

Health Technology Assessment (HTA)

List of publications excluded at full text review

Title	Oral anticoagulants for the prevention of stroke and systemic embolism in people with non-valvular atrial fibrillation
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Technology	Direct oral anticoagulants
Type of Technology	Pharmaceuticals
Date	10 March 2023

Table of Contents

1	<i>Incorrect comparator (k = 185)</i>	3
2	<i>Incorrect intervention (k = 45)</i>	19
3	<i>Incorrect language (k = 6)</i>	23
4	<i>Incorrect outcome (k = 137)</i>	24
5	<i>Incorrect population (k = 208)</i>	36
6	<i>Incorrect publication status (k = 0)</i>	53
7	<i>Incorrect publication type (k = 176)</i>	54
8	<i>Incorrect study design (k = 95)</i>	66
9	<i>Trial data not included in analyses (k = 123)</i>	74
10	<i>Unable to extract (k = 29)</i>	85

1 Incorrect comparator (k = 185)

1. Abraham NS, Singh S, Caleb Alexander G, et al. Comparative risk of gastrointestinal bleeding with dabigatran, rivaroxaban, and warfarin: Population based cohort study. *BMJ (Online)* 2015;350:h1857. doi: <http://dx.doi.org/10.1136/bmj.h1857>.
2. AbuDagga A, Stephenson JJ, Fu AC, et al. Characteristics affecting oral anticoagulant therapy choice among patients with non-valvular atrial fibrillation: a retrospective claims analysis. *BMC Health Serv Res* 2014;14:310. doi: <http://dx.doi.org/10.1186/1472-6963-14-310>.
3. Adeboyeje G, Sylwestrzak G, Barron JJ, et al. Major bleeding risk during anticoagulation with warfarin, dabigatran, apixaban, or rivaroxaban in patients with nonvalvular atrial fibrillation. *J Manag Care Spec Pharm* 2017;23(9):968-78. doi: <http://dx.doi.org/10.18553/jmcp.2017.23.9.968>.
4. Admassie E, Chalmers L, Bereznicki LR. Bleeding-related admissions in patients with atrial fibrillation receiving antithrombotic therapy: results from the Tasmanian Atrial Fibrillation (TAF) study. *Eur J Clin Pharmacol* 2017;73(12):1681-89. doi: <http://dx.doi.org/10.1007/s00228-017-2337-9>.
5. Akao M, Chun YH, Esato M, et al. Inappropriate use of oral anticoagulants for patients with atrial fibrillation. *Circ J* 2014;78(9):2166-72. doi: 10.1253/circj.cj-14-0344.
6. Alberts M, Chen YW, Lin JH, et al. Risks of Stroke and Mortality in Atrial Fibrillation Patients Treated with Rivaroxaban and Warfarin. *Stroke* 2020:549-55. doi: <http://dx.doi.org/10.1161/STROKEAHA.119.025554>.
7. Alberts MJ, He J, Kharat A, et al. Effectiveness and Safety of Rivaroxaban versus Warfarin Among Nonvalvular Atrial Fibrillation Patients with Obesity and Polypharmacy. *Am J Cardiol* 2022 doi: <https://dx.doi.org/10.1007/s40256-021-00520-7>.
8. Alcusky M, Tjia J, McManus DD, et al. Comparative Safety and Effectiveness of Direct-Acting Oral Anticoagulants Versus Warfarin: a National Cohort Study of Nursing Home Residents. *J Gen Intern Med* 2020;35(8):2329-37. doi: <http://dx.doi.org/10.1007/s11606-020-05777-3>.
9. Alnsasra H, Haim M, Senderey AB, et al. Net clinical benefit of anticoagulant treatments in elderly patients with nonvalvular atrial fibrillation: Experience from the real world. *Heart Rhythm* 2019;16(1):31-37. doi: <http://dx.doi.org/10.1016/j.hrthm.2018.08.016>.
10. Alonso A, Bengtson LG, MacLehose RF, et al. Intracranial hemorrhage mortality in atrial fibrillation patients treated with dabigatran or warfarin. *Stroke* 2014;45(8):2286-91. doi: 10.1161/strokeaha.114.006016.
11. Alonso-Coello P, Zhou Q, Guyatt G. Home-monitoring of oral anticoagulation vs. dabigatran: An indirect comparison. *Thromb Haemost* 2012;108(4):647-53. doi: <http://dx.doi.org/10.1160/TH12-01-0027>.
12. Althunian TA, de Boer A, Groenwold RHH, et al. Rivaroxaban was found to be noninferior to warfarin in routine clinical care: A retrospective noninferiority cohort replication study. *Pharmacoepidemiol Drug Saf* 2020;29(10):1263-72. doi: <http://dx.doi.org/10.1002/pds.5065>.
13. Amin A, Deitelzweig S, Jing Y, et al. Comparison of medical costs of patients with atrial fibrillation unsuitable for warfarin treatment with apixaban or aspirin based on averroes trial. *Clin Appl Thromb Hemost* 2015;21(3):235-40. doi: <http://dx.doi.org/10.1177/1076029613507335>.

14. Amin A, Garcia Reeves AB, Li X, et al. Effectiveness and safety of oral anticoagulants in older adults with non-valvular atrial fibrillation and heart failure. *PLoS ONE* 2019;14(3):e0213614. doi: 10.1371/journal.pone.0213614.
15. Amin A, Keshishian A, Dina O, et al. Comparative clinical outcomes between direct oral anticoagulants and warfarin among elderly patients with non-valvular atrial fibrillation in the CMS medicare population. *J Thromb Haemost* 2019;48(2):240-49. doi: <https://dx.doi.org/10.1007/s11239-019-01838-5>.
16. Amin A, Keshishian A, Trocio J, et al. Risk of stroke/systemic embolism, major bleeding and associated costs in non-valvular atrial fibrillation patients who initiated apixaban, dabigatran or rivaroxaban compared with warfarin in the United States Medicare population. *Curr Med Res Opin* 2017;33(9):1595-604. doi: <http://dx.doi.org/10.1080/03007995.2017.1345729>.
17. Andrade MVS, Andrade LAP, Bispo AF, et al. Evaluation of the bleeding intensity of patients anticoagulated with warfarin or dabigatran undergoing dental procedures. *ABC Cardiol* 2018;111(3):394-99. doi: <http://dx.doi.org/10.5935/abc.20180137>.
18. Anonymous. CORRIGENDUM: Comparisons between Oral Anticoagulants among Older Nonvalvular Atrial Fibrillation Patients (Journal of the American Geriatrics Society, (2019), 67, 8, (1662-1671), 10.1111/jgs.15956). *J Am Geriatr Soc* 2020;68(8):E43-E49. doi: <http://dx.doi.org/10.1111/jgs.16647>.
19. Arihiro S, Todo K, Koga M, et al. Three-month risk-benefit profile of anticoagulation after stroke with atrial fibrillation: The SAMURAI-Nonvalvular Atrial Fibrillation (NVAF) study. *Int J Stroke* 2016;11(5):565-74. doi: <http://dx.doi.org/10.1177/1747493016632239>.
20. Baker WL, Beyer-Westendorf J, Bunz TJ, et al. Effectiveness and safety of rivaroxaban and warfarin for prevention of major adverse cardiovascular or limb events in patients with non-valvular atrial fibrillation and type 2 diabetes. *Diabetes Obes Metab* 2019;21(9):2107-14. doi: <http://dx.doi.org/10.1111/dom.13787>.
21. Bayer V, Kotalczyk A, Kea B, et al. Global Oral Anticoagulation Use Varies by Region in Patients With Recent Diagnosis of Atrial Fibrillation: The GLORIA-AF Phase III Registry. *J Am Heart Assoc* 2022;11(6):e023907. doi: <https://dx.doi.org/10.1161/JAHA.121.023907>.
22. Bellinge JW, Paul JJ, Walsh LS, et al. The impact of non-vitamin K antagonist oral anticoagulants (NOACs) on anticoagulation therapy in rural Australia. *Med J Aust* 2018;208(1):18-23. doi: <http://dx.doi.org/10.5694/mja17.00132>.
23. Berger JS, Laliberte F, Kharat A, et al. Comparative Effectiveness and Safety of Rivaroxaban and Warfarin Among Nonvalvular Atrial Fibrillation (NVAF) Patients with Obesity and Polypharmacy in the United States (US). *Adv Ther* 2021;38(7):3771-88. doi: <http://dx.doi.org/10.1007/s12325-021-01746-2>.
24. Berger JS, Laliberte F, Kharat A, et al. Real-world effectiveness and safety of rivaroxaban versus warfarin among non-valvular atrial fibrillation patients with obesity in a US population. *Curr Med Res Opin* 2021;37(6):881-90. doi: <http://dx.doi.org/10.1080/03007995.2021.1901223>.
25. Bezabhe WM, Bereznicki LR, Radford J, et al. Oral Anticoagulant Treatment and the Risk of Dementia in Patients With Atrial Fibrillation: A Population-Based Cohort Study. *J Am Heart Assoc* 2022:e023098. doi: <https://dx.doi.org/10.1161/JAHA.121.023098>.

26. Blin P, Fauchier L, Dureau-Pournin C, et al. Effectiveness and Safety of Rivaroxaban 15 or 20 mg Versus Vitamin K Antagonists in Nonvalvular Atrial Fibrillation: A Population-Based New Users High-Dimensional Propensity Score Matched Cohorts Study. *Stroke* 2020;2469-76. doi: <http://dx.doi.org/10.1161/STROKEAHA.119.025824>.
27. Chan LX, Wong YM, Chia PL, et al. A single institution's experience with using dabigatran, rivaroxaban and warfarin for prevention of thromboembolism in atrial fibrillation. *Proc Singapore Healthc* 2018;27(1):20-25. doi: <http://dx.doi.org/10.1177/2010105817719913>.
28. Chen N, Brooks MM, Hernandez I. Latent Classes of Adherence to Oral Anticoagulation Therapy among Patients with a New Diagnosis of Atrial Fibrillation. *JAMA Netw Open* 2020;3(2):e1921357. doi: <https://dx.doi.org/10.1001/jamanetworkopen.2019.21357>.
29. Chishaki A, Kumagai N, Takahashi N, et al. Non-valvular atrial fibrillation patients with low CHADS2 scores benefit from warfarin therapy according to propensity score matching subanalysis using the J-RHYTHM Registry. *Thromb Res* 2015;136(2):267-73. doi: <http://dx.doi.org/10.1016/j.thromres.2015.06.009>.
30. Coleman CI, Tangirala M, Evers T. Treatment persistence and discontinuation with rivaroxaban, dabigatran, and warfarin for stroke prevention in patients with non-valvular atrial fibrillation in the United States. *PLoS ONE* 2016;11(6):e0157769. doi: <http://dx.doi.org/10.1371/journal.pone.0157769>.
31. Coleman CI, Thompson S, Ashton V, et al. Rivaroxaban Versus Warfarin in African American Patients with Nonvalvular Atrial Fibrillation. *J Natl Med Assoc* 2020;112(4):395-401. doi: <http://dx.doi.org/10.1016/j.jnma.2020.04.014>.
32. Coleman CI, Turpie AGG, Bunz TJ, et al. Effectiveness and safety of rivaroxaban vs. warfarin in non-valvular atrial fibrillation patients with a non-sex-related CHA2DS2-VASc score of 1. *Eur Heart J Cardiovasc Pharmacother* 2019;5(2):64-69. doi: 10.1093/ehjcvp/pvy025.
33. Costa OS, Beyer-Westendorf J, Ashton V, et al. Rivaroxaban Versus Warfarin for Management of Obese African Americans With Non-Valvular Atrial Fibrillation or Venous Thromboembolism: A Retrospective Cohort Analysis. *Clin Appl Thromb Hemost* 2020;26 doi: <http://dx.doi.org/10.1177/1076029620954910>.
34. Di Lullo L, Tripepi G, Ronco C, et al. Safety and effectiveness of rivaroxaban and warfarin in moderate-to-advanced CKD: real world data. *J Nephrol* 2018;31(5):751-56. doi: <http://dx.doi.org/10.1007/s40620-018-0501-7>.
35. Dogliotti A, Giugliano RP. A novel approach indirectly comparing benefit-risk balance across anti-thrombotic therapies in patients with atrial fibrillation. *Eur Heart J Cardiovasc Pharmacother* 2015;1(1):15-28. doi: <http://dx.doi.org/10.1093/ehjcvp/pvu007>.
36. Dogliotti A, Paolasso E, Giugliano RP. Current and new oral antithrombotics in non-valvular atrial fibrillation: a network meta-analysis of 79 808 patients. *Heart* 2014;100(5):396-405. doi: 10.1136/heartjnl-2013-304347.
37. Ellis MH, Neuman T, Bitterman H, et al. Bleeding in patients with atrial fibrillation treated with dabigatran, rivaroxaban or warfarin: A retrospective population-based cohort study. *Eur J Intern Med* 2016;33:55-59. doi: <http://dx.doi.org/10.1016/j.ejim.2016.05.023>.

38. Feldeisen T, Alexandris-Souphis C, Haymart B, et al. Anticoagulation Changes Following Major and Clinically Relevant Nonmajor Bleeding Events in Non-valvular Atrial Fibrillation Patients. *J Pharm Pract* 2021 doi: <https://dx.doi.org/10.1177/08971900211064189>.
39. Fernandez MM, Wang J, Ye X, et al. Systematic review and network meta-analysis of the relative efficacy and safety of edoxaban versus other nonvitamin K antagonist oral anticoagulants among patients with nonvalvular atrial fibrillation and CHADS2 score \geq 2. *SAGE Open Med* 2015;3:2050312115613350. doi: 10.1177/2050312115613350.
40. Franchino-Elder J, Gilligan A, Song X, et al. Comparison of healthcare costs among patients with non-valvular atrial fibrillation treated with warfarin who switched to a novel oral anticoagulant. *J Pharm Health Serv Res* 2020;11(2):133-40. doi: <http://dx.doi.org/10.1111/jphs.12352>.
41. Giustozzi M, Vedovati MC, Verdecchia P, et al. Vitamin K and non-vitamin K antagonist oral anticoagulants for non-valvular atrial fibrillation in real-life. *Eur J Intern Med* 2016;33:42-46. doi: <http://dx.doi.org/10.1016/j.ejim.2016.06.022>.
42. Go AS, Singer DE, Toh S, et al. Erratum: Correction: Outcomes of Dabigatran and Warfarin for Atrial Fibrillation (Annals of internal medicine (2017) 12 (845-854)). *Ann Intern Med* 2017;169(3):204. doi: <http://dx.doi.org/10.7326/L18-0377>.
43. Guo L, Li S, Wang P, et al. Comparative Efficacy of Clinical Events Prevention of Five Anticoagulants in Patients With Atrial Fibrillation (A Network Meta-Analysis). *Am J Cardiol* 2017;119(4):585-93. doi: <http://dx.doi.org/10.1016/j.amjcard.2016.11.006>.
44. Ha ACT, Singh N, Cox JL, et al. Oral Anticoagulation for Stroke Prevention in Canadian Practice: Stroke Prevention and Rhythm Interventions in Atrial Fibrillation (SPRINT-AF) Registry*. *Can J Cardiol* 2016;32(2):204-10. doi: <http://dx.doi.org/10.1016/j.cjca.2015.04.028>.
45. Halvorsen S, Johnsen SP, Madsen M, et al. Effectiveness and safety of non-vitamin K antagonist oral anticoagulants and warfarin in atrial fibrillation: a scandinavian population-based cohort study. *Eur Heart J Qual Care Clin Outcomes* 2021 doi: <http://dx.doi.org/10.1093/ehjqcco/qcab048>.
46. Handy A, Banerjee A, Wood AM, et al. Evaluation of antithrombotic use and COVID-19 outcomes in a nationwide atrial fibrillation cohort. *Heart* 2022 doi: <https://dx.doi.org/10.1136/heartjnl-2021-320325>.
47. Hernandez I, Zhang Y, Brooks MM, et al. Anticoagulation use and clinical outcomes after major bleeding on dabigatran or warfarin in atrial fibrillation. *Stroke* 2017;48(1):159-66. doi: <http://dx.doi.org/10.1161/STROKEAHA.116.015150>.
48. Huisman MV, Teutsch C, Lu S, et al. Dabigatran versus vitamin K antagonists for atrial fibrillation in clinical practice: final outcomes from Phase III of the GLORIA-AF registry. *Clin Res Cardiol* 2022 doi: <https://dx.doi.org/10.1007/s00392-021-01957-1>.
49. Ilomaki J, Helin-Salmivaara A, Huupponen R, et al. Analgesic use before and after oral anticoagulant initiation - A population-based study in Finland. *Eur J Clin Pharmacol* 2015;71(6):723-32. doi: <http://dx.doi.org/10.1007/s00228-015-1836-9>.
50. Jackson LR, Kim S, Blanco R, et al. Discontinuation rates of warfarin versus direct acting oral anticoagulants in US clinical practice: Results from Outcomes Registry for Better Informed Treatment of Atrial Fibrillation II (ORBIT-AF II): Discontinuation Rates of Warfarin vs DOACs. *Am Heart J* 2020;226:85-93. doi: <http://dx.doi.org/10.1016/j.ahj.2020.04.016>.

51. Kawabata M, Goya M, Sasaki T, et al. Left atrial appendage thrombi formation in Japanese non-valvular atrial fibrillation patients during anticoagulation therapy: Warfarin vs. direct oral anticoagulants. *Circ J* 2017;81(5):645-51. doi: <http://dx.doi.org/10.1253/circj.CJ-16-1089>.
52. Kennedy C, Gabr A, McCormack J, et al. The association between increasing oral anticoagulant prescribing and atrial fibrillation related stroke in Ireland. *Br J Clin Pharmacol* 2022;88(1):178-86. doi: [10.1111/bcp.14938](https://doi.org/10.1111/bcp.14938).
53. Kim DH, Pawar A, Gagne JJ, et al. Frailty and clinical outcomes of direct oral anticoagulants versus warfarin in older adults with atrial fibrillation: A cohort study. *Ann Intern Med* 2021;174(9):1214-23. doi: <https://dx.doi.org/10.7326/M20-7141>.
54. Kjerpeseth LJ, Selmer R, Ariansen I, et al. Comparative effectiveness of warfarin, dabigatran, rivaroxaban and apixaban in nonvalvular atrial fibrillation: A nationwide pharmacoepidemiological study. *PLoS ONE* 2019;14(8):e0221500. doi: <http://dx.doi.org/10.1371/journal.pone.0221500>.
55. Kodani E, Atarashi H, Inoue H, et al. Beneficial effect of non-vitamin K antagonist oral anticoagulants in patients with nonvalvular atrial fibrillation - Results of the J-RHYTHM registry 2. *Circ J* 2016;80(4):843-51. doi: <http://dx.doi.org/10.1253/circj.CJ-16-0066>.
56. Kohsaka S, Katada J, Saito K, et al. Safety and effectiveness of apixaban in comparison to warfarin in patients with nonvalvular atrial fibrillation: a propensity-matched analysis from Japanese administrative claims data. *Curr Med Res Opin* 2018;34(9):1627-34. doi: <http://dx.doi.org/10.1080/03007995.2018.1478282>.
57. Komen JJ, Forslund T, Mantel-Teeuwisse AK, et al. Association of preceding antithrombotic therapy in atrial fibrillation patients with ischaemic stroke, intracranial haemorrhage, or gastrointestinal bleed and mortality. *Eur Heart J Cardiovasc Pharmacother* 2021;7(1):3-10. doi: <http://dx.doi.org/10.1093/ehjcvp/pvz063>.
58. Komen JJ, Pottegard A, Mantel-Teeuwisse AK, et al. Oral anticoagulants in patients with atrial fibrillation at low stroke risk: a multicentre observational study. *Eur Heart J* 2022 doi: <https://dx.doi.org/10.1093/eurheartj/ehac111>.
59. Kusano K, Sugishita N, Akao M, et al. Effectiveness and safety of rivaroxaban by general practitioners - A multicenter, prospective study in Japanese patients with non-valvular atrial fibrillation (GENERAL). *Circ J* 2021;85(8):1275-82. doi: <http://dx.doi.org/10.1253/circj.CJ-20-1244>.
60. Lababidi E, Breik O, Savage J, et al. Assessing an oral surgery specific protocol for patients on direct oral anticoagulants: a retrospective controlled cohort study. *Int J Oral Maxillofac Surg* 2018;47(7):940-46. doi: <http://dx.doi.org/10.1016/j.ijom.2018.03.009>.
61. Laliberte F, Cloutier M, Crivera C, et al. Effects of Rivaroxaban Versus Warfarin on Hospitalization Days and Other Health Care Resource Utilization in Patients With Nonvalvular Atrial Fibrillation: An Observational Study From a Cohort of Matched Users. *Clin Ther* 2015 doi: <http://dx.doi.org/10.1016/j.clinthera.2015.02.001>.
62. Lee HJ, Kim HK, Jung JH, et al. Novel Oral Anticoagulants for Primary Stroke Prevention in Hypertrophic Cardiomyopathy Patients with Atrial Fibrillation. *Stroke* 2020;2582-86. doi: <http://dx.doi.org/10.1161/STROKEAHA.119.026048>.

63. Lee SI, Sayers M, Lip GYH, et al. Use of non-Vitamin K antagonist oral anticoagulants in atrial fibrillation patients: Insights from a specialist atrial fibrillation clinic. *Int J Clin Pract* 2015;69(11):1341-48. doi: <http://dx.doi.org/10.1111/ijcp.12712>.
64. Leef G, Qin D, Althouse A, et al. Risk of Stroke and Death in Atrial Fibrillation by Type of Anticoagulation: A Propensity-Matched Analysis. *Pacing Clin Electrophysiol* 2015;38(11):1310-16. doi: <http://dx.doi.org/10.1111/pace.12695>.
65. Li X, Deitelzweig S, Keshishian A, et al. Effectiveness and safety of apixaban versus warfarin in non-valvular atrial fibrillation patients in "real-world" clinical practice: A propensity-matched analysis of 76,940 patients. *Thromb Haemost* 2017;117(6):1072-82. doi: <http://dx.doi.org/10.1160/TH17-01-0068>.
66. Li X, Keshishian A, Hamilton M, et al. Apixaban 5 and 2.5 mg twice-daily versus warfarin for stroke prevention in nonvalvular atrial fibrillation patients: Comparative effectiveness and safety evaluated using a propensity-score-matched approach. *PLoS ONE* 2018;13(1):e0191722. doi: <http://dx.doi.org/10.1371/journal.pone.0191722>.
67. Li XS, Deitelzweig S, Keshishian A, et al. Effectiveness and safety of apixaban versus warfarin in non-valvular atrial fibrillation patients in "real-world" clinical practice. A propensity-matched analysis of 76,940 patients. *Thromb Haemost* 2017;117(6):1072-82. doi: 10.1160/th17-01-0068.
68. Linder M, Nyman AI, Kieler H, et al. Assessing safety of direct thrombin inhibitors, direct factor xa inhibitors and vitamin k antagonists in patients with atrial fibrillation: A nation-wide propensity score matched cohort from Sweden. *Clin Epidemiol* 2020;12:1029-38. doi: <http://dx.doi.org/10.2147/CLEP.S258373>.
69. Lopes RD, Steffel J, Di Fusco M, et al. Corrigendum to "Effectiveness and Safety of Oral Anticoagulants in Adults with Non-valvular Atrial Fibrillation Patients and Concomitant Coronary/Peripheral Artery Disease" *American Journal of Medicine* 131:09 (2018): 1074-1085.e4 (The American Journal of Medicine (2018) 131(9) (1075-1085.e4), (S0002934318304431), (10.1016/j.amjmed.2018.05.007)). *Am J Med* 2020;133(10):1229-38. doi: <http://dx.doi.org/10.1016/j.amjmed.2020.06.003>.
70. Martinez C, Katholing A, Wallenhorst C, et al. Therapy persistence in newly diagnosed non-valvular atrial fibrillation treated with warfarin or NOAC: A cohort study. *Thromb Haemost* 2016;115(1):31-39. doi: <http://dx.doi.org/10.1160/TH15-04-0350>.
71. Maura G, Blotiere PO, Bouillon K, et al. Comparison of the short-term risk of bleeding and arterial thromboembolic events in nonvalvular atrial fibrillation patients newly treated with dabigatran or rivaroxaban versus Vitamin K antagonists a French nationwide propensity-matched cohort study. *Circulation* 2015;132(13):1252-60. doi: <http://dx.doi.org/10.1161/CIRCULATIONAHA.115.015710>.
72. Mendoza PA, McIntyre WF, Belley-Cote EP, et al. Oral anticoagulation for patients with atrial fibrillation in the ED: RE-LY AF registry analysis. *J Thromb Haemost* 2022;53(1):74-82. doi: <https://dx.doi.org/10.1007/s11239-021-02530-3>.
73. Michalski F, Tittl L, Werth S, et al. Selection, management, and outcome of vitamin K antagonist-treated patients with atrial fibrillation not switched to novel oral anticoagulants: Results from the Dresden NOAC registry. *Thromb Haemost* 2015;114(5):1076-84. doi: <http://dx.doi.org/10.1160/TH15-02-0116>.

74. Naganuma M, Shiga T, Hagiwara N. Clinical Outcomes of Direct Oral Anticoagulants and Warfarin in Japanese Patients with Atrial Fibrillation Aged \geq 85 Years: A Single-Center Observational Study. *Drugs Real World Outcomes* 2020;7(4):325-35. doi: <http://dx.doi.org/10.1007/s40801-020-00209-4>.
75. Olesen JB, R SO, Hansen ML, et al. Non-vitamin K antagonist oral anticoagulation agents in anticoagulant naive atrial fibrillation patients: Danish nationwide descriptive data 2011-2013. *Europace* 2014;17(2):187-93. doi: <http://dx.doi.org/10.1093/europace/euu225>.
76. Ording AG, Sogaard M, Skjoth F, et al. Hematuria in anticoagulated patients with atrial fibrillation and urologic cancer. *Res Pract Thromb Haemost* 2022;6(1):e12629. doi: <https://dx.doi.org/10.1002/rth2.12629>.
77. Pahs L, Beavers C, Schuler P. The real-world treatment of hemorrhages associated with dabigatran and rivaroxaban. *Crit Pathw Cardiol* 2015;14(2):53-61. doi: <http://dx.doi.org/10.1097/HPC.0000000000000042>.
78. Pastori D, Menichelli D, Del Sole F, et al. Long-Term Risk of Major Adverse Cardiac Events in Atrial Fibrillation Patients on Direct Oral Anticoagulants. *Mayo Clin Proc* 2021;96(3):658-65. doi: <http://dx.doi.org/10.1016/j.mayocp.2020.06.057>.
79. Patel AD, Tan MK, Angaran P, et al. Risk stratification and stroke prevention therapy care gaps in canadian atrial fibrillation patients (from the co-ordinated national network to engage physicians in the care and treatment of patients with atrial fibrillation chart audit). *Am J Cardiol* 2015;115(5):641-46. doi: <http://dx.doi.org/10.1016/j.amjcard.2014.12.022>.
80. Patel PA, Zhao X, Fonarow GC, et al. Novel Oral Anticoagulant Use among Patients with Atrial Fibrillation Hospitalized with Ischemic Stroke or Transient Ischemic Attack. *Circ Cardiovasc Qual Outcomes* 2015;8(4):383-92. doi: <http://dx.doi.org/10.1161/CIRCOUTCOMES.114.000907>.
81. Patel SI, Cherington C, Scherber R, et al. Assessment of Patient Adherence to Direct Oral Anticoagulant vs Warfarin Therapy. *J Am Osteopath Assoc* 2017;117(1):7-15. doi: <http://dx.doi.org/10.7556/jaoa.2017.002>.
82. Patti G, Pecen L, Manu MC, et al. Thromboembolic and bleeding risk in obese patients with atrial fibrillation according to different anticoagulation strategies. *Int J Cardiol* 2020;318:67-73. doi: <http://dx.doi.org/10.1016/j.ijcard.2020.06.010>.
83. Perales IJ, San Agustin K, DeAngelo J, et al. Rivaroxaban Versus Warfarin for Stroke Prevention and Venous Thromboembolism Treatment in Extreme Obesity and High Body Weight. *Ann Pharmacother* 2020;54(4):344-50. doi: <http://dx.doi.org/10.1177/1060028019886092>.
84. Perreault S, de Denus S, White-Guay B, et al. Oral Anticoagulant Prescription Trends, Profile Use, and Determinants of Adherence in Patients with Atrial Fibrillation. *Pharmacotherapy* 2020;40(1):40-54. doi: <http://dx.doi.org/10.1002/phar.2350>.
85. Pink J, Pirmohamed M, Lane S, et al. Cost-effectiveness of pharmacogenetics-guided warfarin therapy vs. Alternative anticoagulation in atrial fibrillation. *Clin Pharmacol* 2014;95(2):199-207. doi: <http://dx.doi.org/10.1038/clpt.2013.190>.
86. Qazi JZ, Schnitzer ME, Cote R, et al. Predicting major bleeding among hospitalized patients using oral anticoagulants for atrial fibrillation after discharge. *PLoS ONE* 2021;16(3 March):e0246691. doi: <http://dx.doi.org/10.1371/journal.pone.0246691>.

87. Rago A, Papa AA, Attena E, et al. Direct Current Cardioversion in Atrial Fibrillation Patients on Edoxaban Therapy Versus Vitamin K Antagonists: a Real-world Propensity Score-Matched Study. *Cardiovasc Drugs Ther* 2020 doi: <http://dx.doi.org/10.1007/s10557-020-07078-7>.
88. Rahme E, Godin R, Nedjar H, et al. Dose specific effectiveness and safety of DOACs in patients with non-valvular atrial fibrillation: A Canadian retrospective cohort study. *Thromb Res* 2021;203:121-30. doi: <http://dx.doi.org/10.1016/j.thromres.2021.05.005>.
89. Ramagopalan S, Allan V, Saragoni S, et al. Patient characteristics and bleeding events in nonvalvular atrial fibrillation patients treated with apixaban or vitamin K antagonists: Real-world evidence from Italian administrative databases. *J Comp Eff Res* 2018;7(11):1063-71. doi: <http://dx.doi.org/10.2217/ceer-2018-0054>.
90. Ramagopalan SV, Graham S, Carroll R, et al. Discontinuation and primary care visits in nonvalvular atrial fibrillation patients treated with apixaban or warfarin. *J Comp Eff Res* 2019;8(6):371-79. doi: <http://dx.doi.org/10.2217/ceer-2019-0005>.
91. Riley TR, Gauthier-Lewis ML, Sanchez CK, et al. Evaluation of bleeding events requiring hospitalization in patients with atrial fibrillation receiving dabigatran, warfarin, or antiplatelet therapy. *J Pharm Pract* 2017;30(2):214-18. doi: <http://dx.doi.org/10.1177/0897190016630408>.
92. Robson J, Mathur R, Priebe M, et al. Thromboembolic and haemorrhagic events in patients with atrial fibrillation: A prospective cohort study in UK primary and secondary care. *Br J Gen Pract* 2019;69(683):E407-E12. doi: <http://dx.doi.org/10.3399/bjgp19X702269>.
93. Rodriguez-Pascual C, Torres-Torres I, Gomez-Quintanilla A, et al. Safety of Direct Oral Anticoagulants and Vitamin K Antagonists in Oldest Old Patients: A Prospective Study. *J Am Med Dir Assoc* 2018;19(11):936-41. doi: <http://dx.doi.org/10.1016/j.jamda.2018.04.017>.
94. Russo V, Attena E, Di Maio M, et al. Non-vitamin K vs vitamin K oral anticoagulants in patients aged > 80 year with atrial fibrillation and low body weight. *Eur J Clin Invest* 2020;50(11):e13335. doi: <http://dx.doi.org/10.1111/eci.13335>.
95. Russo V, Attena E, Di Maio M, et al. Clinical profile of direct oral anticoagulants versus vitamin K anticoagulants in octogenarians with atrial fibrillation: a multicentre propensity score matched real-world cohort study. *J Thromb Haemost* 2020;49(1):42-53. doi: <http://dx.doi.org/10.1007/s11239-019-01923-9>.
96. Russo V, Attena E, Rago A, et al. Clinical outcome of edoxaban vs. vitamin K antagonists in patients with atrial fibrillation and diabetes mellitus: Results from a multicenter, propensity-matched, real-world cohort study. *J Clin Med* 2020;9(6):1621. doi: <http://dx.doi.org/10.3390/jcm9061621>.
97. Russo-Alvarez G, Martinez KA, Valente M, et al. Thromboembolic and Major Bleeding Events With Rivaroxaban Versus Warfarin Use in a Real-World Setting. *Ann Pharmacother* 2018;52(1):19-25. doi: <http://dx.doi.org/10.1177/1060028017727290>.
98. Rustem Gulluoglu F, Souverein PC, van den Ham HA, et al. Comparative effectiveness and safety of direct oral anticoagulants versus warfarin in UK patients with atrial fibrillation and type 2 diabetes: A retrospective cohort study. *Pharmacoepidemiol Drug Saf* 2021;30(10):1293-320. doi: <https://dx.doi.org/10.1002/pds.5181>.

99. Rutherford OCW, Jonasson C, Ghanima W, et al. Effectiveness and safety of oral anticoagulants in elderly patients with atrial fibrillation. *Heart* 2022;108(5):345-52. doi: <https://dx.doi.org/10.1136/heartjnl-2020-318753>.
100. Saito T, Kawamura Y, Sato N, et al. Non-vitamin K antagonist oral anticoagulants do not increase cerebral microbleeds. *J Stroke Cerebrovasc Dis* 2015;24(6):1373-77. doi: <http://dx.doi.org/10.1016/j.jstrokecerebrovasdis.2015.02.018>.
101. Saji N, Kimura K, Tateishi Y, et al. Safety and efficacy of non-vitamin K oral anticoagulant treatment compared with warfarin in patients with non-valvular atrial fibrillation who develop acute ischemic stroke or transient ischemic attack: a multicenter prospective cohort study (daVinci study). *J Thromb Thrombolysis* 2016;42(4):453-62. doi: 10.1007/s11239-016-1376-x.
102. Saji N, Sakurai T, Ito K, et al. Protective effects of oral anticoagulants on cerebrovascular diseases and cognitive impairment in patients with atrial fibrillation: Protocol for a multicentre, prospective, observational, longitudinal cohort study (Strawberry study). *BMJ Open* 2018;8(11):e021759. doi: <http://dx.doi.org/10.1136/bmjopen-2018-021759>.
103. Sakai T, Motoki H, Fuchida A, et al. Comparison of prognostic impact of anticoagulants in heart failure patients with atrial fibrillation and renal dysfunction: direct oral anticoagulants versus vitamin K antagonists. *Heart Vessels* 2022 doi: <https://dx.doi.org/10.1007/s00380-022-02027-w>.
104. Salmasi S, Adelakun A, Safari A, et al. Satisfaction With Oral Anticoagulants Among Patients With Atrial Fibrillation: A Prospective Observational Study. *CJC Open* 2021;3(11):1347-56. doi: <https://dx.doi.org/10.1016/j.cjco.2021.06.015>.
105. Sanghai SR, Liu W, Wang W, et al. Prevalence of Frailty and Associations with Oral Anticoagulant Prescribing in Atrial Fibrillation. *J Gen Intern Med* 2022;37(4):730-36. doi: <https://dx.doi.org/10.1007/s11606-021-06834-1>.
106. Sawant AC, Kumar A, McCray W, et al. Superior safety of direct oral anticoagulants compared to Warfarin in patients with atrial fibrillation and underlying cancer: A national veterans Affairs database study. *J Geriatr Cardiol* 2019;16(9):706-09. doi: <http://dx.doi.org/10.11909/j.issn.1671-5411.2019.09.006>.
107. Schaefer JK, Sood SL, Haymart B, et al. Sociodemographic factors in patients continuing warfarin vs those transitioning to direct oral anticoagulants. *Blood Adv* 2017;1(26):2536-40. doi: <https://dx.doi.org/10.1182/bloodadvances.2017012377>.
108. Schafer JH, Casey AL, Dupre KA, et al. Safety and Efficacy of Apixaban Versus Warfarin in Patients With Advanced Chronic Kidney Disease. *Ann Pharmacother* 2018;52(11):1078-84. doi: <http://dx.doi.org/10.1177/1060028018781853>.
109. Schiavoni M, Margaglione M, Coluccia A. Use of dabigatran and rivaroxaban in non-valvular atrial fibrillation: One-year follow-up experience in an Italian centre. *Blood Transfus* 2018;16(2):209-14. doi: <http://dx.doi.org/10.2450/2017.0196-16>.
110. Schneeweiss S, Gopalakrishnan C, Bartels DB, et al. Sequential monitoring of the comparative effectiveness and safety of dabigatran in routine care. *Circ Cardiovasc Qual Outcomes* 2019;12(2):e005173. doi: <http://dx.doi.org/10.1161/CIRCOUTCOMES.118.005173>.

111. Serper M, Weinberg EM, Cohen JB, et al. Mortality and Hepatic Decompensation in Patients With Cirrhosis and Atrial Fibrillation Treated With Anticoagulation. *Hepatology Communications* 2021;73(1):219-32. doi: <https://dx.doi.org/10.1002/hep.31264>.
112. Shah S, Norby FL, Datta YH, et al. Comparative effectiveness of direct oral anticoagulants and warfarin in patients with cancer and atrial fibrillation. *Blood Adv* 2018;2(3):200-09. doi: <http://dx.doi.org/10.1182/bloodadvances.2017010694>.
113. Sherid M, Sifuentes H, Sulaiman S, et al. Gastrointestinal bleeding with dabigatran, a comparative study with warfarin: a multicenter experience. *Korean J Gastroenterol* 2015;65(4):205-14. doi: <http://dx.doi.org/10.4166/kjg.2015.65.4.205>.
114. Sheth H, McNally D, Santibanez-Koref M, et al. Association of stroke and bleed events in non-valvular atrial fibrillation patients with direct oral anticoagulant prescriptions in NHS England between 2013 and 2016. *PLoS ONE* 2019;14(6):e0218878. doi: <http://dx.doi.org/10.1371/journal.pone.0218878>.
115. Shinohara M, Fujino T, Yao S, et al. Assessment of the bleeding risk of anticoagulant treatment in non-severe frail octogenarians with atrial fibrillation. *J Cardiol* 2019;73(1):7-13. doi: <http://dx.doi.org/10.1016/j.jjcc.2018.05.012>.
116. Singer AJ, Quinn A, Dasgupta N, et al. Management and Outcomes of Bleeding Events in Patients in the Emergency Department Taking Warfarin or a Non-Vitamin K Antagonist Oral Anticoagulant. *J Emerg Med* 2017;52(1):1. doi: <http://dx.doi.org/10.1016/j.jemermed.2016.09.028>.
117. Siontis KC, Zhang X, Eckard A, et al. Outcomes associated with apixaban use in patients with end-stage kidney disease and atrial fibrillation in the United States. *Circulation* 2018;138(15):1519-29. doi: <http://dx.doi.org/10.1161/CIRCULATIONAHA.118.035418>.
118. Själander S, Sjögren V, Renlund H, et al. Dabigatran, rivaroxaban and apixaban vs. high TTR warfarin in atrial fibrillation. *Thromb Res* 2018;167:113-18. doi: <http://dx.doi.org/10.1016/j.thromres.2018.05.022>.
119. Sjögren V, Byström B, Renlund H, et al. Non-Vitamin K oral anticoagulants are non-inferior for stroke prevention but cause fewer major bleedings than well-managed warfarin: A retrospective register study. *PLoS ONE* 2017;12(7):e0181000. doi: <http://dx.doi.org/10.1371/journal.pone.0181000>.
120. Smythe MA, Forman MJ, Bertran EA, et al. Dabigatran versus warfarin major bleeding in practice: an observational comparison of patient characteristics, management and outcomes in atrial fibrillation patients. *J Thromb Haemost* 2015;40(3):280-87. doi: <http://dx.doi.org/10.1007/s11239-015-1213-7>.
121. Solomon MD, Ullal AJ, Hoang DD, et al. Cost-effectiveness of pharmacologic and invasive therapies for stroke prophylaxis in atrial fibrillation. *J Cardiovasc Med (Hagerstown)* 2012;13(2):86-96. doi: <http://dx.doi.org/10.2459/JCM.0b013e32834f23cf>.
122. Song X, Gandhi P, Gilligan AM, et al. Comparison of all-cause, stroke, and bleed-specific healthcare resource utilization among patients with non-valvular atrial fibrillation (NVAf) and newly treated with dabigatran or warfarin. *Expert Rev Pharmacoecon Outcomes Res* 2019;19(2):213-22. doi: <http://dx.doi.org/10.1080/14737167.2017.1347041>.

