



## CURRICULUM VITAE

**Professor Alain COMBES, MD, PhD**

### PERSONAL INFORMATION

**Current Position Title:** Professeur des Universités - Praticien Hospitalier  
Professor of Intensive Care Medicine  
Head, Medical Intensive Care Unit, Pitié-Salpêtrière Hospital  
Sorbonne Université, Assistance Publique Hopitaux de Paris, APHP  
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**Citizenship:** French

### EDUCATION

**USMLE, part 1, part 2 and ECFMG English test**, passed, sept.94.

**MD**, University of Paris, 1998

**Resident**, University of Paris, 1991-1998

**Board Certified, Cardiology**, University of Paris, 1998

**Board Certified, Intensive Care Medicine**, University of Paris, 2001

**Thesis in Science, PhD**, University of Paris, 2001, "The role of proinflammatory cytokine in the pathophysiology of heart failure."

## APPOINTMENTS

**Post-Doc fellow, Cardiology Department, Pr Feldman**, University of Pittsburgh, USA, 1995-1997

**Chief Resident** : Service de Réanimation Médicale, Hôpital Bichat, Université de Paris 7, 1998-2001

**Chief Resident** : Service de Réanimation Médicale, Hôpital Pitié, Université de Paris 6, 2001-2003

**Assistant Professor of Critical Care Medicine** : Réanimation Médicale, Hôpital Pitié, Université de Paris 6, 03-07

**Professor of Critical Care Medicine** : Réanimation Médicale, Hôpital Pitié, Université de Paris 6, since 2007

**Head of the ICU department at La Pitié Salpêtrière** : Since 2015

## RESEARCH INTEREST

Care of patients with severe/refractory cardiac and/or respiratory failure, Paris ECMO center

- VA ECMO, LVADs, heart transplantation for end-stage cardiac failure
- VV ECMO, ECCO2R for severe respiratory failure

Primary investigator of multicenter international randomized trial:

- HEROICS, to test high volume hemofiltration in patients with complicated heart surgery.
- EOLIA, to test the impact of early ECMO treatment in severe ARDS
- SUPERNOVA, ECCO<sub>2</sub>R for moderate to severe ARDS
- ANCHOR, VA-ECMO in AMI related cardiogenic shock

Center primary investigator in numerous randomized trials (academic and industry sponsored)

Other areas of interest:

The role of proinflammatory cytokine in the pathophysiology of heart failure

Pulmonary infections in mechanically ventilated ICU patients

Hemodynamic monitoring in the ICU

Echocardiography in the ICU

Evaluation of the results of critical care medicine

## SCIENTIFIC SOCIETIES

Member of the Société de Réanimation de Langue Française (SRLF)

- Chair of the scientific committee of the SRLF congress 2007-2009

Member of the ESCIM, European Society of Intensive Care Medicine

Member of the American Thoracic Society, Member of the congress scientific board 2009-2012

Member of the, European Society of Cardiology, ESC

Member of the Association for Acute CardioVascular Care, ESC-ACVC

Board member of the ESC-ACVC

Member of the ELSO, Extracorporeal Life Support Organization since 2011

- President of the EURO-ELSO 2017-2020

Member of the International ECMO network (ECMONet)

Associate Editor of Intensive Care Medicine (IF 41)

## PUBLICATIONS

**Total publications: 372**

**Total Citations: 16930** (650 CITATIONS/Year)

**H-INDEX : 81, G-INDEX : 151**

## REVIEWING

- Regular reviewer for the following journals :
- American Journal of Respiratory and Critical Care Medicine, Circulation, JACC, JAMA, Lancet, Lancet respiratory, Critical Care Medicine, Chest, Cochrane library, Intensive Care Medicine, BMJ, Heart, Shock, Critical Care, Journal of Critical Care, Expert Opinion on Pharmacotherapy.

