Patient Information Guide

SLENDER® Sirolimus-Eluting Coronary Stent Integrated Delivery System (SLENDER IDS®)

DIRECT Sirolimus-Eluting Coronary Stent Rapid Exchange Delivery System (DIRECT RX®)

This guide explains the possible risks associated with implantation of a drug-eluting stent, along with medication recommendations and answers to questions you may have about the treatment of coronary artery disease.

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1 The Heart and Coronary Artery Disease

1.1 The Heart

The heart is a pump perfusing blood through the circulatory system to provide the body with oxygen and nutrients critical to sustaining life. Synchronized contractions of the four chambers of the heart – called 'heart beats' – occur billions of times throughout one's lifetime, transporting blood throughout the body, including to the heart itself. Coronary arteries – blood vessels carrying oxygen and nutrient-rich blood located around the heart – allow the heart to function properly.

1.2 What is Coronary Artery Disease (CAD)?

CAD is the build-up of fat or calcium deposits – also known as 'plaque' – in the arteries located around the heart. Normally arteries are elastic, smooth and unobstructed. Arteries can, however, become stiff and narrowed through plaque formation, a process termed 'atherosclerosis'. Over time, narrowing of the artery may become so severe that the heart muscle does not receive the proper amount of oxygen and nutrients necessary to work efficiently.

1.3 What are the symptoms of CAD?

Coronary arteries typically harden and narrow gradually over many years, usually long before symptoms, such as chest discomfort, shortness of breath, nausea, radiating pain, etc., present. Symptoms usually appear when the heart is under stress, occurring when the lack of blood flow resulting from CAD starves the heart muscle of much needed oxygen-rich blood.

1.4 What are the Risk Factors for CAD?

Risk factors, both genetic and environmental, include:

- Family history of heart or vascular disease;
- Diabetes;
- Hypertension (high blood pressure);
- Hyperlipidemia and hypercholesteremia (high levels of LDL, known as 'bad' cholesterol, and triglycerides, a type of fat found in blood, coupled with low levels of HDL, known as 'good' cholesterol);
- Obesity;
- Smoking;
- Age (over 45 for men, over 55 for women);
- Sedentary lifestyle;
- Emotional stress.

1.5 How is CAD Diagnosed?

Several diagnostic evaluations can be used to identify coronary artery disease, including:

- Blood test to assess fat (cholesterol) levels and identify the presence of enzymes secreted by damaged heart muscle cells;
- Stress test to reproduce symptoms of CAD under physical or pharmacological stress;
- Electrocardiography (also known as 'ECG' or 'EKG') to record the heart's electrical activity;
- Echocardiogram using sound waves to detect how efficiently the heart is working;
- Magnetic resonance imaging (also known as 'MRI') to identify lesions in coronary arteries;
- Computer tomography (also known as 'CT'): to show coronary arteries at different angles;
- Coronary angiography (also known as 'heart catheterization') to inject contrast dye into the coronary arteries, concomitant with X-ray imaging, to visualize any narrowing of the coronary arteries;

- Intravascular ultrasound (also known as 'IVUS') using high-frequency sound waves to show the inside of a coronary artery.

The last 2 diagnostic evaluations are 'invasive', meaning they require entry into the circulatory system. These evaluations also provide the most detailed assessment of the coronary arteries.

2 Coronary Angiography – Before the Procedure

Coronary angiography is a diagnostic evaluation in which patients are brought to the catheterization laboratory so a cardiologist can directly visualize any narrowing of the coronary arteries and help assess whether interventional treatment is needed to open a narrowed vessel.

During this procedure, patients are mildly sedated. Devices such as an ECG to monitor the heart, a blood pressure cuff to monitor blood pressure, and a blood oxygen monitor to track blood oxygen saturation may be used in tandem with coronary angiography.

A small incision is made, typically in the wrist or groin, so that a long, thin, flexible tube (known as a 'catheter') is introduced into the circulatory system and carefully advanced to the coronary arteries of the heart. Contrast dye is injected into the coronary arteries and visualized concomitantly on X-ray. During injection of the contrast dye, a warm sensation may be temporarily felt, but any pain or discomfort should be reported during the procedure.

Based on this procedure, a cardiologist will share findings and provide treatment options to the patient.

3 Treatment Options

Treatment for CAD can include lifestyle changes, medications, minimally invasive or surgical procedures and any combination thereof.

3.1 Medications

Various medications can help lower cholesterol and/or reduce blood pressure, while others can help increase the flow of blood to the heart by expanding the coronary arteries to help relieve chest pain (also known as 'angina').

3.2 Cardiac Surgery

Coronary Artery Bypass Surgery (CABG) is typically an in-patient, invasive procedure through chest incision(s) involving relocation of a segment of a healthy vessel from part(s) of a patient's body (such as mammary arteries and saphenous veins) to the coronary artery beyond the blockage site. This provides a new route for blood to flow around the blocked area of the coronary artery.

