

# ULTRAVISION2

Solving surgical smoke problems

Smoke **Management**

Enhanced **Visualization**

Stable **Pneumoperitoneum**

Workflow **Optimization**



Ultravision2 Integrated Monopolar L-Hook

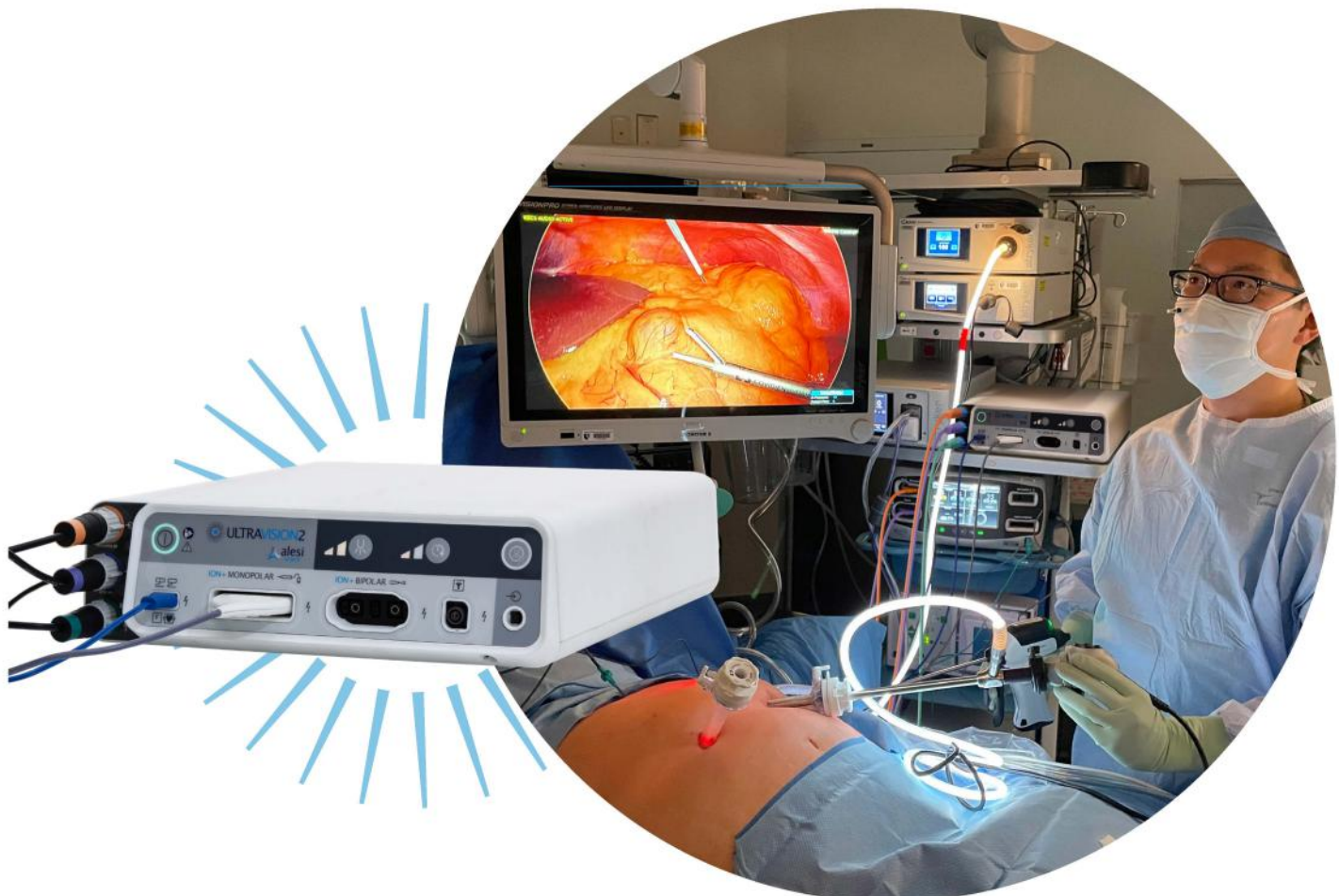
Ultravision2 Generator



# Revolutionising laparoscopic and robotic surgery.

Ultravision™ is the world's only advanced surgical smoke management technology that provides class-leading visualization and minimizes patient CO<sub>2</sub> exposure.

A revolutionary new system that improves the surgical experience by providing surgical smoke control at the point of origin. The Ultravision technology's unique mode of action delivers unparalleled bioaerosol control<sup>1</sup>, advanced visualization, stable pneumoperitoneum in standard and low pressure surgery, and minimizes workflow disruptions caused by surgical smoke.





