

# 读书报告·期刊荟萃

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**March**

# When Policy Gets It Right: Variability in U.S. Hospitals' Diagnosis of Ventilator-Associated Pneumonia

- **Objective**

- The Centers for Disease Control has recently proposed a major change in how ventilator-associated pneumonia is defined. This has profound implications for public reporting, reimbursement, and accountability measures for ICUs. We sought to provide evidence for or against this change by quantifying limitations of the national definition of ventilator-associated pneumonia, particularly with regard to comparisons between, and ranking of, hospitals and ICUs.
- 提供证据支持或反对该定义的修改

- **Design**

- A prospective survey of a nationally representative group of 43 hospitals, randomly selected from the American Hospital Association Guide (2009). Subjects classified six standardized vignettes of possible cases of ventilator-associated pneumonia as pneumonia or no pneumonia.
- 给予6个病例，受调查者选择是或不是VAP

- **Subjects**

- Individuals responsible for ventilator-associated pneumonia surveillance at 43 U.S. hospitals.
- 43家医院中的单个人

- **Measurements and Main Results**

- We measured the proportion of standardized cases classified as ventilator-associated pneumonia. 43 fully completed the survey. Agreement among hospitals about classification of cases as ventilator-associated pneumonia/not ventilator-associated pneumonia was nearly random (Fleiss [kappa] 0.13). Although region of the country did not predict case assignment, respondents who described their region as “rural” were more likely to judge a case to be pneumonia than respondents elsewhere (relative risk, 1.25, Kruskal-Wallis chi-square,  $p = 0.03$ ).
- 43个参与者判定VAP的一致性很差，kappa系数仅为0.13
- 不同的医院临近区域判定VAP的发生率存在不同。

- **Conclusions**

- assignment of ventilator-associated pneumonia **is extremely variable**, enough to render **comparisons between hospitals worthless**, even when standardized cases eliminate variability in clinical data abstraction. The magnitude of this variability highlights the limitations of using poorly performing surveillance definitions as methods of hospital evaluation and comparison, and our study provides very **strong support for moving to a more objective definition of ventilator-associated complications.**
- 不同的医院中，对于VAP的判定都存在较大的变异性
- 提醒使用不完善的监测定义来作为评定和比较医院是不恰当的
- 需要更加客观的定义

# Evaluating the Efficacy and Safety of Two Doses of the Polyclonal Anti-Tumor Necrosis Factor-[alpha] Fragment Antibody AZD9773 in Adult Patients With Severe Sepsis and/or Septic Shock: Randomized, Double-Blind, Placebo-Controlled Phase IIb Study

- Objective
  - This trial compared the efficacy/safety of two IV doses of AZD9773, a polyclonal antibody to tumor necrosis factor- $\alpha$ , in adult patients with severe sepsis/septic shock.
  - 严重脓毒症/脓毒症休克的病人身上比较了两种剂量AZD9773的安全性和有效性
- Design
  - Multicenter, randomized, double-blind, placebo-controlled phase IIb trial.
- Setting
  - ICUs in seven countries (Australia, Belgium, Canada, Czech Republic, Finland, France and Spain)

- **Patients**

- Patients 18 years old or older with severe sepsis and/or septic shock. Patients were required to have 1) objective clinical evidence of infection; 2) at least two of four systemic inflammatory response syndrome criteria; and 3) cardiovascular and/respiratory sepsis-related failure.
- 客观感染证据 / 4个炎症反应综合症标准中的至少2个 / 伴有与脓毒症相关的心脏和/或呼吸衰竭

- **Interventions**

- Patients were randomized 1:1:1 to a single loading infusion of AZD9773 250 U/kg followed by 50 U/kg every 12 hours (**low dose, n=100**), a single loading infusion of AZD9773 500 U/kg followed by 100 U/kg every 1 hours (**high dose, n=100**), or **placebo (n=100)** for **5 days**. Follow-up assessments were performed up to day 90.
- 3组，低剂量组（负荷剂量250u/kg，以后每12小时给予50u/kg），高剂量组（单独负荷剂量500u/kg，以后每1小时给予100u/kg），对照组，每组各100人



