

# Glossary of Terms

- ◆ **Acute coronary syndrome (ACS)**  
Acute coronary syndrome (ACS) is a common and life-threatening condition which occurs when a coronary artery is blocked by a blood clot, known as a thrombosis, reducing blood supply to the heart. This disruption of blood flow can directly cause myocardial infarction (a heart attack), or cause severe pain in the chest (unstable angina) indicating that a heart attack may soon occur. ACS is a complication of Coronary Heart Disease (CHD), which kills approximately 7.2 million people worldwide each year<sup>1</sup>
- ◆ **Anticoagulant drugs**  
Anticoagulants have been used for more than 70 years to prevent and treat potentially deadly blood clots. Sometimes referred to as 'blood thinners'
- ◆ **Antiplatelet therapy**  
The current standard therapy to prevent blood from clotting after an acute coronary syndrome (ACS) is the dual antiplatelet therapy of aspirin plus a drug class known as thienopyridine, of which clopidogrel is the most prescribed. Antiplatelet therapy works by addressing platelet aggregation, one source of clot formation
- ◆ **Atherosclerosis**  
Plaque build-up in the inner wall of the arteries that narrows the arteries and can decrease the amount of blood flow to the heart muscle
- ◆ **Atria**  
Upper chambers of the heart
- ◆ **Atrial fibrillation (AF)**  
AF is the most common sustained cardiac rhythm disorder and occurs when the upper chambers (atria) of the heart beat irregularly. As a result, the atria do not empty completely and blood does not flow properly, potentially allowing blood clots to form. These blood clots can break loose and travel to the brain, resulting in a stroke<sup>2</sup>
- ◆ **Cardiac arrhythmia**  
Conditions in which there is an abnormal heart beat
- ◆ **Coagulation cascade**  
A chain of biochemical reactions that result in clot formation. Anticoagulants work by blocking or regulating a stage, or stages, of the coagulation cascade
- ◆ **Composite endpoint**  
A combination of two or more endpoints in a clinical trial
- ◆ **Deep vein thrombosis (DVT)**  
The formation of a blood clot in a deep vein, usually in the leg, which partially or totally blocks the flow of blood. If all or part of the blood clot breaks off, it can travel to the lungs and cause a pulmonary embolism, where it may impact the flow of blood and lead to potentially life-threatening consequences<sup>3</sup>
- ◆ **Drug-drug interaction**  
A modification of the effect of a drug when administered with another drug, usually either an increase or decrease in the action of either substance, or an effect not normally associated with either drug alone





- ◆ **Efficacy**  
The ability of a drug to produce the desired effect
- ◆ **Embolism**  
Occurs when an object or foreign substance migrates from one part of the body (through circulation) and causes a blockage (obstruction) of a blood vessel in another part of the body. Blood clots are the most common cause of embolism
- ◆ **Enoxaparin**  
A low molecular weight heparin marketed as Lovenox® or Clexane® and manufactured by Sanofi-Aventis<sup>4</sup>. See 'Low molecular weight heparin' for more details
- ◆ **Factor Xa**  
An enzyme which acts at a pivotal stage in the blood-clotting (coagulation) process, stimulating the production of thrombin
- ◆ **Factor Xa inhibitor**  
An anticoagulant drug that acts at a pivotal stage in the blood-clotting (coagulation) process to prevent clot formation by inhibiting the production of thrombin
- ◆ **Fondaparinux**  
An anticoagulant medication marketed as Arixtra® by GlaxoSmithKline used for the treatment and prevention of blood clots<sup>5</sup>. Fondaparinux is given subcutaneously, daily
- ◆ **Hemorrhagic stroke**  
Stroke caused by rupture of a blood vessel or an abnormal vascular structure which leads to bleeding inside the brain
- ◆ **Heparin**  
An anticoagulant (anti-clotting) medication. Heparin is used to prevent and treat thromboembolic complications (clots that travel from their site of origin through the blood stream to clog up another vessel). Heparins require administration by injection or infusion, which can be inconvenient and cause discomfort
- ◆ **International Normalised Ratio (INR)**  
A system for assessing the clotting tendency of blood in patients receiving anticoagulant therapy with vitamin K antagonists (VKAs)
- ◆ **Intravenous**  
Within or administered into a vein
- ◆ **Ischaemic stroke**  
Stroke caused by an interruption of the blood supply due to a blockage (e.g. a blood clot)<sup>6</sup>
- ◆ **Low molecular weight heparin (LMWH)**  
An anticoagulant used for the treatment and prevention of blood clots. It is injected subcutaneously, or given intravenously
- ◆ **Myocardial infarction (or heart attack)**  
The event when blood flow to a part of the heart is blocked for a long enough time that part of the heart muscle is damaged or dies.
  - **ST segment elevation myocardial infarction (STEMI):** a more serious type of heart attack that is typically caused by a blood clot completely obstructing the coronary artery, leading to damage and death of the heart muscle tissue
  - **non-ST segment elevation myocardial infarction (NSTEMI):** a type of heart attack that is typically caused by a blood clot partially obstructing the coronary artery
- ◆ **Pooled data analysis**  
A statistical tool that combines the results of studies, for which the populations must be similar, that address a set of related principal outcomes. The resultant larger sample size allows less frequent events to be analysed





- ◆ **Pulmonary embolism (PE)**

The formation of a blood clot blocking one or more vessels in the lungs. Once in the lung, the blood clot may block the circulation, threatening sudden death or long-term damage to the lungs and other vital organs.

