

Monday 24<sup>th</sup> September 2012

## Research endorses national standard for assessment of kidney function in Indigenous Australians

A new Menzies School of Health Research (Menzies) study has backed the nation's standard kidney function test for Indigenous Australians, deeming it accurate and valid.

An accurate measurement of kidney function is critical to Indigenous health outcomes, as the incidence of end-stage kidney disease (ESKD) is up to 15 times higher in Indigenous than it is in non-Indigenous Australians.

At the end of 2008, more than 1,300 Indigenous Australians were receiving treatment for end-stage kidney disease (7.4% of the 17,604 Australians receiving treatment).

In August this year, the Australasian Creatinine Consensus Group recommended a new formula called CKD-EPI serve as the nation's standard kidney function test, known as eGFR.

However concern has been raised that eGFR may be an inappropriate measure because Indigenous Australians have a different body build to non-Indigenous Australians.

To validate the test for this population, Menzies tested 600 Indigenous Australians and 100 non-Indigenous Australians in five regions across Northern Australia.

This included Queensland's Far North, Western Australia's Kimberley and Kalgoorlie regions and the Northern Territory's Top End and Central Australia.

Menzies' four year study was recently published in the prestigious [American Journal of Kidney Disease](#). Chief Investigator and Menzies' Diabetes specialist Dr Louise Maple-Brown said the results showed that the CKD-EPI formula for eGFR is robust.

"The study came out in support of the kidney function test known as CKD-EPI eGFR, and found it to be an accurate and reliable test of kidney function in Indigenous Australians, similar to reports that it is accurate and reliable in non-Indigenous Australians..

"In particular, our results show that CKD-EPI measures kidney function in healthy Indigenous people more precisely, and we have reported that the previous test known as MDRD formula was underestimating kidney function for this group by an average of 10%, so that's a positive outcome.

"We can now more accurately track the progression of kidney disease, and health care providers can use the kidney function test across Australia with confidence," said Dr Maple-Brown.

In the United States, the formula includes a correction factor for African Americans, however Menzies has reported that this correction factor should not be used in the assessment of kidney function in Indigenous Australians.

The study entitled *Accurate Assessment of Kidney Function in Indigenous Australians: The Estimated GFR Study*, was funded by the National Health and Medical Research Council (NHMRC), following a pilot study supported by Kidney Health Australia.

Data collected in this study will be utilised to look at the progression of kidney disease in a NHMRC funded project running from 2012 to 2015.

Called *Progression of kidney damage in Indigenous Australians*, the \$758,000 project will look at rates of progression of kidney disease and the factors influencing that.

“Until now most studies have looked at end stage kidney disease but not at the rates of progression more broadly across Australia, so this project will help us understand why some Indigenous Australian kidney disease patients progress rapidly and some patients don’t.

“Then we can start to look at targeting some of the key risk factors we identify,” said Dr Maple-Brown.

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**Background:**

Menzies School of Health Research is the national leader in Aboriginal and Torres Strait Islander health research. It is the only medical research institute in the NT and the only one in Australia with a major focus on Indigenous health. Menzies has more than 300 staff working in over 60 communities in Central and Northern Australia, as well as developing countries in the region. Menzies is also a significant contributor to health education and research training. Its major research programs include infectious diseases, chronic diseases, environmental health, health services research, social determinants of health, mental health, and international health.