123. Sørensen R, Gislason G, Torp-Pedersen C, et al. Dabigatran use in Danish atrial fibrillation patients in 2011: a nationwide study. *BMJ Open* 2013;3(5) doi: 10.1136/bmjopen-2013-002758.
124. Sørensen R, Jamie Nielsen B, Langtved Pallisgaard J, et al. Adherence with oral anticoagulation in non-valvular atrial fibrillation: A comparison of Vitamin K antagonists and non-Vitamin K antagonists. *Eur Heart J Cardiovasc Pharmacother* 2017;3(3):151-56. doi: <http://dx.doi.org/10.1093/ehjcvp/pvw048>.
125. Staerk L, Fosbol EL, Lamberts M, et al. Resumption of oral anticoagulation following traumatic injury and risk of stroke and bleeding in patients with atrial fibrillation: A nationwide cohort study. *Eur Heart J* 2018;39(19):1698-705. doi: <http://dx.doi.org/10.1093/eurheartj/ehx598>.
126. Staerk L, Fosbol EL, Lip GYH, et al. Ischaemic and haemorrhagic stroke associated with non-Vitamin K antagonist oral anticoagulants and warfarin use in patients with atrial fibrillation: A nationwide cohort study. *Eur Heart J* 2017;38(12):907-15. doi: <http://dx.doi.org/10.1093/eurheartj/ehw496>.
127. Staerk L, Gislason GH, Lip GYH, et al. Risk of gastrointestinal adverse effects of dabigatran compared with warfarin among patients with atrial fibrillation: A nationwide cohort study. *Europace* 2015;17(8):1215-22. doi: <http://dx.doi.org/10.1093/europace/euv119>.
128. Steinberg BA, Shrader P, Thomas L, et al. Factors associated with non-vitamin K antagonist oral anticoagulants for stroke prevention in patients with new-onset atrial fibrillation: Results from the Outcomes Registry for Better Informed Treatment of Atrial Fibrillation II (ORBIT-AF II). *Am Heart J* 2017;189:40-47. doi: 10.1016/j.ahj.2017.03.024.
129. Steinberg BA, Simon DN, Thomas L, et al. Management of Major Bleeding in Patients With Atrial Fibrillation Treated With Non-Vitamin K Antagonist Oral Anticoagulants Compared With Warfarin in Clinical Practice (from Phase II of the Outcomes Registry for Better Informed Treatment of Atrial Fibrillation [ORBIT-AF II]). *Am J Cardiol* 2017;119(10):1590-95. doi: <http://dx.doi.org/10.1016/j.amjcard.2017.02.015>.
130. Stephenson JJ, Shinde MU, Kwong WJ, et al. Comparison of claims vs patient-reported adherence measures and associated outcomes among patients with nonvalvular atrial fibrillation using oral anticoagulant therapy. *Patient Prefer Adherence* 2018;12:105-17. doi: <http://dx.doi.org/10.2147/PPA.S148697>.
131. Stolk LM, de Vries F, Ebbelaar C, et al. Risk of myocardial infarction in patients with atrial fibrillation using vitamin K antagonists, aspirin or direct acting oral anticoagulants. *Br J Clin Pharmacol* 2017;83(8):1835-43. doi: <http://dx.doi.org/10.1111/bcp.13264>.
132. Stolk LM, Vries Fd, Ebbelaar C, et al. Correction to: Risk of myocardial infarction in patients with atrial fibrillation using vitamin K antagonists, aspirin or direct acting oral anticoagulants: Myocardial infarction with VKAs, aspirin or DOACS (British Journal of Clinical Pharmacology, (2017), 83, 8, (1835-1843), 10.1111/bcp.13264). *Br J Clin Pharmacol* 2019;85(8):1864. doi: <http://dx.doi.org/10.1111/bcp.14001>.
133. Suda S, Abe A, Iguchi Y, et al. Characteristics of Ischemic Versus Hemorrhagic Stroke in Patients Receiving Oral Anticoagulants: Results of the PASTA Study. *Intern Med* 2022;61(6):801-10. doi: <https://dx.doi.org/10.2169/internalmedicine.8113-21>.

134. Sunbul M, Oguz M, Dogan Z, et al. Heart Failure and Mortality in Patients with Nonvalvular Atrial Fibrillation Started on Novel Oral Anticoagulant Therapy: A Single-Center Experience. *Clin Appl Thromb Hemost* 2017;23(5):454-59. doi: <http://dx.doi.org/10.1177/1076029615614397>.
135. Suzuki S, Otsuka T, Sagara K, et al. Nine-year trend of anticoagulation use, thromboembolic events, and major bleeding in patients with non-valvular atrial fibrillation shinken database analysis. *Circ J* 2016;80(3):639-49. doi: <http://dx.doi.org/10.1253/circj.CJ-15-1237>.
136. Suzuki T, Shiga T, Omori H, et al. Adherence to medication and characteristics of Japanese patients with non-valvular atrial fibrillation. *J Cardiol* 2017;70(3):238-43. doi: <http://dx.doi.org/10.1016/j.jjcc.2016.11.009>.
137. Tagaya M, Yoshikawa D, Sugishita Y, et al. Prescription patterns of oral anticoagulants for patients with non-valvular atrial fibrillation: experience at a Japanese single institution. *Heart Vessels* 2016;31(6):957-62. doi: <http://dx.doi.org/10.1007/s00380-015-0694-9>.
138. Tajiri K, Sato A, Harunari T, et al. Impact of rivaroxaban compared with warfarin on the coagulation status in Japanese patients with non-valvular atrial fibrillation: A preliminary analysis of the prothrombin fragment 1+2 levels. *J Cardiol* 2015;65(3):191-96. doi: <http://dx.doi.org/10.1016/j.jjcc.2014.08.006>.
139. Takahashi H, Jimbo Y, Takano H, et al. Intracerebral Hematoma Occurring during Warfarin Versus Non-Vitamin K Antagonist Oral Anticoagulant Therapy. *Am J Cardiol* 2016;118(2):222-25. doi: <http://dx.doi.org/10.1016/j.amjcard.2016.04.034>.
140. Tapaskar N, Ham SA, Micic D, et al. Restarting Warfarin vs Direct Oral Anticoagulants After Major Gastrointestinal Bleeding and Associated Outcomes in Atrial Fibrillation: A Cohort Study. *Clin Gastroenterol Hepatol* 2022;20(2):381. doi: <https://dx.doi.org/10.1016/j.cgh.2020.11.029>.
141. Tavares SF, Ferreira I, Chaves V, et al. Acute Ischemic Stroke Outcome and Preceding Anticoagulation: Direct Oral Anticoagulants Versus Vitamin K Antagonists. *J Stroke Cerebrovasc Dis* 2020;29(4):104691. doi: <http://dx.doi.org/10.1016/j.jstrokecerebrovasdis.2020.104691>.
142. Tepper PG, Mardekian J, Masseria C, et al. Real-world comparison of bleeding risks among non-valvular atrial fibrillation patients prescribed apixaban, dabigatran, or rivaroxaban. *PLoS ONE* 2018;13(11):e0205989. doi: <http://dx.doi.org/10.1371/journal.pone.0205989>.
143. Tiew WJ, Wong VL, Tan VH, et al. A Real-world Experience of the Safety and Efficacy of Non-vitamin K Oral Anticoagulants Versus Warfarin in Patients with Non-valvular Atrial Fibrillation-A Single-centre Retrospective Cohort Study in Singapore. *Ann Acad Med Singap* 2020;49(11):838-47. doi: <http://dx.doi.org/10.47102/annals-acadmedsg.2020184>.
144. Tiili P, Leventis I, Kinnunen J, et al. Adherence to oral anticoagulation in ischemic stroke patients with atrial fibrillation. *Ann Med* 2021;53(1):1613-20. doi: <http://dx.doi.org/10.1080/07853890.2021.1968031>.
145. Tsai K, Erickson SC, Yang J, et al. Adherence, persistence, and switching patterns of dabigatran etexilate. *Am J Manag Care* 2013;19(9):e325-e32. doi: <http://dx.doi.org/10.1016/j.amjman.2013.07.002>.
146. Tsivgoulis G, Katsanos AH, Seiffge DJ, et al. Fatal intracranial haemorrhage occurring after oral anticoagulant treatment initiation for secondary stroke prevention in patients with atrial fibrillation. *Eur J Neurol* 2020;27(8):1612-17. doi: <http://dx.doi.org/10.1111/ene.14280>.

147. Umemura T, Mashita S, Kawamura T. Oral anticoagulant use and the development of new cerebral microbleeds in cardioembolic stroke patients with atrial fibrillation. *PLoS ONE* 2020;15(9 September):e0238456. doi: <http://dx.doi.org/10.1371/journal.pone.0238456>.
148. Van Den Dries CJ, Van Doorn S, Souverein P, et al. The Number of Concomitant Drugs and the Safety of Direct Oral Anticoagulants in Routine Care Patients with Atrial Fibrillation. *TH Open* 2020;4(4):E417-E26. doi: <https://dx.doi.org/10.1055/s-0040-1721499>.
149. Van Der Wall SJ, Teutsch C, Dubner SJ, et al. Anticoagulation Prescription and Outcomes in Relation to Renal Function in Patients with Atrial Fibrillation: Results from GLORIA-AF. *TH Open* 2021;5(1):E35-E42. doi: <https://dx.doi.org/10.1055/s-0040-1722706>.
150. Van Ganse E, Danchin N, Mahe I, et al. Comparative Safety and Effectiveness of Oral Anticoagulants in Nonvalvular Atrial Fibrillation: The NAXOS Study. *Stroke* 2020:2066-75. doi: <http://dx.doi.org/10.1161/STROKEAHA.120.028825>.
151. Vaughan Sarrazin MS, Jones M, Mazur A, et al. Bleeding rates in veterans affairs patients with Atrial fibrillation who switch from Warfarin to Dabigatran. *Am J Med* 2014;127(12):1179-85. doi: <http://dx.doi.org/10.1016/j.amjmed.2014.07.024>.
152. Villines TC, Schnee J, Fraeman K, et al. A comparison of the safety and effectiveness of dabigatran and warfarin in non-valvular atrial fibrillation patients in a large healthcare system. *Thromb Haemost* 2015;114(6):1290-98. doi: <http://dx.doi.org/10.1160/TH15-06-0453>.
153. Volterrani M, Iellamo F, Alberto C, et al. NOAC in "real world" patients with atrial fibrillation in Italy: results from the ISPAF-2 (Indagine Sicoa Paziente Con Fibrillazione Atriale) survey study. *Intern Emerg Med* 2018;13(7):1069-75. doi: <http://dx.doi.org/10.1007/s11739-018-1896-9>.
154. Wanat MA, Wang X, Paranjpe R, et al. Warfarin vs. apixaban in nonvalvular atrial fibrillation, and analysis by concomitant antiarrhythmic medication use: A national retrospective study. *Res Pract Thromb Haemost* 2019;3(4):674-83. doi: <http://dx.doi.org/10.1002/rth2.12221>.
155. Wang SV, Huybrechts KF, Fischer MA, et al. Generalized boosted modeling to identify subgroups where effect of dabigatran versus warfarin may differ: An observational cohort study of patients with atrial fibrillation. *Pharmacoepidemiol Drug Saf* 2018;27(4):383-90. doi: <http://dx.doi.org/10.1002/pds.4395>.
156. Wang W, Saczynski J, Lessard D, et al. Physical, cognitive, and psychosocial conditions in relation to anticoagulation satisfaction among elderly adults with atrial fibrillation: The SAGE-AF study. *J Cardiovasc Electrophysiol* 2019;30(11):2508-15. doi: <http://dx.doi.org/10.1111/jce.14176>.
157. Watson RM, Smith CB, Crannage EF, et al. Examination of the Effectiveness of Direct Oral Anticoagulants in Comparison to Warfarin in an Obese Population. *J Pharm Technol* 2022;38(1):26-30. doi: <https://dx.doi.org/10.1177/87551225211064113>.
158. Webster-Clark M, Sturmer T, Edwards JK, et al. Real-world on-treatment and initial treatment absolute risk differences for dabigatran vs warfarin in older US adults. *Pharmacoepidemiol Drug Saf* 2020;29(8):832-41. doi: <http://dx.doi.org/10.1002/pds.5069>.
159. Wee XT, Ho LM, Ho HK, et al. Incidence of thromboembolic and bleeding events in patients with newly diagnosed nonvalvular atrial fibrillation: An Asian multicenter retrospective cohort study in Singapore. *Clin Cardiol* 2017;40(12):1218-26. doi: 10.1002/clc.22811.

160. Weir MR, Ashton V, Moore KT, et al. Rivaroxaban versus warfarin in patients with nonvalvular atrial fibrillation and stage IV-V chronic kidney disease. *Am Heart J* 2020;223:3-11. doi: <http://dx.doi.org/10.1016/j.ahj.2020.01.010>.
161. Weir MR, Berger JS, Ashton V, et al. Impact of renal function on ischemic stroke and major bleeding rates in nonvalvular atrial fibrillation patients treated with warfarin or rivaroxaban: a retrospective cohort study using real-world evidence. *Curr Med Res Opin* 2017;33(10):1891-900. doi: <http://dx.doi.org/10.1080/03007995.2017.1339674>.
162. Weir MR, Chen YW, He J, et al. Effectiveness and safety of rivaroxaban versus warfarin among nonvalvular atrial fibrillation patients with obesity and diabetes. *J Diabetes Complicat* 2021;35(11):108029. doi: <http://dx.doi.org/10.1016/j.jdiacomp.2021.108029>.
163. Weir MR, Haskell L, Berger JS, et al. Evaluation of clinical outcomes among nonvalvular atrial fibrillation patients treated with rivaroxaban or warfarin, stratified by renal function. *Clin Nephrol* 2018;89(5):314-29. doi: <http://dx.doi.org/10.5414/CN109281>.
164. Wetmore JB, Roetker NS, Yan H, et al. Direct-Acting Oral Anticoagulants Versus Warfarin in Medicare Patients with Chronic Kidney Disease and Atrial Fibrillation. *Stroke* 2020;51(8):2364-73. doi: <http://dx.doi.org/10.1161/STROKEAHA.120.028934>.
165. Wilkinson C, Wu J, Clegg A, et al. Impact of oral anticoagulation on the association between frailty and clinical outcomes in people with atrial fibrillation: nationwide primary care records on treatment analysis. *European pacing, arrhythmias, and cardiac electrophysiology* 2022 doi: <https://dx.doi.org/10.1093/europace/euac022>.
166. Woldendorp K, Khadra S, Bannon PG, et al. Novel Oral Anticoagulants Compared to Warfarin for Postoperative Atrial Fibrillation After Isolated Coronary Artery Bypass Grafting. *Heart Lung Circ* 2020;29(12):1832-38. doi: <https://dx.doi.org/10.1016/j.hlc.2020.04.018>.
167. Wong JM, Maddox TM, Kennedy K, et al. Comparing Major Bleeding Risk in Outpatients With Atrial Fibrillation or Flutter by Oral Anticoagulant Type (from the National Cardiovascular Disease Registry's Practice Innovation and Clinical Excellence Registry). *Am J Cardiol* 2020;125(10):1500-07. doi: <http://dx.doi.org/10.1016/j.amjcard.2020.02.028>.
168. Woo HG, Chung I, Gwak DS, et al. Intracerebral hemorrhage associated with warfarin versus non-vitamin K antagonist oral anticoagulants in Asian patients. *J Clin Neurosci* 2019;61:160-65. doi: <http://dx.doi.org/10.1016/j.jocn.2018.10.102>.
169. Wu VC, Wang CL, Gan ST, et al. Efficacy and safety of NOAC versus warfarin in AF patients with left atrial enlargement. *PLoS ONE* 2020;15(12):e0243866. doi: 10.1371/journal.pone.0243866.
170. Xian Y, O'Brien EC, Liang L, et al. Association of preceding antithrombotic treatment with acute ischemic stroke severity and in-hospital outcomes among patients with atrial fibrillation. *JAMA* 2017;317(10):1057-67. doi: <http://dx.doi.org/10.1001/jama.2017.1371>.
171. Xian Y, Xu H, O'Brien EC, et al. Clinical Effectiveness of Direct Oral Anticoagulants vs Warfarin in Older Patients with Atrial Fibrillation and Ischemic Stroke: Findings from the Patient-Centered Research into Outcomes Stroke Patients Prefer and Effectiveness Research (PROSPER) Study. *JAMA Neurol* 2019;76(10):1192-202. doi: <http://dx.doi.org/10.1001/jamaneurol.2019.2099>.

172. Xie L, Vo L, Keshishian A, et al. Comparison of hospital length of stay and hospitalization costs among patients with non-valvular atrial fibrillation treated with apixaban or warfarin: An early view. *J Med Econ* 2016;19(8):769-76. doi: <http://dx.doi.org/10.3111/13696998.2016.1171774>.
173. Yamaji H, Higashiya S, Murakami T, et al. Effects of Oral Anticoagulants on Patients with Atrial Fibrillation Aged 90 Years and Older: Comparison among Direct Oral Anticoagulant, Warfarin Anticoagulant, and Nonanticoagulation. *J Cardiovasc Pharmacol* 2019;74(3):246-54. doi: <http://dx.doi.org/10.1097/FJC.0000000000000703>.
174. Yamashiro K, Kurita N, Tanaka R, et al. Adequate Adherence to Direct Oral Anticoagulant is Associated with Reduced Ischemic Stroke Severity in Patients with Atrial Fibrillation. *J Stroke Cerebrovasc Dis* 2019;28(6):1773-80. doi: <http://dx.doi.org/10.1016/j.jstrokecerebrovasdis.2018.09.019>.
175. Yamashita T, Laurent T, Kato M, et al. Comparison of hospital length of stay of acute ischemic stroke patients with non-valvular atrial fibrillation started on rivaroxaban or warfarin treatment during hospitalization. *J Med Econ* 2020;23(12):1379-88. doi: <http://dx.doi.org/10.1080/13696998.2020.1824384>.
176. Yamashita T, Suzuki S, Inoue H, et al. Two-year outcomes of more than 30 000 elderly patients with atrial fibrillation: Results from the All Nippon AF in the Elderly (ANAFIE) Registry. *Eur Heart J Qual Care Clin Outcomes* 2022;8(2):202-13. doi: <https://dx.doi.org/10.1093/ehjqcco/qcab025>.
177. Yang L, Brooks MM, Glynn NW, et al. Real-World Direct Comparison of the Effectiveness and Safety of Apixaban, Dabigatran, Rivaroxaban, and Warfarin in Medicare Beneficiaries With Atrial Fibrillation. *Am J Cardiol* 2020;126:29-36. doi: <http://dx.doi.org/10.1016/j.amjcard.2020.03.034>.
178. Yang SY, Kang DW, Nam JH, et al. Adherence is an optimal factor for maximizing the effective and safe use of oral anticoagulants in patients with atrial fibrillation. *Sci Rep* 2022;12(1):3413. doi: <https://dx.doi.org/10.1038/s41598-022-07316-y>.
179. Yao X, Abraham NS, Sangaralingham LR, et al. Effectiveness and safety of dabigatran, rivaroxaban, and apixaban versus warfarin in nonvalvular atrial fibrillation. *J Am Heart Assoc* 2016;5(6):e003725. doi: <http://dx.doi.org/10.1161/JAHA.116.003725>.
180. Yao X, Inselman JW, Ross JS, et al. Comparative effectiveness and safety of oral anticoagulants across kidney function in patients with atrial fibrillation. *Circ Cardiovasc Qual Outcomes* 2020:759-71. doi: <http://dx.doi.org/10.1161/CIRCOUTCOMES.120.006515>.
181. Yasui T, Shioyama W, Oboshi M, et al. Oral anticoagulants in Japanese patients with atrial fibrillation and active cancer. *Intern Med* 2019;58(13):1845-49. doi: <http://dx.doi.org/10.2169/internalmedicine.2415-18>.
182. Yavuz B, Ayturk M, Ozkan S, et al. A real world data of dabigatran etexilate: multicenter registry of oral anticoagulants in nonvalvular atrial fibrillation. *J Thromb Haemost* 2016;42(3):399-404. doi: <http://dx.doi.org/10.1007/s11239-016-1361-4>.
183. Yoshihisa A, Sato Y, Sato T, et al. Better clinical outcome with direct oral anticoagulants in hospitalized heart failure patients with atrial fibrillation. *BMC Cardiovasc Disord* 2018;18(1):11. doi: <http://dx.doi.org/10.1186/s12872-018-0746-z>.

184. Yoshimura S, Koga M, Sato S, et al. Two-year outcomes of anticoagulation for acute ischemic stroke with nonvalvular atrial fibrillation - SAMURAI-NVAF study. *Circ J* 2018;82(7):1935-42. doi: <http://dx.doi.org/10.1253/circj.CJ-18-0067>.
185. Zeymer U, Lober C, Wolf A, et al. Use, Persistence, Efficacy, and Safety of Apixaban in Patients with Non-Valvular Atrial Fibrillation in Unselected Patients in Germany. Results of the Prospective Apixaban in Atrial Fibrillation (APAF) Registry. *Cardiology and Therapy* 2020;9(2):467-78. doi: <http://dx.doi.org/10.1007/s40119-020-00188-1>.

2 Incorrect intervention (k = 45)

1. Agarwal S, Hachamovitch R, Menon V. Current trial-associated outcomes with warfarin in prevention of stroke in patients with nonvalvular atrial fibrillation: A meta-analysis. *Arch Intern Med* 2012;172(8):623-31. doi: <http://dx.doi.org/10.1001/archinternmed.2012.121>.
2. Ahuja T, Raco V, Papadopoulos J, et al. Antithrombotic Stewardship: Assessing Use of Computerized Clinical Decision Support Tools to Enhance Safe Prescribing of Direct Oral Anticoagulants in Hospitalized Patients. *J Patient Saf* 2021;17(8):e1057-e61. doi: <https://dx.doi.org/10.1097/PTS.0000000000000535>.
3. Alegret JM, Vinolas X, Arias MA, et al. New oral anticoagulants vs vitamin K antagonists: Benefits for health-related quality of life in patients with atrial fibrillation. *Int J Medical Sci* 2014;11(7):680-84. doi: <http://dx.doi.org/10.7150/ijms.8916>.
4. Ando G, Trio O. New oral anticoagulants versus Warfarin in patients undergoing cardioversion of atrial fibrillation. *Int J Cardiol* 2016;225:244-46. doi: <http://dx.doi.org/10.1016/j.ijcard.2016.09.126>.
5. Aronow WS, Shamliyan TA. Comparative Effectiveness and Safety of Rivaroxaban in Adults with Nonvalvular Atrial Fibrillation. *Am J Ther* 2018;26(6):e679-e703. doi: <http://dx.doi.org/10.1097/MJT.0000000000000890>.
6. Baker WL, Phung OJ. Systematic review and adjusted indirect comparison meta-analysis of oral anticoagulants in atrial fibrillation. *Circ Cardiovasc Qual Outcomes* 2012;5(5):711-19. doi: <http://dx.doi.org/10.1161/CIRCOUTCOMES.112.966572>.
7. Biondi-Zoccai G, Malavasi V, D'Ascenzo F, et al. Comparative effectiveness of novel oral anticoagulants for atrial fibrillation: Evidence from pair-wise and warfarin-controlled network meta-analyses. *HSR Proc Intensive Care Cardiovasc Anesth* 2013;5(1):40-54.
8. Briceno DF, Villablanca P, Cyrille N, et al. Left Atrial Appendage Occlusion Device and Novel Oral Anticoagulants Versus Warfarin for Stroke Prevention in Nonvalvular Atrial Fibrillation. *Circ Arrhythm Electrophysiol* 2015;8(5):1057-64. doi: <http://dx.doi.org/10.1161/CIRCEP.115.002993>.
9. Bruins Slot KM, Berge E. Factor Xa inhibitors versus vitamin K antagonists for preventing cerebral or systemic embolism in patients with atrial fibrillation. *Cochrane Database Syst Rev* 2018;3(3):Cd008980. doi: 10.1002/14651858.CD008980.pub3.
10. Chen J, Zhuang X, Long M, et al. Efficacy and Safety of Edoxaban in Nonvalvular Atrial Fibrillation: A Meta-analysis of Randomized Controlled Trials. *J Stroke Cerebrovasc Dis* 2015;24(12):2710-19. doi: <http://dx.doi.org/10.1016/j.jstrokecerebrovasdis.2015.07.026>.
11. Dentali F, Riva N, Crowther M, et al. Efficacy and safety of the novel oral anticoagulants in atrial fibrillation: a systematic review and meta-analysis of the literature. *Circulation* 2012;126(20):2381-91. doi: 10.1161/circulationaha.112.115410.
12. Dezman ZDW, Comer AC, Smith GS, et al. The Severity of Bleeding and Mortality in Trauma Patients Taking Dabigatran. *J Emerg Med* 2016;51(3):238-45. doi: <http://dx.doi.org/10.1016/j.jemermed.2016.05.005>.
13. Dogliotti A, Paolasso E, Giugliano RP. Novel oral anticoagulants in atrial fibrillation: A meta-analysis of large, randomized, controlled trials vs warfarin. *Clin Cardiol* 2013;36(2):61-67. doi: <http://dx.doi.org/10.1002/clc.22081>.

14. Douxfils J, Buckinx F, Mullier F, et al. Dabigatran etexilate and risk of myocardial infarction, other cardiovascular events, major bleeding, and all-cause mortality: A systematic review and meta-analysis of randomized controlled trials. *J Am Heart Assoc* 2014;3(3):000515. doi: <http://dx.doi.org/10.1161/JAHA.113.000515>.
15. Eckman MH, Wise RE, Speer B, et al. Integrating real-time clinical information to provide estimates of net clinical benefit of antithrombotic therapy for patients with atrial fibrillation. *Circ Cardiovasc Qual Outcomes* 2014;7(5):680-6. doi: 10.1161/circoutcomes.114.001163.
16. Farmakis D, Pipilis A, Antoniou A, et al. Clinical profile and therapeutic management of patients with atrial fibrillation in greece: Results from the registry of atrial fibrillation to investigate new guidelines (RAFTING). *Hellenic J Cardiol* 2013;54(5):368-75.
17. Ferrante F, Bianchi C, Iadecola A. [Persistence of therapy analysis: NOA/AVK use for patients with atrial fibrillation. A population-based cohort study]. *G Ital di Farm Clin* 2019;33(2):46-57. doi: <http://dx.doi.org/10.1721/3186.31638>.
18. Gomez-Outes A, Terleira-Fernandez AI, Calvo-Rojas G, et al. Dabigatran, rivaroxaban, or apixaban versus warfarin in patients with nonvalvular atrial fibrillation: A systematic review and meta-analysis of subgroups. *Thrombosis* 2013;640723. doi: <http://dx.doi.org/10.1155/2013/640723>.
19. Jiang H, Jiang Y, Ma H, et al. Effects of rivaroxaban and warfarin on the risk of gastrointestinal bleeding and intracranial hemorrhage in patients with atrial fibrillation: Systematic review and meta-analysis. *Clin Cardiol* 2021;44(9):1208-15. doi: <http://dx.doi.org/10.1002/clc.23690>.
20. Kongnakorn T, Lanitis T, Annemans L, et al. Cost Effectiveness of Apixaban Versus Aspirin for Stroke Prevention in Patients with Non-Valvular Atrial Fibrillation in Belgium. *Clin Drug Investig* 2014;34(10):709-21. doi: <http://dx.doi.org/10.1007/s40261-014-0224-z>.
21. Kosiuk J, Koutalas E, Doering M, et al. Comparison of dabigatran and uninterrupted warfarin in patients with atrial fibrillation undergoing cardiac rhythm device implantations - Case-control study. *Circ J* 2014;78(10):2402-07. doi: <http://dx.doi.org/10.1253/circj.CJ-14-0665>.
22. Lamsam L, Sussman ES, Iyer AK, et al. Intracranial hemorrhage in deep vein thrombosis/ pulmonary embolus patients without atrial fibrillation direct oral anticoagulants versus warfarin. *Stroke* 2018;49(8):1866-71. doi: <http://dx.doi.org/10.1161/STROKEAHA.118.022156>.
23. Le Heuzey JY, Ammentorp B, Darius H, et al. Differences among western European countries in anticoagulation management of atrial fibrillation: Data from the PREFER IN AF Registry. *Thromb Haemost* 2014;111(5):833-41. doi: <http://dx.doi.org/10.1160/TH13-12-1007>.
24. Maeder Micha T, Tabea K, Sanja B, et al. Quality of vitamin K antagonist oral anticoagulation in 322 patients with atrial fibrillation - real-life data from a survey in Eastern Switzerland. *Swiss Med Wkly* 2017;147(39-40):w14503. doi: <http://dx.doi.org/10.4414/smw.2017.w14503>.
25. Mannucci C, Douketis JD. The management of patients who require temporary reversal of vitamin K antagonists for surgery: a practical guide for clinicians. *Intern Emerg Med* 2006;1(2):96-104. doi: <http://dx.doi.org/10.1007/BF02936533>.
26. Miller CS, Grandi SM, Shimony A, et al. Meta-analysis of efficacy and safety of new oral anticoagulants (dabigatran, rivaroxaban, apixaban) versus warfarin in patients with atrial fibrillation. *Am J Cardiol* 2012;110(3):453-60. doi: <http://dx.doi.org/10.1016/j.amjcard.2012.03.049>.

27. Paciaroni M, Agnelli G, Ageno W, et al. Risk factors for cerebral ischemic events in patients with atrial fibrillation on warfarin for stroke prevention. *Atherosclerosis* 2010;212(2):564-66. doi: <http://dx.doi.org/10.1016/j.atherosclerosis.2010.06.016>.
28. Panikker S, Lord J, Jarman JWE, et al. Outcomes and costs of left atrial appendage closure from randomized controlled trial and realworld experience relative to oral anticoagulation. *Eur Heart J* 2016;37(46):3470-82. doi: <http://dx.doi.org/10.1093/eurheartj/ehw048>.
29. Perez Cabeza AI, Rivera-Caravaca JM, Roldan-Rabadan I, et al. Antithrombotic therapy and clinical outcomes at 1 year in the Spanish cohort of the EORP-AF Long-term General Registry. *Eur J Clin Invest* 2022;52(4):e13709. doi: <https://dx.doi.org/10.1111/eci.13709>.
30. Petrou P. Does X(a) mark the spot? An indirect mixed treatment comparison of Xa inhibitors compared to warfarin for patients with atrial fibrillation. *Health Policy Technol* 2019;8(3):304-12. doi: <http://dx.doi.org/10.1016/j.hlpt.2019.08.002>.
31. Reddy VY, Akehurst RL, Amorosi SL, et al. Cost-effectiveness of left atrial appendage closure with the WATCHMAN device compared with warfarin or non-Vitamin K antagonist oral anticoagulants for secondary prevention in nonvalvular atrial fibrillation. *Stroke* 2018;49(6):1464-70. doi: <http://dx.doi.org/10.1161/STROKEAHA.117.018825>.
32. Reddy VY, Akehurst RL, Armstrong SO, et al. Cost effectiveness of left atrial appendage closure with the Watchman device for atrial fibrillation patients with absolute contraindications to warfarin. *Europace* 2016;18(7):979-86. doi: <https://dx.doi.org/10.1093/europace/euv412>.
33. Salazar CA, del Aguila D, Cordova EG. Direct thrombin inhibitors versus vitamin K antagonists for preventing cerebral or systemic embolism in people with non-valvular atrial fibrillation. *Cochrane Database Syst Rev* 2014;2014(3):CD009893. doi: <http://dx.doi.org/10.1002/14651858.CD009893.pub2>.
34. Salcedo J, Hay JW, Lam J. Cost-effectiveness of rivaroxaban versus warfarin for treatment of nonvalvular atrial fibrillation in patients with worsening renal function. *Int J Cardiol* 2019;282:53-58. doi: <http://dx.doi.org/10.1016/j.ijcard.2018.11.087>.
35. Saliba L, Mondoly P, Duparc A, et al. [Factors Associated with Direct Oral Anticoagulants versus Vitamin K Antagonists in Patients with Non-valvular Atrial Fibrillation]. *Therapie* 2015;70(6):485-92. doi: 10.2515/therapie/2015032.
36. Sardar P, Chatterjee S, Wu WC, et al. New Oral Anticoagulants Are Not Superior to Warfarin in Secondary Prevention of Stroke or Transient Ischemic Attacks, but Lower the Risk of Intracranial Bleeding: Insights from a Meta-Analysis and Indirect Treatment Comparisons. *PLoS ONE* 2013;8(10):e77694. doi: <http://dx.doi.org/10.1371/journal.pone.0077694>.
37. Seeger JD, Bykov K, Bartels DB, et al. Safety and effectiveness of dabigatran and warfarin in routine care of patients with atrial fibrillation. *Thromb Haemost* 2015;114(6):1277-89. doi: <http://dx.doi.org/10.1160/TH15-06-0497>.
38. Senoo K, Miki T, Ohkura T, et al. A Smartphone App to Improve Oral Anticoagulation Adherence in Patients With Atrial Fibrillation: Prospective Observational Study. *JMIR mhealth uhealth* 2022;10(1):e30807. doi: <https://dx.doi.org/10.2196/30807>.

39. Shaw JR, Zhang T, Le Gal G, et al. Perioperative interruption of direct oral anticoagulants and vitamin K antagonists in patients with atrial fibrillation: A comparative analysis. *Res Pract Thromb Haemost* 2020;4(1):131-40. doi: <http://dx.doi.org/10.1002/rth2.12285>.
40. Singh SM, Micieli A, Wijeyesundera HC. Economic evaluation of percutaneous left atrial appendage occlusion, dabigatran, and warfarin for stroke prevention in patients with nonvalvular atrial fibrillation. *Circulation* 2013;127(24):2414-23. doi: <http://dx.doi.org/10.1161/CIRCULATIONAHA.112.000920>.
41. Sinnaeve PR, Brueckmann M, Clemens A, et al. Stroke prevention in elderly patients with atrial fibrillation: Challenges for anticoagulation. *J Intern Med* 2012;271(1):15-24. doi: <http://dx.doi.org/10.1111/j.1365-2796.2011.02464.x>.
42. Suda S, Sakamoto Y, Okubo S, et al. Anticoagulants, Reperfusion Therapy, and Outcomes in Ischemic Stroke Patients With Non-Valvular Atrial Fibrillation - A Single-Center, 6-Year Experience of 546 Consecutive Patients. *Circ J* 2018;82(10):2647-54. doi: 10.1253/circj.CJ-18-0561.
43. Tjoe B, Nguyen H, Mandava S, et al. Use of Direct Oral Anticoagulation Therapy Following Implantation of the Watchman Left Atrial Appendage Occlusion Device. *Structural Heart* 2021;5(3):295-301. doi: <http://dx.doi.org/10.1080/24748706.2021.1890286>.
44. Xiang C, Gong YZ, Zeng LJ, et al. Efficacy and safety of oral direct factor Xa inhibitors versus warfarin in patients with atrial fibrillation: a meta-analysis of randomized controlled trials. *Acta Cardiol* 2016;71(3):349-57. doi: <http://dx.doi.org/10.1080/AC.71.3.3152095>.
45. Xu W, Lv M, Wu S, et al. Severe Bleeding Risk of Direct Oral Anticoagulants Versus Vitamin K Antagonists for Stroke Prevention and Treatment in Patients with Atrial Fibrillation: A Systematic Review and Network Meta-Analysis. *Cardiovasc Drugs Ther* 2021 doi: <http://dx.doi.org/10.1007/s10557-021-07232-9>.

3 Incorrect language (k = 6)

1. Alegria Ezquerro E, Agra Bermejo R, Alonso Perez LJ, et al. [Atrial fibrillation and ischemic heart disease: beyond stroke prevention]. *Rev Esp Cardiol Suplementos* 2020;20(Supplement 1):11-20. doi: <http://dx.doi.org/10.1016/S1131-3587%2820%2930012-1>.
2. Anguita Sanchez M, Bertomeu Martinez V, Ruiz Ortiz M, et al. [Direct oral anticoagulants versus vitamin K antagonists in real-world patients with nonvalvular atrial fibrillation. The FANTASIA study]. *Rev Esp Cardiol* 2020;73(1):14-20. doi: <http://dx.doi.org/10.1016/j.recesp.2019.02.003>.
3. Castro A, Arochena L, San Saturnino M, et al. [The management of non-valvular atrial fibrillation from patient perspective in Spain]. *Medicina Clinica Practica* 2019;2(3):37-46. doi: <http://dx.doi.org/10.1016/j.mcpsp.2019.01.010>.
4. Escobar C, Marti-Almor J, Perez Cabeza A, et al. [Direct Oral Anticoagulants Versus Vitamin K Antagonists in Real-life Patients With Atrial Fibrillation. A Systematic Review and Meta-analysis]. *Rev Esp Cardiol* 2019;72(4):305-16. doi: <http://dx.doi.org/10.1016/j.recesp.2018.02.023>.
5. Guerrero AZA, Coutinho EL, Ferraz MB, et al. [Economy-and Social-Based Strategies for Anticoagulation of Patients with Atrial Fibrillation]. *ABC Cardiol* 2022;118(1):88-94. doi: <https://dx.doi.org/10.36660/abc.20200921>.
6. Sigismondi A, Camacho-Freire SJ, León-Jiménez J, et al. [Patients with non-valvular atrial fibrillation on vitamin k antagonists or direct-acting oral anticoagulants: patients profile and long-term follow up outcomes]. *Arch Cardiol Mex* 2019;89(4):382-92. doi: 10.24875/acm.19000023.