## PUBLICATIONS (Last 5 years)

1. Annane D, Renault A, Brun-Buisson C, Megarbane B, Quenot JP, Siami S, Cariou A, Forceville X, Schwebel C, Martin C, Timsit JF, Misset B, Ali Benali M, Colin G, Souweine B, Asehnoune K, Mercier E, Chimot L, Charpentier C, Francois B, Boulain T, Petitpas F, Constantin JM, Dhonneur G, Baudin F, Combes A, Bohe J, Loriferne JF, Amathieu R, Cook F, Slama M, Leroy O, Capellier G, Dargent A, Hissem T, Maxime V, Bellissant E. Hydrocortisone plus Fludrocortisone for Adults with Septic Shock. *N Engl J Med* 2018; 378: 809-818.
2. Boyle AJ, Madotto F, Laffey JG, Bellani G, Pham T, Pesenti A, Thompson BT, O'Kane CM, Deane AM, McAuley DF. Identifying associations between diabetes and acute respiratory distress syndrome in patients with acute hypoxemic respiratory failure: an analysis of the LUNG SAFE database *Crit Care* 2018; 22: 268.
3. Brechot N, Demondion P, Santi F, Lebreton G, Pham T, Dalakidis A, Gambotti L, Luyt CE, Schmidt M, Hekimian G, Cluzel P, Chastre J, Leprince P, Combes A. Intra-aortic balloon pump protects against hydrostatic pulmonary oedema during peripheral venoarterial-extracorporeal membrane oxygenation. *European heart journal Acute cardiovascular care* 2018; 7: 62-69.
4. Brechot N, Mastroianni C, Schmidt M, Santi F, Lebreton G, Hoareau AM, Luyt CE, Chommeloux J, Rigolet M, Lebbah S, Hekimian G, Leprince P, Combes A. Retrieval of severe acute respiratory failure patients on extracorporeal membrane oxygenation: Any impact on their outcomes? *J Thorac Cardiovasc Surg* 2018; 155: 1621-1629.e1622.

