# NEW BLOOD TEST FAILS TO SET HEARTS RACING

The country's top cardiologists have warned doctors against blanket routine or inappropriate use of a simple, 'easy to interpret' blood test for heart failure now being aggressively touted as a long-awaited diagnostic tool, with sales up by 120% last year.

The NTProBNP (N-terminal pro-brain natriuretic peptide) test, introduced to South Africa 3 years ago, is taking hold with demand among cardiologists, GPs and physicians reaching unprecedented levels last year.

*Izindaba* probed some of the claims made by its distributors after they repeatedly approached us in January, claiming the test had 'taken America and Europe by storm', with four symposiums already held around the product. An aid in the early detection of cardiovascular disease, the test shows increased levels of a neurohormonal marker that has been shown to be of prognostic significance in patients with heart failure or coronary heart disease. It measures a particular protein secreted chiefly by the ventricular heart muscle when under stress.

Dr Yossi Sammy, clinical marketing manager for the distributors, Roche Diagnostics, boasted that its accuracy helped avoid unnecessary referrals, hospitalisation, medication and investigations.

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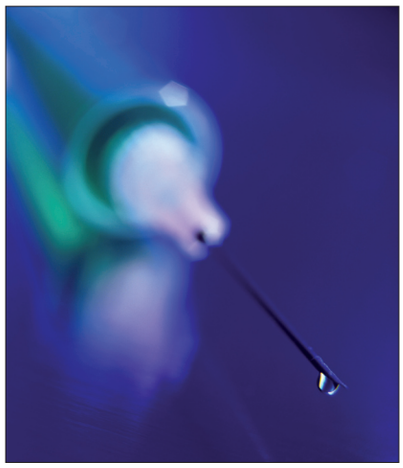
## Heart chiefs circumspect

However, some of the cardiology chiefs at the top academic hospitals and universities in Cape Town, Durban and Johannesburg said it could actually increase all of the above, if inappropriately used. All warned against blanket routine testing and said the test was not 100% specific for heart failure. While agreeing on its value as a 'rule out' test, they warned about the 'grey area' of slightly elevated readings, all of which could be attributed to causes other than coronary heart disease.



Professor Datshana Naidoo, head of the department of cardiology at the Nelson Mandela School of Medicine in Durban, said the test's main value was to exclude heart failure rather than diagnose it. 'It sounds like a contradiction, but if levels are absolutely normal you can confidently say there's no heart failure – but once they're elevated you have to ask what the other possible causes are,' he warned. BNP's chief value was as a marker of ventricular function.

Naidoo, Professor Patrick Commerford, head of cardiology at the University of Cape Town's Medical School and Professor Rafique Essop, cardiology chief at the Chris Hani/Baragwanath Hospital, concurred that the test was a supplement to a full clinical assessment, together with X-rays, ECGs and, where appropriate, echocardiogaphy.

Naidoo stressed: 'You also have to have BNP values that are appropriate to age and gender, because levels go up with the age and for females. For example, if a patient comes in wheezing, you would examine the patient and do a peak flow estimation to assess whether this is asthma – BNP doesn't even feature'.

His advice to GPs who are dubious about a diagnosis of acute dyspnoea or heart failure was simple: 'Go by the history and clinical examination – in 90% of patients there is absolutely no doubt about the diagnosis and BNP is of little value – even in following up patients, because it's simply too expensive' (about R350 per test).

## Room for abuse

Added Essop: 'Like everything else in medicine, there's a role for new technology and techniques, but the question is to define what that role is – if it's not done carefully it can be abused'. He said it was totally inappropriate to do the test on an overweight person who was 'slightly short of breath'.

'High BNP in a patient who doesn't have heart failure means nothing,' he added.

Essop said that in a country like South Africa where health care resources were limited, aggressively promoting a product like NTProBNP was not always in the interests of patients. 'We have to rely on our clinical acumen and use the tools on hand in the best way and not just grab at technology used elsewhere,' he added.

Commerford agreed, adding that the test had a 'role to play in a small group of patients, but from what I can see it's being massively overused'. Instead of reducing referrals, especially in rural areas, the test could result in major unnecessary expense for people who could least afford it. 'There's a

use for it in an emergency room when you're faced with a difficult problem and maybe prognostically in selected patients, but it's not a shotgun,' he cautioned.

Essop said there were many tests and biomarkers that had been correlated with a poor outcome; the important point was whether anything could be done about it. You modify the risk to improve the prognosis, but if you can't do anything about it, it's pointless measuring it'.

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Dr Joe Tyrrell, a cardiologist in private practice at the Vincent Palloti Hospital in Cape Town, said that while its clinical utility was as an exclusion test, NTProBNP could be useful in emergency departments and 'perhaps in a primary health care setting as well as for cardiologists at the coalface'. He said it could be helpful in a rural practice, but only if there was uncertainty and either very high or very low readings. 'There is a grey area and a bit of a learning curve in using it and interpreting results because the cut-off points are not well established,' he added.

**Chris Bateman**

# A FEW GOOD MEN AND WOMEN: AN INVITATION

Izindaba's *Chris Bateman*.

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**Chris Bateman**