

CORSO WEBINAR

FAD SINCRONA

**I PERCORSI APPROPRIATI
ASSISTENZIALI E TERAPEUTICI
IN PREVENZIONE SECONDARIA**

**10 GIUGNO
2022**

L'applicazione delle raccomandazioni delle linee guida sull'uso degli anticoagulanti diretti nel paziente anziano con comorbidità nella fibrillazione atriale

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**I PERCORSI APPROPRIATI
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IN PREVENZIONE SECONDARIA**

**Approccio al paziente
ad alto rischio cardiovascolare**



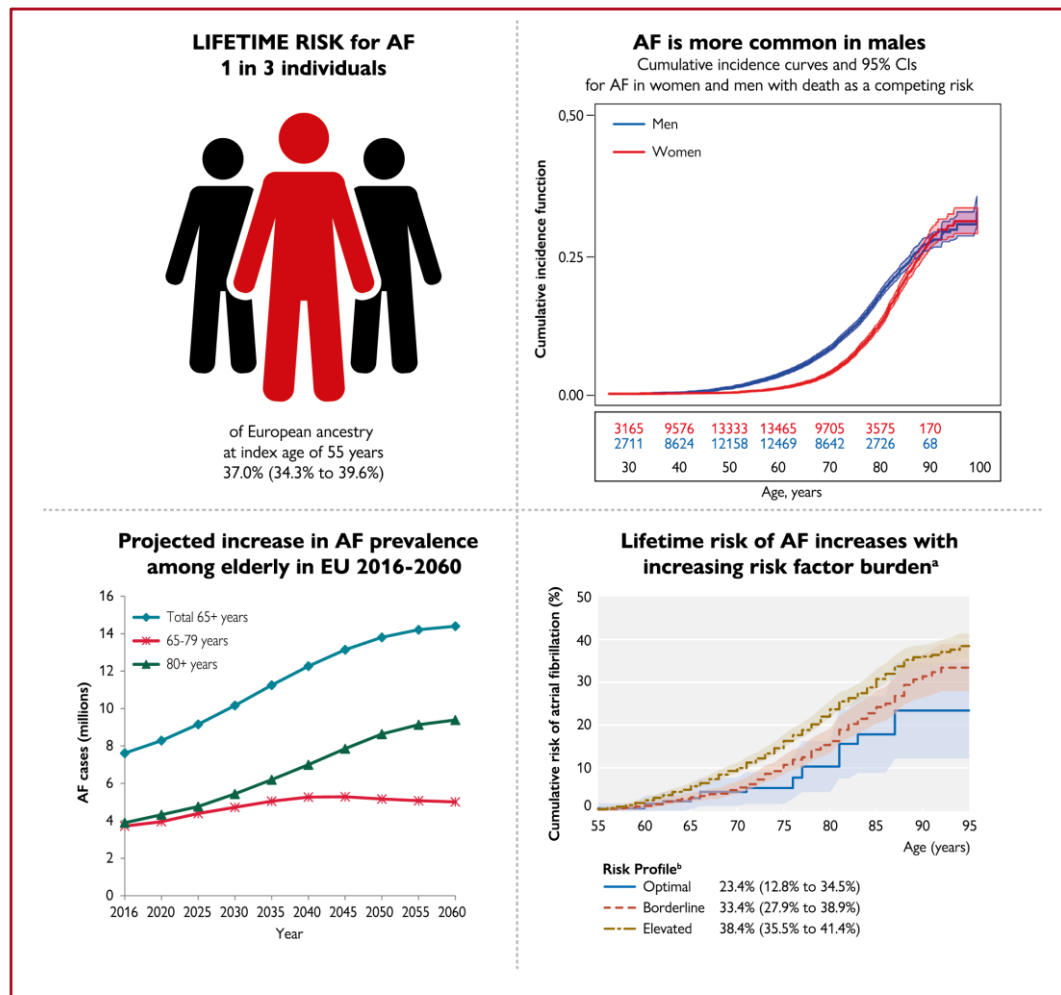


Figure 2 (2)
Epidemiology of AF: lifetime risk and projected rise in the incidence and prevalence

The prevalence of AF increases progressively with age [67,1200, 1206] and age is an independent risk factor for adverse outcomes in AF. [372,1200,1207,1208]

