

TITLE DMScan, breast cancer risk prediction software

DESCRIPTION OF TECHNOLOGY

A group of researchers from the Informatics Technology Institute of the Polytechnic University of Valencia, the *Instituto de Salud Carlos III* (ISCII) and the Valencia Foundation for the Promotion of Health and Biomedical Research (FISABIO) have created the new DMScan software to help in determining the risk of suffering breast cancer.

The human breast is mainly composed of adipose and fibroglandular tissue at a density that depends on the proportion of the latter in relation to breast size. DMScan can distinguish between dense tissue and fat and put a quantity on this value. It thus offers a continuous measure that is much more objective than the present system of visual inspection.

The tool uses Artificial Vision, Shape Recognition and Automatic Learning methods to help estimate the risk of breast cancer from digital mammography images.

The software includes a statistical model created from a data base of more than 3,600 mammograms

in DICOM format as a reference to classify new cases. The system is trained to use the data base to classify a new mammogram with reference to the existing images.

DMScan can also classify mammograms semi-automatically; the user only has to select a few parameters which the program uses to estimate mammographic density.

It also has an automatic classification algorithm based on a combination of image processing and supervised classification techniques.

Apart from medical applications, DMScan can be used in research for studies on breast density from large numbers of images, for example on relating breast density with a specific genotype.

BUSINESS APPLICATION SECTORS

- The application can be used in R&D, as a biomarker analysis tool in mammography, or in a clinical environment to estimate the risk of contracting breast cancer.

TECHNICAL AND COMMERCIAL ADVANTAGES

- Defines the population at risk
- Helps early detection of breast cancer
- Objective evaluation of breast density
- The value is calculated automatically and thus assists radiologists
- Image processing in only 3-4 seconds
- Optimises hospital screening programs

STATE OF TECHNOLOGY

The software has been completely developed and is currently in use in research projects.

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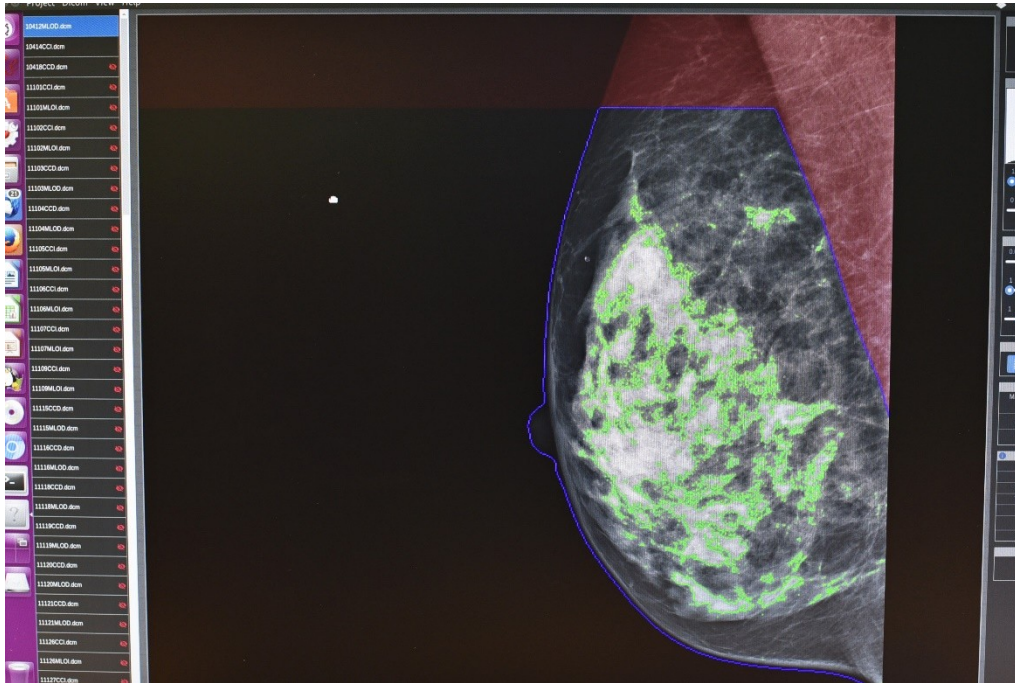
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On April 3, 2017, UPV registered this software.

DESIRED COOPERATION

UPV is searching for companies interested in establishing agreements to acquire the license of the software for its use and commercialization.

RELATED IMAGES



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