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(54) Title: COMPOSITIONS, METHODS, AND SYSTEMS FOR THE SYNTHESIS AND USE OF IMAGING AGENTS

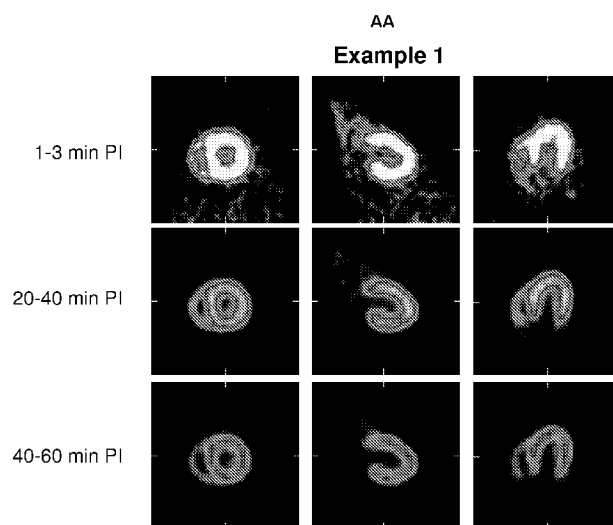


FIGURE 2

(57) Abstract: The present invention relates to systems, compositions, and methods for the synthesis and use of imaging agents, or precursors thereof. An imaging agent precursor may be converted to an imaging agent using the methods described herein. In some cases, the imaging agent is enriched in ^{18}F . In some cases, an imaging agent may be used to image an area of interest in a subject, including, but not limited to, the heart, cardiovascular system, cardiac vessels, brain, and other organs. In some embodiments, methods and compositions for assessing perfusion and innervation mismatch in a portion of a subject are provided.

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