

# 6<sup>th</sup> APELSO 2023 &


## The 55<sup>th</sup> Annual Scientific Meeting of the Korean Society for Thoracic & Cardiovascular Surgery

*"Post Pandemic, New Standards"*

November 2(Thu) ~ 4(Sat), 2023 | Grand Intercontinental Seoul Parnas, Seoul, Korea



### Curriculum Vitae

<b>Name</b>	<b>First Name</b>	Ryoungeun	<b>Last Name</b>	Ko
<b>Country</b>	Republic of Korea			
<b>Affiliation</b>	Department of Critical Care Medicine, Samsung Medical Center			
<b>E-mail</b>	koryoungeun@gmail.com			

#### Educational Background

2003 - 2006	Bachelor, College of Pharmacy, Woosuk University
2007 - 2011	Master, School of Medicine, Jeonbuk National University (Doctor of Medicine)
2013 - 2019	Ph. Doctor, School of Medicine, Jeonbuk National University

#### Professional Career

2011 - 2012	Internship, Jeonbuk National University
2013 - 2016	Residency, Internal Medicine, Jeonbuk National University
2017.03 - 2018.02	Clinical Fellowship for general pulmonology, Division of Pulmonary and Critical Care Medicine, Department of Medicine, Samsung Medical Center
2018.03 – 2022.02	Clinical Fellowship for Critical Care Medicine, Department of Critical Care Medicine, Samsung Medical Center
2022.03 –	Clinical instructor, Department of Critical Care Medicine, Samsung Medical Center

#### Research Field

- 1) Acute respiratory distress syndrome
- 2) Weaning from mechanical ventilation
- 3) Sepsis immune-metabolism
- 4) Extracorporeal membrane oxygenation

#### Papers, Books, etc. presented or published by your name

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### (1) Original papers in SCI-journals as the first author and corresponding author

Ahn HY, Jung Y, Kim TW, Cho YH, Yang JH, Chung CR, Min MS, **Ko RE**. Association of Argatroban Dose With Coagulation Laboratory Test in Patients on Extracorporeal Membrane Oxygenation: Activated Clotting Time vs Activated Partial Thromboplastin Time. *Ann Pharmacother.* 2023 Jul 3;10600280231183510. doi: 10.1177/10600280231183510.

Lee YI, **Ko RE**, Na SJ, Ryu JA, Cho YH, Yang JH, Chung CR, Suh GY. Prognostic significance of respiratory quotient in patients undergoing extracorporeal cardiopulmonary resuscitation in Korea. *Acute Crit Care.* 2023 May;38(2):190-199. doi: 10.4266/acc.2022.01438.

**Ko RE**, Kang D, Cho J, Na SJ, Chung CR, Lim SY, Lee YJ, Park S, Oh DK, Lee SY, Park MH, Lee H, Lim CM, Suh GY; Korean Sepsis Alliance (KSA) investigators. Influence of gender on age-associated in-hospital mortality in patients with sepsis and septic shock: a prospective nationwide multicenter cohort study. *Crit Care.* 2023 Jun 11;27(1):229. doi: 10.1186/s13054-023-04515-5.

Kim TW, **Ko RE**, Na SJ, Chung CR, Choi KH, Park CM, Yang JH. Associations of albumin and nutritional index factors with delirium in patients admitted to the cardiac intensive care unit. *Front Cardiovasc Med.* 2023 Mar 3;10:1100160. doi: 10.3389/fcvm.2023.1100160.

**Ko RE**, Cho J, Shin MK, Oh SW, Seong Y, Jeon J, Jeon K, Paik S, Lim JS, Shin SJ, Ahn JB, Park JH, You SC, Kim HS. Machine Learning-Based Mortality Prediction Model for Critically Ill Cancer Patients Admitted to the Intensive Care Unit (CanICU). *Cancers (Basel).* 2023 Jan 17;15(3):569. doi: 10.3390/cancers15030569.

