



2020 Surgical Critical Care: All References

Below you will find the topics and their accompanying references for the 2020 Surgical Critical Care Continuous Certification Assessment. References that are available open source are indicated with a green star ★ and the entire citation is a link to the open access source. References that are not available open access have a link in their PubMed ID to the abstract.

Diplomates are neither required nor expected to read all of these references before or during the completion of the assessment.

Biostatistics

- ★ [McMurtry TL, Hu Y, Blackstone EH, Kozower BD. Propensity scores: methods, considerations, and applications in the Journal of Thoracic and Cardiovascular Surgery. *J Thorac Cardiovasc Surg.* 2015;150\(1\):14-19.](#)
[PMID: 25963441]
- Leisman DE. Ten pearls and pitfalls of propensity scores in critical care research: a guide for clinicians and researchers. *Crit Care Med.* 2019;47(2):176-185.
[\[PMID: 30543566\]](#)

Blood Component Therapy

- ★ [Spinella PC, Pidcock HF, Strandenes G, et al. Whole blood for hemostatic resuscitation of major bleeding. *Transfusion.* 2016;\(56 suppl 2\):S190-S202.](#)
[PMID: 27100756]
- Cotton BA, Podbielski J, Camp E, et al. A randomized controlled pilot trial of modified whole blood versus component therapy in severely injured patients requiring large volume transfusions. *Ann Surg.* 2013;258(4):527-533.
[\[PMID: 23979267\]](#)
- Katsura M, Kazuhide M, Kitamura, R, et al. The use of warm fresh whole blood transfusion in the austere setting: a civilian trauma experience. *J Trauma Acute Care Surg.* Published online June 3, 2020.
[\[PMID: 32833413\]](#)
- Seheult JN, Anto V, Alarcon LH, Sperry JL, Triulzi DJ, Yazer MH. Clinical outcomes among low-titer group O whole blood recipients compared to recipients of conventional components in civilian trauma resuscitation. *Transfusion.* 2018;58(8):1838-1845.
[\[PMID: 30160310\]](#)
- ★ [Gonzalez E, Moore EE, Moore HB. Management of trauma-induced coagulopathy with thromboelastography. *Crit Care Clin.* 2017;33\(1\):119-134.](#)
[PMID: 27894492]
- ★ [Hunt H, Stanworth S, Curry N, et al. Thromboelastography \(TEG\) and rotational thromboelastometry \(ROTEM\) for trauma induced coagulopathy in adult trauma patients with bleeding. *Cochrane Database Syst Rev.* 2015;2015\(2\):CD010438.](#)
[PMID: 25686465]



2020 Surgical Critical Care: All References

- Tapia NM, Chang A, Norman M, et al. TEG-guided resuscitation is superior to standardized MTP resuscitation in massively transfused penetrating trauma patients. *J Trauma Acute Care Surg.* 2013;74(2):378-386.
[[PMID: 23354228](#)]

Blunt Cerebrovascular Injury

- Burlew CC, Biffl WL. Blunt cerebrovascular trauma. *Curr Opin Crit Care.* 2010;16(6):587-595.
[[PMID: 20808220](#)]
- ★ [Edwards NM, Fabian TC, Claridge JA, Timmons SD, Fischer PE, Croce MA. Antithrombotic therapy and endovascular stents are effective treatment for blunt carotid injuries: results from longterm followup. J Am Coll Surg.](#) 2007;204(5):1007-1015.
[PMID: 17481530]

Burn Resuscitation

- Deutsch CJ, Tan A, Smailes S, Dziewulski P. The diagnosis and management of inhalation injury: an evidence-based approach. *Burns.* 2018;44(5):1040-1051.
[[PMID: 29398078](#)]

Cardiac Arrest After Cardiac Surgery

- ★ [Society of Thoracic Surgeons Task Force on Resuscitation After Cardiac Surgery. The Society of Thoracic Surgeons expert consensus for the resuscitation of patients who arrest after cardiac surgery. Ann Thorac Surg.](#) 2017;103(3):1005-1020.
[PMID: 28122680]

