



THE SCIENCE *of* POSSIBILITY

VX20-880-101

JUNE 2021

VX20-880-101

A Phase 1/2 Study to Evaluate the Safety, Tolerability, and Efficacy of VX-880 in Subjects Who Have Type 1 Diabetes Mellitus with Impaired Hypoglycemic Awareness and Severe Hypoglycemia

- **Primary Objective:** Provide replacement cells for the ones that have been lost or don't work properly in people with diabetes.
- **Study design:** Single-arm, open-label
- **Sample Size:** 17 adult subjects (18-65 yrs) with T1DM
- **Study Endpoints**
 - **Primary Outcome Measures**
 - Safety and tolerability
 - Proportion of participants free of severe hypoglycemic events with either HbA1c <7.0% or a $\geq 1\%$ reduction in HbA1c from baseline
 - **Secondary Outcome Measures**
 - Proportion of participants who are insulin independent
 - Changes in stimulated C-peptide
- **Study Duration:** 5 years (+ long term follow-up)

THERAPEUTIC RATIONALE

β -cell replacement via either whole-pancreas organ or isolated islet transplantation has emerged as a potential therapeutic option to replace exogenous insulin therapy for patients with T1D.

However, whole organ transplant is a major surgery with numerous risks, and has a 20% rate of organ rejection after 1 year.

When successful, β -cell replacement can be highly effective in normalizing blood glucose and protect T1D patients from developing long-term complications of diabetes.

Unfortunately, the scarcity of suitable deceased donors for pancreas procurement significantly limits the ability to utilize whole-pancreas or cadaveric islet transplantation as options for β -cell replacement.

VX-880 is a mixture of islet cells made from human embryonic stem cells

Compared to cadaveric islet transplantation, treatment with VX-880

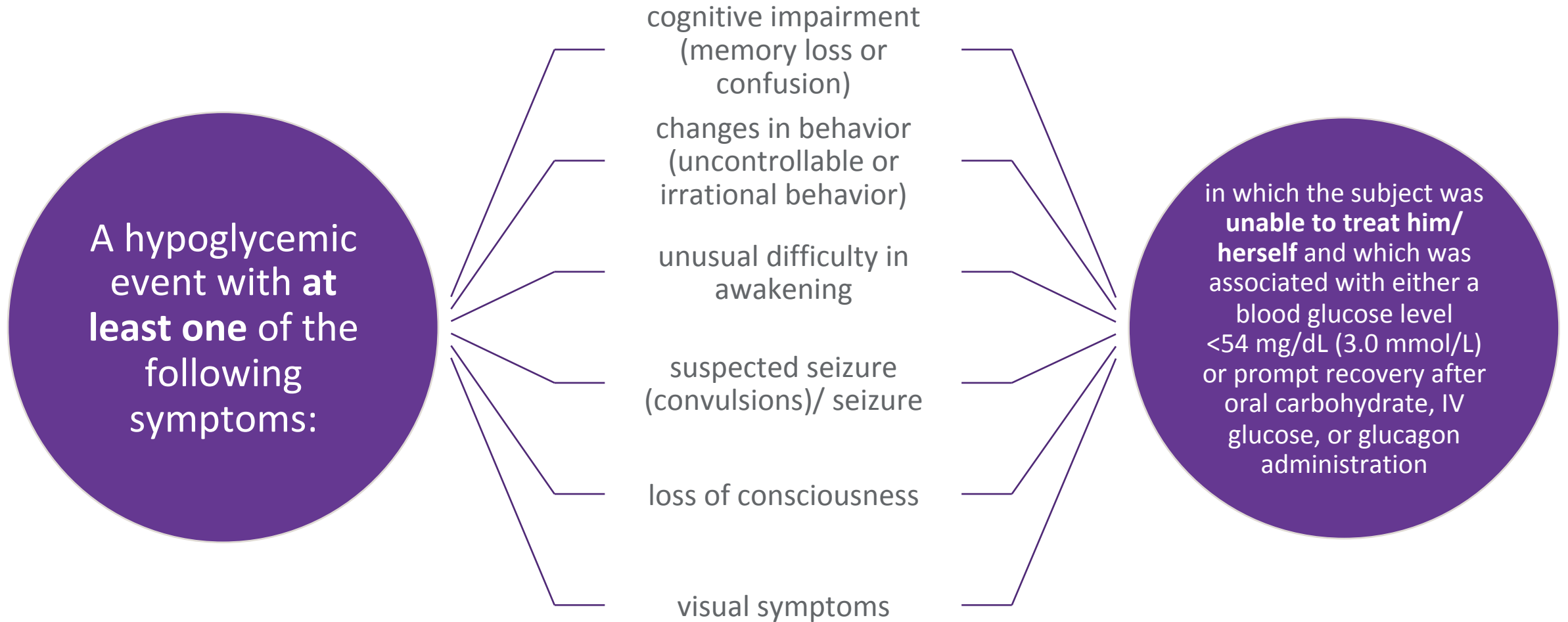
- Overcomes the limited supplies of cadaveric tissue availability issue, allowing higher doses to be delivered in single infusion
- Provides more homogeneous cell preparations with the potential for a more consistent product leading to improved outcomes

VX20-880-101 STUDY ELIGIBILITY

- Male or female between the ages of 18 and 65 (inclusive)
- Clinical history of T1D with > 5 years of duration
- At least two episodes of **documented** severe hypoglycemia in the 12 months prior to enrollment
- Blood type of A or AB
- Consistent use of continuous glucose monitor (CGM) for at least 3 months before Screening and willingness to use CGM for the duration of the study
- Do not have advanced complications associated with diabetes including untreated proliferative retinopathy, skin ulcers, or amputations attributable to diabetes
- Willing and able to comply with the study instructions

There are additional eligibility requirements, which the study doctor will explain during the screening procedure.