5. Brodie D, Vincent JL, Brochard LJ, Combes A, Ferguson ND, Hodgson CL, Laffey JG, Mercat A, Pesenti A, Quintel M, Slutsky AS, Ranieri VM. Research in Extracorporeal Life Support: A Call to Action. *Chest* 2018; 153: 788-791.
6. Chazal T, Didier M, Durrleman J, Combes A, Febvre M, Nunes H, Valeyre D. [Mediastinitis following endobronchial ultrasound-guided transbronchial needle aspiration]. *Rev Mal Respir* 2018; 35: 745-748.
7. Combes A, Hajage D, Capellier G, Demoule A, Lavoue S, Guerville C, Da Silva D, Zafrani L, Tirot P, Veber B, Maury E, Levy B, Cohen Y, Richard C, Kalfon P, Bouadma L, Mehdaoui H, Beduneau G, Lebreton G, Brochard L, Ferguson ND, Fan E, Slutsky AS, Brodie D, Mercat A. Extracorporeal Membrane Oxygenation for Severe Acute Respiratory Distress Syndrome. *N Engl J Med* 2018; 378: 1965-1975.
8. Combes A, Slutsky AS, Brodie D. ECMO for Severe Acute Respiratory Distress Syndrome. *N Engl J Med* 2018; 379: 1091-1092.
9. Coutrot M, Hekimian G, Moulin T, Brechot N, Schmidt M, Besset S, Nieszkowska A, Franchineau G, Bourcier S, Bourron O, Luyt CE, Combes A. Euglycemic ketoacidosis, a common and underrecognized complication of continuous renal replacement therapy using glucose-free solutions. *Intensive Care Med* 2018.
10. Danial P, Hajage D, Nguyen LS, Mastroianni C, Demondion P, Schmidt M, Bougle A, Amour J, Leprince P, Combes A, Lebreton G. Percutaneous versus surgical femoro-femoral veno-arterial ECMO: a propensity score matched study. *Intensive Care Med* 2018; 44: 2153-2161.
11. Dong ER, Ng DG, Ramzy D, Chung JS, Friedman O, Combes A, Arabia FA, Nurok M. Acute Cor Pulmonale in Venovenous Extracorporeal Membrane Oxygenation: Three Case Reports. *Asaio j* 2018.
12. Drusano GL, Corrado ML, Girardi G, Ellis-Grosse EJ, Wunderink RG, Donnelly H, Leeper KV, Brown M, Malek T, Hite RD, Ferrari M, Djureinovic D, Kollef MH, Mayfield L, Doyle A, Chastre J, Combes A, Walsh TJ, Dorizas K, Alnuaimat H, Morgan BE, Rello J, Torre CAM, Jones RN, Flamm RK, Woosley L, Ambrose PG, Bhavnani S, Rubino CM, Bulik CC, Louie A, Vicchiarelli M, Berman C. Dilution Factor of Quantitative Bacterial Cultures Obtained by Bronchoalveolar Lavage in Patients with Ventilator-Associated Bacterial Pneumonia. *Antimicrob Agents Chemother* 2018; 62.
13. Franchineau G, Luyt CE, Combes A, Schmidt M. Ventilator-associated pneumonia in extracorporeal membrane oxygenation-assisted patients. *Annals of translational medicine* 2018; 6: 427.