Figure 3 Summary of risk factors for incident AF

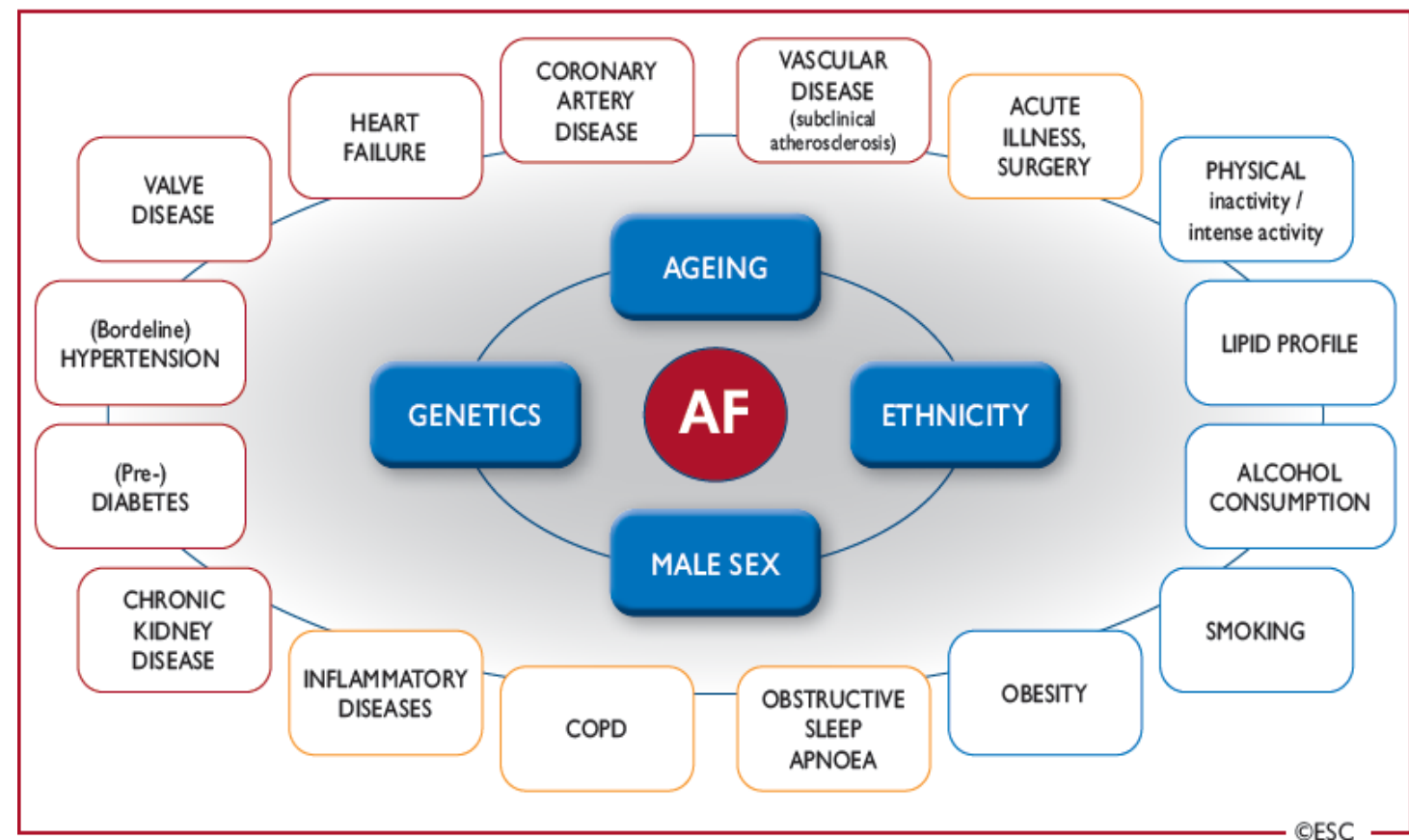
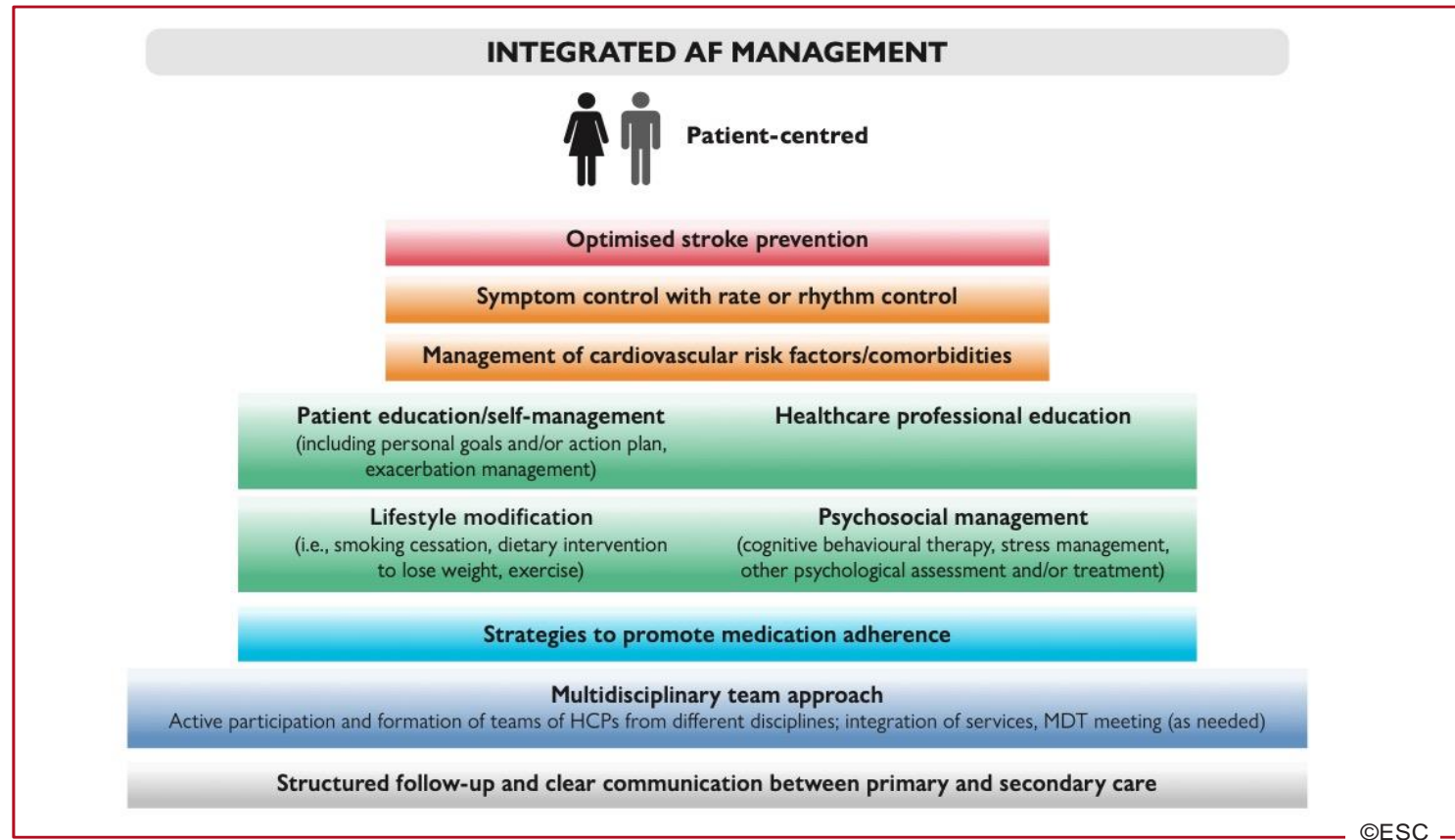


Figure 10 Components of integrated AF management

- A:** Anticoagulation/Avoid stroke
- B:** Better symptom management
- C:** Cardiovascular and Comorbidity optimization



11.13 The elderly and frail with atrial fibrillation



- **ACCESSO ALLE CURE:** Older people are less likely to receive OAC [1209-1216] despite sufficient evidence supporting the use of OAC in this population.
- **FRAGILITA':** Frailty, comorbidities, and increased risk of falls [1217,1219] do not outweigh the benefits of OAC given the small absolute risk of bleeding in anticoagulated elderly patients. [339,390,391,1220,1223]
- **BENEFICIO:** Evidence from RCTs, [441,1224] meta-analyses [423,1225] and large registries [339,433,1209,1226] support the use of OAC in this age group.
- **DOSI RIDOTTE:** Prescribing a reduced dose of OAC is less effective in preventing AF adverse outcomes. [1107,1211,1237,1238]

2020 ESC Guidelines for the diagnosis and management of atrial fibrillation developed in collaboration with the European Association of Cardio-Thoracic Surgery (EACTS)



11.13 The elderly and frail with atrial fibrillation

- **Older people are less likely to receive OAC despite sufficient evidence supporting the use of OAC in this population.**

1209. Graham DJ, et al. Cardiovascular, bleeding, and mortality risks in elderly Medicare patients treated with dabigatran or warfarin for nonvalvular atrial fibrillation. *Circulation* 2015;131:157-164

1210. **Biteker** M, et al. Real-world clinical characteristics and treatment patterns of individuals aged 80 and older with nonvalvular atrial fibrillation: results from the ReAl-life Multicenter Survey Evaluating Stroke Study. *J Am Geriatr Soc* 2017;65:1684-1690.

1211. Gage BF, et al. Adverse outcomes and predictors of underuse of antithrombotic therapy in Medicare beneficiaries with chronic atrial fibrillation. *Stroke* 2000;31:822-827.

1212. Ghaswalla PK, Harpe SE, Slattum PW. Warfarin use in nursing home residents: results from the 2004 national nursing home survey. *Am J Geriatr Pharmacother* 2012;10:2536.e2.

1213. Kotecha D, Chudasama R, Lane DA, Kirchhof P, Lip GY. Atrial fibrillation and heart failure due to reduced versus preserved ejection fraction: a systematic review and meta-analysis of death and adverse outcomes. *Int J Cardiol* 2016;203:660-666.

1214. **Oqab** Z, Pournazari P, Sheldon RS. What is the impact of frailty on prescription of anticoagulation in elderly patients with atrial fibrillation? A systematic review and meta-analysis. *J Atr Fibrillation* 2018;10:1870.

1215. Proietti M, Laroche C, Opolski G, Maggioni AP, Boriani G, Lip GYH, on behalf of the AF Gen Pilot Investigators. 'Real-world' atrial fibrillation management in Europe: observations from the 2-year follow-up of the EURObservational Research Programme-Atrial Fibrillation General Registry Pilot Phase. *Europace* 2017;19:722-733.

1216. Singh P, Arreval PS, Peterson GM, Bereznicki LR. Evaluation of antithrombotic usage for atrial fibrillation in aged care facilities. *J Clin Pharm Ther* 2011;36:166-171.

Real-World Clinical Characteristics and Treatment Patterns of Individuals Aged 80 and Older with Nonvalvular Atrial Fibrillation: Results from the ReAl-life Multicenter Survey Evaluating Stroke Study

- **OBJECTIVES:** To compare the clinical characteristics of and use of oral anticoagulant (OAC) therapy in individuals aged 80 and older with atrial fibrillation (AF) with those of individuals younger than 80 with AF in clinical practice.
- **DESIGN:** Observational study.
- **RESULTS:** Fifty-seven cardiology units enrolled **6,273 individuals in 3 months**

CONCLUSION:

Nearly one-fifth of individuals with NVAF in this real-world sample were aged 80 and older.

