

Pulmonary Embolism Response Team and Advanced Therapy for Acute Pulmonary Embolism Detected by Artificial Intelligence

Emory Clinical
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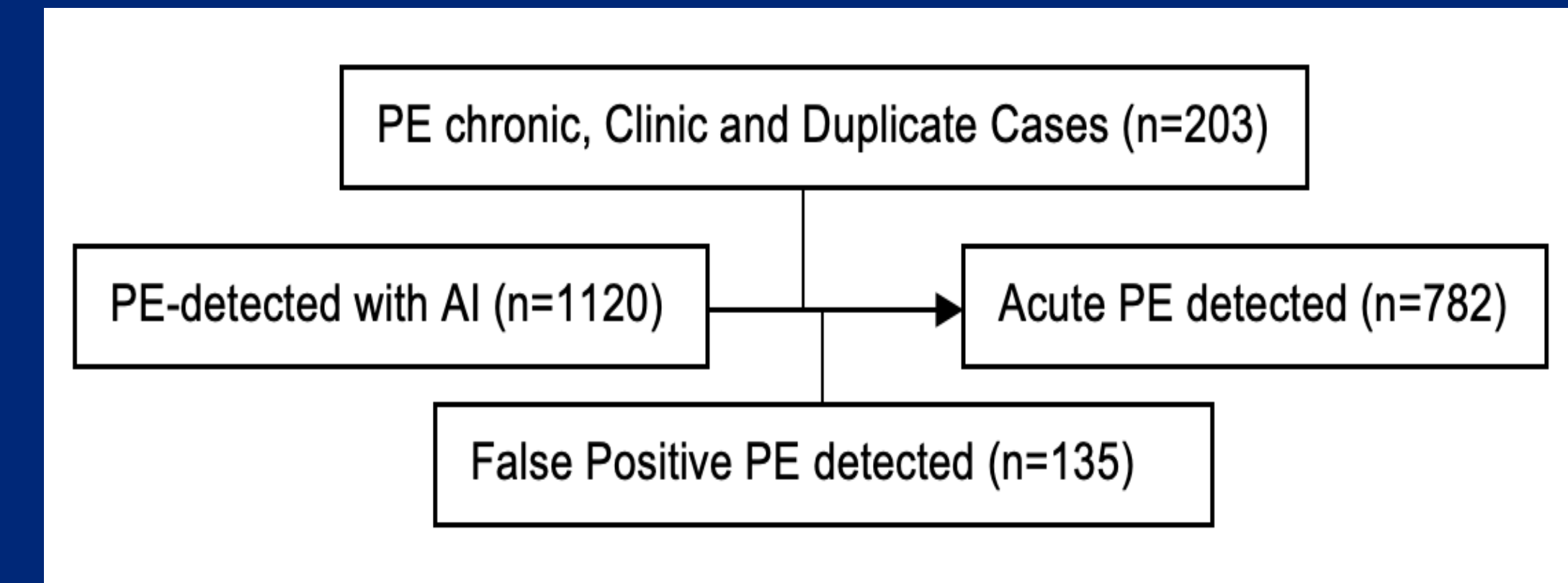
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Introduction

An artificial intelligence (AI) application for real-time detection of acute pulmonary embolism (PE) on computed tomography scan was implemented in a large healthcare system and used by the pulmonary embolism response team (PERT) at a subset of hospitals. The aim of this study is to describe the use of advanced therapy for treatment of acute PE detected by AI in hospitals with a PERT and those without a PERT.

Methods

An FDA-approved AI algorithm was used to identify cases of PE from December 2023 to April 2024. The patients included presented with acute PE to 5 different Emory-affiliated hospitals of which 4 are connected to PERT. Use of advanced therapy-catheter directed therapy (CDT), tissue plasminogen activator (tPA), extracorporeal membrane oxygenation (ECMO) and surgical embolectomy- were analyzed.



Results

Most patients presented with intermediate risk (56%) and were distributed similarly across the hospitals. In PERT hospitals, 62 patients (9.6%) received advanced therapy, while in non-PERT hospitals, 12 patients (8.6%) received advanced therapy. There was no significant difference in the use of the different advanced therapy between the different hospitals. In-hospital mortality in PERT hospitals was 9.6% compared to 11.5% in non-PERT hospitals.

Summary and Conclusions

The presence of PERT and implementation of automated PE detection application do not seem to significantly affect the utilization of advanced therapies for acute PE. Larger data is needed to ascertain these findings.

Distribution of advanced therapy in PERT and non-PERT hospitals