14. Goligher EC, Tomlinson G, Hajage D, Wijeyundera DN, Fan E, Juni P, Brodie D, Slutsky AS, Combes A. Extracorporeal Membrane Oxygenation for Severe Acute Respiratory Distress Syndrome and Posterior Probability of Mortality Benefit in a Post Hoc Bayesian Analysis of a Randomized Clinical Trial. *JAMA* 2018; 320: 2251-2259.
15. Hekimian G, Jovanovic T, Brechot N, Lebreton G, Leprince P, Trouillet JL, Schmidt M, Nieszkowska A, Besset S, Chastre J, Combes A, Luyt CE. When the heart gets the flu: Fulminant influenza B myocarditis: A case-series report and review of the literature. *J Crit Care* 2018; 47: 61-64.
16. Kapandji N, Redheuil A, Fouret P, Hékimian G, Lebreton G, Bréchet N, Luyt CE, Cluzel P, Combes A, Schmidt M. Extensive Myocardial Calcification in Critically Ill Patients. *Crit Care Med* 2018; 46: e702-e706.
17. Lasocki S, Lefebvre T, Mayeur C, Puy H, Mebazaa A, Gayat E. Iron deficiency diagnosed using hepcidin on critical care discharge is an independent risk factor for death and poor quality of life at one year: an observational prospective study on 1161 patients. *Crit Care* 2018; 22: 314.
18. Le Guennec L, Cholet C, Huang F, Schmidt M, Brechot N, Hekimian G, Besset S, Lebreton G, Nieszkowska A, Leprince P, Combes A, Luyt CE. Ischemic and hemorrhagic brain injury during venoarterial-extracorporeal membrane oxygenation. *Annals of intensive care* 2018; 8: 129.
19. Messika J, Schmidt M, Aubry A, Combes A, Ricard JD. Extracorporeal Membrane Oxygenation-Associated Infections: Carefully Consider Cannula Infections! *Crit Care Med* 2018; 46: e171-e172.
20. Montero S, Aissaoui N, Tadie JM, Bizouarn P, Scherrer V, Persichini R, Delmas C, Rolle F, Besnier E, Le Guyader A, Combes A, Schmidt M. Fulminant giant-cell myocarditis on mechanical circulatory support: Management and outcomes of a French multicentre cohort. *Int J Cardiol* 2018; 253: 105-112.
21. Montero S, Chommeloux J, Franchineau G, Combes A, Schmidt M. Microcirculation in cardiogenic shock supported with extracorporeal membrane oxygenation: the need for a homogeneous population and strict evolution assessment. *Crit Care* 2018; 22: 281.
22. Overtchouk P, Pascal J, Lebreton G, Hulot JS, Luyt CE, Combes A, Kerneis M, Silvain J, Barthelemy O, Leprince P, Brechot N, Montalescot G, Collet JP. Outcome after revascularisation of acute myocardial infarction with cardiogenic shock on extracorporeal life support. *EuroIntervention : journal of EuroPCR in collaboration with*