- **Measurements and Main Results**

- Mean number of ventilator-free days (primary endpoint) **did not differ between** low-dose(19.7d) or high-dose AZD9773 (17.3d) and placebo (18.3d)(one-sided  $p=0.18$  and  $0.74$ , respectively). **Mortality rates were comparable across treatment groups**; relative risk of death versus placebo at day 29 was 0.80 for low-dose AZD9773 (one-sided,  $p=0.25$ ) and 1.64 for high-dose AZD9773 ( $p=0.97$ ). Most patients experienced at least one treatment-emergent adverse event (87.8% in AZD9773-treated patients, 92.9% in placebo patients), most were mild/moderate in nature. **No differences in the incidence of adverse events or laboratory or vital sign abnormalities were observed between groups.**
- 主要指标：不进行机械通气的时间及死亡率；死亡率在治疗组间有可比性
- 大多数的病人至少发生过一种轻到中度不良事件
- 另外：测定了TNF- $\alpha$ 和IL-6的浓度，发现高低剂量组的TNF- $\alpha$ 与安慰剂组比下降；IL-6随时间下降，但在组间没有差异

- **Conclusions**

- **AZD9773 rapidly and efficiently decreased plasma tumor necrosis factor- $\alpha$  concentration in patients with severe sepsis/septic shock, but this effect did not translate into clinical benefit**
- 能有效快速降低血浆TNF- $\alpha$ 的浓度，但是并没有带来良好的临床效应

# Plasma Biomarkers for Acute Respiratory Distress Syndrome: A Systematic Review and Meta-Analysis

- **Objective**

- Numerous studies have focused on biomarkers for acute lung injury and acute respiratory distress syndrome. Although several biomarkers have been identified, their relative performance is unclear. **We aim to provide a quantitative overview of plasma-derived biomarkers associated with acute respiratory distress syndrome diagnosis or mortality.**
- 回顾血浆生物标记物与急性呼吸窘迫综合症诊断与死亡率的关系



- **Data Sources**

- MEDLINE (inception to January 2012) and personal databases.

- **Study Selection**

- English-language studies on plasma biomarkers associated with acute respiratory distress syndrome diagnosis or mortality.

- **Data Extraction**

- Demographic variables, plasma levels of biomarker, statistical data, acute respiratory distress syndrome occurrence, and mortality rates were retrieved. The methodological quality was assessed with the Quality Assessment of Diagnostic Accuracy Studies score. Clinical outcomes included 1) diagnosis of acute respiratory distress syndrome in the at-risk population and 2) mortality in acute respiratory distress syndrome patients. For each biomarker, pooled odds ratios for clinical outcome were calculated by meta-analysis, and biomarkers were ranked according to pooled odds ratio.

- 提取的资料

- 高危人群ARDS的诊断/ARDS的死亡率

- 临床结局：每种生物标记物的比值比，并进行排列

- **Data Synthesis**

- Fifty-four studies appeared eligible for meta-analysis, together including 3,753 patients. We identified 20 biomarkers for diagnosis of acute respiratory distress syndrome in the at-risk population and 19 biomarkers for mortality of acute respiratory distress syndrome patients. **The biomarkers most strongly associated with acute respiratory distress syndrome diagnosis in the at-risk population, when increased**, were Krebs von den Lungen-6 (odds ratio [95% CI], 6.1 [3.0–12.1]), lactate dehydrogenase (5.7 [1.7–19.1]), soluble receptor for advanced glycation end products (3.5 [1.7–7.2]), and von Willebrand Factor (3.1 [2.0–5.2]).
- 诊断相关依次为：肺泡细胞表面抗原、乳酸脱氢酶、晚期糖基化终产物的可溶性受体、血管假性血友病因子

- The biomarkers most strongly associated with acute respiratory distress syndrome mortality, when increased, were interleukin-4 (18.0 [6.0–54.2]), interleukin-2 (11.8 [4.3–32.2]), angiopoietin-2 (6.4 [1.3–30.4]), and Krebs von den Lungen-6 (5.1 [3.0–12.2]). Decreased levels of Protein C were associated with increased odds for acute respiratory distress syndrome diagnosis and mortality.
- 死亡率相关依次为：IL-4、IL-2、血管生成素、肺泡细胞表面抗原
- 减少的活化蛋白C
- **Conclusions**
  - This meta-analysis provides a **unique ranking** of plasma biomarkers according to their strength of association with acute respiratory distress syndrome diagnosis or acute respiratory distress syndrome mortality. The relative performance of biomarkers among studies shown in this ranking may help to improve acute respiratory distress syndrome diagnosis and outcome prediction
  - 对ARDS的诊断和结局预测进行了排序，有一定帮助

# Prevalence, Risk Factors, and Mortality for Ventilator-Associated Pneumonia in Middle-Aged, Old, and Very Old Critically Ill Patients

- **Objective**

- We investigated the **epidemiology of ventilator-associated pneumonia in elderly ICU patients**. More precisely, we assessed prevalence, risk factors, signs and symptoms, causative bacterial pathogens, and associated outcomes.