# Features + key benefits



Controls bioaerosols at the site of origin

Minimizes accidental dispersal of aerosol within OR to subviral particle size

Provides advanced visualization

Maximizes performance of HD, 4K and 3D systems

Delivers stable pneumoperitoneum

Facilitates standard and low-pressure surgery

CO<sub>2</sub> sparing

Minimizes patient exposure to cold, dry, acidic gas

Reduces camera fogging and cleaning

Less smoke means fewer interruptions

Minimizes distractions

Silent in operation

Easy to use

Integrated instrument and trocar options, with no tubing required

Climate-friendly

Minimizes CO<sub>2</sub> use in laparoscopic and robotic surgery

Consumes less energy

15x less electricity required to run than a smoke evacuator<sup>2</sup>

Reduces biohazard waste

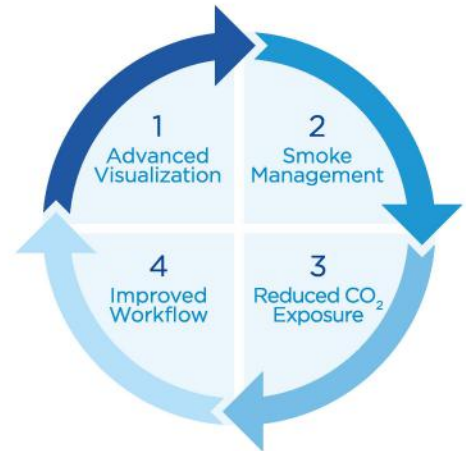
No disposable filters or tubing



## Ultravision performance

The Ultravision technology has undergone a variety of rigorous independent tests, achieving outstanding results.\*

*\*All data generated using the Ultravision system.*

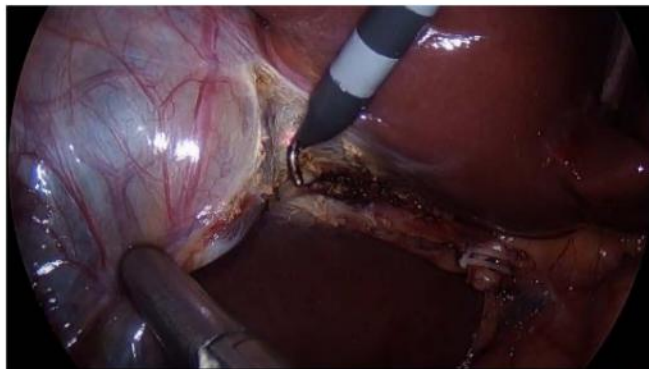


## Visualization performance

Ultravision consistently delivers advanced visualization, optimising procedural performance.



Venting through port



**Ultravision | Advanced visualization**



Advanced insufflator

Images courtesy Dr. Jin S. Yoo, Duke University Hospital, US.

In independent tests Ultravision delivered surgeon visualization scores of Excellent or Good in 80% of cases, compared to only 20% when venting.<sup>3</sup>

## The surgeon's view

When we're doing laparoscopic surgery visualization is just about everything.

We need to be able see very clearly what we are doing and anatomically what we are trying to accomplish.

**Dr. Richard Rosenfield, MD**

*Executive Medical Director, Pearl Women's Center, US*

Further studies available on [alesi-surgical.com](http://alesi-surgical.com)

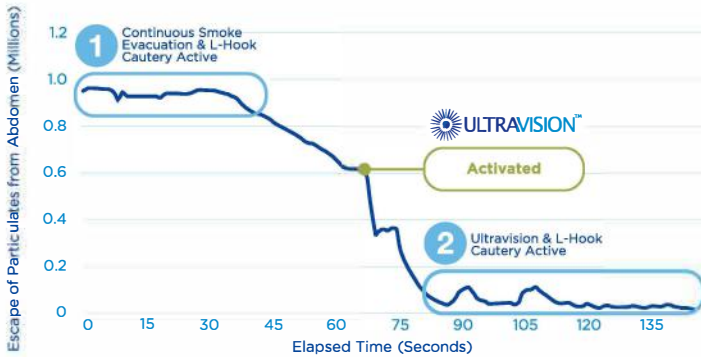
# Smoke management performance

Ultravision technology proven to be faster and more efficient than traditional smoke evacuation systems.

## Study

Measuring unintentional release of smoke into the operating room.

### Ultravision versus continuous smoke evacuation system.<sup>4</sup>



1) Continuous smoke evacuation experiences additional escape of smoke particulates through leaks in trocars and during instrument exchanges.

