



bellavista 1000 / 1000e

Lung Recruitment Tool

Expand your lung protection strategy

Prevention of ventilator induced lung injury (VILI) is one of the most important issues in patient management. Understanding lung recruitability and the setting of optimal PEEP is not easy unless you have a tool that provides this information. bellavista's **Lung Recruitment Tool (LRT)** provides the clinician all relevant information in a reliable, reproducible and easy way.^{1,2}

The bellavista Lung Recruitment Tool is an **automatic maneuver** that determines recruitability and subsequent recruitment in two steps. The first step is to perform an assessment maneuver, to verify **if the patient lung is recruitable**.^{3,4} After the assessment maneuver there are two independent cursors where you can estimate e.g. the optimal PEEP or the recruitability of the patients lung.⁵ In a second step you can recruit the lung with setting a pause (T_{Recruit}) and measure the recruitable volume.^{5,6,7,8,9}



ASSESSMENT

Screen after an assessment maneuver. The curve can be analysed with two cursors, to find inflection points or the lung closing pressure.^{3,6} A volume difference curve can be used as an additional guidance. Seven monitoring parameters are displayed to *support your decisions* to set up a lung protective strategy.



RECRUITMENT

Screen after a recruitment maneuver. The recruited volume after P_{Max} is shown here as a blue graph and also as a monitoring parameter. A recruitment time (T_{recruit}) of 10 seconds and a PEEP after the maneuver of 15 mbar were adjusted here.



COMPARISON

With the use of the comparison tab you will be able to compare the course of the assessments and recruitment you made. Up to **50 screenshots** can be made and be exported via USB.



BELLAVISTA LUNG RECRUITMENT TOOL IS AVAILABLE AS AN OPTION IN BELLAVISTA 1000 AND INTEGRATED IN BELLAVISTA 1000 E.

"bellavistas Lung Recruitment Tool provides the clinician all relevant information in a reliable, reproducible and easy way."






REFERENCES

1. Lapinsky SE, Aubin M, Mehta S, Boiteau P, Slutsky AS. Safety and efficacy of a sustained inflation for alveolar recruitment in adults with respiratory failure. *Intensive Care Med.* 1999;25(11):1297-1301. doi:10.1007/s001340051061.
2. Koefoed-Nielsen J, Nielsen ND, Kjaergaard AJ, Larsson A. Alveolar recruitment can be predicted from airway pressure-lung volume loops: an experimental study in a porcine acute lung injury model. *Crit. Care* 2008;12(1):R7. doi:10.1186/cc6771.
3. Koefoed-Nielsen J, Andersen G, Barklin A, et al. Maximal hysteresis: A new method to set positive end-expiratory pressure in acute lung injury? *Acta Anaesthesiol. Scand.* 2008;52(5):641-649. doi:10.1111/j.1399-6576.2008.01600.x.
4. Lu Q, Constantin J-M, Nieszkowska A, Elman M, Vieira S, Rouby J-J. Measurement of alveolar derecruitment in patients with acute lung injury: computerized tomography versus pressure-volume curve. *Crit. Care* 2006;10(3):R95. doi:10.1186/cc4956.
5. Grasso S, Mascia L, Del Turco M, et al. Effects of recruiting maneuvers in patients with acute respiratory distress syndrome ventilated with protective ventilatory strategy. *Anesthesiology* 2002;96(4):795-802. doi:10.1097/01.sa.0000087669.65158.16.
6. Hickling KG. The pressure-volume curve is greatly modified by recruitment: A mathematical model of ards lungs. *Am. J. Respir. Crit. Care Med.* 1998;158(1):194-202. doi:10.1164/ajrccm.158.1.9708049
7. Maggiore SM, Brochard L. Pressure-volume curve: methods and meaning. *Minerva Anesthesiol.* 2001;67(4):228-237. <http://www.ncbi.nlm.nih.gov/pubmed/11376515>. *Intensive Care Med.* 2007;33(7):1204-1211. doi:10.1007/s00134-007-0629-8.
8. Gattinoni L, Pesenti A, Avalli L, Rossi F, Bombino M. Pressure-Volume Curve of Total Respiratory System in Acute Respiratory Failure: Computed Tomographic Scan Study. *Am. Rev. Respir. Dis.* 1987;136(3):730-736. doi:10.1164/ajrccm/136.3.730.
9. Blanch L, López-Aguilar J, Villagrà A. Bedside evaluation of pressure-volume curves in patients with acute respiratory distress syndrome. *Curr. Opin. Crit. Care* 2007;13(3):332-337. doi:10.1097/MCC.0b013e32811e14f2

GLOBAL HEADQUARTERS

Vyairé Medical
26125 N. Riverwoods Blvd.
Mettawa, IL 60045
USA

 imtmedical ag
Gewerbstrasse 8
9470 Buchs,
Switzerland

CE 0124

vyaire.com

Please note, all products, services, or features of products and services may not be available in your local area. Please check with your local Vyairé representative. For global distribution.

© 2019 Vyairé Medical, Inc. or one of its affiliates. All rights reserved. Vyairé and the Vyairé Medical logo are trademarks or registered trademarks of Vyairé Medical, Inc. or one of its affiliates. VYR-GBL-1900139