- **Design**

- Secondary analysis of a multicenter prospective cohort (EU-VAP project).

- **Setting**

- Twenty-seven European ICUs.

- **Patients**

- Patients who were mechanically ventilated for greater than or equal to 48 hours. We compared **middle-aged (45–64 yr;  $n = 670$ )**, **old (65–74 yr;  $n = 549$ )**, and **very old patients ( $\geq 75$  yr;  $n = 516$ )**.

- **Measurements and Main Results**

- Ventilator-associated pneumonia occurred in 103 middle-aged (14.6%), 104 old (17.0%), and 73 very old patients (12.8%). The prevalence ( $n$  ventilator-associated pneumonia/1,000 ventilation days) was 13.7 in middle-aged patients, 16.6 in old patients, and 13.0 in very old patients. Logistic regression analysis **could not demonstrate older age as a risk factor for ventilator-associated pneumonia. Ventilator-associated pneumonia in elderly patients was more frequently caused by *Enterobacteriaceae* (24% in middle-aged, 32% in old, and 43% in very old patients;  $p = 0.042$ )**.

- Regarding clinical signs and symptoms at ventilator-associated pneumonia onset, **new temperature rise was less frequent among very old patients** (59% vs 76% and 74% for middle-aged and old patients, respectively;  $p = 0.035$ ). **Mortality among patients with ventilator-associated pneumonia was higher among elderly patients**: 35% in middle-aged patients versus 51% in old and very old patients ( $p = 0.036$ ). Logistic regression analysis confirmed the importance of older age in the risk of death (adjusted odds ratio for old age, 2.1; 95% CI, 1.2–3.9 and adjusted odds ratio for very old age, 2.3; 95% CI, 1.2–4.4). **Other risk factors** for mortality in ventilator-associated pneumonia were diabetes mellitus, septic shock, and a high-risk pathogen as causative agent.
- **Conclusions**
  - In this multicenter cohort study, **ventilator-associated pneumonia did not occur more frequently among elderly, but the associated mortality in these patients was higher**. New temperature rise was less common in elderly patients with ventilator-associated pneumonia, whereas more episodes among elderly patients were caused by **Enterobacteriaceae**.



## Pediatric and Neonatal Extracorporeal Membrane Oxygenation: Does Center Volume Impact Mortality?

- 小儿和新生儿体外膜肺：**ECMO**中心的收容率会影响死亡率吗？

## Effects of Viscosity on Cerebral Blood Flow After Cardiac Arrest

- 心跳骤停后血液粘滞度对脑血流的影响

## Central Venous Catheter Placement by Advanced Practice Nurses Demonstrates Low Procedural Complication and Infection Rates—A Report From 13 Years of Service

- 经验丰富的护士进行中心静脉置管能降低并发症和感染机率——来自**13**年提供的服务报道

## Impact of Distinct Definitions of Acute Lung Injury on Its Incidence and Outcomes in Brazilian ICUs: Prospective Evaluation of 7,133 Patients

- 不同的定义对急性肺损伤发生率以及临床结局的影响：来自巴西**ICU**的前瞻性的评估

## Augmented Renal Clearance in the ICU: Results of a Multicenter Observational Study of Renal Function in Critically Ill Patients With Normal Plasma Creatinine Concentrations

- 增加的肾脏清除率：血浆肌酐浓度正常的危重病人肾功能的多中心观察性研究

## The Association of Lacking Insurance With Outcomes of Severe Sepsis: Retrospective Analysis of an Administrative Database

- 缺乏疾病保险与感染性休克临床结局的关系：一项回顾性分析

## Agitated Saline Bubble–Enhanced Transthoracic Echocardiography: A Novel Method to Visualize the Position of Central Venous Catheter

- 确定中心静脉导管的位置:

## The Glucoregulatory Benefits of Glucagon-Like Peptide-1 (7-36) Amide Infusion During Intensive Insulin Therapy in Critically Ill Surgical Patients: A Pilot Study

- 强化胰岛素治疗时输注肠促人胰高血糖素样短肽对血糖调控的益处：一项探索性研究

## Cornell Assessment of Pediatric Delirium: A Valid, Rapid, Observational Tool for Screening Delirium in the PICU

- 一种快速、准确筛查小儿谵妄的评分方法

**April**

# Liberal Versus Restricted Fluid Resuscitation Strategies in Trauma Patients: A Systematic Review and Meta-Analysis of Randomized Controlled Trials and Observational

- **Objective**

- Hemorrhage is responsible for most deaths that occur during the first few hours after trauma. Animal models of trauma have shown that restricting fluid administration can reduce the risk of death; however, studies in patients are difficult to conduct due to logistical and ethical problems. To maximize the value of the existing evidence, we performed a meta-analysis to compare liberal versus restricted fluid resuscitation strategies in trauma patients.

- **Data Sources**

- Medline and Embase were systemically searched from inception to February 2013.

-

- **Study Selection**

- We selected randomized controlled trials and observational studies that compared different fluid administration strategies in trauma patients. There were no restrictions for language, population, or publication year.

- **Data Extraction**

- **Four randomized controlled trials and seven observational studies** were identified from 1,106 references. One of the randomized controlled trials suffered from a high protocol violation rate and was excluded from the final analysis.

- **Data Synthesis**

- The quantitative synthesis indicated that **liberal fluid resuscitation strategies might be associated with higher mortality than restricted fluid strategies**, both in randomized controlled trials (risk ratio, 1.25; 95% CI, 1.01–1.55; **three trials**;  $I^2$ , 0) and observational studies (odds ratio, 1.14; 95% CI, 1.01–1.28; seven studies;  $I^2$ , 21.4%). When only adjusted odds ratios were pooled for observational studies, odds for mortality with liberal fluid resuscitation strategies increased (odds ratio, 1.19; 95% CI, 1.02–1.38; six studies;  $I^2$ , 26.3%).

-

- **Conclusions**

- Current evidence indicates that initial liberal fluid resuscitation strategies may be associated with higher mortality in injured patients. However, available studies are subject to **a high risk of selection bias** and **clinical heterogeneity**. This result should be interpreted with great caution.
- 目前证据显示对创伤病人初始开放性液体复苏会增加死亡率
- 存在选择偏倚和临床异质性

# Immunological Characterization of Compensatory Anti-Inflammatory Response Syndrome in Patients With Severe Sepsis: A Longitudinal Study

- **Objectives**

- To perform a complete immunological characterization of compensatory anti-inflammatory response syndrome in patients with sepsis and to explore the relationship between these changes and clinical outcomes of 28-day mortality and secondary infections.
- 描述脓毒症病人抗炎反应综合症的免疫学特征及与28天死亡率、继发感染的关系

- **Design**

- Prospective single-center study

- **Setting**

- ICUs from Hospital Universitario San Vicente Fundación at Medellín, Colombia.

- **Patients**

- One hundred forty-eight patients with severe sepsis.



- **Interventions: None.**
- **Measurements and Main Results**
  - At days 0, 1, 3, 5, 10, and 28, we determined the expression of HLA-DR in monocytes and the apoptosis and the proliferation index in T lymphocytes, as well as the levels of tumor necrosis factor-[alpha], interleukin-6, interleukin-1[beta], interleukin-10, and transforming growth factor-[beta] in both plasma and cell culture supernatants of peripheral blood mononuclear cells. The mean percentage of HLA-DR<sup>+</sup> was 60.7 at enrollment and increased by 0.9% (95% CI, 0.7–1.2%) per day. The mean percentage of CD4 T cells and CD8 T cells AV+/7-AAD– at enrollment was 37.2% and 20.4%, respectively, but it diminished at a rate of –0.5% (95% CI, –0.7% to –0.3%) and –0.3% (95% CI, –0.4% to –0.2%) per day, respectively.
  - 测定0、1、3、5、10、28天单核细胞中人类白细胞DR抗原的表达、细胞凋亡、T淋巴细胞的扩增指数、血浆及外周单核细胞培养上清液中TNF-a、IL-6、IL-1 β、IL-10、转化生长因子β的水平