2) Ultravision suppresses smoke and bioaerosols at the point of creation which reduces the likelihood of release in the operating room.

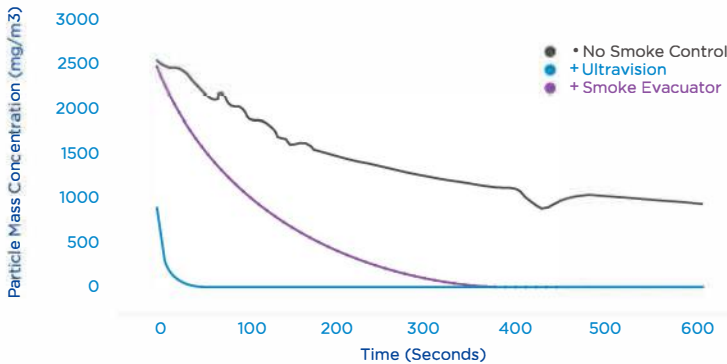
## Result

In simulated surgery, the use of Ultravision was 23-times more effective in reducing the amount of surgical smoke aerosol that escaped into the OR due to accidental leaks during the procedure.

## Study

Measuring speed & effectiveness.

### Ultravision versus filter-based smoke evacuation system.<sup>5</sup>



## Result

Ultravision minimizes surgical smoke, providing two levels of risk reduction:

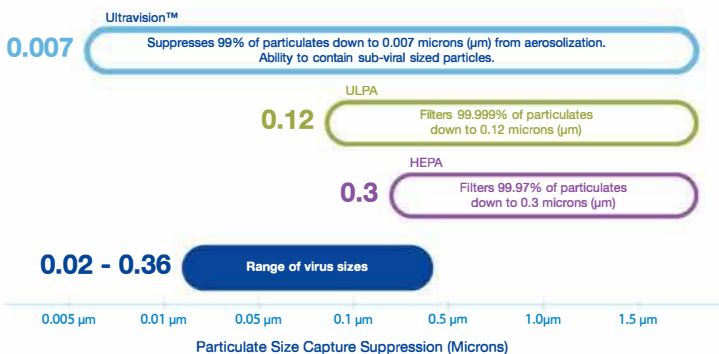
1. Particle suppression at the point of creation.
2. More rapid elimination of smoke compared to smoke evacuators.

After 60 seconds Ultravision removes 99.9% of particles from the atmosphere, versus 30.2% with a smoke evacuator.

## Study

Removal efficiency test for sub-viral particulates.

### Suppression of particulate by size.<sup>5</sup>



## Result

1. Suppresses 99% of particulates down to 0.007 microns (µm) from aerosolization.
2. The only technology verified to be effective at sub-viral particle sizes.



# CO<sub>2</sub> management performance



Ultravision's unique system provides stable pneumoperitoneum in standard and low-pressure surgery, enables low-CO<sub>2</sub> surgery, and reduces CO<sub>2</sub> usage.

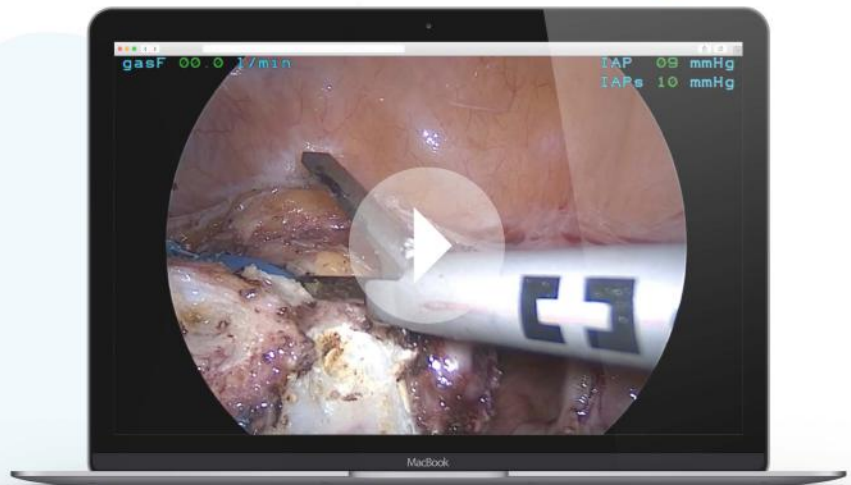
Watch full video at [www.alesi-surgical.com](http://www.alesi-surgical.com)

### Study

A test to explore the use of Ultravision in facilitating low pressure surgery in total laparoscopic hysterectomy (TLH) and myomectomy.<sup>6</sup>

### Result

Ultravision enhances low pressure laparoscopic hysterectomy and myomectomy. This was achieved by minimizing interruptions to surgery and exchange of CO<sub>2</sub>, providing stable pneumoperitoneum, a clear visual field throughout the procedure, and eliminating surgical smoke at the site of origin.



