**Supplemental Methods**

**Fushimi AF Registry data sources**

For a detailed presentation of the study design, patient enrollment, definition of the measurements, and subjects’ baseline clinical characteristics of the Fushimi AF Registry, please refer to the UMIN Clinical Trials Registry, No. UMIN000005834. (<http://www.umin.ac.jp/ctr/index.htm>). The 80 institutions that participated in the registry consisted of two cardiovascular centers (National Hospital Organization Kyoto Medical Center and Ijinkai Takeda General Hospital), 10 small- and medium-sized hospitals (<400 beds), and 68 primary care clinics.

Because the present study was observational and did not involve human subjects, written informed consent was not obtained from each patient according to the ethical guidelines for epidemiological research issued by Ministry of Education, Culture, Sports, Science and Technology and Ministry of Health, Labour and Welfare, Japan. Instead, we published all relevant details regarding this study and provided each patient the opportunity to refuse inclusion in this research by posting the details at every participating clinic and at the homepages of our institutions.

**Stroke ascertainment and definitions**

We identified stroke cases using brain magnetic resonance imaging or computed tomography at stroke onset (89% and 11%, respectively, 5.5%; implanted devices, 5.5%; untraceable). Because we could not use the standard TOAST classification system of classifying stroke type as all patients had cardiac-originated atrial fibrillation (AF)13, multiple independent neurologists reviewed each case and confirmed the diagnosis of stroke, with reference to a previous report.14 The underlying ischemic stroke etiology was classified as follows: 1) cardioembolic stroke (CES), ≥2-cm cortical lesions on diffusion-weighted imaging (DWI), without significant (≥50%) occlusive disease in the proximal relevant artery (acute ischemic lesions in multiple arterial areas were regarded as supportive evidence); 2) lacunar infarction (small-artery occlusion), <2-cm subcortical infarction (lacunar stroke) on DWI, without evidence of significant (≥50%) stenosis in the relevant artery; 3) large-artery atherosclerosis, cortical or cerebellar lesions and brain stem or subcortical hemispheric infarcts > 1.5 cm in diameter and significant (≥50%) occlusion of the proximal relevant artery (if DWI showed a small subcortical infarction compatible with lacunar infarction, the patient was excluded from the large-artery atherosclerosis classification); or 4) undetermined etiology, two or more potential causes of stroke precluding definitive diagnosis. For cases requiring a classification of stroke etiology as CES or large-artery atherosclerosis, the presence or absence of carotid artery stenosis was examined using carotid artery magnetic resonance angiography and/or carotid ultrasonography.

**AF types**

Paroxysmal AF was defined as recurrent AF that terminated spontaneously and lasted ≤7 days. Persistent AF was defined as AF that lasted >7 days, with termination achieved by pharmacological therapy or electric cardioversion. Permanent AF was defined as longstanding AF, where pharmacological and/or electric cardioversion were either not performed or one or several attempts failed to restore sinus rhythm. We combined persistent AF and permanent AF into a single sustained AF classification because it is difficult to distinguish between the two in daily clinical practice.

**Risk factor selection**

The following risk factors were chosen: sex, components of the CHADS2 risk score (congestive heart failure, hypertension, age ≥ 75 years, diabetes mellitus, and previous stroke/transient ischemic attack)3, sustained AF, low body weight (LBW), chronic kidney disease (CKD), and oral anticoagulant prescription at baseline. Sustained AF and LBW (≤50 kg) were independently associated with the incidence of stroke/systemic thromboembolism in Japanese patients with AF.10,11 CKD is thought to be associated with an increased risk of stroke or systemic thromboembolism and bleeding among patients with AF.6