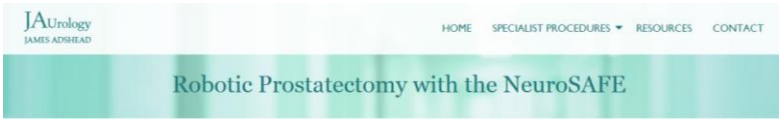
East and North Hertfordshire NHS Trust



Understanding Robotic Prostate removal

What is Robotic removal of the Prostate with NeuroSAFE?

Many men choose removal of the prostate to get rid of their cancer but they understandably have concerns about side effects

The main worries are whether they will be able to keep their erections and not leak drips of urine between pees.

This information leaflet covers what we do at the Lister to minimize these risks while still giving you an excellent chance of a cure. With each topic we have linked you to an information leaflet with more background.

We have performed 1000s of prostatectomies at Lister and have a huge experience in trying to keep you pad free and still able to have erections post op. We have large numbers of men who keep both these functions.

Despite our best efforts and ever evolving techniques to improve results we do get some men who will lose erections and a small number of who need pads.

The good news is that we can correct incontinence and erectile problems post op. We will always work hard to get you back to a pad free life and continuing a healthy sex life.

Removing the prostate for cancer is often called a “Robotic Radical Prostatectomy”

Quite often with early, PSA-found prostate cancer we do not do a “radical”, wide removal of the prostate with all its coverings but perform a “Precision Prostatectomy” where we tease the prostate from its surrounding layers to minimize any effects on the delicate nerves and muscles that live around the prostate.

Will I keep my erections?

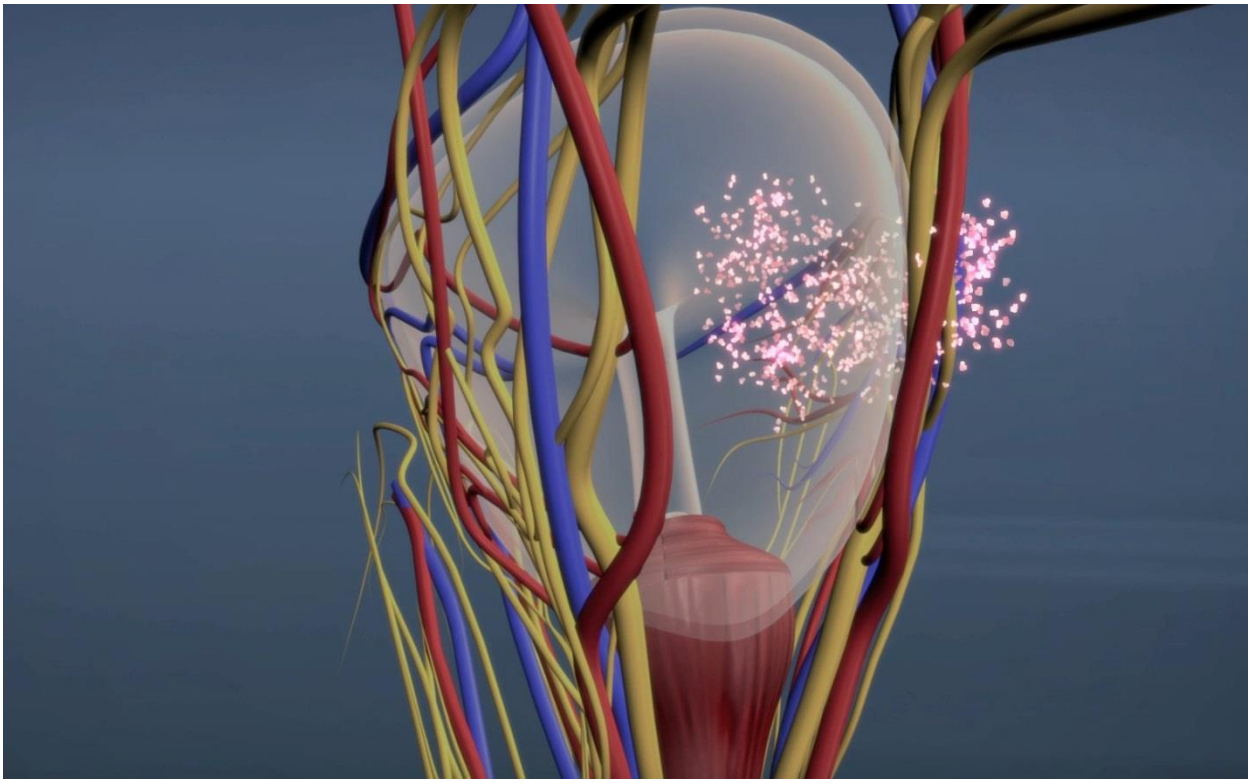
The reason losing erectile function is a concern when the prostate is removed is that these delicate cobweb-like nerves actually live on the surface of the prostate.

