Press release

Ulm, 02/26/2025

Contrast Booster improves the image quality and diagnostic value of pulmonary CTs

In February 2025, ulrich medical is bringing a world first to the market: the Red Dot Design Award-winning Contrast Booster breathing control device. With this device, the Ulm-based medical technology manufacturer helps patients do the Müller maneuver, a special breathing technique for pulmonary CTs. An independent study* shows that during pulmonary embolism CTs (PECTs), it increases the contrast media density in the target vessels and reduces incorrect contrasting, thus elevating the diagnostic value of the imaging. In addition, the constant, reproducible breathing position ensures consistent and comparable CT imaging quality for follow-up scans.

The Müller maneuver, also referred to as “suction against resistance”, is used as a breathing technique in radiological diagnostics to better visualize pathological changes in the airway and lung tissue, for example in cases of suspected pulmonary embolism. However, incorrect contrasting frequently occurs during PECTs due to transient interruption of contrast (TIC). The flow of uncontrasted blood from the lower half of the body (*inferior vena cava*) means that the CT scan cannot be used to rule out pulmonary embolism. “A factor that can positively influence imaging but has so far been underestimated in this context is the Müller maneuver. This is exactly where the Contrast Booster comes in: we support the patient and make it easier for them to do the suction maneuver in a consistent and reproducible manner”, explains Sven Erdmann, Head of Technology and Regulation of the ulrich medical Executive Board. How well it works can be seen from the results of a prospective, single-center clinical study on 150 patients. A comparison of PECTs with and without the Contrast Booster found that incorrect contrasting was reduced from 12.3% to zero with the breathing control device. Increased contrast media density in the target vessels lowered the risk of unusable investigations as well as false-positive and false-negative findings: the rate of complete diagnostic images was 89.6%.

ulrich GmbH & Co. KG I Buchbrunnenweg 12 I 89081 Ulm | Germany
Phone: +49 (0)731 9654-0 I Fax: +49 (0)731 9654-199
info@ulrichmedical.com I www.ulrichmedical.com

Press release

Easy handling, proven clinical benefit

The Contrast Booster comprises a charging unit and a patient unit with a disposable mouthpiece, which is so light the patient can easily hold it in their mouth without using their hands. The device does not require training or any subsequent servicing. Mirrored LED displays on the charging unit and patient unit show both the patient and the MTRs responsible for the investigation, at the same time, whether the Müller maneuver suction is intense enough or needs to be adjusted. After being used, the patient unit is disinfected and the disposable mouthpiece is replaced. Thanks to its short charging time, the Contrast Booster is ready for use again very quickly. “It was important to us that the Contrast Booster is extremely user-friendly – and the Red Dot Design Award confirms how successful we were”, says Sven Erdmann and he adds “We are also proud of the results from the independent study, which prove its clinical benefit.” The Contrast Booster can, in principle, also be used for contrast-enhanced CTs of the pulmonary vessels and CTs of the coronary vessels and the thoracic aorta.

ulrich medical will exhibit its radiology portfolio, including the Contrast Booster, at the ECR (European Congress of Radiology) in Vienna. The team will be available for questions and discussion from February 26 until March 2, 2025 in hall X2, stand 220.

Further information can be found at https://www.ulrichmedical.com/en.

((Prefix & running text: 3,706 characters, including spaces))

*von Münchhausen, N., Janssen, S., Overhoff, D. et al. Influence of device-assisted suction against resistance (Mueller maneuver) on image quality in CTPA for suspected lung embolism. Eur Radiol (2023). https://doi.org/10.1007/s00330-023-09834-3
In this study, PECTs are referred to as CT pulmonary angiograms (CTPA).

About ulrich medical

ulrich GmbH & Co. KG I Buchbrunnenweg 12 I 89081 Ulm | Germany
Phone: +49 (0)731 9654-0 I Fax: +49 (0)731 9654-199
info@ulrichmedical.com I www.ulrichmedical.com

Press release

ulrich GmbH & Co. KG, ulrich medical for short, develops, produces, and distributes products for spinal surgery and contrast media injectors. Founded in 1912, the family business employs a total of more than 650 people at its site in Germany and its three subsidiaries in France, Spain, and the USA. While the products are used worldwide, the medical technology company focuses on “Made in Germany” quality, making it one of the few in the industry that develops and manufactures its products in Germany.
ulrich medical increased its revenue again in 2024 – for the 15th year in a row – further underscoring its position as a reliable partner in the medical technology industry. The F.A.Z. Institute named ulrich medical one of the “Innovation Leaders of Germany” for the sixth time in a row in 2024.

https://www.linkedin.com/company/ulrich-medical/
https://www.youtube.com/user/ulrichmedical

Image material:

(Note, screen resolution only. Request print resolution at ulrichmedical@pr-hoch-drei.de.)



Image 1: The Contrast Booster comprises a charging unit, the patient unit and a disposable mouthpiece.

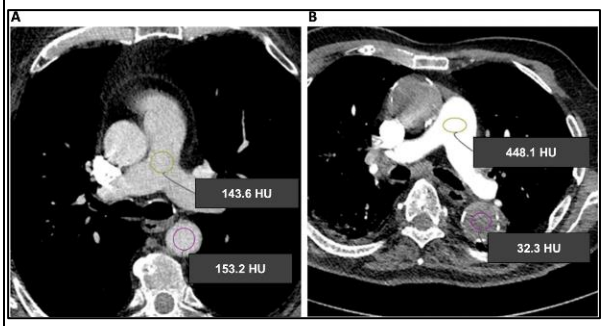


Image 2: Blood vessel contrast: left – without Contrast Booster, right – with Contrast Booster.

ulrich GmbH & Co. KG I Buchbrunnenweg 12 I 89081 Ulm | Germany
Phone: +49 (0)731 9654-0 I Fax: +49 (0)731 9654-199
info@ulrichmedical.com I www.ulrichmedical.com

Press release



Image 3: After being used, the patient unit is disinfected and the disposable mouthpiece is replaced. Thanks to its short charging time, the Contrast Booster is ready for use again very quickly.



Image 4: Mirrored LED displays on the charging unit and patient unit show, at the same time, whether the Müller maneuver suction is intense enough.

Image credits: ulrich medical

If you have any queries, please contact:

ulrich medical

Buchbrunnenweg 12

89081 Ulm, Germany

Isabelle Korger

Phone: +49 (0)731 9654-103

Email: i.korger@ulrichmedical.com

Press contact:

PR hoch drei GmbH

Turnhallenweg 4

79183 Waldkirch, Germany

Ramona Riesterer

Phone: +49 (0)7681 4922511

Email: ulrichmedical@pr-hoch-drei.de