

Supplemental Materials

Table S1 Participating study sites and associated ethics committees

Site	Ethics committee
Aishin Cardiovascular Clinic	Adachi Kyosai Hospital Ethics Committee*
Akita City Hospital	Akita City Hospital Ethics Committee
Anno Cardiology Clinic	Adachi Kyosai Hospital Ethics Committee*
Chikamori Hospital	Chikamori Hospital Ethics Committee
Fukuoka Wajiro Hospital	Fukuoka Wajiro Hospital Ethics Committee
Hachioji Naika Clinic	Adachi Kyosai Hospital Ethics Committee*
Hasegawa Outpatients Clinic for Cardiovascular Disease	Adachi Kyosai Hospital Ethics Committee*
Hirasawa Cardiovascular Clinic	Adachi Kyosai Hospital Ethics Committee*
Hiroshi Yamaguchi Clinic	Adachi Kyosai Hospital Ethics Committee*
Ichiki Clinic	Adachi Kyosai Hospital Ethics Committee*
Inoue Cardiovascular Clinic	Adachi Kyosai Hospital Ethics Committee*
Kanazawa Medical Center	Hospital Medical Committee
Kawahara Medical Clinic	Adachi Kyosai Hospital Ethics Committee*
Kinugawa Cardiology Clinic	Adachi Kyosai Hospital Ethics Committee*
Machii Heart Clinic	Adachi Kyosai Hospital Ethics Committee*
Mineki Naika Clinic	Adachi Kyosai Hospital Ethics Committee*
Miyanomori Memorial Hospital	Adachi Kyosai Hospital Ethics Committee*
Miyanosawa Cardiovascular Clinic	Adachi Kyosai Hospital Ethics Committee*
Murakami Clinic	Adachi Kyosai Hospital Ethics Committee*
Nakayama Clinic	Adachi Kyosai Hospital Ethics Committee*
Owari Clinic	Adachi Kyosai Hospital Ethics Committee*
Sakurabashi Watanabe Hospital	Hospital Clinical Trial Ethics Committee
Sato Pediatrics and Internal Clinic	Adachi Kyosai Hospital Ethics Committee*
Shimozono Clinic	Adachi Kyosai Hospital Ethics Committee*
Shindo Clinic	Adachi Kyosai Hospital Ethics Committee*
Sumi Cardiovascular Clinic	Adachi Kyosai Hospital Ethics Committee*
Takaishi Fujii Cardiovascular Hospital	Adachi Kyosai Hospital Ethics Committee*
Takashima Clinic	Adachi Kyosai Hospital Ethics Committee*
Tsumura Cardiovascular Clinic	Adachi Kyosai Hospital Ethics Committee*
Urayasu Central Hospital	Adachi Kyosai Hospital Ethics Committee*
Yamanashi Prefectural Central Hospital	Hospital Clinical Research Review Committee
Yokohama Sakae Kyosai Hospital	Hospital Clinical Trial Ethics Committee
Yoshida Naika Junkankika	Adachi Kyosai Hospital Ethics Committee*

*Adachi Kyosai Hospital Ethics Committee was the central ethics committee for this study.

Figure S1 Questionnaire for physicians

Institution	
Your name	

Please answer the following questions regarding anticoagulant therapy for prevention of cardioembolic stroke.

<Q1> The number of patients treated with an anticoagulant

- ✓ The number of patients treated with an OAC: () patients per month
- ✓ The number of patients treated with warfarin: () patients per month
- ✓ The number of NVAf patients treated with warfarin: () patients per month

<Q2> PT-INR measurement

- ☐ outsourced ☐ in-hospital (POCT device use) ☐ in-hospital (laboratory)

<Q3> Frequency of PT-INR measurements

- ☐ once every 1-3 weeks
- ☐ once every 4 weeks
- ☐ once every 6 weeks
- ☐ once every 8 weeks
- ☐ once every 12 weeks
- ☐ once every 24 weeks
- ☐ other ()
- ☐ irregular, depending on patient condition or PT-INR control level

<Q4> PT-INR control level

Percent of patients whose PT-INR is stably controlled within the therapeutic range recommended by Japanese guidelines (2.0–3.0 in patients aged less than 70, 1.6–2.6 in patients aged equal to or over 70)

- ☐ less than 50% ☐ 50% ☐ 60% ☐ 70% ☐ 80% ☐ 90% ☐ 100%

<Q5> Do you prescribe warfarin for OAC-naïve patients?

- ☐ For patients for whom DOAC is indicated.
- ☐ Only for patients for whom DOAC is contraindicated.
- ☐ No

<Q6> Have you ever experienced bleeding or embolic events in patients treated with

warfarin?