Yu B, **Ko RE**, Yoo K, Gil E, Choi KJ, Park CM. Non-occlusive mesenteric ischemia in critically ill patients. *PLoS One.* 2022 Dec 19;17(12):e0279196. doi: 10.1371/journal.pone.0279196.

Jung H, Lee J, Ahn HY, Yang JH, Suh GY, **Ko RE**, Chung CR. Safety and feasibility of continuous ketamine infusion for analgesedation in medical and cardiac ICU patients who received mechanical ventilation support: A retrospective cohort study. *PLoS One.* 2022 Sep 22;17(9):e0274865. doi: 10.1371/journal.pone.0274865.

**Ko RE**, Kim S, Lee J, Park S, Bae D, Choi KH, Park TK, Chung CR, Yang JH. Clinical phenotypes of delirium in patients admitted to the cardiac intensive care unit. *PLoS One.* 2022 Sep 2;17(9):e0273965. doi: 10.1371/journal.pone.0273965.

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Kim SE, **Ko RE**, Na SJ, Chung CR, Choi KH, Kim D, Park TK, Lee JM, Song YB, Choi JO, Hahn JY, Choi SH, Gwon HC, Yang JH. *External validation and comparison of two delirium prediction models in patients admitted to the cardiac intensive care unit. Front Cardiovasc Med. 2022 Aug 3;9:947149.*

**Ko RE**, Kwon O, Cho KJ, Lee YJ, Kwon JM, Park J, Kim JS, Kim AJ, Jo YH, Lee Y, Jeon K. *Quick Sequential Organ Failure Assessment Score and the Modified Early Warning Score for Predicting Clinical Deterioration in General Ward Patients Regardless of Suspected Infection. J Korean Med Sci. 2022 Apr 25;37(16):e122.*

**Ko RE**, Oh DK, Choi SM, Park S, Park JE, Lee JG, Kim YT, Jeon K. *Lung transplantation for severe COVID-19-related ARDS. Ther Adv Respir Dis. 2022 Jan-Dec;16:17534666221081035.*

**Ko RE**, Kang D, Park H, Cho J, Suh GY, Chung CR. *Association between the presence of delirium during intensive care unit admission and cognitive impairment or psychiatric problems: the Korean ICU National Data Study. J Intensive Care. 2022 Feb 14;10(1):7.*

Jung H, **Ko RE**, Ko MG, Jeon K. *Trends of in-hospital cardiac arrests in a single tertiary hospital with a mature rapid response system. PLoS One. 2022 Jan 13;17(1):e0262541.*

Hur S, **Ko RE**, Yoo J, Ha J, Cha WC, Chung CR. *A Machine Learning-Based Algorithm for the Prediction of Intensive Care Unit Delirium (PRIDE): Retrospective Study. JMIR Med Inform. 2021 Jul 26;9(7):e23401.*

Park C, **Ko RE**, Jung J, Na SJ, Jeon K. *Prediction of successful de-cannulation of tracheostomised patients in medical intensive care units. Respir Res. 2021 Apr 28;22(1):131.*

Gil HI, **Ko RE**, Lee K, Um SW, Kim H, Jeong BH. *Effects of Antithrombotic Treatment on Bleeding Complications of EBUS-TBNA. Medicina (Kaunas). 2021 Feb 5;57(2):142.*

**Ko RE**, Jang GY, Chung CR, Lee JY, Oh TI, Suh GY, Kim Y, Woo EJ. *Noninvasive Beat-to-Beat Stroke Volume Measurements to Determine Preload Responsiveness during Mini-Fluid Challenge in a Swine Model: A Preliminary Study. Shock. 2021 Jan 28.*

**Ko RE**, Chung CR, Yang JH, Jeon K, Suh GY, Oh SY, Choi SJ, Yang JH, Sung K, Cho YH. *Use of extracorporeal membrane oxygenation in postpartum patients with refractory shock or respiratory failure. Sci Rep. 2021 Jan 13;11(1):887.*

