



P R O D U C T P R E S E N T A T I O N

FAL>10
medical media vision

REGISTERED PATENTS

NO. 102022000007703 - NO. 102022000007700

FALKO is the innovative Head-Mounted Display - studied and designed by Tecnomed Italia for the medical practice, installed on a dentist's helmet with flip-up system.

Working in healthy conditions is an absolute right; studies show that musculoskeletal problems are very common in the medical profession, especially in dentistry.

FALKO starts with this goal: to effectively eliminate the postural problems encountered in the medical practice. It was initially designed to be connected to our EsaCam surgical lighthead for obtaining high-definition images with high contrasts and up to 30X zoom.

By talking to medical specialists from different branches of medicine, we understood their need; that is why we decided to extend the applications of FALKO to other medical equipment. Its aim is to enhance, not to replace, the equipment with which FALKO connects.

With FALKO, a new flexible ecosystem is defined. **With FALKO we raise the bar in terms of precision, quality and safety of medical procedures, safeguarding the well-being and health of the medical professional.** In addition, it is possible to consult the patient file by quickly switching from the camera to the practice management PC and to do Telecooperation in healthcare.

We are currently working on the interchangeability of FALKO's modules, i.e. those modules that enable wireless control of equipment with which the FALKO device is connected. **This is aimed to make FALKO a 100% flexible technology.**

VIDEO

vimeo.com/712321812



FALKO enhances the use of equipment such as:



Operating microscopes



Intraoral cameras



Scanner 3D



Surgical lights with
cameras



Implant navigators



HDMI multi-parameter
monitors

3. DESCRIPTION

The FALKO unit consists of a viewer, a wireless communication system, surgical headband and a power source. The FALKO viewer is designed to provide high-resolution 2D colour video visualisations via PC, connected to endoscopic/laparoscopic/microscopic surgical camera systems and other compatible medical imaging systems, such as guided surgery, implant navigation, 3D oral scans, intraoral first-check imaging, etc. **FALKO offers high-definition binocular vision with focus and inter-pupillary adjustment** for real-time use during minimally invasive surgical procedures and is suitable for use in hospital operating theatres, surgery centres, clinics, etc. The two OLED screens and aspherical lenses have an autostereoscopic effect similar, but not equal, to the real stereoscopic effect. For images with a zoom of less than 20 X at 700 mm distance, a higher learning curve is required. **FALKO is supplied with a basic ergonomic and optical setting that can be varied as desired by the user to perfectly suit their needs**, ensuring visual and postural comfort.

The unit is particularly useful in medical practices specialising in Dentistry, Maxillofacial Surgery, Aesthetic Microsurgery, Dermatology, Otolaryngology, Gynaecology, Diagnostics, Anatomy .

SOME GENERAL FEATURES:

- Ergonomic and balanced surgical helmet with even pressure points on the entire head.
- Choice between immersive vision mode and peripheral vision mode (without front mask). In peripheral vision mode, the viewing angle can be changed to expand the standard field of view.
- The visor can be raised quickly as it is equipped with a flip-up system.
- Interpupillary and dioptic adjustment.
- Possibility of adjusting the image in the viewer menu. Contrast or colour adjustment, for example, is very useful in surgery or aesthetics.
- With the ARCHIMED 4 software it is possible to take photos or record videos by capturing images with the supplied USB pedal. In turn, the software allows the real-time switching of 2 USB video sources. For example, the OKKIO usb camera signal and the signal coming from FALKONNECT.

VIDEO

vimeo.com/722507209



MIRRORING WITHOUT A NETWORK

FALKO's wireless transmission and reception system supports an uncompressed HDMI video signal up to 1080P.
No IP setting is required, no internet network is needed. ONBOARD function management!



