



Video Autofluorescence Bronchoscopy SAFE-3000

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Breathe easily.

New precision
in modern pulmonology.

LCM/01/06/06/02

New insights.

The art of combining.

Thanks to PENTAX, pulmonologists are now able to work easily with a single system combining video endoscopy and video autofluorescence. The SAFE-3000 processor and the video autofluorescence bronchoscope, the first of their kind in the world, make this possible.

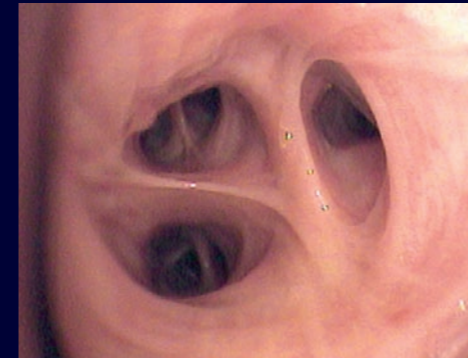
Previously, fiberoptic based autofluorescence endoscopy and video bronchoscopy could only be performed using two separate systems. The development of PENTAX SAFE-3000 was primarily in response to a repeatedly expressed desire from professionals for optimizing autofluorescence technology and enhancing modern bronchoscopic diagnostics and therapy.

Specialists who have already experienced this innovative new PENTAX system are delighted with the results and the range of possible applications, as well as the improved observation quality.

Superb, high-resolution video images in full screen format, thanks to the PENTAX Full-Digital System.

Nothing could be quicker or more convenient. Switch seamlessly from digital video to video autofluorescence mode with just one click.

New PENTAX video autofluorescence technology shows up finely differentiated structures beyond the visible area.



Two technologies

One innovative system

Twice the technology with one click.

The systematic merging of PENTAX fully digital video technology with cutting edge autofluorescence technology allows new imaging quality and observational capabilities. In video mode, the high-resolution video autofluorescence bronchoscope delivers brilliant, and optimally lit pictures of the area under examination, thanks to the Xenon light source.

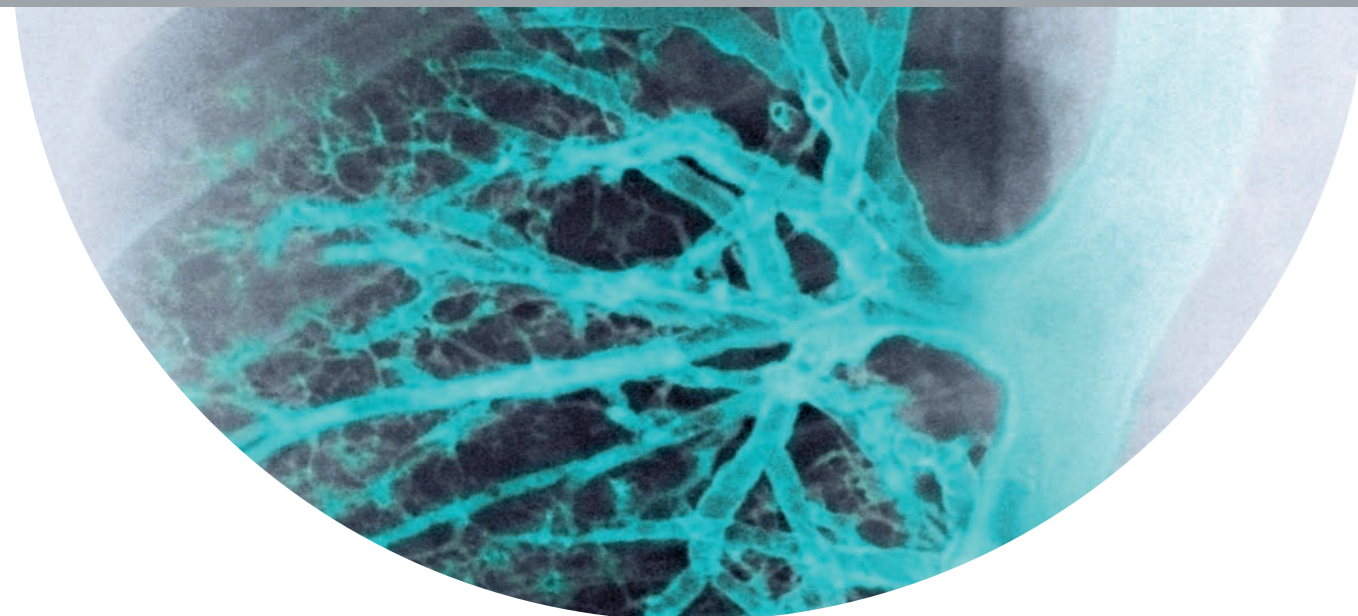
The system switches seamlessly between video and autofluorescence mode at the press of a button. Moreover, M.I.X. (Multiple Image Xposition) technology and the "twin mode" function provide additional unique possibilities for displaying images on the monitor.