3.3 Percutaneous Intervention

3.3.1 Percutaneous Transluminal Coronary Intervention (PTCA)

PTCA is typically an outpatient, less invasive procedure in which a catheter is introduced into the circulatory system through a small puncture in the wrist or leg. The catheter is advanced to the blocked area(s) of the coronary artery and a small, high pressure balloon attached to the catheter is inflated and deflated. The balloon compresses the plaque against the artery wall(s), widening the artery and increasing the flow of oxygen-rich blood. Often times this is followed with placement of a coronary artery stent to preserve the widening achieved in the coronary artery.

3.3.2 Coronary Artery Stenting

A stent is a tiny metal mesh-like tube used to hold a coronary artery wall open and maximize blood flow. The stent is crimped on a balloon which is part of the catheter delivery system and delivered into the coronary artery.

Once positioned within the narrowed area (also known as 'stenosis') of the coronary artery stenosis where plaque formation has occurred, the stent is expanded by inflating the catheter delivery system balloon. The stent and balloon push the plaque against the artery walls to widen the artery and increase blood flow.

After the stent is expanded, the balloon is deflated and the catheter delivery system is removed from the body. The stent remains in the coronary artery permanently to maintain the widened area of the artery like a scaffold. Over time, the coronary artery wall will heal around the stent as it continues to support the artery.

4 The Svelte® Coronary Stent

The Svelte® coronary stent (hereinafter Svelte® stent) is intended as a permanent implant. It is made from a cobalt chromium (CoCr) alloy consisting of cobalt, chromium, tungsten and nickel. The Svelte® stent has a special bioresorbable drug coating (polymer and drug) to reduce the chances of re-narrowing of the area treated for stenosis. The drug used with the Svelte® stent is called sirolimus and is released from the polymer over the period of time during which re-narrowing is most likely to occur. The stent is designed to be flexible, allowing it to conform to the shape of the artery.

4.1 Polymer

The bioresorbable polymer coating carries and protects the drug before and during the procedure. Once the stent is implanted, the polymer coating controls release of the drug into the coronary artery wall. The polymer coating consists of amino acids naturally found in the human body and is fully absorbed by the body over time, allowing healing to occur and only the cobalt chromium stent to remain in the coronary artery.

4.2 Drug

The sirolimus drug is an anti-proliferative compound which has been used with coronary stents in the treatment of coronary artery disease and prevention of restenosis since 2000. It is blended with the polymer and then applied to the stent surface. This drug coating allows a consistent and controlled rate of drug release to the coronary artery wall to minimize restenosis (recurrent narrowing) and reduce the likelihood that additional treatment in this area will be needed in the future.

5 Potential Adverse Events

Potential adverse events which may be associated with the use of a drug-eluting coronary stent in coronary arteries include, but are not limited to:

- Air bubbles, pieces of device fragments or blood clots blocking the coronary artery;
- Allergic reactions to contrast dye, antiplatelet therapy, stent material (cobalt, chromium, nickel, and tungsten), drug or polymer coating;
- Aneurysm (weakening of a portion of the blood vessel wall);
- Bleeding around the heart or generally which may require transfusion or surgery;

- Breaking of the balloon used to expand the stent;
- Bruising or bleeding or pain at the catheter insertion site (leg, wrist or arm);
- Chest pain during or after the procedure;
- Death;
- Decreased or increased blood pressure;
- Deformation, collapse or fracture of the stent which may require emergency surgery;
- Failure to release the stent from the catheter;
- Fever or infection;
- Heart attack;
- Irregular heartbeats which could be life-threatening;
- Kidney failure;
- Misplacement of the stent or movement of where the stent was placed in the artery;
- Nerve injury;
- Re-narrowing, tearing, puncture or rupture of the coronary artery;
- Shock;
- Stroke or transient ischemic attack.

Potential adverse events related to the oral administration of the sirolimus drug include, but are not limited to:

- Abnormal liver function tests;
- Allergic reaction which can include rash, difficulty breathing, throat swelling or low blood pressure;
- Anemia (low red blood cell count);
- Cancer;
- Diarrhea;
- Diseases affecting the tissue and space around the air sacs of the lungs;
- Increased levels of cholesterol and triglycerides (fat or lipids) in the blood;
- Fatigue;
- Headache;
- Hypokalemia (low potassium levels in the blood);
- Infection;
- Joint pain;
- Neutropenia (low white blood cell count).

The amount of sirolimus circulating in the bloodstream is significantly lower for stent implants than with oral doses. Advise a physician if taking immunosuppressive medication or becoming pregnant following a stenting procedure.

6 Clinical Data Summary

The principal safety and effectiveness information for the Svelte® stent is derived from the OPTIMIZE clinical trial. This randomized, controlled trial compared the Svelte® stent to FDA approved Abbott Vascular Xience® or Boston Scientific Promus® drug-eluting stents in 1,639 patients.

