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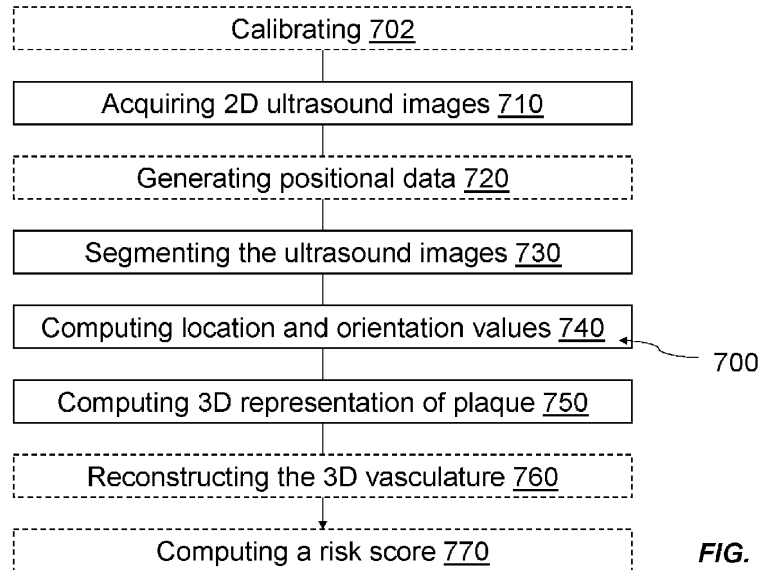
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(54) Title: THREE-DIMENSIONAL CHARACTERIZATION OF ATHEROSCLEROTIC PLAQUES USING TWO-DIMENSIONAL ULTRASOUND IMAGES



(57) Abstract: Devices, systems, computer readable mediums and methods i) for computing a three- dimensional representation of the atherosclerotic plaque in at least one blood vessel from a plurality of two-dimensional ultrasound images, ii) for rapid acquisition of vascular imaging data; iii) for improving medical scan quality utilizing a guidance and feedback system; iv) for processing a three-dimensional reconstruction of a vasculature to simulate and predict flow dynamics in the vasculature; v) for setting boundary conditions and solving the Navier-Stokes equation for simulating blood flow in a vasculature; and/or for automated measurement of diameter and characterization of stenosis and disease from vascular structures within a body.

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