

(19)



(11)

EP 4 560 644 A8

(12)

CORRECTED EUROPEAN PATENT APPLICATION

(15) Correction information:

Corrected version no 1 (W1 A1)

Corrections, see

Bibliography INID code(s) 71

(51) International Patent Classification (IPC):

G16H 30/40 ^(2018.01) **G16H 50/20** ^(2018.01)

G16H 50/30 ^(2018.01)

(52) Cooperative Patent Classification (CPC):

G16H 50/20; G16H 30/40; G16H 50/30

(48) Corrigendum issued on:

09.07.2025 Bulletin 2025/28

(43) Date of publication:

28.05.2025 Bulletin 2025/22

(21) Application number: **23315438.4**

(22) Date of filing: **24.11.2023**

(84) Designated Contracting States:

**AL AT BE BG CH CY CZ DE DK EE ES FI FR GB
GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL
NO PL PT RO RS SE SI SK SM TR**

Designated Extension States:

BA

Designated Validation States:

KH MA MD TN

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(54) **METHODS FOR TRAINING AND USING A MACHINE LEARNING MODEL FOR PREDICTING A LIKELIHOOD OF AN EVENT OCCURRING IN A PATIENT HAVING A MALIGNANT TUMOUR**

(57) Methods for training and using a machine learning model for predicting a likelihood of an event occurring in a patient having a malignant tumour are provided. The method of using the machine learning model includes inputting a pathology image of a portion of a malignant tumour of a patient and one or more categorical risk factors associated with the malignant tumour or the patient. The method also includes extracting, from the

pathology image, one or more features relating to one or more properties of the malignant tumour. The method further comprises determining a predicted likelihood of an event occurring in the patient based on the extracted features and the one or more categorical risk factors. The method additionally includes outputting the predicted likelihood.

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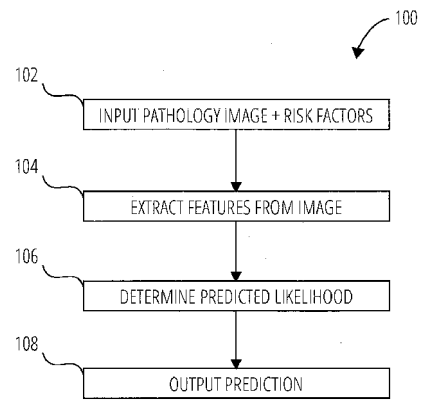


FIG. 1