



Launch of web-based tool to predict risk of bone fracture

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It will soon be possible for anyone over 60 to predict their individual risk of bone fracture with the aid of a simple web-based tool, developed by the Sydney-based Garvan Institute of Medical Research.

The tool will be accessible online from the end of March at www.fractureriskcalculator.com

Each person has a unique risk profile, a combination of five factors including sex, age, weight, history of prior fracture, number of falls in the past 12 months and bone mineral density.

Scientists from Garvan developed the tool using data, accumulated over 17 years, from the internationally recognised Dubbo Osteoporosis Epidemiology Study. A paper describing the tool and its methodology was published online today in the prestigious international journal, *Osteoporosis International*.

“The biggest challenge at the moment is how to develop prognostic tools that allow individuals and their doctors to predict risk of fracture” said Professor John Eisman, Director of Garvan’s Bone and Mineral Research Program.

Associate Professor Tuan Nguyen, whose team at Garvan developed the tool, said “We have kept our model simple and easy to use. In addition to the web-based version, it is also available on paper as a nomogram, a simple graph which is easy for a clinician to complete.”

The prognostic tool was developed in two stages. First, people from the Dubbo epidemiological study were separated into ‘low risk’ and ‘high risk’ categories. Their risk factors were combined in a statistical model, allowing scientists to derive the weighting for each risk factor. For these analyses, the Dubbo population was split into two halves. Scientists derived the prognostic model from one half and then applied the model to the other half to ensure that it accurately predicted their fracture risk.

This Tool has the potential to allow individuals to make informed judgments about their actual risk of having an osteoporotic fracture and what steps they may wish to take to reduce that risk.

ABOUT GARVAN

The Garvan Institute of Medical Research was founded in 1963. Initially a research department of St Vincent's Hospital in Sydney, it is now one of Australia's largest medical research institutions with approximately 400 scientists, students and support staff. Garvan’s main research programs are: Cancer, Diabetes & Obesity, Arthritis & Immunology, Osteoporosis, and Neuroscience. The Garvan’s mission is to make significant contributions to medical science that will change the directions of science and medicine and

have major impacts on human health. The outcome of Garvan's discoveries is the development of better methods of diagnosis, treatment, and ultimately, prevention of disease.

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