Shedding new light on autofluorescence.

PENTAX autofluorescence technology uses a modern blue laser light source and, in conjunction with the PENTAX video autofluorescence processor, delivers convincingly detailed digital video quality images beyond the visible mucosal surfaces. In addition, the high-frequency shutter guarantees the picture always remains sharp and is not blurred by slow motion effects.

Quick and easy.

The SAFE-3000 system's "quick-start" function boots extremely quickly, allowing more time for observation. Its especially easy and intuitional handling makes applications more comfortable and efficient. The flexibility of the SAFE-3000 video processor is further enhanced with compatibility with all K Series Video Bronchoscopes and GI Endoscopes.

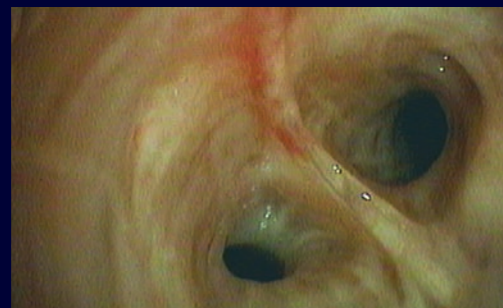




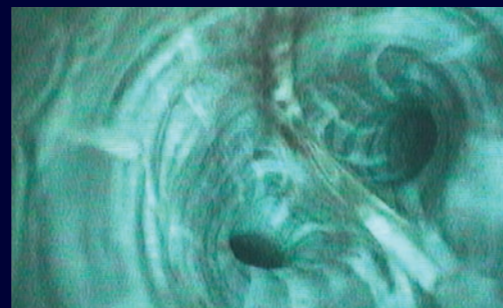
New Practice.

More post-procedure care.

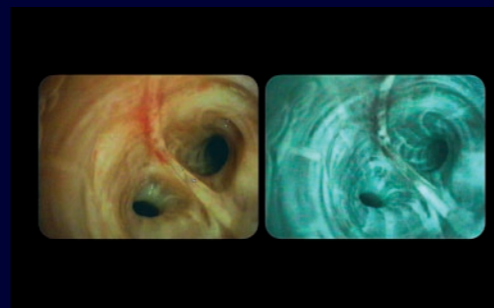
One particularly attractive characteristic of the PENTAX video autofluorescence system is that it can be used for both pre- and post-operative purposes, most notably after a curative resection. Conspicuous changes in tissue can be located more quickly and accurately with video autofluorescence.



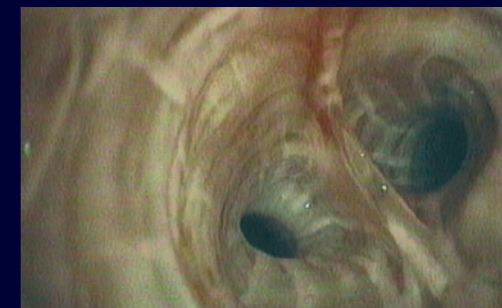
The digital video quality of PENTAX full vision technology facilitates an accurate initial assessment of conspicuous areas of tissue.



The video autofluorescence image enables the bronchologist to demarcate the areas of a tumour more precisely as part of a single procedure.



The "twin mode" makes it possible to display the endoscopic video and video autofluorescence image on the screen simultaneously.