This is very similar to the outer layer of an onion and to preserve these delicate nerves we peel them away from the capsule of the prostate and this can be tricky for 2 reasons

1. They are delicate and attached to the prostate capsule/surface to varying degrees. It is best to wait 6 weeks after a biopsy before having your operation to minimize the stickiness that the biopsies may have caused. Waiting is fine, as this operation for slow growing prostate cancer is an investment for 15 years' time and so we always time the operation to a point when you will get the best long term outcome.

2. The second problem is that prostate cancer is usually always just under this capsule/surface and so the first place it attempts to escape from the capsule is usually exactly where these nerves are positioned. Therefore, when we preserve the erection nerve layer there is a small risk some cancer cells may be left.

Neurovascular bundles on the side of the prostate with cancer affecting them on the right of the picture



How does NeuroSAFE help?

We are extremely grateful to our pathology consultants as they give up their time to come to theatre and check that it is safe to peel the nerves away.

During the operation we surgically spare your erectile nerves and remove the prostate from your tummy button.

This means that while you are still asleep we can hand your prostate to the pathologist to check that the cancer has not gone outside the capsule into the nerve layer with a microscope.

This takes them about 30 mins and during that time we are connecting your bladder back to the penis urine pipe (urethra) or sometimes sampling the lymph glands. As a result, it doesn't add any time to your operation because the pathologists analyses the prostate for us at the same time.

What happens most the time is the pathologist tells us that it is safe to leave the nerves as no cancer is going through the capsule

Sometimes though, the pathologists tells us that disease is going out (or just too close) on one or both sides and we then have to remove the nerve bundle or bundles. This is to ensure that any cancer cells that have got into the nerves are removed

So what chance do I have of keeping my erections?

We have published our results in the British Journal of Urology but it is important to know that this is a group of young men with an average age of 57 who had very good erections preoperatively.

In our study, if we can spare both nerves, 78% of men get there erections back by 12 months. They are not as good as preop but these men are capable of getting an erection sufficient or rigid enough to have intercourse and 1/2 of these men need a Viagra type tablet to achieve this

If we can only spare 1 side then this success drops to 60% capable of an erection that is good enough for intercourse. Almost all of these men needs Viagra type pill to get there.

These figures many not be as good if your erections are not perfect pre op and certainly not if you already need Viagra.

What do you do if the nerves can't be saved or you are one of the unlucky ones whose saved nerves just don't recover?

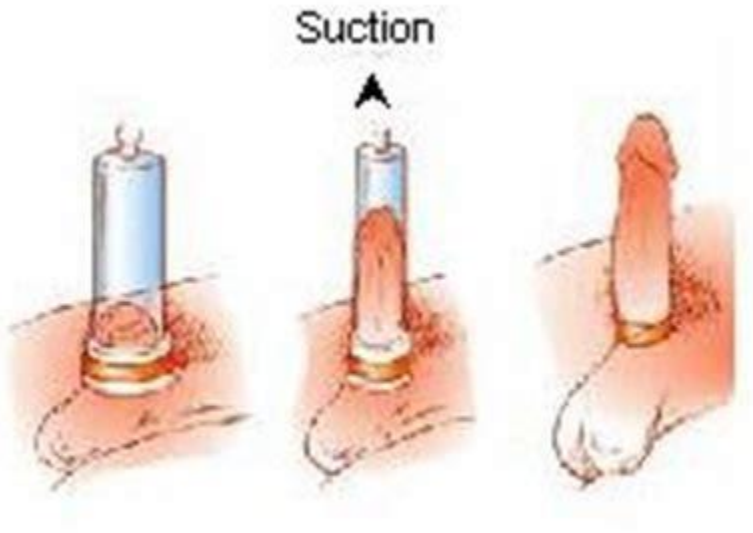
The first thing to say is that if the nerves don't work then Viagra type tablets are no use

There are three ways to get you back to sexual intercourse when your nerves are removed or have not recovered.