Cardiac Assist Devices

- ★ [Sen A, Larson JS, Kashani KB, et al. Mechanical circulatory assist devices: a primer for critical care and emergency physicians. Crit Care.](#) 2016;20(1):153.
[PMID: 27342573]
- Slaughter MS. Long-term continuous flow left ventricular assist device support and end-organ function: prospects for destination therapy. *J Card Surg.* 2010;25(4):490-494.
[[PMID: 20642766](#)]

Cardiogenic Shock

- Khodani CA, Fares WH. Management of right heart failure in the intensive care unit. *Clin Chest Med.* 2015;36(3):511-520.
[[PMID: 26304287](#)]



2020 Surgical Critical Care: All References

- ★ [Konstam MA, Kiernan MS, Bernstein D, et al. Evaluation and management of right-sided heart failure: a scientific statement from the American Heart Association. *Circulation.* 2018;137\(20\):e578-622.](#)
[PMID: 29650544]
- ★ [Harjola VP, Mebazaa A, Čelutkienė J, et al. Contemporary management of acute right ventricular failure: a statement from the Heart Failure Association and the Working Group on Pulmonary Circulation and Right Ventricular Function of the European Society of Cardiology. *Eur J Heart Fail.* 2016;18\(3\):226-241.](#)
[PMID: 26995592]
- ★ [Pozzi M, Banfi C, Grinberg D, et al. Veno-arterial extracorporeal membrane oxygenation for cardiogenic shock due to myocarditis in adult patients. *J Thorac Dis.* 2016;8\(7\):E495-502.](#)
[PMID: 27499982]
- ★ [van Diepen S, Katz JN, Albert NM, et al. Contemporary management of cardiogenic shock: a scientific statement from the American Heart Association. *Circulation.* 2017;136\(16\):e232-e268.](#)
[PMID: 28923988]

Delirium

- ★ [Devlin JW, Skrobik Y, Gélinas C, et al. Executive summary: clinical practice guidelines for the prevention and management of pain, agitation/sedation, delirium, immobility, and sleep disruption in adult patients in the ICU. *Crit Care Med.* 2018;46\(9\):e825-e873.](#)
[PMID: 30113371]
- ★ [Pun BT, Balas MC, Barnes-Daly MA, et al. Caring for critically ill patients with the ABCDEF bundle: results of the ICU Liberation Collaborative in over 15,000 adults. *Crit Care Med.* 2019;47\(1\):3-14.](#)
[PMID: 30339549]

End of Life Care

- ★ [Elwyn G, Frosch D, Thomson R, et al. Shared decision making: a model for clinical practice. *J Gen Int Med.* 2012;27\(10\):1361-1367.](#)
[PMID: 22618581]
- Cooper Z, Koritsanszky LA, Cauley CE, et al. Recommendations for best communication practices to facilitate goal-concordant care for seriously ill older patients with emergency surgical conditions. *Ann Surg.* 2016;263(1):1-6.
[PMID: 26649587]



2020 Surgical Critical Care: All References

- ★ [Taylor LJ, Nabozny MJ, Steffens NM, et al. A framework to improve surgeon communication in high-stakes surgical decisions: best case/worst case. *JAMA Surg.* 2017;152\(6\):531-538.](#)
[PMID: 28146230]
- ★ [Best Case/Worst Case \(BC/WC\) Surgeon Communication Tool - Whiteboard Video. University of Wisconsin, Madison. March 29, 2016.](#)

Fungal and Viral Infections

- ★ [Lelievre L, Garcia-Hermoso D, Abdoul H, et al. Posttraumatic mucormycosis: a nationwide study in France and review of the literature. *Medicine \(Baltimore\)*. 2014;93\(24\):395-404.](#)
[PMID: 25500709]
- ★ [McCarthy M, Rosengart A, Schuetz AN, Kontoyiannis DP, Walsh TJ. Mold infections of the central nervous system. *N Engl J Med.* 2014;371\(2\):150-160.](#)
[PMID: 25006721]
- ★ [Kronen R, Liang SY, Bochicchio G, Bochicchio K, Powderly WG, Spec A. Invasive fungal infections secondary to traumatic injury. *Int J Infect Dis.* 2017;62:102-111.](#)
[PMID: 28705753]

