Xarelto (rivaroxaban) 1mg/mL Granules for Suspension

Summary

Xarelto (Rivaroxaban) is a medication utilized to treat or prevent blood clots. It has been designed to lower the risk of heart attack, stroke, major thrombotic events and death in certain individuals. Additionally, Xarelto (rivaroxaban) has been shown to reduce the likelihood of decreased blood flow to the legs, amputation, and serious heart problems in some patients.

Xarelto (rivaroxaban) is available in two forms: tablets and granules for suspension. The tablets are taken orally, usually once daily with food. The granules for suspension are mixed with a liquid and taken orally. The recommended dose of Xarelto may vary based on the indication and the individual's characteristics, such as weight, renal function, and concomitant medications.

This policy pertains to Xarelto (Rivaroxaban) granules for suspension only, not the oral tablets.

Xarelto (Rivaroxaban) is indicated:

- to reduce the risk of stroke and systemic embolism in adult patients with nonvalvular atrial fibrillation (AF)
  There are limited data on the relative effectiveness of Xarelto (Rivaroxaban) and warfarin in reducing the risk of stroke and systemic embolism when warfarin therapy is well controlled.
- for the treatment of deep vein thrombosis (DVT)
- for the treatment of pulmonary embolism (PE)
- for the reduction in the risk of recurrence of DVT and/or PE in adult patients at continued risk for recurrent DVT and/or PE after completion of initial treatment lasting at least 6 months
- for the prophylaxis of DVT, which may lead to PE in adult patients undergoing knee or hip replacement surgery
- for the prophylaxis of venous thromboembolism (VTE) and VTE-related death in acutely ill medical patients
- to reduce the risk of major cardiovascular events (cardiovascular death, myocardial infarction, and stroke) in adult patients with coronary artery disease (CAD), in combination with aspirin
- to reduce the risk of major thrombotic vascular events (myocardial infarction, ischemic stroke, acute limb ischemia, and major amputation of a vascular etiology) in patients with peripheral artery disease (PAD), including patients after recent lower extremity revascularization due to symptomatic PAD, in combination with aspirin.
- for the treatment of VTE and reduction in the risk of recurrent VTE in pediatric patients from birth to less than 18 years
- for thromboprophylaxis in pediatric patients aged 2 years and older with congenital heart after the Fontan procedure

Definitions

"Congenital heart disease" refers to a range of conditions that are present at birth and affect the structure and function of the heart. Congenital heart disease can range from minor abnormalities to serious conditions that require ongoing medical care.

"Coronary artery disease (CAD)" is a condition in which the blood vessels that supply blood to the heart become narrow or blocked, reducing the flow of oxygen and nutrients to the heart. CAD can lead to chest pain (angina), heart attack, and other serious health problems.

"Deep vein thrombosis (DVT)" is a condition in which a blood clot forms in one of the deep veins, usually in the legs. DVT can cause swelling, pain, and redness in the affected leg, and can lead to serious complications if the clot travels to the lungs (pulmonary embolism).

"Fontan procedure" is a surgical treatment for certain types of congenital heart disease. It is used to redirect the flow of blood from the right side of the heart to the lungs, bypassing the heart's right ventricle and reducing the workload on the heart.

"Nonvalvular atrial fibrillation (AF)" is a type of irregular heartbeat in which the two upper chambers of the heart (the atria) beat in a fast and irregular manner. This can increase the risk of blood clots and stroke.

"Parenteral" refers to the administration of a medication or other substance into the body through a route other than the digestive tract, such as injection or infusion.

"Prophylaxis" refers to the use of measures to prevent the development of a disease or condition. In the context of medication, prophylaxis refers to the use of a drug to prevent the occurrence of a disease or condition.

"Pulmonary embolism (PE)" is a condition in which a blood clot travels to the lungs and blocks one or more blood vessels, causing chest pain, shortness of breath, and other symptoms. PE can be life-threatening if left untreated.

"Recurrent" refers to the occurrence of a disease, condition, or event more than once.

"[s]" indicates state mandates may apply.

