



# Effective Health Care

## Nattokinase for Atrial Fibrillation

### Nomination Summary Document

#### Results of Topic Selection Process & Next Steps

- Treatment of atrial fibrillation was found to be addressed by two in-process Effective Health Care (EHC) Program reviews titled *Stroke Prevention in Atrial Fibrillation* and *Atrial Fibrillation: Comparative Effectiveness of Treatment Options*. Given that this ongoing work covers this nomination, no further activity will be undertaken on this topic.
  - To view a description and status of these research reviews, please go to: <http://www.effectivehealthcare.ahrq.gov/index.cfm/search-for-guides-reviews-and-reports/>.
  - To sign up for notification when these and other EHC Program topics are posted, please go to: <http://effectivehealthcare.ahrq.gov/index.cfm/join-the-email-list1/>
- Nattokinase for atrial fibrillation is not feasible for a full systematic review due to the limited data available for a review at this time.

#### Topic Description

**Nominator:** Anonymous individual

**Nomination Summary:** The nominator requests information on effective treatments for atrial fibrillation, including the use of nattokinase.

**Staff-Generated PICO**

**Population(s):** Patients with atrial fibrillation

**Intervention(s):** Anticoagulation and antiplatelet therapies (including alternative therapies), and procedural interventions

**Comparator(s):** Comparisons within and between classes of interventions

**Outcome(s):** Preventing thromboembolic events

**Key Questions**

**from Nominator:** None

#### Considerations

- The topic meets EHC Program appropriateness and importance criteria. (For more information, see <http://effectivehealthcare.ahrq.gov/index.cfm/submit-a-suggestion-for-research/how-are-research-topics-chosen/>.)

- Questions related to the treatment of atrial fibrillation were found to be addressed by two in-process EHC Program reviews titled *Stroke Prevention in Atrial Fibrillation* and *Atrial Fibrillation: Comparative Effectiveness of Treatment Options*. Key questions from these reports include:

### **Stroke Prevention in Atrial Fibrillation**

1. In patients with nonvalvular atrial fibrillation (AF), what are the comparative diagnostic accuracy and impact on clinical decisionmaking (diagnostic thinking, therapeutic efficacy, and patient outcome efficacy) of available clinical and imaging tools for predicting thromboembolic risk?
2. In patients with nonvalvular AF, what are the comparative diagnostic accuracy and impact on clinical decisionmaking (diagnostic thinking, therapeutic efficacy, and patient outcome efficacy) of clinical tools and associated risk factors for predicting bleeding events?
3. What are the comparative safety and effectiveness of specific anticoagulation therapies, antiplatelet therapies, and procedural interventions for preventing thromboembolic events:
  - a. In patients with nonvalvular AF?
  - b. In specific subpopulations of patients with nonvalvular AF?
4. What are the comparative safety and effectiveness of available strategies for anticoagulation in patients with nonvalvular AF who are undergoing invasive procedures?
5. What are the comparative safety and effectiveness of available strategies for switching between warfarin and other novel oral anticoagulants, in patients with nonvalvular AF?
6. What are the comparative safety and effectiveness of available strategies for resuming anticoagulation therapy or performing a procedural intervention as a stroke prevention strategy following a hemorrhagic event (stroke, major bleed, or minor bleed) in patients with nonvalvular AF?

### **Atrial Fibrillation: Comparative Effectiveness of Treatment Options**

#### **Rate-control therapies:**

1. What are the comparative safety and effectiveness of pharmacological agents used for ventricular rate control in patients with AF? Do the comparative safety and effectiveness of these therapies differ among specific patient subgroups of interest?
2. What are the comparative safety and effectiveness of a strict rate-control strategy versus a more lenient rate-control strategy in patients with AF? Do the comparative safety and effectiveness of these therapies differ among specific patient subgroups of interest?
3. What are the comparative safety and effectiveness of newer procedural and other nonpharmacological rate-control therapies compared with pharmacological agents in patients with AF who have failed initial pharmacotherapy? Do the comparative safety and effectiveness of these therapies differ among specific patient subgroups of interest?

#### **Rhythm-control therapies:**

4. What are the comparative safety and effectiveness of available antiarrhythmic agents and electrical cardioversion for conversion of AF to sinus rhythm? Do the comparative safety and effectiveness of these therapies differ among specific patient subgroups of interest?
5. What are the comparative safety and effectiveness of newer procedural rhythm-control therapies, other nonpharmacological rhythm-control therapies, and pharmacological agents (either separately or in combination with each other) for maintenance of sinus rhythm in

- patients with AF? Do the comparative safety and effectiveness of these therapies differ among specific patient subgroups of interest?
6. What are the comparative diagnostic accuracy, diagnostic thinking, therapeutic, and patient outcome efficacy of echocardiographic studies and other clinical parameters for predicting successful conversion, successful ablation, successful maintenance of sinus rhythm, and improved outcomes in patients with AF?

Comparison of the available rate- and rhythm-control therapies:

7. What are the comparative safety and effectiveness of rhythm-control therapies compared to rate-control therapies in patients with AF? Does the comparative safety and effectiveness of these therapies differ among specific patient subgroups of interest?
- Neither of these in-process reviews will address the use of nattokinase; however, no studies were identified that address the use of this supplement for the treatment of atrial fibrillation. Therefore, this topic is not feasible for a full systematic review due to the limited data available for a review at this time.
  - Potential harms may exist from the combined use of herbal supplements and pharmacologic anticoagulants including warfarin, and natto may have an antagonistic effect to warfarin. Clinical guidelines recommend that patients receiving anticoagulant treatment need to be monitored whenever any drug, dietary supplement, or herbal medicine is added to or withdrawn from patient care.