Gastrointestinal Bleeding, Upper

- ★ [Huang HB, Jiang W, Wang C-Y, Qin HY, Du B. Stress ulcer prophylaxis in intensive care unit patients receiving enteral nutrition: a systematic review and meta-analysis. *Crit Care.* 2018;22\(1\):20.](#)
[PMID: 29374489]
- ★ [Krag M, Marker S, Perner A, et al. Pantoprazole in patients at risk for gastrointestinal bleeding in the ICU. *N Engl J Med.* 2018;379\(23\):2199-2208.](#)
[PMID: 30354950]

Hypovolemic Shock

- ★ [Advanced Trauma Life Support® \(ATLS®\), 10th ed., 2018. American College of Surgeons.](#)
- ★ [Holcomb JB, del Junco DJ, Fox EE, et al. The Prospective, Observational, Multicenter, Major Trauma Transfusion \(PROMMTT\) study: comparative effectiveness of a time-varying treatment with competing risks. *JAMA Surg.* 2013;148\(2\):127-136.](#)
[PMID: 23560283]
- ★ [CRASH-2 trial collaborators, Shakur H, Roberts I, et al. Effects of tranexamic acid on death, vascular occlusive events, and blood transfusion in trauma patients with significant haemorrhage \(CRASH-2\): a randomised, placebo-controlled trial. *Lancet.* 2010;376\(9734\):23-32.](#)
[PMID: 20554319]



2020 Surgical Critical Care: All References

- Weymouth W, Long B, Koyfman A, Winckler C. Whole blood in trauma: a review for emergency clinicians. *J Emerg Med.* 2019;56(5):491-498.
[PMID: 30904380]

Mesenteric Ischemia

- ★ Bala M, Kashuk J, Moore EE, et al. Acute mesenteric ischemia: guidelines of the World Society of Emergency Surgery. *World J Emerg Surg.* 2017;12:38.
[PMID: 28794797]

Neurogenic Shock

- ★ Hagen EM. Acute complications of spinal cord injuries. *World J Orthop.* 2015;6(1):17-23.
[PMID: 25621207]

Nosocomial Infections

- ★ Goldenberg JZ, Yap C, Lytvyn L, et al. Probiotics for the prevention of *Clostridium difficile*-associated diarrhea in adults and children. *Cochrane Database Syst Rev.* 2017;12(12):CD006095. Published 2017 Dec 19.
[PMID: 29257353]
- Bignardi GE. Risk factors for *Clostridium difficile* infection. *J Hosp Infect.* 1998;40(1):1-15.
[PMID: 9777516]

Nutritional Therapy

- Patel JJ, Kozeniecki M, Biesboer A, et al. Early trophic enteral nutrition is associated with improved outcomes in mechanically ventilated patients with septic shock: a retrospective review. *J Intensive Care Med.* 2016;31(7):471-477.
[PMID: 25315218]
- ★ Casaer MP, Mesotten D, Hermans G, et al. Early versus late parenteral nutrition in critically ill adults. *N Engl J Med.* 2011;365(6):506-517.
[PMID: 21714640]
- ★ Mancl EE, Muzevich KM. Tolerability and safety of enteral nutrition in critically ill patients receiving intravenous vasopressor therapy. *JPEN J Parenter Enteral N.* 2013;37(5):641-651.
[PMID: 23270986]
- Dellinger RP, Carlet JM, Masur H, et al. Surviving sepsis campaign guidelines for management of severe sepsis and septic shock. *Crit Care Med.* 2004;32(3):858-873.
[PMID: 15090974]



