

The time duration for each case was collected separately from OARM and CARM cases.

**Results:** A total of operated cases under both C ARM and O ARM were 327 (Cervical-211, Dorsal-61, Lumbar-55). Mean time O-ARM required was x hours (range 2 hours 45 minutes to 12 hours). Mean time required for C-ARM was x hours (range 1 hour 10 minutes to 9 hours).

**Conclusion:** From the comparative study, both techniques resulted in accurate screw placement; images acquisition with the O ARM was consistently faster than with the C ARM. Additionally, radiation exposure to health care professionals (including nurses) was less with the O ARM.

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### Diagnostic Imaging in Disasters: A Bibliometric Analysis

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**Study/Objective:** This study aims at analyzing recent articles depicting the roles of diagnostic imaging in disaster management.

**Background:** Disasters, natural or human-made, can cause significant mobility and mortality, leading to substantial economic and human loss. It is thus important to analyze how imaging has been utilized in disaster management and the lessons learned in order to develop future disaster management plans.

**Methods:** MEDLINE search was conducted via OVID to identify various natural and human-made disasters, and was restricted to articles published since 2000. Only original research articles depicting the roles of diagnostic imaging in the clinical diagnosis and management of patients in response to disasters were included. Review articles, meta-analysis, and studies without human subjects were excluded.

**Results:** A total of 67 articles were included in our analysis. The most studied disaster types were armed conflict (31 articles), earthquake (16 articles) and terrorist incident (10 articles). The most studied disasters were the Sichuan earthquake (China) in 2008 (13 articles), the War in Afghanistan, 2001-2014 (11 articles), and the Iraq War, 2003-2011 (7 articles). Countries producing the most articles were the United States of America (20 articles), People's Republic of China (16 articles), and the United Kingdom (6 articles). Thirty-three first authors were affiliated with the Radiology department (49.3%), and 2 affiliated with Nuclear Medicine (3.0%). Articles were published in 50 journals, including 19 Radiology journals and 1 Nuclear Medicine journal. Fifty-seven studies were retrospective (85.1%), and 10 studies were prospective (14.9%). Computed tomography (CT) was the most utilized modality (51.0%), followed by conventional radiography (25.5%) and ultrasound (16.7%). A list of the 20 most cited articles was also compiled.

**Conclusion:** Our results offer important insight into the roles of diagnostic imaging in disaster management and could

help guide future research in development of disaster management plans.

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### Comparison between Two-Point and Three-Point Compression Ultrasound for the Diagnosis of Deep Vein Thrombosis

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**Study/Objective:** To examine the sensitivity and specificity of Two-Point Compression (2PLCT) versus Three Point Compression (3PLCT) ultrasound test, for the diagnosis of lower limb Deep Vein Thrombosis (DVT). Both tests would then be compared to Duplex ultrasound - the gold standard test.

**Background:** DVT is a major cause of morbidity and mortality, and a frequent cause of admission in emergency departments (EDs). Although the ultimate gold standard for diagnosis is Focused Duplex Compression test (FDCU) conducted by a radiologist; the current test for diagnosis of DVT in the emergency department (ED) is a compression ultrasound. To date no comparison has been made between the two and three compression point ultrasound and FDCU.

**Methods:** A prospective diagnostic study of patients coming to the ED suspected of having DVT. The ED physician performed the two and three compression tests, and then the patient was sent to radiology for a comprehensive FDCU. Sensitivity, specificity, Positive Likelihood Ratio (+LR), Negative Likelihood Ratio (-LR), Positive Predictive Value (PPV), Negative Predictive Value (NPV) were calculated.

**Results:** There were 200 patients admitted to the ED with DVT suspicion enrolled. Diagnosis of DVT was made by FDCU in 46/200 (23%) patients. Common femoral vein and popliteal vein were the most common sites (25/80 (31.2%). The 2plct diagnosed 43/46 patients with DVT and was falsely positive in 2/152. The 3plct diagnosed 45/46 patients with DVT and was falsely positive in 3/151. The sensitivity and specificity of 2PCL was 93.48%, 98.7%, respectively. The sensitivity and specificity of 3PCL were 97.83%, 98.05%, respectively.

**Conclusion:** The 3PLCT is superior to 2PLCT for diagnosis of lower limb DVT and both highly correlate to the results of the FDCU exam.

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### Rad-Aid UTHealth Houston Chapter, in Morocco, 2017 Project

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