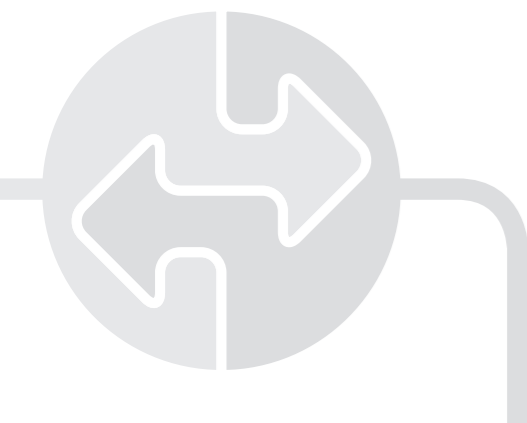
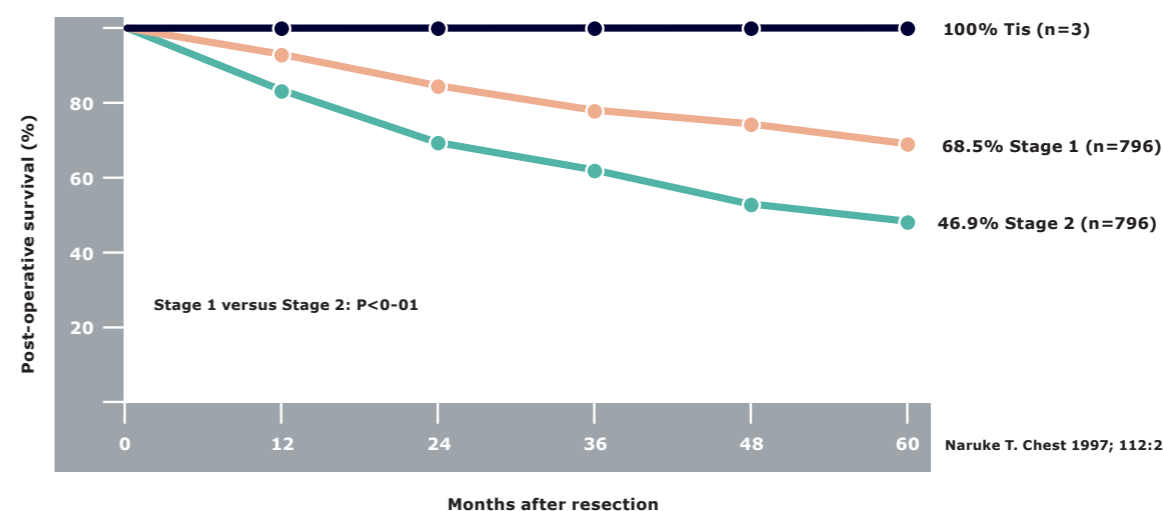
Unique M.I.X. (Multiple Image Xposition) technology is used to combine the endoscopic video and video autofluorescence images on the screen, providing an entirely new level of visualization.

Time is of the essence.

SAFE-3000 brings about a marked improvement in the diagnosis of bronchial illnesses. The critical features of the system are: much more accurate visualization, the demarcation of relevant tissue structures, and immediate comparison between the video and autofluorescence images. In conventional bronchoscopies, some potentially curable early carcinomas are sometimes unobserved. Yet, the earlier the bronchial carcinoma is found, the better the post-operative survival rate (Chart 1). Now, the combination of two endoscopy technologies in a single system allows the way to a new level of observation, enabling the possibility of detecting cancer in its early stages.

The PENTAX SAFE-3000 system is therefore the frontrunner in advanced pre- and post-diagnostics in the field of pulmonology.

Chart 1: Dependence of post-operative survival on the tumour stage in bronchial carcinoma



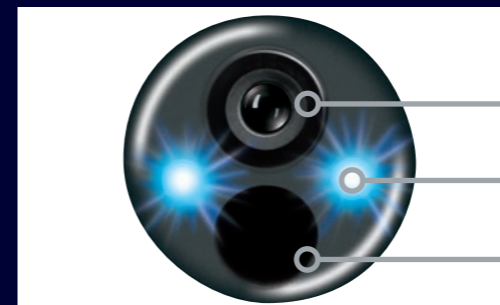
The system.

PENTAX SAFE-3000

An optimally calibrated system with a simple operating concept ensures a fast and efficient routine from the outset.



Optional system components: DVD recorder, video printer, video trolley.



- Lens
- Xenon / laser light guide
- Instrument channel (Ø=2.8 mm)

Video/video autofluorescence processor

Type	SAFE-3000 ¹
White light source	300 W xenon
Autofluorescence light source (stimulation light)	Class 2 Laser diode (wavelength 408 nm, laser power 20 to 40mW)
Emergency lamp	LED
Outputs	1x RGBS (BNC), 1x composite (BNC), 2x RGBS (BNC and D-sub 9 pin), 2x Y/C, 1x DV, 3x USB
Dimensions (W x H x D) • Weight	450 x 213 x 594 mm • 27 kg

¹ Autofluorescence image with dedicated AF scope only. All other K series video image only.

Video autofluorescence bronchoscope

Type	EB-1970AK ²
Angle of view (°)	120
Focus range (mm)	3-50
Tip deflection(°) up/down	180/130
Insertion tube diameter (mm)	6.3
Distal end diameter (mm)	6.2
Instrument channel diameter (mm)	2.8
Working length (mm)	600

² The EB-1970AK can only be operated in conjunction with the SAFE-3000 endoscopic video/video autofluorescence processor.

PENTAX Quality & Service Programme

- Exceptional quality and durability.
- Innovative detailed solutions for greater user convenience and reliability.
- Downward compatibility of PENTAX endoscopes ensures system is flexible and protects purchaser's investment.
- Industry leading service plans, consultancy, financing, technical service and training.