

## Press Release

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# PulmoVista 500 monitor offers more lung status information in adult and pediatric care

Esophageal and transpulmonary pressure curves serve as additional decision-making tools

- Display Paw, Pes, and Pga values<sup>1</sup> measured with the PressurePod directly on the PulmoVista 500 screen
- Facilitates bedside monitoring of ventilation settings in children with respiratory diseases

**Lübeck** – Until now, the PulmoVista 500 electrical impedance tomography (EIT) displayed live changes in the regional tidal volume distribution with up to 50 images/second directly at the patient's bedside. Now, the PulmoVista monitor also gives doctors information about the pressure ratios in the respiratory system and other derived parameters. This is made possible by the new Dräger PressurePod, which transmits the Paw, Pes, and Pga values measured for the patient to the EIT device.

The transpulmonary pressure calculated from the difference between Paw and Pes provides important additional information about the elastic behavior of the lung and the chest wall. This allows the user to calculate the mechanical load on the lung tissue and identify indications for the collapse of lung regions in ventilated patients. The information on the pressure ratios in the pleural cavity, which is calculated via the esophageal pressure, can also be used to better assess the degree of spontaneous breathing effort in ventilated patients or calculate an appropriate weaning time. According to study findings, the measured esophageal pressure contributes to an improved understanding of the pathophysiology of acute respiratory failure, with the aim of establishing a successful treatment.<sup>2</sup>

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<sup>1</sup> Paw = Airway pressure; Pes = Esophageal pressure; Pga = Gastric pressure

<sup>2</sup> Mauri T. et al.: Esophageal and transpulmonary pressure in the clinical setting: meaning, usefulness and perspectives; Intensive Care Med (2016) 42:1360-1373 DOI 10.1007/s00134-016-4400x

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### Pediatric belt as an extension

Monitoring ventilation in pediatric patients can be particularly useful because clinical observations have shown that the lung is less flexible in children compared to adults and is more susceptible to collapse.<sup>3</sup> According to the Translational EIT developmeNt stuDY Group, EIT can provide a positive contribution to children with lung diseases: For instance, irregularities in the lung function can be identified and more information can be accessed to improve the ventilation parameter settings.<sup>4</sup> A comparative study came to the conclusion that therapeutic decisions are easier to make thanks to EIT, and that this supports lung-protective ventilation.<sup>5</sup> The new measuring belt for the PulmoVista 500 for pediatric patients is available in four sizes, starting from a chest circumference of 36 cm (from about four weeks of age or a body weight of around 4 kg) up to 72 cm for a patient who is approximately 11 years old.

The PressurePod and PulmoVista 500 are manufactured by Drägerwerk AG & Co. KGaA.

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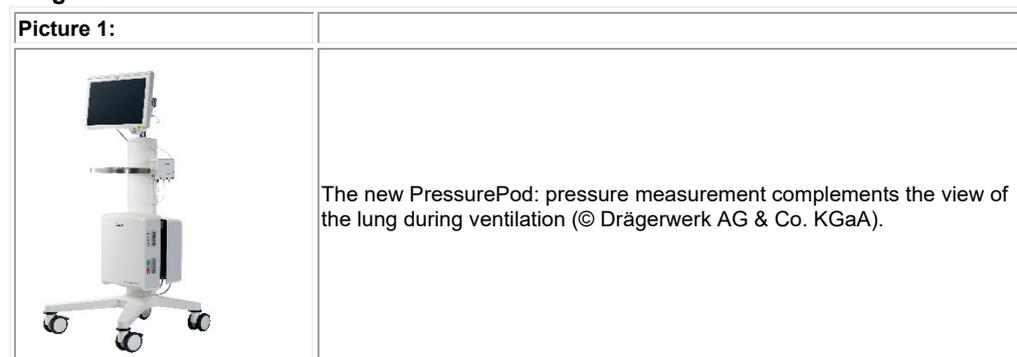
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### Images:



<sup>3</sup> Mazzoni M B. et al.: Electrical impedance tomography in children with community acquired pneumonia: preliminary data; Respiratory Medicine 130 (2017) 9-12, p. 11

<sup>4</sup> Frerichs I, et al.: Chest electrical impedance tomography examination, data analysis, terminology, clinical use and recommendations: consensus statement of the Translational EIT developmeNt stuDY group Thorax 2017;72:83-93. Doi:10.1136/thoraxjnl-206-208357; p.89ff.

<sup>5</sup> Davies P. et al.: Clinical Scenarios of the Application of Electrical Impedance Tomography in Pediatric Intensive Care; Scientific Reports (2019) 9:5362.; <https://doi.org/101038/x41589-019-41774-1>, p.6

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<p><b>Picture 2:</b></p> 	<p>The new Dräger PressurePod (© Drägerwerk AG &amp; Co. KGaA).</p>
<p><b>Picture 3:</b></p> 	<p>PulmoVista 500 – Electrode belt for pediatric patients (© Drägerwerk AG &amp; Co. KGaA).</p>

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Note: The product mentioned in this press release will not initially be available in all countries. For more information on availability in countries other than Germany, please visit the website for your country or contact the local Dräger Sales organization.

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