Methods For Quantifying Pancreatic Beta Cell Function And Mass Properties With Radiomanganese Positron Emission Tomography

View U.S. Patent Application Publication No. US-2018-0271470 in PDF format.

WARF: P150361US02

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The Invention

Methods for imaging beta cells in pancreatic tissue using radioisotopes of manganese, which may be referred to as radiomanganese, are described. Example radioisotopes of manganese include Mn-52g, Mn-52m, and Mn-51. As one example, radiomanganese can be used to image pancreatic beta cells, in which radiomanganese shows a preferential uptake. This provides for applications such as quantifying beta cell mass (e.g., functional beta cell mass), assessing transplant viability, and monitoring the efficacy of drug treatments. A pharmacological agent can be administered to modulate the uptake of divalent metals by the pancreatic beta cells, which can be correlated to a modulated uptake of radiomanganese to estimate pancreatic beta cell mass, function, or both.

Additional Information

For More Information About the Inventors

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Tech Fields

- Medical Imaging : Other diagnostic imaging

For current licensing status, please contact Jeanine Burmania at jeanine@warf.org or 608-960-9846