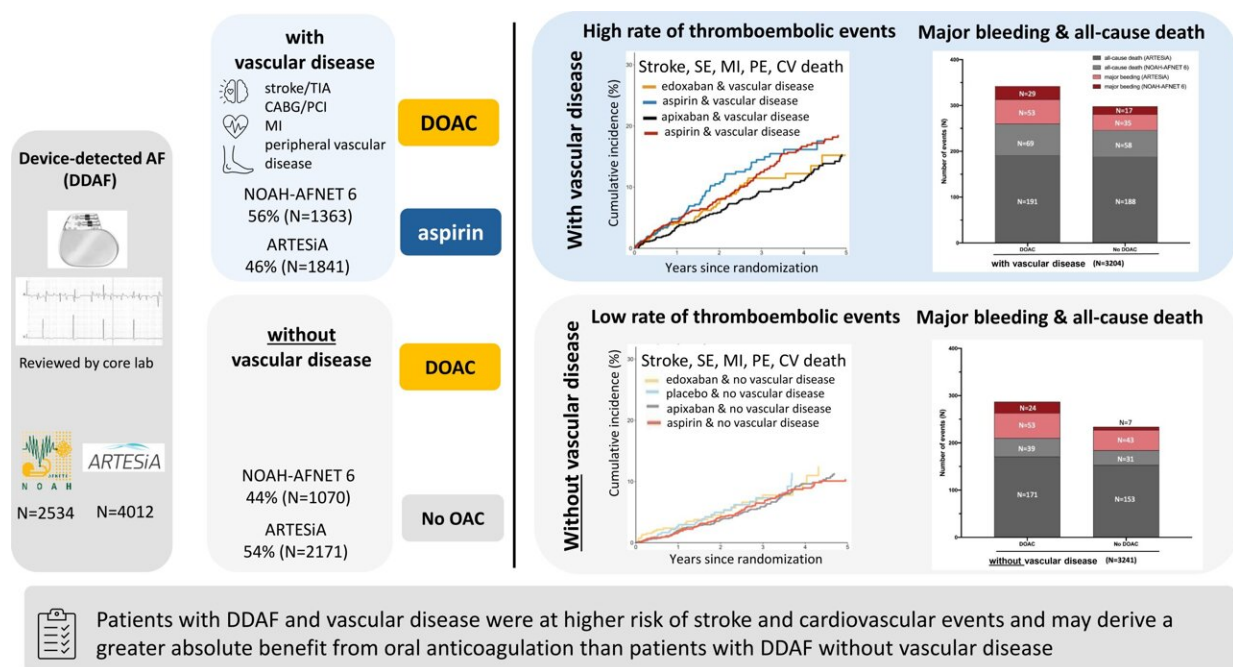


# Device-detected atrial fibrillation: Anticoagulation may have greater benefit in patients with vascular disease

September 2 2024, by Angelika Leute



Graphical Abstract. Credit: *European Heart Journal* (2024). DOI: 10.1093/eurheartj/ehae596

A combined subgroup analysis of the similar trials NOAH—AFNET 6 and ARTESiA has revealed that patients with device-detected atrial fibrillation and concomitant vascular disease are at higher risk of stroke and cardiovascular events and may derive a greater benefit from oral

anticoagulation than those without vascular disease.

The finding was presented by AFNET Steering Committee member Prof. Renate Schnabel, University Medical Center Hamburg-Eppendorf (UKE), Hamburg, Germany, at the annual congress of the [European Society of Cardiology \(ESC\) in London](#) on Sept. 2, 2024 and [published](#) in the *European Heart Journal*.

Device-detected atrial fibrillation (DDAF) are short and typically rare episodes of atrial fibrillation (AF) detected by pacemakers, defibrillators, or implanted loop recorders. Device-detected atrial fibrillation is found in every fifth patient with a cardiac implanted electronic device. Device-detected atrial fibrillation can lead to [stroke](#), but the [stroke risk](#) in patients with device-detected atrial fibrillation appears lower than the stroke risk in patients with ECG-documented atrial fibrillation (1%/year).

