

Miracor Medical Systems GmbH Executive Summary

Introduction

Miracor Medical Systems GmbH ("Miracor" or the "Company") was founded to develop and commercialize the PICSO™ (Pressure-controlled Intermittent Coronary Sinus Occlusion) technology for acute coronary syndrome (ACS) and later heart failure patients. The initial market opportunity for PICSO™ is estimated to be 30% of all ACS patients treated per year. This patient group represents an addressable market of more than 1 Billion USD annually. The market segment grows proportionally with the number of angioplasties which has grown with 7.2% CAGR from 2002 to 2009. Worldwide 3.0 million angioplasties were performed in 2009¹. The Company has raised €6.2M to execute phase 1 of the 2-phase plan outlined below.

The first phase includes the development of the Miracor PICSO™ Impulse Console and Catheter, which will be used in a randomized clinical trial for ACS patients in Europe. This phase also includes European approval/CE-mark enabling the Company to start commercialization in Europe. The second phase will be a full European sales and marketing launch, US regulatory approval including US clinical trials, and further technology developments. The Company will start seeking financing for phase 2 in early 2010.

The PICSO™ technology intermittently occludes the venous outflow from the myocardium, thus increasing the coronary sinus pressure and redistributing flow into the ischemic zone. This occlusion may lead to angiogenesis. Following release of the occlusion toxic agents arising from the heart attack are washed out. PICSO™ has the potential to significantly improve standard revascularization outcomes for ACS patients by reducing infarct size and revitalizing damaged myocardium. PICSO™ may also be of benefit to heart failure patients and during cardiac surgery. The technology will be sold by selling the PICSO™ console to hospitals and by generating revenue from the catheters ("razor/razor-blade" business model).

Investment Highlights

A number of compelling reasons exist to support Miracor's development of PICSO™ for the interventional market. These include:

LARGE DEVICE-BASED MARKET OPPORTUNITY

Miracor is initially targeting the current acute coronary syndrome patient market segment and this represents an opportunity of more than 350,000 patients annually. The longer term worldwide market of ACS, heart failure and cardiac surgery patients who could benefit from the PICSO™ technology is estimated to be several Billions USD.

EXPERIENCED MANAGEMENT TEAM AND BOARD OF DIRECTORS

Miracor is led by Jon H. Hoem, a cardiology and cardiac surgery device industry veteran with more than 20 years' experience in the US and Europe. The founder and inventor, Prof. Werner

¹ 2010 Medtech Outlook, BMO Capital Partners, January 4th 2010, p. 33.

Mohl, is a practising cardiac surgeon. The Miracor management team has over 60 years of combined medical device development and commercialization experience. The board includes Thom Rasche (Earlybird) and Joey Mason (Delta Partners) who have considerable operational and investing experience in the medical device industry.

EARLY POSITIVE CLINICAL DATA EXIST

Mohl et al.² has published a randomized trial comparing 17 patients in each group receiving an early version of PICSO™ for an average of 59 minutes after revascularization of a proximal LAD stenosis. At 60 months follow-up a significant difference ($p < 0.0001$) between the two groups was demonstrated with regard to major adverse cardiovascular events (MACE). In addition to the reduced MACE, the PICSO™ group also showed a lower restenosis value at 30 days ($p = 0.0126$). After 48 months 100% of the patients in the PICSO™ group but only 55.6% in the control group were free from re-myocardial infarction. The PICSO™ group also showed longer cardiac event free survival ($p < 0.0001$). Miracor intends to repeat these findings in a new randomized trial in Europe using the new generation of the PICSO™ technology.

BROAD INTELLECTUAL PROPERTY POSITION

Miracor has secured 4 PICSO™ patents with other patents pending. The Company continues to build the IP position giving it a unique position to pursue Miracor's long term objectives and making it difficult for others to enter the field.

UNIQUE TECHNOLOGY ADDRESSES UNMET MEDICAL NEED

Timely and effective myocardial reperfusion using primary percutaneous coronary intervention (PCI) remains the most effective treatment strategy for limiting infarct size, reducing left ventricular remodeling and improving clinical outcomes following ST-segment elevation myocardial infarction (STEMI). Despite optimum primary PCI, the mortality and morbidity following a STEMI remains sizable. Clearly, primary PCI alone is not enough to eliminate the risk for future cardiovascular events. Paradoxically, the process of restoring coronary blood flow can in itself exacerbate the myocardial injury³. PICSO™ offers a new and innovative approach to reduce myocardial injury and to revitalize ischemic myocardium. The initial clinical results show positive effects on MACE, restenosis rates and long-term event free survival.

SOLID FINANCIAL BACKING

Miracor is currently funded through Earlybird (www.earlybird.com) and Delta Partners (www.delta.ie) and has received a grant from the Austrian Research Promotion Agency (FFG). Miracor expects to complete phase 1 of the Company's commercialization strategy and raise its Series B financing in 2011.

Please do not hesitate to contact Jon H. Hoem (jhoem@miracormedical.com) to receive further information.

² **Myocardial Protection via Coronary Sinus**; Long-term effects of Intermittent Coronary Sinus Occlusion as an adjunct to reperfusion in acute Myocardial Infarction; Mohl et al. Circ J 2008; 72: 526-533.

³ **Myocardial reperfusion injury**; Yellon DM and Hausenloy DJ. N Engl J Med 2007; 357: 1121-1135.