- Plasma levels of interleukin-6 and interleukin-10 were 290 and 166 pg/mL and decreased at a rate of  $-7.8$  pg/mL (95% CI,  $-9.5$  to  $-6.1$  pg/mL) and  $-4$  pg/mL (95% CI,  $-5.1$  to  $-2.8$  pg/mL) per day, respectively. After controlling for confounders, **only sustained plasma levels of interleukin-6 increase the risk of death** (hazard ratio 1.003; 95% CI, 1.001–1.006).
- IL-6的水平增加死亡风险
- **Conclusions**
  - We found no **evidence to support a two-phase model of sepsis pathophysiology**. However, immunological variables did behave in a **mixed and time-dependent manner**. Further studies should evaluate changes over time of **interleukin-6 plasma levels** as a prognostic biomarker for critically ill patients.
  - 无证据支持脓毒症病理生理的两期变化。
  - 时间依赖的方式
  - 血浆IL-6水平

# A Multibiomarker-Based Outcome Risk Stratification Model for Adult Septic Shock

- **Objectives**

- Clinical trials in septic shock continue to fail due, in part, to inequitable and sometimes unknown distribution of baseline mortality risk between study arms. Investigators advocate that interventional trials in septic shock require effective outcome risk stratification. We derived and tested a multibiomarker-based approach to estimate mortality risk in adults with septic shock.
- 存在基线死亡风险的分布偏倚、需要分层

- **Setting**

- Multiple ICUs in Canada, Finland, and the United States.

- **Subjects**

- Eight hundred eighty-one adults with septic shock or severe sepsis.

- **Intervention**

- None.

- **Design**

- Previous genome-wide expression studies identified 12 plasma proteins as candidates for biomarker-based risk stratification. The current analysis used banked plasma samples and clinical data from existing studies. Biomarkers were assayed in plasma samples obtained from 341 subjects with septic shock within 24 hours of admission to the ICU. Classification and regression tree analysis was used to generate a decision tree predicting 28-day mortality based on a combination of both biomarkers and clinical variables. **The derived tree was first tested in an independent cohort of 331 subjects**, then calibrated using all subjects ( $n = 672$ ), and subsequently validated in another independent cohort ( $n = 209$ ).
- 结合生物标记物和临床变量，采用分组和回归树分析来预测28天死亡率

- **Measurements and Main Results**

- The derived decision tree included five candidate biomarkers, admission lactate concentration, age, and chronic disease burden. In the derivation cohort, sensitivity for mortality was 94% (95% CI, 87–97), specificity was 56% (50–63), positive predictive value was 50% (43–57), and negative predictive value was 95% (89–98). Performance was comparable in the test cohort. The calibrated decision tree had the following test characteristics in the validation cohort: sensitivity 85% (76–92), specificity 60% (51–69), positive predictive value 61% (52–70), and negative predictive value 85% (75–91).

- **Conclusions**

- We have derived, tested, calibrated, and validated a risk stratification tool and found that it reliably estimates the probability of mortality in adults with septic shock.

# Troponin Elevation in Severe Sepsis and Septic Shock: The Role of Left Ventricular Diastolic Dysfunction and Right Ventricular Dilatation

- **Objective**

- Serum troponin concentrations predict mortality in almost every clinical setting they have been examined, including sepsis. **However, the causes for troponin elevations in sepsis are poorly understood.** We hypothesized that detailed investigation of myocardial dysfunction by **echocardiography** can provide insight into the possible causes of troponin elevation and its association with mortality in sepsis.
- 肌钙蛋白升高的原因不明/利用超声来进行观察

- **Design**

- Prospective, analytic cohort study.

- **Setting**

- Tertiary academic institute.

- **Patients**

- A cohort of ICU patients with severe sepsis or septic shock.