DEFINITION OF SEVERE HYPOGLYCEMIC EVENTS



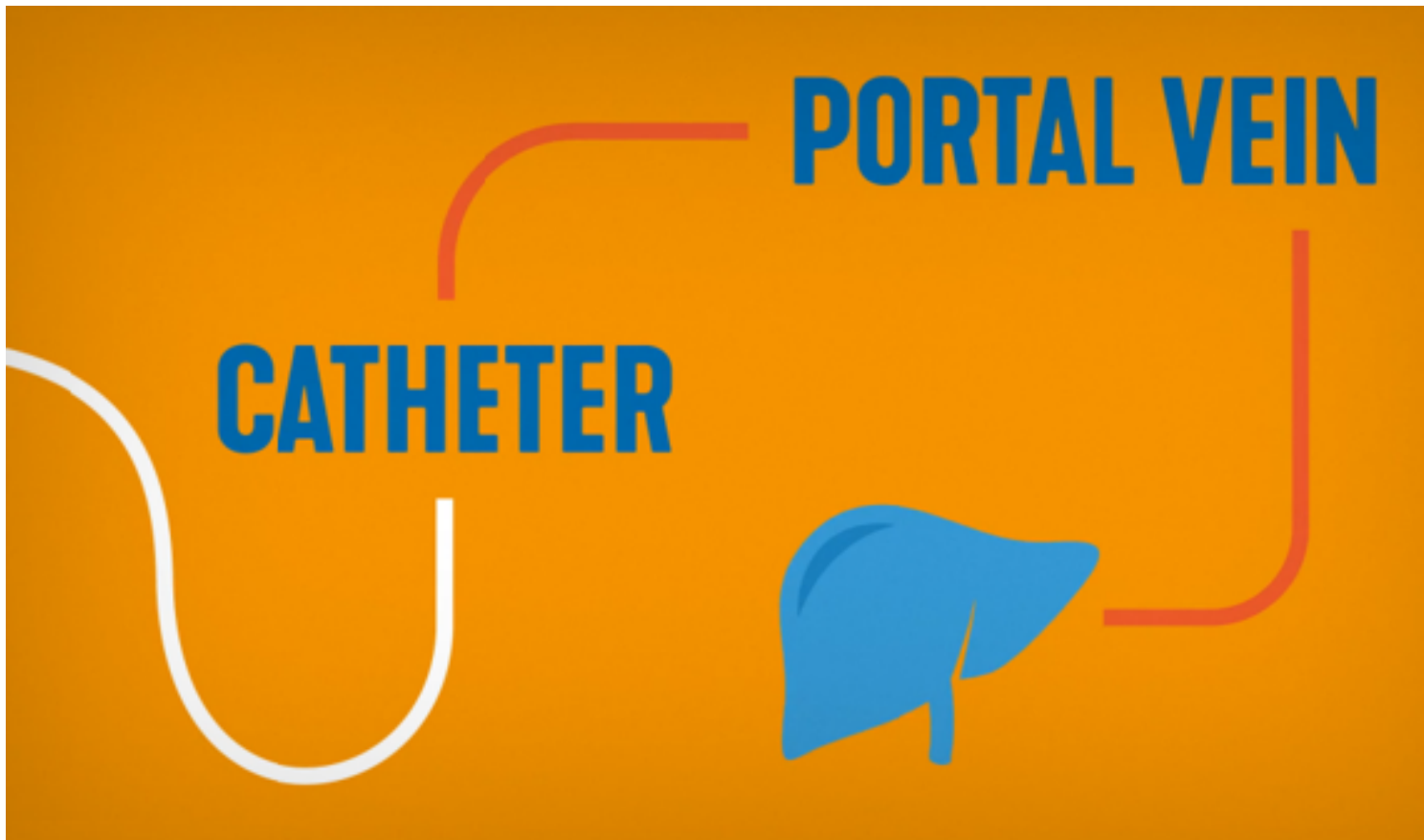
STUDY PARTICIPATION

- The infusion of islet cells will occur up to 90 days after the screening visit.
- Prior to a planned islet cell infusion, participants will be admitted to the hospital for approximately three days and will remain in the hospital for approximately four more days after the infusion for safety monitoring.
- Participants will be required to use immunosuppression medications for the entire duration of the study. These are drugs that are taken every day and prevent the body from destroying the infused islet cells.
- Participants must wear a CGM device which is provided by Vertex at no cost.
- The follow-up period after the infusion is approximately five years during which participants will attend follow-up visits monthly after the infusion for the first year and about every three months thereafter.
- Some of these visits can be done at the participant's home with a home health nurse.
- All study procedures are at no cost

VX-880 INFUSION PROCESS

The islet cells are delivered to the study participants through an infusion into a large vein in the liver (portal vein)

The infusion will occur slowly over approximately 30 to 90 minutes



RESOURCES

<https://t1dstudy.com/>

<https://www.clinicaltrials.gov/ct2/show/NCT04786262>

Q & A