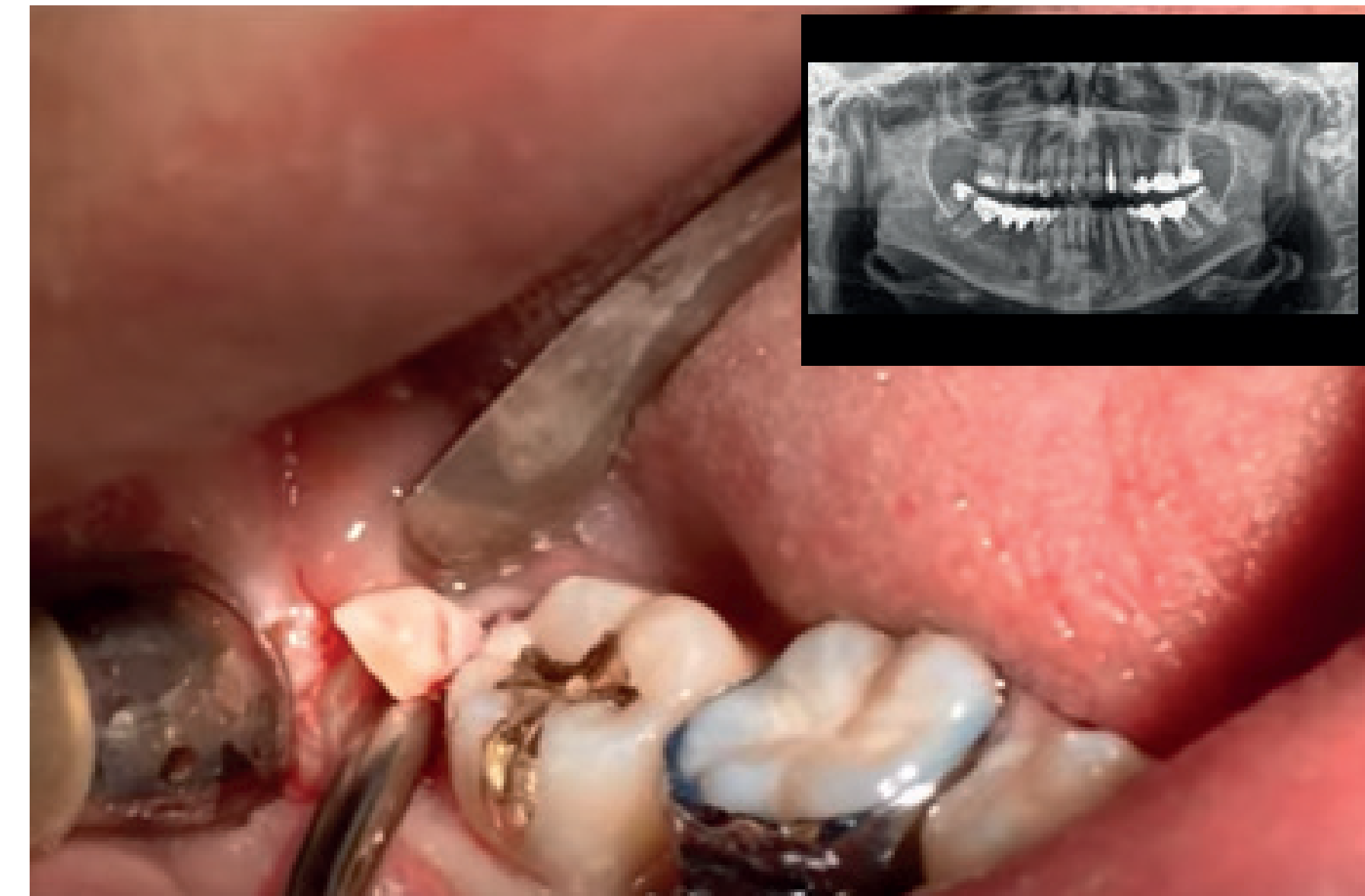
V I D E O

vimeo.com/702335734

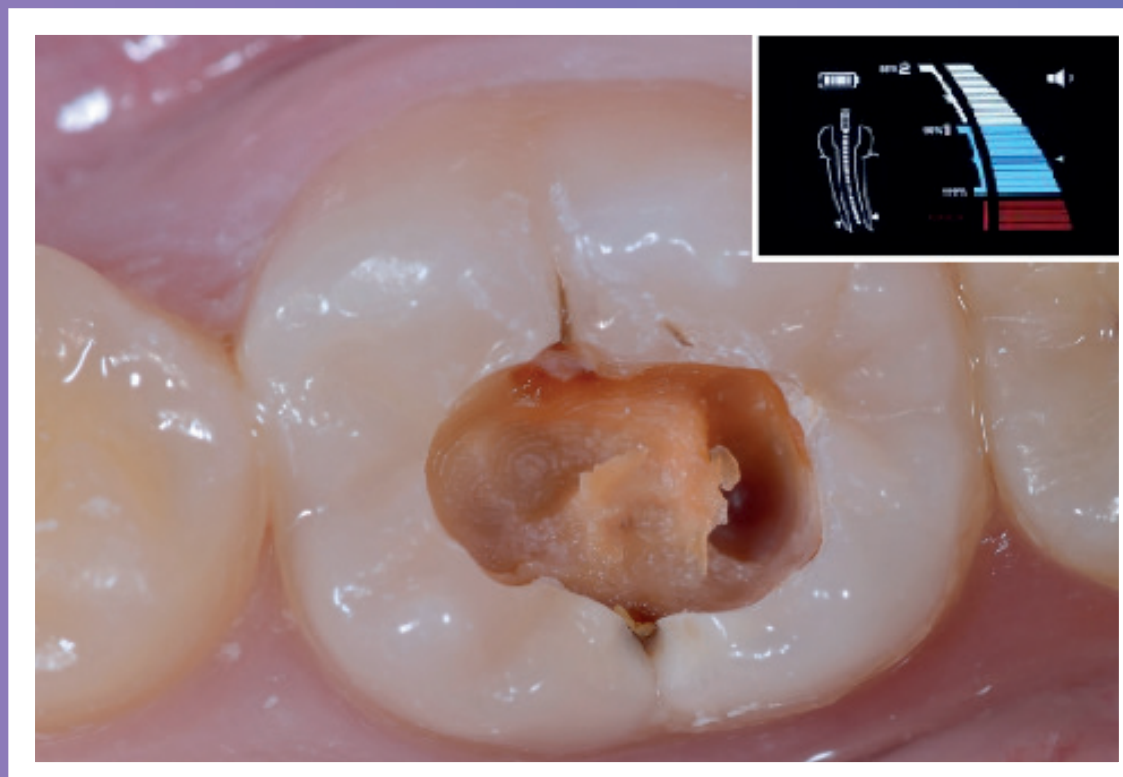
MODULE WITH MULTIVISION FUNCTION

The information interlaced with the FALKONNECT central unit, selectable from the joystick on the viewer (PIP switch). Controls always at hand.

The FALKONNECT central unit, controlled by the viewer, allows to manage 2 video information between: microscope / lamp with camera / OKKIO HDMI camera / PC RX / implant navigator / PC for 3D scanner / PC apical detector / HDMI multi-parameter monitor.

