

## عنوان مقاله:

Features of Lung Ultrasound and Chest Radiology in Diagnosing of Pleural Effusion in Critical Care Patients: A Systematic Review

## محل انتشار:

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## خلاصه مقاله:

**Introduction:** Pleural effusion (PLEFF) is mainly caused by volume overload, heart failure, trauma, and pleuro-pulmonary infection, it is common in emergency and ICU patients. Although the function of ultrasonography in detecting PLEFF has long been noted, controversial results have been reported. This study aimed to review the literature on ultrasound and radiography in detecting PLEFF. **Methods:** A search was done in Medline, ISI Web of Knowledge, EMBASE, and Scopus databases. Two reviewers independently searched, screened, and included the data and a third author resolved any conflict. **Results:** The findings proved that as a screening tool, chest ultrasound has greater diagnostic accuracy in identifying multiple pleural effusions than radiography. Chest ultrasound enables clinicians visualize pleural effusions and also helps differentiate between various types. In addition, chest ultrasound is crucial for thoracentesis and thoracostomy drainage as it enhances safeness and reduces life-threatening complications. This is important not only when inserting a needle or tube drain, but also when monitoring the amount of her PLEFF deflated. In addition, chest ultrasound is often more specific and sensitive than chest radiography, helping to diagnose coexisting lung disease without X-ray exposure. **Conclusion:** Thoracic Ultrasound (TUS) is a simple, non-invasive, bedside procedure for diagnosing PLEFF with greater sensitivity and specificity than a chest X-ray. This is crucial for visualizing exudate and helps differentiate various forms of her PLEFF. More recently, ultrasound has been used to guide thoracentesis and insert chest tubes to raise the safeness of this invasive method, especially if an ICU patient is on a ventilator or has a small localized pleural effusion. Additionally, TUS can monitor the PLEFF drainage and determine when to extract the drainage.

## کلمات کلیدی:

Ultrasonography, CT scan, Radiology, Pleural Effusion

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