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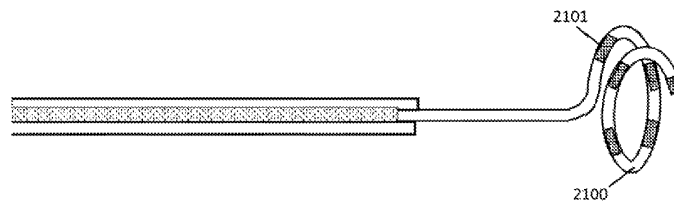
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(54) Title: SYSTEM AND METHOD FOR MAPPING FUNCTIONAL NERVES INNERVATING WALL OF ARTERIES, 3-D MAPPING AND CATHETERS FOR SAME

Figure 21A



(57) Abstract: Systems and methods for locating and identifying nerves innervating the wall of arteries such as the renal artery. The systems and methods identify areas on vessel walls that are innervated with nerves; provide indication on whether energy is delivered accurately to a targeted nerve; and provide immediate post-procedural assessment of the effect of energy delivered to the nerve. The methods include evaluating change in physiological parameters after energy is delivered to an arterial wall; and determining the type of nerve that the energy is directed to based on the evaluated results. The system includes at least a device (101) for delivering energy to the wall of blood vessel; sensors (103) for detecting physiological signals from a subject and indicators (105) to display results obtained using the method. The system includes catheters for performing mapping and ablating functions.

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