized Light

### High-Resolution View of Double Refraction Structure in Cells

Various compensators make it possible to observe a wide range of retardation.



Uric Acid Crystals

Images are courtesy of:

Noriko Motoi, M.D., Ph.D. and Yuichi Ishikawa, M.D., Ph.D.  
Division of Pathology, The Cancer Institute,  
JAPANESE FOUNDATION FOR CANCER RESEARCH  
(P.9 top right)

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**OLYMPUS CORPORATION**  
Shinjuku Monolith, 2-3-1 Nishi-Shinjuku, Shinjuku-ku, Tokyo 163-0914, Japan

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