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**Ko RE**, Moon SM, Kang D, Cho J, Chung CR, Lee Y, Hong YS, Lee SH, Lee JH, Suh GY. *Translation and validation of the Korean version of the clinical frailty scale in older patients. BMC Geriatr. 2021 Jan 13;21(1):47.*

**Ko RE**, Huh K, Kim DH, Na SJ, Chung CR, Cho YH, Jeon K, Suh GY, Yang JH. *Nosocomial infections in in-hospital cardiac arrest patients who undergo extracorporeal cardiopulmonary resuscitation. PLoS One. 2020 Dec 23;15(12):e0243838.*

**Ko RE**, Park C, Nam J, Ko MG, Na SJ, Ahn JH, Carriere KC, Jeon K. *Effect of post-extubation high-flow nasal cannula on reintubation in elderly patients: a retrospective propensity score-matched cohort study. Ther Adv Respir Dis. 2020 Jan-Dec;14:1753466620968497.*

Sim JK, **Ko RE**, Na SJ, Suh GY, Jeon K. *Intensive care unit-acquired hyponatremia in critically ill medical patients. J Transl Med. 2020 Jul 2;18(1):268. doi: 10.1186/s12967-020-02443-4.*

Park YH, **Ko RE**, Kang D, Park J, Jeon K, Yang JH, Park CM, Cho J, Park YS, Park H, Cho J, Guallar E, Suh GY, Chung CR. *Relationship between Use of Rehabilitation Resources and ICU Readmission and ER Visits in ICU Survivors: the Korean ICU National Data Study 2008-2015. J Korean Med Sci. 2020 Apr 20;35(15):e101.*

**Ko RE**, Ryu JA, Cho YH, Sung K, Jeon K, Suh GY, Park TK, Lee JM, Song YB, Hahn JY, Choi JH, Choi SH, Gwon HC, Carriere KC, Ahn J, Yang JH. *The differential neurologic prognosis of low-flow time according to the initial rhythm in patients who undergo extracorporeal cardiopulmonary resuscitation. Resuscitation. 2020 Mar 1;148:121-127.*

**Ko RE**, Lee JG, Kim SY, Kim YT, Choi SM, Kim DH, Cho WH, Park SI, Jo KW, Kim HK, Paik HC, Jeon K; Korean Organ Transplantation Registry Study Group. *Extracorporeal membrane oxygenation as a bridge to lung transplantation: analysis of Korean organ transplantation registry (KOTRY) data. Respir Res. 2020 Jan 13;21(1):20*

**Ko RE**, Park SJ, Kim HS. *Relationship between the time required for transfer and outcomes in patients with appendicitis: Experience at a tertiary military hospital in South Korea. Medicine (Baltimore). 2019 Oct;98(43):e17715.*

**Ko RE**, Na SJ, Huh K, Suh GY, Jeon K. *Association of time-to-treatment with outcomes of Pneumocystis pneumonia with respiratory failure in HIV-negative patients. Respir Res. 2019 Sep 26;20(1):213.*

**Ko RE**, Lee H, Jung JH, Lee HO, Sohn I, Yoo H, Ko JY, Suh GY, Chung CR. *Simple functional assessment at hospital discharge can predict long-term outcomes of ICU survivors. PLoS One. 2019 Apr 4;14(4):e0214602.*



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**Ko RE**, Jeong BH, Chon HR, Huh HJ, Han J, Lee H, Lee K, Kim H, Kwon OJ, Um SW. *Clinical usefulness of routine AFB culture and MTB PCR of EBUS-TBNA needle rinse fluid. Respiriology. 2019 Jul;24(7):667-674.*

Kim HS, **Ko RE**, Ji M, Lee JH, Lee CS, Lee H. *The usefulness of hand washing during field training to prevent acute respiratory illness in a military training facility. Medicine (Baltimore). 2018 Jul;97(30):e11594.*

