sources. Cardiovascular medicine receives a large proportion of funding and is therefore susceptible to losses due to non-publication.

**Purpose:** The aim of the study was to establish the rate of non-publication of cardiovascular trials and to identify contributing factors in order to determine potential sources of dissemination bias.

**Methods:** The National Clinical Trials database was searched for interventional Phase II-IV cardiovascular clinical trials with a primary completion date between January 2010 and January 2014. Medline and Embase databases were queried for publications associated with the included trials. Trial variables including, condition, phase and source of funding were extracted and subject to chi-squared and multinomial logistic regression analyses to establish independent impact on non-publication.

**Results:** Of the 431 trials included in the study, 82.1% (n=354) were completed at the time of analysis. 61.5% (n=265) of trials were published, while 38.5% (n=166) remained unpublished, accounting for 110,149 and 25,565 study participants, respectively. Funding was predominantly obtained from industry sources (32.9%) and academic institutions (31.6%). 30.6%, 24.8% and 44.5% of trials were phase II, III and IV, respectively. Coronary artery disease was the most studied disease (41.5%). Chi-squared analysis demonstrated an association between non-publication and sponsor type (chi-square = 23.47, P < 0.0001), and between non-publication and study size (chi-square = 41.22, P < 0.0000001). Multinomial logistic regression revealed that industry-funded studies were more likely to remain unpublished than those funded by academic institutions (odds ratio [OR] 3.47, 95% confidence interval [CI] 1.92–6.27, P = 0.004). Studies of fewer than 20 participants were less likely to be published than larger counterparts (P < 0.0000001). Phase III and IV trials were more likely to remain unpublished than phase II trials (OR 3.50, 95% CI 1.95–6.64, P < 0.0001 and OR 2.86, 95% CI 1.69–5.11, P < 0.0003, respectively). Condition of interest had no effect on publication rate. Based on rudimentary estimates of clinical trial cost, non-publication of trials may account for between $323–933 million over the 4-year study period.

**Conclusion:** The high rate of non-publication among clinical trials in cardiovascular medicine that is strongly associated with study size and source of funding, particularly implicating industry funding as a predictor of non-publication. This study evidences a large financial deficit and considerable number of participants whose contribution of time has not been utilised appropriately, and supports further measures to promote publication of clinical data.

**P3234 | BEDSIDE**

Usefulness of posterior leads derived from the 18-lead ECG in the diagnosis of posterior myocardial infarction

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**Background:** Although abnormal Q-waves in the posterior leads (V7–9) suggest prior posterior myocardial infarction (MI), clinical features of MI patients with Q-waves limited only to V7–9 leads has not been fully elucidated. The synthesized 18-lead ECG, which has been developed recently, estimates V7–9 leads waveforms from the standard 12-lead ECG, without placing ECG leads on the back.

**Purpose:** We sought to evaluate the usefulness of posterior leads derived from the 18-lead ECG in the diagnosis of posterior MI.

**Methods:** Myocardial SPECT was retrospectively analyzed in prior non-anterior MI patients (n=218). The extent and severity score in the inferior or lateral area were analyzed using a 17-segment model. The relation between these SPECT score parameters and Q-waves in the V7–9 leads was analyzed using an 18-lead ECG. Patients with prior anterior MI, history of coronary artery bypass grafting, right or left bundle branch block, right or left ventricular hypertrophy, Wolff-Parkinson-White syndrome, a cardiac devise implantation such as pacemaker or cardiac resynchronization therapy, were excluded.

**Results:** Among 218 patients, Q-waves were solely limited to V7–9 leads in 15 patients (7%). No Q-wave in the inferior leads or high-R-wave in the V1 lead was observed in these patients. Extent score in the lateral area was greater in 15 patients with Q-waves in V7–9 leads (2.2±1.9 vs 1.1±1.5; P=0.005) than in 203 patients without such findings, while extent score in the inferior area was similar (1.2±1.4 vs 2.0±1.7, P=NS). Severity score in the lateral area was also greater in these patients (3.6±5.7 vs 2.5±6.5, P=0.09). However, those without, while extent score in the inferior area was similar (2.1±2.2 vs 3.0±4.0; P=NS). Among patients with 15 Q-waves limited to V7–9 leads, coronary angiography showed LCX lesion in 12 patients while distal RCA lesion in 3 patients.

**Conclusion:** Even if a standard 12-lead ECG is masked to detect abnormal findings, the 18-lead ECG analysis reveals Q-waves in V7–9 leads, which is regarded as a simple indicator for posterior MI.

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**Abstrct P3233 – Table 1**

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<th>(0.3, 0.4)</th>
<th>(0.4, 0.5)</th>
<th>(0.5, 0.6)</th>
<th>(0.6, 0.7)</th>
<th>(0.7, 0.8)</th>
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<td>18,145</td>
<td>4,314</td>
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<td>3,390</td>
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<td>559</td>
<td>525</td>
<td>853</td>
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<tr>
<td>% of accepted rules in manual review</td>
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<td>1% (2/200)</td>
<td>8% (17/200)</td>
<td>13% (26/200)</td>
<td>30% (30/200)</td>
<td>22% (45/200)</td>
<td>22% (45/200)</td>
<td>52% (105/200)</td>
<td>55% (110/200)</td>
<td>86% (173/200)</td>
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**P3235 | BENCH**

Artificial intelligence in cardiology by clinical decision support system to predict correct diagnosis in subjects with stable chest pain from ARTICA co-operative database

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**Background:** Artificial Intelligence has shown several applications in cardiology from the Randomized Decision Support System (CDSS) to images interpretation. Machine Learning helps computers learn and develop their own rules without having to be always instructed by human programmers.

**Purpose:** To verify if CDSS is able to identify a correct diagnosis of coronary artery disease (CAD) on subjects at stable chest pain clinical evaluation.

**Methods:** 201 subjects (142 males and 59 females, 62.8±8.7 years) were referred for stable chest pain evaluation over 4 months period. A computerized auto-