4 Incorrect outcome (k = 137)

1. Adcock AK, Lee-Iannotti JK, Aguilar MI, et al. Is dabigatran cost effective compared with warfarin for stroke prevention in atrial fibrillation? A critically appraised topic. *Neurologist* 2012;18(2):102-07. doi: <http://dx.doi.org/10.1097/NRL.0b013e318247bcb6>.
2. Ahrens I, Bode C. Clinical utility of rivaroxaban in stroke prevention associated with nonvalvular atrial fibrillation - Patient considerations. *J Blood Med* 2014;5:25-30. doi: <http://dx.doi.org/10.2147/JBM.S32957>.
3. Alcusky M, McManus DD, Hume AL, et al. Changes in Anticoagulant Utilization Among United States Nursing Home Residents With Atrial Fibrillation From 2011 to 2016. *J Am Heart Assoc* 2019;8(9):e012023. doi: <http://dx.doi.org/10.1161/JAHA.119.012023>.
4. Ali A, Bailey C, Abdelhafiz AH. Stroke prophylaxis with warfarin or dabigatran for patients with non-valvular atrial fibrillation-cost analysis. *Age Ageing* 2012;41(5):681-84. doi: <http://dx.doi.org/10.1093/ageing/afs017>.
5. Alonso A, MacLehose RF, Chen LY, et al. Prospective study of oral anticoagulants and risk of liver injury in patients with atrial fibrillation. *Heart* 2017;103(11):834-39. doi: <http://dx.doi.org/10.1136/heartjnl-2016-310586>.
6. Amin A, Bruno A, Trocio J, et al. Comparison of differences in medical costs when new oral anticoagulants are used for the treatment of patients with non-valvular atrial fibrillation and venous thromboembolism vs warfarin or placebo in the US. *J Med Econ* 2015;18(6):399-409. doi: <http://dx.doi.org/10.3111/13696998.2015.1007210>.
7. Amin A, Deitelzweig S, Jing Y, et al. Estimation of the impact of warfarin's time-in-therapeutic range on stroke and major bleeding rates and its influence on the medical cost avoidance associated with novel oral anticoagulant use-learnings from ARISTOTLE, ROCKET-AF, and RE-LY trials. *J Thromb Haemost* 2014;38(2):150-59. doi: <http://dx.doi.org/10.1007/s11239-013-1048-z>.
8. Amin A, Keshishian A, Trocio J, et al. A real-world observational study of hospitalization and health care costs among nonvalvular atrial fibrillation patients prescribed oral anticoagulants in the U.S. Medicare population. *J Manag Care Spec Pharm* 2020;26(5):639-51. doi: <http://dx.doi.org/10.18553/jmcp.2020.26.5.639>.
9. Amin A, Keshishian A, Vo L, et al. Real-world comparison of all-cause hospitalizations, hospitalizations due to stroke and major bleeding, and costs for non-valvular atrial fibrillation patients prescribed oral anticoagulants in a US health plan. *J Med Econ* 2018;21(3):244-53. doi: <http://dx.doi.org/10.1080/13696998.2017.1394866>.
10. Amin A, Stokes M, Makenbaeva D, et al. Estimated medical cost reductions associated with use of novel oral anticoagulants vs warfarin in a real-world non-valvular atrial fibrillation patient population. *J Med Econ* 2014;17(11):771-81. doi: <http://dx.doi.org/10.3111/13696998.2014.953682>.
11. Annavarapu S, Gandhi PK, Li Y, et al. Factors influencing dabigatran or warfarin medication persistence in patients with nonvalvular atrial fibrillation. *J Comp Eff Res* 2018;7(7):685-91. doi: <http://dx.doi.org/10.2217/cer-2017-0081>.

12. Antonucci E, Poli D, Tosetto A, et al. The Italian START-Register on anticoagulation with focus on atrial fibrillation. *PLoS ONE* 2015;10(5):e0124719. doi: <http://dx.doi.org/10.1371/journal.pone.0124719>.
13. Artang R, Rome E, Nielsen JD, et al. Meta-analysis of randomized controlled trials on risk of myocardial infarction from the use of oral direct thrombin inhibitors. *Am J Cardiol* 2013;112(12):1973-79. doi: <http://dx.doi.org/10.1016/j.amjcard.2013.08.027>.
14. Atay JK, Fiumara K, Piazza G, et al. Hospital budget implications of substituting dabigatran for warfarin in an anticoagulation service. *Clin Appl Thromb Hemost* 2012;18(2):181-84. doi: <http://dx.doi.org/10.1177/1076029611416642>.
15. Bennaghmouch N, de Veer AJWM, Zivelonghi C, et al. First report of a comparative patient-oriented perspective on the use of non-vitamin-K oral anticoagulants or vitamin-K antagonists in atrial fibrillation: patients' experiences, side-effects and practical problems leading to non-adherence. *Neth Heart J* 2019;27(12):596-604. doi: <http://dx.doi.org/10.1007/s12471-019-01331-x>.
16. Bennaghmouch N, de Veer AJWM, Zivelonghi C, et al. Correction to: First report of a comparative patient-oriented perspective on the use of non-vitamin-K oral anticoagulants or vitamin-K antagonists in atrial fibrillation: patients' experiences, side-effects and practical problems leading to non-adherence (Netherlands Heart Journal, (2019), 27, 12, (596-604), 10.1007/s12471-019-01331-x). *Neth Heart J* 2021;29(5):297-98. doi: <http://dx.doi.org/10.1007/s12471-021-01577-4>.
17. Bowrin K, Briere JB, Levy P, et al. Use of real-world evidence in meta-analyses and cost-effectiveness models. *J Med Econ* 2020;23(10):1053-60. doi: <http://dx.doi.org/10.1080/13696998.2020.1792917>.
18. Braithwaite RS, Mentor SM. Identifying favorable-value cardiovascular health services. *Am J Manag Care* 2011;17(6):431-38.
19. Briere JB, Bowrin K, Coleman C, et al. Real-world clinical evidence on rivaroxaban, dabigatran, and apixaban compared with vitamin K antagonists in patients with nonvalvular atrial fibrillation: a systematic literature review. *Expert Rev Pharmacoecon Outcomes Res* 2019;19(1):27-36. doi: <http://dx.doi.org/10.1080/14737167.2018.1518134>.
20. Brierea J-B, Bowrinb K, Fauchierd L, et al. Correction to: Real-world clinical evidence on rivaroxaban, dabigatran, and apixaban compared with vitamin K antagonists in patients with nonvalvular atrial fibrillation: a systematic literature review (Expert Review of Pharmacoeconomics & Outcomes Research, (2019), 19, 1, (27-36), 10.1080/14737167.2018.1518134). *Expert Rev Pharmacoecon Outcomes Res* 2019;19(4):503. doi: <http://dx.doi.org/10.1080/14737167.2019.1633768>.
21. Caldeira D, Rodrigues FB, Barra M, et al. Non-Vitamin K antagonist oral anticoagulants and major bleeding-related fatality in patients with atrial fibrillation and venous thromboembolism: A systematic review and meta-analysis. *Heart* 2015;101(15):1204-11. doi: <http://dx.doi.org/10.1136/heartjnl-2015-307489>.
22. Carmo J, Costa FM, Ferreira J, et al. Dabigatran in real-world atrial fibrillation: Meta-analysis of observational comparison studies with vitamin K antagonists. *Thromb Haemost* 2016;116(4):754-63. doi: <http://dx.doi.org/10.1160/TH16-03-0203>.

23. Carnicelli AP, Hong H, Connolly SJ, et al. Direct Oral Anticoagulants versus Warfarin in Patients with Atrial Fibrillation: Patient-Level Network Meta-Analyses of Randomized Clinical Trials with Interaction Testing by Age and Sex. *Circulation* 2022 doi: <https://dx.doi.org/10.1161/CIRCULATIONAHA.121.056355>.
24. Carnicelli AP, Hong H, Connolly SJ, et al. Direct Oral Anticoagulants Versus Warfarin in Patients With Atrial Fibrillation: Patient-Level Network Meta-Analyses of Randomized Clinical Trials With Interaction Testing by Age and Sex. *Circulation* 2022;145(4):242-55. doi: 10.1161/circulationaha.121.056355.
25. Chen C, Cao Y, Zheng Y, et al. Effect of Rivaroxaban or Apixaban in Atrial Fibrillation Patients with Stage 4-5 Chronic Kidney Disease or on Dialysis. *Cardiovasc Drugs Ther* 2021;35(2):273-81. doi: <http://dx.doi.org/10.1007/s10557-021-07144-8>.
26. Chokesuwattanaskul R, Thongprayoon C, Bathini T, et al. Efficacy and safety of anticoagulation for atrial fibrillation in patients with cirrhosis: A systematic review and meta-analysis. *Dig Liver Dis* 2019;51(4):489-95. doi: <http://dx.doi.org/10.1016/j.dld.2018.12.001>.
27. Coleman CI, Briere JB, Fauchier L, et al. Meta-analysis of real-world evidence comparing non-vitamin K antagonist oral anticoagulants with vitamin K antagonists for the treatment of patients with non-valvular atrial fibrillation. *J Mark Access Health Policy* 2019;7(1):1574541. doi: 10.1080/20016689.2019.1574541.
28. Cope S, Clemens A, Hammes F, et al. Critical appraisal of network meta-analyses evaluating the efficacy and safety of new oral anticoagulants in atrial fibrillation stroke prevention trials. *Value Health* 2015;18(2):234-49. doi: <http://dx.doi.org/10.1016/j.jval.2014.10.012>.
29. Darwiche W, Bejan-Angoulvant T, Angoulvant D, et al. Risk of myocardial infarction and death in patients with atrial fibrillation treated with dabigatran or vitamin K antagonists. Meta-analysis of observational analyses. *Thromb Haemost* 2016;116(6):1150-58. doi: 10.1160/th16-06-0483.
30. Deitelzweig S, Amin A, Jing Y, et al. Medical Costs of Oral Anticoagulants vs Warfarin for Atrial Fibrillation Patients with Different Stroke Risks. *Cardiology and Therapy* 2013;2(2):165-70. doi: <https://dx.doi.org/10.1007/s40119-013-0020-5>.
31. Deitelzweig S, Farmer C, Luo X, et al. Risk of major bleeding in patients with non-valvular atrial fibrillation treated with oral anticoagulants: a systematic review of real-world observational studies. *Curr Med Res Opin* 2017;33(9):1583-94. doi: <http://dx.doi.org/10.1080/03007995.2017.1347090>.
32. Deng K, Cheng J, Rao S, et al. Efficacy and safety of direct oral anticoagulants in elderly patients with atrial fibrillation: A network meta-analysis. *Front Med* 2020;7:107. doi: <http://dx.doi.org/10.3389/fmed.2020.00107>.
33. Eisen A, Giugliano RP, Ruff CT, et al. Edoxaban vs warfarin in patients with nonvalvular atrial fibrillation in the US Food and Drug Administration approval population: An analysis from the Effective Anticoagulation with Factor Xa Next Generation in Atrial Fibrillation-Thrombolysis in Myocardial Infarction 48 (ENGAGE AF-TIMI 48) trial. *Am Heart J* 2016;172:144-51. doi: <http://dx.doi.org/10.1016/j.ahj.2015.11.004>.
34. Escobar C, Barrios V, Lip GYH, et al. Effectiveness and Safety of Dabigatran Compared to Vitamin K Antagonists in Non-Asian Patients with Atrial Fibrillation: A Systematic Review and Meta-Analysis. *Clin Drug Investig* 2021;41(11):941-53. doi: <https://dx.doi.org/10.1007/s40261-021-01091-w>.

35. Feldberg J, Patel P, Farrell A, et al. A systematic review of direct oral anticoagulant use in chronic kidney disease and dialysis patients with atrial fibrillation. *Nephrol Dial Transplant* 2019;34(2):265-77. doi: <http://dx.doi.org/10.1093/ndt/gfy031>.
36. Generalova D, Cunningham S, Leslie SJ, et al. Prescribers' views and experiences of using direct acting oral anticoagulants in the management of nonvalvular atrial fibrillation: A survey in remote and rural Scotland. *Br J Clin Pharmacol* 2019;85(10):2414-22. doi: <http://dx.doi.org/10.1111/bcp.14069>.
37. Grymonprez M, Steurbaut S, De Backer TL, et al. Effectiveness and Safety of Oral Anticoagulants in Older Patients With Atrial Fibrillation: A Systematic Review and Meta-Analysis. *Front pharmacol* 2020;11:583311. doi: <http://dx.doi.org/10.3389/fphar.2020.583311>.
38. Guimaraes PO, Lopes RD, Alexander JH, et al. International normalized ratio control and subsequent clinical outcomes in patients with atrial fibrillation using warfarin. *J Thromb Haemost* 2019;48(1):27-34. doi: <http://dx.doi.org/10.1007/s11239-019-01858-1>.
39. Guo Z, Ding X, Ye Z, et al. Non-vitamin K antagonist oral anticoagulants versus vitamin K antagonists in atrial fibrillation patients with previous stroke or intracranial hemorrhage: A systematic review and meta-analysis of observational studies. *Clin Cardiol* 2021;44(7):917-24. doi: <http://dx.doi.org/10.1002/clc.23647>.
40. Harskamp RE, Lucassen WAM, Lopes RD, et al. Risk of stroke and bleeding in relation to hypertension in anticoagulated patients with atrial fibrillation: a meta-analysis of randomised controlled trials. *Acta Cardiol* 2021:1-5. doi: 10.1080/00015385.2021.1882111.
41. Hellfritzsch M, Adelborg K, Damkier P, et al. Effectiveness and safety of direct oral anticoagulants in atrial fibrillation patients switched from vitamin K antagonists: A systematic review and meta-analysis. *Basic Clin Pharmacol Toxicol* 2020;126(1):21-31. doi: <http://dx.doi.org/10.1111/bcpt.13283>.
42. Hirschl M, Kundi M. Safety and efficacy of direct acting oral anticoagulants and vitamin k antagonists in nonvalvular atrial fibrillation - a network meta-analysis of real-world data. *VASA* 2019;48(2):134-47. doi: <http://dx.doi.org/10.1024/0301-1526/a000746>.
43. Hirschl M, Kundi M. Safety and efficacy of direct acting oral anticoagulants and vitamin K antagonists in nonvalvular atrial fibrillation - A network meta-analysis of real-world data. *VASA* 2019;48(2):134-47. doi: <http://dx.doi.org/10.1024/0301-1526/a000746>.
44. Huang ZC, Li CQ, Liu XY, et al. Efficacy and Safety of Direct Oral Anticoagulants in Patients with Atrial Fibrillation and Liver Disease: a Meta-Analysis and Systematic Review. *Cardiovasc Drugs Ther* 2021;35(6):1205-15. doi: <https://dx.doi.org/10.1007/s10557-020-07065-y>.
45. Jin H, Zhu K, Wang L, et al. A network meta-analysis of non-vitamin K antagonist oral anticoagulants versus warfarin in patients with atrial fibrillation and diabetes mellitus. *Acta Cardiol* 2021;76(9):960-69. doi: <https://dx.doi.org/10.1080/00015385.2020.1869671>.
46. Joundi RA, Cipriano LE, Sposato LA, et al. Ischemic Stroke Risk in Patients With Atrial Fibrillation and CHA2DS2-VASc Score of 1: Systematic Review and Meta-Analysis. *Stroke* 2016;47(5):1364-67. doi: <http://dx.doi.org/10.1161/STROKEAHA.115.012609>.
47. Kansal AR, Sorensen SV, Gani R, et al. Cost-effectiveness of dabigatran etexilate for the prevention of stroke and systemic embolism in UK patients with atrial fibrillation. *Heart* 2012;98(7):573-78. doi: <http://dx.doi.org/10.1136/heartjnl-2011-300646>.

48. Kansal AR, Zheng Y, Pokora T, et al. Cost-effectiveness of new oral anticoagulants in the prevention of stroke in patients with atrial fibrillation. *Best Pract Res Clin Haematol* 2013;26(2):225-37. doi: <http://dx.doi.org/10.1016/j.beha.2013.07.012>.
49. Kasmeridis C, Apostolakis S, Ehlers L, et al. Cost effectiveness of treatments for stroke prevention in atrial fibrillation: Focus on the novel oral anticoagulants. *Pharmacoeconomics* 2013;31(11):971-80. doi: <http://dx.doi.org/10.1007/s40273-013-0090-1>.
50. Laliberte F, Cloutier M, Crivera C, et al. Effect of Rivaroxaban Versus Warfarin on Health Care Costs Among Nonvalvular Atrial Fibrillation Patients: Observations from Rivaroxaban Users and Matched Warfarin Users. *Adv Ther* 2015;32(3):216-27. doi: <http://dx.doi.org/10.1007/s12325-015-0189-1>.
51. Laliberte F, Pilon D, Raut MK, et al. Is rivaroxaban associated with lower inpatient costs compared to warfarin among patients with non-valvular atrial fibrillation? *Curr Med Res Opin* 2014;30(8):1521-28. doi: <http://dx.doi.org/10.1185/03007995.2014.916159>.
52. Lau YC, Xiong Q, Shantsila E, et al. Effects of non-vitamin K antagonist oral anticoagulants on fibrin clot and whole blood clot formation, integrity and thrombolysis in patients with atrial fibrillation. *J Thromb Haemost* 2016;42(4):535-44. doi: <http://dx.doi.org/10.1007/s11239-016-1399-3>.
53. Lee CJY, Gerds TA, Carlson N, et al. Risk of Myocardial Infarction in Anticoagulated Patients With Atrial Fibrillation. *J Am Coll Cardiol* 2018;72(1):17-26. doi: <http://dx.doi.org/10.1016/j.jacc.2018.04.036>.
54. Lee JJ, Ha ACT, Dorian P, et al. Meta-Analysis of Safety and Efficacy of Direct Oral Anticoagulants Versus Warfarin According to Time in Therapeutic Range in Atrial Fibrillation. *Am J Cardiol* 2021;140:62-68. doi: <http://dx.doi.org/10.1016/j.amjcard.2020.10.064>.
55. Lega JC, Bertolotti L, Gremillet C, et al. Consistency of safety and efficacy of new oral anticoagulants across subgroups of patients with atrial fibrillation. *PLoS ONE* 2014;9(3):e91398. doi: <http://dx.doi.org/10.1371/journal.pone.0091398>.
56. Leminen A, Pyykonen M, Tynkkynen J, et al. Modeling patients' time, travel, and monitoring costs in anticoagulation management: societal savings achievable with the shift from warfarin to direct oral anticoagulants. *BMC Health Serv Res* 2019;19(1):901. doi: <http://dx.doi.org/10.1186/s12913-019-4711-z>.
57. Liang X, Xie W, Lin Z, et al. The efficacy and safety of edoxaban versus warfarin in preventing clinical events in atrial fibrillation: A systematic review and meta-Analysis. *Anatol J Cardiol* 2021;25(2):77-88. doi: <http://dx.doi.org/10.14744/AnatolJCardiol.2020.18049>.
58. Liberato NL, Marchetti M. Cost-effectiveness of non-Vitamin K antagonist oral anticoagulants for stroke prevention in non-valvular atrial fibrillation: A systematic and qualitative review. *Expert Rev Pharmacoecon Outcomes Res* 2016;16(2):221-35. doi: <http://dx.doi.org/10.1586/14737167.2016.1147351>.
59. Limone BL, Baker WL, Kluger J, et al. Novel Anticoagulants for Stroke Prevention in Atrial Fibrillation: A Systematic Review of Cost-Effectiveness Models. *PLoS ONE* 2013;8(4):e62183. doi: <http://dx.doi.org/10.1371/journal.pone.0062183>.

60. Lin J, Trocio J, Gupta K, et al. Major bleeding risk and healthcare economic outcomes of non-valvular atrial fibrillation patients newly-initiated with oral anticoagulant therapy in the real-world setting. *J Med Econ* 2017;20(9):952-61. doi: <http://dx.doi.org/10.1080/13696998.2017.1341902>.
61. Lindhoff-Last E, Herrmann E, Lindau S, et al. Severe hemorrhage associated with oral anticoagulants: A prospective observational study of the clinical course during treatment with vitamin K antagonists or direct oral anticoagulants. *Dtsch* 2020;117(18):312-19. doi: <http://dx.doi.org/10.3238/arztebl.2020.0312>.
62. Lobraico-Fernandez J, Baksh S, Nemeč E. Elderly Bleeding Risk of Direct Oral Anticoagulants in Nonvalvular Atrial Fibrillation: A Systematic Review and Meta-Analysis of Cohort Studies. *Drugs R D* 2019;19(3):235-45. doi: <http://dx.doi.org/10.1007/s40268-019-0275-y>.
63. Loewen PS, Ji AT, Kapanen A, et al. Patient values and preferences for antithrombotic therapy in atrial fibrillation: A narrative systematic review. *Thromb Haemost* 2017;117(6):1007-22. doi: <http://dx.doi.org/10.1160/TH16-10-0787>.
64. Lopes RD, Crowley MJ, Shah BR, et al. AHRQ Comparative Effectiveness Reviews. Stroke Prevention in Atrial Fibrillation. Rockville (MD): Agency for Healthcare Research and Quality (US) 2013.
65. Lowenstern A, Al-Khatib SM, Sharan L, et al. Interventions for preventing thromboembolic events in patients with atrial fibrillation a systematic review. *Ann Intern Med* 2018;169(11):774-87. doi: <http://dx.doi.org/10.7326/M18-1523>.
66. Malik AH, Yandrapalli S, Aronow WS, et al. Meta-Analysis of Direct-Acting Oral Anticoagulants Compared With Warfarin in Patients >75 Years of Age. *Am J Cardiol* 2019;123(12):2051-57. doi: <http://dx.doi.org/10.1016/j.amjcard.2019.02.060>.
67. Martha JW, Pranata R, Raffaello WM, et al. Direct Acting Oral Anticoagulant vs. Warfarin in the Prevention of Thromboembolism in Patients With Non-valvular Atrial Fibrillation With Valvular Heart Disease-A Systematic Review and Meta-Analysis. *Front Cardiovasc Med* 2021;8:764356. doi: [10.3389/fcvm.2021.764356](https://doi.org/10.3389/fcvm.2021.764356).
68. Masbah N, Macleod MJ. The cost savings of Newer oral anticoagulants in atrial fibrillation-related stroke prevention. *Int J Clin Pharmacol Ther* 2017;55(3):220-30. doi: <http://dx.doi.org/10.5414/CP202651>.
69. Meng Q, Cen Z. New oral anticoagulants for nonvalvular atrial fibrillation with peripheral artery disease: a meta-analysis. *Herz* 2021;46(4):352-58. doi: <http://dx.doi.org/10.1007/s00059-020-04970-8>.
70. Mergenthaler U, Kostev K, Moosmang S, et al. [Stroke prevention in atrial fibrillation in Germany. Situational analysis of treatment reality based on retrospective data]. *MMW Fortschr Med* 2017;159(7):26-32. doi: <http://dx.doi.org/10.1007/s15006-017-0341-8>.
71. Mitchell SA, Simon TA, Raza S, et al. The efficacy and safety of oral anticoagulants in warfarin-suitable patients with nonvalvular atrial fibrillation: Systematic review and meta-analysis. *Clin Appl Thromb Hemost* 2013;19(6):619-31. doi: <http://dx.doi.org/10.1177/1076029613486539>.
72. Munir MB, Hlavacek P, Keshishian A, et al. Contemporary clinical and economic outcomes among oral anticoagulant treated and untreated elderly patients with atrial fibrillation: Insights from the United

States Medicare database. *PLoS ONE* 2022;17(2 February):e0263903. doi: <https://dx.doi.org/10.1371/journal.pone.0263903>.

73. Nazha B, Pandya B, Cohen J, et al. Periprocedural outcomes of direct oral anticoagulants versus warfarin in nonvalvular atrial fibrillation meta-analysis of phase III trials. *Circulation* 2018;138(14):1402-11. doi: <http://dx.doi.org/10.1161/CIRCULATIONAHA.117.031457>.
74. Nielsen PB, Lane DA, Rasmussen LH, et al. Renal function and non-vitamin K oral anticoagulants in comparison with warfarin on safety and efficacy outcomes in atrial fibrillation patients: a systemic review and meta-regression analysis. *Clin Res Cardiol* 2015;104(5):418-29. doi: 10.1007/s00392-014-0797-9.
75. Noviyani R, Youngkong S, Nathisuwan S, et al. Economic evaluation of direct oral anticoagulants (DOACs) versus vitamin K antagonists (VKAs) for stroke prevention in patients with atrial fibrillation: a systematic review and meta-analysis. *BMJ Evid Based Med* 2021 doi: <http://dx.doi.org/10.1136/bmjebm-2020-111634>.
76. Ntaios G, Papavasileiou V, Makaritsis K, et al. Real-World Setting Comparison of Nonvitamin-K Antagonist Oral Anticoagulants Versus Vitamin-K Antagonists for Stroke Prevention in Atrial Fibrillation: A Systematic Review and Meta-Analysis. *Stroke* 2017;48(9):2494-503. doi: <http://dx.doi.org/10.1161/STROKEAHA.117.017549>.
77. O'Neill ES, Grande SW, Elwyn G, et al. Availability of patient decision aids for stroke prevention in atrial fibrillation: A systematic review. *Am Heart J* 2017;191:1-11. doi: <http://dx.doi.org/10.1016/j.ahj.2017.05.014>.
78. Oh HJ, Ryu KH, Park BJ, et al. The risk of gastrointestinal hemorrhage with non-vitamin K antagonist oral anticoagulants: A network meta-analysis. *Medicine* 2021;100(11):e25216. doi: <https://dx.doi.org/10.1097/MD.00000000000025216>.
79. Ozaki AF, Choi AS, Le QT, et al. Real-World Adherence and Persistence to Direct Oral Anticoagulants in Patients with Atrial Fibrillation: A Systematic Review and Meta-Analysis. *Circ Cardiovasc Qual Outcomes* 2020:e005969. doi: <http://dx.doi.org/10.1161/CIRCOUTCOMES.119.005969>.
80. Pinyol C, Cepeda JM, Roldan I, et al. A Systematic Literature Review on the Cost-Effectiveness of Apixaban for Stroke Prevention in Non-valvular Atrial Fibrillation. *Cardiology and Therapy* 2016;5(2):171-86. doi: <http://dx.doi.org/10.1007/s40119-016-0066-2>.
81. Pulignano G, Del Sindaco D, Tinti MD, et al. Atrial fibrillation management in older heart failure patients: A complex clinical problem. *Heart Int* 2016;11(1):e41-e49. doi: <http://dx.doi.org/10.5301/heartint.5000230>.
82. Purrucker JC, Holscher K, Kollmer J, et al. Etiology of ischemic strokes of patients with atrial fibrillation and therapy with anticoagulants. *J Clin Med* 2020;9(9):1-11. doi: <http://dx.doi.org/10.3390/jcm9092938>.
83. Pyykonen M, Linna M, Tykkylainen M, et al. Patient-specific and healthcare real-world costs of atrial fibrillation in individuals treated with direct oral anticoagulant agents or warfarin. *BMC Health Serv Res* 2021;21(1):1299. doi: <https://dx.doi.org/10.1186/s12913-021-07125-5>.

84. Ramagopalan SV, Samnaliev M, Weir S, et al. Costs of gastrointestinal bleeding events in atrial fibrillation: a UK Clinical Practice Research Datalink study. *Future Cardiol* 2019;15(5):367-75. doi: 10.2217/fca-2019-0033.
85. Reddy P, Atay JK, Selbovitz LG, et al. Dabigatran: A review of clinical and pharmacoeconomic evidence. *Crit Pathw Cardiol* 2011;10(3):117-27. doi: <http://dx.doi.org/10.1097/HPC.0b013e3182315c03>.
86. Reddy P, Giugliano RP. The role of rivaroxaban in atrial fibrillation and acute coronary syndromes. *J Cardiovasc Pharmacol Ther* 2014;19(6):526-32. doi: <http://dx.doi.org/10.1177/1074248414525505>.
87. Reers S, Agdirlioglu T, Kellner M, et al. Incidence of left atrial abnormalities under treatment with dabigatran, rivaroxaban, and Vitamin K antagonists. *Eur J Med Res* 2016;21(1):41. doi: <http://dx.doi.org/10.1186/s40001-016-0235-8>.
88. Reinecke H, Jurgensmeyer S, Engelbertz C, et al. Design and rationale of a randomised controlled trial comparing apixaban to phenprocoumon in patients with atrial fibrillation on chronic haemodialysis: the AXADIA-AFNET 8 study. *BMJ open* 2018;8(9):e022690. doi: <http://dx.doi.org/10.1136/bmjopen-2018-022690>.
89. Reynolds SL, Ghate SR, Sheer R, et al. Healthcare utilization and costs for patients initiating Dabigatran or Warfarin. *Health Qual Life Outcomes* 2017;15(1):128. doi: <http://dx.doi.org/10.1186/s12955-017-0705-x>.
90. Rodwin BA, Salami JA, Spatz ES, et al. Variation in the Use of Warfarin and Direct Oral Anticoagulants in Atrial Fibrillation and Associated Cost Implications. *Am J Med* 2019;132(1):61. doi: <http://dx.doi.org/10.1016/j.amjmed.2018.09.026>.
91. Rolden HJA, van der Wilt GJ, Maas A, et al. THE GAP BETWEEN ECONOMIC EVALUATIONS AND CLINICAL PRACTICE: A SYSTEMATIC REVIEW OF ECONOMIC EVALUATIONS ON DABIGATRAN FOR ATRIAL FIBRILLATION. *Int J Technol Assess Health Care* 2018;34(3):327-36. doi: 10.1017/s0266462318000211.
92. Rome BN, Gagne JJ, Avorn J, et al. Non-warfarin oral anticoagulant copayments and adherence in atrial fibrillation: A population-based cohort study. *Am Heart J* 2021;233:109-21. doi: <https://dx.doi.org/10.1016/j.ahj.2020.12.010>.
93. Rosanio S, Keyhani AM, D'Agostino DC, et al. Pharmacology, benefits, unaddressed questions, and pragmatic issues of the newer oral anticoagulants for stroke prophylaxis in non-valvular atrial fibrillation and proposal of a management algorithm. *Int J Cardiol* 2014;174(3):471-83. doi: <http://dx.doi.org/10.1016/j.ijcard.2014.04.179>.
94. Rozjabek HM, Coleman CI, Ashton V, et al. Healthcare costs of stroke and major bleeding in patients with atrial fibrillation treated with non-vitamin K antagonist oral anticoagulants. *J Med Econ* 2019;22(8):751-59. doi: <http://dx.doi.org/10.1080/13696998.2019.1603156>.
95. Ruff CT, Giugliano RP, Braunwald E, et al. Cardiovascular biomarker score and clinical outcomes in patients with atrial fibrillation: A subanalysis of the ENGAGE AF-TIMI 48 randomized clinical trial. *JAMA Cardiol* 2016;1(9):999-1006. doi: <http://dx.doi.org/10.1001/jamacardio.2016.3311>.
96. Rujirachun P, Charoenngam N, Wattanachayakul P, et al. Efficacy and safety of direct oral anticoagulants (DOACs) versus vitamin K antagonist (VKA) among patients with atrial fibrillation and

- hypertrophic cardiomyopathy: a systematic review and meta-analysis. *Acta Cardiol* 2020;75(8):724-31. doi: <https://dx.doi.org/10.1080/00015385.2019.1668113>.
97. Schneeweiss S, Gagne JJ, Patrick AR, et al. Comparative efficacy and safety of new oral anticoagulants in patients with atrial fibrillation. *Circ Cardiovasc Qual Outcomes* 2012;5(4):480-86. doi: <http://dx.doi.org/10.1161/CIRCOUTCOMES.112.965988>.
98. Seiffge DJ, Paciaroni M, Wilson D, et al. Direct oral anticoagulants versus vitamin K antagonists after recent ischemic stroke in patients with atrial fibrillation. *Ann Neurol* 2019;85(6):823-34. doi: <http://dx.doi.org/10.1002/ana.25489>.
99. Shah SJ, Singer DE, Fang MC, et al. Net clinical benefit of oral anticoagulation among older adults with atrial fibrillation. *Circ Cardiovasc Qual Outcomes* 2019;12(11):e006212. doi: <http://dx.doi.org/10.1161/CIRCOUTCOMES.119.006212>.
100. Siegbahn A, Oldgren J, Andersson U, et al. D-dimer and factor VIIa in atrial fibrillation - Prognostic values for cardiovascular events and effects of anticoagulation therapy: A RE-LY substudy. *Thromb Haemost* 2016;115(5):921-30. doi: <http://dx.doi.org/10.1160/TH15-07-0529>.
101. Silingardi M. New anticoagulant drugs versus warfarin in atrial fibrillation: Economic evaluation and cost-effectiveness analysis. *Ital J Med* 2013;7(SUPPL. 8):65-70. doi: <http://dx.doi.org/10.4081/itjm.2013.s8.65>.
102. Silverio A, Di Maio M, Prota C, et al. Safety and efficacy of non-vitamin K antagonist oral anticoagulants in elderly patients with atrial fibrillation: systematic review and meta-analysis of 22 studies and 440 281 patients. *Eur Heart J Cardiovasc Pharmacother* 2021;7(Fi1):f20-f29. doi: [10.1093/ehjcvp/pvz073](https://doi.org/10.1093/ehjcvp/pvz073).
103. Sitticharoenchai P, Takkavatakarn K, Boonyaratavej S, et al. Non-vitamin k antagonist oral anticoagulants provide less adverse renal outcomes than warfarin in non-valvular atrial fibrillation: A systematic review and metaanalysis. *J Am Heart Assoc* 2021;10(7):e019609. doi: <http://dx.doi.org/10.1161/JAHA.120.019609>.
104. Sobieraj DM, White CM, Alikhanov S, et al. The impact of antiplatelet and anticoagulant therapies on gastrointestinal symptoms in patients with atrial fibrillation: A systematic review. *Ann Pharmacother* 2012;46(9):1220-31. doi: <http://dx.doi.org/10.1345/aph.1R064>.
105. Sørensen SV, Peng S, Monz BU, et al. A comparative analysis of models used to evaluate the cost-effectiveness of dabigatran versus warfarin for the prevention of stroke in atrial fibrillation. *PharmacoEconomics* 2013;31(7):589-604. doi: <http://dx.doi.org/10.1007/s40273-013-0035-8>.
106. Souverein PC, van den Ham HA, Huerta C, et al. Comparing risk of major bleeding between users of different oral anticoagulants in patients with nonvalvular atrial fibrillation. *Br J Clin Pharmacol* 2021;87(3):988-1000. doi: <http://dx.doi.org/10.1111/bcp.14450>.
107. Spinoni EG, Ghiglieno C, Costantino S, et al. Access Site Bleeding Complications with NOACs versus VKAs in Patients with Atrial Fibrillation Undergoing Cardiac Implantable Device Intervention. *J Clin Med* 2022;11(4):986. doi: <https://dx.doi.org/10.3390/jcm11040986>.
108. Spyropoulos AC, Hartaigh BO, Caod Z, et al. Healthcare Resource Utilization for Oral Anticoagulant Reversal Therapies in Non-Valvular Atrial Fibrillation/Venous Thromboembolism Patients. *Cardiol Res* 2022;13(1):27-43. doi: <https://dx.doi.org/10.14740/cr1307>.

109. Steffel J, Gwechenberger M, Müller MW, et al. [Risk-adapted anticoagulation in atrial fibrillation in Germany, Austria and Switzerland - an analysis from the PREFER-in-AF study]. *Dtsch Med Wochenschr* 2015;140(23):e247-55. doi: 10.1055/s-0041-108996.
110. Stöhr R, Dirrachs T, Kneizeh K, et al. Influence of rivaroxaban compared to vitamin K antagonist treatment upon development of cardiovascular calcification in patients with atrial fibrillation and/or pulmonary embolism. *Clin Cardiol* 2022 doi: 10.1002/clc.23819.
111. Su X, Yan B, Wang L, et al. Oral Anticoagulant Agents in Patients With Atrial Fibrillation and CKD: A Systematic Review and Pairwise Network Meta-analysis. *Am J Kidney Dis* 2021;78(5):678. doi: <http://dx.doi.org/10.1053/j.ajkd.2021.02.328>.
112. Suah BH, Lee ZY, Teo YH, et al. Comparison of the Efficacy and Safety of Non-vitamin K Antagonist Oral Anticoagulants with Warfarin in Atrial Fibrillation Patients with a History of Bleeding: A Systematic Review and Meta-Analysis. *Am J Cardiovasc Drugs* 2022 doi: 10.1007/s40256-022-00530-z.
113. Sussman M, Di Fusco M, Tao CY, et al. The IMPact of untreated non-Valvular atrial fibrillation on short-term clinical and economic outcomes in the US Medicare population: the IMPROVE-AF model. *J Med Econ* 2021;24(1):1070-82. doi: 10.1080/13696998.2021.1970954.
114. Sussman M, Ghate S, Sutherland SP, et al. Resource use among nonvalvular atrial fibrillation patients. *Am J Pharm Ben* 2016;8(5):84-92.
115. Tahir F, Riaz H, Riaz T, et al. The new oral anti-coagulants and the phase 3 clinical trials - a systematic review of the literature. *Thromb J* 2013;11(1):18. doi: <http://dx.doi.org/10.1186/1477-9560-11-18>.
116. Tan J, Liu S, Segal JB, et al. Warfarin use and stroke, bleeding and mortality risk in patients with end stage renal disease and atrial fibrillation: A systematic review and meta-analysis. *BMC Nephrol* 2016;17(1):157. doi: <http://dx.doi.org/10.1186/s12882-016-0368-6>.
117. Tawfik A, Bielecki JM, Krahn M, et al. Systematic review and network meta-analysis of stroke prevention treatments in patients with atrial fibrillation. *Clinical pharmacology* 2016;8:93-107. doi: <http://dx.doi.org/10.2147/CPAA.S105165>.
118. Turakhia MP. Compared with warfarin, high-dose dabigatran was cost-effective for preventing stroke in older patients with nonvalvular AF. *Ann Intern Med* 2011;154(12):JC6-12. doi: <http://dx.doi.org/10.7326/0003-4819-154-12-201106210-02012>.
119. Vinereanu D, Lopes RD, Mulder H, et al. Echocardiographic risk factors for stroke and outcomes in patients with atrial fibrillation anticoagulated with apixaban or warfarin. *Stroke* 2017;48(12):3266-73. doi: <http://dx.doi.org/10.1161/STROKEAHA.117.017574>.
120. Vinereanu D, Napalkov D, Bergler-Klein J, et al. Patient perceptions of anticoagulant treatment with dabigatran or a vitamin K antagonist for stroke prevention in atrial fibrillation according to region and age: an exploratory analysis from the RE-SONANCE study. *J Thromb Haemost* 2021;52(4):1195-206. doi: <http://dx.doi.org/10.1007/s11239-021-02450-2>.
121. Vlachos B, Giner-Soriano M, Zabaleta-del-Olmo E, et al. Dabigatran and vitamin K antagonists' use in naive patients with non-valvular atrial fibrillation: a cross-sectional study of primary care-based

- electronic health records. *Eur J Clin Pharmacol* 2017;73(10):1323-30. doi: <http://dx.doi.org/10.1007/s00228-017-2305-4>.
122. von Scheele B, Fernandez M, Hogue SL, et al. Review of economics and cost-effectiveness analyses of anticoagulant therapy for stroke prevention in atrial fibrillation in the US. *Ann Pharmacother* 2013;47(5):671-85. doi: <http://dx.doi.org/10.1345/aph.1R411>.
 123. Wang SY, Giugliano RP. Non-Vitamin K Antagonist Oral Anticoagulant for Atrial Fibrillation in Obese Patients. *Am J Cardiol* 2020;127:176-83. doi: <http://dx.doi.org/10.1016/j.amjcard.2020.04.016>.
 124. Wang YP, Kehar R, Iansavitchene A, et al. Bleeding Risk in Nonvalvular Atrial Fibrillation Patients Receiving Direct Oral Anticoagulants and Warfarin: A Systematic Review and Meta-Analysis of Observational Studies. *TH Open* 2020;4(3):145-52. doi: <http://dx.doi.org/10.1055/s-0040-1714918>.
 125. Wei W, Rasu RS, Hernandez-Munoz JJ, et al. Impact of Fall Risk and Direct Oral Anticoagulant Treatment on Quality-Adjusted Life-Years in Older Adults with Atrial Fibrillation: A Markov Decision Analysis. *Drugs Aging* 2021;38(8):713-23. doi: <http://dx.doi.org/10.1007/s40266-021-00870-6>.
 126. Weir MR, Chen YW, He J, et al. Healthcare Resource Utilization and Costs of Rivaroxaban Versus Warfarin Among Nonvalvular Atrial Fibrillation Patients with Obesity and Diabetes. *Diabetes Ther* 2021;12(12):3167-86. doi: <http://dx.doi.org/10.1007/s13300-021-01161-4>.
 127. Wong ES, Done N, Zhao M, et al. Comparing total medical expenditure between patients receiving direct oral anticoagulants vs warfarin for the treatment of atrial fibrillation: Evidence from VA-Medicare dual enrollees. *J Manag Care Spec Pharm* 2021;27(8):1056-66. doi: <https://dx.doi.org/10.18553/jmcp.2021.27.8.1056>.
 128. Xu Y, Schulman S, Dowlatshahi D, et al. Healthcare resource utilization and costs among patients with direct oral anticoagulant or warfarin-related major bleeding. *Thromb Res* 2019;182:12-19. doi: <http://dx.doi.org/10.1016/j.thromres.2019.07.026>.
 129. Yamagishi M, Tsuda T, Kato T, et al. Cost-effectiveness for prevention of thromboembolism by anticoagulants in non-valvular atrial fibrillation: additional analysis from the Hokuriku-Plus AF Registry. *Heart Vessels* 2019;34(6):1024-30. doi: [10.1007/s00380-018-01333-6](https://doi.org/10.1007/s00380-018-01333-6).
 130. Yang L, Guo J, Liang Q, et al. Primary care provider payment models and adherence to anticoagulation in patients with atrial fibrillation. *J Manag Care Spec Pharm* 2021;27(12):1672-79. doi: <https://dx.doi.org/10.18553/JMCP.2021.27.12.1672>.
 131. Yu YB, Liu J, Fu GH, et al. Comparison of dabigatran and warfarin used in patients with non-valvular atrial fibrillation: Meta-analysis of random control trial. *Medicine* 2018;97(46):e12841. doi: [10.1097/md.00000000000012841](https://doi.org/10.1097/md.00000000000012841).
 132. Zelniker TA, Ruff CT, Antman EM, et al. The efficacy and safety of non-vitamin K antagonist oral anticoagulants in patients with atrial fibrillation and coronary artery disease: A meta-analysis of randomized trials. *Eur Heart J Acute Cardiovasc Care* 2019;8(6):554-61. doi: <http://dx.doi.org/10.1177/2048872618796990>.
 133. Zhang C, Gu ZC, Ding Z, et al. Decreased risk of renal impairment in atrial fibrillation patients receiving non-vitamin K antagonist oral anticoagulants: A pooled analysis of randomized controlled

trials and real-world studies. *Thromb Res* 2019;174:16-23. doi:
<http://dx.doi.org/10.1016/j.thromres.2018.12.010>.

