

sine on neutrophil chemotaxis in the presence of cangrelor or control whereas ticagrelor and dipyridamole both preserved this effect of adenosine in the presence of erythrocytes (Figure).

Conclusion: Inhibition of adenosine reuptake by ticagrelor and dipyridamole leads to potentiation of the effects of adenosine on neutrophil chemotaxis in the presence of erythrocytes. This represents a potential mechanism by which ticagrelor could influence host defence against bacterial lung infection.

RISK ASSESSMENT IN ATRIAL FIBRILLATION: WHAT REALLY MATTERS?

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Stroke is often the first clinical manifestation of atrial fibrillation. The FibStroke study

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Purpose: Atrial fibrillation (AF) is often asymptomatic and may remain undiagnosed and lead to stroke when no anticoagulation is used.

Methods: We analyzed the timing of 1,471 ischemic strokes and transient ischemic attacks (TIA) in relation to the diagnosis AF in 1,310 patients treated in 4 centers during 2003-2012. The patients were divided into 2 groups according to the history of AF: (1) patients with a history of AF and (2) patients with a new diagnosis of AF at the presentation of stroke or TIA.

Results: AF was diagnosed for the first time at the time of stroke/TIA in 384 (26.1%) patients. Patients with a history of AF were significantly older and they had more often heart failure, vascular disease, history of stroke and chronic AF (Table).

Clinical characteristics

	Previous AF n (%)	New AF n (%)	p
N (% of all events)	1087 (73.9)	384 (26.1)	
Age, yr (95% CI)	76.7 (9.3)	74.8 (9.3)	0.001
Female gender	601 (55.3)	204 (53.1)	0.5
Heart failure	221 (20.3)	37 (9.6)	<0.001
Diabetes	241 (22.2)	76 (19.8)	0.3
Hypertension	698 (64.2)	245 (63.8)	0.9
Vascular disease	432 (39.7)	91 (23.7)	<0.001
History of stroke	359 (33.0)	60 (15.6)	<0.001
Paroxysmal AF	406 (44.0)	197 (80.1)	<0.001

Conclusions: Stroke is often the first manifestation of AF. More effective measures to screen for asymptomatic AF are needed.

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Cost-effectiveness analysis of screening for atrial fibrillation in pharmacies using an iPhone handheld ECG (SEARCH-AF)

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Purpose: Identifying unknown atrial fibrillation (AF) in the community and subsequent anti-thrombotic treatment could reduce stroke burden. We aimed to determine the cost-effectiveness of community screening for unknown AF, using an iPhone ECG with an automated algorithm (iECG) in pharmacies.

Methods: Cost-effectiveness analysis from an Australian health funder perspective comparing cost of iECG population-based AF screening, to diagnosed AF in an unscreened population, for age 65-84. Results are expressed as incremental cost-effectiveness ratio (ICER) per stroke avoided and per quality adjusted life year (QALY) gained. The model assumed a rate of unknown AF of 1.4% in target population; test sensitivity 97%; test specificity 92%; cost of warfarin treatment and monitoring \$AUD803.80 (€421.73) pa; cost per screen \$AUD20 (€10.49); and 5.09 QALYs gained per stroke avoided. Benefits of detecting AF are based on data obtained from the UK Clinical Practice Research Datalink using a subset of 5,567 patients with incidentally detected asymptomatic AF, with incidence rates projected out to 10 years following initial screen. Sensitivity analyses varied base assumptions for anticoagulant guideline-adherence rate.

Abstract 5832 – Table 1. Sensitivity analysis (ICER/QALY gained)

ASSUMPTIONS	40% Rx adherence	50% Rx adherence	55% Rx adherence	60% Rx adherence	70% Rx adherence	80% Rx adherence
Base case	\$8,457	\$6,619	\$5,951	\$5,394	\$4,519	\$3,862
DEVIATIONS FROM BASE CASE: *\$AUD30 per screen	\$11,578	\$9,116	\$8,221	\$7,474	\$6,302	\$5,423
*Treatment: 90% NOAC @ \$1,508pa and 10% warfarin	\$16,512	\$14,674	\$14,006	\$13,449	\$12,574	\$11,918
*Treatment: 90% NOAC @ \$1,174pa and 10% warfarin	\$12,696	\$10,858	\$10,189	\$9,632	\$8,757	\$8,101
*4.275 QALYs gained per stroke avoided	\$10,070	\$7,881	\$7,085	\$6,422	\$5,380	\$4,599
*6.39 QALYs gained per stroke avoided	\$6,737	\$5,273	\$4,740	\$4,297	\$3,600	\$3,077

Rx: Treatment; NOAC: novel oral anticoagulant; \$: \$AUD (Purchasing Power Parity: \$AUD1=€0.5247).

