

About Acute Coronary Syndrome (ACS)



What is Acute Coronary Syndrome?

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 covers a range of acute cardiac events, including unstable angina, a condition where the heart does not receive enough blood or oxygen, and two types of myocardial infarction (non-ST-segment elevation myocardial infarction and ST-segment elevation myocardial infarction)
- ◆ ACS is a complication of Coronary Heart Disease (CHD) which is the single most common cause of death worldwide¹ and one of the most prevalent non-communicable diseases in the world²

The essential underlying condition for ACS is plaque that collects in the inner walls of coronary arteries. This plaque build-up narrows the arteries, sometimes decreasing the amount of blood flow to the heart. This process is called atherosclerosis. If plaque from the wall of a coronary artery ruptures, a blood clot can form at the site of the rupture. If the clot is large enough to block the vessel and critically reduce blood flow, the heart muscle can be damaged³.

Who is at Risk of ACS?

There are a variety of risk factors for the build-up of atherosclerosis, potentially resulting in ACS, including^{4,5}:

- ◆ A family history of heart attack or unstable angina
- ◆ High cholesterol
- ◆ High blood pressure
- ◆ Diabetes
- ◆ Tobacco use

Recurrent ACS is a significant issue. Patients with established ACS are a very high risk for recurrent ACS⁵.

- ◆ Up to 30% of patients who leave the hospital after an ACS event are re-admitted within six months⁶



How Common is ACS?

- ◆ Over 4 million patients are admitted to hospital with ACS every year in North America alone⁷

What is the Disease Burden of ACS?

- ◆ Coronary Heart Disease kills approximately 7.2 million people worldwide each year¹, many of which are attributable to ACS
- ◆ Unstable angina and non-ST-segment elevation heart attacks (both types of ACS) are responsible for approximately 2.5 million hospital admissions worldwide and are a major cause of mortality and morbidity in Western countries⁸

What is the Treatment Goal for ACS?

The main treatment goal for ACS patients is to prevent death, stroke or recurrent myocardial infarction by removing an existing blood clot, and subsequently stopping the formation of new clots.

- ◆ The current gold standard for the secondary prevention of ACS is the dual antiplatelet therapy of aspirin plus a drug class known as thienopyridine, of which clopidogrel is the most prescribed. The dual antiplatelet therapy has improved effectiveness over aspirin alone⁹. The combination of these two treatments, used for a period of six months to one year, is widely recommended for ACS patients
- ◆ Despite the efficacy of dual therapy with aspirin and thienopyridines, a high rate of subsequent cardiac events remains following an acute coronary syndrome^{9,10}

New oral anticoagulants, when added to dual antiplatelet therapy, may deliver improved outcomes for ACS patients.

- ◆ Xarelto[®] (rivaroxaban) is a highly effective, oral anticoagulant developed to prevent and treat dangerous blood clots in a wide range of patient populations
- ◆ Rivaroxaban, which acts at a pivotal point in the blood-clotting process, has a complementary mode of action to antiplatelet drugs, and may reduce the rates of secondary acute cardiac events





References

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About Rivaroxaban (Xarelto®)

Rivaroxaban is an oral anticoagulant that was discovered in Bayer HealthCare's Wuppertal laboratories in Germany, and is being jointly developed by Bayer HealthCare and Johnson & Johnson Pharmaceutical Research & Development, L.L.C. It has a rapid onset of action with a predictable dose response and high bioavailability, no requirement for routine coagulation monitoring, and 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 oral anticoagulant that has consistently demonstrated superior efficacy over enoxaparin in this indication. Rivaroxaban is approved in more than 110 countries worldwide and marketed outside the U.S. by Bayer HealthCare in this indication.

In the U.S., where rivaroxaban has been available since July 2011 for VTE prevention in adult patients following elective hip or knee replacement surgery, Janssen Pharmaceuticals, Inc. (a Johnson & Johnson Company) holds marketing rights. The Bayer HealthCare sales force is supporting Janssen Pharmaceuticals, Inc. in designated hospital accounts. On November 4, Xarelto® received further marketing approval in the U.S. for the prevention of stroke in patients with Atrial Fibrillation.

The extensive clinical trial programme supporting rivaroxaban makes it the most studied and widely published oral, direct Factor Xa inhibitor. The studies, reported and ongoing, involve over 75,000 patients for the prevention and treatment of venous and arterial thromboembolic (VAT) disorders across a broad range of acute and chronic conditions, including stroke prevention in patients with Atrial Fibrillation, DVT treatment and the prevention of recurrent DVT or PE, and the secondary prevention of Acute Coronary Syndrome.

**To learn more about thrombosis, please visit www.thrombosisadviser.com
To learn more about 'Xarelto' please visit www.xarelto.com**

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