134. Zheng Y, Liu Y, Bi J, et al. Novel Oral Anticoagulants for the Prevention of Stroke in Patients with Atrial Fibrillation and Hypertension: A Meta-Analysis. *Am J Cardiol* 2019;19(5):477-85. doi:
<http://dx.doi.org/10.1007/s40256-019-00342-8>.
135. Zhou LY, Yang SF, Zhang Z, et al. A renal function based trade-off analysis of non-Vitamin K antagonist oral anticoagulants in nonvalvular atrial fibrillation. *Front physiol* 2018;9(NOV):1644. doi:
<http://dx.doi.org/10.3389/fphys.2018.01644>.
136. Ziakas PD, Kourbeti IS, Poulou LS, et al. Medicare part D prescribing for direct oral anticoagulants in the United States: Cost, use and the "Rubber Effect". *PLoS ONE* 2018;13(6):e0198674. doi: <http://dx.doi.org/10.1371/journal.pone.0198674>.
137. Zou R, Tao J, Shi W, et al. Meta-analysis of safety and efficacy for direct oral anticoagulation treatment of non-valvular atrial fibrillation in relation to renal function. *Thromb Res* 2017;160:41-50. doi: <http://dx.doi.org/10.1016/j.thromres.2017.10.013>.

5 Incorrect population (k = 208)

1. Adam SS, McDuffie JR, Ortel TL, et al. Comparative effectiveness of warfarin and new oral anticoagulants for the management of atrial fibrillation and venous thromboembolism: A systematic review. *Ann Intern Med* 2012;157(11):796-807. doi: <http://dx.doi.org/10.7326/0003-4819-157-10-201211200-00532>.
2. Aguilar MI, Hart R. Oral anticoagulants for preventing stroke in patients with non-valvular atrial fibrillation and no previous history of stroke or transient ischemic attacks. *Cochrane Database Syst Rev* 2005(3) doi: 10.1002/14651858.CD001927.pub2.
3. Ajmal M, Hutchinson MD, Lee K, et al. Outcomes in patients implanted with a Watchman device in relation to choice of anticoagulation and indication for implant. *J Interv Card Electrophysiol* 2021 doi: <https://dx.doi.org/10.1007/s10840-021-00958-4>.
4. Akman C, Kirilmaz B, Balci S, et al. Assessment of Awareness Levels About Anticoagulants in Patients With Atrial Fibrillation Presenting to Emergency Department. *Cureus* 2021;13(1):e12963. doi: 10.7759/cureus.12963.
5. Alwafi H, Alotaibi B, Naser AY, et al. The safety and efficacy of the use of oral anticoagulant medications in patients with diabetes mellitus: A systematic review. *Saudi Pharm J* 2021;29(12):1374-82. doi: <https://dx.doi.org/10.1016/j.jsps.2021.11.001>.
6. Ando G, Capranzano P. Non-vitamin K antagonist oral anticoagulants in atrial fibrillation patients with chronic kidney disease: A systematic review and network meta-analysis. *Int J Cardiol* 2017;231:162-69. doi: <http://dx.doi.org/10.1016/j.ijcard.2016.11.303>.
7. Andreas M, Moayedifar R, Wieselthaler G, et al. Increased Thromboembolic Events with Dabigatran Compared with Vitamin K Antagonism in Left Ventricular Assist Device Patients: A Randomized Controlled Pilot Trial. *Circ Heart Fail* 2017;10(5):e003709. doi: <http://dx.doi.org/10.1161/CIRCHEARTFAILURE.116.003709>.
8. Anghel L, Sascau R, Trifan A, et al. Non-vitamin k antagonist oral anticoagulants and the gastrointestinal bleeding risk in real-world studies. *J Clin Med* 2020;9(5):1398. doi: <http://dx.doi.org/10.3390/jcm9051398>.
9. Anonymous. Correction to: Recurrent hospitalization among patients with atrial fibrillation undergoing Intracoronary stenting treated with 2 treatment strategies of Rivaroxaban or a dose-Adjusted oral Vitamin K antagonist treatment strategy (*Circulation* (2017) 135 (323-333) DOI: 10.1161/CIRCULATIONAHA.116.025783). *Circulation* 2017;135(12):e789. doi: <http://dx.doi.org/10.1161/CIR.0000000000000495>.
10. Armbruster HL, Lindsley JP, Moranville MP, et al. Safety of Novel Oral Anticoagulants Compared With Uninterrupted Warfarin for Catheter Ablation of Atrial Fibrillation. *Ann Pharmacother* 2015;49(3):278-84. doi: <http://dx.doi.org/10.1177/1060028014563950>.
11. Avendano R, Romero J, Lupercio F, et al. Clinical outcomes in patients with atrial fibrillation receiving amiodarone on NOACs vs. warfarin. *J Interv Card Electrophysiol* 2019;54(1):73-80. doi: <http://dx.doi.org/10.1007/s10840-018-0427-y>.

12. Bai Y, Chen H, Yang Y, et al. Safety of antithrombotic drugs in patients with atrial fibrillation and non-end-stage chronic kidney disease: Meta-analysis and systematic review. *Thromb Res* 2016;137:46-52. doi: <http://dx.doi.org/10.1016/j.thromres.2015.11.020>.
13. Balsam P, Ozieranski K, Tyminska A, et al. Comparison of clinical characteristics of real-life atrial fibrillation patients treated with Vitamin K antagonists, dabigatran, and rivaroxaban: Results from the CRAFT study. *Kardiol Pol* 2018;76(5):889-98. doi: <http://dx.doi.org/10.5603/KP.a2018.0027>.
14. Barco S, Granziera S, Coppens M, et al. Determinants of the Quality of Warfarin Control after Venous Thromboembolism and Validation of the SAME-TT2-R2 Score: An Analysis of Hokusai-VTE. *Thromb Haemost* 2019;119(4):675-84. doi: <http://dx.doi.org/10.1055/s-0039-1678546>.
15. Basto AN, Fewel NP, Gupta R, et al. A Comparison between dabigatran and warfarin on time to elective cardioversion. *J Atr Fibrillation* 2016;8(6):45-47.
16. Benavente O, Hart R, Koudstaal P, et al. Oral anticoagulants for preventing stroke in patients with non-valvular atrial fibrillation and no previous history of stroke or transient ischemic attacks. *Cochrane Database Syst Rev* 2000(2):CD001927.
17. Bennaghmouch N, de Veer A, Bode K, et al. Efficacy and Safety of the Use of Non-Vitamin K Antagonist Oral Anticoagulants in Patients With Nonvalvular Atrial Fibrillation and Concomitant Aspirin Therapy: A Meta-Analysis of Randomized Trials. *Circulation* 2018;137(11):1117-29. doi: [10.1161/circulationaha.117.028513](https://doi.org/10.1161/circulationaha.117.028513).
18. Bennaghmouch N, De Veer AJWM, Mahmoodi BK, et al. Economic evaluation of the use of non-Vitamin K oral anticoagulants in patients with atrial fibrillation on antiplatelet therapy: A modelling analysis using the healthcare system in the Netherlands. *Eur Heart J Qual Care Clin Outcomes* 2019;5(2):127-35. doi: <http://dx.doi.org/10.1093/ehjqcco/qcy030>.
19. Berzins A, Knoka E, Nevzorovs V, et al. Efficacy and safety of non-vitamin K antagonist oral anticoagulants one year after electrical cardioversion. *Cor et Vasa* 2021;63(1):6-10. doi: <https://dx.doi.org/10.33678/COR.2020.063>.
20. Bitar YSL, Duraes AR, Roevers L, et al. Comparison of the Direct Oral Anticoagulants and Warfarin in Patients With Atrial Fibrillation and Valvular Heart Disease: Updated Systematic Review and Meta-Analysis of Randomized Controlled Trials. *Front Cardiovasc Med* 2021;8:712585. doi: [10.3389/fcvm.2021.712585](https://doi.org/10.3389/fcvm.2021.712585).
21. Bode K, Hindricks G, Ten Berg JM, et al. Anticoagulant plus antiplatelet therapy for atrial fibrillation : Cost-utility of combination therapy with non-vitamin K oral anticoagulants vs. warfarin. *Herz* 2020;45(6):564-71. doi: [10.1007/s00059-018-4747-6](https://doi.org/10.1007/s00059-018-4747-6).
22. Bonanad C, García-Blas S, Torres Llargo J, et al. Direct Oral Anticoagulants versus Warfarin in Octogenarians with Nonvalvular Atrial Fibrillation: A Systematic Review and Meta-Analysis. *J Clin Med* 2021;10(22) doi: [10.3390/jcm10225268](https://doi.org/10.3390/jcm10225268).
23. Cabbar F, Cabbar AT, Cosansu K, et al. Effects of Direct Oral Anticoagulants on Quality of Life During Periprocedural Management for Dental Extractions. *J Oral Maxillofac Surg* 2019;77(5):904-11. doi: <http://dx.doi.org/10.1016/j.joms.2018.11.032>.

24. Caldeira D, Costa J, Ferreira JJ, et al. Non-vitamin K antagonist oral anticoagulants in the cardioversion of patients with atrial fibrillation: systematic review and meta-analysis. *Clin Res Cardiol* 2015;104(7):582-90. doi: 10.1007/s00392-015-0821-8.
25. Caldeira D, Nunes-Ferreira A, Rodrigues R, et al. Non-vitamin K antagonist oral anticoagulants in elderly patients with atrial fibrillation: A systematic review with meta-analysis and trial sequential analysis. *Arch Gerontol Geriatr* 2019;81:209-14. doi: <http://dx.doi.org/10.1016/j.archger.2018.12.013>.
26. Cao B, Yao X, Zhang L, et al. Efficacy and Safety of Direct Oral Anticoagulants in Patients with Diabetes and Nonvalvular Atrial Fibrillation: Meta-Analysis of Observational Studies. *Cardiovasc Ther* 2021;2021:5520027. doi: <https://dx.doi.org/10.1155/2021/5520027>.
27. Cappato R, Marchlinski FE, Hohnloser SH, et al. Uninterrupted rivaroxaban vs. uninterrupted vitamin K antagonists for catheter ablation in non-valvular atrial fibrillation. *Eur Heart J* 2015;36(28):1805-11. doi: <http://dx.doi.org/10.1093/eurheartj/ehv177>.
28. Casula M, Fortuni F, Fabris F, et al. Direct oral Xa inhibitors versus warfarin in patients with cancer and atrial fibrillation: A meta-analysis. *J Cardiovasc Med (Hagerstown)* 2020;21(8):570-76. doi: <http://dx.doi.org/10.2459/JCM.0000000000001041>.
29. Cavallari I, Verolino G, Romano S, et al. Efficacy and Safety of Nonvitamin K Oral Anticoagulants in Patients with Atrial Fibrillation and Cancer: A Study-Level Meta-Analysis. *Thromb Haemost* 2020;120(2):314-21. doi: <http://dx.doi.org/10.1055/s-0039-3400300>.
30. Chai-Adisaksopha C, Crowther M, Isayama T, et al. The impact of bleeding complications in patients receiving target-specific oral anticoagulants: a systematic review and meta-analysis. *Blood* 2014;124(15):2450-8. doi: 10.1182/blood-2014-07-590323.
31. Chai-Adisaksopha C, Hillis C, Isayama T, et al. Mortality outcomes in patients receiving direct oral anticoagulants: A systematic review and meta-analysis of randomized controlled trials. *J Thromb Haemost* 2015;13(11):2012-20. doi: <http://dx.doi.org/10.1111/jth.13139>.
32. Chen F, Zhou Y, Wan Q, et al. Effect of non-vitamin K antagonist oral anticoagulants versus warfarin in heart failure patients with atrial fibrillation. *Heart Fail Rev* 2021;26(6):1391-97. doi: <http://dx.doi.org/10.1007/s10741-020-09946-8>.
33. Chen Y, Mao M, Chang J, et al. Safety and efficacy of new oral anticoagulants compared to those of warfarin in AF patients with cancer: a meta-analysis of randomized clinical trials and observational studies. *Eur J Clin Pharmacol* 2021;77(6):849-57. doi: <http://dx.doi.org/10.1007/s00228-021-03132-x>.
34. Chen Y, Zhao Y, Dang G, et al. Stroke event rates and the optimal antithrombotic choice of patients with paroxysmal atrial fibrillation: A systematic review and meta-analysis of randomized controlled trials. *Medicine* 2015;94(52):e2364. doi: <http://dx.doi.org/10.1097/MD.0000000000002364>.
35. Cho MS, Yun JE, Park JJ, et al. Outcomes after Use of Standard- And Low-Dose Non-Vitamin K Oral Anticoagulants in Asian Patients with Atrial Fibrillation. *Stroke* 2019;50(1):110-18. doi: <http://dx.doi.org/10.1161/STROKEAHA.118.023093>.
36. Cordero A, Ferreiro JL, Bertomeu-Gonzalez V, et al. Direct Oral Anticoagulants Versus Vitamin-K Antagonist After PCIs in Patients With AF: A Meta-analysis of Cardiac Ischemic Events. *J Cardiovasc Pharmacol* 2021;77(2):164-69. doi: <https://dx.doi.org/10.1097/FJC.0000000000000938>.

37. Cosansu K, Ureyen CM, Yilmaz S. Effect of novel oral anticoagulants on Hospital Anxiety and Depression Scale scores. *Herz* 2019;44(8):743-49. doi: <http://dx.doi.org/10.1007/s00059-019-4828-1>.
38. Costello M, Murphy R, Judge C, et al. Effect of non-vitamin-K oral anticoagulants on stroke severity compared to warfarin: a meta-analysis of randomized controlled trials. *Eur J Neurol* 2020;27(3):413-18. doi: <http://dx.doi.org/10.1111/ene.14134>.
39. Del-Carpio Munoz F, Gharacholou SM, Munger TM, et al. Meta-Analysis of Renal Function on the Safety and Efficacy of Novel Oral Anticoagulants for Atrial Fibrillation. *Am J Cardiol* 2016;117(1):69-75. doi: <http://dx.doi.org/10.1016/j.amjcard.2015.09.046>.
40. Deng Y, Tong Y, Deng Y, et al. Non-Vitamin K Antagonist Oral Anticoagulants Versus Warfarin in Patients With Cancer and Atrial Fibrillation: A Systematic Review and Meta-Analysis. *J Am Heart Assoc* 2019;8(14):e012540. doi: 10.1161/jaha.119.012540.
41. Di Monaco A, Guida P, Vitulano N, et al. Catheter ablation of atrial fibrillation with uninterrupted anticoagulation: a meta-analysis of six randomized controlled trials. *J Cardiovasc Med (Hagerstown)* 2020;21(7):483-90. doi: 10.2459/jcm.0000000000000939.
42. Fu Y, Zhu W, Zhou Y, et al. Non-vitamin K Antagonist Oral Anticoagulants Versus Warfarin in Patients with Atrial Fibrillation and Liver Disease: A Meta-Analysis and Systematic Review. *Am J Cardiol* 2020;20(2):139-47. doi: <http://dx.doi.org/10.1007/s40256-019-00369-x>.
43. Gawalko M, KaplonCieslicka A, Budnik M, et al. Comparison of different oral anticoagulant regimens in patients with atrial fibrillation undergoing ablation or cardioversion. *Pol Arch Intern Med* 2017;127(12):823-31. doi: <http://dx.doi.org/10.20452/pamw.4117>.
44. Grajek S, Kaluzna-Oleksy M, Siller-Matula JM, et al. Non-vitamin k antagonist oral anticoagulants and risk of myocardial infarction in patients with atrial fibrillation with or without percutaneous coronary interventions: A meta-analysis. *J Pers Med* 2021;11(10):1013. doi: <http://dx.doi.org/10.3390/jpm11101013>.
45. Grymonprez M, Vanspranghe K, Steurbaut S, et al. Non-vitamin K Antagonist Oral Anticoagulants (NOACs) Versus Warfarin in Patients with Atrial Fibrillation Using P-gp and/or CYP450-Interacting Drugs: a Systematic Review and Meta-analysis. *Cardiovasc Drugs Ther* 2021 doi: <http://dx.doi.org/10.1007/s10557-021-07279-8>.
46. Gu ZC, Kong LC, Yang SF, et al. Net clinical benefit of non-vitamin K antagonist oral anticoagulants in atrial fibrillation and chronic kidney disease: a trade-off analysis from four phase III clinical trials. *Cardiovasc Diagn Ther* 2019;9(5):410-19. doi: 10.21037/cdt.2019.07.09.
47. Gupta S, Um KJ, Pandey A, et al. Direct Oral Anticoagulants Versus Vitamin K Antagonists in Patients Undergoing Cardioversion for Atrial Fibrillation: a Systematic Review and Meta-analysis. *Cardiovasc Drugs Ther* 2019;33(3):339-52. doi: <http://dx.doi.org/10.1007/s10557-019-06869-x>.
48. Hage A, Dolan DP, Nasr VG, et al. Safety of Direct Oral Anticoagulants Compared to Warfarin for Atrial Fibrillation after Cardiac Surgery: A Systematic Review and Meta-Analysis. *Semin Thorac Cardiovasc Surg* 2021 doi: <http://dx.doi.org/10.1053/j.semthorcv.2021.05.011>.
49. Hansen PS, Sanchez R, Walfridsson H. Safety of novel oral anticoagulants in catheter ablation of atrial fibrillation. *Dan Med J* 2016;63(2).

50. Harel Z, Sholzberg M, Shah PS, et al. Comparisons between novel oral anticoagulants and vitamin K antagonists in patients with CKD. *J Am Soc Nephrol* 2014;25(3):431-42. doi: <http://dx.doi.org/10.1681/ASN.2013040361>.
51. Harskamp RE, Teichert M, Lucassen WAM, et al. Impact of Polypharmacy and P-Glycoprotein- and CYP3A4-Modulating Drugs on Safety and Efficacy of Oral Anticoagulation Therapy in Patients with Atrial Fibrillation. *Cardiovasc Drugs Ther* 2019;33(5):615-23. doi: <http://dx.doi.org/10.1007/s10557-019-06907-8>.
52. He W, Zhou Y, Zhu W. Non-vitamin K antagonist oral anticoagulants in patients with hypertrophic cardiomyopathy and atrial fibrillation: a systematic review and meta-analysis. *J Thromb Haemost* 2020;50(2):311-17. doi: <http://dx.doi.org/10.1007/s11239-019-02008-3>.
53. Hesselbjerg LJ, Pedersen HS, Asmussen MB, et al. Is dabigatran considered a cost-effective alternative to warfarin treatment: A review of current economic evaluations worldwide. *J Med Econ* 2013;16(7):845-58. doi: <http://dx.doi.org/10.3111/13696998.2013.800523>.
54. Hien YS, Piao NY, Aslannif R, et al. A comparison of dabigatran and warfarin for stroke prevention in elderly asian population with nonvalvular atrial fibrillation: An audit of current practice in Malaysia. *Med J Malaysia* 2017;72(6):360-64.
55. Hohnloser SH, Camm AJ. Safety and efficacy of dabigatran etexilate during catheter ablation of atrial fibrillation: A meta-analysis of the literature. *Europace* 2013;15(10):1407-11. doi: <http://dx.doi.org/10.1093/europace/eut241>.
56. Hohnloser SH, Camm J, Cappato R, et al. Uninterrupted administration of edoxaban vs vitamin K antagonists in patients undergoing atrial fibrillation catheter ablation: Rationale and design of the ELIMINATE-AF study. *Clin Cardiol* 2018;41(4):440-49. doi: <http://dx.doi.org/10.1002/clc.22918>.
57. Hua Y, Sun JY, Su Y, et al. The Safety and Efficacy of Rivaroxaban Compared with Warfarin in Patients with Atrial Fibrillation and Diabetes: A Systematic Review and Meta-analysis. *Am J Cardiol* 2021;21(1):51-61. doi: <https://dx.doi.org/10.1007/s40256-020-00407-z>.
58. Inohara T, Xian Y, Liang L, et al. Association of intracerebral hemorrhage among patients taking non-Vitamin K antagonist vs Vitamin K antagonist oral anticoagulants with in-hospital mortality. *JAMA* 2018;319(5):463-73. doi: <http://dx.doi.org/10.1001/jama.2017.21917>.
59. Jacobs MS, de Jong LA, Postma MJ, et al. Health Economic Evaluation of Rivaroxaban in Elective Cardioversion of Atrial Fibrillation. *Eur J Health Econ* 2018;19(7):957-65.
60. Jin H, Zhu K, Wang L, et al. Efficacy and safety of non-vitamin K anticoagulants and warfarin in patients with atrial fibrillation and heart failure: A network meta-analysis. *Thromb Res* 2020;196:109-19. doi: <http://dx.doi.org/10.1016/j.thromres.2020.08.021>.
61. Kaseno K, Naito S, Sakamoto T, et al. Efficacy and Safety of Periprocedural Dabigatran in Patients Undergoing Catheter Ablation of Atrial Fibrillation. *Circ J* 2012;76(10):2337-42. doi: <http://dx.doi.org/10.1253/circj.CJ-12-0498>.
62. Katsanos AH, Mavridis D, Parissis J, et al. Novel oral anticoagulants for the secondary prevention of cerebral ischemia: A network meta-analysis. *Ther Adv Neurol Disord* 2016;9(5):359-68. doi: <http://dx.doi.org/10.1177/1756285616659411>.

63. Katsanos AH, Schellinger PD, Kohrmann M, et al. Fatal oral anticoagulant-related intracranial hemorrhage: a systematic review and meta-analysis. *Eur J Neurol* 2018;25(10):1299-302. doi: <http://dx.doi.org/10.1111/ene.13742>.
64. Kerneis M, Yee MK, Mehran R, et al. Association of international normalized ratio stability and bleeding outcomes among atrial fibrillation patients undergoing percutaneous coronary intervention: Insights from the PIONEER AF-PCI trial. *Circ Cardiovasc Interv* 2019;12(2):e007124. doi: <http://dx.doi.org/10.1161/CIRCINTERVENTIONS.118.007124>.
65. Kido K, Shimizu M, Shiga T, et al. Meta-Analysis Comparing Direct Oral Anticoagulants Versus Warfarin in Morbidly Obese Patients With Atrial Fibrillation. *Am J Cardiol* 2020;126:23-28. doi: <http://dx.doi.org/10.1016/j.amjcard.2020.03.048>.
66. Kim IS, Kim HJ, Kim TH, et al. Non-vitamin K antagonist oral anticoagulants have better efficacy and equivalent safety compared to warfarin in elderly patients with atrial fibrillation: A systematic review and meta-analysis. *J Cardiol* 2018;72(2):105-12. doi: <http://dx.doi.org/10.1016/j.jjcc.2018.01.015>.
67. Kimachi M, Furukawa TA, Kimachi K, et al. Direct oral anticoagulants versus warfarin for preventing stroke and systemic embolic events among atrial fibrillation patients with chronic kidney disease. *Cochrane Database Syst Rev* 2017;2017(11):CD011373. doi: <http://dx.doi.org/10.1002/14651858.CD011373.pub2>.
68. Knijnik L, Rivera M, Blumer V, et al. Prevention of Stroke in Atrial Fibrillation After Coronary Stenting. *Stroke* 2019;50(8):2125-32. doi: [10.1161/strokeaha.119.026078](https://doi.org/10.1161/strokeaha.119.026078).
69. Lakkireddy D, Reddy YM, Biase LD, et al. Feasibility and safety of uninterrupted rivaroxaban for periprocedural anticoagulation in patients undergoing radiofrequency ablation for atrial fibrillation: Results from a multicenter prospective registry. *J Am Coll Cardiol* 2014;63(10):982-88. doi: <http://dx.doi.org/10.1016/j.jacc.2013.11.039>.
70. Lee KH, Park HW, Cho JG, et al. Comparison of non-Vitamin K antagonist oral anticoagulants and warfarin on clinical outcomes in atrial fibrillation patients with renal dysfunction. *Europace* 2015;17(Supplement 2) doi: <http://dx.doi.org/10.1093/europace/euv198>.
71. Lee SR, Choi EK, Kwon S, et al. Oral Anticoagulation in Asian Patients with Atrial Fibrillation and a History of Intracranial Hemorrhage. *Stroke* 2020;51:416-23. doi: <http://dx.doi.org/10.1161/STROKEAHA.119.028030>.
72. Lee Y, Jeong DS, Ahn J, et al. New Oral Anticoagulant Versus Vitamin K Antagonists for Thoracoscopic Ablation in Patients With Persistent Atrial Fibrillation: A Randomized Controlled Trial. *Semin Thorac Cardiovasc Surg* 2021 doi: <https://dx.doi.org/10.1053/j.semtcvs.2021.12.003>.
73. Lee ZY, Suah BH, Teo YH, et al. Comparison of the Efficacy and Safety of Direct Oral Anticoagulants and Vitamin K Antagonists in Patients with Atrial Fibrillation and Concomitant Liver Cirrhosis: A Systematic Review and Meta-Analysis. *Am J Cardiovasc Drugs* 2022;22(2):157-65. doi: [10.1007/s40256-021-00482-w](https://doi.org/10.1007/s40256-021-00482-w).
74. Li PJ, Xiao J, Yang Q, et al. Network meta-analysis of efficacy and safety of competitive oral anticoagulants in patients undergoing radiofrequency catheter ablation of atrial fibrillation. *J Interv Card Electrophysiol* 2016;46(3):213-24. doi: <http://dx.doi.org/10.1007/s10840-016-0126-5>.

75. Li W, Gao C, Li M, et al. Safety and efficacy of rivaroxaban versus warfarin in patients undergoing catheter ablation of atrial fibrillation: A meta-analysis of observational studies. *Discov Med* 2015;19(104):193-201.
76. Li WJ, Archontakis-Barakakis P, Palaiodimos L, et al. Dabigatran, rivaroxaban, and apixaban are superior to warfarin in Asian patients with non-valvular atrial fibrillation: An updated meta-analysis. *World J Cardiol* 2021;13(4):82-94. doi: <http://dx.doi.org/10.4330/wjc.v13.i4.82>.
77. Liao CT, Lee MC, Chen ZC, et al. Cost-effectiveness analysis of oral anticoagulants in stroke prevention among patients with atrial fibrillation in Taiwan. *Acta Cardiol Sin* 2020;36(1):50-61. doi: http://dx.doi.org/10.6515/ACS.202001_36%281%29.20190511A.
78. Liao XZ, Fu YH, Ma JY, et al. Non-Vitamin K Antagonist Oral Anticoagulants Versus Warfarin in Patients with Atrial Fibrillation and Peripheral Artery Disease: a Systematic Review and Meta-Analysis. *Cardiovasc Drugs Ther* 2020;34(3):391-99. doi: <http://dx.doi.org/10.1007/s10557-020-06962-6>.
79. Lin J, Shen S, Bhave P, et al. Post-procedural dabigatran versus interrupted warfarin therapy following catheter ablation for atrial fibrillation. *J Atr Fibrillation* 2014;6(5):10-14.
80. Lin SY, Chang YC, Lin FJ, et al. Post-Intracranial Hemorrhage Antithrombotic Therapy in Patients With Atrial Fibrillation. *J Am Heart Assoc* 2022;11(6):e022849. doi: <https://dx.doi.org/10.1161/JAHA.121.022849>.
81. Liu F, Xu Z, Luo J, et al. Effectiveness and Safety of DOACs vs. VKAs in AF Patients With Cancer: Evidence From Randomized Clinical Trials and Observational Studies. *Front Cardiovasc Med* 2021;8:766377. doi: 10.3389/fcvm.2021.766377.
82. Liu X, Huang M, Ye C, et al. The role of non-Vitamin K antagonist oral anticoagulants in Asian patients with atrial fibrillation A PRISMA-compliant article. *Medicine* 2020;99(27) doi: <http://dx.doi.org/10.1097/MD.00000000000021025>.
83. Lowres N, Giskes K, Hespe C, et al. Reducing stroke risk in atrial fibrillation: Adherence to guidelines has improved, but patient persistence with anticoagulant therapy remains suboptimal. *Korean Circ J* 2019;49(10):883-907. doi: <http://dx.doi.org/10.4070/kcj.2019.0234>.
84. Lu D, Liu Q, Wang K, et al. Meta-Analysis of Efficacy and Safety of Apixaban in Patients Undergoing Catheter Ablation for Atrial Fibrillation. *Pacing Clin Electrophysiol* 2016;39(1):54-59. doi: <http://dx.doi.org/10.1111/pace.12771>.
85. Malhotra K, Ishfaq MF, Goyal N, et al. Oral anticoagulation in patients with chronic kidney disease: A systematic review and meta-analysis. *Neurology* 2019;92(21):e2421-e31. doi: <http://dx.doi.org/10.1212/WNL.00000000000007534>.
86. Manckoundia P, Rosay C, Menu D, et al. The prescription of vitamin K antagonists in a very old population: A cross-sectional study of 8696 ambulatory subjects aged over 85 years. *Int J Environ Res Public Health* 2020;17(18):1-12. doi: <http://dx.doi.org/10.3390/ijerph17186685>.
87. Mariani MV, Magnocavallo M, Straito M, et al. Direct oral anticoagulants versus vitamin K antagonists in patients with atrial fibrillation and cancer a meta-analysis. *J Thromb Haemost* 2021;51(2):419-29. doi: <http://dx.doi.org/10.1007/s11239-020-02304-3>.

88. Mendell J, Noveck RJ, Shi M. A randomized trial of the safety, Pharmacokinetics and pharmacodynamics of edoxaban, An oral factor Xa inhibitor, Following a switch from warfarin. *Br J Clin Pharmacol* 2013;75(4):966-78. doi: <http://dx.doi.org/10.1111/j.1365-2125.2012.04409.x>.
89. Mendoza JA, Silva FA, Rangel LM. Cost-effectiveness of new oral anticoagulants and warfarin in atrial fibrillation from adverse events perspective. *Rev Colomb Cardiol* 2019;26(2):70-77. doi: <http://dx.doi.org/10.1016/j.rccar.2018.10.011>.
90. Mhanna M, Beran A, Al-Abdoh A, et al. Direct Oral Anticoagulants Versus Warfarin in Morbidly Obese Patients with Nonvalvular Atrial Fibrillation: A Systematic Review and Meta-analysis. *Am J Ther* 2021;28(5):E531-E39. doi: <https://dx.doi.org/10.1097/MJT.0000000000001403>.
91. Mzoughi K, Zairi I, Ben Ghorbel F, et al. Evaluation of patients' knowledge on their vitamin K antagonist treatment. *Tunis Med* 2018;96(3).
92. Nagao T, Inden Y, Shimano M, et al. Feasibility and safety of uninterrupted dabigatran therapy in patients undergoing ablation for atrial fibrillation. *Intern Med* 2015;54(10):1167-73. doi: <http://dx.doi.org/10.2169/internalmedicine.54.3520>.
93. Nagao T, Inden Y, Shimano M, et al. Efficacy and safety of Apixaban in the patients undergoing the ablation of atrial fibrillation. *Pacing Clin Electrophysiol* 2015;38(2):155-63. doi: <http://dx.doi.org/10.1111/pace.12553>.
94. Nairooz R, Ayoub K, Sardar P, et al. Uninterrupted New Oral Anticoagulants Compared With Uninterrupted Vitamin K Antagonists in Ablation of Atrial Fibrillation: A Meta-analysis. *Can J Cardiol* 2016;32(6):814-23. doi: <http://dx.doi.org/10.1016/j.cjca.2015.09.012>.
95. Nairooz R, Sardar P, Pino M, et al. Meta-analysis of risk of stroke and thrombo-embolism with rivaroxaban versus vitamin K antagonists in ablation and cardioversion of atrial fibrillation. *Int J Cardiol* 2015;187:345-53. doi: <http://dx.doi.org/10.1016/j.ijcard.2015.03.323>.
96. Nakamura K, Naito S, Sasaki T, et al. Silent cerebral ischemic lesions after catheter ablation of atrial fibrillation in patients on 5 types of periprocedural oral anticoagulation - Predictors of diffusion-weighted imaging-positive lesions and follow-up magnetic resonance imaging. *Circ J* 2016;80(4):870-77. doi: <http://dx.doi.org/10.1253/circj.CJ-15-1368>.
97. Ntaios G, Papavasileiou V, Diener HC, et al. Nonvitamin-K-antagonist oral anticoagulants in patients with atrial fibrillation and previous stroke or transient ischemic attack: A systematic review and meta-analysis of randomized controlled trials. *Stroke* 2012;43(12):3298-304. doi: <http://dx.doi.org/10.1161/STROKEAHA.112.673558>.
98. Okumura K, Aonuma K, Kumagai K, et al. Efficacy and safety of rivaroxaban and warfarin in the perioperative period of catheter ablation for atrial fibrillation - Outcome analysis from a prospective multicenter registry study in Japan. *Circ J* 2016;80(11):2295-301. doi: <http://dx.doi.org/10.1253/circj.CJ-16-0621>.
99. Ottoffy M, Matrai P, Farkas N, et al. Uninterrupted or minimally interrupted direct oral anticoagulant therapy is a safe alternative to vitamin k antagonists in patients undergoing catheter ablation for atrial fibrillation: An updated meta-analysis. *J Clin Med* 2020;9(10):1-13. doi: <http://dx.doi.org/10.3390/jcm9103073>.

100. Pallisgaard JL, Gislason GH, Torp-Pedersen C, et al. Risk of ischemic stroke, hemorrhagic stroke, bleeding, and death in patients switching from vitamin K antagonist to dabigatran after an ablation. *PLoS ONE* 2016;11(8):e0161768. doi: <http://dx.doi.org/10.1371/journal.pone.0161768>.
101. Pallisgaard JL, Lindhardt TB, Hansen ML, et al. Cardioversion and risk of adverse events with dabigatran versus warfarin - A nationwide cohort study. *PLoS ONE* 2015;10(10):e0141377. doi: <http://dx.doi.org/10.1371/journal.pone.0141377>.
102. Patil T, Lebrecht M. A single center retrospective cohort study evaluating use of direct oral anticoagulants (DOACs) in morbidly obese veteran population. *Thromb Res* 2020;192:124-30. doi: <http://dx.doi.org/10.1016/j.thromres.2020.04.015>.
103. Patti G, Di Gioia G, Cavallari I, et al. Safety and efficacy of nonvitamin K antagonist oral anticoagulants versus warfarin in diabetic patients with atrial fibrillation: A study-level meta-analysis of phase III randomized trials. *Diabetes Metab Res Rev* 2017;33(3):e2876. doi: <http://dx.doi.org/10.1002/dmrr.2876>.
104. Pengo V, Denas G, Zoppellaro G, et al. Rivaroxaban vs warfarin in high-risk patients with antiphospholipid syndrome. *Blood* 2018;132(13):1365-71. doi: <http://dx.doi.org/10.1182/blood-2018-04-848333>.
105. Pengo V, Hoxha A, Andreoli L, et al. Trial of Rivaroxaban in AntiPhospholipid Syndrome (TRAPS): Two-year outcomes after the study closure. *J Thromb Haemost* 2021;19(2):531-35. doi: [10.1111/jth.15158](https://doi.org/10.1111/jth.15158).
106. Phan K, Wang N, Pison L, et al. Meta-analysis of dabigatran vs warfarin in patients undergoing catheter ablation for atrial fibrillation. *Int J Cardiol* 2015;189(1):199-203. doi: <http://dx.doi.org/10.1016/j.ijcard.2015.04.072>.
107. Piccini JP, Stevens SR, Lokhnygina Y, et al. Outcomes after cardioversion and atrial fibrillation ablation in patients treated with rivaroxaban and warfarin in the ROCKET AF Trial. *J Am Coll Cardiol* 2013;61(19):1998-2006. doi: <http://dx.doi.org/10.1016/j.jacc.2013.02.025>.
108. Plitt A, Zelniker TA, Park JG, et al. Patients with diabetes mellitus and atrial fibrillation treated with non-vitamin K antagonist oral anticoagulants: meta-analysis of eight outcomes in 58 634 patients across four randomized controlled trials. *Eur Heart J Cardiovasc Pharmacother* 2021;7(F11):f40-f49. doi: <http://dx.doi.org/10.1093/ehjcvp/pvaa120>.
109. Popovic M, Altabas K, Trbusic M. Anticoagulant treatment in patients with atrial fibrillation and chronic kidney disease. *Acta Clin Croat* 2021;60(Supplement 1):102-13. doi: <http://dx.doi.org/10.20471/acc.2021.60.s1.15>.
110. Providencia R, Marijon E, Albenque JP, et al. Rivaroxaban and dabigatran in patients undergoing catheter ablation of atrial fibrillation. *Europace* 2014;16(8):1137-44. doi: <http://dx.doi.org/10.1093/europace/euu007>.
111. Qian J, Yan YD, Yang SY, et al. Benefits and Harms of Low-Dose Rivaroxaban in Asian Patients With Atrial Fibrillation: A Systematic Review and Meta-analysis of Real-World Studies. *Front pharmacol* 2021;12:642907. doi: <http://dx.doi.org/10.3389/fphar.2021.642907>.
112. Rago A, Papa AA, Cassese A, et al. Clinical Performance of Apixaban vs. Vitamin K Antagonists in Patients with Atrial Fibrillation Undergoing Direct Electrical Current Cardioversion: A

- Prospective Propensity Score-Matched Cohort Study. *Am J Cardiol* 2019;19(4):421-27. doi: <http://dx.doi.org/10.1007/s40256-019-00341-9>.
113. Rago A, Pezzullo E, D'Aquino M MC, et al. Non vitamin k antagonist oral anticoagulants in atrial fibrillation patients scheduled for electrical cardioversion: A real-life propensity score matched study. *J Blood Med* 2021;12:413-20. doi: <https://dx.doi.org/10.2147/JBM.S299265>.
 114. Rahman H, Khan SU, DePersis M, et al. Meta-analysis of safety and efficacy of oral anticoagulants in patients requiring catheter ablation for atrial fibrillation. *Cardiovasc Revasc Med* 2019;20(2):147-52. doi: <http://dx.doi.org/10.1016/j.carrev.2018.05.007>.
 115. Renda G, Zimarino M, Ricci F, et al. Efficacy and Safety of Non-Vitamin K Antagonist Oral Anticoagulants After Cardioversion for Nonvalvular Atrial Fibrillation. *Am J Med* 2016;129(10):1117. doi: <http://dx.doi.org/10.1016/j.amjmed.2016.05.007>.
 116. Reynolds MR, Allison JS, Natale A, et al. A Prospective Randomized Trial of Apixaban Dosing During Atrial Fibrillation Ablation: The AEIOU Trial. *JACC Clin Electrophysiol* 2018;4(5):580-88. doi: <http://dx.doi.org/10.1016/j.jacep.2017.11.005>.
 117. Rillig A, Lin T, Plesman J, et al. Apixaban, Rivaroxaban, and Dabigatran in Patients Undergoing Atrial Fibrillation Ablation. *J Cardiovasc Electrophysiol* 2016;27(2):147-53. doi: <http://dx.doi.org/10.1111/jce.12856>.
 118. Rivera-Caravaca JM, Harrison SL, Buckley BJR, et al. Efficacy and safety of direct-acting oral anticoagulants compared to vitamin K antagonists in COVID-19 outpatients with cardiometabolic diseases. *Cardiovasc Diabetol* 2021;20(1):176. doi: <http://dx.doi.org/10.1186/s12933-021-01368-6>.
 119. Rivolo S, Di Fusco M, Polanco C, et al. Cost-effectiveness analysis of apixaban versus vitamin K antagonists for antithrombotic therapy in patients with atrial fibrillation after acute coronary syndrome or percutaneous coronary intervention in Spain. *PLoS ONE* 2021;16(11 November):e0259251. doi: <https://dx.doi.org/10.1371/journal.pone.0259251>.
 120. Rodríguez-Pardo J, Plaza Herráiz A, Lobato-Pérez L, et al. Influence of oral anticoagulation on stroke severity and outcomes: A propensity score matching case-control study. *J Neurol Sci* 2020;410:116685. doi: [10.1016/j.jns.2020.116685](https://doi.org/10.1016/j.jns.2020.116685).
 121. Rojas-Fernandez CH, Goh J, Hartwick J, et al. Assessment of Oral Anticoagulant Use in Residents of Long-Term Care Homes: Evidence for Contemporary Suboptimal Use. *Ann Pharmacother* 2017;51(12):1053-62. doi: <http://dx.doi.org/10.1177/1060028017723348>.
 122. Romero J, Cerrud-Rodriguez RC, Alviz I, et al. Significant Benefit of Uninterrupted DOACs Versus VKA During Catheter Ablation of Atrial Fibrillation. *JACC Clin Electrophysiol* 2019;5(12):1396-405. doi: <http://dx.doi.org/10.1016/j.jacep.2019.08.010>.
 123. Romero J, Cerrud-Rodriguez RC, Diaz JC, et al. Uninterrupted direct oral anticoagulants vs. Uninterrupted vitamin K antagonists during catheter ablation of non-valvular atrial fibrillation: A systematic review and meta-analysis of randomized controlled trials. *Europace* 2018;20(10):1612-20. doi: <http://dx.doi.org/10.1093/europace/euy133>.
 124. Ruiz Vargas E, Sposato LA, Lee SAW, et al. Anticoagulation Therapy for Atrial Fibrillation in Patients With Alzheimer's Disease. *Stroke* 2018;49(12):2844-50. doi: [10.1161/strokeaha.118.022596](https://doi.org/10.1161/strokeaha.118.022596).