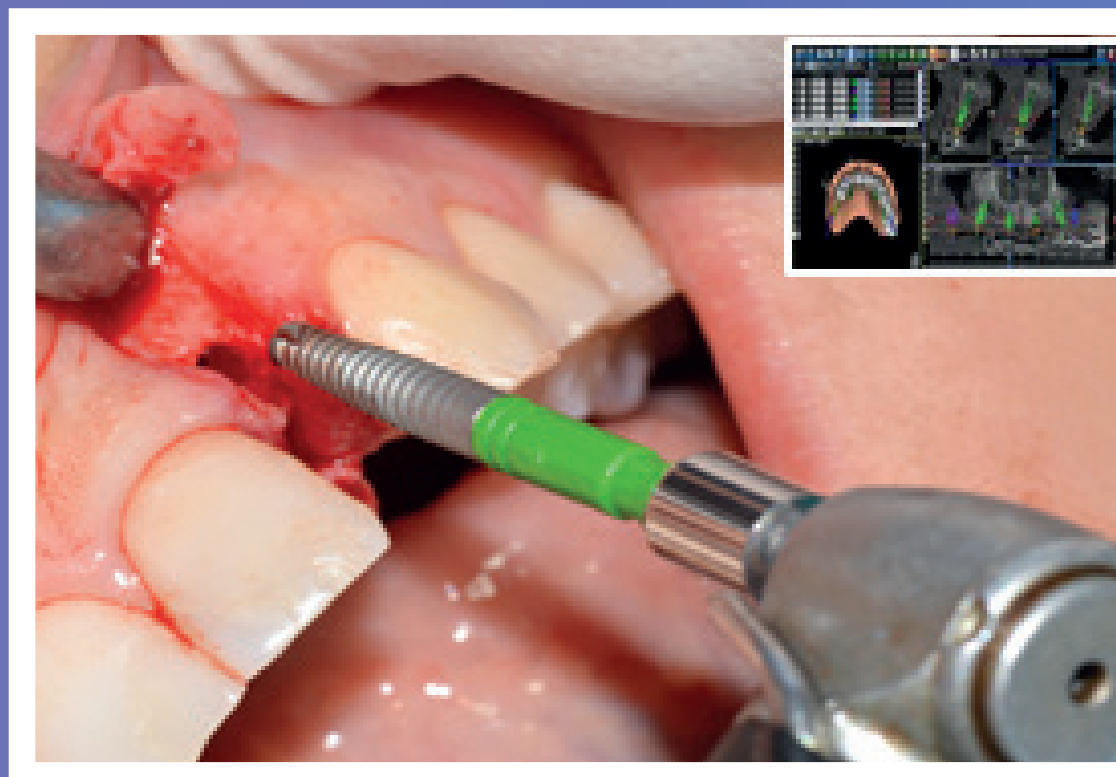


MIRRORING WITHOUT A NETWORK



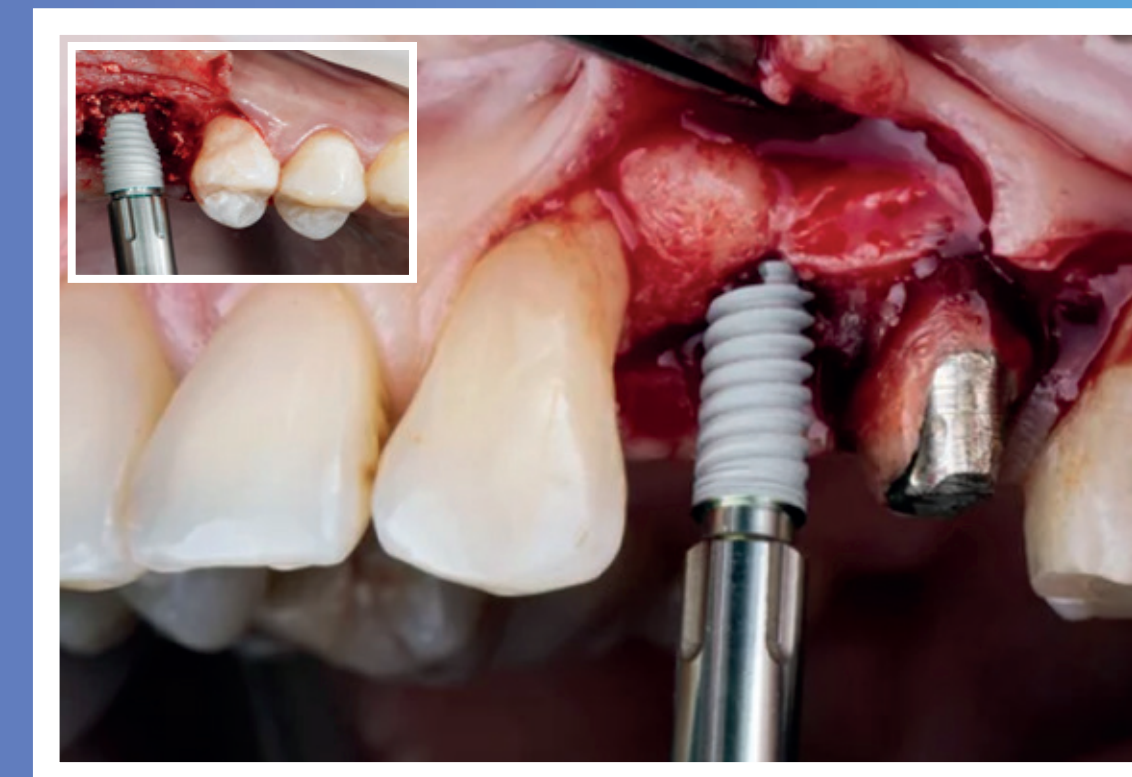
MICROSCOPE INTERFACE

With microscope interface, the continuous adaptation of the eye to changing microscope/environment light is avoided. The light change frequency during surgery can cause migraines. It is also possible to work on the upper arch or palate without taking awkward postures and eliminating indirect vision.



IMPLANT NAVIGATOR INTERFACE

With the interface to the guided surgery system, the operator only consults the PC monitor by raising his eyes. Head movement between working field and PC monitor can confuse the operator in coordinating the two visual information and eliminating indirect vision.



VIDEOCAMERA INTERFACE

With the OKKIO HDMI microscope/camera interface and PIP function, the doctor can see the visual information from his perspective and the assistant (with the inexpensive FALKO WIRE viewer) can see the visual information from his perspective. This facilitates coordination when working with four hands.

MIRRORING WITHOUT A NETWORK



ESACAM SURGICAL LAMP CONTROL MODULE

A joystick, installed on the FALKO visor as an optional module, allows the management of the main functions of our EsaCam lamp with camera. Controls always at hand.



ZOOM
Adjustment



CAMERA APERTURE
Adjustment



BRIGHTNESS
Adjustment

V I D E O

vimeo.com/709811939

TELECOOPERATION

Over the past year, new technologies have relentlessly reshaped the way we live and we, through collaboration with trusted industry partners, have created integrated experiences that offer unprecedented customisation and versatility.

Telecooperation in healthcare is an act consisting of assistance provided by a doctor or other healthcare professional to another doctor or other healthcare professional engaged in a medical act. The term is also used for the advice given to emergency responders. The user transmits health information (data, signals, images, etc.) and receives the results of the service (diagnosis, treatment addresses).