A "Stroke" is a medical condition in which the blood supply to the brain is interrupted, causing brain cells to die. Strokes can have a range of effects, including weakness or paralysis on one side of the body, difficulty speaking or understanding speech, and vision loss.

"Systemic embolism" refers to the obstruction of a blood vessel by an embolus, a clot or other material that has broken off from another part of the body and traveled through the bloodstream. Systemic emboli can cause serious health problems, including heart attack, stroke, and organ damage.

"Venous thromboembolism (VTE)" is a term used to describe a condition in which a blood clot forms in a vein and causes a blockage. VTE includes deep vein thrombosis (DVT) and pulmonary embolism (PE).

Medical Necessity Criteria for Clinical Review

General Medical Necessity Criteria

The Plan considers Xarelto (Rivaroxaban) granules for suspension medically necessary when ONE (1) of the following criteria are met:

1. The member is 18 years of age or older and has an inability to swallow;*OR*

2. The member is a pediatric patient <18 years of age and Xarelto (Rivaroxaban) is being prescribed for ANY of the following:
    a. Thromboprophylaxis in members with congenital heart disease following the Fontan procedure*; or*
    b. Reduce risk of recurrent venous thromboembolism (VTE) after ≥5 days of initial treatment with a parenteral anticoagulant*; or*
    c. Treatment of venous thromboembolism (VTE) after ≥5 days of initial treatment with a parenteral anticoagulant.

<u>If the above prior authorization criteria are met, Xarelto (Rivaroxaban) will be authorized for the following time frame based on its intended use:</u>[s]

- <u>60-days</u> for:
    - superficial vein thrombosis (acute symptomatic)*; or*
    - venous thromboembolism prophylaxis in acutely ill medical patients, nonmajor orthopedic surgery of the lower limb, or total hip or knee arthroplasty*; or*
- <u>6-months</u> for heparin-induced thrombocytopenia (treatment)*; or*
- <u>12-months</u> for all other indications.

Experimental or Investigational / Not Medically Necessary[s]

Xarelto (Rivaroxaban) for any other indication or use is considered not medically necessary by the Plan, as it is deemed to be experimental, investigational, or unproven.

References

1. Abdelnabi M, Saleh Y, Fareed A, et al. Comparative Study of Oral Anticoagulation in Left Ventricular Thrombi (No-LVT Trial). J Am Coll Cardiol. 2021 Mar 30;77(12):1590-1592. doi: 10.1016/j.jacc.2021.01.049.
2. Alikhan R, Gomez K, Maraveyas A, et al. Cancer-associated venous thromboembolism in adults (Second edition): A British society for haematology guideline. Br J Haemetol. 2024 Jul;205(1):71-87. doi: 10.1111/bjh.19414. Epub 2024 Apr 25.
3. American College of Obstetricians and Gynecologists. ACOG Practice Bulletin No. 196: Thromboembolism in pregnancy. Obstet Gynecol. 2018;132(1):e1-e17. doi:10.1097/AOG.0000000000002706.
4. Anderson DR, Dunbar M, Murnaghan J, et al. Aspirin or rivaroxaban for VTE prophylaxis after hip or knee arthroplasty. N Engl J Med. 2018;378(8):699-707. doi:10.1056/NEJMoa1712746.
5. Barnes GD, Burnett A, Allen A, et al. Thromboembolic prevention and anticoagulant therapy during the COVID-19 pandemic: updated clinical guidance from the anticoagulation forum. J Thromb Thrombolysis. 2022 Aug;54(2):197-210. Doi: 10.1007/s11239-022-02643-3. Epub 2022 May 17.
6. Bates SM, Rajasekhar A, Middeldorp S, et al. American Society of Hematology 2018 guidelines for management of venous thromboembolism: venous thromboembolism in the context of pregnancy. Blood Adv. 2018 Nov 27;2(22):3317-3359. doi: 10.1182/bloodadvances.2018024802.
7. Beyer-Westendorf J, Schellong SM, Gerlach H, et al; SURPRISE investigators. Prevention of thromboembolic complications in patients with superficial-vein thrombosis given rivaroxaban or

