



## **Useful 12 Lead EKG criteria for the diagnosis of PE**

In a retrospective study published by Sreeram et al the admission and serial ECGs of patients hospitalized with proven pulmonary embolism, ECGs of 49 patients were reviewed by three independent observers, they found that Pulmonary embolism was considered as the primary diagnosis in 76 percent of the patients based on the presence of three or more of the following diagnostic ECG criteria:

- 1) incomplete or complete right bundle branch block
- 2) S waves in leads I and aVL of  $> 1.5$  mm
- 3) a shift in the transition zone to V5
- 4) Q waves in leads III and aVF, but not in lead II
- 5) right-axis deviation, with a frontal QRS axis of  $> 90$  degrees or an indeterminate axis
- 6) a low-voltage QRS of  $< 5$  mm in the limb leads
- 7) T-wave inversion in leads III and aVF or leads V1 to V4

Overall, the 12-lead ECG was suggestive of pulmonary embolism in 82 percent of the subjects.

When you consider that PE is the second leading medical cause of death after cardiovascular disease in the US, more attention to “ruling it in” is warranted.