- the Working Group on Interventional Cardiology of the European Society of Cardiology* 2018; 13: e2160-e2168.
23. Pineton de Chambrun M, Brechot N, Combes A. Mechanical circulatory devices in acute heart failure. *Curr Opin Crit Care* 2018; 24: 286-291.
  24. Pineton de Chambrun M, Mathian A, Luyt CE, Combes A, Amoura Z. Myocardial dysfunction is frequent in systemic capillary-leak syndrome (Clarkson disease) severe episodes. *The Journal of allergy and clinical immunology* 2018; 141: 1539-1540.
  25. Rozenchwajg S, Brechot N, Schmidt M, Hekimian G, Lebreton G, Besset S, Franchineau G, Nieszkowska A, Leprince P, Combes A, Luyt CE. Co-infection with influenza-associated acute respiratory distress syndrome requiring extracorporeal membrane oxygenation. *Int J Antimicrob Agents* 2018; 51: 427-433.
  26. Schellongowski P, Combes A, Moller MH. Focus on extracorporeal life support. *Intensive Care Med* 2018; 44: 2251-2253.
  27. Schmidt M, Jaber S, Zogheib E, Godet T, Capellier G, Combes A. Feasibility and safety of low-flow extracorporeal CO<sub>2</sub> removal managed with a renal replacement platform to enhance lung-protective ventilation of patients with mild-to-moderate ARDS. *Crit Care* 2018; 22: 122.
  28. Schmidt M, Schellongowski P, Patroniti N, Taccone FS, Reis Miranda D, Reuter J, Prodanovic H, Pierrot M, Dorget A, Park S, Balik M, Demoule A, Crippa IA, Mercat A, Wohlfarth P, Sonnevile R, Combes A. Six-Month Outcome of Immunocompromised Patients with Severe Acute Respiratory Distress Syndrome Rescued by Extracorporeal Membrane Oxygenation. An International Multicenter Retrospective Study. *Am J Respir Crit Care Med* 2018; 197: 1297-1307.
  29. Touchard C, Aubry A, Eloy P, Brechot N, Lebreton G, Franchineau G, Besset S, Hekimian G, Nieszkowska A, Leprince P, Luyt CE, Combes A, Schmidt M. Predictors of insufficient peak amikacin concentration in critically ill patients on extracorporeal membrane oxygenation. *Crit Care* 2018; 22: 199.
  30. Abrams D, Ferguson ND, Brochard L, Fan E, Mercat A, Combes A, Pellegrino V, Schmidt M, Slutsky AS, Brodie D. ECMO for ARDS: from salvage to standard of care? *The Lancet Respiratory medicine* 2019; 7: 108-110.
  31. Abrams D, Pham T, Burns KEA, Combes A, Curtis JR, Mueller T, Prager KM, Serra A, Slutsky AS, Brodie D, Schmidt M. Practice Patterns and Ethical Considerations in the Management of Venovenous Extracorporeal Membrane Oxygenation Patients: An International Survey. *Crit Care Med* 2019; 47: 1346-1355.
  32. Augy JL, Aissaoui N, Richard C, Maury E, Fartoukh M, Mekontso-Dessap A, Paulet R, Anguel N, Blayau C, Cohen Y, Chiche JD, Gaudry S, Voicu S, Demoule A, Combes A, Megarbane B, Charpentier E, Haghghat S, Panczer M, Diehl JL. A 2-year multicenter, observational, prospective, cohort study on extracorporeal CO<sub>2</sub> removal in a large metropolis area. *Journal of intensive care* 2019; 7: 45.
  33. Bourcier S, Combes A. The NUTRIREA-2 study. *Lancet* 2019; 393: 1501-1502.
  34. Brodie D, Slutsky AS, Combes A. Extracorporeal Life Support for Adults With Respiratory Failure and Related Indications: A Review. *JAMA* 2019; 322: 557-568.
  35. Combes A, Fanelli V, Pham T, Ranieri VM. Feasibility and safety of extracorporeal CO<sub>2</sub> removal to enhance protective ventilation in acute respiratory distress syndrome: the SUPERNOVA study. *Intensive Care Med* 2019; 45: 592-600.
  36. Combes A, Franchineau G. Fine particle environmental pollution and cardiovascular diseases. *Metabolism: clinical and experimental* 2019; 100s: 153944.
  37. Combes A, Tonetti T, Fanelli V, Pham T, Pesenti A, Mancebo J, Brodie D, Ranieri VM. Efficacy and safety of lower versus higher CO<sub>2</sub> extraction devices to allow ultraprotective ventilation: secondary analysis of the SUPERNOVA study. *Thorax* 2019; 74: 1179-1181.
  38. Coutance G, d'Orio V, Belin L, Brechot N, Saheb S, Lebreton G, Bougle A, Rouvier P, Gautreau C, Ouldammam S, Chamillard X, Huot M, Amour J, Combes A, Leprince P, Varnous S. Favorable Outcome of an Exclusively Posttransplant Prophylactic Strategy After Heart Transplantation in Recipients With High Immunological Risk. *Transplantation* 2019; 103: 1439-1449.
  39. de Chambrun MP, Cluzel P, Brocheriou I, Brechot N, Hekimian G, Turki MW, Franchineau G, Rouvier P, Bourcier S, Bureau C, Nieszkowska A, Le Guennec L, Mathian A, Amoura Z, Schmidt M, Combes A, Luyt CE. Transvenous Renal Biopsy of Critically Ill Patients: Safety and Diagnostic Yield. *Crit Care Med* 2019; 47: 386-392.
  40. Formica F, Avalli L, Sangalli F, Danial P, Combes A, Lebreton G. Should we always use the peripheral cannula for distal leg reperfusion in femoro-femoral ECMO patients? *Intensive Care Med* 2019; 45: 559-560.