fondaparinux: the open-label, randomised, non-inferiority SURPRISE phase 3b trial. Lancet Haematol. 2017;4(3):e105-e113. doi: 10.1016/S2352-3026(17)30014-5.
8. Bonaca MP, Bauersachs RM, Anand SS, et al. Rivaroxaban in peripheral artery disease after revascularization. N Engl J Med. 2020;382(21):1994-2004. doi:10.1056/NEJMoa2000052.
9. By the 2023 American Geriatrics Society Beers Criteria Update Expert Panel. American geriatrics society 2023 updated AGS Beers criteria for potentially inappropriate medication use in older adults. J Am Geriatr Soc. 2023 Jul;71(7):2052-2081. doi:10.1111/jgs.18372. Epub 2023 May 4.
10. Cohen AT, Spiro TE, Büller HR, et al. Rivaroxaban for thromboprophylaxis in acutely ill medical patients. N Engl J Med. 2013 Feb 7;368(6):513-23. doi: 10.1056/NEJMoa1111096.
11. Crowther M. Management of heparin-induced thrombocytopenia. Post TW, ed. UpToDate. Waltham, MA: UpToDate Inc. http://www.uptodate.com.
12. Crowther MA, Cuker A. Reduced-intensity rivaroxaban for the prevention of recurrent venous thromboembolism. N Engl J Med. 2017;376(13):1279-1280. doi:10.1056/NEJMe1701628.
13. Cuker A, Arepally GM, Chong BH, et al. American Society of Hematology 2018 guidelines for management of venous thromboembolism: heparin-induced thrombocytopenia. Blood Adv. 2018;2(22):3360-3392. doi:10.1182/bloodadvances.2018024489.
14. Dager WE, Gulseth MP, Nutescu EA, eds. Anticoagulation Therapy: A Clinical Practice Guide. 2nd ed. Bethesda, MD: American Society of Health-System Pharmacists; 2018.
15. Davis KA, Davis DO. Direct acting oral anticoagulants for the treatment of suspected heparin-induced thrombocytopenia. Eur J Haematol. 2017;99(4):332-335. doi:10.1111/ejh.12921.
16. Doherty JU, Gluckman TJ, Hucker WJ, et al. 2017 ACC expert consensus decision pathway for periprocedural management of anticoagulation in patients with nonvalvular atrial fibrillation: a report of the American College of Cardiology Clinical Expert Consensus Document Task Force. J Am Coll Cardiol. 2017;69(7):871-898. doi:10.1016/j.jacc.2016.11.024.
17. Douketis JD, Mithoowani S. Prevention of venous thromboembolic disease in acutely ill hospitalized medical adults. Post TW, ed. UpToDate. Waltham, MA: UpToDate Inc. http://www.uptodate.com.
18. Douketis JD, Mithoowani S. Prevention of venous thromboembolism (VTE) in adults undergoing non-major extremity orthopedic surgery. Post TW, ed. UpToDate. Waltham, MA: UpToDate Inc. http://www.uptodate.com.
19. Douketis JD, Spyropoulos AC, Murad MH, et al. Perioperative management of antithrombotic therapy: an American College of Chest Physicians clinical practice guideline. Chest. 2022c;162(5):e207-e243. doi:10.1016/j.chest.2022.07.025.
20. Eikelboom JW, Connolly SJ, Bosch J, et al; COMPASS Investigators. Rivaroxaban with or without aspirin in stable cardiovascular disease. N Engl J Med. 2017;377(14):1319-1330. doi:10.1056/NEJMoa1709118.
21. European Association for the Study of the Liver. EASL clinical practice guidelines on prevention and management of bleeding and thrombosis in patients with cirrhosis. J Hepatol. 2022 May; 76(5):1151-1184. doi:10.1016/j.jhep.2021.09.003. Epub 2022 Mar 15.
22. Falanga A, Ay C, Di Nisio M, et al. Venous thromboembolism in cancer patients: ESMO clinical practice guideline. Ann Oncol. 2023 May;34(5):452-467. doi:10.1016/j.annonc.2022.12.014. Epub 2023 Jan 10.
23. Falanga A, Leader A, Ambaglio C, et al. EHA guideline on management of antithrombotic treatments in thrombocytopenic patients with cancer. Hemasphere. 2022 Jul 13;6(8):e750. doi:10.1097/HS9.0000000000000750. eCollection 2022 Aug.
24. Hess CN, Bonaca MP. Contemporary Review of Antithrombotic Therapy in Peripheral Artery Disease. Circ Cardiovasc Interv. 2020 Oct;13(10):e009584. doi: 10.1161/CIRCINTERVENTIONS.120.009584. Epub 2020 Oct 7.
25. Hull RD. Venous thromboembolism: anticoagulation after initial management. Post TW, ed. UpToDate. Waltham, MA: UpToDate Inc. http://www.uptodate.com.
26. Iqbal H, Straw S, Craven TP, Stirling K, Wheatcroft SB, Witte KK. Direct oral anticoagulants compared to vitamin K antagonist for the management of left ventricular thrombus. ESC Heart Fail. 2020 Oct;7(5):2032-2041. doi: 10.1002/ehf2.12718. Epub 2020 Jun 25.