Symptoms of PE include acute shortness of breath, chest pain, and rapid heart rate; some people also cough blood
- ◆ **Stroke**

A stroke is the rapidly developing loss of brain function(s)<sup>6</sup>. Strokes are caused by a lack of blood supply to the brain due to a blockage or haemorrhage, and can cause severely restricted movement paralysis, loss of speech or vision, or even death
- ◆ **Subcutaneous**

Introduced under the skin
- ◆ **Systemic embolism**

A clot that blocks blood flow in an artery somewhere in the body
- ◆ **Thrombin**

An enzyme in the blood clotting cascade that promotes the formation of blood clots
- ◆ **Thrombosis**

The formation of a clot inside a blood vessel, blocking a vein (venous thrombosis) or artery (arterial thrombosis)
- ◆ **Thromboprophylaxis**

Measures including pharmacological agents preventing blood clotting
- ◆ **Transient ischaemic attack (TIA)**

A change in the blood supply to the brain resulting in transient neurologic dysfunction
- ◆ **Unstable Angina**

A condition where the heart doesn't receive enough blood flow and oxygen, that may lead to a heart attack
- ◆ **Venous arterial thromboembolism (VAT)**

Venous arterial thromboembolism (VAT) is caused when a blood clot becomes loose and is moved by the blood stream to obstruct another vessel. This can result in damage to vital organs, because the tissue beyond the blockage no longer receives nutrients and oxygen. VAT encompasses two serious conditions: venous thromboembolism (VTE) and arterial thromboembolism
- ◆ **Venous thromboembolism (VTE)**

Venous thromboembolism (VTE) encompasses two serious conditions - deep vein thrombosis (DVT) and pulmonary embolism (PE)
- ◆ **Vitamin K antagonist (VKA)**

VKAs, such as warfarin and acenocoumarol, were the first oral anticoagulants to be developed. VKAs work by blocking the ability of vitamin K to regenerate, which eventually slows the activation of the coagulation cascade and the ultimate formation of blood clots
- ◆ **Warfarin**

An anticoagulant drug (brand names: Coumadin<sup>®</sup>, Panwarfin<sup>®</sup>, Sofarin<sup>®</sup>) taken to prevent the blood from clotting and to treat blood clots<sup>7</sup>. Warfarin is also used to reduce the risk of clots causing strokes or heart attacks. Warfarin works by slowing the activation of clotting factor





## References

- 1) Mackay, J., Mensah, G. Global burden of stroke. The Atlas of Heart Disease and Stroke. United Kingdom. World Health Organization 2004. Available at [http://www.who.int/cardiovascular\\_diseases/resources/atlas/en/](http://www.who.int/cardiovascular_diseases/resources/atlas/en/) Last accessed November 2011
- 2) NHS choices. Atrial fibrillation. Available at <http://www.nhs.uk/Conditions/Atrial-fibrillation/Pages/Complications.aspx> Last accessed November 2011
- 3) Patient UK. Deep vein thrombosis. Available at: <http://www.patient.co.uk/health/Deep-Vein-Thrombosis.htm> Last accessed November 2011
- 4) eMC. Clexane® SPC. Available at: <http://www.medicines.org.uk/EMC/medicine/24345/SPC/Clexane+pre-filled+syringes/> Last accessed November 2011
- 5) eMC. Arixtra® SPC. Available at: <http://www.medicines.org.uk/emc/medicine/15123/SPC/> Last accessed November 2011
- 6) News Medical. What is a stroke? Available at <http://www.news-medical.net/health/What-is-a-Stroke.aspx> Last accessed November 2011
- 7) eMC. Warfarin SPC. Available at: <http://www.medicines.org.uk/EMC/medicine/21578/SPC/Warfarin+3+mg+Tablets/> Last accessed November 2011

## About Xarelto® (Rivaroxaban)

Rivaroxaban is the most broadly indicated novel oral anticoagulant and is marketed under the brand name Xarelto®. To date, Xarelto has been approved for use in the following venous arterial thromboembolic (VAT) indications:

- The prevention of stroke and systemic embolism in adult patients with non-valvular atrial fibrillation (AF) with one or more risk factors in more than 70 countries worldwide
- The treatment of deep vein thrombosis (DVT) and prevention of recurrent DVT and pulmonary embolism (PE) in adults in more than 70 countries worldwide
- The prevention of venous thromboembolism (VTE) in adult patients undergoing elective hip or knee replacement surgery in more than 120 countries worldwide

Since the first approval of Xarelto in 2008 in the orthopaedic setting, more than two and a half million patients worldwide have received Xarelto in daily clinical practice in this indication alone.

Rivaroxaban was discovered by Bayer HealthCare, and is being jointly developed with Janssen Research & Development, LLC. Xarelto is marketed outside the U.S. by Bayer HealthCare and in the U.S. by Janssen Pharmaceuticals, Inc. (a Johnson & Johnson Company).

Anticoagulant medicines are potent therapies used to prevent or treat serious illnesses and potentially life threatening conditions. Before initiating therapy with anticoagulant medicines, physicians should carefully assess the benefit and risk for the individual patient.

Responsible use of Xarelto is a high priority for Bayer, and the company has developed a [Prescribers Guide](#) for physicians and a [Xarelto Patient Card](#) for patients to support best practices. To learn more, please visit: <https://prescribe.xarelto.com>.

**To learn more about thrombosis, please visit [www.thrombosisadviser.com](http://www.thrombosisadviser.com)**  
**To learn more about VAT, please visit [www.VATspace.com](http://www.VATspace.com)**  
**To learn more about Xarelto, please visit [www.xarelto.com](http://www.xarelto.com)**

Media Backgrounder  
For Ex-US and Ex-UK Use Only



**RIVAROXABAN**