(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
12 September 2025 (12.09.2025)

WIPO | PCT

(10) International Publication Number
WO 2025/184701 A1

(51) International Patent Classification:
G06T 7/00 (2017.01) *A61B 6/50* (2024.01)
A61B 6/00 (2024.01) *G16H 50/20* (2018.01)
A61B 6/03 (2006.01) *G16H 50/30* (2018.01)

(21) International Application Number:
PCT/AU2025/050205

(22) International Filing Date:
07 March 2025 (07.03.2025)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2024900612 08 March 2024 (08.03.2024) AU
2024902678 27 August 2024 (27.08.2024) AU

(71) Applicant: **ARTRYA LIMITED** [AU/AU]; 235 St Georges Terrace, Perth, Western Australia 6000 (AU).

(72) Inventors: **KWOK, Sze Man**; 11 Lysons Way, Bateman, Western Australia 6150 (AU). **NIU, Kai**; 10 Alpina Bend, Canning Vale, Western Australia 6155 (AU). **DWIVEDI, Girish**; 43 Gallop Road, Dalkeith, Western Australia 6009 (AU). **IHDAYHID, Abdul Rahman**; 16 Canning River Gardens, Wilson, Western Australia 6107 (AU).

(74) Agent: **IIP GROUP PTY LTD**; 1/186 Hampden Rd, Nedlands, Western Australia 6009 (AU).

(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CV, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, MG, MK, MN, MU, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UY, UZ, VC, VN, WS, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, CV, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SC, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, ME, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

(54) Title: A METHOD OF AND SYSTEM FOR PLAQUE SCORING OF CORONARY ARTERIES

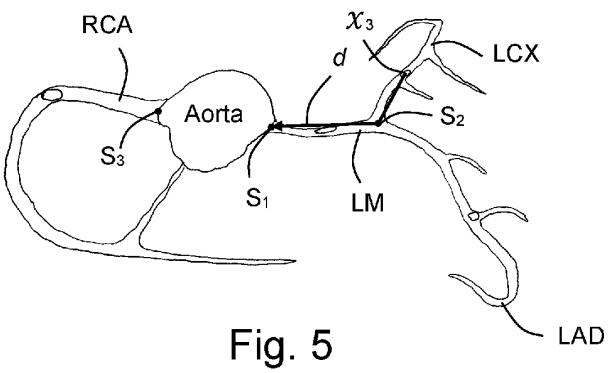


Fig. 5

(57) Abstract: A method of automatically determining a plaque score for coronary arteries of a patient is disclosed. The method involves receiving cardiac CT data indicative of a cardiac CT scan carried out on the patient, and analysing the cardiac CT data to identify plaque volumes to be included in the plaque score, the plaque volumes located on the coronary arteries. The method also includes determining locations of the identified plaque volumes on the coronary arteries, applying machine learning to the cardiac CT data to identify a plurality of primary key points on the coronary arteries, determining a distance between each identified plaque volume and an associated primary key point, and determining a plaque score based on a heart dimension value and, for each identified plaque volume, the determined distance from the identified plaque volume to the associated primary key point.

WO 2025/184701 A1

[Continued on next page]

Published:

— *with international search report (Art. 21(3))*

— *in black and white; the international application as filed contained color or greyscale and is available for download from PATENTSCOPE*