Cardiopulmonary resuscitation

- Potential common key genes associated with myocardial dysfunction and brain injury following cardiac arrest resuscitation in a rat model
- Endogenous Recovery of Hippocampal Function Following Global Cerebral Ischemia in Juvenile Female Mice Is Influenced by Neuroinflammation and Circulating Sex Hormones
- BOOTStrap-SCI: Beyond One Option of Treatment for Spinal Trauma and Spinal Cord Injury: Consensus-Based Stratified Protocols for Intensive Care and Surgical Management
- Gut Microbial Tryptophan Metabolism Is Involved in Post-Cardiac Arrest Brain Injury via Pyroptosis Modulation
- Legumain In Situ Engineering Promotes Efferocytosis of CAR Macrophage to Treat Cardiac Fibrosis
- Impact of Body Mass Index on Stroke in Extracorporeal Cardiopulmonary Resuscitation: Data from the Extracorporeal Life Support Organization Registry
- Developing a Systematic Approach for the Implementation of Medical Extended Reality Learning Modules in Cardiothoracic Health Care: Recommendations From an International Expert Group
- Tenecteplase for ischemic stroke at 4.5 to 24 hours without thrombectomy: a cost-utility analysis from the perspective of Chinese healthcare system

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Cardiopulmonary resuscitation (CPR) is an emergency procedure that combines chest compressions often with artificial ventilation in an effort to manually preserve intact brain function until further measures are taken to restore spontaneous blood circulation and breathing in a person who is in cardiac arrest.

Approximately 15% of deaths in a developed country are due to sudden cardiac arrest, making it the most common cause of death worldwide. Though high-quality cardiopulmonary resuscitation has improved overall survival rates, the majority of survivors remain comatose after return of spontaneous circulation secondary to hypoxic-ischemic brain injury. Since the advent of targeted temperature management, neurologic recovery has improved substantially, but the majority of patients are left with neurologic deficits ranging from minor cognitive impairment to persistent coma. Of those who survive cardiac arrest, but die during their hospitalization, some progress to brain death and others die after withdrawal of life-sustaining treatment due to anticipated poor neurologic prognosis [1)].

Resuscitation is the process of correcting physiological disorders in an acutely unwell patient. It is an important part of intensive care medicine, trauma surgery and emergency medicine. Well known examples are cardiopulmonary resuscitation and mouth-to-mouth resuscitation.

Advanced dementia patients cannot express intention about their end-of-life care and depend on family surrogates to decide for them.

A study showed that spouse and direct relatives, comorbidities of musculoskeletal disease or diabetes, psychological symptoms of repetitive wording and behavior, previous discussion about patients' intention, and believers of Taiwan folk belief are all positive influencing factors for surrogates to consent DNR directive for patients. The findings are important in promoting DNR directive for patients with dementia.

The results may help to promote do-not-resuscitate (DNR) decisions for dementia patients, especially in Chinese populations [2].

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Carroll E, Lewis A. Neuroprognostication after Cardiac Arrest: Who Recovers? Who Progresses to Brain Death? Semin Neurol. 2021 Oct;41(5):606-618. doi: 10.1055/s-0041-1733789. Epub 2021 Oct 7. PMID: 34619784.
2)
Fang YC, Pai MC, Wang LC, Yang YP, Li CY, Lee FP, Wang JJ. Factors Influencing Family Surrogates' Intention with Regard to Do-Not-Resuscitate Directive for Patients with Dementia. Clin Gerontol. 2018 Apr 10:1-9. doi: 10.1080/07317115.2018.1461164. [Epub ahead of print] PubMed PMID: 29723128.