125. Russo V, Bottino R, Rago A, et al. Atrial Fibrillation and Malignancy: The Clinical Performance of Non-Vitamin K Oral Anticoagulants-A Systematic Review. *Semin Thromb Hemost* 2019;45(2):205-14. doi: 10.1055/s-0038-1661386.
126. Sagawa Y, Nagata Y, Yamaguchi T, et al. Comparison of direct oral anticoagulants and warfarin regarding midterm adverse events in patients with atrial fibrillation undergoing catheter ablation. *J Arrhythm* 2018;34(4):428-34. doi: <http://dx.doi.org/10.1002/joa3.12079>.
127. Santarpia G, De Rosa S, Polimeni A, et al. Efficacy and safety of non-vitamin K antagonist oral anticoagulants versus vitamin K antagonist oral anticoagulants in patients undergoing radiofrequency catheter ablation of atrial fibrillation: A meta-analysis. *PLoS ONE* 2015;10(5):e0126512. doi: <http://dx.doi.org/10.1371/journal.pone.0126512>.
128. Sardar P, Chatterjee S, Lavie CJ, et al. Risk of major bleeding in different indications for new oral anticoagulants: insights from a meta-analysis of approved dosages from 50 randomized trials. *Int J Cardiol* 2015;179:279-87. doi: 10.1016/j.ijcard.2014.11.101.
129. Sardar P, Nairooz R, Chatterjee S, et al. Meta-analysis of risk of stroke or transient ischemic attack with dabigatran for atrial fibrillation ablation. *Am J Cardiol* 2014;113(7):1173-77. doi: <http://dx.doi.org/10.1016/j.amjcard.2013.12.027>.
130. Sawhney V, Shaukat M, Volkova E, et al. Catheter ablation for atrial fibrillation on uninterrupted direct oral anticoagulants: A safe approach. *Pacing Clin Electrophysiol* 2018;41(8):1001-09. doi: <http://dx.doi.org/10.1111/pace.13370>.
131. Schmiedl S, Rottenkolber M, Szymanski J, et al. Bleeding complications and liver injuries during phenprocoumon treatment: a multicentre prospective observational study in internal medicine departments. *Dtsch Arztebl Int* 2013;110(14):244-52. doi: 10.3238/arztebl.2013.0244.
132. Scibelli N, Mangano A, Raynor K, et al. A Retrospective Review of Upper Gastrointestinal Bleed Outcomes During Hospital Admission While on Oral Anticoagulation. *Cureus* 2021;13(5):e15061. doi: 10.7759/cureus.15061.
133. Scognamiglio G, Fusco F, Hankel TC, et al. Safety and efficacy of non-vitamin K antagonist oral anticoagulants for prevention of thromboembolism in adults with systemic right ventricle: Results from the NOTE international registry. *Int J Cardiol* 2021;322:129-34. doi: 10.1016/j.ijcard.2020.08.034.
134. Seiffge DJ, Hooff RJ, Nolte CH, et al. Recanalization therapies in acute ischemic stroke patients: impact of prior treatment with novel oral anticoagulants on bleeding complications and outcome. *Circulation* 2015;132(13):1261-9. doi: 10.1161/circulationaha.115.015484.
135. Sen P, Kundu A, Sardar P, et al. Outcomes After Cardioversion in Atrial Fibrillation Patients Treated with Non-Vitamin K Antagonist Oral Anticoagulants (NOACs): Insights from a Meta-Analysis. *Am J Cardiol* 2016;16(1):33-41. doi: <http://dx.doi.org/10.1007/s40256-015-0136-1>.
136. Shah RR, Pillai A, Schafer P, et al. Safety and Efficacy of Uninterrupted Apixaban Therapy Versus Warfarin During Atrial Fibrillation Ablation. *Am J Cardiol* 2017;120(3):404-07. doi: <http://dx.doi.org/10.1016/j.amjcard.2017.04.041>.
137. Sharif Z, Srinivas B, Tiedt I, et al. Evaluating cardioversion outcomes for atrial fibrillation on novel oral anticoagulants versus warfarin: experience at a tertiary referral centre. *Ir J Med Sci* 2017;186(3):615-20. doi: <http://dx.doi.org/10.1007/s11845-017-1582-3>.

138. Sharma M, Cornelius VR, Patel JP, et al. Efficacy and harms of direct oral anticoagulants in the elderly for stroke prevention in atrial fibrillation and secondary prevention of venous thromboembolism: Systematic review and meta-analysis. *Circulation* 2015;132(3):194-204. doi: <http://dx.doi.org/10.1161/CIRCULATIONAHA.114.013267>.
139. Sherwood MW, Piccini JP, Holmes DN, et al. Outcomes of Cardiac Catheterization in Patients with Atrial Fibrillation on Anticoagulation in Contemporary in Practice: An Analysis of the ORBIT II Registry. *Circ Cardiovasc Interv* 2020;13(5):e008274. doi: <http://dx.doi.org/10.1161/CIRCINTERVENTIONS.119.008274>.
140. Shibata N, Morishima I, Okumura K, et al. Non-vitamin K antagonist oral anticoagulants versus warfarin for cardioversion of atrial fibrillation in clinical practice: A single-center experience. *J Arrhythm* 2017;33(1):7-11. doi: 10.1016/j.joa.2016.04.003.
141. Shurrab M, Morillo CA, Schulman S, et al. Safety and Efficacy of Dabigatran Compared With Warfarin for Patients Undergoing Radiofrequency Catheter Ablation of Atrial Fibrillation: A Meta-analysis. *Can J Cardiol* 2013;29(10):1203-10. doi: <http://dx.doi.org/10.1016/j.cjca.2013.07.005>.
142. Sindet-Pedersen C, Staerk L, Lamberts M, et al. Use of oral anticoagulants in combination with antiplatelet(s) in atrial fibrillation. *Heart* 2018;104(11):912-20. doi: 10.1136/heartjnl-2017-311976.
143. Snipelisky D, Kauffman C, Prussak K, et al. A comparison of bleeding complications post-ablation between warfarin and dabigatran. *J Interv Card Electrophysiol* 2012;35(1):29-33. doi: <http://dx.doi.org/10.1007/s10840-012-9708-z>.
144. Snipelisky D, Ray JC, Ung R, et al. A comparison of bleeding complications between warfarin, dabigatran, and rivaroxaban in patients undergoing cryoballoon ablation. *J Interv Card Electrophysiol* 2014;41(3):231-36. doi: <http://dx.doi.org/10.1007/s10840-014-9948-1>.
145. Sommerauer C, Schlender L, Krause M, et al. Effectiveness and safety of vitamin K antagonists and new anticoagulants in the prevention of thromboembolism in atrial fibrillation in older adults - a systematic review of reviews and the development of recommendations to reduce inappropriate prescribing. *BMC Geriatr* 2017;17(Suppl 1):223. doi: 10.1186/s12877-017-0573-6.
146. Sridharan K, Al Banny R, Qader AM, et al. Health-related quality of life in patients receiving oral anti-coagulants: a cross-sectional study. *Expert Rev Cardiovasc Ther* 2020;18(5):309-14. doi: <http://dx.doi.org/10.1080/14779072.2020.1760092>.
147. Starr JA, Pinner NA, Mannis M, et al. A Review of Direct Oral Anticoagulants in Patients With Stage 5 or End-Stage Kidney Disease. *Ann Pharmacother* 2021 doi: <http://dx.doi.org/10.1177/10600280211040093>.
148. Staudacher DL, Kaiser M, Hehrlein C, et al. Triple antithrombotic therapy after percutaneous coronary intervention (PCI) in patients with indication for oral anticoagulation: Data from a single center registry. *PLoS ONE* 2015;10(10):e0140101. doi: <http://dx.doi.org/10.1371/journal.pone.0140101>.
149. Steffel J, Ruff CT, Hamershock RA, et al. First experience with edoxaban and atrial fibrillation ablation - Insights from the ENGAGE AF-TIMI 48 trial. *Int J Cardiol* 2017;244:192-95. doi: <http://dx.doi.org/10.1016/j.ijcard.2017.05.098>.

150. Stepanyan G, Badhwar N, Lee RJ, et al. Safety of new oral anticoagulants for patients undergoing atrial fibrillation ablation. *J Interv Card Electrophysiol* 2014;40(1):33-38. doi: <http://dx.doi.org/10.1007/s10840-014-9888-9>.
151. Sun MT, Wood MK, Chan W, et al. Risk of intraocular bleeding with novel oral anticoagulants compared with warfarin a systematic review and meta-analysis. *JAMA Ophthalmol* 2017;135(8):864-70. doi: <http://dx.doi.org/10.1001/jamaophthalmol.2017.2199>.
152. Tao S, Otomo K, Ono Y, et al. Efficacy and safety of uninterrupted rivaroxaban taken preoperatively for radiofrequency catheter ablation of atrial fibrillation compared to uninterrupted warfarin. *J Interv Card Electrophysiol* 2017;48(2):167-75. doi: <http://dx.doi.org/10.1007/s10840-016-0214-6>.
153. Telles-Garcia N, Dahal K, Kocherla C, et al. Non-vitamin K antagonists oral anticoagulants are as safe and effective as warfarin for cardioversion of atrial fibrillation: A systematic review and meta-analysis. *Int J Cardiol* 2018;268:143-48. doi: <http://dx.doi.org/10.1016/j.ijcard.2018.04.034>.
154. Terekhov D, Agapov V, Kulikov K, et al. Pacemaker implantation in elderly patients: Safety of various regimens of anticoagulant therapy. *J Atr Fibrillation* 2017;9(5) doi: <http://dx.doi.org/10.4022/jafib.1467>.
155. Thangjui S, Kewcharoen J, Yodsuwan R, et al. Efficacy and safety of direct oral anticoagulant in morbidly obese patients with atrial fibrillation: systematic review and meta-analysis. *Eur Heart J Cardiovasc Pharmacother* 2021 doi: <https://dx.doi.org/10.1093/ehjcvp/pvab026>.
156. Tint D, Petris AO, Pop I, et al. Vitamin K Antagonists Versus Novel Oral Anticoagulants for Elective Electrical Cardioversion of Atrial Fibrillation. *Am J Ther* 2017;24(5):e553-e58. doi: <http://dx.doi.org/10.1097/MJT.0000000000000590>.
157. Tomita H, Hagii J, Metoki N, et al. Severity and functional outcome of patients with cardioembolic stroke occurring during non-vitamin K antagonist oral anticoagulant treatment. *J Stroke Cerebrovasc Dis* 2015;24(6):1430-37. doi: <http://dx.doi.org/10.1016/j.jstrokecerebrovasdis.2015.03.004>.
158. Tong Y, Deng Y, Zou L, et al. Non-Vitamin K Antagonist Oral Anticoagulants Versus Warfarin in Patients With Cancer and Atrial Fibrillation: A Systematic Review and Meta-Analysis. *J Am Heart Assoc* 2019;8(14):e012540. doi: <http://dx.doi.org/10.1161/JAHA.119.012540>.
159. Touma L, Filion KB, Atallah R, et al. A meta-analysis of randomized controlled trials of the risk of bleeding with apixaban versus vitamin K antagonists. *Am J Cardiol* 2015;115(4):533-41. doi: <http://dx.doi.org/10.1016/j.amjcard.2014.11.039>.
160. Tscholl V, Lsharaf AK, Lin T, et al. Apixaban, rivaroxaban, and dabigatran use in patients undergoing catheter ablation for atrial fibrillation using the second-generation cryoballoon. *Clin Cardiol* 2017;40(11):1095-99. doi: 10.1002/clc.22782.
161. Tse HF, Teo WS, Siu CW, et al. Prognosis and treatment of atrial fibrillation in Asian cities: 1-year review of the Asia-Pacific Heart Rhythm Society Atrial Fibrillation Registry. *European pacing, arrhythmias, and cardiac electrophysiology* 2022 doi: <https://dx.doi.org/10.1093/europace/euab327>.

162. Türk U, Acar RD, Akgün T, et al. Current clinician perspective on non-vitamin K antagonist oral anticoagulant use in challenging clinical cases. *Turk Kardiyol Dern Ars* 2020;48(3):289-303. doi: 10.5543/tkda.2020.16359.
163. Turker Y, Ekinozu I, Aytekin S, et al. Comparison of Changes in Anxiety and Depression Level Between Dabigatran and Warfarin Use in Patients With Atrial Fibrillation. *Clin Appl Thromb Hemost* 2017;23(2):164-67. doi: 10.1177/1076029615600792.
164. Tziomalos K, Giampatzis V, Bouziana SD, et al. Acenocoumarol vs. low-dose dabigatran in real-world patients discharged after ischemic stroke. *Blood Coagul Fibrinolysis* 2016;27(2):185-89. doi: <http://dx.doi.org/10.1097/MBC.0000000000000416>.
165. Uchino K, Hernandez AV. Dabigatran association with higher risk of acute coronary events: Meta-analysis of noninferiority randomized controlled trials. *Arch Intern Med* 2012;172(5):397-402. doi: <http://dx.doi.org/10.1001/archinternmed.2011.1666>.
166. Uribe-Arango W, Reyes Sanchez JM, Castano Gamboa N. Budget Impact Analysis of Anticoagulation Clinics in Patients with Atrial Fibrillation under Chronic Therapy with Oral Anticoagulants. *J Prim Care Community Health* 2021;12:21501327211000213. doi: <http://dx.doi.org/10.1177/21501327211000213>.
167. Vestergaard AS, Skjøth F, Lip GY, et al. Effect of Anticoagulation on Hospitalization Costs After Intracranial Hemorrhage in Atrial Fibrillation: A Registry Study. *Stroke* 2016;47(4):979-85. doi: 10.1161/strokeaha.115.012338.
168. Violi F, Vestri A, Menichelli D, et al. Direct Oral Anticoagulants in Patients With Atrial Fibrillation and Advanced Liver Disease: An Exploratory Meta-Analysis. *Hepatology Communications* 2020;4(7):1034-40. doi: <http://dx.doi.org/10.1002/hep4.1513>.
169. Vlachos K, Efremidis M, Bazoukis G, et al. Safety and efficacy of DOACs vs acenocoumarol in patients undergoing catheter ablation of atrial fibrillation. *Clin Cardiol* 2017;40(10):847-52. doi: <http://dx.doi.org/10.1002/clc.22734>.
170. Vranckx P, Valgimigli M, Eckardt L, et al. Edoxaban in atrial fibrillation patients with percutaneous coronary intervention by acute or chronic coronary syndrome presentation: A pre-specified analysis of the ENTRUST-AF PCI trial. *Eur Heart J* 2020;41(47):4497-504. doi: <http://dx.doi.org/10.1093/eurheartj/ehaa617>.
171. Wang KL, Chiu CC, Giugliano RP, et al. Drug Class, Renal Elimination, and Outcomes of Direct Oral Anticoagulants in Asian Patients: A Meta-Analysis. *J Stroke Cerebrovasc Dis* 2018;27(4):857-64. doi: 10.1016/j.jstrokecerebrovasdis.2017.10.027.
172. Wang N, Shen NN, Wu Y, et al. Comparison of effectiveness and safety of direct oral anticoagulants versus vitamin-k antagonists in elderly patients with atrial fibrillation: A systematic review and cost-effectiveness analysis protocol. *Ann Transl Med* 2020;8(6):391. doi: <http://dx.doi.org/10.21037/atm.2020.02.109>.
173. Wang TF, Carrier M, Fournier K, et al. Oral Anticoagulant Use in Patients with Morbid Obesity: A Systematic Review and Meta-Analysis. *Thromb Haemost* 2021 doi: <http://dx.doi.org/10.1055/a-1588-9155>.

174. Wasserlauf G, Grandi SM, Filion KB, et al. Meta-analysis of rivaroxaban and bleeding risk. *Am J Cardiol* 2013;112(3):454-60. doi: <http://dx.doi.org/10.1016/j.amjcard.2013.03.054>.
175. Watanabe T, Shinoda Y, Ikeoka K, et al. Dabigatran exhibits low intensity of left atrial spontaneous echo contrast in patients with nonvalvular atrial fibrillation as compared with warfarin. *Heart Vessels* 2017;32(3):326-32. doi: <http://dx.doi.org/10.1007/s00380-016-0871-5>.
176. Weisshaar S, Litschauer B, Gouya G, et al. Antithrombotic triple therapy and coagulation activation at the site of thrombus formation: a randomized trial in healthy subjects. *J Thromb Haemost* 2014;12(11):1850-60. doi: <http://dx.doi.org/10.1111/jth.12726>.
177. Welsh RC, Dehghani P, Lopes R, et al. Impact of prior oral anticoagulant use and outcomes on patients from secondary analysis in the AUGUSTUS trial. *Open Heart* 2022;9(1):e001892. doi: <https://dx.doi.org/10.1136/openhrt-2021-001892>.
178. Wiecek M, Bogossian H, Bandorski D, et al. Uninterrupted use of direct oral anticoagulants versus vitamin K antagonists for catheter ablation of atrial fibrillation with PVAC gold: incidence of silent cerebral microembolic events. *J Interv Card Electrophysiol* 2021;62(1):39-47. doi: <http://dx.doi.org/10.1007/s10840-020-00863-2>.
179. Winkle RA, Mead RH, Engel G, et al. Peri-procedural interrupted oral anticoagulation for atrial fibrillation ablation: Comparison of aspirin, warfarin, dabigatran, and rivaroxaban. *Europace* 2014;16(10):1443-49. doi: <http://dx.doi.org/10.1093/europace/euu196>.
180. Wolfe Z, Khan SU, Nasir F, et al. A systematic review and Bayesian network meta-analysis of risk of intracranial hemorrhage with direct oral anticoagulants. *J Thromb Haemost* 2018;16(7):1296-306. doi: <http://dx.doi.org/10.1111/jth.14131>.
181. Wong EKC, Belza C, Naimark DMJ, et al. Cost-effectiveness of antithrombotic agents for atrial fibrillation in older adults at risk for falls: a mathematical modelling study. *CMAJ Open* 2020;8(4):E706-e14. doi: 10.9778/cmajo.20200107.
182. Wu S, Yang YM, Zhu J, et al. Meta-analysis of efficacy and safety of new oral anticoagulants compared with uninterrupted Vitamin K antagonists in patients undergoing catheter ablation for atrial fibrillation. *Am J Cardiol* 2016;117(6):926-34. doi: <http://dx.doi.org/10.1016/j.amjcard.2015.12.027>.
183. Wu VCC, Wang CL, Lee CH, et al. Novel oral anticoagulant vs. warfarin in elderly atrial fibrillation patients with normal, mid-range, and reduced left ventricular ejection fraction. *ESC heart fail* 2020;7(5):2862-70. doi: <http://dx.doi.org/10.1002/ehf2.12890>.
184. Wyrembak J, Campbell KB, Steinberg BA, et al. Incidence and Predictors of Left Atrial Appendage Thrombus in Patients Treated With Nonvitamin K Oral Anticoagulants Versus Warfarin Before Catheter Ablation for Atrial Fibrillation. *Am J Cardiol* 2017;119(7):1017-22. doi: <http://dx.doi.org/10.1016/j.amjcard.2016.12.008>.
185. Xian Y, Hernandez AF, Harding T, et al. Acute management of stroke patients taking non-vitamin K antagonist oral anticoagulants - Addressing Real-world Anticoagulant Management Issues in Stroke (ARAMIS) Registry: Design and rationale. *Am Heart J* 2016;182:28-35. doi: <http://dx.doi.org/10.1016/j.ahj.2016.07.023>.
186. Xiang E, Ahuja T, Raco V, et al. Anticoagulation prescribing patterns in patients with cancer. *J Thromb Haemost* 2018;45(1):89-98. doi: <http://dx.doi.org/10.1007/s11239-017-1558-1>.

187. Xiong Q, Lau YC, Senoo K, et al. Non-vitamin K antagonist oral anticoagulants (NOACs) in patients with concomitant atrial fibrillation and heart failure: A systemic review and meta-analysis of randomized trials. *Eur J Heart Fail* 2015;17(11):1192-200. doi: <http://dx.doi.org/10.1002/ejhf.343>.
188. Xiong Q, Wang C, Liu H, et al. Efficacy and Safety of Non-Vitamin K Antagonist Oral Anticoagulants in Asians With Nonvalvular Atrial Fibrillation: A Network Meta-Analysis. *Clin Appl Thromb Hemost* 2019;25 doi: <http://dx.doi.org/10.1177/1076029619885188>.
189. Xue Z, Zhang H. Non-Vitamin K Antagonist Oral Anticoagulants Versus Warfarin in Asians With Atrial Fibrillation: Meta-Analysis of Randomized Trials and Real-World Studies. *Stroke* 2019;50(10):2819-28. doi: 10.1161/strokeaha.119.026054.
190. Xue Z, Zhang H. Non-Vitamin K Antagonist Oral Anticoagulants Versus Warfarin in Asians with Atrial Fibrillation: Meta-Analysis of Randomized Trials and Real-World Studies. *Stroke* 2020;2819-28. doi: <http://dx.doi.org/10.1161/STROKEAHA.119.026054>.
191. Yamaji H, Murakami T, Hina K, et al. Usefulness of dabigatran etexilate as periprocedural anticoagulation therapy for atrial fibrillation ablation. *Clin Drug Investig* 2013;33(6):409-18. doi: <http://dx.doi.org/10.1007/s40261-013-0081-1>.
192. Yanagisawa S, Inden Y, Fujii A, et al. Uninterrupted Direct Oral Anticoagulant and Warfarin Administration in Elderly Patients Undergoing Catheter Ablation for Atrial Fibrillation: A Comparison With Younger Patients. *JACC Clin Electrophysiol* 2018;4(5):592-600. doi: <http://dx.doi.org/10.1016/j.jacep.2018.02.013>.
193. Yanagisawa S, Inden Y, Fujii A, et al. Renal function and risk of stroke and bleeding in patients undergoing catheter ablation for atrial fibrillation: Comparison between uninterrupted direct oral anticoagulants and warfarin administration. *Heart Rhythm* 2018;15(3):348-54. doi: <http://dx.doi.org/10.1016/j.hrthm.2017.10.033>.
194. Yang KT, Sun WC, Tsai TJ, et al. The risk of gastrointestinal bleeding between non-vitamin K antagonist oral anticoagulants and vitamin K antagonists in the Asian atrial fibrillation patients: A meta-analysis. *Int J Environ Res Public Health* 2021;18(1):1-16. doi: <https://dx.doi.org/10.3390/ijerph18010137>.
195. Yao RJR, Hawkins NM, Lavaie Y, et al. Anticoagulation management of postoperative atrial fibrillation after cardiac surgery: A systematic review. *J Card Surg* 2021;36(6):2081-94. doi: <http://dx.doi.org/10.1111/jocs.15396>.
196. Yap LB, Eng DT, Sivalingam L, et al. A Comparison of Dabigatran With Warfarin for Stroke Prevention in Atrial Fibrillation in an Asian Population. *Clin Appl Thromb Hemost* 2016;22(8):792-97. doi: 10.1177/1076029615584664.
197. Yoshida R, Morishima I, Takagi K, et al. Comparison between long-term clinical outcomes of vitamin K antagonist and direct oral anticoagulants in patients with atrial fibrillation undergoing percutaneous coronary intervention. *Circ J* 2018;82(8):2016-24. doi: <http://dx.doi.org/10.1253/circj.CJ-17-1171>.
198. Yoshida Y, Watarai M, Fujii K, et al. Comparison of uninterrupted anticoagulation with dabigatran etexilate or warfarin in the periprocedural period for atrial fibrillation catheter ablation:

Results of the Japanese subgroup of the RE-CIRCUIT trial. *J Arrhythm* 2018;34(2):148-57. doi: <http://dx.doi.org/10.1002/joa3.12024>.

199. Yoshimoto I, Iriki Y, Oketani N, et al. A randomized comparison of two direct oral anticoagulants for patients undergoing cardiac ablation with a contemporary warfarin control arm. *J Interv Card Electrophysiol* 2021;60(3):375-85. doi: <http://dx.doi.org/10.1007/s10840-020-00732-y>.
200. Zaitoun MF, Sheikh ME, Faifi ASA, et al. The Use of Non-Vitamin K Antagonist Oral Anticoagulants in Post-Kidney Transplantation, Single-Center Experience. *Transplant Proc* 2021;53(10):2918-22. doi: <https://dx.doi.org/10.1016/j.transproceed.2021.09.042>.
201. Zak M, Castiblanco SA, Garg J, et al. Periprocedural Management of New Oral Anticoagulants in Atrial Fibrillation Ablation. *J Cardiovasc Pharmacol Ther* 2015;20(5):457-64. doi: <http://dx.doi.org/10.1177/1074248415576193>.
202. Zhang H, Xue Z, Yi D, et al. Non-Vitamin K Antagonist Oral Anticoagulants Versus Warfarin in Patients with Atrial Fibrillation with Coronary or Peripheral Artery Disease. *Int Heart J* 2020;61(2):231-38. doi: 10.1536/ihj.19-202.
203. Zhang J, Tang J, Cui X, et al. Indirect comparison of novel Oral anticoagulants among Asians with non-Valvular atrial fibrillation in the real world setting: a network meta-analysis. *BMC Cardiovasc Disord* 2019;19(1):182. doi: 10.1186/s12872-019-1165-5.
204. Zhao J, Blais JE, Chui CSL, et al. Association Between Nonvitamin K Antagonist Oral Anticoagulants or Warfarin and Liver Injury: A Cohort Study. *Am J Gastroenterol* 2020;115(9):1513-24. doi: <http://dx.doi.org/10.14309/ajg.0000000000000678>.
205. Zhao Y, Lu Y, Qin Y. A meta-analysis of randomized controlled trials of uninterrupted periprocedural anticoagulation strategy in patients undergoing atrial fibrillation catheter ablation. *Int J Cardiol* 2018;270:167-71. doi: <http://dx.doi.org/10.1016/j.ijcard.2018.06.024>.
206. Zhao YJ, Lin L, Zhou HJ, et al. Cost-effectiveness modelling of novel oral anticoagulants incorporating real-world elderly patients with atrial fibrillation. *Int J Cardiol* 2016;220:794-801. doi: <http://dx.doi.org/10.1016/j.ijcard.2016.06.087>.
207. Zhou Y, He W, Zhou Y, et al. Non-vitamin K antagonist oral anticoagulants in patients with hypertrophic cardiomyopathy and atrial fibrillation: a systematic review and meta-analysis. *J Thromb Thrombolysis* 2020;50(2):311-17. doi: 10.1007/s11239-019-02008-3.
208. Zylla MM, Pohlmeier M, Hess A, et al. Prevalence of intracardiac thrombi under phenprocoumon, direct oral anticoagulants (dabigatran and rivaroxaban), and bridging therapy in patients with atrial fibrillation and flutter. *Am J Cardiol* 2015;115(5):635-40. doi: <http://dx.doi.org/10.1016/j.amjcard.2014.12.016>.

6 Incorrect publication status (k = 0)

None of the publications captured in the systematic searches were excluded due to incorrect publication status.

7 Incorrect publication type (k = 176)

1. Afzal S, Zaidi STR, Merchant HA, et al. Prescribing trends of oral anticoagulants in England over the last decade: a focus on new and old drugs and adverse events reporting. *J Thromb Thrombolysis* 2021;52(2):646-53. doi: 10.1007/s11239-021-02416-4.
2. Agnelli G. Current issues in anticoagulation. *Pathophysiology of Haemostasis and Thrombosis* 2005;34(SUPPL. 1):2-9. doi: <http://dx.doi.org/10.1159/000083078>.
3. Ahmad Y, Lip GY. Stroke prevention in atrial fibrillation: concepts and controversies. *Curr Cardiol Rev* 2012;8(4):290-301. doi: 10.2174/157340312803760820.
4. Ajam T, Cumpian TL, Tilkens BL, et al. Non-vitamin K antagonist oral anticoagulants for stroke prevention in atrial fibrillation: safety issues in the elderly. *Expert Rev Clin Pharmacol* 2020;13(12):1309-27. doi: <https://dx.doi.org/10.1080/17512433.2020.1842191>.
5. Amani A, Fellers CM, Eyebe A, et al. Safety and Efficacy of Apixaban Use in Peritoneal Dialysis: A Review of the Literature. *J Pharm Technol* 2021;37(3):147-51. doi: <http://dx.doi.org/10.1177/8755122520988728>.
6. Amara W, Larsen TB, Sciaraffia E, et al. Patients' attitude and knowledge about oral anticoagulation therapy: results of a self-assessment survey in patients with atrial fibrillation conducted by the European Heart Rhythm Association. *Europace* 2016;18(1):151-5. doi: 10.1093/europace/euv317.
7. Amin A. Choosing non-vitamin K antagonist oral anticoagulants: Practical considerations we need to know. *Ochsner J* 2016;16(4):531-41.
8. Andrade JG, Verma A, Mitchell LB, et al. 2018 Focused Update of the Canadian Cardiovascular Society Guidelines for the Management of Atrial Fibrillation. *Can J Cardiol* 2018;34(11):1371-92. doi: <http://dx.doi.org/10.1016/j.cjca.2018.08.026>.
9. Anonymous. Dabigatran compared to warfarin when given to patients with atrial fibrillation. *Formulary* 2010;45(1):16.
10. Anonymous. Dabigatran (Pradaxa). An alternative to warfarin (Coumadin) is approved to help treat patients with atrial fibrillation. *Heart Advis* 2011;14(4):6.
11. Anonymous. Should dabigatran replace warfarin for stroke prevention in AF? *Drug Ther Bull* 2011;49(10):114-17. doi: <http://dx.doi.org/10.1136/dtb.2011.02.0060>.
12. Anonymous. The alternative to warfarin for selected patients. *Prescrire Int* 2012;21(124):33-36.
13. Anonymous. Rivaroxaban and atrial fibrillation. *Prescrire Int* 2012;21(132):257-60.
14. Arnao V, Agnelli G, Paciaroni M. Direct oral anticoagulants in the secondary prevention of stroke and transient ischemic attack in patients with atrial fibrillation. *Intern Emerg Med* 2015;10(5):555-60. doi: <http://dx.doi.org/10.1007/s11739-015-1226-4>.
15. Aronow WS. Atrial Fibrillation Management in Elderly. *Curr Cardiovasc Risk Rep* 2012;6(5):431-42. doi: <http://dx.doi.org/10.1007/s12170-012-0263-z>.
16. Batta A, Kalra B, Khirasaria R. Critical Issues and Recent Advances in Anticoagulant Therapy: A Review. *Neurol India* 2019;67(5):1200-12. doi: <http://dx.doi.org/10.4103/0028-3886.271256>.
17. Bentz BA. Nonvitamin K antagonist oral anticoagulants in everyday practice: Stroke prevention in atrial fibrillation and treatment of venous thromboembolism. *J Am Assoc Nurse Pract* 2015;27(12):721-31. doi: <http://dx.doi.org/10.1002/2327-6924.12330>.

18. Bociek A, Manka E, Bociek M, et al. Current views on the prevention of thromboembolic complications in atrial fibrillation. *Acta Angiol* 2018;24(2):44-50. doi: <http://dx.doi.org/10.5603/AA.2018.0012>.
19. Borg Xuereb C, Shaw RL, Lane DA. Patients' and health professionals' views and experiences of atrial fibrillation and oral-anticoagulant therapy: A qualitative meta-synthesis. *Patient Educ Couns* 2012;88(2):330-37. doi: <http://dx.doi.org/10.1016/j.pec.2012.05.011>.
20. Botto G, Ameri P, Cappellari M, et al. Unmet Clinical Needs in Elderly Patients Receiving Direct Oral Anticoagulants for Stroke Prevention in Non-valvular Atrial Fibrillation. *Adv Ther* 2021;38(6):2891-907. doi: <http://dx.doi.org/10.1007/s12325-021-01769-9>.
21. Brar T, Chua D. Direct-Acting Oral Anticoagulant Choice for Stroke Prevention in Obese Patients With Atrial Fibrillation. *Can J Cardiol* 2021;37(9):1489-92. doi: <https://dx.doi.org/10.1016/j.cjca.2021.04.004>.
22. Breitenstein A, Steffel J. [Atrial fibrillation and anticoagulation - Update 2016]. *Kardiovask Medizin* 2017;20(1):3-8.
23. Bruins Slot KMH, Berge E. Factor Xa inhibitors vs warfarin for preventing stroke and thromboembolism in patients with atrial fibrillation. *JAMA* 2014;311(11):1150-51. doi: <http://dx.doi.org/10.1001/jama.2014.1403>.
24. Bruins Slot KMH, Berge E. Factor Xa Inhibitors Versus Vitamin K Antagonists for Prevention of Cerebral or Systemic Embolism in Patients with Atrial Fibrillation. *Stroke* 2018;49(7):e235-e36. doi: <http://dx.doi.org/10.1161/STROKEAHA.118.021521>.
25. Caldeira D, Goncalves N, Ferreira JJ, et al. Tolerability and Acceptability of Non-Vitamin K Antagonist Oral Anticoagulants in Atrial Fibrillation: Systematic Review and Meta-Analysis. *Am J Cardiol* 2015;15(4):259-65. doi: <http://dx.doi.org/10.1007/s40256-015-0132-5>.
26. Camm AJ, Pinto FJ, Hankey GJ, et al. Non-vitamin K antagonist oral anticoagulants and atrial fibrillation guidelines in practice: Barriers to and strategies for optimal implementation. *Europace* 2015;17(7):1007-17. doi: <http://dx.doi.org/10.1093/europace/euv068>.
27. Cardoso CS, Sousa JA, Simoes P, et al. Misdosing of Non-Vitamin K Antagonist Oral Anticoagulants in Primary Care. *Clin Ther* 2020;42(6):1132. doi: <http://dx.doi.org/10.1016/j.clinthera.2020.04.008>.
28. Caucanas C, Sfeir D, Blas-Chatelain C, et al. Are general practitioners in Paris and surrounding areas reticent about direct oral anticoagulants? *JMV* 2017;42(3):133-40. doi: <http://dx.doi.org/10.1016/j.jdmv.2017.02.005>.
29. Chan NC, Eikelboom JW, Weitz JI. Evolving Treatments for Arterial and Venous Thrombosis: Role of the Direct Oral Anticoagulants. *Circ Res* 2016;118(9):1409-24. doi: <http://dx.doi.org/10.1161/CIRCRESAHA.116.306925>.
30. Chang AY, Askari M, Fan J, et al. Impact of primary care physician gatekeeping on medication prescriptions for atrial fibrillation. *Journal of Clinical and Translational Science* 2018:82-83. doi: <http://dx.doi.org/10.1017/cts.2018.287>.
31. Cheng JWM, Vu H. Dabigatran Etxilate: An Oral Direct Thrombin Inhibitor for the Management of Thromboembolic Disorders. *Clin Ther* 2012;34(4):766-87. doi: <http://dx.doi.org/10.1016/j.clinthera.2012.02.022>.