41. Gaudry S, Hajage D, Martin-Lefevre L, Louis G, Moschietto S, Titeca-Beauport D, La Combe B, Pons B, de Prost N, Besset S, Combes A, Robine A, Beuzelin M, Badie J, Chevrel G, Reignier J, Bohé J, Coupez E, Chudeau N, Barbar S, Vinsonneau C, Forel JM, Thevenin D, Boulet E, Lakhal K, Aissaoui N, Grange S, Leone M, Lacave G, Nseir S, Poirson F, Mayaux J, Asehnoune K, Geri G, Klouche K, Thiery G, Argaud L, Ricard JD, Quenot JP, Dreyfuss D. The Artificial Kidney Initiation in Kidney Injury 2 (AKIKI2): study protocol for a randomized controlled trial. *Trials* 2019; 20: 726.
42. Goligher EC, Combes A, Brodie D, Ferguson ND, Pesenti AM, Ranieri VM, Slutsky AS. Determinants of the effect of extracorporeal carbon dioxide removal in the SUPERNOVA trial: implications for trial design. *Intensive Care Med* 2019; 45: 1219-1230.
43. Le Guennec L, Schmidt M, Combes A, Luyt CE. Reversible splenic lesion syndrome during venoarterial extracorporeal membrane oxygenation. *Intensive Care Med* 2019; 45: 1019-1020.
44. Luyt CE, Faure M, Bonnet I, Besset S, Huang F, Junot H, Hekimian G, Schmidt M, Brechot N, Combes A, Aubry A, Mayaux J, Chastre J. Use of non-carbapenem antibiotics to treat severe extended-spectrum beta-lactamase-producing Enterobacteriaceae infections in intensive care unit patients. *Int J Antimicrob Agents* 2019; 53: 547-552.
45. Millar JE, Bartnikowski N, von Bahr V, Malfertheiner MV, Obonyo NG, Belliato M, Suen JY, Combes A, McAuley DF, Lorusso R, Fraser JF. Extracorporeal membrane oxygenation (ECMO) and the acute respiratory distress syndrome (ARDS): a systematic review of pre-clinical models. *Intensive care medicine experimental* 2019; 7: 18.
46. Nguyen LS, Coutance G, Salem JE, Ouldamar S, Lebreton G, Combes A, Amour J, Laali M, Leprince P, Varnous S. Effect of recipient gender and donor-specific antibodies on antibody-mediated rejection after heart transplantation. *Am J Transplant* 2019; 19: 1160-1167.
47. Papazian L, Aubron C, Brochard L, Chiche JD, Combes A, Dreyfuss D, Forel JM, Guerin C, Jaber S, Mekontso-Dessap A, Mercat A, Richard JC, Roux D, Vieillard-Baron A, Faure H. Formal guidelines: management of acute respiratory distress syndrome. *Annals of intensive care* 2019; 9: 69.
48. Petroni T, D'Alessandro C, Combes A, Golmard JL, Brechot N, Barreda E, Laali M, Farahmand P, Varnous S, Weber P, Pavie A, Leprince P. Long-term outcome of heart transplantation performed after ventricular assist device compared with standard heart transplantation. *Arch Cardiovasc Dis* 2019; 112: 485-493.
49. Pineton de Chambrun M, Brechot N, Combes A. Venoarterial extracorporeal membrane oxygenation in cardiogenic shock: indications, mode of operation, and current evidence. *Curr Opin Crit Care* 2019; 25: 397-402.
50. Pineton de Chambrun M, Combes A, Hekimian G. Contrast-enhanced Doppler echography to assess position of the distal leg perfusion line in patients on venoarterial extracorporeal membrane oxygenation: A preliminary study. *Artif Organs* 2019; 43: 605-606.
51. Pineton de Chambrun M, Larcher R, Pene F, Argaud L, Demoule A, Jamme M, Coudroy R, Mathian A, Gibelin A, Azoulay E, Tandjaoui-Lambiotte Y, Dargent A, Beloncle FM, Raphalen JH, Couteau-Chardon A, de Prost N, Devaquet J, Contou D, Gaugain S, Trouiller P, Grange S, Ledochowski S, Lemarie J, Faguer S, Degos V, Combes A, Luyt CE, Amoura Z. CAPS criteria fail to identify most severely-ill thrombotic antiphospholipid syndrome patients requiring intensive care unit admission. *Journal of autoimmunity* 2019: 102292.
52. Potapov EV, Antonides C, Crespo-Leiro MG, Combes A, Färber G, Hannan MM, Kukucka M, de Jonge N, Loforte A, Lund LH, Mohacsi P, Morshuis M, Netuka I, Özbaran M, Pappalardo F, Scandroglio AM, Schweiger M, Tsui S, Zimpfer D, Gustafsson F. 2019 EACTS Expert Consensus on long-term mechanical circulatory support. *Eur J Cardiothorac Surg* 2019; 56: 230-270.
53. Roux D, Azoulay E, Schwebel C, Terzi N, Combes A, Ehrmann S. Medicine and Intensive Care Training: The Search for the Holy Grail of Diversity Within Harmonization. *Crit Care Med* 2019; 47: e428-e429.
54. Rozencwajg S, Guihot A, Franchineau G, Lescroat M, Bréchet N, Hékimian G, Lebreton G, Autran B, Luyt CE, Combes A, Schmidt M. Ultra-Protective Ventilation Reduces Biotrauma in Patients on Venovenous Extracorporeal Membrane Oxygenation for Severe Acute Respiratory Distress Syndrome. *Crit Care Med* 2019; 47: 1505-1512.
55. Sandroni C, Combes A, Nolan JP. Focus on post-resuscitation care. *Intensive Care Med* 2019; 45: 1283-1287.
56. Schmidt M, Combes A, Shekar K. ECMO for immunosuppressed patients with acute respiratory distress syndrome: drawing a line in the sand. *Intensive Care Med* 2019.