- ✓ Major bleeding: ☐ Yes ☐ No
- ✓ Any bleeding: ☐ Yes ☐ No
- ✓ Cardioembolic events : ☐ Yes ☐ No

<Q7> Which patients do you think are suitable for warfarin treatment? (check all that apply)

- ☐ Patients with decreased renal function
 - (Serum creatinine greater than _____mg/dL)
- ☐ Patients with low body weight
 - (less than _____kg)
- ☐ Patients whose PT-INR is controlled within the guideline-recommended therapeutic range.
- ☐ Patients whose PT-INR is controlled below the guideline-recommended therapeutic range, but no cardioembolic stroke occurred
- ☐ Patients who are satisfied with warfarin
- ☐ Frequent dose adjustment is needed for the patients
- ☐ Self-pay ratio of medical cost
 - ☐ 0%
 - ☐ 10%
 - ☐ 20%
 - ☐ 30%
- ☐ NVAf patients with coronary artery disease
- ☐ NVAf patients with mitral valve stenosis
- ☐ NVAf patients with valvular disease
- ☐ Other (_____)

<Q8> When a PT-INR value falls below the therapeutic range of warfarin recommended by the guidelines (2.0–3.0 in patients aged <70 years, 1.6–2.6 in patients aged ≥70 years), which is the most appropriate action?

- ☐ Continue treatment at the same dose if there are no concerns about effectiveness and safety.
- ☐ Try to identify the cause of abrupt suboptimal control of PT-INR and educate the patient if necessary.
- ☐ Continue the same treatment, but if PT-INR is suboptimal again at the next visit, consider changing treatment.
- ☐ Change warfarin to DOAC
- ☐ Increase warfarin dose
- ☐ Refer the patient to a specialist
- ☐ Other (_____)

<Q9> When PT-INR values are consistently within the therapeutic range for warfarin recommended by the guidelines (2.0–3.0 in patients aged <70 years, 1.6–2.6 in patients aged ≥70 years), which is the most appropriate action?

- ☐ Continue treatment with warfarin therapy if there are no concerns about effectiveness and safety.
- ☐ Change warfarin to DOAC if patient requests it.
- ☐ Change all patients on warfarin to DOAC for greater effectiveness and safety if possible.
- ☐ Change warfarin to DOAC when PT-INR is stably controlled.
- ☐ Other (_____)

<Q10> When PT-INR values are consistently below the therapeutic range for warfarin recommended by the guidelines (2.0–3.0 in patients aged <70 years, 1.6–2.6 in patients aged ≥70 years) but there are no concerns about effectiveness and safety, which is the most appropriate action?

- ☐ Continue treatment with warfarin therapy
- ☐ Increase warfarin dose to achieve a PT-INR value within the therapeutic range
- ☐ Change warfarin to DOAC at a low dose
- ☐ Change warfarin to DOAC at a standard dose
- ☐ Other (_____)

<Q11> When patients experience any bleeding while being treated with warfarin, which is the most appropriate action?

- ☐ Explain to the patient that anticoagulant therapy is very important for prevention of cardioembolic stroke and minor bleeding is a sign of effectiveness of anticoagulant therapy, and continue treatment with warfarin therapy.
- ☐ Continue treatment at the same dose if the bleeding is nonserious.
- ☐ Reduce a dose of warfarin
- ☐ Change warfarin to DOAC
- ☐ Discontinue anticoagulant therapy
- ☐ Other (_____)

<Q12> Which patients do you think are suitable for switching to DOACs? (check all that apply)

- ☐ All patients for whom DOACs are indicated.
- ☐ When PT-INR values are not consistently within the therapeutic range for warfarin recommended by the guidelines
- ☐ Patients with fluctuations in PT-INR
- ☐ Patients who do not adhere to dietary restrictions
- ☐ Patients with signs of dehydration

- ☐ Patients aged less than 65 years
- ☐ Patients aged equal to or over 65 and less than 75 years
- ☐ Patients aged equal to or over 75 years
- ☐ Patients with diabetes mellitus
- ☐ Patients concomitantly treated with NSAIDs
- ☐ Patients concomitantly treated with an antiplatelet drug
- ☐ Patients requiring surgery
- ☐ Patients scheduled for an ablation treatment
- ☐ Patients scheduled for a dental procedure
- ☐ Patients with dementia
- ☐ Patients with depression
- ☐ Self-pay ratio of medical cost:
 - ☐ 0%
 - ☐ 10%
 - ☐ 20%
 - ☐ 30%
- ☐ Other (_____)

<Q13> When switching from warfarin to a DOAC, are there any concerns about effectiveness and safety during the transition?

- ☐ There are concerns about bleeding events because of overlapping of anticoagulants
- ☐ There are concerns about ischemic events because of an inadequate dose of anticoagulants
- ☐ No concerns if PT-INR is regularly measured
- ☐ No concerns

<Q14> Please write the schedule of switching from warfarin to DOACs.