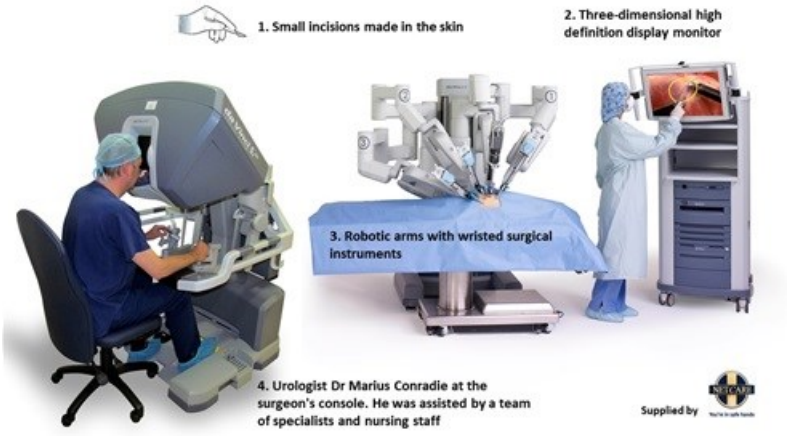
South Africa's first robotic assisted nephrectomy a triumph

A state-of-the-art da Vinci Si robotic technology was used to assist in the surgical removal of the patient's cancerous kidney. The first ever-robotic assisted procedure of its kind in South Africa is known as a radical nephrectomy and took place at Netcare Waterfall Hospital in Midrand on Monday, 27 April 2015.



Three days later, the patient, a consultant who prefers not to be named, was discharged home where he was able to quietly celebrate his 51st birthday with his family. "I feel so much better," said a relieved 51-year-old father of five following his discharge 72 hours after having his cancerous kidney removed.

The highly complex operation was completed through small incisions in the skin and was by all appearances a great success, according to Dr Marius Conradie, an urologist who practises at the hospital and who performed the surgery with the assistance of a team of specialists and nursing staff.

"The patient's right kidney, which was badly diseased, was removed. Despite the fact that a nephrectomy is a major procedure, the patient had recovered to the extent that he was moved from intensive care to a general ward and had regained his mobility just 24 hours after the operation. With traditional open surgery we expect a patient to take about a week to get back on his or her feet."

"The use of this robotic technology in this specific procedure is an important development in the field of urology in South Africa. It was a great honour to have been able to, for the first time on our continent, assist a patient with cutting edge treatment that has been proven internationally for its effectiveness."

The da Vinci Si system consists of a surgeon's console offering three-dimensional, high definition display and a patient side cart featuring robotic arms with wristed surgical instruments. These instruments are controlled by the surgeon, improve and steady the natural motion of the hands.

"The robotic procedure has many advantages over traditional surgical techniques and enabled us to perform the procedure in a minimally invasive manner with an extremely high degree of accuracy."

"The smaller incisions required for a da Vinci procedure mean that the patient suffers reduced blood loss during surgery and that there is a lower risk of wound infection. In addition, da Vinci patients usually have less postoperative pain and are able to return to their lives much sooner than they would after open surgery.

"The patient was so impressed by the outstanding results that have been achieved worldwide using the technology that he insisted on da Vinci robotic surgery, even though he had to fund the operation himself."

Not only does the da Vinci technology enable minimally invasive surgical techniques, but it also provides high-quality 3D images of the kidney during the procedure, giving a surgeon trained in the use of robotic assisted surgery excellent control to enable removal of any diseased tissue with great accuracy. This means that side effects are kept to a minimum and cancer control is improved.

Jacques du Plessis, managing director of the Netcare hospital division, agrees with Dr Conradie that the procedure marks an "important milestone in the history of South African urological medicine." He believes the da Vinci robotic technology is a much-needed new tool in the battle against kidney and other cancers.

New application

"Up until now the da Vinci Si robotic technology has only been used to perform radical prostectomy, the surgical removal of the prostate gland, and it has been highly successful in this role both locally and internationally," confirms Dr Greg Boustead, who is the consultant urological and robotic surgeon and consultant advisor in robotic surgery to Netcare hospitals. Dr Boustead is a world-renowned robotic prostate surgery expert who formed part of the surgical team.

"The considerable potential of the technology to assist with a variety of minimally invasive procedures in urology and in other medical fields such as gynaecology has been recognised internationally. The da Vinci system was first introduced at Netcare Waterfall City Hospital in Midrand and Netcare Christiaan Barnard Memorial Hospital in Cape Town last year. The treatment of kidney cancer is an important new application for the da Vinci robotic technology in South Africa."

Dr Conradie agrees, noting that kidney cancer is not uncommon, affecting approximately 190,000 people worldwide every year. He says that the disease can be cured in the great majority of cases if it is detected early and treated appropriately.

"Each kidney cancer case differs and treatment depends upon factors such as the type of cancer that is present, the extent of disease, and the patient's general condition. However, if the disease is detected before it can spread to other organs, it can usually be successfully treated."

Surgery is the main treatment for most kidney cancers and may involve the removal of only the diseased part of the kidney, which is known as a partial nephrectomy, or it may require a radical nephrectomy, the complete removal of the organ. In this particular case the disease had advanced to the stage that the entire kidney had to be removed, states Dr Conradie.

"This procedure demonstrates that in trained hands, the da Vinci robotic system can successfully be used to treat kidney cancer with fewer risks than are associated with traditional open surgery. We consequently expect a growing demand for the technology within fields such as nephrology into the future," adds Du Plessis.

"We are excited by the number of treatment options that the highly versatile da Vinci system is making available to our patients in various fields of medicine. The introduction of this technology has been driven by Netcare's commitment to

continue creating an environment for specialists at our hospitals to offer their patients treatments that have been proven internationally to enhance medical outcomes," concludes Du Plessis.