2020 Surgical Critical Care: All References

Oxygen and Other Gas Therapies

- ★ [Frat JP, Thille W, Mercat A, et al. High-flow oxygen through nasal cannula in acute hypoxemic respiratory failure. *N Engl J Med.* 2015;372\(23\):2185-2196.](#)
[PMID: 25981908]
- Ni YN, Luo J, Yu H, et al. Can high-flow nasal cannula reduce the rate of endotracheal intubation in adult patients with acute respiratory failure compared with conventional oxygen therapy and noninvasive positive-pressure ventilation?: a systematic review and meta-analysis. *Chest.* 2017;151(4):764-775.
[PMID: 28089816]
- ★ [Nishimura M. High-flow nasal cannula oxygen therapy in adults: physiological benefits, indication, clinical benefits, and adverse effects. *Respir Care.* 2016;61\(4\):529-541.](#)
[PMID: 27016353]
- ★ [Drake MG. High-flow nasal cannula oxygen in adults: an evidence-based assessment. *Ann Am Thorac Soc.* 2018;15\(2\):145-155.](#)
[PMID: 29144160]

Pain Management and Sedation

- ★ [Devlin JW, Skrobik Y, Gélinas C, et al. Executive Summary: Clinical Practice Guidelines for the Prevention and Management of Pain, Agitation/Sedation, Delirium, Immobility, and Sleep Disruption in Adult Patients in the ICU. *Crit Care Med.* 2018;46\(9\):1532-1548.](#)
[PMID: 30113371]

Patient Safety and Systems of Care

- ★ [Patient Safety Network. Making Just Culture a reality: one organization's approach. October 2007.](#)

Penetrating Neck Injury

- Inaba K, Branco BC, Menaker J, et al. Evaluation of multidetector computed tomography for penetrating neck injury: a prospective multicenter study. *J Trauma Acute Care Surg.* 2012;72(3):576-804.
[PMID: 22491539]
- ★ [Nowicki JL, Stew B, Ooi E. Penetrating neck injuries: a guide to evaluation and management. *Ann R Coll Surg Engl.* 2018;100\(1\):6-11. \[PMID: 29046084\]](#)



2020 Surgical Critical Care: All References

Personal Protective Equipment in a Pandemic

- ★ [Center for Disease Control and Prevention. Interim Infection Prevention and Control Recommendations for Healthcare Personnel During the Coronavirus Disease 2019 \(COVID-19\) Pandemic. July 2020.](#)
- ★ [United States Department of Labor. OSHA Laws & Regulations; 1910 Subpart I-Personal Protective Equipment.](#)

Pneumonia, Ventilator-Associated (Hospital-Acquired)

- [Kalil AC, Metersky ML, Klompas M, et al. Management of adults with hospital-acquired and ventilator-associated pneumonia: 2016 clinical practice guidelines by the Infectious Disease Society of America and the American Thoracic Society. *Clin Infect Dis.* 2016;63\(5\):e61-e111.](#)
[PMID: 27418577]
- Martin-Lloeches I, Rodriguez AH, Torres A. New guidelines for hospital-acquired pneumonia/ventilator-associated pneumonia: USA vs. Europe. *Curr Opin Crit Care.* 2018;24(5):347-352.
[\[PMID: 30063491\]](#)
- ★ [Sartelli M, Duane TM, Catena F, et al. Antimicrobial stewardship: a call to action for surgeons. *Surg Infect \(Larchmt\).* 2016;17\(6\):625-631.](#)
[PMID: 27828764]

Post-Cardiac Surgery, Early Management

- ★ [Society of Thoracic Surgeons Task Force on Resuscitation After Cardiac Surgery. The Society of Thoracic Surgeons expert consensus for the resuscitation of patients who arrest after cardiac surgery. *Ann Thoracic Surgery.* 2017;103\(3\):1005-1020.](#)
[PMID: 28122680]
- ★ [Neumar RW, Otto CW, Link MS, et al. Part 8: Adult advanced cardiovascular life support: 2010 American Heart Association guidelines for cardiopulmonary resuscitation and emergency cardiovascular care. *Circulation.* 2010;122\(18\)\(suppl 3\):S729-S767.](#)
[PMID: 20956224]
- ★ [Lockowandt U, Levine A, Strang T, Dunning J. If a patient arrests after cardiac surgery is it acceptable to delay cardiopulmonary resuscitation until you have attempted either defibrillation or pacing? *Interact Cardiovasc Thorac Surg.* 2008;7\(5\):878-885.](#)
[PMID: 18544586]



