

THERAPY

Objectives:

At the end of this module, learners will be able to:

- Critically evaluate a randomized control trial (RCT) assessing for risk of bias.
- Better appreciate how to interpret the results of an RCT and how to calculate measures of treatment effect.
- Understand how to apply new evidence to the clinical management of real patients.

Assignment:

Please consider the attached manuscript reporting the results of the ADRENAL trial from the New England Journal of Medicine when completing the attached worksheet. This trial examined the effect of administering corticosteroids as compared with placebo to critically ill patients with septic shock. The primary outcome was mortality at 90 days.

Clinical Scenario:

A 56 year old female presents to the emergency department at your hospital complaining of shortness of breath and feeling unwell. Initial vital signs reveal an elevated heart rate, low oxygen saturations and a low blood pressure. Intravenous fluids are initiated, broad spectrum antibiotics are administered and blood tests are ordered. Chest x-ray reveals pneumonia. The patient's blood pressure does not improve after 2 Litres of intravenous fluid and their serum lactate comes back elevated at 4.5 mmol/L (normal is <2 mmol/L). Your colleague asks you if, in addition to fluids and antibiotics, there is any benefit to giving intravenous corticosteroids to this patient who you believe is in septic shock.

Enclosed Materials:

1. Venkatesh B, Finfer S, Cohen D, Rajbhandari Y, Arabi R, Bellomo R, Billot L, Correa M, Glass P, Harward M, Joyce C, Li Q, McArthur C, Perner A, Rhodes A, Thompson K, Webb S, Myburgh J, et al. Adjunctive Glucocorticoid Therapy in Patients with Septic Shock. *N Engl J Med* 2018; 378(9): 797-808.
2. Guyatt G, Drummond R. *User's Guides to the Medical Literature: A Manual for Evidence Based Clinical Practice*, 3rd Edition (JAMA). New York, NY: The McGraw-Hill Companies, Inc, 2015. 8. Therapy - How to Use a Noninferiority Trial
3. Worksheet for the evaluation of an article on unit title.