The OPTIMIZE study primary endpoint results showed that at 1 year following Svelte® stent deployment, the combined occurrence of heart-related death, heart attack, bypass surgery and repeat treatment in the lesion where the stent was placed was 10.3% for the Svelte® stent compared

to 9.5% for the FDA approved Xience® and Promus® control drug-eluting stents. Repeat treatment in the lesion where the stent was placed was 1.5% for the Svelte® stent compared to 1.9% for the FDA approved Xience® and Promus® control drug-eluting stents.

In summary, the OPTIMIZE clinical study results demonstrated that the Svelte® stent system is safe and effective in the treatment of coronary blockages.

7 Medications

A number of medications to thin the blood and prevent blood clots from forming and adhering to the surface of the stent are available by prescription from a doctor. These medications (also known as 'antiplatelet drugs') may include aspirin and other blood-thinning drugs such as clopidogrel (Plavix®), ticlopidine (Ticlid®), prasugrel (Effient®) or ticagrelor (Brilinta®). A doctor will provide guidance regarding length of treatment with these antiplatelet drugs. It is extremely important to follow medication regimens exactly as prescribed by the doctor. If you stop taking these medications before being advised otherwise, there are increased chances of blood clot formation on the stent, subsequent heart attack or even death. Report side effects from medications immediately. These may include headaches, nausea, vomiting or rash.

Do not stop taking medications unless asked to do so by a cardiologist.

If surgery or dental work is recommended requiring suspension or premature termination of these medications, carefully consider the risks and benefits of this additional surgery or dental work versus the possible risks from early discontinuation of these medications with a physician. It is strongly recommended to remain compliant with these medications post stent implantation.

8 After the Procedure

Following stent implantation and prior to discharge from the hospital, nurses and doctors will continuously monitor patients. Some patients may be asked to stay in bed for several hours and experience bruising and soreness in the area where the catheter was inserted. This is normal. It is also normal to feel sleepy or forgetful for some time if sedatives were used during the procedure. Discharge may occur as early as the day of the procedure or take one or more days.

9 Follow-up Activities

- Follow physicians' guidelines;
- Return to normal physical activities gradually and consult with a physician or nurse regarding exercising or strenuous activities;
- Discuss lifestyle changes made during the recovery period with a physician;
- Keep up with all follow-up appointments, including any laboratory blood tests, and remain steadfast in compliance with medications prescribed after the procedure;
- Carry a Patient Implant Card at all times and show it to medical professionals prior to receiving dental care, elective surgery or emergency services;
- Consider registering the stent and the conditions under which it can be scanned safely with the MedicAlert Foundation (www.medicalert.org) or equivalent organization.

10 Frequently Asked Questions

Can the stent move or rust?
Once implanted in a coronary artery, the stent cannot move on its own and is manufactured so that it will not rust.

Can I walk through metal detectors or security with a stent?
Yes, without any concern of setting them off.

How soon can I go back to work?
Ask a physician about when return to work is possible. The majority of patients return to work several days after the procedure.

What if I still have pain?
Immediately inform a physician or the center where the procedure was performed.

Can I undergo an X-ray, MRI or scanner tests with a stent?
An X-Ray or CT Scan can be performed at any time. For MRI, inform a doctor or MR technician that a Svelte® drug-eluting stent was implanted prior to undergoing an MRI. MRI safety tests have demonstrated that the Svelte® stent is 'MR conditional' and safe under the conditions described on the Patient Implant Card.

Can I exercise or play sports?
Ask a cardiologist when and what types of exercise and sports can be safely undertaken after a stenting procedure.

What should I change in my diet?
A physician may prescribe a low-fat, low-cholesterol diet to help reduce the levels of fat in the blood to reduce risk of progressive coronary disease.

Does Sirolimus (the drug delivered by the Svelte® stent) have any drug interactions of concern?
Sirolimus is released into the surrounding arterial tissue following stent implantation. Sirolimus blood content levels are measurable for about one week and thereafter diluted and excreted through normal bodily functions. It is not expected that the sirolimus covering the stent will have effects anywhere other than in the heart, as the dose of sirolimus used on the Svelte® stent is less than the recommended daily dose of sirolimus that an organ transplant patient would be prescribed. Formal drug interaction studies with sirolimus-based stents have not been conducted. Since some sirolimus could theoretically remain on the stent, drug interactions at the location of the stent itself (affecting the performance of the drug) cannot be ruled out. Discuss with a physician any drugs you are currently taking or plan to start taking.

What if I have taken sirolimus (the drug delivered by the Svelte® stent) before for cancer treatment and had a reaction to it?
Immediately advise a physician or nurse if previous allergic reactions to sirolimus are known.

Where does the bioresorbable polymer go once it's absorbed?
The bioresorbable polymer is gradually eliminated from the body as carbon dioxide and water through natural metabolic processes.

11 More Information

For more information about the Svelte® stent, please visit our website (www.sveltemedical.com) or call us at (888) 974-1113.

CAUTION: Federal (U.S.A.) law restricts these products to sale by or on the order of a physician.

Indications, contraindications, warnings and the directions for use can be found in the product's Instructions for Use manual.

The Svelte® SLENDER IDS® and DIRECT RX® are a product of Svelte Medical Systems.

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