

# PATIENTS WITH REFRACTORY ANGINA ARE OFTEN CALLED NO OPTION PATIENTS



The Neovasc Reducer™ System  
Puts a Solution in Your Hands

innovative cardiovascular devices

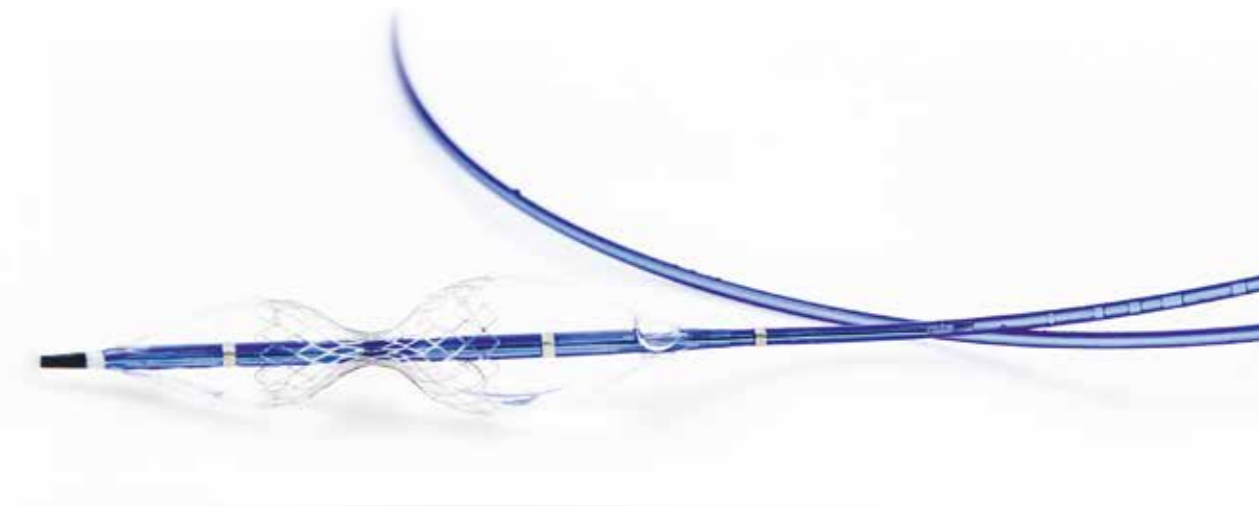


# THE PROBLEM OF REFRACTORY ANGINA

Refractory angina is caused by coronary insufficiency due to obstructive coronary artery disease. It is a type of reversible myocardial ischemia that cannot be controlled by a combination of medical therapy, angioplasty or coronary bypass surgery<sup>1</sup>. Consequently patients are typically labelled "no option" patients<sup>2</sup>.

Refractory angina leads to

- Significant disability
- Limited quality of life
- Multiple medications
- Frequent hospital admissions<sup>1, 3, 4, 5, 6, 7</sup>