Two recent trials, NOAH—AFNET 6 and ARTESiA, assessed the benefit of [anticoagulation](#) in patients with DDAF and stroke risk factors, but without ECG-documented AF. In both trials, patients were randomized either to anticoagulation (edoxaban in NOAH—AFNET 6 and apixaban in ARTESiA) or no anticoagulation in order to compare efficacy and safety outcomes in both groups.

NOAH—AFNET 6 (Non vitamin K antagonist Oral anticoagulants in patients with Atrial High-rate episodes), an investigator-initiated trial conducted by the AFNET, was terminated early due to an expected increase in bleeding events in patients with device-detected atrial fibrillation while the stroke preventing effect was smaller than expected. The weak effects of anticoagulation are also found in several subgroups including patients with long episodes of device-detected AF, patients with a high comorbidity burden, and patients with prior stroke.

ARTESiA (Apixaban for the Reduction of Thrombo-Embolism in Patients with Device-Detected Sub-Clinical Atrial Fibrillation) confirmed the low rate of stroke in patients with DDAF and demonstrated a small stroke-reducing effect of anticoagulation. A [meta-analysis](#) of NOAH—AFNET 6 and ARTESiA confirmed an increase in bleeding and detected a small reduction in ischemic strokes with anticoagulation.

Prof. Schnabel, leading investigator of the combined NOAH—AFNET 6 / ARTESiA sub-analysis presented now at the ESC congress, explained the background of this research, saying, "About half of patients with device-detected [atrial fibrillation](#) have concomitant vascular disease, i.e. prior stroke or transient ischemic attack (TIA), coronary or [peripheral vascular disease](#). The main goal of our pre-specified subgroup analysis was to assess whether vascular disease affects the efficacy and safety of [oral anticoagulation](#) therapy in patients with DDAF. The NOAH—AFNET 6 results were validated in a pre-specified secondary analysis of ARTESiA and meta-analyzed."

About half of the study population of NOAH—AFNET 6 and ARTESiA (56% in NOAH—AFNET 6; 46% in ARTESiA) had concomitant vascular disease with an established indication for acetylsalicylic acid therapy. In these patients, stroke, [myocardial infarction](#), systemic or [pulmonary embolism](#), or cardiovascular death occurred less often with than without anticoagulation (3.9% versus 5.0% per patient-year in NOAH—AFNET 6 and 3.2% versus 4.4% per patient-year in ARTESiA).

Without vascular disease, outcomes were equal with and without anticoagulation (2.7% per patient-year in NOAH—AFNET 6 and 2.3% per patient-year in ARTESiA in both groups). Meta-analysis found consistent results across both trials.

Anticoagulation increased major bleeding in a comparable fashion in patients with vascular disease (edoxaban 2.1% per patient-year; no anticoagulation 1.3% per patient-year; apixaban 1.7% per patient-year; no anticoagulation 1.1% per patient-year) and without vascular disease (edoxaban 2.2% per patient-year; no anticoagulation 0.6% per patient-year; apixaban 1.4% per patient-year; no anticoagulation 1.1% per patient-year).

AFNET board chair Prof. Paulus Kirchhof, UKE, principal investigator of the NOAH—AFNET 6 trial, concluded, "This combined NOAH—AFNET 6 and ARTESiA sub-analysis suggests different effects of anticoagulation in DDAF patients with and without concomitant vascular disease. In the high-risk subgroup of patient with DDAF and vascular disease, anticoagulation therapy appears to reduce thromboembolic events with a greater magnitude than in patients without vascular disease. These data can guide shared clinical decision making on anticoagulation therapy in patients with DDAF."

**More information:** Paulus Kirchhof et al, Anticoagulation in device-detected atrial fibrillation with or without vascular disease: a combined analysis of the NOAH-AFNET 6 and ARTESiA trials, *European Heart Journal* (2024). DOI: [10.1093/eurheartj/ehae596](https://doi.org/10.1093/eurheartj/ehae596)

Provided by Atrial Fibrillation NETwork

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