27. Joglar JA, Chung MK, Armbruster AL, et al. 2023 ACC/AHA/ACCP/HRS guideline for the diagnosis and management of atrial fibrillation: a report of the American college of cardiology/American heart association joint committee on clinical practice guidelines. J Am Coll Cardiol. 2024 Jan 2; 83(1):109-279. doi:10.1016/j.jacc.2023.08.017. Epub 2023 Nov 30.
28. Kearon C, Akl EA, Ornelas J, et al. Antithrombotic Therapy for VTE Disease: CHEST Guideline and Expert Panel Report. Chest. 2016 Feb;149(2):315-352. doi: 10.1016/j.chest.2015.11.026. Epub 2016 Jan 7. Erratum in: Chest. 2016 Oct;150(4):988. doi: 10.1016/j.chest.2016.08.1442.
29. Key NS, Khorana AA, Kuderer NM, et al. Venous thromboembolism prophylaxis and treatment in patients with cancer: ASCO clinical practice guideline update. J Clin Oncol. 2020;38(5):496-520. doi:10.1200/JCO.19.01461.
30. Key NS, Khorana AA, Kuderer NM, et al. Venous thromboembolism prophylaxis and treatment in patients with cancer: ASCO guideline update. J Clin Oncol. 2023 Jun 1;41(16):3063-3071. doi:10.1200/JCO.23.00294. Epub Apr 19.
31. Kumbhani DJ, Cannon CP, Beavers CJ, et al. 2020 ACC expert consensus decision pathway for anticoagulant and antiplatelet therapy in patients with atrial fibrillation or venous thromboembolism undergoing percutaneous coronary intervention or with atherosclerotic cardiovascular disease: a report of the American College of Cardiology Solution Set Oversight Committee. J Am Coll Cardiol. 2021;77(5):629-658. doi:10.1016/j.jacc.2020.09.011.
32. Kunk PR, Brown J, McShane M, Palkimas S, Gail Macik B. Direct oral anticoagulants in hypercoagulable states. J Thromb Thrombolysis. 2017 Jan;43(1):79-85. doi: 10.1007/s11239-016-1420-x.
33. Lawton JS, Tamis-Holland JE, Bangalore S, et al. 2021 ACC/AHA/SCAI Guideline for Coronary Artery Revascularization: A Report of the American College of Cardiology/American Heart Association Joint Committee on Clinical Practice Guidelines. J Am Coll Cardiol. 2022 Jan 18;79(2):e21-e129. doi: 10.1016/j.jacc.2021.09.006. Epub 2021 Dec 9. Erratum in: J Am Coll Cardiol. 2022 Apr 19;79(15):1547. doi: 10.1016/j.jacc.2022.03.330. Erratum in: J Am Coll Cardiol. 2024 Aug 20;84(8):771. doi: 10.1016/j.jacc.2024.07.010.