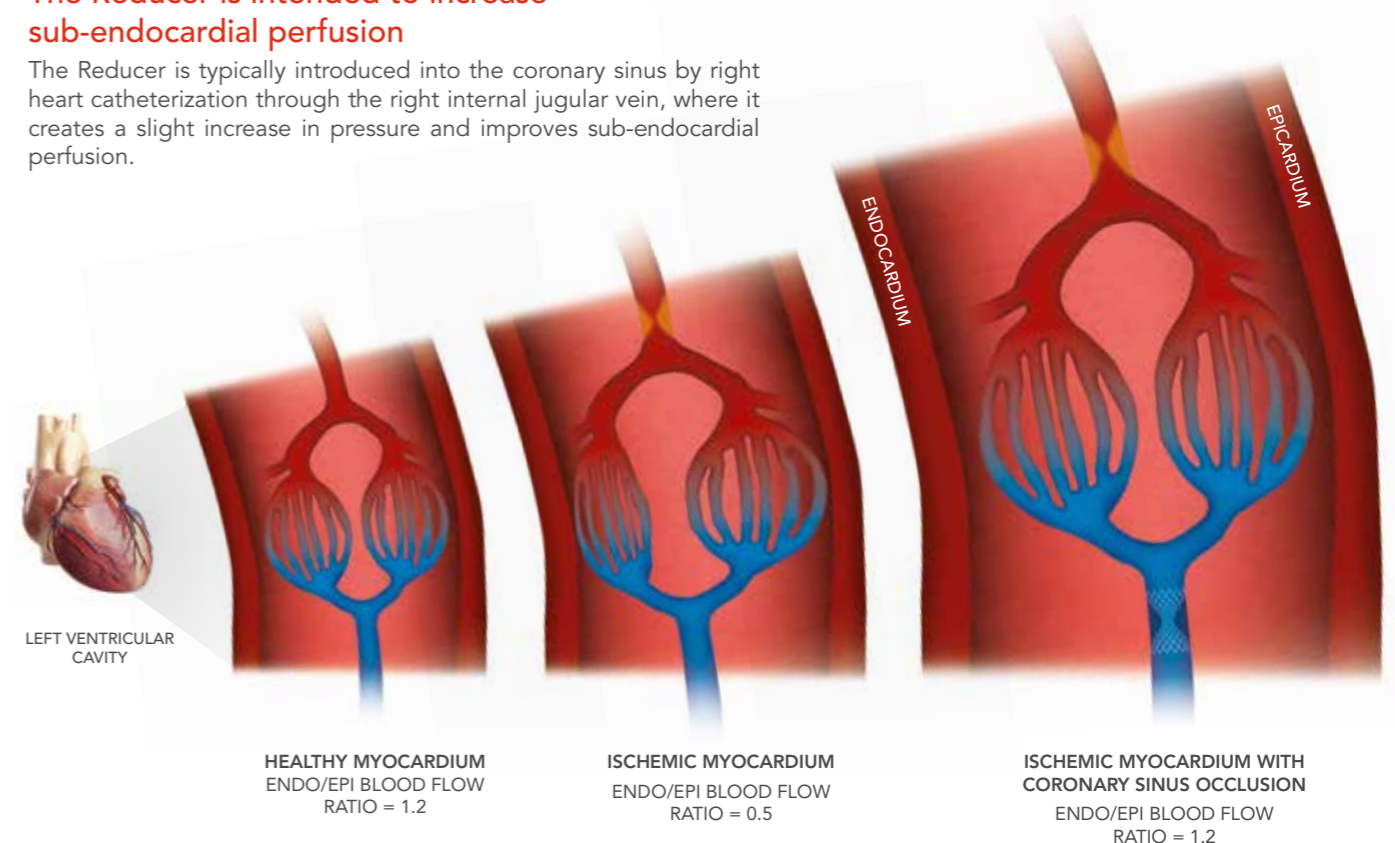


## The Neovasc Reducer™ System: A novel solution

The Reducer is a balloon expandable hourglass-shaped metal mesh. When implanted in the coronary sinus (CS) it creates a focal narrowing to modulate flow and elevate CS pressure. CS narrowing has been demonstrated to improve perfusion to ischemic territories of the myocardium<sup>10</sup> and can lead to relief of symptoms in patients with refractory angina.

## The Reducer is intended to increase sub-endocardial perfusion

The Reducer is typically introduced into the coronary sinus by right heart catheterization through the right internal jugular vein, where it creates a slight increase in pressure and improves sub-endocardial perfusion.



It has been estimated that between **2 and 4%** of the population have angina<sup>8</sup>.

Up to **10%** of these patients have refractory angina<sup>9</sup>, the prevalence of which continues to increase<sup>1</sup>.

<sup>1</sup> European Heart Journal 2002;23:355-370  
<sup>2</sup> Nature Review Cardiology 2014;11:78-95  
<sup>3</sup> European Heart Journal 2013 34, 2949-3003  
<sup>4</sup> European Heart Journal 2006;27:1007-1009  
<sup>5</sup> Heart 2004;90:225-230

<sup>6</sup> Am J Cardiol 1999;84:598-600  
<sup>7</sup> Can J Cardiol 2009;25(7):399-401  
<sup>8</sup> ESC 2006  
<sup>9</sup> ESC Joint Study Group 2002

<sup>10</sup> Am J Physiol Heart Circ Physiol 280:H13610-H1367, 2001

“Reducer implantation was significantly better than a sham intervention to improve angina symptoms in patients with advanced coronary artery disease unsuitable for revascularization and treated with optimal therapy”<sup>11</sup>

<b>Cardiac death</b>	0	1
<b>MI</b>	2*	3

\* Two events occurred in the same patient. One peri-procedural NSTEMI adjudicated as possibly related to the timing of the procedure. The second NSTEMI was adjudicated as not related to the procedure or device, but a progression of disease in the LCx artery.

## FIM Long-term safety after 3 years<sup>12</sup>

	Baseline	6 months	3 years	P value
<b>CCS class</b>	3.07 ± 0.11	1.73 ± 0.22	1.57 ± 0.23	0.006
<b>Dobutamine Echo ischemia severity</b>	1.33 ± 0.28	0.55 ± 0.25	0.45 ± 0.16	0.02
<b>Thallium SPECT ischemia severity</b>	1.93 ± 0.06	1.47 ± 0.13	0.82 ± 0.26	0.03
<b>Maximal ST segment depression</b>	1.67 ± 0.33	0.78 ± 0.22	0.67 ± 0.33	0.03

The safety and performance of the Neovasc Reducer™ System is maintained 3 years after implantation. The improvement in angina and ischemia severity observed 6 months after implantation of the Reducer was maintained for 3 years<sup>12</sup>.

As with any medical procedure there are risks associated with use of the Neovasc Reducer™ System including, but not limited to, myocardial infarction, continued angina, and implant migration/dislodgement requiring medical intervention. For a complete list of potential complications consult the device Instructions for Use.

<sup>11</sup> New England Journal of Medicine, 2015;372:517-25

<sup>12</sup> JACC March 9 2010 Volume 55 Issue 10A A98.E927



Neovasc Inc., headquartered in Vancouver, B.C. Canada, is a specialty medical device company that develops, manufactures and markets products for the rapidly growing cardiovascular marketplace. Its products include the Neovasc Reducer™ System for the treatment of refractory angina, Tiara™ Mitral Valve with the Tiara™ Delivery System (in development) for the transcatheter treatment of mitral valve disease, and a line of advanced biological tissue products that are used as key components in a variety of third-party medical products, such as transcatheter heart valves.

Code	Product
RED-001	The Neovasc Reducer™ System

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