- **Interventions**

- Advanced echocardiography using **global strain, strain-rate imaging and 3D left and right ventricular volume analyses** in addition to the standard echocardiography, and concomitant high-sensitivity troponin-T measurement in patients with severe sepsis or septic shock.
- 整体应变、应变率成像以及3D左右心室容量分析、常规超声、高敏肌钙蛋白-T

- **Measurements and Main Results**

- Two hundred twenty-five echocardiograms and concomitant high-sensitivity troponin-T measurements were performed in a cohort of 106 patients within the first days of severe sepsis or septic shock ( $2.1 \pm 1.4$  measurements/patient). Combining echocardiographic and clinical variables, **left ventricular diastolic dysfunction defined as increased mitral E-to-strain-rate e'-wave ratio, right ventricular dilatation (increased right ventricular end-systolic volume index), high Acute Physiology and Chronic Health Evaluation-II score, and low glomerular filtration rate best correlated with elevated log-transformed concomitant high-sensitivity troponin-T concentrations** (mixed linear model:  $t = 3.8, 3.3, 2.8,$  and  $-2.1$  and  $p = 0.001, 0.0002, 0.006,$  and  $0.007,$  respectively).
- 左室舒张障碍，右心室扩张，急慢性生理评分，肾小球滤过率

- Left ventricular systolic dysfunction determined by reduced strain-rate s'-wave or low ejection fraction did not significantly correlate with log(concomitant high-sensitivity troponin-T). Forty-one patients (39%) died in-hospital. Right ventricular end-systolic volume index and left ventricular strain-rate e'-wave predicted in-hospital mortality, independent of Acute Physiology and Chronic Health Evaluation-II score (logistic regression: Wald = 8.4, 6.6, and 9.8 and  $p = 0.004$ , 0.010, and 0.001, respectively). Concomitant high-sensitivity troponin-T predicted mortality in univariate analysis (Wald = 8.4;  $p = 0.004$ ), but not when combined with right ventricular end-systolic volume index and strain-rate e'-wave in the multivariate analysis (Wald = 2.3, 4.6, and 6.2 and  $p = 0.13$ , 0.032, and 0.012, respectively).
- **Conclusions**
  - Left ventricular diastolic dysfunction and right ventricular dilatation are the echocardiographic variables correlating best with concomitant high-sensitivity troponin-T concentrations. Left ventricular diastolic and right ventricular systolic dysfunction seem to explain the association of troponin with mortality in severe sepsis and septic shock.



## Use of Intensive Care Services and Associated Hospital Mortality After Massachusetts Healthcare Reform

- 马萨诸塞州健康保险改革后的ICU效用及死亡率

## Cost-Effectiveness of Histamine Receptor-2 Antagonist Versus Proton Pump Inhibitor for Stress Ulcer Prophylaxis in Critically Ill Patients

- 组胺受体-2拮抗剂与质子泵抑制剂预防应激性溃疡的成本效益

## Seeking to Reduce Nonbeneficial Treatment in the ICU: An Exploratory Trial of Proactive Ethics Intervention

- 减少ICU无益的治疗：临床伦理学家的介入

## At-Risk Drinking Is Independently Associated With ICU and One-Year Mortality in Critically Ill Nontrauma Patients

- 饮酒与ICU非创伤病人ICU及一年死亡率独立相关

## Physical Complications in Acute Lung Injury Survivors: A Two-Year Longitudinal Prospective Study

- 急性肺损伤生存者的并发症：纵向两年的前瞻性研究

## Using Electronic Health Record Data to Develop and Validate a Prediction Model for Adverse Outcomes in the Wards

- 使用健康信息电子数据来建立能预测普通病房病人不良后果的模型

## **The Association Between Renal Replacement Therapy Modality and Long-Term Outcomes Among Critically Ill Adults With Acute Kidney Injury: A Retrospective Cohort Study**

- 急性肾脏损伤的危重病人使用肾脏替代治疗的形式与长期结局

## **A Feasibility Study of Cerebral Oximetry During In-Hospital Mechanical and Manual Cardiopulmonary Resuscitation**

- 人工和机械心肺复苏时不同的脑血氧输送的研究

## **Timing of Continuous Renal Replacement Therapy and Mortality in Critically Ill Children**

- 危重症儿童持续肾脏替代治疗的时机与死亡率

## The Attributable Mortality of Acute Kidney Injury: A Sequentially Matched Analysis

- 急性肾脏损伤的死亡率：一项配对分析

## Effects of Fluid Resuscitation With 0.9% Saline Versus a Balanced Electrolyte Solution on Acute Kidney Injury in a Rat Model of Sepsis

- 使用生理盐水或平衡电解质液复苏对脓毒症大鼠模型肾脏功能影响

*Happy  
New Year*

**Thank You !**



*Meitu2013*