Results are expressed as incremental cost-effectiveness ratio (ICER) per stroke avoided and per quality adjusted life year (QALY) gained. The model assumed a rate of unknown AF of 1.4% in target population; test sensitivity 97%; test specificity 92%; cost of warfarin treatment and monitoring \$AUD803.80 (€421.73) pa; cost per screen \$AUD20 (€10.49); and 5.09 QALYs gained per stroke avoided. Benefits of detecting AF are based on data obtained from the UK Clinical Practice Research Datalink using a subset of 5,567 patients with incidentally detected asymptomatic AF, with incidence rates projected out to 10 years following initial screen. Sensitivity analyses varied base assumptions for anticoagulant guideline-adherence rate.

Results: The ICER of extending iECG screening into the community, based on 55% warfarin prescription adherence, would be \$AUD5,951 (€3,122) per QALY gained and \$AUD30,290 (€15,892) for prevention of one stroke. Sensitivity analysis indicated cost-effectiveness improved with increased treatment adherence.

Conclusions: Screening with iECG in pharmacies is cost effective for stroke prevention and gaining QALY, and well within a range fundable on a population basis, using either warfarin or novel oral anticoagulants. Guideline recommendation of community iECG screening for AF should be considered.

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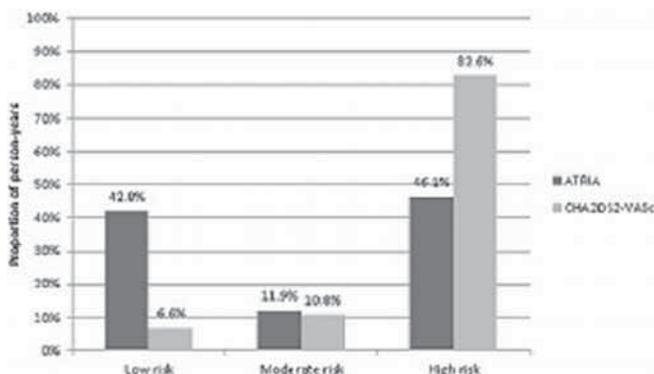
Comparison of ATRIA and CHA2DS2-VASc risk stratification schemes for the prediction of stroke in the individual patient with atrial fibrillation and the impact on treatment decisions

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Purpose: To compare the predictive ability of the currently recommended CHA2DS2-VASc ischaemic stroke risk score with the new ATRIA stroke risk score in patients with atrial fibrillation (AF).

Methods: Patients with AF, not using warfarin, were assembled from the Clinical Practice Research Datalink (CPRD) database. Patients were followed from date of AF diagnosis until occurrence of ischaemic stroke, prescription of warfarin, death or the end of study. Independent predictors of ischaemic stroke were identified with a Cox proportional hazard model by stepwise backward selection. The c-index assessed the discriminative ability of the risk schemes. Net reclassification improvement (NRI) assessed net correct risk reclassification using ATRIA versus CHA2DS2-VASc, using published point score cut-offs. As correct stroke risk thresholds for low/moderate/high risk, 1% and 2% per year were used.

Results: We included 60,594 patients. The overall stroke rate was 2.45% per year. Age and previous stroke were the strongest predictors of ischaemic stroke. Other independent predictors were hypertension (HR 1.25 CI 95%, 1.15-1.35) and diabetes (HR 1.27 CI 95%, 1.14-1.41). Vascular disease and heart failure were not significant predictors. For the full point scores, the c-index was 0.71 (CI 95%, 0.70-0.72) for the ATRIA score and 0.69 (CI 95%, 0.68-0.70) for the CHA2DS2-VASc score. The NRI was 0.38 for ATRIA compared to the CHA2DS2-VASc-score, resulting entirely from downward reclassification (Figure).



Distribution of person-years by risk cat.

Conclusion: The ATRIA score had better discriminative ability than CHA2DS2-VASc. The CHA2DS2-VASc-score assigns most AF patients to the moderate and high risk categories, which could lead to overtreatment. In this community-based, low-risk cohort, the ATRIA score correctly reclassified patients as lower risk.