Diabetes – Selected Excerpts

The Basics of Diabetes

Diabetes is actually a group of diseases that either cause or allow abnormally high levels of the sugar glucose in the bloodstream. This excess glucose is responsible for most of the complications of diabetes, which include blindness, kidney failure, heart disease, stroke, neuropathy, and amputations.

There is currently no cure for diabetes. People with type 1 diabetes must take insulin several times a day and test their blood glucose concentration three to four times a day throughout their entire lives. Frequent monitoring is important because patients who keep their blood glucose concentrations as close to normal as possible can significantly reduce many of the complications of diabetes, such as retinopathy (a disease of the small blood vessels of the eye which can lead to blindness) and heart disease that tend to develop over time.

Stem Cell Approach

Stem Cell Diabetes Market Forecast, Prospective Procedures, US, 2006–2016

Year	Type 1 Diabetes Diagnosed	Type 2 Diabetes Diagnosed	New Type 1 Diabetes	Amputations due to Diabetes	Cases of Blindness Due to Diabetes	Annual Pancreas Transplants	Available Market for Stem Cell Therapy	Penetration Level	Total Annual Procedures	Growth (%)
2005										
2006										
2007										
2008										
2009										
2010										
2011										
2012										
2013										
2014										
2015										
2016						1,373				

Last year, we estimate, approximately 1,300 people with type 1 diabetes receive whole-organ pancreas transplants worldwide. After a year, 83% of these patients, on average, have no symptoms of diabetes and do not have to take insulin to maintain normal glucose concentrations in the blood. However, only one Type 1 diabetic person out of 1,700 is eligible to receive a transplant due to their availability and the cost of the operation. Furthermore, to prevent the body from rejecting the transplanted pancreas, patients must take powerful drugs that suppress the immune system for their entire lives, a regimen that makes them susceptible to a host of other diseases. Many hospitals will not perform a pancreas transplant unless the patient also needs a kidney transplant. That is because the risk of infection due to immunosuppressant therapy can be a greater health threat than the diabetes itself. But if a patient is also receiving a new kidney and will require immunosuppressant drugs anyway, many hospitals will perform the pancreas transplant.

For the complete *Stem Cell Analysis and Market Forecast 2006-2016,* click here.