**Ko RE**, Moon SM, Ahn S, Jhun BW, Jeon K, Kwon OJ, Huh HJ, Ki CS, Lee NY, Koh WJ. *Changing Epidemiology of Nontuberculous Mycobacterial Lung Diseases in a Tertiary Referral Hospital in Korea between 2001 and 2015. J Korean Med Sci. 2018 Feb 19;33(8):e65.*

### (2) Papers in SCI-journals as coauthor

Sohn YM, **Ko RE**, Park HJ, Choo E, Jung M, Lee S, Jeon K. *Clinical pharmacokinetic study of tacrolimus in continuous intravenous administration for lung transplantation. J Thorac Dis. 2023 Jun 30;15(6):3431-3436. doi: 10.21037/jtd-22-1760.*

Heo S, Jeon K, Park B, **Ko RE**, Kim T, Hwang SY, Yoon H, Shin TG, Cha WC, Lee SU. *Clinical factors predicting return emergency department visits in chemotherapy-induced febrile neutropenia patients. Am J Emerg Med. 2023 Feb 14;67:90-96. doi: 10.1016/j.ajem.2023.02.012.*

Kim JH, Kim YK, Oh DK, Jeon K, **Ko RE**, Suh GY, Lim SY, Lee YJ, Cho YJ, Park MH, Hong SB, Lim CM, Park S; Korean Sepsis Alliance (KSA) investigators. *HYPOTENSION AT THE TIME OF SEPSIS RECOGNITION IS NOT ASSOCIATED WITH INCREASED MORTALITY IN SEPSIS PATIENTS WITH NORMAL LACTATE LEVELS. Shock. 2023 Mar 1;59(3):360-367. doi: 10.1097/SHK.0000000000002067.*

Na SJ, Yang JH, **Ko RE**, Chung CR, Cho YH, Choi KH, Kim D, Park TK, Lee JM, Song YB, Choi JO, Hahn JY, Choi SH, Gwon HC. *Dopamine versus norepinephrine as the first-line vasopressor in the treatment of cardiogenic shock. PLoS One. 2022 Nov 3;17(11):e0277087.*

Jang GY, Chung CR, **Ko RE**, Lee JY, Oh TI, Suh GY, Kim Y, Woo EJ. *Real-Time Measurements of Relative Tidal Volume and Stroke Volume Using Electrical Impedance Tomography with Spatial Filters: A Feasibility Study in a Swine Model Under Normal and Reduced Ventilation. Ann Biomed Eng. 2022 Aug 12. doi: 10.1007/s10439-022-03040-w.*

Na SJ, **Ko RE**, Nam J, Ko MG, Jeon K. *Factors associated with prolonged weaning from mechanical ventilation in*

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medical patients. *Ther Adv Respir Dis.* 2022 Jan-Dec;16:17534666221117005. doi: 10.1177/17534666221117005.

Na SJ, **Ko RE**, Nam J, Ko MG, Jeon K. *Comparison between pressure support ventilation and T-piece in spontaneous breathing trials.* *Respir Res.* 2022 Feb 7;23(1):22.

Na SJ, Oh DK, Park S, Lee YJ, Hong SB, Park MH, **Ko RE**, Lim CM, Jeon K; Korean Sepsis Alliance (KSA) Study Group. *Clinical Characteristics and Outcomes of Neutropenic Sepsis: A Multicenter Cohort Study.* *Shock.* 2022 May 1;57(5):659-665.

Lee YI, **Ko RE**, Yang JH, Cho YH, Ahn J, Ryu JA. *Optimal Mean Arterial Pressure for Favorable Neurological Outcomes in Survivors after Extracorporeal Cardiopulmonary Resuscitation.* *J Clin Med.* 2022 Jan 6;11(2):290.

Im Y, Kang D, **Ko RE**, Lee YJ, Lim SY, Park S, Na SJ, Chung CR, Park MH, Oh DK, Lim CM, Suh GY; Korean Sepsis Alliance (KSA) investigators. *Time-to-antibiotics and clinical outcomes in patients with sepsis and septic shock: a prospective nationwide multicenter cohort study.* *Crit Care.* 2022 Jan 13;26(1):19.