34. Leung LLK. Direct oral anticoagulants and parenteral direct thrombin inhibitors: Dosing and adverse effects. Post TW, ed. UpToDate. Waltham, MA: UpToDate Inc. http://www.uptodate.com.
35. Levine GN, McEvoy JW, Fang JC, et al. Management of Patients at Risk for and With Left Ventricular Thrombus: A Scientific Statement From the American Heart Association. Circulation. 2022 Oct 11;146(15):e205-e223. doi: 10.1161/CIR.0000000000001092. Epub 2022 Sep 15.
36. Linkins LA, Warkentin TE, Pai M, et al. Rivaroxaban for treatment of suspected or confirmed heparin-induced thrombocytopenia study. J Thromb Haemost. 2016 Jun;14(6):1206-10. doi: 10.1111/jth.13330. Epub 2016 May 10.
37. Lip GYH. Acute coronary syndrome: Anticoagulation in medically treated patients. Post TW, ed. UpToDate. Waltham, MA: UpToDate Inc. http://www.uptodate.com.
38. Lip GYH, Banerjee A, Boriani G, et al. Antithrombotic therapy for atrial fibrillation: CHEST guideline and expert panel report. CHEST. 2018 Nov; 154(5):1121-1201. doi:10.1016/j.chest.2018.07.040. Epub 2018 Aug 22.
39. Lyman GH, Carrier M, Ay C, et al. American society of hematology 2021 guidelines for management of venous thromboembolism: prevention and treatment in patients with cancer. Blood Adv. 2021 Apr 13;5(7):1953. doi:10.1182/bloodadvances.2021004734.
40. Male C, Lensing AWA, Palumbo JS, et al. Rivaroxaban compared with standard anticoagulants for the treatment of acute venous thromboembolism in children: a randomised, controlled, phase 3 trial. Lancet Haematol. 2020;7(1):e18-e27.
41. Mega JL, Braunwald E, Wiviott SD, et al; ATLAS ACS 2–TIMI 51 Investigators. Rivaroxaban in patients with a recent acute coronary syndrome. N Engl J Med. 2012;366(1):9-19. doi:10.1056/NEJMoa1112277.
42. Middeldorp S, Nieuwlaat R, Kreuziger LB, et al. American society of hematology 2023 guidelines for management of venous thromboembolism: thrombophilia testing. Blood Adv. 2023 Nov 28;7(22):7101-7138. doi:10.1182/bloodadvances.2023010177.