# Improving OR efficiency

Ultravision enables a more efficient OR through time savings and reduced CO<sub>2</sub> usage.

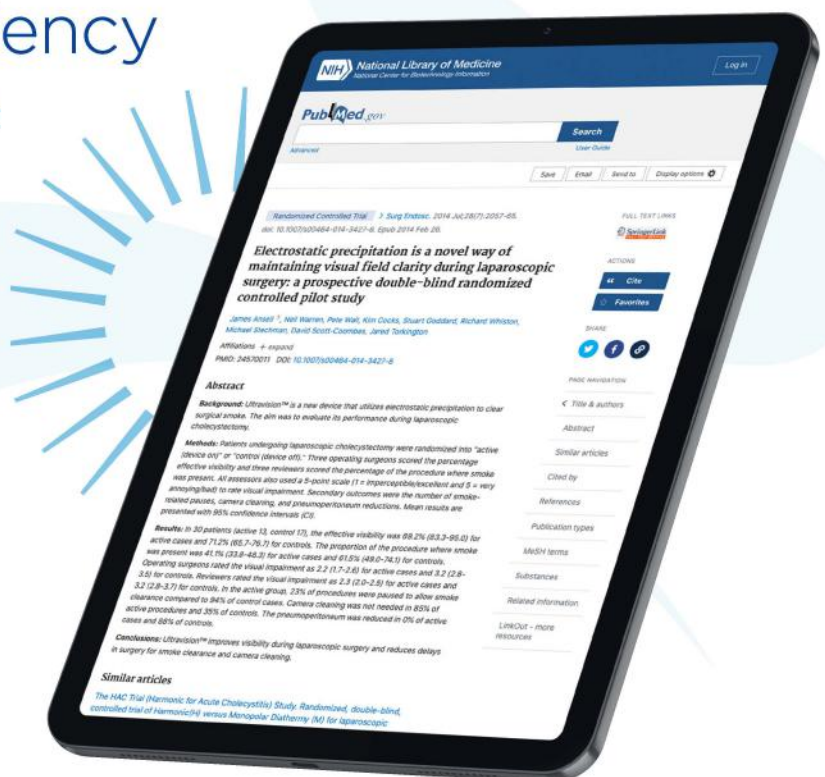
### Study

Evaluate Ultravision performance during laparoscopic cholecystectomy.<sup>3</sup>

### Result

1. 8 minutes per case saved.
2. Zero pauses in 77% of procedures.
3. No camera cleaning required in 95% of cases.

Visit [alesi-surgical.com](http://alesi-surgical.com) to read full study





Order Number    Description

DPD-006-001    Ultravision2 Generator



DPD-006-201    Ultravision2 Integrated Monopolar L-Hook (x5)



DAD-003-014    Ultravision 5mm Trocar (x6)



DAD-001-003    Ultravision Ionwand Pack (x10)



“ I have used Ultravision for the last two years in most of my laparoscopic cases. The advancements in Ultravision2 have vastly improved overall performance and ease of use. The new integrated monopolar instrument is a game-changer for the technology. ”

**Dr. Urs Pabst-Giger**, Senior Consultant Surgeon,  
University Hospital Münster, Germany



\*1 Gohler D et al, *Journal of Aerosol Science* (accepted)

\*2 Based on Ultravision2 maximum consumption of 62VA versus representative smoke evacuator of 1000VA.

\*3 Ansell et al, *Electrostatic precipitation is a novel way of maintaining visual field clarity during laparoscopic surgery: a prospective double-blind randomized controlled pilot study* *Surgical Endoscopy* (2014) 28: 2057-2065

\*4 Buggisch et al, *Experimental Model to Test Electrostatic Precipitation Technology in the COVID-19 Era: A Pilot Study* *Journal of American College of Surgeons*, (2020), 231 (6) 704-712

\*5 Alesi internal reports DVER-006-015 and DREP-002

\*6 Levine, D et al, *“Electrostatic Precipitation in Low Pressure Laparoscopic Hysterectomy and Myomectomy”* (2020), *JSLs*, Volume 24, Issue 4.





## Solving surgical smoke problems

Alesi Surgical Limited, Cardiff Medicentre, Cardiff, U.K.  
Tel: +44 (0) 29 2029 1022  
Email: [info@alesi-surgical.com](mailto:info@alesi-surgical.com)

**Visit [alesi-surgical.com](http://alesi-surgical.com)**

