

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
31 July 2025 (31.07.2025)



(10) International Publication Number
WO 2025/159701 A1

(51) International Patent Classification:

G06T 7/10 (2017.01) G16H 50/00 (2018.01)
G16H 30/40 (2018.01)

(21) International Application Number:

PCT/SG2025/050067

(22) International Filing Date:

27 January 2025 (27.01.2025)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

10202400229U 26 January 2024 (26.01.2024) SG

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(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,

(54) Title: METHODS AND SYSTEMS FOR LESION CHARACTERISATION

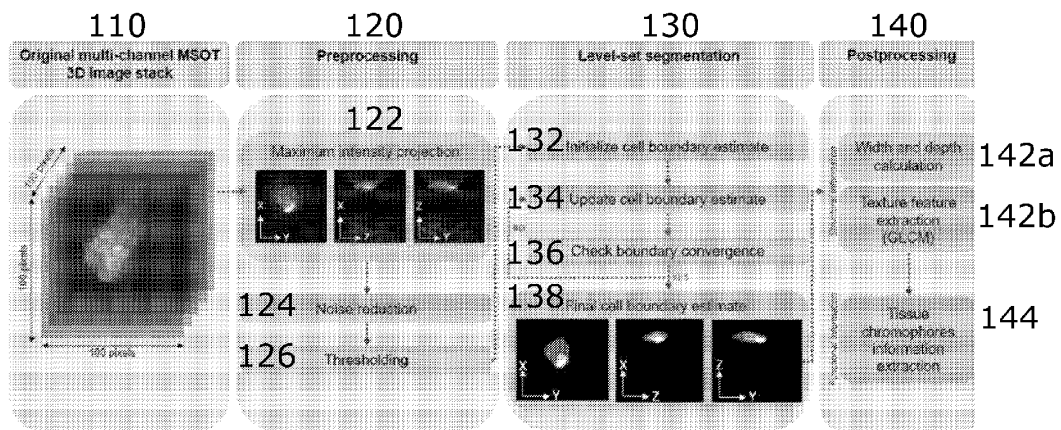


Figure 1

(57) Abstract: Systems and methods for delineating tumour boundaries using a three-dimensional (3D) image stack, such as photoacoustic image slices, comprising a plurality of images. Multiple maximum intensity projections (MIPs) are derived from the stack, and level set segmentation is performed on those MIPs, to derive a boundary that bounds a region of interest (i.e., a tumour boundary). Structural and functional information is then derived for the region of interest, to analyse the tumour tissue.

[Continued on next page]

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).

Declarations under Rule 4.17:

— *of inventorship (Rule 4.17(iv))*

Published:

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