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Melanoma Institute Australia to exploit IBM's cognitive technology in melanoma R&D

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Singapore: IBM Research in Australia has announced plans to undertake research with Melanoma Institute Australia to help further advance the identification of melanoma using cognitive technology.

This planned research builds on IBM's existing research agreement with MoleMap, which uses advanced visual analytics to analyze more than 40,000 data sets including images and text. IBM Research plans to analyze dermatological images of skin lesions to help identify specific clinical patterns in the early stages of melanoma1. The Australian research aims to help reduce unnecessary biopsies and help clinicians more accurately understand skin cancer, which could help to improve patient care.

Using advanced visual analytics IBM Research will conduct retrospective analysis on de-identified data, which will include access to more than one million images from 9,000 Australian and New Zealand patients, as well as text based clinical notes in an effort to improve the accuracy of its machine learning algorithms. IBM's cognitive technology would aim to learn to understand skin cancers such as melanoma, basal cell carcinoma and squamous cell carcinoma using lower resolution clinical images, with a goal of similar accuracy to what can be achieved with dermoscopy images.

The planned research aims to scale and test this performance. Melanoma Institute Australia and MoleMap will help IBM Research to further train and validate the algorithms to help improve the understanding and identification of early stages of melanoma, which could help to improve patient care.

Dr Joanna Batstone, Vice President and Lab Director, IBM Research - Australia said, "Cognitive computing has the ability to process vast amounts of complex data including images and text very quickly, something that isn't possible by current manual methods. Another major benefit of the self-learning technology is that it improves as more and more data is fed into it. This initiative could inform future research and, potentially, the development of offerings that could have enormous implications for

both the Australian public and the health system."