32. Coleman CI, Weeda ER, Nguyen E, et al. Effectiveness and safety of rivaroxaban vs. warfarin in patients 80+ years of age with non-valvular atrial fibrillation. *Eur Heart J Qual Care Clin Outcomes* 2018;4(4):328-29. doi: <http://dx.doi.org/10.1093/ehjqcco/qcx044>.
33. Curtin C, Hayes JM, Hayes SJ. Dental implications of new oral anticoagulants for atrial fibrillation. *Dent Update* 2014;41(6):526-31.
34. De Caterina R. How safe are non-Vitamin K antagonist oral anticoagulants in atrial fibrillation? *Eur Heart J Suppl* 2016;18(Supplement 1):I1-I6. doi: <http://dx.doi.org/10.1093/eurheartj/suw051>.
35. De Caterina R, Husted S, Wallentin L, et al. New oral anticoagulants in atrial fibrillation and acute coronary syndromes: ESC working group on thrombosis - Task force on anticoagulants in heart disease position paper. *J Am Coll Cardiol* 2012;59(16):1413-25. doi: <http://dx.doi.org/10.1016/j.jacc.2012.02.008>.
36. Di Minno A, Spadarella G, Spadarella E, et al. Gastrointestinal bleeding in patients receiving oral anticoagulation: Current treatment and pharmacological perspectives. *Thromb Res* 2015;136(6):1074-81. doi: <http://dx.doi.org/10.1016/j.thromres.2015.10.016>.
37. Di Minno MND, Russolillo A, Di Minno A, et al. Direct anticoagulant drugs to overcome limitations of vitamin K antagonists. A critical appraisal of data in atrial fibrillation patients. *Expert Opin Emerg Drugs* 2013;18(1):9-23. doi: <http://dx.doi.org/10.1517/14728214.2013.777427>.
38. Diener HC. [Stroke prevention: Edoxaban versus warfarin in patients with atrial fibrillation]. *Arzneimitteltherapie* 2014;32(4):96.
39. Diener HC. [Stroke prevention in atrial fibrillation: Reduced dose of NOACs compared to warfarin]. *Arzneimitteltherapie* 2017;35(5):177-78.
40. Diener HC. [Hemodialysis patients with atrial fibrillation. The Valkyrie study: Safety and efficacy of vitamin K antagonists versus rivaroxaban]. *Arzneimitteltherapie* 2021;39(7-8):260-61.
41. Diug BO, Lowthian JA, Dooley M. Replacing warfarin for better or worse: Patient factors and future directions. *Med J Aust* 2013;199(3):156-58. doi: <http://dx.doi.org/10.5694/mja12.11863>.
42. Dzeshka MS, Lip GYH. Antithrombotic and anticoagulant therapy for atrial fibrillation. *Cardiol Clin* 2014;32(4):585-99. doi: <http://dx.doi.org/10.1016/j.ccl.2014.07.009>.
43. Einecke D. [Three years' experience with NOACs in atrial fibrillation: Clear benefits as opposed to vitamin K antagonists]. *MMW Fortschr Med* 2014;156(13):80. doi: <http://dx.doi.org/10.1007/s15006-014-3283-4>.
44. Freeman WD, Aguilar M. Anticoagulation therapy for cardioembolic stroke prevention in the elderly: Defining benefits and risks. *Aging Health* 2010;6(4):439-50. doi: <http://dx.doi.org/10.2217/ahe.10.45>.
45. Frye L, Katz H, Bray N, et al. Review of new oral anticoagulants. *Osteopath Fam Physician* 2015;7(3):8-15.
46. Gadisseur APA, Breukink-Engbers WGM, Van Der Meer FJM, et al. Comparison of the Quality of Oral Anticoagulant Therapy Through Patient Self-management and Management by Specialized Anticoagulation Clinics in the Netherlands: A Randomized Clinical Trial. *Arch Intern Med* 2003;163(21):2639-46. doi: <http://dx.doi.org/10.1001/archinte.163.21.2639>.
47. Gala A, Biron-Andreani C. [Dabigatran versus warfarin in patients with atrial fibrillation]. *Angiologie* 2010;62(3):65-67.

48. Garnock-Jones KP. Dabigatran etexilate: A review of its use in the prevention of stroke and systemic embolism in patients with atrial fibrillation. *Am J Cardiol* 2011;11(1):57-72. doi: <http://dx.doi.org/10.2165/11206400-000000000-00000>.
49. Garwood CL, Dumo P, Baringhaus SN, et al. Quality of anticoagulation care in patients discharged from a pharmacist-managed anticoagulation clinic after stabilization of warfarin therapy. *Pharmacotherapy* 2008;28(1):20-26. doi: <http://dx.doi.org/10.1592/phco.28.1.20>.
50. Giugliano RP, Ruff CT, Wiviott SD, et al. Mortality in Patients with Atrial Fibrillation Randomized to Edoxaban or Warfarin: Insights from the ENGAGE AF-TIMI 48 Trial. *Am J Med* 2016;129(8):850. doi: <http://dx.doi.org/10.1016/j.amjmed.2016.02.028>.
51. Guthrie R. Usage of dabigatran versus warfarin for patients with atrial fibrillation. *Postgrad Med* 2010;122(4):230-33. doi: <http://dx.doi.org/10.3810/pgm.2010.07.2193>.
52. Halperin JL, Dorian P. Trials of novel oral anticoagulants for stroke prevention in patients with non-valvular atrial fibrillation. *Curr Cardiol Rev* 2014;10(4):297-302. doi: <http://dx.doi.org/10.2174/1573403X10666140513104523>.
53. Halperin JL, Rondina M. In nonvalvular atrial fibrillation, effects of rivaroxaban compared with warfarin did not differ by patient age. *Ann Intern Med* 2014;161(10):JC5. doi: <http://dx.doi.org/10.7326/0003-4819-161-10-201411180-02005>.
54. Hankey GJ. Intracranial hemorrhage and novel anticoagulants for atrial fibrillation: What have we learned? *Curr Cardiol Rep* 2014;16(5):480. doi: <http://dx.doi.org/10.1007/s11886-014-0480-9>.
55. Hecht B. Stroke prevention in atrial fibrillation: Comparison of the factor Xa inhibitor rivaroxaban with warfarin. *Med Monatsschr Pharm* 2011;34(9).
56. Hermans C, Lambert C. Edoxaban (Lixiana) and atrial fibrillation: A third anti-Xa enters the scene. The ENGAGE-AF trial under scrutiny. *Louv Med* 2014;133(2):98-102.
57. Ingelmo C, Wazni O. Review of the randomized evaluation of long-term anticoagulation therapy (RE-LY) trial: Warfarin versus dabigatran. *Curr Cardiol Rep* 2011;13(5):357-60. doi: <http://dx.doi.org/10.1007/s11886-011-0203-4>.
58. Kerbel R, Feinbloom D. Dabigatran etexilate for the prevention of stroke in patients with nonvalvular atrial fibrillation. *Clin Pract* 2012;9(6):629-37. doi: <http://dx.doi.org/10.2217/cpr.12.60>.
59. Kertland H, Tejani AM. Should direct thrombin inhibitors replace warfarin for prophylaxis of thromboembolism in Canadians with atrial fibrillation? *Can J Hosp Pharm* 2012;65(5):401-05. doi: <http://dx.doi.org/10.4212/cjhp.v65i5.1180>.
60. Khan MH, Saghir H, Pokhrel PK. Anticoagulation options for patients with non-valvular atrial fibrillation. *Osteopath Fam Physician* 2014;6(6):24-30. doi: <http://dx.doi.org/10.1016/ofp.v6i6.358>.
61. King A. Is dabigatran cost-effective compared with warfarin in patients with AF? *Nat Rev Cardiol* 2012;9(1):3. doi: <http://dx.doi.org/10.1038/nrcardio.2011.175>.
62. Kita K, Lyn R, Cortes G, et al. The ARISTOTLE trial: Apixaban versus warfarin in patients with atrial fibrillation. *J Interv Cardiol* 2011;3(6):637. doi: <http://dx.doi.org/10.2217/ica.11.72>.
63. Komocsi A. Discontinuation of anticoagulant treatment: From clinical trials to medication persistence. *Curr Med Res Opin* 2015;31(10):1841-44. doi: <http://dx.doi.org/10.1185/03007995.2015.1086991>.

64. Kumana CR, Cheung BMY, Siu DCW, et al. Non-vitamin K Oral Anticoagulants Versus Warfarin for Patients with Atrial Fibrillation: Absolute Benefit and Harm Assessments Yield Novel Insights. *Cardiovasc Ther* 2016;34(2):100-06. doi: <http://dx.doi.org/10.1111/1755-5922.12173>.
65. Lafuente-Lafuente C, Oasi C, Belmin J. [Treatment with oral anticoagulants in older patients: Should warfarin still be prescribed?]. *Presse Medicale* 2019;48(2):154-64. doi: <http://dx.doi.org/10.1016/j.lpm.2018.11.010>.
66. Lee SR, Choi EK. Nonvitamin K Antagonist Oral Anticoagulants in Patients with Extreme Body Weights: One Size Fits All? *Thromb Haemost* 2021;121(2):115-17. doi: <https://dx.doi.org/10.1055/s-0040-1718413>.
67. Liew A, O'Donnell M, Douketis J. Comparing mortality in patients with atrial fibrillation who are receiving a direct-acting oral anticoagulant or warfarin: A meta-analysis of randomized trials. *J Thromb Haemost* 2014;12(9):1419-24. doi: <http://dx.doi.org/10.1111/jth.12651>.
68. Liu X, Xu ZX, Yu P, et al. Non-Vitamin K Antagonist Oral Anticoagulants in Secondary Stroke Prevention in Atrial Fibrillation Patients: An Updated Analysis by Adding Observational Studies. *Cardiovasc Drugs Ther* 2020;34(4):569-78. doi: <http://dx.doi.org/10.1007/s10557-020-06961-7>.
69. Loffredo L, Perri L, Violi F. Myocardial infarction and atrial fibrillation: Different impact of anti-IIa vs anti-Xa new oral anticoagulants: A meta-analysis of the interventional trials. *Int J Cardiol* 2015;178:8-9. doi: <http://dx.doi.org/10.1016/j.ijcard.2014.10.124>.
70. Lyon C, Reed A, Prasad S. Direct oral anticoagulants or warfarin for A fib? *J Fam Pract* 2017;66(8):518-20.
71. Maegdefessel L, Spin JM, Azuma J, et al. New options with dabigatran etexilate in anticoagulant therap. *Vasc Health Risk Manag* 2010;6(1):339-49. doi: <http://dx.doi.org/10.2147/vhrm.s8942>.
72. Masotti L, Di Napoli M, Ageno W, et al. Direct oral anticoagulants for secondary prevention in patients with non-valvular atrial fibrillation. *Ital J Med* 2013;7(SUPPL. 8):8-21. doi: <http://dx.doi.org/10.4081/itjm.2013.s8.8>.
73. Meinertz T, Nitschmann S. [Warfarin or Dabigatran in patients with atrial fibrillation: RE-LY study (Randomized Evaluation of Long-term anticoagulation therapY)]. *Internist* 2011;52(4):462-65. doi: <http://dx.doi.org/10.1007/s00108-011-2813-8>.
74. Meya L, Polymeris A, Schaedelin S, et al. Oral anticoagulants in atrial fibrillation patients with recent stroke who are dependent on the daily help of others. *Stroke* 2021;3472-81. doi: <http://dx.doi.org/10.1161/STROKEAHA.120.033862>.
75. Mookadam M, Shamoun FE, Ramakrishna H, et al. Perioperative venous thromboembolic disease and the emerging role of the novel oral anticoagulants: An analysis of the implications for perioperative management. *Ann Card Anaesth* 2015;18(4):517-27. doi: <http://dx.doi.org/10.4103/0971-9784.166461>.
76. Nagler M, Bachmann LM, Schmid P, et al. Patient self-management of oral anticoagulation with vitamin K antagonists in everyday practice: Efficacy and safety in a nationwide long-term prospective cohort study. *PLoS ONE* 2014;9(4):e95761. doi: <http://dx.doi.org/10.1371/journal.pone.0095761>.

77. Nutescu EA, Bathija S, Sharp LK, et al. Anticoagulation patient self-monitoring in the United States: Considerations for clinical practice adoption. *Pharmacotherapy* 2011;31(12):1161-74. doi: <http://dx.doi.org/10.1592/phco.31.12.1161>.
78. O'Dell KM, Igawa D, Hsin J. New Oral Anticoagulants for Atrial Fibrillation: A Review of Clinical Trials. *Clin Ther* 2012;34(4):894-901. doi: <http://dx.doi.org/10.1016/j.clinthera.2012.01.019>.
79. Oertel LB, Fogerty AE. Use of direct oral anticoagulants for stroke prevention in elderly patients with nonvalvular atrial fibrillation. *J Am Assoc Nurse Pract* 2017;29(9):551-61. doi: <http://dx.doi.org/10.1002/2327-6924.12494>.
80. Overvad TF, Larsen TB, Albertsen IE, et al. Balancing bleeding and thrombotic risk with new oral anticoagulants in patients with atrial fibrillation. *Expert Rev Cardiovasc Ther* 2013;11(12):1619-29. doi: <http://dx.doi.org/10.1586/14779072.2013.839214>.
81. Panichpisal K, Szarek M, Sareen A. Dabigatran for stroke prevention in patients with atrial fibrillation and previous stroke or transient ischemic attack: Does dose matter? *Future Neurol* 2011;6(2):155-58. doi: <http://dx.doi.org/10.2217/fnl.11.8>.
82. Patel KK, Mehdiraz AA, Lim MJ, et al. Beyond warfarin: A patient-centered approach to selecting novel oral anticoagulants for stroke prevention in atrial fibrillation. *J Hosp Med* 2014;9(6):400-06. doi: <http://dx.doi.org/10.1002/jhm.2201>.
83. Patel P, Pandya J, Goldberg M. NOACs vs. Warfarin for Stroke Prevention in Nonvalvular Atrial Fibrillation. *Cureus* 2017;9(6):e1395. doi: 10.7759/cureus.1395.
84. Patti G, Haas S. Non-Vitamin K Antagonist Oral Anticoagulants and Factors Influencing the Ischemic and Bleeding Risk in Elderly Patients With Atrial Fibrillation: A Review of Current Evidence. *J Cardiovasc Pharmacol* 2020;77(1):11-21. doi: 10.1097/fjc.0000000000000927.
85. Patti G, Mantione L, Bressi E, et al. Efficacy and safety of oral anticoagulant therapy in frail patients with atrial fibrillation. *Monaldi Arch Chest Dis* 2018;88(2):10-13. doi: <http://dx.doi.org/10.4081/monaldi.2018.958>.
86. Pelliccia F, Tanzilli G, Schiariti M, et al. [Real-world data on novel oral anticoagulants: the added value of registries and observational studies. Focus on apixaban]. *G Ital Cardiol* 2016;17(12 Suppl 3):3s-21s. doi: 10.1714/2642.27146.
87. Pengo V, Crippa L, Falanga A, et al. Phase III studies on novel oral anticoagulants for stroke prevention in atrial fibrillation: A look beyond the excellent results. *J Thromb Haemost* 2012;10(10):1979-87. doi: <http://dx.doi.org/10.1111/j.1538-7836.2012.04866.x>.
88. Piccini JP, Wallace TW, Patel MR, et al. Stroke prevention in atrial fibrillation. *Cardiovasc Drugs Ther* 2011;25(6):561-70. doi: <http://dx.doi.org/10.1007/s10557-011-6334-4>.
89. Pink J, Pirmohamed M, Hughes DA. Comparative effectiveness of dabigatran, rivaroxaban, apixaban, and warfarin in the management of patients with nonvalvular atrial fibrillation. *Clin Pharmacol* 2013;94(2):269-76. doi: <http://dx.doi.org/10.1038/clpt.2013.83>.
90. Poller L, Jespersen J, Ibrahim S. Warfarin or dabigatran for treatment of atrial fibrillation. *J Thromb Haemost* 2014;12(7):1193-95. doi: <http://dx.doi.org/10.1111/jth.12590>.

91. Potpara TS, Lip GY. Postapproval Observational Studies of Non-Vitamin K Antagonist Oral Anticoagulants in Atrial Fibrillation. *JAMA* 2017;317(11):1115-16. doi: <http://dx.doi.org/10.1001/jama.2017.1152>.
92. Potpara TS, Polovina MM, Licina MM, et al. Novel oral anticoagulants for stroke prevention in atrial fibrillation: Focus on apixaban. *Adv Ther* 2012;29(6):491-507. doi: <http://dx.doi.org/10.1007/s12325-012-0026-8>.
93. Prisco D, Cenci C, Silvestri E, et al. Novel oral anticoagulants in Atrial fibrillation: Which novel oral anticoagulant for which patient? *J Cardiovasc Med (Hagerstown)* 2015;16(7):512-19. doi: <http://dx.doi.org/10.2459/JCM.0000000000000262>.
94. Prom R, Spinler SA. The role of apixaban for venous and arterial thromboembolic disease. *Ann Pharmacother* 2011;45(10):1262-83. doi: <http://dx.doi.org/10.1345/aph.1Q119>.
95. Pujadas-Mestres L, Escolar G, Arellano-Rodrigo E, et al. Apixaban in the prevention of stroke and systemic embolism in nonvalvular atrial fibrillation. *Drugs Today* 2013;49(7):425-36. doi: <http://dx.doi.org/10.1358/dot.2013.49.7.1980498>.
96. Rahme RJ, Bernstein R, Batjer HH, et al. Is it time to abandon warfarin and embrace oral direct thrombin inhibitors to prevent stroke in patients with atrial fibrillation? *Neurosurgery* 2011;68(2):N16-7. doi: 10.1227/01.neu.0000393591.15767.13.
97. Raparelli V, Proietti M, Cangemi R, et al. Adherence to oral anticoagulant therapy in patients with atrial fibrillation focus on non-vitamin k antagonist oral anticoagulants. *Thromb Haemost* 2017;117(2):209-18. doi: <http://dx.doi.org/10.1160/TH16-10-0757>.
98. Reiffel JA. New versus Traditional Approaches to Oral Anticoagulation in Patients with Atrial Fibrillation. *Am J Med* 2014;127(4):e15. doi: <http://dx.doi.org/10.1016/j.amjmed.2013.06.001>.
99. Renda G, Di Nicola M, De Caterina R. Net Clinical Benefit of Non-Vitamin K Antagonist Oral Anticoagulants Versus Warfarin in Phase III Atrial Fibrillation Trials. *Am J Med* 2015;128(9):1007. doi: <http://dx.doi.org/10.1016/j.amjmed.2015.03.034>.
100. Riva N, Xuereb CB, Ageno W. Anticoagulant therapy in atrial fibrillation: Vitamin K antagonists or novel oral anticoagulant drugs? *J Cardiovasc Med (Hagerstown)* 2015;16(2):139-41. doi: <http://dx.doi.org/10.2459/JCM.0000000000000212>.
101. Roberts A. Anticoagulation therapy: Rivaroxaban is a safe and feasible alternative to warfarin in AF ablation. *Nat Rev Cardiol* 2014;11(3):127. doi: <http://dx.doi.org/10.1038/nrcardio.2014.3>.
102. Roberts A. Anticoagulation therapy: Edoxaban noninferior to warfarin in patients with AF. *Nat Rev Cardiol* 2014;11(2):66. doi: <http://dx.doi.org/10.1038/nrcardio.2013.206>.
103. Roca B, Roca M. The new oral anticoagulants: Reasonable alternatives to warfarin. *Cleve Clin J Med* 2015;82(12):847-54. doi: <http://dx.doi.org/10.3949/ccjm.82a.14052>.
104. Rockey DC. Gastrointestinal bleeding. Gastrointestinal bleeding risk is increased by novel anticoagulants. *Nat Rev Gastroenterol Hepatol* 2015;12(3):131-2. doi: 10.1038/nrgastro.2015.7.
105. Roffi M, Gencer B, Storey RF, et al. Clinical Perspectives and Pearls from the 2015 ESC NSTEMI-ACS Guidelines. *Curr Cardiol Rep* 2016;18(5):48. doi: <http://dx.doi.org/10.1007/s11886-016-0722-0>.

106. Rosenberg K. Lower Risk of Ischemic Stroke and Major Bleeding Events with Direct Oral Anticoagulants vs. Warfarin. *Am J Nurs* 2021;121(7):57. doi: <http://dx.doi.org/10.1097/01.NAJ.0000758508.43335.04>.
107. Rother J, Crijns H. Prevention of stroke in patients with atrial fibrillation: The role of new antiarrhythmic and antithrombotic drugs. *Cerebrovasc Dis* 2010;30(3):314-22. doi: <http://dx.doi.org/10.1159/000319608>.
108. Ru San T, Chan MY, Wee Siong T, et al. Stroke prevention in atrial fibrillation: understanding the new oral anticoagulants dabigatran, rivaroxaban, and apixaban. *Thrombosis* 2012;2012:108983. doi: 10.1155/2012/108983.
109. Rubboli A. Adherence to and persistence with non-Vitamin K-antagonist oral anticoagulants: Does the number of pills per day matter? *Curr Med Res Opin* 2015;31(10):1845-47. doi: <http://dx.doi.org/10.1185/03007995.2015.1086993>.
110. Rubboli A, Agewall S, Huber K, et al. New-onset atrial fibrillation after recent coronary stenting: Warfarin or non-vitamin K-antagonist oral anticoagulants to be added to aspirin and clopidogrel? A viewpoint. *Int J Cardiol* 2015;196:133-8. doi: 10.1016/j.ijcard.2015.06.006.
111. Rubboli A, Agewall S, Huber K, et al. New-onset atrial fibrillation after recent coronary stenting: Warfarin or non-vitamin K-antagonist oral anticoagulants to be added to aspirin and clopidogrel? A viewpoint. *Int J Cardiol* 2015;196:133-38. doi: <http://dx.doi.org/10.1016/j.ijcard.2015.06.006>.
112. Ruell J, Smith A, Perera T, et al. The role of a specialist bridging service. A New Zealand prospective study of 600 patients. *J Thromb Haemost* 2019;17(10):1756-61. doi: <http://dx.doi.org/10.1111/jth.14542>.
113. Russo V, Attena E, Mazzone C, et al. Real-life Performance of Edoxaban in Elderly Patients With Atrial Fibrillation: a Multicenter Propensity Score-Matched Cohort Study. *Clin Ther* 2019;41(8):1598-604. doi: <http://dx.doi.org/10.1016/j.clinthera.2019.04.041>.
114. Russo V, Rago A, Proietti R, et al. Efficacy and safety of the target-specific oral anticoagulants for stroke prevention in atrial fibrillation: the real-life evidence. *Ther Adv Drug Saf* 2017;8(2):67-75. doi: <http://dx.doi.org/10.1177/2042098616673990>.
115. Ryu R. Update on the safety and efficacy of oral anticoagulation in CKD and ESRD. *US Pharm* 2021;46(3):36-40.
116. Sabbag A, Yao X, Siontis KC, et al. Anticoagulation for Stroke Prevention in Older Adults with Atrial Fibrillation and Comorbidity: Current Evidence and Treatment Challenges. *Korean Circ J* 2018;48(10):873-89. doi: 10.4070/kcj.2018.0261.
117. Safavi-Naeini P, Saeed M. Target-specific oral anticoagulants: Should we switch from warfarin? *Tex Heart Inst J* 2015;42(3):229-33. doi: <http://dx.doi.org/10.14503/THIJ-15-5065>.
118. Sander R. Dabigatran versus warfarin in patients with atrial fibrillation. *Nurs Older People* 2017;29(6):11. doi: <http://dx.doi.org/10.7748/nop.29.6.11.s13>.
119. Sbrana F, Ripoli A, Dal Pino B. Patients with diabetes mellitus and atrial fibrillation treated with non-vitamin K antagonist oral anticoagulants. *Acta Cardiol* 2021;1. doi: 10.1080/00015385.2021.1962623.

120. Schafer A, Flierl U, Berliner D, et al. Anticoagulants for Stroke Prevention in Atrial Fibrillation in Elderly Patients. *Cardiovasc Drugs Ther* 2020;34(4):555-68. doi: <http://dx.doi.org/10.1007/s10557-020-06981-3>.
121. Scheen AJ, Sprynger M, Lancellotti P. [Anticoagulation of diabetic patients with nonvalvular atrial fibrillation]. *Rev Med Liege* 2021;76(2):93-97.
122. Schulman S, Majeed A. A benefit-risk assessment of dabigatran in the prevention of venous thromboembolism in orthopaedic surgery. *Drug Safety* 2011;34(6):449-63. doi: <http://dx.doi.org/10.2165/11587290-000000000-00000>.
123. Schwartz JB. Dabigatran Compared With Rivaroxaban vs Warfarin. *JAMA Intern Med* 2017;177(5):741-42. doi: 10.1001/jamainternmed.2017.0554.
124. Schwartz NE, Albers GW. Dabigatran challenges warfarin's superiority for stroke prevention in atrial fibrillation. *Stroke* 2010;41(6):1307-9. doi: 10.1161/strokeaha.110.584557.
125. Seeger J, Wohrle J. Apixaban: An update of the evidence for its place in the prevention of stroke in patients with atrial fibrillation. *Core Evid* 2020;15:1-6. doi: <http://dx.doi.org/10.2147/CE.S172935>.
126. Senoo K, Lip GY. Switching from a vitamin K antagonist to a NOAC. *Lancet Haematol* 2015;2(4):e132-3. doi: 10.1016/s2352-3026(15)00041-1.
127. Shafeeq H, Tran TH. New oral anticoagulants for atrial fibrillation: Are they worth the risk? *P T* 2014;39(1):54-64.
128. Shah R, Patel MR. Primary and key secondary results from the ROCKET AF trial, and their implications on clinical practice. *Ther Adv Cardiovasc Dis* 2017;11(3):105-20. doi: <http://dx.doi.org/10.1177/1753944716663156>.
129. Sharobeam A, Jones B, Watters A, et al. Anticoagulant prescribing in patients with ischaemic stroke: what has changed over a decade? *Intern Med J* 2020;50(10):1274-77. doi: <http://dx.doi.org/10.1111/imj.15022>.
130. Sherwood M, Piccini JP. For people with non-valvular atrial fibrillation rivaroxaban is non-inferior to warfarin for preventing stroke or embolism, with no difference in the risk of clinically relevant bleeding. *Evid Based Med* 2012;17(5):148-49. doi: <http://dx.doi.org/10.1136/ebmed-2011-100343>.
131. Singer DE, Hellkamp AS, Piccini JP, et al. Impact of global geographic region on time in therapeutic range on warfarin anticoagulant therapy: Data from the rocket af clinical trial. *J Am Heart Assoc* 2013;2(1):e000067. doi: <http://dx.doi.org/10.1161/JAHA.112.000067>.
132. Spartalis M, Tzatzaki E, Nikiteas NI, et al. Uninterrupted dabigatran is safer than warfarin in patients undergoing ablation for atrial fibrillation. *J Arrhythm* 2017;33(6):655-56. doi: 10.1016/j.joa.2017.07.014.
133. Stabile E, Izzo R, Rozza F, et al. Real Data on Effectiveness, Tolerability and Safety of New Oral Anticoagulant Agents: Focus on Dabigatran. *High Blood Press Cardiovasc Prev* 2016;23(2):115-22. doi: <http://dx.doi.org/10.1007/s40292-016-0150-7>.
134. Stacy ZA, Richter SK. The use of edoxaban in patients with nonvalvular atrial fibrillation and venous thromboembolism: A pharmacist's perspective. *Hosp Pharm* 2016;51(1):26-34. doi: <http://dx.doi.org/10.1310/hpj5101-26>.

135. Stacy ZA, Richter SK. Direct oral anticoagulants for stroke prevention in atrial fibrillation: treatment outcomes and dosing in special populations. *Ther Adv Cardiovasc Dis* 2018;12(9):247-62. doi: <http://dx.doi.org/10.1177/1753944718787384>.
136. Steinberg BA. Non-vitamin-K oral anticoagulants reduce mortality, stroke and intracranial haemorrhage when compared with warfarin in randomised trials of patients with non-valvular atrial fibrillation. *Evid Based Med* 2014;19(5):182. doi: <http://dx.doi.org/10.1136/ebmed-2014-110004>.
137. Steinberg BA. Systematic review and meta-analysis: Non-vitamin-K oral anticoagulants reduce mortality, stroke and intracranial haemorrhage when compared with warfarin in randomised trials of patients with non-valvular atrial fibrillation. *Evid Based Med* 2014;19(5):182. doi: <http://dx.doi.org/10.1136/ebmed-2014-110004>.
138. Steurer J. [Atrial fibrillation: new anticoagulants are more effective and safer, but expensive]. *Praxis* 2014;103(13):785-6. doi: 10.1024/1661-8157/a001681.
139. Stewart RA. Clinical trials of direct thrombin and factor Xa inhibitors in atrial fibrillation. *Curr Opin Cardiol* 2011;26(4):294-9. doi: 10.1097/HCO.0b013e3283477dbc.
140. Stollberger C, Finsterer J. Concerns about the use of new oral anticoagulants for stroke prevention in elderly patients with atrial fibrillation. *Drugs Aging* 2013;30(12):949-58. doi: <http://dx.doi.org/10.1007/s40266-013-0119-3>.
141. Streit S, Roberts R, Burman RA, et al. Anticoagulation in primary care - a cross sectional study in 14 heterogeneous countries. *Kardiovask Medizin* 2013;16(11):299-302.
142. Syzdol M, Tendera M. Stroke prevention in patients with atrial fibrillation-anticoagulation strategy 2012. *Cor et Vasa* 2013;55(2):E95-E100. doi: <http://dx.doi.org/10.1016/j.crvasa.2013.03.002>.
143. Talati R, White MC. Dabigatran: A new orally available anticoagulant for prevention of strokes and thrombosis in patients with atrial fibrillation. *Formulary* 2011;46(2):44-53.
144. Teddy P, Nair G. Anti-stroke prophylaxis--the ethics of collateral damage. *J Clin Neurosci* 2012;19(6):792-4. doi: 10.1016/j.jocn.2012.01.024.
145. Tellor KB, van Tuyl JS, Armbruster AL. Comparative risk impact of edoxaban in the management of stroke and venous thromboembolism. *Ther Clin Risk Manag* 2016;12:667-74. doi: <http://dx.doi.org/10.2147/TCRM.S84608>.
146. Tendera M, Syzdol M, Parma Z. ARISTOTLE RE-LYs on the ROCKET. What's new in stroke prevention in patients with atrial fibrillation? *Cardiol J* 2012;19(1):4-10. doi: <http://dx.doi.org/10.5603/CJ.2012.0002>.
147. Toth PP. Stroke prevention in patients with atrial fibrillation: focus on new oral anticoagulants. *Postgrad Med* 2013;125(3):155-61. doi: <http://dx.doi.org/10.3810/pgm.2013.05.2670>.
148. Tran A, Cheng-Lai A. Dabigatran etexilate: The first oral anticoagulant available in the united states since warfarin. *Cardiol Rev* 2011;19(3):154-61. doi: <http://dx.doi.org/10.1097/CRD.0b013e3182137758>.
149. Trikha R, Kowey PR. Practical Considerations for the Nonvitamin K Antagonist Oral Anticoagulants. *Cardiology (Switzerland)* 2017;136(2):115-24. doi: <http://dx.doi.org/10.1159/000447530>.

150. Turagam MK, Addepally NS, Velagapudi P. Novel anticoagulants for stroke prevention in atrial fibrillation and chronic kidney disease. *Expert Rev Cardiovasc Ther* 2013;11(10):1297-99. doi: <http://dx.doi.org/10.1586/14779072.2013.839188>.
151. Undas A, Pasierski T, Windyga J, et al. Practical aspects of new oral anticoagulant use in atrial fibrillation. *Polskie Arch Med Wewnetrznej* 2014;124(3):124-35. doi: <http://dx.doi.org/10.20452/pamw.2138>.
152. Veltkamp R, Hacke W. [New oral anticoagulants in atrial fibrillation]. *Nervenarzt* 2011;82(2):180, 82-4, 86-9. doi: 10.1007/s00115-010-3114-5.
153. Verdecchia P, Angeli F, Aita A, et al. Why switch from warfarin to NOACs? *Intern Emerg Med* 2016;11(3):289-93. doi: <http://dx.doi.org/10.1007/s11739-016-1411-0>.
154. Verdino RJ. Untreated atrial fibrillation in the United States of America: Understanding the barriers and treatment options. *J Saudi Heart Assoc* 2015;27(1):44-49. doi: <http://dx.doi.org/10.1016/j.jsha.2014.09.003>.
155. Verheugt FWA, Granger CB. Oral anticoagulants for stroke prevention in atrial fibrillation: Current status, special situations, and unmet needs. *Lancet* 2015;386(9990):303-10. doi: <https://dx.doi.org/10.1016/S0140-6736%2815%2960245-8>.
156. Vimalasvaran K, Dockrill SJ, Gorog DA. Role of rivaroxaban in the management of atrial fibrillation: Insights from clinical practice. *Vasc Health Risk Manag* 2018;14:13-21. doi: <http://dx.doi.org/10.2147/VHRM.S134394>.
157. Violi F, Pastori D. Real-world efficacy and safety of non-vitamin K antagonist oral anticoagulants in patients with atrial fibrillation. *Intern Emerg Med* 2019;14(8):1199-201. doi: <http://dx.doi.org/10.1007/s11739-019-02135-y>.
158. Vitin L, Quinto E, Kirwin J. Rivaroxaban: A novel oral factor xa inhibitor to prevent stroke in nonvalvular atrial fibrillation. *Formulary* 2011;46(7):257-67.
159. Vora AN, Alexander JH, Lopes RD. Dabigatran Compared With Rivaroxaban vs Warfarin. *JAMA Intern Med* 2017;177(5):742-43. doi: 10.1001/jamainternmed.2017.0561.
160. Waks JW, Zimetbaum PJ. Dabigatran etexilate for thromboembolic prophylaxis in non-valvular atrial fibrillation: the RE-LY study and substudies with commentary. *Expert Rev Cardiovasc Ther* 2013;11(11):1461-71. doi: <http://dx.doi.org/10.1586/14779072.2013.849572>.
161. Wang Y, Bajorek B. New oral anticoagulants in practice: pharmacological and practical considerations. *Am J Cardiovasc Drugs* 2014;14(3):175-89. doi: 10.1007/s40256-013-0061-0.
162. Wassef SN, Abel TJ, Grossbach A, et al. Traumatic intracranial hemorrhage in patients taking dabigatran: report of 3 cases and review of the literature. *Neurosurgery* 2013;73(2):E368-73; discussion E73-4. doi: 10.1227/01.neu.0000430763.95349.5f.
163. Weachter R. Dabigatran: a new anticoagulant for stroke prevention in patients with atrial fibrillation. *Mo Med* 2012;109(2):146-49.
164. Wehling M, Collins R, Gil VM, et al. Appropriateness of Oral Anticoagulants for the Long-Term Treatment of Atrial Fibrillation in Older People: Results of an Evidence-Based Review and International Consensus Validation Process (OAC-FORTA 2016). *Drugs Aging* 2017;34(7):499-507. doi: <http://dx.doi.org/10.1007/s40266-017-0466-6>.

165. Weimar C, Hohnloser SH, Eikelboom JW, et al. Preventing cardioembolic stroke in atrial fibrillation with dabigatran. *Curr Neurol Neurosci Rep* 2012;12(1):17-23. doi: <http://dx.doi.org/10.1007/s11910-011-0229-4>.
166. Weintraub WS. Cutting through the statistical fog: understanding and evaluating non-inferiority trials. *Int J Clin Pract* 2010;64(10):1359-66. doi: 10.1111/j.1742-1241.2010.02481.x.
167. Wilke T, Groth A, Fuchs A, et al. Persistence with VKA treatment in newly treated atrial fibrillation patients: an analysis based on a large sample of 38,076 German patients. *Eur J Clin Pharmacol* 2017;73(11):1437-47. doi: <http://dx.doi.org/10.1007/s00228-017-2307-2>.
168. Wilson SJA, Wells PS, Kovacs MJ, et al. Comparing the quality of oral anticoagulant management by anticoagulation clinics and by family physicians: A randomized controlled trial. *CMAJ* 2003;169(4):293-98.
169. Yasaka M, Lip GYH. Impact of non-vitamin K antagonist oral anticoagulants on intracranial bleeding in Asian patients with non-valvular atrial fibrillation. *Circ J* 2014;78(10):2367-72. doi: <http://dx.doi.org/10.1253/circj.CJ-14-0720>.
170. Zeidan A, Faltas B, Streiff M. Dabigatran etexilate: What do hospitalists need to know? *J Hosp Med* 2012;7(3):262-69. doi: <http://dx.doi.org/10.1002/jhm.996>.
171. Zhang L, Steckman DA, Adelstein EC, et al. Oral Anticoagulation for Atrial Fibrillation Thromboembolism Prophylaxis in the Chronic Kidney Disease Population: the State of the Art in 2019. *Cardiovasc Drugs Ther* 2019;33(4):481-88. doi: <http://dx.doi.org/10.1007/s10557-019-06885-x>.
172. Zhang Y. Apixaban for oral antithrombotic therapy: is a new era coming? *Mol Cell Ther* 2014;2:4. doi: 10.1186/2052-8426-2-4.
173. Zhao YJ, Lim WS. Dabigatran Compared With Rivaroxaban vs Warfarin. *JAMA Intern Med* 2017;177(5):742. doi: 10.1001/jamainternmed.2017.0564.
174. Zhu X, Wang Z, Ferrari MW, et al. Anticoagulation in cardiomyopathy: unravelling the hidden threat and challenging the threat individually. *ESC heart fail* 2021;8(6):4737-50. doi: <https://dx.doi.org/10.1002/ehf2.13597>.
175. Zikria J, Ansell J. Oral anticoagulation with Factor Xa and thrombin inhibitors: Is there an alternative to warfarin? *Discov Med* 2009;8(43):196-203.
176. Zirlik A, Bode C. Vitamin K antagonists: relative strengths and weaknesses vs. direct oral anticoagulants for stroke prevention in patients with atrial fibrillation. *J Thromb Haemost* 2017;43(3):365-79. doi: <http://dx.doi.org/10.1007/s11239-016-1446-0>.

8 Incorrect study design (k = 95)

1. Ababneh M, Nasser SA, Rababa'h A, et al. Warfarin adherence and anticoagulation control in atrial fibrillation patients: A systematic review. *Eur Rev Med Pharmacol Sci* 2021;25(24):7926-33. doi: https://dx.doi.org/10.26355/eurev_202112_27642.
2. Abdullah HM, Ullah W, Jafar MS, et al. Safety and Efficacy of Apixaban, Rivaroxaban, and Warfarin in End-Stage Renal Disease With Atrial Fibrillation: A Systematic Review and Meta-Analysis. *Cardiovasc Revasc Med* 2021;30:26-32. doi: <http://dx.doi.org/10.1016/j.carrev.2020.09.041>.
3. Acanfora D, Ciccone MM, Carlomagno V, et al. A systematic review of the efficacy and safety of direct oral anticoagulants in atrial fibrillation patients with diabetes using a risk index. *J Clin Med* 2021;10(13):2924. doi: <https://dx.doi.org/10.3390/jcm10132924>.
4. Acanfora D, Ciccone MM, Scicchitano P, et al. Efficacy and safety of direct oral anticoagulants in patients with atrial fibrillation and high thromboembolic risk. A systematic review. *Front pharmacol* 2019;10:1048. doi: <http://dx.doi.org/10.3389/fphar.2019.01048>.
5. Adam L, Feller M, Syrogiannouli L, et al. Novel bleeding risk score for patients with atrial fibrillation on oral anticoagulants, including direct oral anticoagulants. *J Thromb Haemost* 2021;19(4):931-40. doi: <https://dx.doi.org/10.1111/jth.15251>.
6. Afzal SK, Hasan SS, Babar ZUD. A systematic review of patient-reported outcomes associated with the use of direct-acting oral anticoagulants. *Br J Clin Pharmacol* 2019;85(12):2652-67. doi: <http://dx.doi.org/10.1111/bcp.13985>.
7. Agasthi P, Lee JZ, Pujari SH, et al. Safety and efficacy of direct oral anticoagulants compared to Vitamin K antagonists postpercutaneous coronary interventions in patients with atrial fibrillation: A systematic review and meta-analysis. *J Arrhythm* 2020;36(2):271-79. doi: <http://dx.doi.org/10.1002/joa3.12292>.
8. Ahmad Y, Lip GYH. Preventing stroke and systemic embolism in renal patients with atrial fibrillation: Focus on anticoagulation. *Brain, Stroke and Kidney* 2013;179:81-91. doi: <http://dx.doi.org/10.1159/000346726>.
9. Ahmed A, Ahmed R, Ali SS, et al. Intracerebral hemorrhage outcomes in patients using direct oral anticoagulants versus vitamin K antagonists: a meta-analysis. *Clin Neurol Neurosurg* 2020;198:106146. doi: <http://dx.doi.org/10.1016/j.clineuro.2020.106146>.
10. Akgun AN, Karacaglar E, Bal UA, et al. Comparison of non-vitamin K antagonist oral anticoagulants and well-controlled warfarin in octogenarians with non-valvular atrial fibrillation: Real-world data from a single tertiary center. *Anatol J Cardiol* 2021;25(7):462-67. doi: <http://dx.doi.org/10.5152/AnatolJCardiol.2021.25058>.
11. Al-Shahi Salman R, Keerie C, Stephen J, et al. Effects of oral anticoagulation for atrial fibrillation after spontaneous intracranial haemorrhage in the UK: a randomised, open-label, assessor-masked, pilot-phase, non-inferiority trial. *Lancet Neurol* 2021;20(10):842-53. doi: <https://dx.doi.org/10.1016/S1474-4422%2821%2900264-7>.
12. Albert NM. Use of novel oral anticoagulants for patients with atrial fibrillation: Systematic review and clinical implications. *Heart Lung* 2014;43(1):48-59. doi: <http://dx.doi.org/10.1016/j.hrtlng.2013.10.014>.