- Those aged 80 and older with AF were less likely to receive anticoagulants than those who were younger than 80
- Having more comorbidities and other individual-level characteristics may explain this difference.
- When they were prescribed OACs, participants aged 80 and older had poorer quality of anticoagulation than those who were younger, suggesting opportunities for improvement.

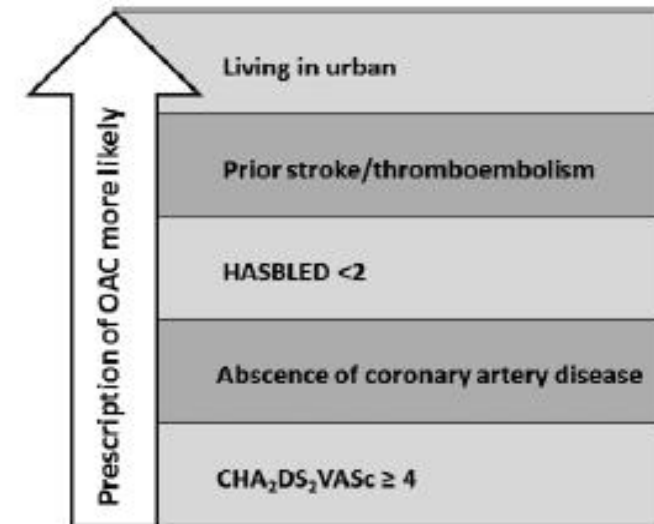
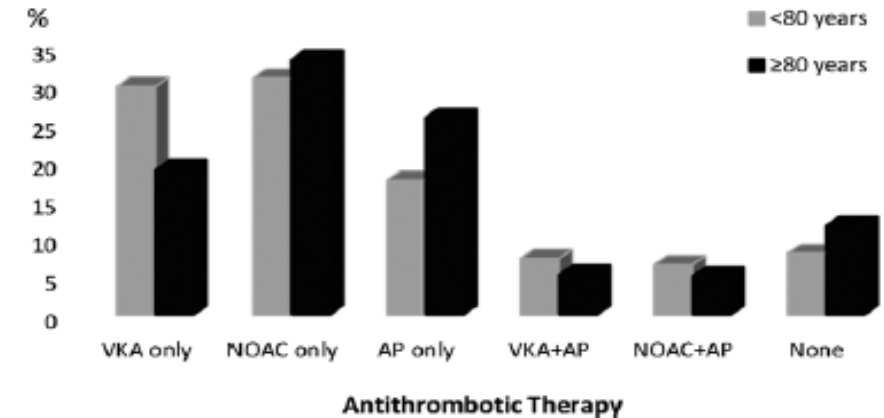


Figure 3. Predictors of oral anticoagulant (OAC) therapy prescription in individuals aged 80 and older with nonvalvular atrial fibrillation.

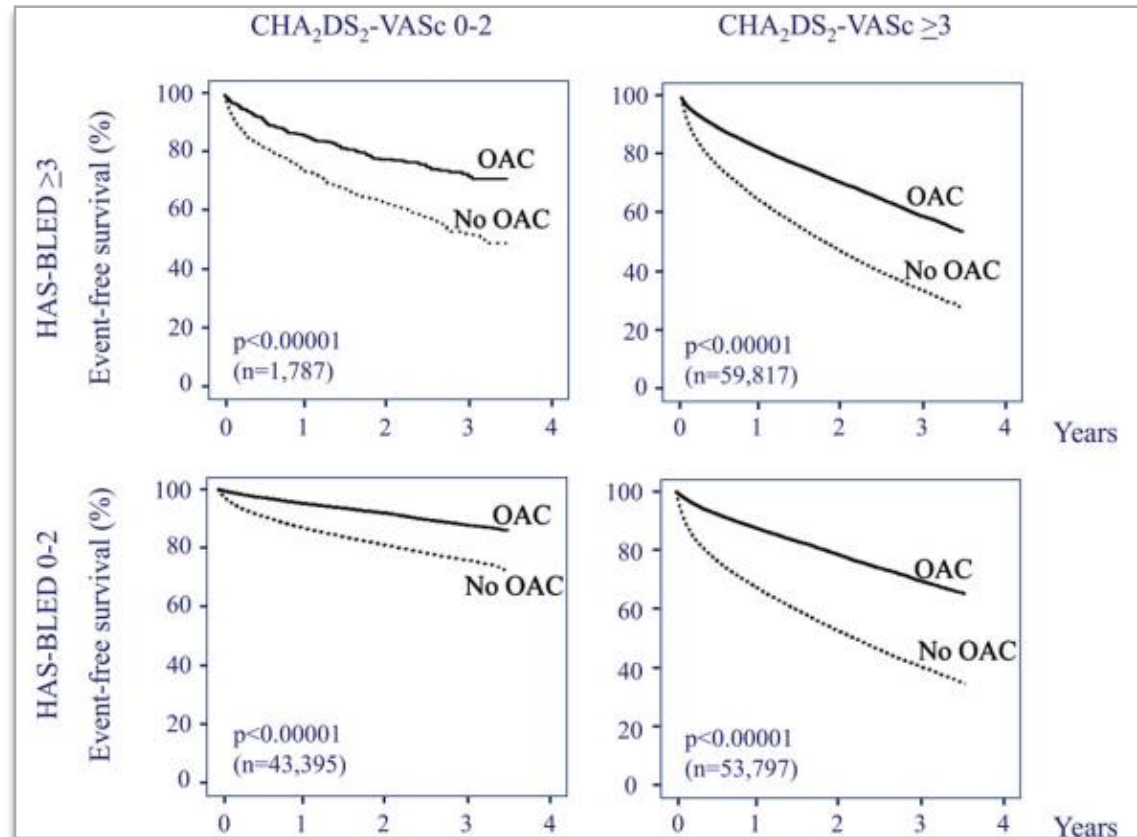
Antithrombotic therapy in the elderly: expert position paper of the European Society of Cardiology Working Group on Thrombosis



Net Clinical Benefit of Warfarin in Patients With Atrial Fibrillation

A Report From the Swedish Atrial Fibrillation Cohort Study

Older patients have multi-organ changes, **increased risk of both bleeding and ischaemic events**, frequent comorbidities/co-medication and **reduced adherence to prescriptions**.



Dai 70 anni in poi, il rischio di ictus aumenta molto più di quanto aumenti il rischio di sanguinamenti

Swedish atrial fibrillation cohort study. *Circulation* 2012;125:2298–2307.

Il lessico della geriatria

Fragilità

- È condizione di elevata vulnerabilità, di ridotta efficienza omeostatica, conseguenza del declino di molti sistemi fisiologici, legato più frequentemente alla multimorbilità, al loro trattamento, agli stili di vita, all'invecchiamento.
- La fragilità è la predisposizione al danno, è la vulnerabilità latente

Due concetti di fragilità:

- 1) il “**fenotipo fragile**” (Fried et al), che include riduzione della forza muscolare, affaticamento, riduzione della velocità del cammino, perdita di peso (ridotta massa magra) e ridotta attività fisica,
- 2) l'accumulo di deficit misurato mediante il **Deficit Index**, (Rockwood et al), che comprende deficit sensoriali, disabilità e comorbilità, condizioni correlate alla fragilità.

il “fenotipo fragile” dà informazioni sul rischio di sviluppare disabilità in futuro, mentre la perdita delle funzioni basali o strumentali contribuisce di per se stessa alla diagnosi di fragilità secondo il deficit Index di Rockwood

What is the Impact of Frailty on Prescription of Anticoagulation in Elderly Patients with Atrial Fibrillation? A Systematic Review and Meta-Analysis

Objective: we performed a systematic review to determine the prevalence of frailty in patients with AF, and whether frailty was associated with reduced prescription of OAC.

