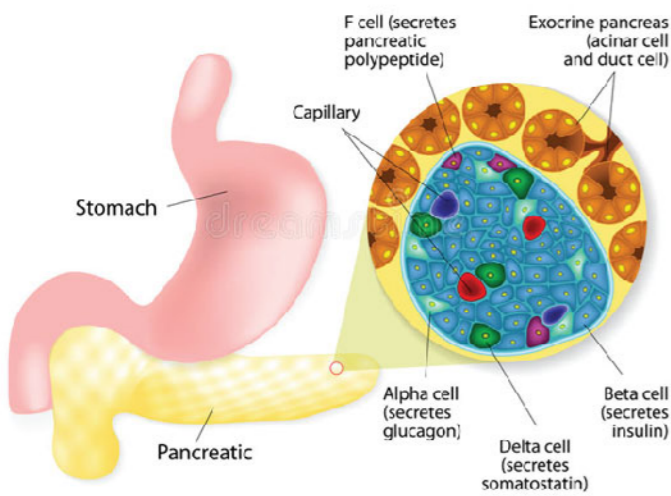


# TARGETED PRECURSOR(PROGENITOR) BRAIN STEM CELLS FOR DIABETES Type 1

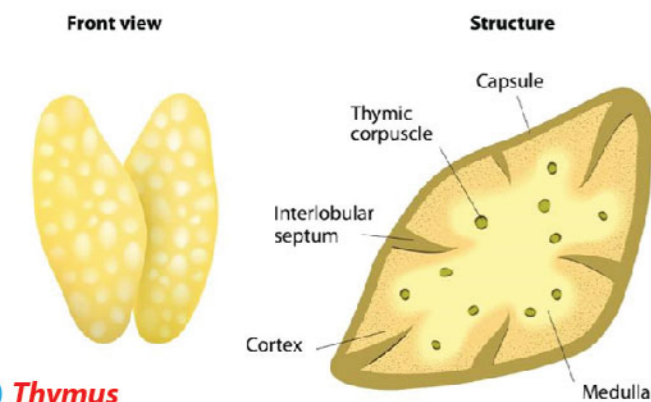
## Introduction

Diabetes Mellitus Type 1 is a form of diabetes mellitus in which not enough insulin is produced as a result of destruction of the beta cells of the islets of Langerhans of the pancreatic gland. This results in high blood sugar levels in the body.



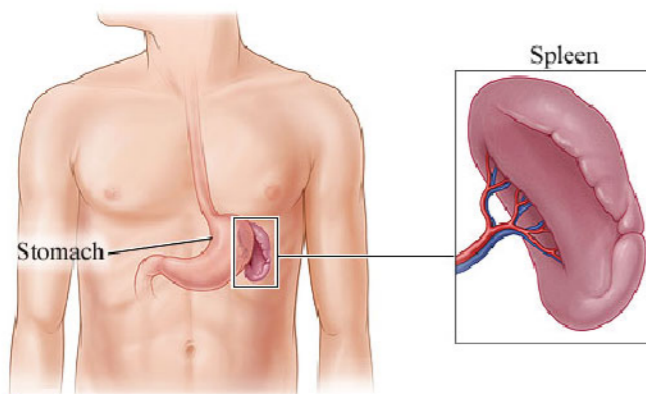
### 1 Islets of Pancreas (islets of Langerhan)

Description: are tiny clusters of cells scattered throughout the pancreas. Pancreatic islets contain several types of cells, including beta cells that produce the hormone insulin. Insulin helps cells throughout the body absorb glucose from the bloodstream and use it for energy.



