About the EINSTEIN-DVT Study

Novel Single-Drug Approach for Treatment of Deep Vein Thrombosis (DVT)

Fast facts

- **EINSTEIN DVT is the first study of all new oral anticoagulants that investigated a groundbreaking new single-drug approach for DVT treatment, i.e. with no need for initial injectable LMWH/fondaparinux treatment**
- **EINSTEIN-DVT compares the efficacy and safety of oral rivaroxaban with the combination of injectable enoxaparin followed by a vitamin K antagonist (VKA)**
- **EINSTEIN-DVT is a large Phase III study enrolling more than 3,400 patients from approximately 442 sites across 32 countries worldwide**
- **EINSTEIN-DVT is part of the EINSTEIN global clinical development program that, together with EINSTEIN-PE and EINSTEIN-EXT, comprises more than 8,800 patients worldwide**

What is the EINSTEIN-DVT trial?[1]

EINSTEIN-DVT is a Phase III major outcomes study comparing the efficacy and safety of novel once-daily oral rivaroxaban with enoxaparin followed by a vitamin K antagonist (VKA) in the initial treatment of acute symptomatic deep vein thrombosis (DVT) and long-term prevention of recurrent DVT and pulmonary embolism (PE).

What is the importance of the EINSTEIN-DVT trial?

Standard therapy for DVT currently includes two compounds: low molecular weight heparin (LMWH) or fondaparinux administrated via subcutaneous injection followed by an oral VKA.

EINSTEIN-DVT investigated a new single-drug approach of oral rivaroxaban as a potential replacement for the current standard therapy. If the EINSTEIN-DVT study meets its goal to demonstrate non-inferiority compared to the current standard of care, the novel single-drug approach of oral rivaroxaban will provide clinicians and patients with an attractive, simple, alternative regimen for the initial treatment of DVT, as well as the long-term prevention of recurrent DVT and PE. In two previously conducted dose-ranging studies of patients with symptomatic DVT, rivaroxaban showed similar efficacy and safety profiles to those of standard therapy.[2]

EINSTEIN-DVT[2]	
Study design	◆ Randomized, open-label, assessor-blind, event-driven, non-inferiority trial
Patient numbers	◆ More than 3,400 patients with acute symptomatic DVT without symptoms of PE (from more than 442 sites across 32 countries worldwide)
Interventions	◆ Oral, twice-daily rivaroxaban 15 mg for 3 weeks, followed by oral rivaroxaban 20 mg once-daily ◆ Subcutaneous, twice-daily enoxaparin 40 mg for at least 5 days in combination with VKA; VKA continued if INR≥2 on two consecutive measurements at least 24 hours apart ◆ Both interventions given for either 3, 6 or 12 months
Study inclusion criteria	◆ Confirmed acute symptomatic proximal DVT without symptomatic PE
Primary efficacy endpoint	◆ Symptomatic recurrent VTE – the composite of recurrent DVT or fatal or non-fatal PE
Primary safety endpoint	◆ Composite of major and clinically relevant non-major bleeding*

* Major bleeding is defined as overt bleeding associated with: a fall in hemoglobin of 2 g/dL or more, or leading to a transfusion of 2 or more units of packed red blood cells or whole blood, or bleeding that occurs in a critical site: intracranial, intraspinal, intraocular, pericardial, intra-articular, intramuscular with compartment syndrome, retroperitoneal, or contributing to death. Clinically relevant non-major bleeding was defined as bleeding not meeting the criteria for major bleeding but is associated with medical intervention.

References

1 http://clinicaltrials.gov/ct2/show/NCT00440193 (accessed July 2010)

2 Buller HR. Oral rivaroxaban versus standard therapy in the initial treatment of symptomatic deep vein thrombosis and long-term prevention of recurrent venous thromboembolism. The Einstein-DVT study. Abstract presented at European Society of Cardiology Congress (2010, Stockholm, Sweden)

About Rivaroxaban

Rivaroxaban is a novel oral anticoagulant that was invented in Bayer Schering Pharma's Wuppertal laboratories in Germany, and is being jointly developed by Bayer HealthCare and Johnson & Johnson Pharmaceutical Research & Development, L.L.C. In clinical studies, rivaroxaban has been shown to be effective in preventing VTE in adult patients following elective hip or knee replacement surgery. It has a rapid onset of action with a predictable dose response and high bioavailability, no requirement for coagulation monitoring, as well as a limited potential for food and drug interactions. Rivaroxaban is marketed under the brand name Xarelto® for VTE prevention in adult patients following elective hip or knee replacement surgery, and it is the only new oral anticoagulant that has consistently demonstrated superior efficacy over enoxaparin for this indication. Xarelto® is approved in more than 100 countries worldwide and has been successfully launched in more than 75 countries by Bayer Schering Pharma achieving the market leader position among the new oral anticoagulants.

The extensive clinical trial program supporting rivaroxaban makes it the most studied oral, direct Factor Xa inhibitor in the world today. More than 65,000 patients are expected to be enrolled into the rivaroxaban clinical development program, which will evaluate the product in the prevention and treatment of a broad range of acute and chronic blood-clotting disorders, including stroke prevention in patients with atrial fibrillation, secondary prevention of acute coronary syndrome, and VTE prevention in hospitalized, medically ill patients.

To learn more about thrombosis please visit www.thrombosisadviser.com

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RIVAROXABAN

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