Methods: systematically search of Cochrane, MEDLINE, EMBASE, and PubMed databases. Search terms combined relevant words and MeSH headings: 1) atrial fibrillation, 2) frail elderly, and 3) geriatric assessments

Results: Of 166 reviewed titles, only 3 studies (1204 patients) met the inclusion criteria

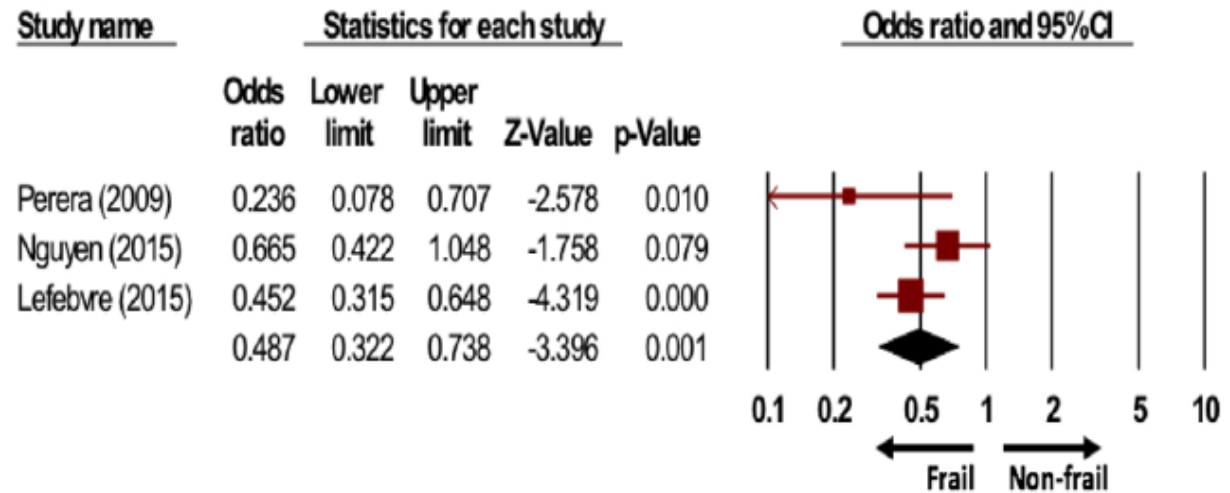


Figure 2:

Random effects model meta-analysis of prescription of anticoagulation in frail versus non-frail elderly. Frail elderly subjects were less likely to receive anticoagulation compared to non-frail elderly subjects.

Conclusions: The prevalence of frailty in hospitalized elderly patients with AF is high, and the use of OAC is low in these patients. Frail elderly are significantly less likely to receive OAC.

La fragilità come guida alla terapia antitrombotica

- Dominio 1: morbilità/multimorbilità e stato di salute;
- Dominio 2: disabilità e perdita dell'indipendenza;
- Dominio 3: funzionalità neuromuscolare (sarcopenia).

Clinical Frailty Scale

 <p>1 Very Fit – People who are robust, active, energetic and motivated. These people commonly exercise regularly. They are among the fittest for their age.</p>	 <p>7 Severely Frail – Completely dependent for personal care, from whatever cause (physical or cognitive). Even so, they seem stable and not at high risk of dying (within ~ 6 months).</p>
 <p>2 Well – People who have no active disease symptoms but are less fit than category 1. Often, they exercise or are very active occasionally, e.g. seasonally.</p>	 <p>8 Very Severely Frail – Completely dependent, approaching the end of life. Typically, they could not recover even from a minor illness.</p>
 <p>3 Managing Well – People whose medical problems are well controlled, but are not regularly active beyond routine walking.</p>	 <p>9 Terminally Ill – Approaching the end of life. This category applies to people with a life expectancy <6 months, who are not otherwise evidently frail.</p>
 <p>4 Vulnerable – While not dependent on others for daily help, often symptoms limit activities. A common complaint is being "slowed up", and/or being tired during the day.</p>	
 <p>5 Mildly Frail – These people often have more evident slowing, and need help in high order IADLs (finances, transportation, heavy housework, medications). Typically, mild frailty progressively impairs shopping and walking outside alone, meal preparation and housework.</p>	
 <p>6 Moderately Frail – People need help with all outside activities and with keeping house. Inside, they often have problems with stairs and need help with bathing and might need minimal assistance (cuing, standby) with dressing.</p>	

Scoring frailty in people with dementia

The degree of frailty corresponds to the degree of dementia. Common **symptoms in mild dementia** include forgetting the details of a recent event, though still remembering the event itself, repeating the same question/story and social withdrawal.

In **moderate dementia**, recent memory is very impaired, even though they seemingly can remember their past life events well. They can do personal care with prompting.

In **severe dementia**, they cannot do personal care without help.

Short Physical Performance Battery

1. Balance Tests

- Side-by-Side Stand**: Feet together side-by-side for 10 sec. < 10 sec (0 pt). Go to 4-Meter Gait Speed Test.
- Semi-Tandem Stand**: Heel of one foot against side of big toe of the other for 10 sec. < 10 sec (+0 pt). Go to 4-Meter Gait Speed Test.
- Tandem Stand**: Feet aligned heel to toe for 10 sec. 10 sec (+2 pt), 3-9.99 sec (+1 pt), <3 sec (+0 pt).

2. Gait Speed Test

Measures the time required to walk 4 meters at a normal pace (use best of 2 times)

<4.82 sec	4 pt
4.82-6.20 sec	3 pt
6.21-8.70 sec	2 pt
>8.7 sec	1 pt
Unable	0 pt

3. Chair Stand Test

Pre-test: Participants fold their arms across their chest and try to stand up once from a chair. If unable, Stop (0 pt).

5 repeats: Measures the time required to perform five rises from a chair to an upright position as fast as possible without the use of the arms.

≤11.19 sec	4 pt
11.20-13.69 sec	3 pt
13.70-16.69 sec	2 pt
>16.7 sec	1 pt
>60 sec or unable	0 pt

- **Frailty, comorbidities, and increased risk of falls do not outweigh the benefits of OAC, given the small absolute risk of bleeding in anticoagulated elderly patients.****

- **339. Lip GY, Clementy N, Pericart L, Banerjee A, Fauchier L. Stroke and major bleeding risk in elderly patients aged ≥ 75 years with atrial fibrillation: the Loire Valley Atrial Fibrillation Project. *Stroke* 2015;46:143-50.
390. Man-Son-Hing M, Nichol G, Lau A, Laupacis A. Choosing antithrombotic therapy for elderly patients with atrial fibrillation who are at risk for falls. *Arch Intern Med* 1999;159:677-685.
391. Gage BF, Yan Y, Milligan PE, Waterman AD, Culverhouse R, Rich MW, Radford MJ. Clinical classification schemes for predicting hemorrhage: results from the National Registry of Atrial Fibrillation (NRAF). *Am Heart J* 2006;151:713-719.
1220. Donze J, Clair C, Hug B, Rodondi N, Waeber G, Cornuz J, Aujesky D. Risk of falls and major bleeds in patients on oral anticoagulation therapy. *Am J Med* 2012;125:773-778.
1221. Garwood CL, Corbett TL. Use of anticoagulation in elderly patients with atrial fibrillation who are at risk for falls. *Ann Pharmacother* 2008;42:523-532.
1222. Hart RG, Pearce LA, Aguilar MI. Adjusted-dose warfarin versus aspirin for preventing stroke in patients with atrial fibrillation. *Ann Intern Med* 2007;147:590-592.