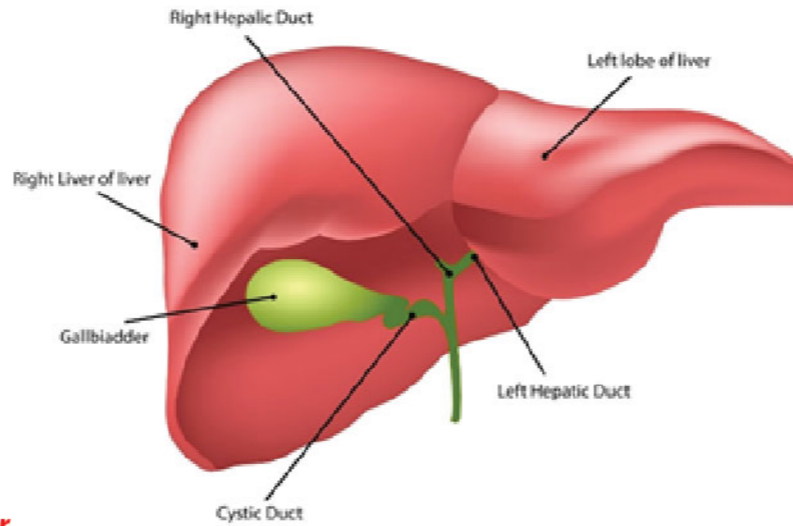
### 2 Thymus

Description: The thymus is a specialized primary lymphoid organ of the immune system. Within the thymus, T cells mature. T cells are critical to the adaptive immune system, where the body adapts specifically to foreign invaders.



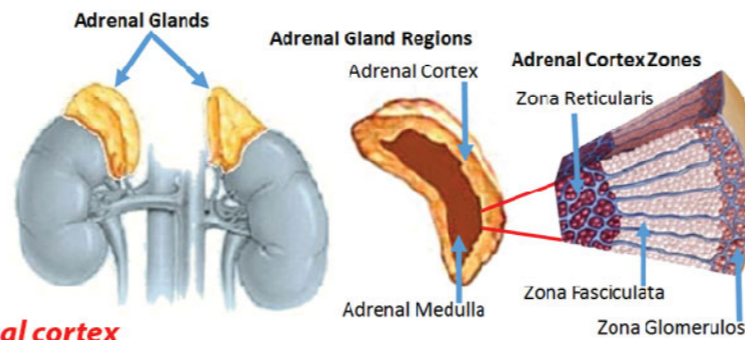
### 3 Spleen

Description: an abdominal organ involved in the production and removal of blood cells in most vertebrates and forming part of the immune system. It acts as a filter for blood as part of the immune system. Old red blood cells are recycled in the spleen, and platelets and white blood cells are stored there.



### 4 Liver

Description: The liver's main job is to filter the blood coming from the digestive tract, before passing it to the rest of the body. The liver also detoxifies chemicals and metabolizes drugs. As it does so, the liver secretes bile that ends up back in the intestines.

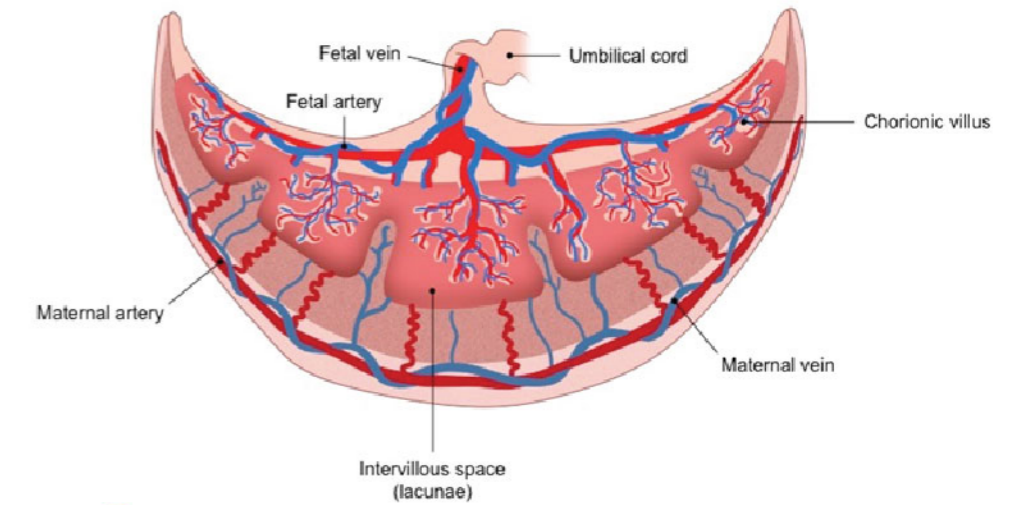
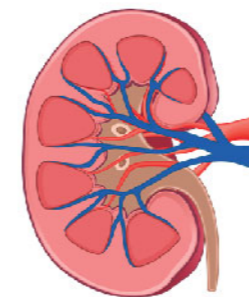