1. Penile vacuum device

This plastic tube device draws blood into the penis with gentle vacuum and using a soft construction ring at the base of the erect penis traps the blood so you can have sex.

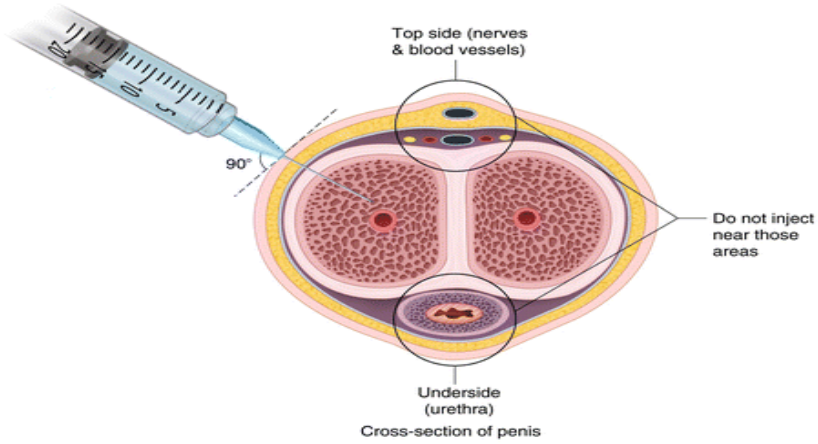
See https://vaxaid.com/pages/our-products OR https://www.imedicare.co.uk/en/products/for-men/erectile-penile-health/erectile-dysfunction-recovery/somaerect-response-ii/

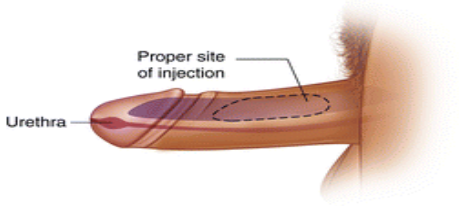


2. Penile injections

These mosquito-like tiny needle injections self-administered into the base of the penis really don't hurt but need a slight leap of faith. We teach you how do inject a tiny quantity of drug that gives you an erection that lasts 20-30 mins. Sexual intercourse is often successful and feels very normal.

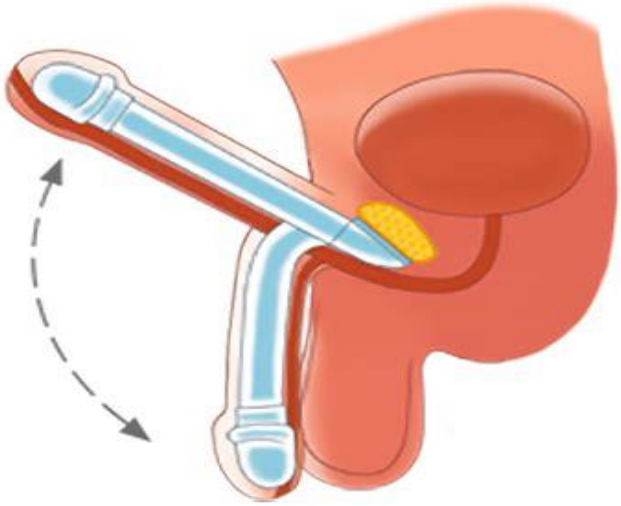
https://www.baus.org.uk/_userfiles/pages/files/Patients/Leaflets/Penile%20injection%20for%20erection.pdf





3. Permanent Penile implants

This a surgical procedure to place with a semi rigid or an inflatable tube inside the penis which can be used for intercourse (See information leaflet- https://www.baus.org.uk/_userfiles/pages/files/Patients/Leaflets/Penile%20prostheses.pdf)



The good news is that even if we don't manage to spare your nerves, even 85% of these men still get back to sexual intercourse with one of these 3 methods

What about my chances of needing pads /incontinence?

There is a difference between a "radical wide excision" for faster growing prostate cancer and a "Precision nerve sparing prostatectomy" for slower growing cancer.

The wider we have to go to cure your disease the slower the recovery of continence.

All patients have a catheter for 7-14 days after the operation.

You will come back to the hospital to have the catheter removed.

