South East London Area Prescribing Committee
Formulary recommendation

Reference	**109**
Intervention:	**Rivaroxaban for the treatment of heparin-induced thrombocytopenia (HIT) in adults (off-label use)** (Rivaroxaban is an anticoagulant)
Date of Decision	**August 2019**
Date of Issue:	**October 2019**
Recommendation:	**RED – Prescribing and supply by hospital only**
Further Information	• Rivaroxaban is accepted for use in South East London as an option for the management of heparin-induced thrombocytopenia (HIT) in adults where the following criteria are met: • The use of rivaroxaban in HIT (with or without thrombosis) will only be suitable for selected patients. **Therefore, the Trust's Thrombosis Team must be involved in any decision to use rivaroxaban for HIT**. • Rivaroxaban is an option for management of HIT in stable patients at low risk of bleeding. • A short-acting agent (e.g. intravenous argatroban) would normally be used first-line in patients with critical illness, increased bleeding risk, or increased potential need for urgent procedures. • Other parenteral treatment options for the management of HIT include fondaparinux and danaparoid. Choice of parenteral therapy will be based on the clinician's decision once patient factors have been considered. • A DOAC is recommended over warfarin by the ASH guidelines when the platelet count is >150x10^9/L and is **stable**. • Treatment with rivaroxaban in **HIT without thrombosis** and no additional indication for anticoagulation should normally be continued for 4 weeks. In some cases treatment may be required for longer but is usually not beyond 3 months The usual strategy for using rivaroxaban in HIT without thrombosis would be 15 mg twice daily until platelet count >150x10^9/L and the patient is stable, followed by 20 mg daily (adjusted according to renal function). • Funding will need to be confirmed at individual Trust level as the complete treatment course for rivaroxaban in **HIT without thrombosis** will be prescribed and supplied by the hospital. • If the patient has **HIT complicated by thrombosis**, treatment is usually for a minimum of 3 months. In cases where a longer duration of treatment is required, existing pathways for the management of venous thromboembolism (VTE) should usually be followed. This includes transfer of prescribing to the GP under existing transfer of prescribing agreements after a minimum of 3 months. The treatment course would be as per the licensed use of rivaroxaban for VTE management, i.e. 15 mg twice daily for 3 weeks, followed by 20mg daily (adjusted according to renal function) for as long as thromboprophylaxis is required (usually total 3 months). • It should be noted that rivaroxaban is **not licensed** for use in this setting. Informed consent should be gained from the patient before treatment is started.
Shared Care/ Transfer of care required:	N/A for treatment with rivaroxaban that is 3 months or less. For cases of HIT with thrombosis requiring treatment for longer than 3 months, the existing pathway for prescribing rivaroxaban in VTE should be followed.

Cost Impact for agreed patient group	• It is estimated that 30 patients might be suitable for treatment per annum across SE London. • Assuming 50% of patients would be treated for acute isolated HIT (without thrombosis), and 50% for HIT with thrombosis, the total cost of treatment for 30 patients would be £4,000 per annum. • This does not include any savings from reduced use of sub-cutaneous treatment options, such as fondaparinux or potentially reduced inpatient stay.
Usage Monitoring & Impact Assessment	**Acute Trusts:** • Monitor use and report back to APC when required. • Audit use upon request to ensure use is in line with this recommendation.
	CCGs: • Monitor Epact 2 data. • Monitor exception reports from GPs if inappropriate prescribing requests are made to primary care.
Evidence reviewed	**References (from evidence evaluation)** 1. Raschke R, Gallo T, Curry S et al. Clinical effectiveness of a Bayesian algorithm for the diagnosis and management of heparin-induced thrombocytopenia. Journal of Thrombosis and Haemostasis 2017 15 p1640–1645. 2. Watson H, Davidson S, Keeling D. Guidelines on the diagnosis and management of heparin induced thrombocytopenia: second edition. British Journal of Haematology 2012 159 p528–540. 3. Kato, S., Takahashi, K., Ayabe, K. Heparin-induced thrombocytopenia: analysis of risk factors in medical inpatients. British Journal of Haematology 2011 154 p373–377. 4. Cuker A, Arepally G, Chong B et al. American Society of Hematology 2018 guidelines for management of venous thromboembolism: heparin-induced thrombocytopenia. Blood Advances 2018 2 (22) p3360-3392. 5. Xarelto (rivaroxaban). Summary of Product Characteristics. Available online at: https://www.medicines.org.uk/emc/product/2793/smpc (accessed 14.06.2019). 6. Shatzel J; Crapster-Pregont M, Deloughery T. Non-vitamin K antagonist oral anticoagulants for heparin-induced thrombocytopenia. A systematic review of 54 reported cases. Thrombosis and Haemostasis 2016 116 p397-400. 7. Warkentin T, Pai M, Linkins L. Direct oral anticoagulants for treatment of HIT: update of Hamilton experience and literature review, Blood 2017 130 p1104-1113. 8. Davis K, Davis D. Direct acting oral anticoagulants for the treatment of suspected heparin-induced thrombocytopenia. European Journal of Haematology 2017 99 (4); p332-335. 9. Modi V, Jatwani K, Rajeeve S. Comparison of Rivaroxaban with Argatroban in Heparin Induced Thrombocytopenia Using Historical Controls: A Case-Control Study. Blood 2018 132 p4996. 10. Tardy-Poncet, B., Tardy, B., Reynaud, J., Mahul, P., Mismetti, P., Mazet, E. & Guyotat, D. (1999) Efficacy and safety of danaparoid sodium (ORG 10172) in critically ill patients with heparin-associated thrombocytopenia. Chest, 115, 1616– 1620. 11. Schenk, J.F., Pindur, G., Stephan, B., Morsdorf, S., Mertzlufft, F., Kroll, H., Wenzel, E. & Seyfert, U.T. (2003) On the prophylactic and therapeutic use of danaparoid sodium (Orgaran) in patients with heparin- induced thrombocytopenia. Clinical and Applied Thrombosis/Hemostasis, 9, 25– 32. 12. Farner, B., Eichler, P., Kroll, H. & Greinacher, A. (2001) A comparison of danaparoid and lepirudin in heparin- induced thrombocytopenia. Thrombosis and Haemostasis, 85, 950– 957. 13. Lewis, B.E., Wallis, D.E., Hursting, M.J., Levine, R.L. & Leya, F. (2006) Effects of argatroban therapy, demographic variables, and platelet count on thrombotic risks in heparin- induced thrombocytopenia. Chest, 129, 1407– 1416.

NOTES:

a) Area Prescribing Committee recommendations and minutes are available publicly via the APC website.

b) This Area Prescribing Committee recommendation has been made on the cost effectiveness, patient outcome and safety data available at the time. The recommendation will be subject to review if new data becomes available, costs are higher than expected or new NICE guidelines or technology appraisals are issued.

c) Not to be used for commercial or marketing purposes. Strictly for use within the NHS.