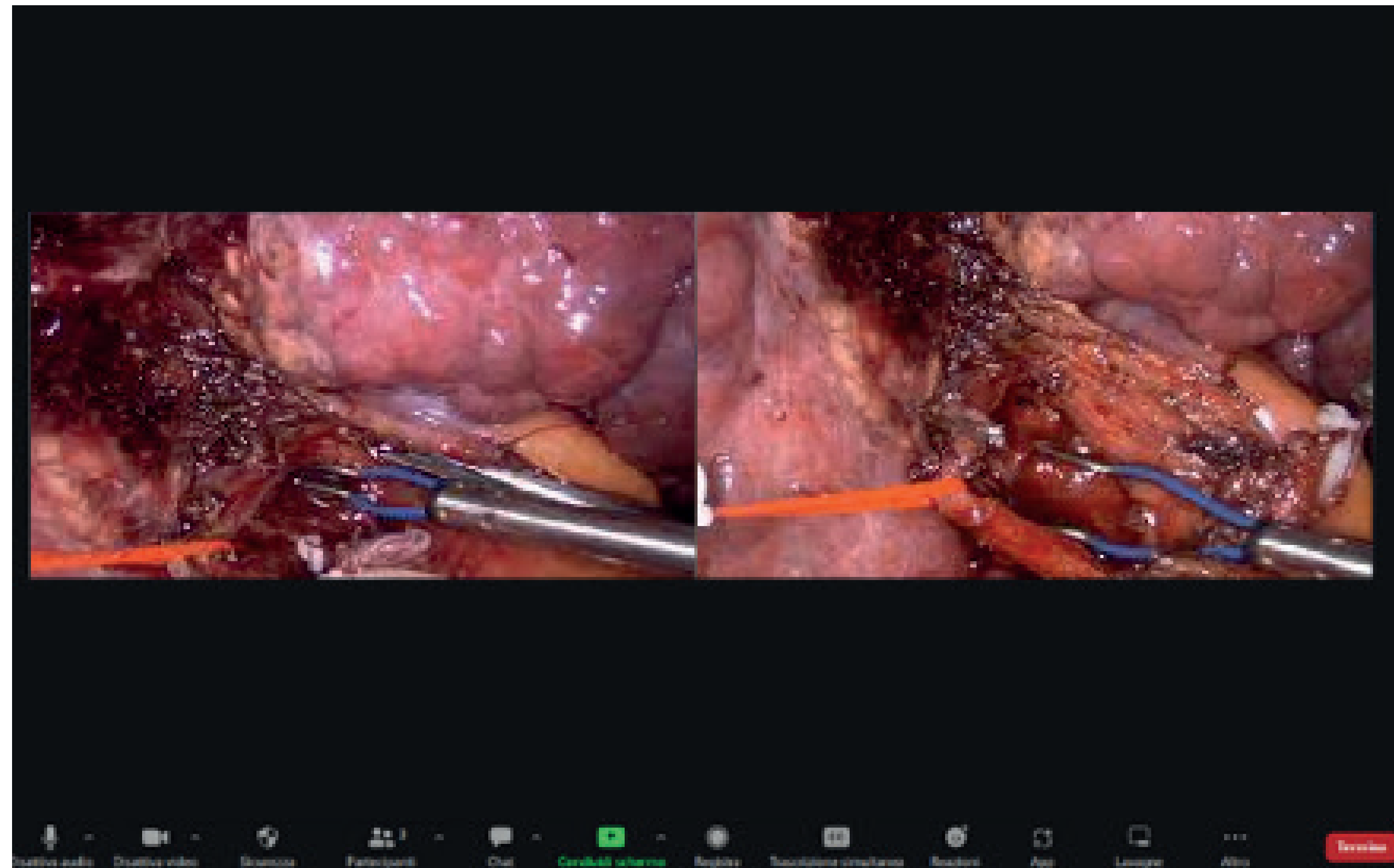
With FALKO it is possible to connect with up to 300 participants. The cooperator can interact with the operator by indicating on the real time video footage the areas of interest by moving the mouse or drawing predefined or freehand signs, while the participants watch the intervention on the PC/tablet/smartphone.

In one-to-one telecooperation, the cooperator can be equipped in turn with the FALKO visor to immerse himself in the operator's field of view and perceive the same details.



MEDICAL TRAINING IN ANATOMY

In human or veterinary anatomy, a remote doctor/student and participant session is possible. Doctor and student video sources are shared and visible on the viewer in side-by-side mode. The student will perform on an anatomical specimen the same actions as the doctor, 299 other students will be able to log on and watch the session.





www.tecnomeditalia.com