### 5 Adrenal cortex

Description: The adrenal cortex (the outer part of the gland) produces hormones that are vital to life, such as cortisol (which helps regulate metabolism and helps your body respond to stress) and aldosterone (which helps control blood pressure).

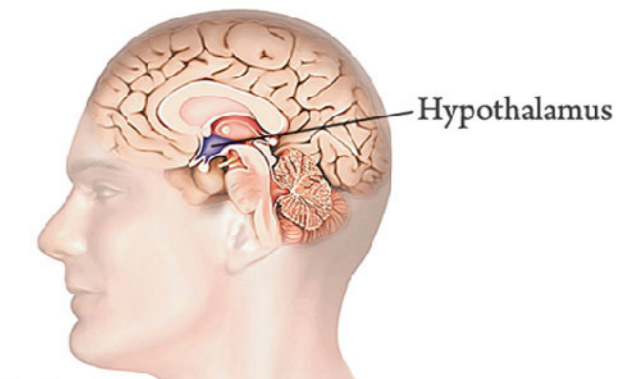
### 6 Kidney

Description:  
Removes waste products from the body.  
Removes drugs from the body.  
Balance the body's fluids.  
Release hormones that regulate blood pressure.  
Produce an active form of vitamin D that promotes strong, healthy bones.  
Control the production of red blood cells.



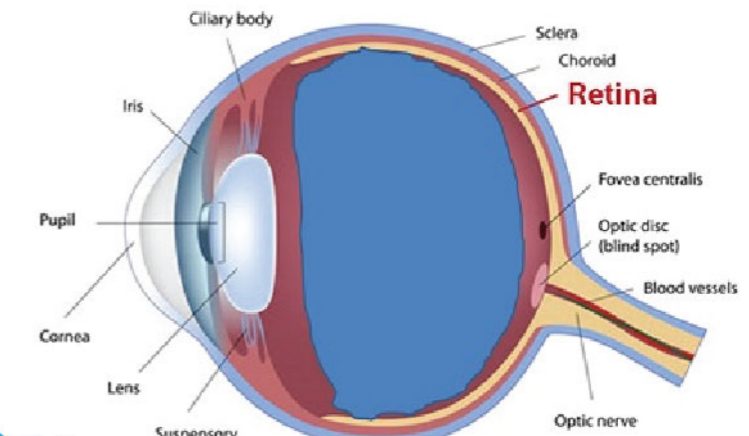
### 7 Placenta

Description: The main function of the placenta is to supply the baby with adequate nutrition. Blood from the mother goes through the placenta then into the umbilical cord attached, before reaching the baby. This blood contains oxygen, glucose and an array of other nutritional substances.



### 8 Hypothalamus

Description: it plays an important role in the nervous system as well as in the endocrine system. It is linked to another small and vital gland called the pituitary gland.



### 9 Retina

Description: The retina is a thin layer of tissue that lines the back of the eye on the inside. It is located near the optic nerve. The purpose of the retina is to receive light that the lens has focused, convert the light into neural signals, and send these signals on to the brain for visual recognition.

## The Recommended Targeted Precursor Brain Stem Cells for Diabetes Type 1

- |                                            |                  |
|--------------------------------------------|------------------|
| 1 Islets of Pancreas (islets of Langerhan) | 5 Adrenal cortex |
| 2 Thymus                                   | 6 Kidney         |
| 3 Spleen                                   | 7 Placenta       |
| 4 Liver                                    | 8 Hypothalamus   |
|                                            | 9 Retina         |