Notably, a history of falls is not an independent predictor of bleeding on OAC (a modelling study estimated that a patient would need to fall 295 times per year for the benefits of ischaemic stroke reduction with OAC to be outweighed by the potential for serious bleeding). Man-Son-Hing M et al. *Arch Intern Med* 1999;159:677-685

NOACs in advanced age and frailty

Table 14 Examples of falls risk assessment

(A) High risk of falls^a

Presence of one or more of

- prior history of falls
- lower extremity weakness
- poor balance
- cognitive impairment
- orthostatic hypotension
- use of psychotropic drugs
- severe arthritis
- dizziness

(B) Probability of falls assessment^b

1 point for each 'yes'

Previous falls	Yes/no
Medications	
>4	Yes/no
Psychotropics	Yes/no
Low visual acuity	Yes/no
Diminished sensation	Yes/no
Near tandem stand 10 s	Yes/no
Alternate step test 10 s	Yes/no
Sit to stand 12 s	Yes/no

Score	0–1	2–3	4–5	6+
Probability of fall per year	7%	13%	27%	49%

Multidisciplinary team approach, including formal geriatric assessment recommended.

^aAdapted from Steffel et al.⁷⁰

^bAdapted from Tiedemann et al.⁵⁵⁵

Table 13 NOAC use in frail patients

Very Fit	People who are robust, active, energetic and motivated. These people commonly exercise regularly. They are among the fittest for their age.
Well	People who have no active disease symptoms but are less fit than category 1. Often, they exercise or are very active occasionally, e.g. seasonally.
Managing Well	People whose medical problems are well controlled but are not regularly active beyond routine walking.
Vulnerable	While not dependent on others for daily help, often symptoms limit activities. A common complaint is being "slowed up", and/or being tired during the day.
Mildly Frail	These people often have more evident slowing and need help in high order with ADLs (finances, transportation, heavy housework, medications). Typically, mild frailty progressively impairs shopping and walking outside alone, meal preparation and housework.
Moderately Frail	People need help with all outside activities and with keeping house. Inside, they often have problems with stairs and need help with bathing and might need minimal assistance (cuing, standby) with dressing.
Severely Frail	Completely dependent for personal care, from whatever cause (physical or cognitive). Even so, they seem stable and not at high risk of dying (within ~ 6 months).
Very Severely Frail	Completely dependent, approaching the end of life. Typically, they could not recover even from a minor illness.
Terminally Ill	Approaching the end of life. This category applies to people with a life expectancy <6 months, who are not otherwise evidently frail.

The 'Canadian Study of Health and Aging' (CHSA) Clinical Frailty Scale, based on comprehensive geriatric assessment including structured interview (<http://www.csha.ca> and Ref.³³⁸). The decision to anticoagulate frail patients depends on multiple aspects (see text for details). While fit or mild frailty per se generally does not pose a problem (green), severe frailty and terminal illness typically indicate a contraindication to anticoagulation (red).

2020 ESC Guidelines for the diagnosis and management of atrial fibrillation developed in collaboration with the European Association for Cardio-Thoracic Surgery (EACTS)

11.13 The elderly and frail with atrial fibrillation



- **Evidence from RCTs, [441,1224] meta-analyses [423,1225] and large registries [339,433,1209,1226] support the use of OAC in this age group.**

(Il rischio/beneficio «reale» della terapia anticoagulante nell'anziano)

Oral Anticoagulation in Very Elderly Patients With Atrial Fibrillation

A Nationwide Cohort Study

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Circulation



BACKGROUND: Stroke prevention with oral anticoagulants (OACs) is the cornerstone for the management of atrial fibrillation (AF). However, data about the use of OACs among patients ≥ 90 years of age are limited. We aimed to investigate the risk of ischemic stroke and intracranial hemorrhage (ICH) and the net clinical benefit of OAC treatment for very elderly patients with AF (≥ 90 years of age).

METHODS: This study used the National Health Insurance Research Database in Taiwan. Risks of ischemic stroke and ICH were compared between 11 064 and 14 658 patients with and without AF ≥ 90 years of age without antithrombotic therapy from 1996 to 2011. Patients with AF ($n=15\,756$) were divided into 3 groups (no treatment, antiplatelet agents, and warfarin), and the risks of stroke and ICH were analyzed. The risks of ischemic stroke and ICH were further compared between patients treated with warfarin and nonvitamin K antagonist OACs (NOACs) from 2012 to 2015 when NOACs were available in Taiwan.

CONCLUSIONS Compared with warfarin, NOACs were associated with a lower risk of ICH. Thus, OACs may still be considered as thromboprophylaxis for elderly patients, with NOACs being the more favorable choice.

Net Clinical Benefit of Non-Vitamin K Antagonist vs Vitamin K Antagonist Anticoagulants in Elderly Patients with Atrial Fibrillation

Data on 3825 elderly patients were pooled from the PREFER in AF and PREFER in AF PROLONGATION registries. The **primary outcome** was the incidence of the net composite endpoint, including major bleeding and ischemic cardiovascular events on NOACs (n = 1556) compared with VKAs (n = 2269).

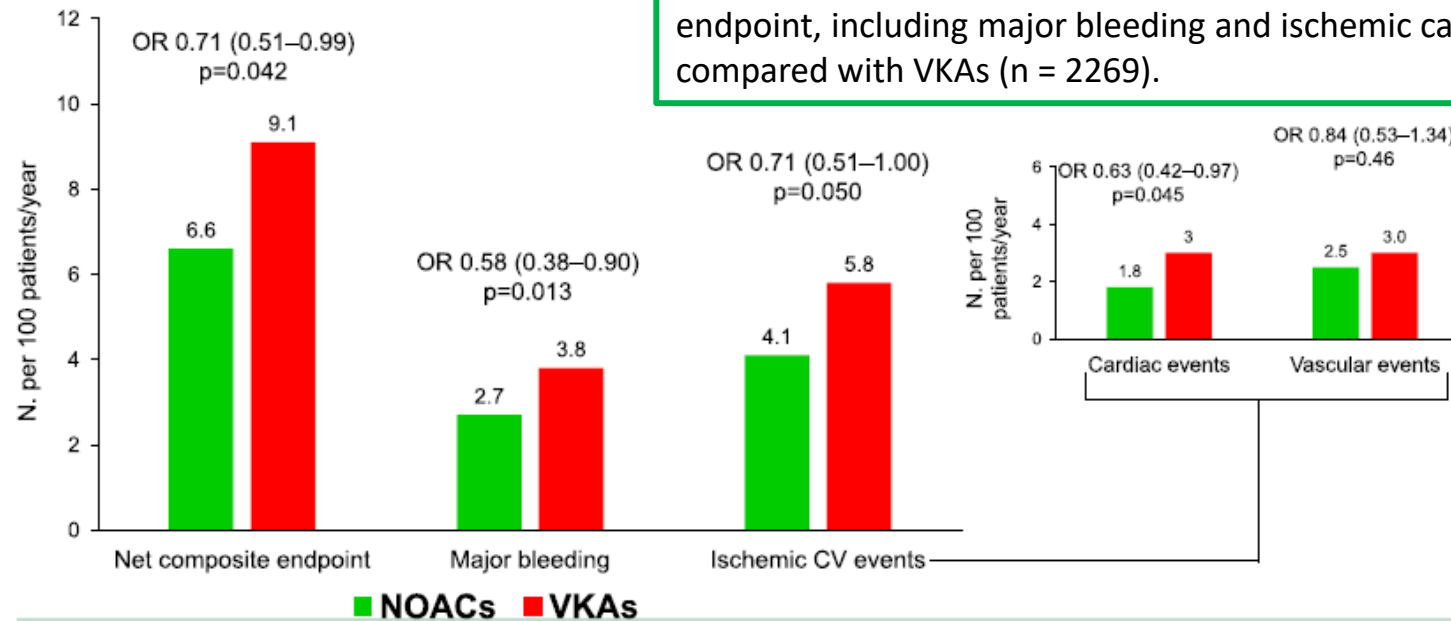


Figure 1 Incidence and related adjusted odds ratios (OR) for the net composite endpoint* and its individual components in patients receiving NOACs or VKAs. CV = cardiovascular; NOACs = non-vitamin K antagonist oral anticoagulants; VKAs = vitamin K antagonists.