43. Moores LK, Tritschler T, Brosnahan S, et al. Thromboprophylaxis in patients with COVID-19: a brief update to the CHEST guideline and expert panel report. Chest. 2022 Jul;162(1):213-225. doi:10.1016/j.chest.2022.02.006. Epub 2022 Feb 12.
44. Ntaios G, Swaminathan B, Berkowitz SD, et al. Efficacy and safety of rivaroxaban versus aspirin in embolic stroke of undetermined source and carotid atherosclerosis. Stroke. 2019 Sep;50(9):2477-2485. doi:10.1161/STROKEAHA.119.025168. Epub 2019 Aug 12.
45. Otto CM, Nishimura RA, Bonow RO, et al. 2020 ACC/AHA guideline for the management of patients with valvular heart disease: a report of the American College of Cardiology/American Heart Association Joint Committee on Clinical Practice Guidelines. Circulation. 2021;143(5):e72-e227. doi:10.1161/CIR.0000000000000923.
46. Palumbo JS, Lensing AWA, Brandão LR, et al. Anticoagulation in pediatric cancer-associated venous thromboembolism: a subgroup analysis of EINSTEIN-Jr. Blood Adv. 2022 Nov 22;6(22):5821-5828. doi: 10.1182/bloodadvances.2022008160.
47. Patel SV, Liberman SA, Burgess PL. The American society of colon and rectal surgeons clinical practice guidelines for the reduction of venous thromboembolism disease in colorectal surgery. Dis Colon Rectum. 2023 Sep 1;66(9):1162-1173. doi:10.1097/DCR.0000000000002975. Epub 2023 Jun 12.
48. Piedra K, Peterson T, Tan C, et al. Comparison of venous thromboembolism incidence in newly diagnosed multiple myeloma patients receiving bortezomib, lenalidomide, dexamethasone (RVD) or carfilzomib, lenalidomide, dexamethasone (KRD) with aspirin or rivaroxaban thromboprophylaxis. Br J Haematol. 2022 Jan;196(1):105-109. doi: 10.1111/bjh.17772. Epub 2021 Aug 15.
49. Powers WJ, Rabinstein AA, Ackerson T, et al; American Heart Association Stroke Council. 2018 Guidelines for the Early Management of Patients With Acute Ischemic Stroke: A Guideline for Healthcare Professionals From the American Heart Association/American Stroke Association. Stroke. 2018;49(3):46-110. doi:10.1161/STR.0000000000000158.
50. Rao SV, O'Donoghue ML, Ruel M, et al. 2025 ACC/AHA/ACEP/NAEMSP/SCAI Guideline for the Management of Patients With Acute Coronary Syndromes: A Report of the American College of Cardiology/American Heart Association Joint Committee on Clinical Practice Guidelines. Circulation. 2025 Apr;151(13):e771-e862. doi: 10.1161/CIR.0000000000001309. Epub 2025 Feb 27. Erratum in: Circulation. 2025 Apr;151(13):e865. doi: 10.1161/CIR.0000000000001328. Erratum in: Circulation. 2025 Jun 24;151(25):e1098. doi: 10.1161/CIR.0000000000001346. Erratum in: Circulation. 2025 Nov 11;152(19):e402. doi: 10.1161/CIR.0000000000001397.
51. Regitz-Zagrosek V, Roos-Hesselink JW, Bauersachs J, et al. 2018 ESC Guidelines for the management of cardiovascular diseases during pregnancy. Eur Heart J. 2018 Sep 7;39(34):3165-3241. doi: 10.1093/eurheartj/ehy340.
52. Rosovsky RP, Kline-Rogers E, Lake L, et al. Direct oral anticoagulants in obese patients with venous thromboembolism: results of an expert consensus panel. Am J Med. 2023;136(6):523-533. doi:10.1016/j.amjmed.2023.01.010[PubMed 36803697]
53. Samama CM, Afshari A, Grønlykke L, Madsen MH, Wiberg S, Romero CS. European guidelines on peri-operative venous thromboembolism prophylaxis: first update. Eur J Anaesthesiol. 2024 Aug 1;41(8):561-569. doi:10.1097/EJA.0000000000002025. Epub 2024 Jul 10.
54. Samama CM, Laporte S, Rosencher N, et al; PRONOMOS Investigators. Rivaroxaban or enoxaparin in nonmajor orthopedic surgery. N Engl J Med. 2020;382(20):1916-1925. doi:10.1056/NEJMoa1913808.
55. Schutgens REG, Jimenez-Yuste V, Escobar M, et al. Antithrombotic treatment in patients with hemophilia: an EHA-ISTH-EAHAD-ESO clinical practice guideline. Hemasphere. 2023 Jun 5;7(6):e900. doi:10.1097/HS9.0000000000000900. eCollection 2023 Jun.
56. Sharifi M, Bay C, Vajo Z, Freeman W, Sharifi M, Schwartz F. New oral anticoagulants in the treatment of heparin-induced thrombocytopenia. Thromb Res. 2015;135(4):607-9. doi:10.1016/j.thromres.2015.01.009.

