Thousands of cells per second are counted and characterized in medical and biotechnical analytics with laser-based flow cytometry. This enables the fast and secure detection of blood anomalies.

**Cell Flow:**
Cells are being excited to make them glow.

**Forward Scatter:**
Measurement of the cell's volume

**Side Scatter:**
Measurement of the cell's granularity

**Fluorescent Light:**
The color-separated light provides information about a variety of cell characteristics.

**Color Filter:**
Detector

**Laser Nozzle Blood Sample**

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Endoscopes enable doctors to examine body cavities and hollow organs, detect illnesses, and treat them with minimal invasion at the same time, if required. The tubes, which are only a few millimeters thick, transfer illumination in one direction and high-resolution images in real time in the other direction.
Individually adjusted varifocals help older people have good vision for all distances. A variety of criteria is included in the calculation for personalized and individual lens design. CNC machines are used to translate the calculated design into individual lenses with micrometer precision.

**INDIVIDUAL CRITERIA**

- **spectacle adjustment**
  - shape of spectacle frame

- **wearer’s characteristics**
  - intended use (sports, office, daily life)
  - eye and head movement

- **eye correction**
  - spherical: myopia or hyperopia
  - cylindrical: degree of astigmatism
  - prismatic: associated heterophoria
  - axial: direction of lens fitting

- **other**
  - face form
  - angle
  - corneal vertex distance
  - pupillary distance
  - pantoscopic tilt
  - fitting height
  - fitting
  - height
  - pantoscopic tilt

The different colors indicate the varying refractive power of the lens: from red (strong) to blue (weak).
Individually adjusted varifocals help older people have good vision for all distances. A variety of criteria is included in the calculation for personalized and individual lens design. CNC machines are used to translate the calculated design into individual lenses with micrometer precision.

The different colors indicate the varying refractive power of the lens: from red (strong) to blue (weak).

The model of varifocals shows:
- Distance vision: > 2 m
- Medium vision: 0.5 – 2 m
- Near vision: < 0.5 m
SEEING CLEARLY AGAIN

From the age of 60 onwards, most people get a slight cataract – known as the grey star. Treating cataracts is the most common operation around the world. The WHO estimates that by 2020, 32 million cataract operations will be performed. The use of the femtosecond laser with ultra-short pulses allows a precise and careful operation.

ANATOMY OF THE HUMAN EYE

cornea
iris
pupil
lens
sclera
vitreous cavity
choroid
optic disc (blind spot)
retina
fovea centralis
optic nerve
From the age of 60 onwards, most people get a slight cataract—known as the grey star. Treating cataracts is the most common operation around the world. The WHO estimates that by 2020, 32 million cataract operations will be performed. The use of the femtosecond laser with ultra-short pulses allows a precise and careful operation.

**SEQUENCE OF A LASER OPERATION**

1. opening the lens

2. segmenting the lens

3. opening the cornea

4. suctioning the lens

5. inserting and centering the artificial lens