



Procalcitonin Testing Associated with Lower Costs, Length of Stay



Procalcitonin (PCT) is increasingly used in health services to diagnose and manage sepsis, and is authorised for use for this purpose in the United States. A recently published study found that patients who had 1-2 PCT evaluations on their first day of admission to the intensive care unit (ICU) had a significantly lower hospital and ICU length of stay, lower hospital costs, but slightly higher lab costs than a comparison patient group. The study is published online in *Chest*.

Robert A. Balk, Rush Medical College, Chicago, USA and colleagues performed a retrospective, propensity score matched multivariable analysis on 33,569 PCT patients from more than 550 U.S. hospitals included in the Premier Healthcare Database and compared them to 98,543 propensity-matched non-PCT patients. They note that the database does not include the reason for PCT testing or its result, nor who ordered the test or the patient characteristics that led to testing.

Results

Total length of stay

- PCT: 11.6 days (5.1 days ICU)
- non-PCT: 12.7 days (5.3 days ICU)

Hospital costs

- PCT: \$30,454
- non-PCT: \$33,213

Antibiotic exposure

- PCT: 16.2 days
- non-PCT: 16.9 days

Patients in the PCT group were more likely to be discharged to home and there was no difference in mortality.

See Also: [Sodium Selenite Administration and Procalcitonin-Guided Therapy in Severe Sepsis](#)

The researchers explain that the study is important as it validates the ability of PCT testing to “favourably impact outcome of critically ill patients when used according to the FDA cleared guideline.” They emphasise that the cost savings were real and consequential, “exceeding the potential increased costs of laboratory testing associated with PCT testing on ICU admission.”

They conclude that the significance and mechanisms surrounding the observed clinical outcomes requires additional evaluation.

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