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Arnold et al.

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(54) **AUTOMATED CALCIUM SCORING OF THE AORTA**

(75) Inventors: **Ben A. Arnold**, Columbia, KY (US);
Judd E. Reed, Santa Rosa, CA (US)

(73) Assignee: **Ben A. Arnold**, Columbia, KY (US)

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(58) **Field of Classification Search**
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See application file for complete search history.

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Primary Examiner — Baisakhi Roy
(74) *Attorney, Agent, or Firm* — Jerry Turner Sewell

(57) **ABSTRACT**

A method automatically scores calcium in the aorta and other arteries of the body using calcium plaque definitions that include subject specific in vivo blood/muscle density measurements, subject specific voxel statistical parameters and 2D and 3D voxel connectivity criteria to automatically identify the plaques. The images are optionally calibrated with external phantoms or internal reference tissue. Aortic calcium is identified automatically without manual marking. Potential false plaques from bone are automatically excluded. A 3D coordinate system provides the specific coordinates of the detected plaques, which are displayed in a plaque map for follow-up exams or ease in plaque review.

21 Claims, 10 Drawing Sheets