At this point almost all men have some leakage and need a pad.

Recovery happens at varying speeds but by 12 months we find that ~85% of men are pad free with a strong flow and no leakage

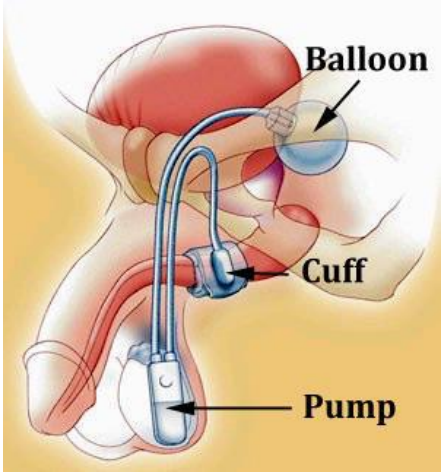
~10% of men still need a security precaution pad for occasional drips but not enough that they feel incontinent

~5% of our men at this stage still need a pad for daily leakage ranging from 20mls to 200mls in a day

What do we offer if you are still leaking and needing pads at 12 months?

We can perform an operation called an AUS or artificial urinalysis sphincter.

This is a small plastic inflatable ring which is surgically implanted around the pipe to keep it closed and prevent leaks



The ring valve can be opened to pass urine by pressing a small button under the skin of the scrotum. They are very effective but like all devices they have parts and these can fail and need replacement at an average time of 9-10 years (https://www.baus.org.uk/_userfiles/pages/files/Patients/Leaflets/AUS%20male.pdf)

What do we do at the Lister to improve our continence results?

Robotics allows us very precise surgery and amazing 3D views of the important structures around your prostate

Where we can, we will try to preserve as much length on the penile urine pipe (urethra) and also spare the continence mechanisms around this pipe and the opening of the bladder called “bladder neck preservation”

This has improved our figures substantially..

You may have heard about a technique called “Retzius sparing approach”

This approach is not done at Lister as we have concerns about the increase in the positive margin rate reported with it. It does seem to improve the earlier recovery of continence so we have adopted some of the important aspects of the technique to preserve the attachments of the penile pipe to the tummy wall and again have seen some further improvements in leakage.

What about training future surgeons during your operation?

The final issue is training future surgeons. The Lister is a Royal College of Surgeons of England accredited training centre for our future Robotic surgeons

We take on a consultant-ready surgeon each year and train them to be safe in Robotic surgery over a year. We get only the very best skilled surgeons come to us and they help us look after you post op as well.

There are multiple parts to a robotic prostatectomy and we teach them by a stepwise training program. Again we are lucky at the Lister as we have what is called a Dual Console which means that we sit right next to them like a driving instructor and can point to structures and take over at any point.

We believe this robotic technology has been the most major advance in teaching safely ever invented. We only allow them to do parts of the operation that don't affect your continence and erections until we are happy that have reached our standard, usually at the end of their Fellowship year.

Robotic Prostatectomy is a fantastic treatment for prostate cancer and many of the worrying side effects can be avoided in an experience high volume unit like ours. The important thing to remember is that if you are unlucky enough to get problems with erections and leakage despite the efforts outlined in this leaflet, we have solutions.

How does NeuroSAFE reduce positive margins?

A positive margin is when the final prostate report suggests that the cancer is right at the margin edge.

Most of these men don't need more treatment as usually no active cancer is left behind.

However, it does increase the risk of needing radiotherapy in the future in some men.

The beauty of having the prostate removed is that your PSA should drop down to zero.

Your follow up is very simple as if the PSA stays at zero every 6 months or so post operatively then you are disease free.

A small number of men's PSA can return and if it were to rise to 0.2 we can offer radiotherapy to these tiny cells and have a good chance of clearing them

NeuroSAFE helps to reduce our positive margin rate as we find out the most common positive margin while you are still asleep and correct it.

Please don't hesitate to ask us any questions through your Consultant or Prostate Cancer Nurse Specialist (CNS)

Thank you and we hope this leaflet is helpful in helping you understand Robotic prostatectomy at The Lister

We also recommend reading the BAUS robotic prostatectomy leaflet which covers more of the practical concerns about the procedure regarding Hospital stay driving and return to work.
(https://www.baus.org.uk/_userfiles/pages/files/Patients/Leaflets/Rad%20prost%20robot.pdf)