2020 Surgical Critical Care: All References

Priorities in the Use of Critical Care Resources

- ★ [Daugherty Biddison EL, Faden R, Gwon HS, et al. Too many patients...a framework to guide statewide allocation of scarce mechanical ventilation during disasters. *Chest.* 2019;155\(4\):848-854.](#)
[PMID: 30316913]
- ★ [Qualls N, Levitt A, Kanade N, et al. Community mitigation guidelines to prevent pandemic influenza - United States, 2017. *MMWR Recomm Rep.* 2017;66\(1\):1-34.](#)
[PMID: 28426646]

Pulmonary Edema

- ★ [Davison DL, Terek M, Chawla LS. Neurogenic pulmonary edema. *Crit Care.* 2012;16\(2\):212.](#)
[PMID: 22429697]
- Rogers FB, Shackford SR, Trevisani GT, Davis JW, Mackersie RC, Hoyt DB. Neurogenic pulmonary edema in fatal and nonfatal head injuries. *J Trauma.* 1995;39(5):860-868.
[PMID: 7474001]

Pulmonary Embolism

- ★ [Kearon C, Akl EA, Ornelas J, et al. Antithrombotic therapy for VTE disease: CHEST Guideline and Expert Panel Report. *Chest.* 2016;149\(2\):315-352.](#)
[PMID: 26827832]
- Bundens WP, Bergan JJ, Halasz NA, Murray J, Drehobl M. The superficial femoral vein. a potentially lethal misnomer. *JAMA.* 1995;274(16):1296-1298.
[PMID: 7563535]
- Dalen JE, Alpert JS, Hirsh J. Thrombolytic therapy for pulmonary embolism: is it effective? is it safe? when is it indicated? *Arch Intern Med.* 1997;157(22):2550-2556.
[PMID: 9531222]
- Chatterjee S, Chakraborty A, Weinberg I, et al. Thrombolysis for pulmonary embolism and risk of all-cause mortality, major bleeding, and intracranial hemorrhage: a meta-analysis. *JAMA.* 2014;311(23):2414-2421.
[PMID: 24938564]
- ★ [Konstantinides S, Geibel A, Heusel G, Heinrich F, Kasper W. Heparin plus alteplase compared with heparin alone in patients with submassive pulmonary embolism. *N Engl J Med.* 2002;347\(15\):1143-1150.](#)
[PMID: 12374874]



2020 Surgical Critical Care: All References

Respiratory Failure, Acute

- ★ [Xu X-P, Zhang X-C, Hu S-L, et al. Noninvasive ventilation in acute hypoxic nonhypercapnic respiratory failure: a systematic review and meta-analysis. Crit Care Med. 2017;45\(7\):e727-e733.](#)
[PMID: 28441237]

Respiratory Monitoring (Pressures and Compliance Resistance)

- ★ [Brochard L, Martin GS, Blanch L, et al. Clinical review: respiratory monitoring in the ICU - a consensus of 16. Crit Care. 2012;16\(2\):219.](#)
[PMID: 22546221]

Renal Failure

- Barbar SD, Dargent A, Quenot J-P. Timing of renal-replacement therapy in acute kidney injury and sepsis. *N Engl J Med.* 2019;380(4):399.
[PMID: 30673539]
- ★ [Gaudy S, Hajage D, Schortgen F, et al. Initiation strategies for renal replacement therapy in the intensive care unit. N Engl J Med. 2016;375\(2\):122-133.](#)
[PMID: 27181456]