*The net composite endpoint included major bleeding and ischemic cardiovascular events (cardiac events [acute coronary syndrome, coronary revascularization] + vascular events [stroke, transient ischemic attack, systemic embolic events]).

Net Clinical Benefit of Non-Vitamin K Antagonist vs Vitamin K Antagonist Anticoagulants in Elderly Patients with Atrial Fibrillation

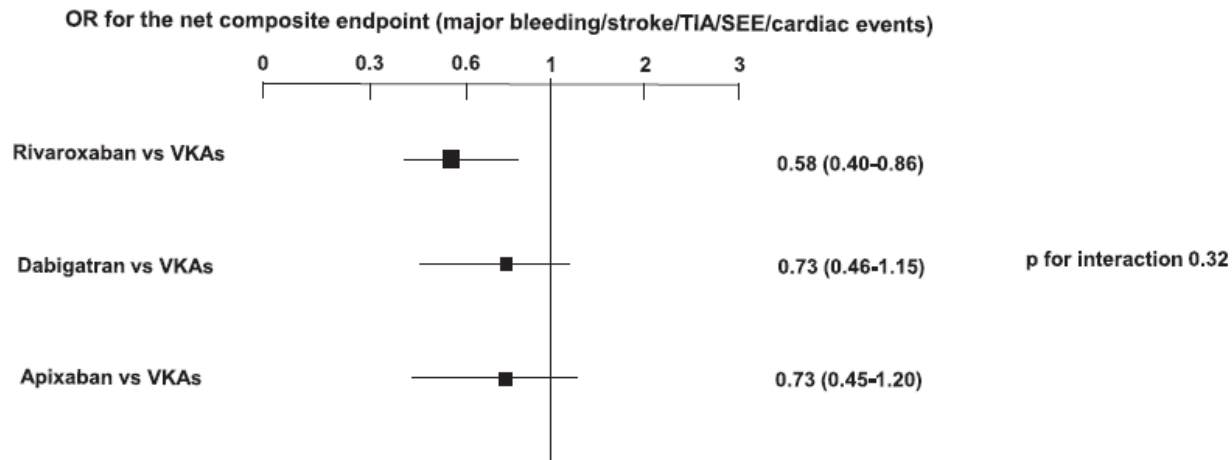


Figure 2 Analysis on the net composite endpoint with different NOACs vs VKAs. NOACs = non-vitamin K antagonist oral anticoagulants; OR = odds ratio; SEE = systemic embolic events; TIA = transient ischemic attack; VKAs = vitamin K antagonists.

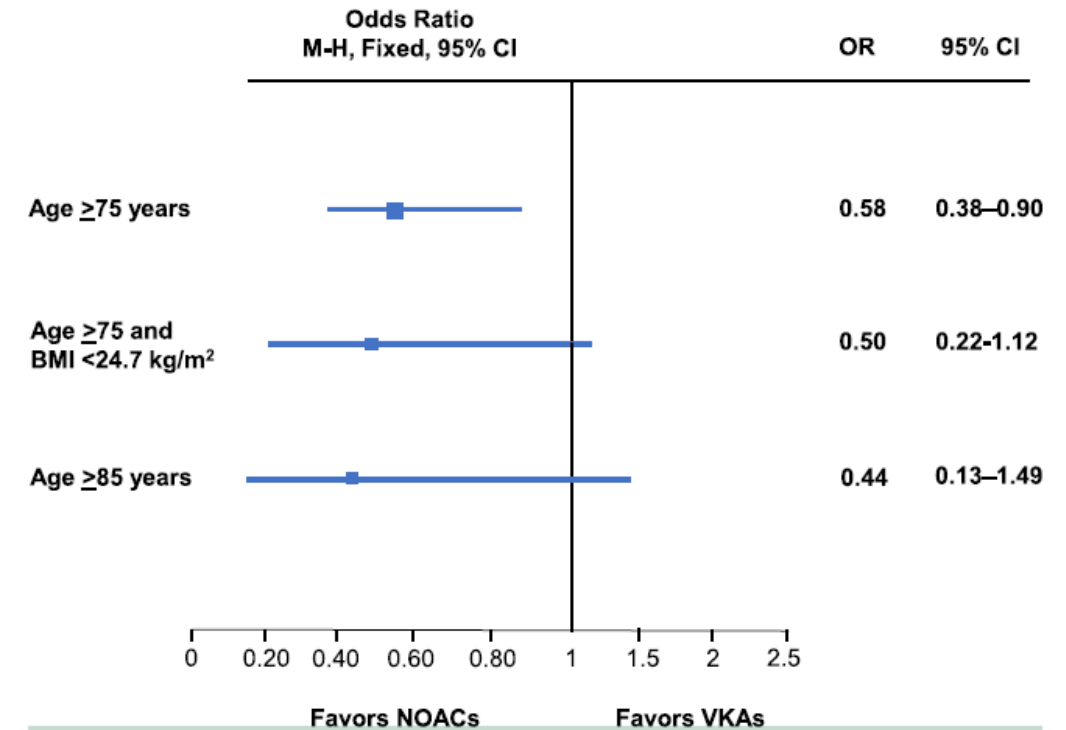


Figure 3 Odds ratios (OR) for major bleeding with NOACs vs VKAs in elderly patients (aged ≥75 years), elderly patients with BMI <24.7 kg/m², and very elderly patients (aged ≥85 years). BMI = body mass index; NOACs = non-vitamin K antagonist oral anticoagulants; VKAs = vitamin K antagonists.

CONCLUSIONS: Our real-world data indicate that, compared with VKAs, NOAC use is associated with a better net clinical benefit in elderly patients with atrial fibrillation, primarily due to lower rates of major bleeding. Major bleeding with NOACs was numerically lower also in higher-risk patients with low BMI or age ≥85 years.

2021 European Heart Rhythm Association Practical Guide on the Use of Non-Vitamin K Antagonist Oral Anticoagulants in Patients with Atrial Fibrillation

POSITION PAPER

EHRA Practical Guide

Cognitive impairment and dementia

Mild cognitive impairment as well as dementia (cognitive impairment severe enough to compromise social and/or occupational functioning) is common in older age groups.^{351,352} AF itself is a risk factor for dementia and conversely, encouraging evidence indicates that OAC use may be associated with a reduced risk of dementia.^{353–357}

Dementia does pose unique considerations of adherence and safety when considering OAC. All patients with dementia should have a careful assessment of their ability to understand and make a treatment decision regarding OAC in AF, with indicative risks of stroke and bleeding provided. Where capacity is lacking, it may be reasonable for the physician to recommend treatment on the basis of the 'best medical interest' principle. This should be documented and explanation given to both patient and next of kin/legal attorney with assent/consent sought as relevant.

Steffel J et al. *Europace* (2021) 23, 1612–1676

NOACs in advanced age and frailty

Frailty and falls

The issue of falls in NOAC-treated patients was specifically analysed in subanalyses of two phase III trials. In the ENGAGE-AF TIMI 48 trial patients were prospectively classified as 'high-' or 'low falls risk' by the presence of known risk factors and co-morbidities.⁷⁰ Patients at increased risk of falling were more likely to experience a bone fracture, major bleeding or life threatening bleeding, and death. Edoxaban was associated with reduced risk of severe bleeding, intracranial haemorrhage and the most severe net clinical benefit outcomes (secondary and tertiary net clinical outcome) compared to VKA in both patient categories, and the absolute risk reduction was greater with edoxaban in patients at increased risk of falling.⁷⁰

In the ARISTOTLE trial patients with a history of falling were older and more likely to have dementia and cerebrovascular disease. These individuals had an increased risk of major bleeding and intracranial bleeding as well as death, but the safety and efficacy of apixaban over warfarin was not affected by falling status.³⁴⁵ Among patients with a history of falls no subdural bleeding was recorded on apixaban.