13. Andrade JG, Krahn AD, Skanes AC, et al. Values and Preferences of Physicians and Patients With Nonvalvular Atrial Fibrillation Who Receive Oral Anticoagulation Therapy for Stroke Prevention. *Can J Cardiol* 2016;32(6):747-53. doi: <http://dx.doi.org/10.1016/j.cjca.2015.09.023>.
14. Antza C, Doundoulakis I, Akrivos E, et al. Non-vitamin K oral anticoagulants in nonvalvular atrial fibrillation: a network meta-analysis. *Scand Cardiovasc J* 2019;53(2):48-54. doi: <http://dx.doi.org/10.1080/14017431.2019.1594353>.
15. Assiri A, Al-Majzoub O, Kanaan AO, et al. Mixed Treatment Comparison Meta-Analysis of Aspirin, Warfarin, and New Anticoagulants for Stroke Prevention in Patients With Nonvalvular Atrial Fibrillation. *Clin Ther* 2013;35(7):967. doi: <http://dx.doi.org/10.1016/j.clinthera.2013.05.011>.
16. Bai Y, Deng H, Shantsila A, et al. Rivaroxaban Versus Dabigatran or Warfarin in Real-World Studies of Stroke Prevention in Atrial Fibrillation: Systematic Review and Meta-Analysis. *Stroke* 2017;48(4):970-76. doi: 10.1161/strokeaha.116.016275.
17. Bai Y, Shi XB, Ma CS, et al. Meta-Analysis of Effectiveness and Safety of Oral Anticoagulants in Atrial Fibrillation With Focus on Apixaban. *Am J Cardiol* 2017;120(9):1689-95. doi: <http://dx.doi.org/10.1016/j.amjcard.2017.07.072>.
18. Baumann S, Huseynov A, El-Battrawy I, et al. Novel oral anticoagulants: Recommendations for patient evaluation, treatment initiation, follow-up and perioperative management. *Cardiovasc Hematol Disord Drug Targets* 2015;15(2):120-26. doi: <http://dx.doi.org/10.2174/1871529X1502151209113125>.
19. Blann AD, Banerjee A, Lane DA, et al. Net clinical benefit of edoxaban versus no treatment in a 'real world' atrial fibrillation population: A modelling analysis based on a nationwide cohort study. *Int J Cardiol* 2015;201:693-8. doi: 10.1016/j.ijcard.2015.08.074.
20. Bloom BJ, Filion KB, Atallah R, et al. Meta-analysis of randomized controlled trials on the risk of bleeding with dabigatran. *Am J Cardiol* 2014;113(6):1066-74. doi: <http://dx.doi.org/10.1016/j.amjcard.2013.11.049>.
21. Botto GL, Cuccia C, Gronda E, et al. [The slow acceptance of new oral anticoagulants in Italy: A critical analysis of a problem]. *G Ital Cardiol* 2017;18(3):208-18.
22. Brunetti L, Chen C, Jentora J. Dabigatran for stroke prevention in nonvalvular atrial fibrillation: Focus in the geriatric population. *Consult Pharm* 2014;29(3):169-78. doi: <http://dx.doi.org/10.4140/TCP.n.2014.169>.
23. Buck J, Fromings Hill J, Martin A, et al. Reasons for discontinuing oral anticoagulation therapy for atrial fibrillation: A systematic review. *Age Ageing* 2021;50(4):1108-17. doi: <http://dx.doi.org/10.1093/ageing/afab024>.
24. Bundhun PK, Soogund MZS, Teeluck AR, et al. Bleeding outcomes associated with rivaroxaban and dabigatran in patients treated for atrial fibrillation: A systematic review and meta-analysis. *BMC Cardiovasc Disord* 2017;17(1):15. doi: <http://dx.doi.org/10.1186/s12872-016-0449-2>.
25. Cameron C, Coyle D, Richter T, et al. Systematic review and network meta-analysis comparing antithrombotic agents for the prevention of stroke and major bleeding in patients with atrial fibrillation. *BMJ Open* 2014;4(6):e004301. doi: <http://dx.doi.org/10.1136/bmjopen-2013-004301>.
26. Chan YH, Lee HF, Chao TF, et al. Real-world Comparisons of Direct Oral Anticoagulants for Stroke Prevention in Asian Patients with Non-valvular Atrial Fibrillation: a Systematic Review and Meta-

- analysis. *Cardiovasc Drugs Ther* 2019;33(6):701-10. doi: <http://dx.doi.org/10.1007/s10557-019-06910-z>.
27. Chaudhry UA, Ezekowitz MD, Gracely EJ, et al. Comparison of Low-Dose Direct Acting Anticoagulant and Warfarin in patients Aged ≥ 80 years With Atrial Fibrillation. *Am J Cardiol* 2021;152:69-77. doi: <https://dx.doi.org/10.1016/j.amjcard.2021.04.035>.
 28. Chiang CE, Wang KL, Lip GYH. Stroke prevention in atrial fibrillation: An Asian perspective. *Thromb Haemost* 2014;111(5):789-97. doi: <http://dx.doi.org/10.1160/TH13-11-0948>.
 29. Cohen AT, Hill NR, Luo X, et al. A systematic review of network meta-analyses among patients with nonvalvular atrial fibrillation: A comparison of efficacy and safety following treatment with direct oral anticoagulants. *Int J Cardiol* 2018;269:174-81. doi: <http://dx.doi.org/10.1016/j.ijcard.2018.06.114>.
 30. Coleman CI, Haas S, Turpie AGG, et al. Impact of Switching From a Vitamin K Antagonist to Rivaroxaban on Satisfaction With Anticoagulation Therapy: The XANTUS-ACTS Substudy. *Clin Cardiol* 2016;39(10):565-69. doi: <http://dx.doi.org/10.1002/clc.22565>.
 31. Cortese F, Scicchitano P, Gesualdo M, et al. Apixaban: Effective and safe in preventing thromboembolic events in patients with atrial fibrillation and renal failure. *Curr Med Chem* 2017;24(34):3813-27. doi: <http://dx.doi.org/10.2174/0929867324666170818112904>.
 32. Dai Q, Deng X, Zhou L, et al. Real-world use of nonvitamin K antagonist oral anticoagulant in atrial fibrillation patients with liver disease: A meta-analysis. *Clin Cardiol* 2020;43(7):676-83. doi: <http://dx.doi.org/10.1002/clc.23408>.
 33. Deitelzweig S, Farmer C, Luo X, et al. Comparison of major bleeding risk in patients with non-valvular atrial fibrillation receiving direct oral anticoagulants in the real-world setting: A network meta-analysis. *Curr Med Res Opin* 2018;34(3):487-98. doi: <http://dx.doi.org/10.1080/03007995.2017.1411793>.
 34. Diener HC, Hankey GJ, Easton JD, et al. Non-vitamin K oral anticoagulants for secondary stroke prevention in patients with atrial fibrillation. *Eur Heart J Suppl* 2020;22:13-21. doi: <http://dx.doi.org/10.1093/EURHEARTJ/SUAA104>.
 35. Dogliotti A, Paolasso E, Giugliano RP. Current and new oral antithrombotics in nonvalvular atrial fibrillation: A network meta-analysis of 79 808 patients. *Heart* 2014;100(5):396-405. doi: <http://dx.doi.org/10.1136/heartjnl-2013-304347>.
 36. Esteve-Pastor MA, Rivera-Caravaca JM, Roldan V, et al. Estimated Effectiveness and Safety of Nonvitamin K Antagonist Oral Anticoagulants Compared With Optimally Acenocoumarol Anticoagulated "Real-World" in Patients With Atrial Fibrillation. *Am J Cardiol* 2018;122(5):785-92. doi: <http://dx.doi.org/10.1016/j.amjcard.2018.05.012>.
 37. Fastner C, Szabo K, Samartzi M, et al. Treatment standards for direct oral anticoagulants in patients with acute ischemic stroke and non-valvular atrial fibrillation: A survey among German stroke units. *PLoS ONE* 2022;17(2 February):e0264122. doi: <https://dx.doi.org/10.1371/journal.pone.0264122>.
 38. Fu W, Guo H, Guo J, et al. Relative efficacy and safety of direct oral anticoagulants in patients with atrial fibrillation by network meta-analysis. *J Cardiovasc Med (Hagerstown)* 2014;15(12):873-79. doi: <http://dx.doi.org/10.2459/JCM.0000000000000206>.

39. Gu ZC, Wei AH, Zhang C, et al. Risk of Major Gastrointestinal Bleeding With New vs Conventional Oral Anticoagulants: A Systematic Review and Meta-analysis. *Clin Gastroenterol Hepatol* 2020;18(4):792. doi: <http://dx.doi.org/10.1016/j.cgh.2019.05.056>.
40. Harenberg J, Weiss C, Marx S, et al. Clinical trials with new direct oral anticoagulants Additive value of indirect comparisons (network meta-analyses). *Phlebologie* 2013;42(3):139-48. doi: <http://dx.doi.org/10.12687/phleb2146-3-2013>.
41. Horstkotte D, Hering D, Prohaska W, et al. [Anticoagulation with vitamin K antagonists in nonvalvular atrial fibrillation]. *Klinikerzt* 2012;41(SUPPL. 1):44-50. doi: <http://dx.doi.org/10.1055/s-0032-1312462>.
42. Kittelson JM, Steg PG, Halperin JL, et al. Bivariate evaluation of thromboembolism and bleeding in clinical trials of anticoagulants in patients with atrial fibrillation. *Thromb Haemost* 2016;116(3):544-53. doi: <http://dx.doi.org/10.1160/TH15-12-1000>.
43. Komori M, Yasaka M, Kokuba K, et al. Intracranial hemorrhage during dabigatran treatment - Case series of eight patients. *Circ J* 2014;78(6):1335-41. doi: <http://dx.doi.org/10.1253/circj.CJ-13-1534>.
44. Krupka S, Hoffmann A, Audebert H, et al. [Health care of patients with atrial fibrillation treated with vitamin k antagonists in germany]. *ZFA (Internet)* 2019;2019(6):259-64. doi: <http://dx.doi.org/10.3238/zfa.2019.0259-0264>.
45. Kwong JS, Lam YY, Yan BP, et al. Bleeding of new oral anticoagulants for stroke prevention in atrial fibrillation: a meta-analysis of randomized controlled trials. *Cardiovasc Drugs Ther* 2013;27(1):23-35. doi: 10.1007/s10557-012-6426-9.
46. Li G, Lip GYH, Holbrook A, et al. Direct comparative effectiveness and safety between non-vitamin K antagonist oral anticoagulants for stroke prevention in nonvalvular atrial fibrillation: a systematic review and meta-analysis of observational studies. *Eur J Epidemiol* 2019;34(2):173-90. doi: <http://dx.doi.org/10.1007/s10654-018-0415-7>.
47. Lim ETS, Yap J, Chin CT. Current and emerging therapies for stroke prophylaxis in atrial fibrillation. *Clin Investig* 2011;1(7):1019-37. doi: <http://dx.doi.org/10.4155/cli.11.66>.
48. Lin L, Lim WS, Zhou HJ, et al. Clinical and Safety Outcomes of Oral Antithrombotics for Stroke Prevention in Atrial Fibrillation: A Systematic Review and Network Meta-analysis. *J Am Med Dir Assoc* 2015;16(12):e1-1103. doi: <http://dx.doi.org/10.1016/j.jamda.2015.09.008>.
49. Liu J, Wu YP, Li SR, et al. The efficacy of non-vitamin K antagonist oral anticoagulants in the prevention of left atrial thrombus in patients with atrial fibrillation compared with vitamin K antagonists: A meta-analysis. *Heart Surg Forum* 2020;23(6):E733-E39. doi: <https://dx.doi.org/10.1532/hcf.3203>.
50. Loffredo L, Perri L, Violi F. Impact of new oral anticoagulants on gastrointestinal bleeding in atrial fibrillation: A meta-analysis of interventional trials. *Dig Liver Dis* 2015;47(5):429-31. doi: <http://dx.doi.org/10.1016/j.dld.2015.01.159>.
51. Lv M, Wu T, Jiang S, et al. Risk of Intracranial Hemorrhage Caused by Direct Oral Anticoagulants for Stroke Prevention in Patients With Atrial Fibrillation (from a Network Meta-Analysis of Randomized Controlled Trials). *Am J Cardiol* 2022;162:92-99. doi: <https://dx.doi.org/10.1016/j.amjcard.2021.09.011>.

52. Majeed A, Hwang HG, Eikelboom JW, et al. Effectiveness and outcome of management strategies for dabigatran- or warfarin-related major bleeding events. *Thromb Res* 2016;140:81-88. doi: <http://dx.doi.org/10.1016/j.thromres.2016.02.005>.
53. Minor C, Tellor KB, Armbruster AL. Edoxaban, a Novel Oral Factor Xa Inhibitor. *Ann Pharmacother* 2015;49(7):843-50. doi: <http://dx.doi.org/10.1177/1060028015579426>.
54. Mohan A, Wanat MA, Abughosh SM. Medication taking behaviors in patients taking warfarin versus direct oral anticoagulants: A systematic review. *Expert Rev Cardiovasc Ther* 2019;17(6):427-34. doi: <http://dx.doi.org/10.1080/14779072.2019.1620600>.
55. Morilla MA, Tumalak CDA, Gulay CB, et al. A meta-analysis on the efficacy of dabigatran versus warfarin among patients with atrial fibrillation. *Phillippine J Intern Med* 2012;50(4).
56. Partington SL, Abid S, Teo K, et al. Pre-admission warfarin use in patients with acute ischemic stroke and atrial fibrillation: The appropriate use and barriers to oral anticoagulant therapy. *Thromb Res* 2007;120(5):663-69. doi: <http://dx.doi.org/10.1016/j.thromres.2006.12.019>.
57. Patti G, Colonna P, Pelliccia F, et al. [Comparability of efficacy and safety results among phase III trials of non-vitamin K antagonist oral anticoagulants in patients with atrial fibrillation]. *G Ital Cardiol* 2017;18(3):175-79.
58. Proietti M, Romanazzi I, Romiti GF, et al. Real-world use of apixaban for stroke prevention in atrial fibrillation: A systematic review and meta-analysis. *Stroke* 2018;49(1):98-106. doi: <http://dx.doi.org/10.1161/STROKEAHA.117.018395>.
59. Riva L, Pasquale GD. [New oral anticoagulants in patients with atrial fibrillation: Efficacy and safety data from the real world]. *G Ital Cardiol* 2017;18(3):188-98.
60. Rolden HJA, Maas A, van der Wilt GJ, et al. Uncertainty on the effectiveness and safety of rivaroxaban in premenopausal women with atrial fibrillation: empirical evidence needed. *BMC Cardiovasc Disord* 2017;17(1):260. doi: 10.1186/s12872-017-0692-1.
61. Romanelli RJ, Nolting L, Dolginsky M, et al. Dabigatran Versus Warfarin for Atrial Fibrillation in Real-World Clinical Practice: A Systematic Review and Meta-Analysis. *Circ Cardiovasc Qual Outcomes* 2016;9(2):126-34. doi: <http://dx.doi.org/10.1161/CIRCOUTCOMES.115.002369>.
62. Röther J, Laufs U. [Preventing stroke by treating atrial fibrillation--new hope with dronedarone and dabigatran?]. *Dtsch Med Wochenschr* 2010;135 Suppl 2:S55-8. doi: 10.1055/s-0030-1249210.
63. Saji N, Kimura K, Aoki J, et al. Intracranial Hemorrhage Caused by Non-Vitamin K Antagonist Oral Anticoagulants (NOACs)- Multicenter Retrospective Cohort Study in Japan. *Circ J* 2015;79(5):1018-23. doi: 10.1253/circj.CJ-14-1209.
64. Scheen AJ, Lancellotti P. [Edoxaban (LIXIANA®) : new oral anticoagulant for the treatment and secondary prevention of thromboembolic disease]. *Rev Med Liege* 2016;71(11):517-24.
65. Seiffge DJ, De Marchis GM, Koga M, et al. Ischemic Stroke despite Oral Anticoagulant Therapy in Patients with Atrial Fibrillation. *Ann Neurol* 2020;87(5):677-87. doi: 10.1002/ana.25700.
66. Serrao A, Lucani B, Assanto Manfredi G, et al. Satisfaction, quality of life and therapy adherence assessment in real life patients transitioning from vitamin K antagonists to direct oral anticoagulants. *J Thromb Thrombolysis* 2020;50(3):718-23. doi: 10.1007/s11239-020-02070-2.

67. Shiyovich A, Shalev V, Chodick G, et al. Shifting from vitamin K antagonists to non-vitamin K antagonist oral anticoagulants in patients with atrial fibrillation: predictors, patterns and temporal trends. *BMC Cardiovasc Disord* 2021;21(1):493. doi: <http://dx.doi.org/10.1186/s12872-021-02295-w>.
68. Shrestha S, Coy S, Bekelis K. Oral antiplatelet and anticoagulant agents in the prevention and management of Ischemic stroke. *Curr Pharm Des* 2017;23(9):1377-91. doi: <http://dx.doi.org/10.2174/1381612822666161221145614>.
69. Siddiqui MU, Scalzitti D, Naeem Z. Apixaban in Comparison to Warfarin for Stroke Prevention in Nonvalvular Atrial Fibrillation: A Systematic Review and Meta-Analysis of Observational Studies. *Cardiol Res Pract* 2019;2019:6419147. doi: <http://dx.doi.org/10.1155/2019/6419147>.
70. Sørensen SV, Kansal AR, Connolly S, et al. Cost-effectiveness of dabigatran etexilate for the prevention of stroke and systemic embolism in atrial fibrillation: A Canadian payer perspective. *Thromb Haemost* 2011;105(5):908-19. doi: <http://dx.doi.org/10.1160/TH11-02-0089>.
71. Spinthakis N, Gue Y, Farag M, et al. Apixaban enhances endogenous fibrinolysis in patients with atrial fibrillation. *Europace* 2019;21(9):1297-306. doi: <http://dx.doi.org/10.1093/europace/euz176>.
72. Sterne JA, Bodalia PN, Bryden PA, et al. Oral anticoagulants for primary prevention, treatment and secondary prevention of venous thromboembolic disease, and for prevention of stroke in atrial fibrillation: systematic review, network meta-analysis and cost-effectiveness analysis. *Health Technol Assess* 2017;21(9):1-386. doi: 10.3310/hta21090.
73. Su T, Fu Z, Nie Z, et al. Warfarin compared with non-vitamin K antagonist oral anticoagulants in subjects with liver disease and atrial fibrillation: A meta-analysis. *Int J Clin Pract* 2021;75(10):e14585. doi: <http://dx.doi.org/10.1111/ijcp.14585>.
74. Sucker C, Litmathe J, Berthold HK. [Oral anticoagulation in atrial fibrillation: differential therapy with non vitamin K antagonist oral anticoagulants (NOAC) and vitamin K antagonists (VKA)]. *MMW Fortschr Med* 2019;161(Supplement 6):15-23. doi: <http://dx.doi.org/10.1007/s15006-019-0920-y>.
75. Sulieman AK. Comparison of benefit between dabigatran and warfarin among patients with atrial fibrillation: A systematic review. *Arch Pharm Prac* 2016;7(2):33-42. doi: <http://dx.doi.org/10.4103/2045-080X.181039>.
76. Sun Z, Liu Y, Zhang Y, et al. Differences in safety and efficacy of oral anticoagulants in patients with non-valvular atrial fibrillation: A Bayesian analysis. *Int J Clin Pract* 2019;73(4):e13308. doi: <http://dx.doi.org/10.1111/ijcp.13308>.
77. Tamayo S, Frank Peacock W, Patel M, et al. Characterizing major bleeding in patients with nonvalvular atrial fibrillation: a pharmacovigilance study of 27 467 patients taking rivaroxaban. *Clin Cardiol* 2015;38(2):63-8. doi: 10.1002/clc.22373.
78. Tellor KB, Patel S, Armbruster AL, et al. Evaluation of the appropriateness of dosing, indication and safety of rivaroxaban in a community hospital. *J Clin Pharm Ther* 2015;40(4):447-51. doi: <http://dx.doi.org/10.1111/jcpt.12288>.
79. van Miert JHA, Kooistra HAM, Veeger NJGM, et al. Quality of life after switching from well-controlled vitamin K antagonist to direct oral anticoagulant: Little to GAIN. *Thromb Res* 2020;190:69-75. doi: <http://dx.doi.org/10.1016/j.thromres.2020.04.007>.

80. Verdecchia P, Angeli F, Lip GYH, et al. Edoxaban in the evolving scenario of non vitamin K antagonist oral anticoagulants imputed placebo analysis and multiple treatment comparisons. *PLoS ONE* 2014;9(6):e100478. doi: <http://dx.doi.org/10.1371/journal.pone.0100478>.
81. Vestergaard AS, Ehlers LH. A Health Economic Evaluation of Stroke Prevention in Atrial Fibrillation: Guideline Adherence Versus the Observed Treatment Strategy Prior to 2012 in Denmark. *PharmacoEconomics* 2015;33(9):967-79. doi: <http://dx.doi.org/10.1007/s40273-015-0281-z>.
82. Vinding NE, Bonde AN, Rorth R, et al. The importance of time in therapeutic range in switching from Vitamin K antagonist to non-Vitamin K antagonist oral anticoagulants in atrial fibrillation. *Europace* 2019;21(4):572-80. doi: <http://dx.doi.org/10.1093/europace/euy262>.
83. Vinding NE, Staerk L, Gislason GH, et al. Switching from vitamin K antagonist to dabigatran in atrial fibrillation: differences according to dose. *Eur Heart J Cardiovasc Pharmacother* 2021;7(1):20-30. doi: [10.1093/ehjcvp/pvz066](https://doi.org/10.1093/ehjcvp/pvz066).
84. Waranugraha Y, Rizal A, Syaban MFR, et al. Direct comparison of non-vitamin K antagonist oral anticoagulant versus warfarin for stroke prevention in non-valvular atrial fibrillation: a systematic review and meta-analysis of real-world evidences. *Egypt Heart J* 2021;73(1):70. doi: <http://dx.doi.org/10.1186/s43044-021-00194-1>.
85. Weitz JI, Semchuk W, Turpie AG, et al. Trends in Prescribing Oral Anticoagulants in Canada, 2008-2014. *Clin Ther* 2015;37(11):2506-14.e4. doi: [10.1016/j.clinthera.2015.09.008](https://doi.org/10.1016/j.clinthera.2015.09.008).
86. Wright JN, Vazquez SR, Kim K, et al. Assessing patient preferences for switching from warfarin to direct oral anticoagulants. *J Thromb Haemost* 2019;48(4):596-602. doi: <http://dx.doi.org/10.1007/s11239-019-01915-9>.
87. Wu T, Lv C, Wu L, et al. Risk of intracranial hemorrhage with direct oral anticoagulants: a systematic review and meta-analysis of randomized controlled trials. *J Neurol* 2022;269(2):664-75. doi: [10.1007/s00415-021-10448-2](https://doi.org/10.1007/s00415-021-10448-2).
88. Xue Z, Zhou Y, Wu C, et al. Non-vitamin K antagonist oral anticoagulants in Asian patients with atrial fibrillation: evidences from the real-world data. *Heart Fail Rev* 2020;25(6):957-64. doi: <http://dx.doi.org/10.1007/s10741-019-09878-y>.
89. Yang P, Zhu D, Xu X, et al. Efficacy and safety of oral anticoagulants in atrial fibrillation patients with cancer-a network meta-analysis. *Heart Fail Rev* 2020;25(5):823-31. doi: <http://dx.doi.org/10.1007/s10741-019-09844-8>.
90. Yao X, Gersh BJ, Sangaralingham LR, et al. Comparison of the CHA(2)DS(2)-VASc, CHADS(2), HAS-BLED, ORBIT, and ATRIA Risk Scores in Predicting Non-Vitamin K Antagonist Oral Anticoagulants-Associated Bleeding in Patients With Atrial Fibrillation. *Am J Cardiol* 2017;120(9):1549-56. doi: [10.1016/j.amjcard.2017.07.051](https://doi.org/10.1016/j.amjcard.2017.07.051).
91. Zellerhoff S, Lewalter T, Eckardt L, et al. [New anticoagulants in patients with non-valvular atrial fibrillation]. *Nervenheilkunde* 2012;31(11):813-20. doi: <https://dx.doi.org/10.1055/s-0038-1628226>.
92. Zeymer U, Bonnemeier H, Wanner C. [Anticoagulation in patients with non-valvular atrial fibrillation (nvAF) and chronic kidney disease (CKD)]. *Dtsch Med Wochenschr* 2019;144(23):1642-49. doi: [10.1055/a-1008-5548](https://doi.org/10.1055/a-1008-5548).

93. Zhang L, Yan X, Fox KAA, et al. Associations between model-predicted rivaroxaban exposure and patient characteristics and efficacy and safety outcomes in patients with non-valvular atrial fibrillation. *J Thromb Haemost* 2020;50(1):20-29. doi: <http://dx.doi.org/10.1007/s11239-020-02077-9>.
94. Zimny M, Blum S, Ammann P, et al. Uptake of non-vitamin K antagonist oral anti coagulants in patients with atrial fibrillation - a prospective cohort study. *Swiss Med Wkly* 2017;147:w14410. doi: 10.4414/smw.2017.14410.
95. Zolfaghari S, Harenberg J, Wehling M, et al. [Development of a questionnaire to identify patients' preference for a conventional or a direct oral anticoagulant]. *MMW Fortschr Med* 2014;156 Suppl 4:107-14. doi: 10.1007/s15006-014-3756-5.

9 Trial data not included in analyses (k = 123)

1. Aisenberg J, Chatterjee-Murphy P, Friedman Flack K, et al. Gastrointestinal Bleeding With Edoxaban Versus Warfarin: Results From the ENGAGE AF-TIMI 48 Trial (Effective Anticoagulation With Factor Xa Next Generation in Atrial Fibrillation-Thrombolysis In Myocardial Infarction). *Circ Cardiovasc Qual Outcomes* 2018;11(5):e003998. doi: <http://dx.doi.org/10.1161/CIRCOUTCOMES.117.003998>.
2. Al-Khatib SM, Thomas L, Wallentin L, et al. Outcomes of apixaban vs. warfarin by type and duration of atrial fibrillation: Results from the ARISTOTLE trial. *Eur Heart J* 2013;34(31):2464-71. doi: <http://dx.doi.org/10.1093/eurheartj/ehz135>.
3. Alak A, Hohnloser SH, Frassdorf M, et al. Reasons for hospitalization and risk of mortality in patients with atrial fibrillation treated with dabigatran or warfarin in the Randomized Evaluation of Long-term Anticoagulation Therapy (RE-LY) trial. *Europace* 2019;21(7):1023-30. doi: <http://dx.doi.org/10.1093/europace/euz021>.
4. Alexander JH, Lopes RD, Thomas L, et al. Apixaban vs. warfarin with concomitant aspirin in patients with atrial fibrillation: Insights from the ARISTOTLE trial. *Eur Heart J* 2014;35(4):224-32. doi: <http://dx.doi.org/10.1093/eurheartj/ehz445>.
5. Alexander KP, Brouwer MA, Mulder H, et al. Outcomes of apixaban versus warfarin in patients with atrial fibrillation and multi-morbidity: Insights from the ARISTOTLE trial. *Am Heart J* 2019;208:123-31. doi: <http://dx.doi.org/10.1016/j.ahj.2018.09.017>.
6. Anonymous. Erratum: Correction to: Efficacy and Safety of Rivaroxaban Compared With Warfarin Among Elderly Patients With Nonvalvular Atrial Fibrillation in the Rivaroxaban Once Daily, Oral, Direct Factor Xa Inhibition Compared With Vitamin K Antagonism for Prevention of Stroke and Embolism Trial in Atrial Fibrillation (ROCKET AF) (Circulation (2014) 130 2 (138-146)). *Circulation* 2018;138(25):e783. doi: <http://dx.doi.org/10.1161/CIR.0000000000000637>.
7. Anonymous. Erratum: Efficacy of apixaban when compared with warfarin in relation to renal function in patients with atrial fibrillation: Insights from the ARISTOTLE trial (Eur Heart J (2012) 33:22 (2821-2830) DOI: 10.1093/eurheartj/ehs274). *Eur Heart J* 2020;41(22):2069. doi: <https://dx.doi.org/10.1093/eurheartj/ehz749>.
8. Bahit MC, Lopes RD, Wojdyla DM, et al. Apixaban in patients with atrial fibrillation and prior coronary artery disease: Insights from the ARISTOTLE trial. *Int J Cardiol* 2013;170(2):215-20. doi: <http://dx.doi.org/10.1016/j.ijcard.2013.10.062>.
9. Bansilal S, Bloomgarden Z, Halperin JL, et al. Efficacy and safety of rivaroxaban in patients with diabetes and nonvalvular atrial fibrillation: the Rivaroxaban Once-daily, Oral, Direct Factor Xa Inhibition Compared with Vitamin K Antagonism for Prevention of Stroke and Embolism Trial in Atrial Fibrillation (ROCKET AF Trial). *Am Heart J* 2015;170(4):675-82.e8. doi: 10.1016/j.ahj.2015.07.006.
10. Berglund E, Wallentin L, Oldgren J, et al. Effects of apixaban compared with warfarin as gain in event-free time - a novel assessment of the results of the ARISTOTLE trial. *Eur J Prev Cardiol* 2020;27(12):1311-19. doi: 10.1177/2047487319886959.
11. Berglund E, Wallentin L, Oldgren J, et al. Effects of apixaban compared with warfarin as gain in event-free time - a novel assessment of the results of the ARISTOTLE trial. *Eur J Prev Cardiol* 2020;27(12):1311-19. doi: <http://dx.doi.org/10.1177/2047487319886959>.

12. Bohm M, Brueckmann M, Eikelboom JW, et al. Cardiovascular outcomes, bleeding risk, and achieved blood pressure in patients on long-term anticoagulation with the thrombin antagonist dabigatran or warfarin: Data from the RE-LY trial. *Eur Heart J* 2020;41(30):2848-59. doi: <http://dx.doi.org/10.1093/eurheartj/ehaa247>.
13. Bonaca MP, Antman EM, Cunningham JW, et al. Ischemic and bleeding risk in atrial fibrillation with and without peripheral artery disease and efficacy and safety of full and half-dose Edoxaban vs. Warfarin: insights from ENGAGE AF-TIMI 48. *Eur Heart J Cardiovasc Pharmacother* 2021 doi: <https://dx.doi.org/10.1093/ehjcvp/pvab089>.
14. Brambatti M, Darius H, Oldgren J, et al. Comparison of dabigatran versus warfarin in diabetic patients with atrial fibrillation: Results from the RE-LY trial. *Int J Cardiol* 2015;196:127-31. doi: <http://dx.doi.org/10.1016/j.ijcard.2015.05.141>.
15. Bytzer P, Connolly SJ, Yang S, et al. Analysis of upper gastrointestinal adverse events among patients given dabigatran in the RE-LY trial. *Clin Gastroenterol Hepatol* 2013;11(3):246. doi: <http://dx.doi.org/10.1016/j.cgh.2012.10.021>.
16. Carnicelli AP, Al-Khatib SM, Xavier D, et al. Premature permanent discontinuation of apixaban or warfarin in patients with atrial fibrillation. *Heart* 2021;107(9):713-20. doi: <http://dx.doi.org/10.1136/heartjnl-2020-317229>.
17. Carnicelli AP, Hellkamp AS, Mahaffey KW, et al. Termination based on event accrual in per protocol versus intention to treat in the rocket af trial. *J Am Heart Assoc* 2021;10(19):e022485. doi: <http://dx.doi.org/10.1161/JAHA.121.022485>.
18. Chao TF, Chen SA, Ruff CT, et al. Clinical outcomes, edoxaban concentration, and anti-factor Xa activity of Asian patients with atrial fibrillation compared with non-Asians in the ENGAGE AF-TIMI 48 trial. *Eur Heart J* 2019;40(19):1518-27. doi: <http://dx.doi.org/10.1093/eurheartj/ehy807>.
19. Chen ST, Hellkamp AS, Becker RC, et al. Efficacy and safety of rivaroxaban vs. Warfarin in patients with non-valvular atrial fibrillation and a history of cancer: Observations from ROCKET AF. *Eur Heart J Qual Care Clin Outcomes* 2019;5(2):145-52. doi: <http://dx.doi.org/10.1093/ehjqcco/qcy040>.
20. De Caterina R, Andersson U, Alexander JH, et al. History of bleeding and outcomes with apixaban versus warfarin in patients with atrial fibrillation in the Apixaban for Reduction in Stroke and Other Thromboembolic Events in Atrial Fibrillation trial. *Am Heart J* 2016;175:175-83. doi: <http://dx.doi.org/10.1016/j.ahj.2016.01.005>.
21. De Caterina R, Patti G, Westerbergh J, et al. Heterogeneity of diabetes as a risk factor for major adverse cardiovascular events in anticoagulated patients with atrial fibrillation: an analysis of the ARISTOTLE trial. *Eur Heart J Cardiovasc Pharmacother* 2020 doi: <https://dx.doi.org/10.1093/ehjcvp/pvaa140>.
22. de Groot JR, Ruff CT, Murphy SA, et al. Edoxaban versus warfarin in patients with atrial fibrillation in relation to the risk of stroke: A secondary analysis of the ENGAGE AF-TIMI 48 study. *Am Heart J* 2021;235:132-39. doi: <http://dx.doi.org/10.1016/j.ahj.2021.01.013>.
23. Di Pasquale G, Riva L. [Edoxaban in atrial fibrillation: The ENGAGE AF-TIMI 48 trial]. *G Ital Cardiol* 2014;15(12 Supplement 1):22S-26S.

24. Diener HC, Connolly SJ, Ezekowitz MD, et al. Dabigatran compared with warfarin in patients with atrial fibrillation and previous transient ischaemic attack or stroke: A subgroup analysis of the RE-LY trial. *Lancet Neurol* 2010;9(12):1157-63. doi: <http://dx.doi.org/10.1016/S1474-4422%2810%2970274-X>.
25. Eikelboom JW, Wallentin L, Connolly SJ, et al. Risk of bleeding with 2 doses of dabigatran compared with warfarin in older and younger patients with atrial fibrillation: An analysis of the randomized evaluation of long-term anticoagulant therapy (RE-LY) Trial. *Circulation* 2011;123(21):2363-72. doi: <http://dx.doi.org/10.1161/CIRCULATIONAHA.110.004747>.
26. Ezekowitz JA, Lewis BS, Lopes RD, et al. Clinical outcomes of patients with diabetes and atrial fibrillation treated with apixaban: Results from the Aristotle trial. *Eur Heart J Cardiovasc Pharmacother* 2015;1(2):86-94. doi: <http://dx.doi.org/10.1093/ehjcvp/pvu024>.
27. Ezekowitz MD, Connolly S, Parekh A, et al. Rationale and design of RE-LY: randomized evaluation of long-term anticoagulant therapy, warfarin, compared with dabigatran. *Am J Cardiol* 2009;157(5):805-10, 10.e1-2. doi: 10.1016/j.ahj.2009.02.005.
28. Fanola CL, Ruff CT, Murphy SA, et al. Efficacy and safety of edoxaban in patients with active malignancy and atrial fibrillation: Analysis of the engage AF-TIMI 48 trial. *J Am Heart Assoc* 2018;7(16):e008987. doi: <http://dx.doi.org/10.1161/JAHA.118.008987>.
29. Ferreira J, Ezekowitz MD, Connolly SJ, et al. Dabigatran compared with warfarin in patients with atrial fibrillation and symptomatic heart failure: A subgroup analysis of the RE-LY trial. *Eur J Heart Fail* 2013;15(9):1053-61. doi: <http://dx.doi.org/10.1093/eurjhf/hft111>.
30. Fordyce CB, Hellkamp AS, Lokhnygina Y, et al. On-Treatment Outcomes in Patients With Worsening Renal Function With Rivaroxaban Compared With Warfarin: Insights From ROCKET AF. *Circulation* 2016;134(1):37-47. doi: 10.1161/circulationaha.116.021890.
31. Garcia DA, Fisher DA, Mulder H, et al. Gastrointestinal bleeding in patients with atrial fibrillation treated with Apixaban or warfarin: Insights from the Apixaban for Reduction in Stroke and Other Thromboembolic Events in Atrial Fibrillation (ARISTOTLE) trial. *Am Heart J* 2020;221:1-8. doi: <http://dx.doi.org/10.1016/j.ahj.2019.10.013>.
32. Geller BJ, Giugliano RP, Braunwald E, et al. Systemic, noncerebral, arterial embolism in 21,105 patients with atrial fibrillation randomized to edoxaban or warfarin: Results from the Effective Anticoagulation with Factor Xa Next Generation in Atrial Fibrillation-Thrombolysis in Myocardial Infarction Study 48 trial. *Am Heart J* 2015;170(4):669-74. doi: <http://dx.doi.org/10.1016/j.ahj.2015.06.020>.
33. Gencer B, Eisen A, Berger D, et al. Edoxaban versus Warfarin in high-risk patients with atrial fibrillation: A comprehensive analysis of high-risk subgroups. *Am Heart J* 2022;247:24-32. doi: <https://dx.doi.org/10.1016/j.ahj.2021.12.017>.
34. Giugliano RP, Ruff CT, Wiviott SD, et al. Mortality in Patients with Atrial Fibrillation Randomized to Edoxaban or Warfarin: Insights from the ENGAGE AF-TIMI 48 Trial. *Am J Med* 2016;129(8):850-57.e2. doi: 10.1016/j.amjmed.2016.02.028.
35. Goodman SG, Wojdyla DM, Piccini JP, et al. Factors associated with major bleeding events: insights from the ROCKET AF trial (rivaroxaban once-daily oral direct factor Xa inhibition compared with

- vitamin K antagonism for prevention of stroke and embolism trial in atrial fibrillation). *J Am Coll Cardiol* 2014;63(9):891-900. doi: 10.1016/j.jacc.2013.11.013.
36. Goto S, Zhu J, Liu L, et al. Efficacy and safety of apixaban compared with warfarin for stroke prevention in patients with atrial fibrillation from East Asia: a subanalysis of the Apixaban for Reduction in Stroke and Other Thromboembolic Events in Atrial Fibrillation (ARISTOTLE) Trial. *Am Heart J* 2014;168(3):303-9. doi: 10.1016/j.ahj.2014.06.005.
 37. Granger CB, Lopes RD, Hanna M, et al. Clinical events after transitioning from apixaban versus warfarin to warfarin at the end of the Apixaban for Reduction in Stroke and Other Thromboembolic Events in Atrial Fibrillation (ARISTOTLE) trial. *American Heart Journal* 2015;169(1):25-30. doi: <http://dx.doi.org/10.1016/j.ahj.2014.09.006>.
 38. Guimaraes PO, Wojdyla DM, Alexander JH, et al. Anticoagulation therapy and clinical outcomes in patients with recently diagnosed atrial fibrillation: Insights from the ARISTOTLE trial. *Int J Cardiol* 2017;227:443-49. doi: <http://dx.doi.org/10.1016/j.ijcard.2016.11.014>.
 39. Halperin JL, Hankey GJ, Wojdyla DM, et al. Efficacy and safety of rivaroxaban compared with warfarin among elderly patients with nonvalvular atrial fibrillation in the Rivaroxaban Once Daily, Oral, Direct Factor Xa Inhibition Compared With Vitamin K Antagonism for Prevention of Stroke and Embolism Trial in Atrial Fibrillation (ROCKET AF). *Circulation* 2014;130(2):138-46. doi: 10.1161/circulationaha.113.005008.
 40. Halperin JL, Hankey GJ, Wojdyla DM, et al. Erratum: Correction to: Efficacy and Safety of Rivaroxaban Compared With Warfarin Among Elderly Patients With Nonvalvular Atrial Fibrillation in the Rivaroxaban Once Daily, Oral, Direct Factor Xa Inhibition Compared With Vitamin K Antagonism for Prevention of Stroke and Embolism Trial in Atrial Fibrillation (ROCKET AF) (*Circulation* (2014) 130 2 (138-146)). *Circulation* 2018;138(25):e783. doi: <http://dx.doi.org/10.1161/CIR.0000000000000637>.
 41. Halvorsen S, Atar D, Yang H, et al. Efficacy and safety of apixaban compared with warfarin according to age for stroke prevention in atrial fibrillation: Observations from the ARISTOTLE trial. *Eur Heart J* 2014;35(28):1864-72. doi: <http://dx.doi.org/10.1093/eurheartj/ehu046>.
 42. Hankey GJ, Patel MR, Stevens SR, et al. Rivaroxaban compared with warfarin in patients with atrial fibrillation and previous stroke or transient ischaemic attack: a subgroup analysis of ROCKET AF. *Lancet Neurol* 2012;11(4):315-22. doi: 10.1016/s1474-4422(12)70042-x.
 43. Hart RG, Diener HC, Yang S, et al. Intracranial hemorrhage in atrial fibrillation patients during anticoagulation with warfarin or dabigatran: The RE-LY trial. *Stroke* 2012;43(6):1511-17. doi: <http://dx.doi.org/10.1161/STROKEAHA.112.650614>.
 44. Healey JS, Eikelboom J, Douketis J, et al. Periprocedural bleeding and thromboembolic events with dabigatran compared with warfarin: Results from the randomized evaluation of long-term anticoagulation therapy (RE-LY) randomized trial. *Circulation* 2012;126(3):343-48. doi: <http://dx.doi.org/10.1161/CIRCULATIONAHA.111.090464>.
 45. Held C, Hylek EM, Alexander JH, et al. Clinical outcomes and management associated with major bleeding in patients with atrial fibrillation treated with apixaban or warfarin: Insights from the ARISTOTLE trial. *Eur Heart J* 2015;36(20):1264-72. doi: <http://dx.doi.org/10.1093/eurheartj/ehu463>.

