

# Retrospective case series and proposed algorithm for utilization of procalcitonin in a nonacademic medical center



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## BACKGROUND AND PURPOSE

- Procalcitonin's (PCT) strengths and weaknesses in guiding antimicrobial therapy have been widely identified and debated in current studies.<sup>1-9</sup>
- Current studies have led to development and adoption of algorithms guiding antimicrobial therapy after a PCT level has resulted. However, studies are lacking in describing development and proposal of an algorithm for guiding initial ordering of a PCT level.
- Pertinent items such as patient setting, population, and antimicrobial stewardship strategies have potential influence on efficacy and usefulness of PCT values.<sup>2</sup>
- We aim to retrospectively evaluate patients who had a PCT level ordered and resulted to help identify characteristics to aid in development of an algorithm. This algorithm will be used to design a clinical decision support (CDSS) tool to aid providers in ordering PCT levels where most beneficial.

## METHODS

- Study is approved by the Institutional Review Board
- Retrospective case series evaluating patients with a PCT level ordered and resulted between January and March of 2020
- **Inclusion criteria**
  - 18 years of age or older
  - Patient at TriStar Skyline Medical Center during specified time frame
  - PCT level ordered and resulted during specified time frame
- **Exclusion criteria**
  - Patients having a PCT level ordered and resulted before specified time frame
  - Patients with a PCT level not resulted
  - Patients deceased before PCT level resulted

## STUDY DESIGN

Patients with a PCT ordered for any indication identified between 1/1/20 and 3/31/20

Gather all PCT values and pertinent patient characteristics

Identify similar patient characteristics leading to PCT not being useful and include as exclusion criteria for PCT ordering in algorithm

CDSS tool developed from algorithm to aid in optimizing PCT utilization

Retrospectively apply CDSS tool to patient population

## STUDY SETTING

- 288-bed community non-academic medical center in Nashville, TN
- Approximately 17,000 patient admissions each year

## RESULTS

Results are pending data analysis

## REFERENCES

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## DISCLOSURES

Authors of this presentation have the following to disclose concerning possible financial or personal relationships with commercial entities that may have a direct or indirect interest in the subject matter of this presentation: Caleb Hammons: Nothing to disclose, Quentin Minson: Nothing to disclose, Matthew Percy: Nothing to disclose.