2020 ESC Guidelines for the diagnosis and management of atrial fibrillation developed in collaboration with the European Association for Cardio-Thoracic Surgery (EACTS)

11.13 The elderly and frail with atrial fibrillation



- Prescribing a reduced dose of OAC is less effective in preventing AF adverse outcomes. [1107,1211,1237,1238]

Practical use of Direct Oral Anti Coagulants (DOACs) in the older persons with atrial fibrillation.



Contents lists available at ScienceDirect

European Journal of Internal Medicine

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In real life clinical practice **off-label use of RD DOACs is quite common (25-50%)*, particularly in older patients.** Several conditions, advanced age, female gender, higher embolic and bleeding risk, previous bleeding, kidney dysfunction, concomitant use of antiplatelet drugs or NSAIDs, have been consistently reported to be associated with DOAC off-label underdosing*... supporting the hypothesis that a substantial proportion of these off-label prescriptions may be voluntary rather than casual ... having high hopes that off-label RD use may lessen the risk of bleeding without reducing the efficacy in stroke prevention.

*J Intern Med 2018;283(1): 45-55. J Am Coll Cardiol 2016; 68: 2597-2604.

Br J Clin Pharmacol 2020; 86: 533-547. Ann Pharmacother 2018; 52(1):54-59.

Br J Clin Pharmacol. 2019 Dec;85(12):2838-2847. J Am Heart Assoc 2018;7:e007603.

J Am Heart Assoc 2020 Mar 17;9(6):e014108. Br J Clin Pharmacol. 2018; 84(9): 2010- 2019.

Am. J. Cardiol 2020; 125: 1332-1338. Front Pharmacol. 2018 Oct 30 9:1220

Ann. Pharmacother. 2018; 52(1): 54-59. Arch Cardiovasc Dis. 2019; 112(6-7):400-409

Efficacy and safety of reduced-dose non-vitamin K antagonist oral anticoagulants in patients with atrial fibrillation: a meta-analysis of randomized controlled trials

CLINICAL RESEARCH
Atrial fibrillation

Data source and search

We searched PubMed, CENTRAL, CINAHL, and EMBASE databases for Phase III RCTs (from database inception through June 2018).

Results

We identified three RCTs (Supplementary material online, Figure S1), including 7351 patients eligible for reduced-dose NOACs from a total population of 46 426 patients for the analysis on stroke or systemic embolism. All trials were judged to be at low risk of bias (Supplementary material online, Figure S2).

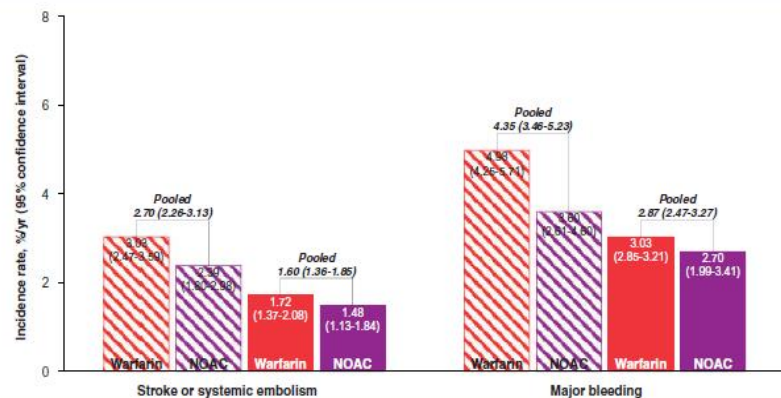
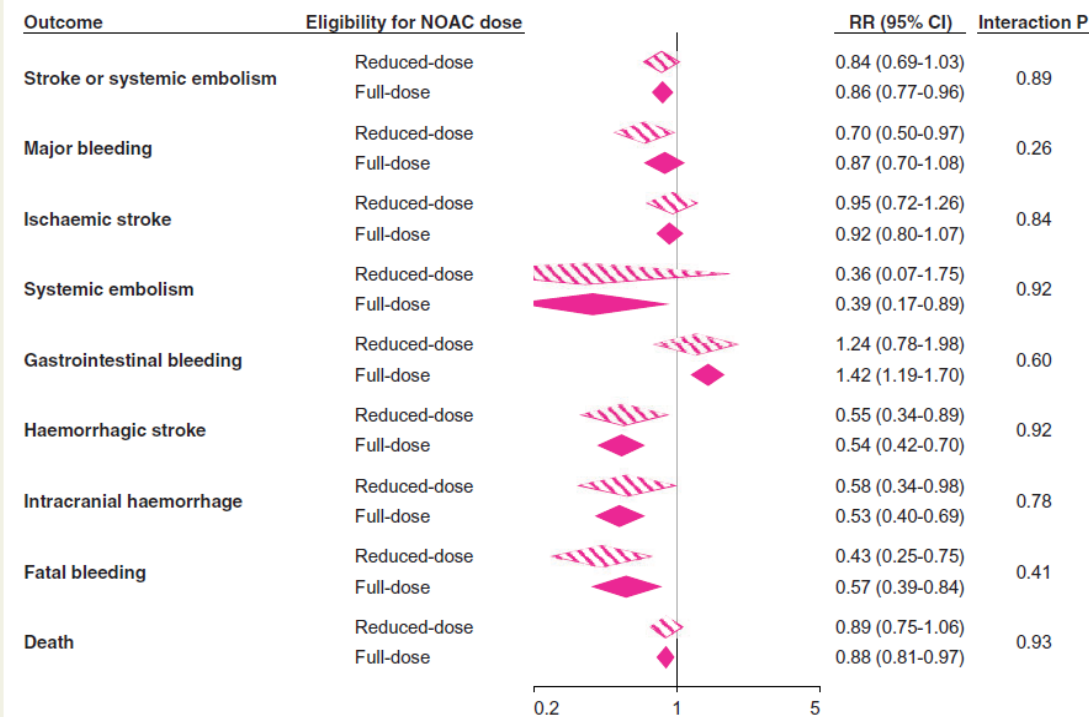


Figure 1 Pooled rates of stroke or systemic embolism and major bleeding. In patients eligible for reduced-dose NOACs (hatched bars), higher rates of stroke or systemic embolism and higher rates of major bleeding were observed with both treatments compared to those eligible for full-dose NOACs (solid bars). NOAC, non-vitamin K antagonist oral anticoagulant.