46. Hijazi Z, Hohnloser SH, Oldgren J, et al. Efficacy and safety of dabigatran compared with warfarin in patients with atrial fibrillation in relation to renal function over time-A RE-LY trial analysis. *Am Heart J* 2018;198:169-77. doi: <http://dx.doi.org/10.1016/j.ahj.2017.10.015>.
47. Hohnloser SH, Hijazi Z, Thomas L, et al. Efficacy of apixaban when compared with warfarin in relation to renal function in patients with atrial fibrillation: Insights from the ARISTOTLE trial. *Eur Heart J* 2012;33(22):2821-30. doi: <https://dx.doi.org/10.1093/eurheartj/ehs274>.
48. Hohnloser SH, Oldgren J, Yang S, et al. Myocardial ischemic events in patients with atrial fibrillation treated with dabigatran or warfarin in the RE-LY (Randomized evaluation of long-term anticoagulation therapy) trial. *Circulation* 2012;125(5):669-76. doi: <http://dx.doi.org/10.1161/CIRCULATIONAHA.111.055970>.
49. Hori M, Connolly SJ, Ezekowitz MD, et al. Efficacy and safety of dabigatran vs. warfarin in patients with atrial fibrillation: Sub-analysis in Japanese population in RE-LY trial. *Circ J* 2011;75(4):800-05. doi: <http://dx.doi.org/10.1253/circj.CJ-11-0191>.
50. Hori M, Matsumoto M, Tanahashi N, et al. Safety and efficacy of adjusted dose of rivaroxaban in Japanese patients with non-valvular atrial fibrillation: subanalysis of J-ROCKET AF for patients with moderate renal impairment. *Circ J* 2013;77(3):632-8. doi: [10.1253/circj.cj-12-0899](http://dx.doi.org/10.1253/circj.cj-12-0899).
51. Hori M, Matsumoto M, Tanahashi N, et al. Predictive factors for bleeding during treatment with rivaroxaban and warfarin in Japanese patients with atrial fibrillation - Subgroup analysis of J-ROCKET AF. *J Cardiol* 2016;68(6):523-28. doi: <http://dx.doi.org/10.1016/j.jjcc.2015.12.003>.
52. Hori M, Matsumoto M, Tanahashi N, et al. Rivaroxaban vs. Warfarin in Japanese patients with non-valvular atrial fibrillation in relation to age - Insight from J-ROCKET AF. *Circ J* 2014;78(6):1349-56. doi: <http://dx.doi.org/10.1253/circj.CJ-13-1324>.
53. Hori M, Matsumoto M, Tanahashi N, et al. Rivaroxaban versus warfarin in japanese patients with nonvalvular atrial fibrillation in relation to the CHADS2 score: A subgroup analysis of the J-ROCKET AF trial. *J Stroke Cerebrovasc Dis* 2014;23(2):379-83. doi: <http://dx.doi.org/10.1016/j.jstrokecerebrovasdis.2013.07.021>.
54. Hu PT, Lopes RD, Stevens SR, et al. Efficacy and safety of apixaban compared with warfarin in patients with atrial fibrillation and peripheral artery disease: Insights from the ARISTOTLE trial. *J Am Heart Assoc* 2017;6(1):e004699. doi: <http://dx.doi.org/10.1161/JAHA.116.004699>.
55. Hylek EM, Held C, Alexander JH, et al. Major bleeding in patients with atrial fibrillation receiving apixaban or warfarin: The ARISTOTLE trial (Apixaban for reduction in stroke and other thromboembolic events in atrial fibrillation): Predictors, characteristics, and clinical outcomes. *J Am Coll Cardiol* 2014;63(20):2141-47. doi: <http://dx.doi.org/10.1016/j.jacc.2014.02.549>.
56. Jones WS, Hellkamp AS, Halperin J, et al. Efficacy and safety of rivaroxaban compared with warfarin in patients with peripheral artery disease and non-valvular atrial fibrillation: insights from ROCKET AF. *Eur Heart J* 2014;35(4):242-9. doi: [10.1093/eurheartj/ehs274](http://dx.doi.org/10.1093/eurheartj/ehs274).
57. Kato ET, Giugliano RP, Ruff CT, et al. Efficacy and Safety of Edoxaban in Elderly Patients With Atrial Fibrillation in the ENGAGE AF-TIMI 48 Trial. *J Am Heart Assoc* 2016;5(5):e003432. doi: <http://dx.doi.org/10.1161/JAHA.116.003432>.

58. Kochar A, Hellkamp AS, Lokhnygina Y, et al. Efficacy and safety of rivaroxaban compared with warfarin in patients with carotid artery disease and nonvalvular atrial fibrillation: Insights from the ROCKET AF trial. *Clin Cardiol* 2018;41(1):39-45. doi: <http://dx.doi.org/10.1002/clc.22846>.
59. Leef GC, Hellkamp AS, Patel MR, et al. Safety and Efficacy of Rivaroxaban in Patients With Cardiac Implantable Electronic Devices: Observations From the ROCKET AF Trial. *J Am Heart Assoc* 2017;6(6) doi: <http://dx.doi.org/10.1161/JAHA.116.004663>.
60. Lip GYH, Clemens A, Noack H, et al. Patient outcomes using the European label for dabigatran: A post-hoc analysis from the RE-LY database. *Thromb Haemost* 2014;111(5):933-42. doi: <http://dx.doi.org/10.1160/TH13-09-0734>.
61. Lopes RD, Al-Khatib SM, Wallentin L, et al. Efficacy and safety of apixaban compared with warfarin according to patient risk of stroke and of bleeding in atrial fibrillation: A secondary analysis of a randomised controlled trial. *Lancet* 2012;380(9855):1749-58. doi: <https://dx.doi.org/10.1016/S0140-6736%2812%2960986-6>.
62. Lopes RD, Al-Khatib SM, Wallentin L, et al. Erratum: Department of Error (Efficacy and safety of apixaban compared with warfarin according to patient risk of stroke and of bleeding in atrial fibrillation: a secondary analysis of a randomised controlled trial (2012) 380(9855) (1749-1758), (S0140673612609866), (10.1016/S0140-6736(12)60986-6)). *Lancet* 2013;381(9862):204. doi: <https://dx.doi.org/10.1016/S0140-6736%2813%2960093-8>.
63. Lopes RD, Alexander JH, Al-Khatib SM, et al. Apixaban for reduction in stroke and other ThromboemboLic events in atrial fibrillation (ARISTOTLE) trial: design and rationale. *Am Heart J* 2010;159(3):331-9. doi: [10.1016/j.ahj.2009.07.035](https://doi.org/10.1016/j.ahj.2009.07.035).
64. Lopes RD, Guimaraes PO, Kolls BJ, et al. Intracranial hemorrhage in patients with atrial fibrillation receiving anticoagulation therapy. *Blood* 2017;129(22):2980-87. doi: <http://dx.doi.org/10.1182/blood-2016-08-731638>.
65. Magnani G, Giugliano RP, Ruff CT, et al. Efficacy and safety of edoxaban compared with warfarin in patients with atrial fibrillation and heart failure: Insights from ENGAGE AF-TIMI 48. *Eur J Heart Fail* 2016 doi: <http://dx.doi.org/10.1002/ejhf.595>.
66. Mahaffey KW, Hellkamp AS, Patel MR, et al. End of study transition from study drug to open-label vitamin K antagonist therapy : the ROCKET AF experience. *Circ Cardiovasc Qual Outcomes* 2013;6(4):470-78. doi: <http://dx.doi.org/10.1161/CIRCOUTCOMES.113.000132>.
67. Mahaffey KW, Stevens SR, White HD, et al. Ischaemic cardiac outcomes in patients with atrial fibrillation treated with vitamin K antagonism or factor Xa inhibition: Results from the ROCKET AF trial. *Eur Heart J* 2014;35(4):233-41. doi: <http://dx.doi.org/10.1093/eurheartj/eh428>.
68. Matsumoto M, Hori M, Tanahashi N, et al. Rivaroxaban versus warfarin in Japanese patients with non-valvular atrial fibrillation in relation to hypertension: A subgroup analysis of the J-ROCKET AF trial. *Hypertens Res* 2014;37(5):457-62. doi: <http://dx.doi.org/10.1038/hr.2014.1>.
69. McMurray JJ, Ezekowitz JA, Lewis BS, et al. Left ventricular systolic dysfunction, heart failure, and the risk of stroke and systemic embolism in patients with atrial fibrillation: insights from the ARISTOTLE trial. *Circ Heart Fail* 2013;6(3):451-60. doi: [10.1161/circheartfailure.112.000143](https://doi.org/10.1161/circheartfailure.112.000143).

70. Melloni C, Dunning A, Granger CB, et al. Efficacy and Safety of Apixaban Versus Warfarin in Patients with Atrial Fibrillation and a History of Cancer: Insights from the ARISTOTLE Trial. *Am J Med* 2017;130(12):1440. doi: <http://dx.doi.org/10.1016/j.amjmed.2017.06.026>.
71. Nagarakanti R, Wallentin L, Noack H, et al. Comparison of characteristics and outcomes of Dabigatran versus Warfarin in hypertensive patients with atrial fibrillation (from the RE-LY Trial). *Am J Cardiol* 2015;116(8):1204-09. doi: <http://dx.doi.org/10.1016/j.amjcard.2015.07.032>.
72. Nelson SE, Giugliano RP, Antman EM, et al. Intracranial hemorrhage in patients with atrial fibrillation receiving anticoagulation with warfarin or edoxaban: An in-depth analysis from the ENGAGE AF-TIMI 48 randomized trial. *J Clin Neurosci* 2021;86:294-300. doi: <https://dx.doi.org/10.1016/j.jocn.2020.10.036>.
73. Nicolau AM, Corbalan R, Nicolau JC, et al. Efficacy and safety of edoxaban compared with warfarin according to the burden of diseases in patients with atrial fibrillation: Insights from the ENGAGE AF-TIMI 48 trial. *Eur Heart J Cardiovasc Pharmacother* 2020;6(3):167-75. doi: <http://dx.doi.org/10.1093/ehjcvp/pvz061>.
74. O'Donoghue ML, Ruff CT, Giugliano RP, et al. Edoxaban vs. Warfarin in Vitamin K antagonist experienced and naive patients with atrial fibrillation. *Eur Heart J* 2015;36(23):1470-77. doi: <http://dx.doi.org/10.1093/eurheartj/ehv014>.
75. Oldgren J, Alings M, Darius H, et al. Risks for stroke, bleeding, and death in patients with atrial fibrillation receiving dabigatran or warfarin in relation to the CHADS2 score: A subgroup analysis of the Re-Ly trial. *Ann Intern Med* 2011;155(10):660-67. doi: <http://dx.doi.org/10.7326/0003-4819-155-10-201111150-00004>.
76. Patel MR, Hellkamp AS, Lokhnygina Y, et al. Outcomes of discontinuing rivaroxaban compared with warfarin in patients with nonvalvular atrial fibrillation: analysis from the ROCKET AF trial (Rivaroxaban Once-Daily, Oral, Direct Factor Xa Inhibition Compared With Vitamin K Antagonism for Prevention of Stroke and Embolism Trial in Atrial Fibrillation). *J Am Coll Cardiol* 2013;61(6):651-8. doi: [10.1016/j.jacc.2012.09.057](http://dx.doi.org/10.1016/j.jacc.2012.09.057).
77. Piccini JP, Garg J, Patel MR, et al. Management of major bleeding events in patients treated with rivaroxaban vs. warfarin: Results from the ROCKET AF trial. *Eur Heart J* 2014;35(28):1873-80. doi: <http://dx.doi.org/10.1093/eurheartj/ehu083>.
78. Plitt A, Ruff CT, Goudev A, et al. Efficacy and safety of edoxaban in patients with diabetes mellitus in the ENGAGE AF-TIMI 48 trial. *Int J Cardiol* 2020;304:185-91. doi: <http://dx.doi.org/10.1016/j.ijcard.2020.01.009>.
79. Pokorney SD, Piccini JP, Stevens SR, et al. Cause of Death and Predictors of All-Cause Mortality in Anticoagulated Patients With Nonvalvular Atrial Fibrillation: Data From ROCKET AF. *J Am Heart Assoc* 2016;5(3):e002197. doi: [10.1161/JAHA.115.002197](http://dx.doi.org/10.1161/JAHA.115.002197).
80. Pokorney SD, Piccini JP, Stevens SR, et al. Cause of death and predictors of all-cause mortality in anticoagulated patients with nonvalvular atrial fibrillation: Data from ROCKET AF. *J Am Heart Assoc* 2015;5(3):e002197. doi: <http://dx.doi.org/10.1161/JAHA.115.002197>.

81. Proietti M, Hijazi Z, Andersson U, et al. Comparison of bleeding risk scores in patients with atrial fibrillation: insights from the RE-LY trial. *J Intern Med* 2018;283(3):282-92. doi: <http://dx.doi.org/10.1111/joim.12702>.
82. Qamar A, Antman EM, Ruff CT, et al. Edoxaban Versus Warfarin in Patients With Atrial Fibrillation and History of Liver Disease. *J Am Coll Cardiol* 2019;74(2):179-89. doi: <http://dx.doi.org/10.1016/j.jacc.2019.04.061>.
83. Quinn GR, Hellkamp AS, Hankey GJ, et al. Selective serotonin reuptake inhibitors and bleeding risk in anticoagulated patients with atrial fibrillation: An analysis from the ROCKET AF trial. *J Am Heart Assoc* 2018;7(15):e008755. doi: <http://dx.doi.org/10.1161/JAHA.118.008755>.
84. Rao MP, Halvorsen S, Wojdyla D, et al. Blood Pressure Control and Risk of Stroke or Systemic Embolism in Patients With Atrial Fibrillation: Results From the Apixaban for Reduction in Stroke and Other Thromboembolic Events in Atrial Fibrillation (ARISTOTLE) Trial. *J Am Heart Assoc* 2015;4(12) doi: 10.1161/jaha.115.002015.
85. Rao MP, Vinereanu D, Wojdyla DM, et al. Clinical Outcomes and History of Fall in Patients with Atrial Fibrillation Treated with Oral Anticoagulation: Insights From the ARISTOTLE Trial. *Am J Med* 2018;131(3):269. doi: <http://dx.doi.org/10.1016/j.amjmed.2017.10.036>.
86. Reinhardt SW, Desai NR, Tang Y, et al. Personalizing the decision of dabigatran versus warfarin in atrial fibrillation: A secondary analysis of the Randomized Evaluation of Long-term anticoagulation therapY (RE-LY) trial. *PLoS ONE* 2021;16(8 August):e0256338. doi: <https://dx.doi.org/10.1371/journal.pone.0256338>.
87. ROCKET AF Study Investigators. Rivaroxaban-Once daily, oral, direct factor Xa inhibition Compared with vitamin K antagonism for prevention of stroke and Embolism Trial in Atrial Fibrillation: Rationale and Design of the ROCKET AF study. *Am Heart J* 2010;159(3):340. doi: <http://dx.doi.org/10.1016/j.ahj.2009.11.025>.
88. Rost NS, Giugliano RP, Ruff CT, et al. Outcomes with Edoxaban Versus Warfarin in Patients with Previous Cerebrovascular Events: Findings from ENGAGE AF-TIMI 48 (Effective Anticoagulation with Factor Xa Next Generation in Atrial Fibrillation-Thrombolysis in Myocardial Infarction 48). *Stroke* 2016;47(8):2075-82. doi: <http://dx.doi.org/10.1161/STROKEAHA.116.013540>.
89. Ruff CT, Giugliano RP, Antman EM, et al. Evaluation of the novel factor Xa inhibitor edoxaban compared with warfarin in patients with atrial fibrillation: Design and rationale for the Effective aNticoagulation with factor xA next GEneration in Atrial Fibrillation- Thrombolysis in Myocardial Infarction study 48 (ENGAGE AF-TIMI 48). *Am Heart J* 2010;160(4):635. doi: <http://dx.doi.org/10.1016/j.ahj.2010.06.042>.
90. Ruff CT, Giugliano RP, Braunwald E, et al. Transition of patients from blinded study drug to open-label anticoagulation: The ENGAGE AF-TIMI 48 trial. *J Am Coll Cardiol* 2014;64(6):576-84. doi: <http://dx.doi.org/10.1016/j.jacc.2014.05.028>.
91. Ruff CT, Giugliano RP, Braunwald E, et al. Association between edoxaban dose, concentration, anti-Factor Xa activity, and outcomes: An analysis of data from the randomised, double-blind ENGAGE AF-TIMI 48 trial. *Lancet* 2015 doi: <http://dx.doi.org/10.1016/S0140-6736%2814%2961943-7>.

92. Sandhu RK, Ezekowitz JA, Hijazi Z, et al. Obesity paradox on outcome in atrial fibrillation maintained even considering the prognostic influence of biomarkers: Insights from the Aristotle trial. *Open Heart* 2018;5(2):e000908. doi: <http://dx.doi.org/10.1136/openhrt-2018-000908>.
93. Shah R, Hellkamp A, Lokhnygina Y, et al. Use of concomitant aspirin in patients with atrial fibrillation: Findings from the ROCKET AF trial. *Am Heart J* 2016;179:77-86. doi: [10.1016/j.ahj.2016.05.019](https://doi.org/10.1016/j.ahj.2016.05.019).
94. Sherwood MW, Douketis JD, Patel MR, et al. Outcomes of temporary interruption of rivaroxaban compared with warfarin in patients with nonvalvular atrial fibrillation: results from the rivaroxaban once daily, oral, direct factor Xa inhibition compared with vitamin K antagonism for prevention of stroke and embolism trial in atrial fibrillation (ROCKET AF). *Circulation* 2014;129(18):1850-9. doi: [10.1161/circulationaha.113.005754](https://doi.org/10.1161/circulationaha.113.005754).
95. Sherwood MW, Nessel CC, Hellkamp AS, et al. Gastrointestinal Bleeding in Patients with Atrial Fibrillation Treated with Rivaroxaban or Warfarin: ROCKET AF Trial. *J Am Coll Cardiol* 2015;66(21):2271-81. doi: <http://dx.doi.org/10.1016/j.jacc.2015.09.024>.
96. Shimada YJ, Yamashita T, Koretsune Y, et al. Effects of regional differences in asia on efficacy and safety of edoxaban compared with warfarin: Insights from the ENGAGE AF-TIMI 48 trial. *Circ J* 2015;79(12):2560-67. doi: <http://dx.doi.org/10.1253/circj.CJ-15-0574>.
97. Stanifer JW, Pokorney SD, Chertow GM, et al. Apixaban Versus Warfarin in Patients with Atrial Fibrillation and Advanced Chronic Kidney Disease. *Circulation* 2020:1384-92. doi: <http://dx.doi.org/10.1161/CIRCULATIONAHA.119.044059>.
98. Steffel J, Giugliano RP, Braunwald E, et al. Edoxaban vs. warfarin in patients with atrial fibrillation on amiodarone: A subgroup analysis of the ENGAGE AF-TIMI 48 trial. *Eur Heart J* 2015;36(33):2239-45. doi: <http://dx.doi.org/10.1093/eurheartj/ehv201>.
99. Steffel J, Giugliano RP, Braunwald E, et al. Correction: Edoxaban Versus Warfarin in Atrial Fibrillation Patients at Risk of Falling: ENGAGE AF-TIMI 48 Analysis (Journal of the American College of Cardiology (2016) 68(11) (1169-1178) (S0735109716344369)(10.1016/j.jacc.2016.06.034)). *J Am Coll Cardiol* 2017;70(4):512-13. doi: <http://dx.doi.org/10.1016/j.jacc.2017.06.021>.
100. Steffel J, Giugliano RP, Braunwald E, et al. Edoxaban Versus Warfarin in Atrial Fibrillation Patients at Risk of Falling: ENGAGE AF-TIMI 48 Analysis. *J Am Coll Cardiol* 2016;68(11):1169-78. doi: <http://dx.doi.org/10.1016/j.jacc.2016.06.034>.
101. Steinberg BA, Hellkamp AS, Lokhnygina Y, et al. Use and outcomes of antiarrhythmic therapy in patients with atrial fibrillation receiving oral anticoagulation: results from the ROCKET AF trial. *Heart Rhythm* 2014;11(6):925-32. doi: [10.1016/j.hrthm.2014.03.006](https://doi.org/10.1016/j.hrthm.2014.03.006).
102. Steinberg BA, Hellkamp AS, Lokhnygina Y, et al. Higher risk of death and stroke in patients with persistent vs. paroxysmal atrial fibrillation: results from the ROCKET-AF Trial. *Eur Heart J* 2015;36(5):288-96. doi: <http://dx.doi.org/10.1093/eurheartj/ehu359>.
103. Tanahashi N, Hori M, Matsumoto M, et al. Rivaroxaban versus warfarin in Japanese patients with nonvalvular atrial fibrillation for the secondary prevention of stroke: A subgroup analysis of J-ROCKET AF. *J Stroke Cerebrovasc Dis* 2013;22(8):1317-25. doi: <http://dx.doi.org/10.1016/j.jstrokecerebrovasdis.2012.12.010>.

104. Thom HHZ, Hollingworth W, Sofat R, et al. Directly Acting Oral Anticoagulants for the Prevention of Stroke in Atrial Fibrillation in England and Wales: Cost-Effectiveness Model and Value of Information Analysis. *MDM Policy Pract* 2019;4(2):2381468319866828. doi: 10.1177/2381468319866828.
105. Uchiyama S, Hori M, Matsumoto M, et al. Net clinical benefit of rivaroxaban versus warfarin in Japanese patients with nonvalvular atrial fibrillation: a subgroup analysis of J-ROCKET AF. *J Stroke Cerebrovasc Dis* 2014;23(5):1142-7. doi: 10.1016/j.jstrokecerebrovasdis.2013.10.001.
106. Van Diepen S, Hellkamp AS, Patel MR, et al. Efficacy and safety of rivaroxaban in patients with heart failure and nonvalvular atrial fibrillation insights from ROCKET AF. *Circ Heart Fail* 2013;6(4):740-47. doi: <http://dx.doi.org/10.1161/CIRCHEARTFAILURE.113.000212>.
107. Vemulapalli S, Hellkamp AS, Jones WS, et al. Blood pressure control and stroke or bleeding risk in anticoagulated patients with atrial fibrillation: Results from the ROCKET AF Trial. *Am Heart J* 2016;178:74-84. doi: <http://dx.doi.org/10.1016/j.ahj.2016.05.001>.
108. Verdecchia P, Reboldi G, Angeli F, et al. Dabigatran vs. warfarin in relation to the presence of left ventricular hypertrophy in patients with atrial fibrillation- the Randomized Evaluation of Long-term anticoagulation therapY (RE-LY) study. *Europace* 2018;20(2):253-62. doi: 10.1093/europace/eux022.
109. Vilain K, Li H, Kwong WJ, et al. Cardiovascular- And Bleeding-Related Hospitalization Rates with Edoxaban Versus Warfarin in Patients with Atrial Fibrillation Based on Results of the ENGAGE AF-TIMI 48 Trial. *Circ Cardiovasc Qual Outcomes* 2020:843-52. doi: <http://dx.doi.org/10.1161/CIRCOUTCOMES.120.006511>.
110. Vinereanu D, Stevens SR, Alexander JH, et al. Clinical outcomes in patients with atrial fibrillation according to sex during anticoagulation with apixaban or warfarin: a secondary analysis of a randomized controlled trial. *Eur Heart J* 2015;36(46):3268-75. doi: 10.1093/eurheartj/ehv447.
111. Wallentin L, Lopes RD, Hanna M, et al. Efficacy and safety of apixaban compared with warfarin at different levels of predicted international normalized ratio control for Stroke prevention in atrial fibrillation. *Circulation* 2013;127(22):2166-76. doi: <http://dx.doi.org/10.1161/CIRCULATIONAHA.112.142158>.
112. Wang K, Li H, Kwong WJ, et al. Impact of spontaneous extracranial bleeding events on health state utility in patients with atrial fibrillation: Results from the ENGAGE AF-TIMI 48 trial. *J Am Heart Assoc* 2017;6(8):e006703. doi: <http://dx.doi.org/10.1161/JAHA.117.006703>.
113. Washam JB, Hellkamp AS, Lokhnygina Y, et al. Efficacy and Safety of Rivaroxaban Versus Warfarin in Patients Taking Nondihydropyridine Calcium Channel Blockers for Atrial Fibrillation (from the ROCKET AF Trial). *Am J Cardiol* 2017;120(4):588-94. doi: <http://dx.doi.org/10.1016/j.amjcard.2017.05.026>.
114. Washam JB, Hohnloser SH, Lopes RD, et al. Interacting medication use and the treatment effects of apixaban versus warfarin: results from the ARISTOTLE Trial. *J Thromb Haemost* 2019;47(3):345-52. doi: <http://dx.doi.org/10.1007/s11239-019-01823-y>.
115. Washam JB, Stevens SR, Lokhnygina Y, et al. Digoxin use in patients with atrial fibrillation and adverse cardiovascular outcomes: a retrospective analysis of the Rivaroxaban Once Daily Oral Direct Factor Xa Inhibition Compared with Vitamin K Antagonism for Prevention of Stroke and

- Embolism Trial in Atrial Fibrillation (ROCKET AF). *Lancet* 2015;385(9985):2363-70. doi: 10.1016/s0140-6736(14)61836-5.
116. Westenbrink BD, Alings M, Connolly SJ, et al. Anemia predicts thromboembolic events, bleeding complications and mortality in patients with atrial fibrillation: Insights from the RE-LY trial. *J Thromb Haemost* 2015;13(5):699-707. doi: <http://dx.doi.org/10.1111/jth.12874>.
117. Wilkinson C, Wu J, Searle SD, et al. Clinical outcomes in patients with atrial fibrillation and frailty: insights from the ENGAGE AF-TIMI 48 trial. *BMC Med* 2020;18(1):401. doi: <https://dx.doi.org/10.1186/s12916-020-01870-w>.
118. Wong KS, Hu DY, Oomman A, et al. Rivaroxaban for stroke prevention in East Asian patients from the ROCKET AF trial. *Stroke* 2014;45(6):1739-47. doi: 10.1161/strokeaha.113.002968.
119. Yamashita T, Koretsune Y, Yang Y, et al. Edoxaban vs. Warfarin in east asian patients with atrial fibrillation - An ENGAGE AF-TIMI 48 subanalysis. *Circ J* 2016;80(4):860-69. doi: <http://dx.doi.org/10.1253/circj.CJ-15-1082>.
120. Yusuf S, Eikelboom J, Parekh A, et al. Dabigatran versus warfarin in patients with atrial fibrillation. *N Engl J Med* 2009;361(12):1139-51. doi: <http://dx.doi.org/10.1056/NEJMoa0905561>.
121. Zeitouni M, Giczewska A, Lopes RD, et al. Clinical and Pharmacological Effects of Apixaban Dose Adjustment in the ARISTOTLE Trial. *J Am Coll Cardiol* 2020;75(10):1145-55. doi: <http://dx.doi.org/10.1016/j.jacc.2019.12.060>.
122. Zelniker TA, Ardissino M, Andreotti F, et al. Comparison of the Efficacy and Safety Outcomes of Edoxaban in 8040 Women Versus 13 065 Men with Atrial Fibrillation in the ENGAGE AF-TIMI 48 Trial. *Circulation* 2021:673-84. doi: <http://dx.doi.org/10.1161/CIRCULATIONAHA.120.052216>.
123. Zelniker TA, Ruff CT, Wiviott SD, et al. Edoxaban in atrial fibrillation patients with established coronary artery disease: Insights from ENGAGE AF-TIMI 48. *Eur Heart J Acute Cardiovasc Care* 2019;8(2):176-85. doi: <http://dx.doi.org/10.1177/2048872618790561>.

10 Unable to extract (k = 29)

1. Agudo-Fernandez S, Castano Milla C, Gonzalez Blanco A, et al. RHEDAR study: Determination of the risk of gastrointestinal hemorrhage in treatment with dabigatran, acenocoumarol and rivaroxaban. *J Gastroenterol Hepatol (Aust)* 2021;36(10):2794-802. doi: <http://dx.doi.org/10.1111/jgh.15547>.
2. Angchaisuksiri P, Bassand JP, John Camm A, et al. Management and 1-year outcomes of patients with newly diagnosed atrial fibrillation and chronic kidney disease: Results from the prospective garfield-af registry. *J Am Heart Assoc* 2019;8(3):e010510. doi: <http://dx.doi.org/10.1161/JAHA.118.010510>.
3. Bai Y, Guo SD, Deng H, et al. Effectiveness and safety of oral anticoagulants in older patients with atrial fibrillation: A systematic review and meta-regression analysis. *Age Ageing* 2018;47(1):9-17. doi: <http://dx.doi.org/10.1093/ageing/afx103>.
4. Bassand JP, Virdone S, Badoz M, et al. Bleeding and related mortality with NOACs and VKAs in newly diagnosed atrial fibrillation: Results from the GARFIELD-AF registry. *Blood Adv* 2021;5(4):1081-91. doi: <https://dx.doi.org/10.1182/bloodadvances.2020003560>.
5. Calderon JM, Martinez F, Diaz J, et al. Real-World Data of Anticoagulant Treatment in Non-valvular Atrial Fibrillation. *Front Cardiovasc Med* 2021;8:733300. doi: 10.3389/fcvm.2021.733300.
6. Capodanno D, Capranzano P, Giacchi G, et al. Novel oral anticoagulants versus warfarin in non-valvular atrial fibrillation: A meta-analysis of 50,578 patients. *Int J Cardiol* 2013;167(4):1237-41. doi: <http://dx.doi.org/10.1016/j.ijcard.2012.03.148>.
7. Garg J, Chaudhary R, Krishnamoorthy P, et al. Safety and efficacy of oral factor-Xa inhibitors versus Vitamin K antagonist in patients with non-valvular atrial fibrillation: Meta-analysis of phase II and III randomized controlled trials. *Int J Cardiol* 2016;218:235-39. doi: <http://dx.doi.org/10.1016/j.ijcard.2016.05.059>.
8. Gomez-Outes A, Lagunar-Ruiz J, Terleira-Fernandez AI, et al. Causes of Death in Anticoagulated Patients With Atrial Fibrillation. *J Am Coll Cardiol* 2016;68(23):2508-21. doi: <http://dx.doi.org/10.1016/j.jacc.2016.09.944>.
9. Hicks T, Stewart F, Eisinga A. NOACs versus warfarin for stroke prevention in patients with AF: a systematic review and meta-analysis. *Open Heart* 2016;3(1):e000279. doi: 10.1136/openhrt-2015-000279.
10. Jia B, Lynn HS, Rong F, et al. Meta-analysis of efficacy and safety of the new anticoagulants versus warfarin in patients with atrial fibrillation. *J Cardiovasc Pharmacol* 2014;64(4):368-74. doi: <http://dx.doi.org/10.1097/FJC.000000000000129>.
11. Kumar S, Danik SB, Altman RK, et al. Non-Vitamin K Antagonist Oral Anticoagulants and Antiplatelet Therapy for Stroke Prevention in Patients With Atrial Fibrillation: A Meta-Analysis of Randomized Controlled Trials. *Cardiol Rev* 2016;24(5):218-23. doi: 10.1097/crd.000000000000088.
12. Moreno-Arribas J, Bertomeu-Gonzalez V, Anguita-Sanchez M, et al. Choice of New Oral Anticoagulant Agents Versus Vitamin K Antagonists in Atrial Fibrillation. *J Cardiovasc Pharmacol Ther* 2016;21(2):150-56. doi: <http://dx.doi.org/10.1177/1074248415596426>.
13. Ntaios G, Papavasileiou V, Diener HC, et al. Nonvitamin-K-antagonist oral anticoagulants versus warfarin in patients with atrial fibrillation and previous stroke or transient ischemic attack: An updated

- systematic review and meta-analysis of randomized controlled trials. *Int J Stroke* 2017;12(6):589-96. doi: <http://dx.doi.org/10.1177/1747493017700663>.
14. Pastori D, Antonucci E, Violi F, et al. Thrombocytopenia and Mortality Risk in Patients With Atrial Fibrillation: An Analysis From the START Registry. *J Am Heart Assoc* 2019;8(21):e012596. doi: 10.1161/jaha.119.012596.
 15. Pastori D, Lip GYH, Farcomeni A, et al. Incidence of bleeding in patients with atrial fibrillation and advanced liver fibrosis on treatment with vitamin K or non-vitamin K antagonist oral anticoagulants. *Int J Cardiol* 2018;264:58-63. doi: 10.1016/j.ijcard.2018.01.097.
 16. Raposeiras-Roubin S, Alonso Rodriguez D, Camacho Freire SJ, et al. Vitamin K Antagonists and Direct Oral Anticoagulants in Nonagenarian Patients With Atrial Fibrillation. *J Am Med Dir Assoc* 2020;21(3):367. doi: <http://dx.doi.org/10.1016/j.jamda.2019.08.033>.
 17. Reers S, Karanatsios G, Borowski M, et al. Frequency of atrial thrombus formation in patients with atrial fibrillation under treatment with non-vitamin K oral anticoagulants in comparison to vitamin K antagonists: A systematic review and meta-analysis. *Eur J Med Res* 2018;23(1):49. doi: <http://dx.doi.org/10.1186/s40001-018-0350-9>.
 18. Rohla M, Weiss TW, Pecen L, et al. Risk factors for thromboembolic and bleeding events in anticoagulated patients with atrial fibrillation: The prospective, multicentre observational PREvention of thromboembolic events - European Registry in Atrial Fibrillation (PREFER in AF). *BMJ Open* 2019;9(3):022478. doi: <http://dx.doi.org/10.1136/bmjopen-2018-022478>.
 19. Rong F, Jia B, Huang P, et al. Safety of the direct-acting anticoagulants in patients with atrial fibrillation: A meta-analysis. *Thromb Res* 2015;135(6):1117-23. doi: <http://dx.doi.org/10.1016/j.thromres.2015.04.004>.
 20. Ruff CT, Giugliano RP, Braunwald E, et al. Comparison of the efficacy and safety of new oral anticoagulants with warfarin in patients with atrial fibrillation: A meta-analysis of randomised trials. *Lancet* 2014;383(9921):955-62. doi: <https://dx.doi.org/10.1016/S0140-6736%2813%2962343-0>.
 21. Savarese G, Giugliano RP, Rosano GM, et al. Efficacy and Safety of Novel Oral Anticoagulants in Patients With Atrial Fibrillation and Heart Failure: A Meta-Analysis. *JACC Heart Fail* 2016;4(11):870-80. doi: 10.1016/j.jchf.2016.07.012.
 22. Seelig J, Hemels MEW, Xhaët O, et al. Impact of different anticoagulation management strategies on outcomes in atrial fibrillation: Dutch and Belgian results from the GARFIELD-AF registry. *J Thromb Haemost* 2020;18(12):3280-88. doi: 10.1111/jth.15081.
 23. Sennesael AL, Larock AS, Devalet B, et al. Preventability of serious thromboembolic and bleeding events related to the use of oral anticoagulants: a prospective study. *Br J Clin Pharmacol* 2018;84(7):1544-56. doi: 10.1111/bcp.13580.
 24. Senoo K, Lau YC, Dzeshka M, et al. Efficacy and safety of non-vitamin K antagonist oral anticoagulants vs. Warfarin in Japanese patients with atrial fibrillation - Meta-analysis. *Circ J* 2015;79(2):339-45. doi: <http://dx.doi.org/10.1253/circj.CJ-14-1042>.
 25. Suárez Fernández C, Castilla-Guerra L, Cantero Hinojosa J, et al. Satisfaction with oral anticoagulants in patients with atrial fibrillation. *Patient Prefer Adherence* 2018;12:267-74. doi: 10.2147/ppa.S152109.

26. Ten Cate V, Ten Cate H, Verheugt FW. The Global Anticoagulant Registry in the FIELD-Atrial Fibrillation (GARFIELD-AF) : Exploring the changes in anticoagulant practice in patients with non-valvular atrial fibrillation in the Netherlands. *Neth Heart J* 2016;24(10):574-80. doi: 10.1007/s12471-016-0874-y.
27. Tsivgoulis G, Lioutas VA, Varelas P, et al. Direct oral anticoagulant- vs vitamin K antagonist-related nontraumatic intracerebral hemorrhage. *Neurology* 2017;89(11):1142-51. doi: 10.1212/wnl.0000000000004362.
28. Wang KL, Buller HR, Goto S, et al. Extracranial arterial and venous thromboembolism in patients with atrial fibrillation: A meta-analysis of randomized controlled trials. *Heart Rhythm* 2017;14(4):599-605. doi: <http://dx.doi.org/10.1016/j.hrthm.2016.12.038>.
29. Wang KL, Lopes RD, Patel MR, et al. Efficacy and safety of reduced-dose non-vitamin K antagonist oral anticoagulants in patients with atrial fibrillation: a meta-analysis of randomized controlled trials. *Eur Heart J* 2019;40(19):1492-500. doi: 10.1093/eurheartj/ehy802.