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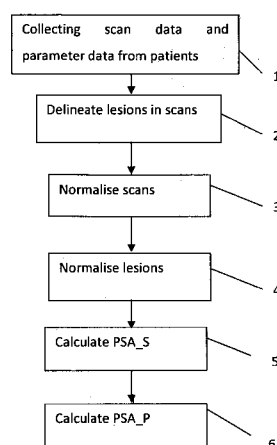


Fig. 1

(57) Abstract: Medical scan data, such as brain scan data, from a plurality of patients suffering from a medical condition such as a stroke is used to construct a probabilistic atlas. A first portion of the atlas indicates, for each location, the corresponding likelihood of a medical abnormality (such as a lesion) associated with the medical condition being present at that location. A second portion of the atlas includes, for each location and each of one or more parameters, corresponding parameter data indicative of the values taken by the parameter for those patients suffering from the medical abnormality at the corresponding location. The probabilistic map can be used to extract outcome data from a scan obtained from a new subject, such as by locating a medical abnormality within the scan of the subject, and obtaining the outcome data using the corresponding locations in the probabilistic map.