57. Schmidt M, Franchineau G, Combes A. Recent advances in venovenous extracorporeal membrane oxygenation for severe acute respiratory distress syndrome. *Curr Opin Crit Care* 2019; 25: 71-76.
58. Schmidt M, Pham T, Arcadipane A, Agerstrand C, Ohshimo S, Pellegrino V, Vuylsteke A, Guervilly C, McGuinness S, Pierard S, Breeding J, Stewart C, Ching SSW, Camuso JM, Stephens RS, King B, Herr D, Schultz MJ, Neuville M, Zogheib E, Mira JP, Roze H, Pierrot M, Tobin A, Hodgson C, Chevret S, Brodie D, Combes A. Mechanical Ventilation Management during Extracorporeal Membrane Oxygenation for Acute Respiratory Distress Syndrome. An International Multicenter Prospective Cohort. *Am J Respir Crit Care Med* 2019; 200: 1002-1012.
59. Taieb A, Jeune F, Lebbah S, Schmidt M, Deransy R, Vaillant JC, Luyt CE, Tresallet C, Combes A, Brechot N. Emergency Abdominal Surgery Outcomes of Critically Ill Patients on Extracorporeal Membrane Oxygenation: A Case-Matched Study with a Propensity Score Analysis. *World journal of surgery* 2019; 43: 1474-1482.
60. Abrams D, Schmidt M, Pham T, Beitler JR, Fan E, Goligher EC, McNamee JJ, Patroniti N, Wilcox ME, Combes A, Ferguson ND, McAuley DF, Pesenti A, Quintel M, Fraser J, Hodgson CL, Hough CL, Mercat A, Mueller T, Pellegrino V, Ranieri VM, Rowan K, Shekar K, Brochard L, Brodie D. Mechanical Ventilation for Acute Respiratory Distress Syndrome during Extracorporeal Life Support. Research and Practice. *Am J Respir Crit Care Med* 2020; 201: 514-525.
61. Azoulay E, Cariou A, Bruneel F, Demoule A, Kouatchet A, Reuter D, Souppart V, Combes A, Klouche K, Argaud L, Barbier F, Jourdain M, Reignier J, Papazian L, Guidet B, Géri G, Resche-Rigon M, Guisset O, Labbé V, Mégarbane B, Van Der Meersch G, Guitton C, Friedman D, Pochard F, Darmon M, Kentish-Barnes N. Symptoms of Anxiety, Depression, and Peritraumatic Dissociation in Critical Care Clinicians Managing Patients with COVID-19. A Cross-Sectional Study. *Am J Respir Crit Care Med* 2020; 202: 1388-1398.
62. Bagshaw SM, Wald R, Adhikari NKJ, Bellomo R, da Costa BR, Dreyfuss D, Du B, Gallagher MP, Gaudry S, Hoste EA, Lamontagne F, Joannidis M, Landoni G, Liu KD, McAuley DF, McGuinness SP, Neyra JA, Nichol AD, Ostermann M, Palevsky PM, Pettilä V, Quenot JP, Qiu H, Rochweg B, Schneider AG, Smith OM, Thomé F, Thorpe KE, Vaara S, Weir M, Wang AY, Young P, Zarbock A. Timing of Initiation of Renal-Replacement Therapy in Acute Kidney Injury. *N Engl J Med* 2020; 383: 240-251.
63. Barbaro RP, MacLaren G, Boonstra PS, Iwashyna TJ, Slutsky AS, Fan E, Bartlett RH, Tonna JE, Hyslop R, Fanning JJ, Rycus PT, Hyer SJ, Anders MM, Agerstrand CL, Hryniewicz K, Diaz R, Lorusso R, Combes A, Brodie D. Extracorporeal membrane oxygenation support in COVID-19: an international cohort study of the Extracorporeal Life Support Organization registry. *Lancet* 2020; 396: 1071-1078.
64. Baudry G, Sonnevile R, Waintraub X, Lebreton G, Deguillard C, Mertens E, Bouadma L, Demondion P, Bréchet N, Luyt CE, Extramiana F, Hékimian G, Dupuis C, Para M, Pisani A, Braham W, Gandjbakhch E, Leenhardt A, Timsit JF, Leprince P, Combes A, Schmidt M. Extracorporeal Membrane Oxygenation to Support Life-Threatening Drug-Refractory Electrical Storm. *Crit Care Med* 2020; 48: e856-e863.
65. Bein T, Vargiolu A. Ensuring editorial continuity and quality of science during the COVID-19 storm: the ICM experience. *Intensive Care Med* 2020; 46: 1918-1920.
66. Bougouin W, Dumas F, Lamhaut L, Marijon E, Carli P, Combes A, Pirracchio R, Aissaoui N, Karam N, Deye N, Sideris G, Beganton F, Jost D, Cariou A, Jouven X. Extracorporeal cardiopulmonary resuscitation in out-of-hospital cardiac arrest: a registry study. *Eur Heart J* 2020; 41: 1961-1971.
67. Bourcier S, Coutrot M, Kimmoun A, Sonnevile R, de Montmollin E, Persichini R, Schnell D, Charpentier J, Aubron C, Morawiec E, Bigé N, Nseir S, Terzi N, Razazi K, Azoulay E, Ferré A, Tandjaoui-Lambiotte Y, Ellrodt O, Hraiech S, Delmas C, Barbier F, Lautrette A, Aissaoui N, Repessé X, Pichereau C, Zerbib Y, Lascarrou JB, Carreira S, Reuter D, Frérou A, Peigne V, Fillatre P, Megarbane B, Voiriot G, Combes A, Schmidt M. Thyroid Storm in the ICU: A Retrospective Multicenter Study. *Crit Care Med* 2020; 48: 83-90.
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