**POINT-OF-CARE ULTRASOUND IN CARDIAC ARREST: A REVIEW OF THE ASSESSMENT OF CARDIAC MOTION IN THE SETTING OF CARDIAC ARREST**

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**Background:** Despite improvements in cardiopulmonary resuscitation (CPR), sudden cardiac arrest remains a leading cause of mortality. Ultrasound (US) is a widely available emergency room (ER) tool used to evaluate the presence of cardiac wall motion. Several studies have evaluated the use of US as a predictor of mortality in cardiac arrest patients. We performed a systematic literature review examining the accuracy and clinical utility of point-of-care US as a predictor of CPR outcomes.
**Method:** A PubMed search of studies evaluating the accuracy of US as a predictor of outcomes following CPR was performed. Studies in adults, written in English, and that reviewed short-term outcomes were included.

**Results:** 14 studies were included assessing cardiac wall motion with point-of-care US and outcomes of following cardiac resuscitation. 13 of 14 studies showed a statistically significant correlation between the presence of cardiac motion and short-term survival. The strongest correlation was found in patients with ventricular fibrillation or ventricular tachycardia as a presenting rhythm. Absence of cardiac motion was strongly correlated with non-survival. **Conclusion:**Evaluation of cardiac motion on US is a valuable tool in the prediction of short-term outcomes. Given the availability of US in the ER, application of this technique to guide CPR is justified.

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| Cardiac Motion and Survival Outcome |
| Population | +Outcome/+Cardiac Motion | +Outcome/-Cardiac Motion | -Outcome/-Cardiac Motion | -Outcome/+Cardiac Motion |
| All Patients | 60.2% | 11.8% | 88.2% | 39.6% |
| PEA Only | 58.8% | 13.8% | 86.2% | 41.2% |
| Asystole Only | 66.7% | 10.1% | 89.9% | 33.3% |
| VF/VT Only | 72.1% | 7.6% | 92.4% | 27.9% |