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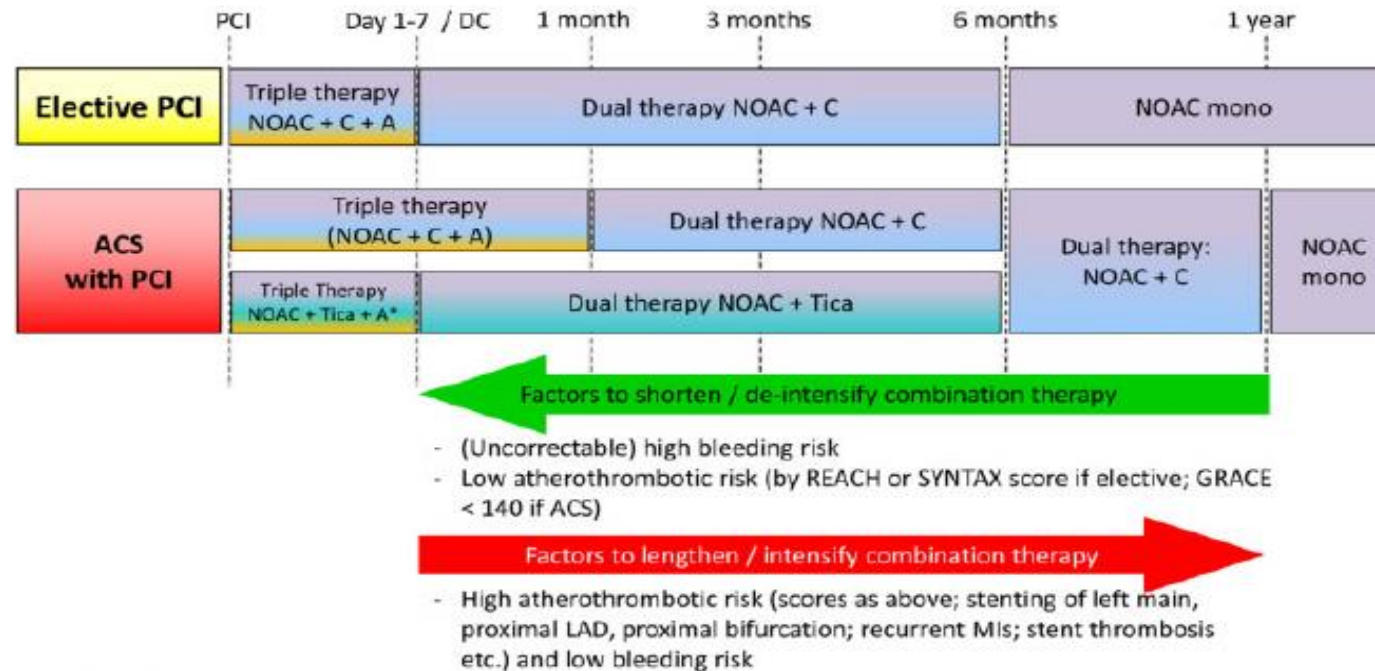
Take home figure Comparative performance between reduced-dose non-vitamin K antagonist oral anticoagulants and full-dose non-vitamin K antagonist oral anticoagulants relative to warfarin. CI, confidence interval; NOAC, non-vitamin K antagonist oral anticoagulant; RR, risk ratio.

Conclusion

When treated with anticoagulants, rates of stroke or systemic embolism and major bleeding were higher in patients with AF who met NOAC dose-reduction criteria than in patients who did not satisfy these criteria. There was no differential effect on efficacy or safety of NOACs between patients eligible for reduced-dose NOACs and those eligible for full-dose NOACs. Thus, our findings highlight the importance of prescribing reduced-dose NOACs for right patient populations per approved clinical criteria.

Patients with atrial fibrillation and
 coronary artery disease

POSITION PAPER
 EHRA Practical Guide



In all patients:

- Avoid use of BMS / first generation DES
- Use PPI if on triple / dual therapy
- Minimize bleeding risk by assessing and treating modifiable bleeding risk factors (e.g., hypertension, etc.)
- Close follow-up; check for signs of (occult) bleeding



10 Patient management: the integrated ABC pathway

Table 10 Clinical risk factors in the HAS-BLED score³⁹⁵

Risk factors and definitions		Points awarded
H	Uncontrolled hypertension SBP >160 mmHg	1
A	Abnormal renal and/or hepatic function Dialysis, transplant, serum creatinine >200 µmol/L, cirrhosis, bilirubin > × 2 upper limit of normal, AST/ALT/ALP >3 × upper limit of normal	1 point for each
S	Stroke Previous ischaemic or haemorrhagic ^a stroke	1
B	Bleeding history or predisposition Previous major haemorrhage or anaemia or severe thrombocytopenia	1
L	Labile INR^b TTR <60% in patient receiving VKA	1
E	Elderly Aged >65 years or extreme frailty	1
D	Drugs or excessive alcohol drinking Concomitant use of antiplatelet or NSAID; and/or excessive ^c alcohol per week	1 point for each
Maximum score		9

ALP = alkaline phosphatase; ALT = alanine aminotransferase; AST = aspartate aminotransferase; SBP = systolic blood pressure; INR = international normalized ratio; NSAID = Non-steroidal anti-inflammatory drug; TTR = time in therapeutic range; VKA = vitamin K antagonist.

^aHaemorrhagic stroke would also score 1 point under the 'R' criterion

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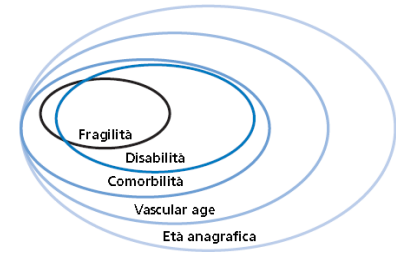
In the PCORI (Patient-Centered Outcomes Research Institute-commissioned systematic review), (Borre ED, et al. Thromb Haemost 2018;118:2171-2187.) encompassing 38 studies of bleeding risk prediction, the **HAS-BLED score had the best evidence for predicting bleeding risk** consistent with other systematic reviews and meta-analyses comparing bleeding risk prediction approaches

Major and minor criteria for high bleeding risk according to the Academic Research Consortium for High Bleeding Risk (ARC) at the time of PCI

Bleeding risk is high if at least 1 major or 2 minor criteria are met

Major	Minor
<ul style="list-style-type: none"> ● Anticipated use of long-term OAC^a 	<ul style="list-style-type: none"> ● Age \geq 75 years
<ul style="list-style-type: none"> ● Severe or end-stage CKD (eGFR $<$30 mL/min) 	<ul style="list-style-type: none"> ● Moderate CKD (eGFR 30–59 mL/min)
<ul style="list-style-type: none"> ● Haemoglobin $<$11 g/dL 	<ul style="list-style-type: none"> ● Haemoglobin 11–12.9 g/dL for men or 11–11.9 g/dL for women
<ul style="list-style-type: none"> ● Spontaneous bleeding requiring hospitalization and/or transfusion in the past 6 months or at any time, if recurrent 	<ul style="list-style-type: none"> ● Spontaneous bleeding requiring hospitalization and/or transfusion within the past 12 months not meeting the major criterion
<ul style="list-style-type: none"> ● Moderate or severe baseline thrombocytopenia^b (platelet count $<$100 \times 10⁹/L) 	<ul style="list-style-type: none"> ● Chronic use of oral non-steroidal anti-inflammatory drugs or steroids
<ul style="list-style-type: none"> ● Chronic bleeding diathesis 	<ul style="list-style-type: none"> ● Any ischaemic stroke at any time not meeting the major criterion
<ul style="list-style-type: none"> ● Liver cirrhosis with portal hypertension 	
<ul style="list-style-type: none"> ● Active malignancy^c (excluding non-melanoma skin cancer) within the past 12 months 	
<ul style="list-style-type: none"> ● Previous spontaneous intracranial haemorrhage (at any time) ● Previous traumatic intracranial haemorrhage within the past 12 months ● Presence of a brain arteriovenous malformation ● Moderate or severe ischaemic stroke^d within the past 6 months 	
<ul style="list-style-type: none"> ● Recent major surgery or major trauma within 30 days prior to PCI ● Non-deferrable major surgery on DAPT 	

I diversi fenotipi di soggetti «anziani...e aderenza alle linee guida»



High intensive treatment

Low intensive treatment



Low clinical complexity

High clinical complexity

Conclusioni

- A causa del potenziale beneficio clinico, i DOAC dovrebbero essere raccomandati per soggetti anziani "in forma e robusti", ma anche per i pazienti con **fenotipo fragile**, indipendentemente dall'età.
- Il rischio di cadute, il deterioramento cognitivo senza limitazioni funzionali e la lieve disabilità non devono essere considerati una controindicazione assoluta, ma valutati di caso in caso con **approccio multidisciplinare**.
- A questi pazienti non va negata a priori l'opportunità di un ulteriore prolungamento della vita in stato di salute anche in presenza di comorbidità.



**I PERCORSI APPROPRIATI
ASSISTENZIALI E TERAPEUTICI
IN PREVENZIONE SECONDARIA**

**Approccio al paziente
ad alto rischio cardiovascolare**

ad alto rischio cardiovascolare
Approccio al paziente

IN PREVENZIONE SECONDARIA

grazie

