

# Direct oral anticoagulants reduce dementia risk in Asian AFib patients compared to traditional blood thinners: Study

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The use of direct oral anticoagulants (DOACs) was associated with a reduction in dementia risk compared to traditional blood thinners—like warfarin—in atrial fibrillation patients, particularly in Asian patients. According to a study published in *JACC: Asia*, this benefit may reverse with increased age and necessitates further follow-up study.

"Asian patients are more likely to be sensitive to vitamin K antagonism,

which puts them at high risk for bleeding events, contributing to [dementia](#) development or a reduction in warfarin dose to subtherapeutic levels," said Vern Hsen Tan, MBBS, senior consultant in the department of cardiology at Changi General Hospital in Singapore and the study's senior author.

"Asians are also often a lower body weight compared to non-Asians, perhaps allowing the DOACs to exert suprathreshold effects at a standard dose."

Atrial fibrillation (AFib) is an irregular heart rhythm that can cause [blood clots](#) and increases the risk of stroke, [heart failure](#) and other related complications. People with AFib are usually treated with medication to reduce the risk of stroke, including traditional blood thinners, such as warfarin, which are anticoagulants that disrupt the blood's ability to clot but can cause increased risk of bleeding. Direct oral anticoagulants are another option that also interfere with the blood's ability to clot but are less likely to cause bleeding compared to traditional blood thinners.

Warfarin is more often prescribed for some patients despite the increased bleeding risk because of affordability—DOACs can be expensive and not or only partially reimbursed in certain regions or countries; some patients may have stable therapeutic range (time to therapeutic ratio, TTR >70%) with warfarin and may be reluctant to switch to DOAC; and for certain concomitant medical conditions most physicians prefer warfarin to DOAC.

Stroke is a known risk factor for dementia, while AFib and Alzheimer's dementia appear to be connected regardless of stroke occurrence. It's unknown whether AFib is directly related to cognitive decline.

Researchers conducted a literature review of studies comparing the

incidence of dementia between AFib patients treated with warfarin compared to DOACs. Overall, 10 studies including more than 342,000 patients were analyzed.

DOAC use was associated with a significantly lower risk of dementia in nine studies when compared to warfarin use. After stratifying by region, a benefit for DOAC was seen in Asian patients but not European patients. Only one study included the American region. A similar benefit for DOACs was seen in patients 65–75 years old, though it was not statistically significant for patients over 75 years old.

In addition to stroke increasing risk of dementia and cognitive decline, there is evidence of stroke-independent risk of dementia in AFib patients. Other proposed factors include [dietary intake](#)—patients taking warfarin must limit consumption of vitamin K as it can interfere with how the medication works, whereas patients taking DOACs do not need to limit their vitamin K intake.

Low vitamin K levels are associated with both cognitive decline and Alzheimer's disease. Additionally, the [green leafy vegetables](#) with high amounts of vitamin K are also often high in B12 and folate, which are associated with lower rates of [cognitive decline](#) and dementia. According to the researchers, the benefits of DOACs over warfarin may not be solely related to the impact of DOACs alone.

"Overall, the use of DOACs in AFib significantly reduces [dementia risk](#) compared to [warfarin](#)," Tan said. "We would highly recommend DOACs for Asian patients, in particular, as they saw the most benefit of dementia reduction. Nevertheless, the data suggestion of a reversal of this benefit with increasing age warrants further study."

Study limits include the non-randomized nature of most studies included in the analysis, as well as the use of disease codes, which only captures

patients admitted to the hospital during the study periods.

**More information:** *JACC: Asia* (2023).

Provided by American College of Cardiology

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