Septic Shock

- ★ [Annane D, Renault A, Brun-Buisson C, et al. Hydrocortisone plus fludrocortisone for adults with septic shock. N Engl J Med. 2018;378\(9\):809-818.](#)
[PMID: 29490185]
- ★ [Sprung CL, Annane D, Keh D, et al. Hydrocortisone therapy for patients with septic shock. N Engl J Med. 2008;358\(2\):111-124.](#)
[PMID: 18184957]
- ★ [De Backer D, Biston P, Devriendt J, et al. Comparison of dopamine and norepinephrine in the treatment of shock. N Engl J Med. 2010;362\(9\):779-789.](#)
[PMID: 20200382]
- ★ [Fang F, Zhang Y, Tang J, et al. Association of corticosteroid treatment with outcomes in adult patients with sepsis: a systematic review and meta-analysis. JAMA Intern Med. 2019;179\(2\):213-223.](#)
[PMID: 30575845]
- ★ [Genetech, Inc. ACTEMRA \(tocilizumab\). Prescribing information. 2020.](#)



2020 Surgical Critical Care: All References

- ★ [Rhodes A, Evans LE, Alhazzani W, et al. Surviving Sepsis Campaign: international guidelines for management of sepsis and septic shock: 2016. *Intensive Care Med.* 2017;43\(3\):304-377.](#)
[PMID: 28101605]
- Reuter DA, Kirchner A, Felbinger TW, et al. Usefulness of left ventricular stroke volume variation to assess fluid responsiveness in patients with reduced cardiac function. *Crit Care Med.* 2003;31(5):1399-1404.
[PMID: 12771609]
- ★ [Semler MW, Self WH, Wanderer JP, et al. Balanced crystalloids versus saline in critically ill adults. *N Engl J Med.* 2018;378\(9\):829-839.](#)
[PMID: 29485925]
- ★ [Caironi P, Tognoni G, Masson S, et al. Albumin replacement in patients with severe sepsis or septic shock. *N Engl J Med.* 2014;370\(15\):1412-1421.](#)
[PMID: 24635772]
- ★ [Cecconi M, De Backer D, Antonelli M, et al. Consensus on circulatory shock and hemodynamic monitoring. Task force of the European Society of Intensive Care Medicine. *Intensive Care Med.* 2014;40\(12\):1795-1815.](#)
[PMID: 25392034]
- Shah MR, Hasselblad V, Stevenson LW, et al. Impact of the pulmonary artery catheter in critically ill patients: meta-analysis of randomized clinical trials. *JAMA.* 2005;294(13):1664-1670.
[PMID: 16204666]

Serum Osmolarity and Electrolytes

- ★ [Braun MM, Barstow CH, Pyzocha NJ. Diagnosis and management of sodium disorders: hyponatremia and hypernatremia. *Am Fam Physician.* 2015;91\(5\):299-307.](#)
[PMID: 25822386]

Traumatic Brain Injury – Intracranial Pressure Monitoring

- ★ [Hawryluk GWJ, Aguilera S, Buki A, et al. A management algorithm for patients with intracranial pressure monitoring: the Seattle International Severe Traumatic Brain Injury Consensus Conference \(SIBICC\). *Intensive Care Med.* 2019;45\(12\):1783-1794.](#)
[PMID: 31659383]
- Godoy DA, Lubillo S, Rabinstein AA. Pathophysiology and management of intracranial hypertension and tissular brain hypoxia after severe traumatic brain injury: an integrative approach. *Neurosurg Clin N Am.* 2018;29(2):195-212.
[PMID: 29502711]



2020 Surgical Critical Care: All References

- ★ [Le Roux P, Menon DK, Citerio G, et al. Consensus summary statement of the International Multidisciplinary Consensus Conference on Multimodality Monitoring in Neurocritical Care: a statement for healthcare professionals from the Neurocritical Care Society and the European Society of Intensive Care Medicine. *Intensive Care Med.* 2014;40\(9\):1189-1209.](#)
[PMID: 25138226]

Vasopressor and Vasodilator

- ★ [van Diepen S, Katz JN, Albert NM, et al. Contemporary management of cardiogenic shock: a scientific statement from the American Heart Association. *Circulation.* 2017;136\(16\):e232-e268.](#)
[PMID: 28923988]