57. Shatzel JJ, Crapster-Pregont M, Deloughery TG. Non-vitamin K antagonist oral anticoagulants for heparin-induced thrombocytopenia. A systematic review of 54 reported cases. Thromb Haemost. 2016;116(2):397-400. doi:10.1160/TH16-02-0101.
58. Shokr M, Ahmed A, Abubakar H, et al. Use of direct oral anticoagulants in the treatment of left ventricular thrombi: A tertiary center experience and review of the literature. Clin Case Rep. 2018 Nov 22;7(1):135-142. doi: 10.1002/ccr3.1917.
59. Siegal DM, Tseng EK, Schunemann HJ, et al. ASH living guidelines on use of anticoagulation for thromboprophylaxis in patients with COVID-19: executive summary. Blood Adv 2024 Oct 22; bloodadvances.2024014219. doi:10.1182/bloodadvances.2024014219. Online ahead of print.
60. Spyropoulos AC, Ageno W, Albers GW, et al; MARINER Investigators. Rivaroxaban for thromboprophylaxis after hospitalization for medical illness. N Engl J Med. 2018;379(12):1118-1127. doi:10.1056/NEJMoa1805090.
61. Steinmetz S, Shor A, Jakubovics M. Systematic Literature Review of DOACs as Treatment for Confirmed or Suspected Heparin-Induced Thrombocytopenia (HIT). Ann Pharmacother. 2025 Nov;59(11):1015-1030. doi: 10.1177/10600280251322549. Epub 2025 May 24.
62. Stevens SM, Woller SC, Kreuziger LB, et al. Antithrombotic therapy for VTE disease: second update of the CHEST guideline and expert panel report. Chest. 2021;160(6):e545-e608. doi:10.1016/j.chest.2021.07.055.
63. Thompson A, Fleischmann KE, Smilowitz NR, et al. 2024 AHA/ACC/ACS/ASNC/HRS/SCA/SCCT/SCMR/SVM Guideline for Perioperative Cardiovascular Management for Noncardiac Surgery: A Report of the American College of Cardiology/American Heart Association Joint Committee on Clinical Practice Guidelines. Circulation. 2024 Nov 5;150(19):e351-e442. doi: 10.1161/CIR.0000000000001285. Epub 2024 Sep 24. Erratum in: Circulation. 2024 Nov 19;150(21):e466. doi: 10.1161/CIR.0000000000001298.
64. Tran PN, Tran MH. Emerging role of direct oral anticoagulants in the management of heparin-induced thrombocytopenia. Clin Appl Thromb Hemost. 2018;24(2):201-209. doi:10.1177/1076029617696582.
65. Warkentin TE, Pai M, Linkins LA. Direct oral anticoagulants for treatment of HIT: update of Hamilton experience and literature review. Blood. 2017 Aug 31;130(9):1104-1113. doi: 10.1182/blood-2017-04-778993. Epub 2017 Jun 23.
66. Weitz JI, Lensing AWA, Prins MH, et al; EINSTEIN CHOICE Investigators. Rivaroxaban or aspirin for extended treatment of venous thromboembolism. N Engl J Med. 2017;376(13):1211-1222. doi:10.1056/NEJMoa1700518.
67. Willeford A, Zhu W, Stevens C, Thomas IC. Direct oral anticoagulants versus warfarin in the treatment of left ventricular thrombus. Ann Pharmacother. 2021;55(7):839-845. doi:10.1177/1060028020975111.
68. Witt DM, Nieuwlaat R, Clark NP, et al. American Society of Hematology 2018 guidelines for management of venous thromboembolism: optimal management of anticoagulation therapy. Blood Adv. 2018 Nov 27;2(22):3257-3291. doi: 10.1182/bloodadvances.2018024893.
69. Xarelto (rivaroxaban) [prescribing information]. Titusville, NJ: Janssen Pharmaceuticals Inc; June 2025.
70. Young AM, Marshall A, Thirlwall J, et al. Comparison of an oral factor Xa inhibitor with low molecular weight heparin in patients with cancer with venous thromboembolism: results of a randomized trial (SELECT-D). J Clin Oncol. 2018;36(20):2017-2023. doi:10.1200/JCO.2018.78.8034[PubMed 29746227]
71. Young G, Lensing AWA, Monagle P, et al. Rivaroxaban for treatment of pediatric venous thromboembolism. An Einstein-Jr phase 3 dose-exposure-response evaluation. J Thromb Haemost. 2020;18(7):1672-1685. doi:10.1111/jth.14813.
72. Yuan Z, Levitan B, Deng H, et al. Quantitative benefit-risk evaluation of rivaroxaban in patients after peripheral arterial revascularization: the VOYAGER PAD trial. J AM Heart Assoc. 2024 Apr 16;13(8):e032782. doi:10.1161/JAHA.123.032782. Epub 2024 Apr 2.

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