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[Q Browse Posters](#) » [Search result](#) » [Poster ECR 2022 / C-10978](#)

## POSTER SECTIONS

Coverpage

Learning objectives

Background

Findings and procedure details

Conclusion

Personal information and conflict of interest

References



ECR 2022 / C-10978

## Audit on the radiographers practice for CTPA performing in emergency department.

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## Learning objectives

ComputedTomography Pulmonary Angiography (CTPA) is a first line exam used to stratify the early risk of patients with Pulmonary embolism (PE) who is a common presentation to emergency department. The diagnosis of acute Pulmonary embolism (PE) is based on direct evidence of a thrombus in two projections, either as a filling defect or as amputation of a pulmonary arterial branch. When performing CTPA, it is important for the radiographer to be aware of all aspects which can lead to an indeterminate CTPA or incorrect interpretation...

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## Background

The study was retrospective study of 2270 consecutive CTPA performed in our unit. All CTPA were performed using multidetector CT equipment, the CT systems used in department was Siemens Somatom Definition AS - 64 slices and Siemens Somatom go.top - 128 slices with syngo.via and Picture Archiving and Communication System (PACS) - Carestream Vue. We excluded patients with multiple scans (e.g. CT pulmonary angiograms or CT brains). The amount of contrast agent was considered as standard of good practice, despite the limitations of patient's hemodynamic...

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## Findings and procedure details

The study population was 2270 patients for whom CTPA was ordered at the emergency department to rule out PE. The CTPA were performed between January 2019 to July 2021 of which 530 in 2019, 769 CTPA exams were performed in 2020 and 971 in the six months of 2021. The increase of CTPA was pandemic SARS-COVID 19 consequence (Fig.1) Data analyses showed failures in different aspects during the CTPA performance, where the most relevant were (Fig 2): 15% Poor upper limb positioning (some due to...

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## Conclusion

The notable weaknesses/limitations in the CTPA performed is justified with different working shifts, new radiographers practice, stress during long shifts and increase of emergency department CTPA request. The audit result concluded that the radiographers practice needs more than an algorithm to run with simple steps between patient preparation, injection criteria and scan protocol. The radiographers practice needs to be implemented with training and support on a daily basis practice, a possible method to encourage the radiographers performance is the use of evidence-based practice according...

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## Personal information and conflict of interest

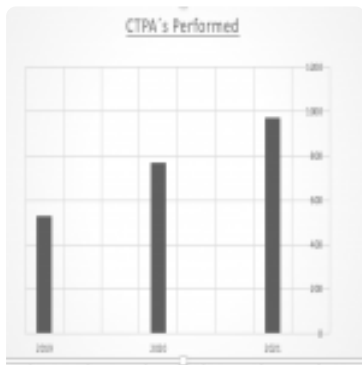
D. M. L. Miranda: Nothing to disclose C. da Silva: Nothing to disclose B. Mateus: Nothing to disclose R. P. P. Almeida: Nothing to disclose B. Vicente: Nothing to disclose A. F. C. L. Abrantes: Nothing to disclose A. P. Ribeiro: Nothing to disclose P. Santos: Nothing to disclose B. Carriço: Nothing to disclose

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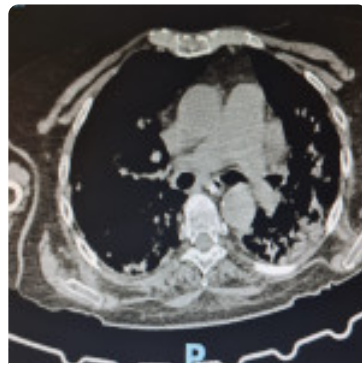
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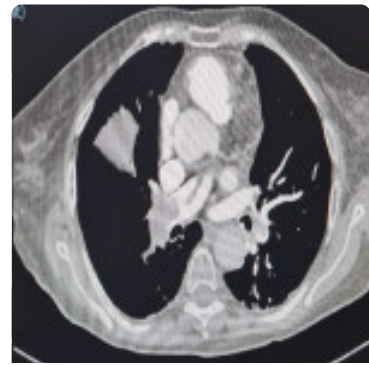
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**Fig 1:** Fig 1. Study Population



**Fig 2:** Fig 2. Wrong Injection time



**Fig 3:** Fig 3. Case of PE

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