Lee YI, **Ko RE**, Ahn J, Carriere KC, Ryu JA. *Association between Neurologic Outcomes and Changes of Muscle Mass Measured by Brain Computed Tomography in Neurocritically Ill Patients.* *J Clin Med.* 2021 Dec 24;11(1):90.

Na SJ, **Ko RE**, Ko MG, Jeon K. *Automated alert and activation of medical emergency team using early warning score.* *J Intensive Care.* 2021 Dec 7;9(1):73.

Im Y, Yoo H, **Ko RE**, Lee JY, Park J, Jeon K. *Exosomal CD63 in critically ill patients with sepsis.* *Sci Rep.* 2021 Oct 13;11(1):20300.

Lee JH, **Ko RE**, Park TK, Cho YH, Suh GY, Yang JH. *Association between a Multidisciplinary Team Approach and Clinical Outcomes in Patients Undergoing Extracorporeal Cardiopulmonary Resuscitation in the Emergency Department.* *Korean Circ J.* 2021 Nov;51(11):908-918.

Lee YJ, Cho KJ, Kwon O, Park H, Lee Y, Kwon JM, Park J, Kim JS, Lee MJ, Kim AJ, **Ko RE**, Jeon K, Jo YH. *A multicentre validation study of the deep learning-based early warning score for predicting in-hospital cardiac arrest in patients admitted to general wards.* *Resuscitation.* 2021 Apr 22;163:78-85.

Park C, Ko UW, **Ko RE**, Na SJ, Yang JH, Jeon K, Suh GY, Sung K, Cho YH. *Outcomes of extracorporeal membrane oxygenation in adults with active hematologic and nonhematologic malignancy.* *Artif Organs.* 2021 Aug;45(8):E236-

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E246.

Ko H, Chung H, Kang WS, Park C, Kim DW, Kim SE, Chung CR, **Ko RE**, Lee H, Seo JH, Choi TY, Jaimes R, Kim KW, Lee J. *An Artificial Intelligence Model to Predict the Mortality of COVID-19 Patients at Hospital Admission Time Using Routine Blood Samples: Development and Validation of an Ensemble Model. J Med Internet Res. 2020 Dec 23;22(12):e25442.*

Lee YI, Kang MG, **Ko RE**, Park TK, Chung CR, Cho YH, Jeon K, Suh GY, Yang JH. *The Impact of Hypoxic Hepatitis on Clinical Outcomes after Extracorporeal Cardiopulmonary Resuscitation. J Clin Med. 2020 Sep 16;9(9):2994.*

Na SJ, **Ko RE**, Ko MG, Koh A, Chung CR, Suh GY, Jeon K. *Risk Factors for Early Medical Emergency Team Reactivation in Hospitalized Patients. Crit Care Med. 2020 Nov;48(11):e1029-e1037.*

Jang GY, Jeong YJ, Zhang T, Oh TI, **Ko RE**, Chung CR, Suh GY, Woo EJ. *Noninvasive, simultaneous, and continuous measurements of stroke volume and tidal volume using EIT: feasibility study of animal experiments. Sci Rep. 2020 Jul 9;10(1):11242.*

Kim YO, **Ko RE**, Chung CR, Yang JH, Park TK, Cho YH, Sung K, Suh GY, Ryu JA. *Prognostic Value of Early Intermittent Electroencephalography in Patients after Extracorporeal Cardiopulmonary Resuscitation. J Clin Med. 2020 Jun 4;9(6):1745.*

Moon SM, Jhun BW, Baek SY, Kim S, Jeon K, **Ko RE**, Shin SH, Lee H, Kwon OJ, Huh HJ, Ki CS, Lee NY, Chung MJ, Lee KS, Shin SJ, Daley CL, Koh WJ. *Long-term natural history of non-cavitary nodular bronchiectatic nontuberculous mycobacterial pulmonary disease. Respir Med. 2019 May;151:1-7.*