Patient information from Gordon Muir, Consultant Urological Surgeon

Please do not rely on this information unless you have been specifically sent this by Mr Muir

Green Light Photoselective Vaporisation of the Prostate operation (PVP).

Mr Muir has been a pioneer of prostate laser surgery, and has been been performing and developing this operation since September 2002 – he has experience of thousands of cases and has taught surgeons all over the world. His data has been presented at the European, American and British Annual Urological Meetings, and published in a number of international journals. The short term results compare very favourably with conventional surgery with dramatically reduced bleeding, hospital stay and recovery time. The recent GOLIATH study, which Mr Muir was a major contributor and assessor for, has shown the technique is similar in outcomes to TURP, but with a superior safety margin and faster recovery.
Data from King's College Hospital show durable flow and symptoms improvements out to 8 years. A recent large randomised trial has confirmed the early safety and efficacy results. We are now using the third generation of the GreenLight technology (the XPS system) which combines the safety of earlier versions with improved efficiency, even in patients who are traditionally viewed as "high risk."

In patients with very large prostates who are normally treated by open surgery we have shown that the procedure can be carried out safely (even in high risk patients) with good results. For patients in retention of urine, more than 95% can expect to be catheter free after GreenLight surgery. Even patients with concurrent bladder stones or hernias can often leave hospital the same day without a catheter.

For patients with very large prostates we will discuss the option of laser enucleation of the prostate, and in patients who are keen to preserve ejaculation and sexual function the options of either Urolift or our technique of Ejaculation Preserving GreenLight laser will be discussed. Not every prostate and patient is suitable for every operation: our aim is to listen to the patient and find the solution which fits his needs and wishes.

It is necessary to see patients prior to surgery, but to reduce inconvenience to patients we try to make all clinic visits "one stop."
To assist in this, we like to have as much information on patients as possible prior to seeing them. The following pages should help with this.

This information pack is designed to be of help for all patients both when considering and recovering from surgery, as there are a number of areas which are common to all patients having the procedure. All of Mr Muir's patients will be given specific personal advice on their preparation and recovery, as well as the other treatment options available.

We hope you will find this timesaving, helpful and straightforward. Please let us know of any ideas for improvement.

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GreenLight Laser Prostatectomy

This describes the procedure involved in having a prostate operation. This procedure is an alternative to the "gold standard" of TURP and is usually carried out as a day case operation
You will have discussed the reasons behind having the surgery, which are to relieve the obstruction to the flow of urine through the prostate by removing the central part of the prostate.
This operation is done usually for benign (non-cancerous) swelling of the prostate although it may be used to relieve the obstruction of a prostate cancer. However it does not remove the whole prostate and is not a "cancer curing" operation.

How is the operation carried out?
No special preparation for the surgery (i.e. shaving or diet) is required. You will usually come in on the day of the operation and should starve for at least six hours prior to the scheduled operating time. You need not stop aspirin or other anti-platelet drugs prior to the operation but ***if you are taking warfarin or heparin then it is imperative that the dosage of this is monitored or modified. In this case please make sure you have a copy of our protocol for managing anticoagulation***

The operation is carried out under light general (asleep) anaesthetic. Spinal anaesthesia can be used but if it is then a catheter must be left in the bladder after the operation. We prefer not to use sedation and local anaesthetic unless absolutely necessary, since most men will have some discomfort with this technique.
A telescope (cystoscope) is passed into the bladder, which is examined. The obstructing prostate tissue is then vaporised using the high powered laser. A small catheter (soft plastic drainage tube) may be placed in the bladder to drain the urine if there is any concern about bladder contractility, but it is not usually required for bleeding even in the largest prostates.
After passing water you can usually leave hospital; if a catheter is left in place this is removed the following morning unless there has been a previous problem with retention of urine in which case we may recommend leaving it for a few more days.
Some men may fail to pass water after the operation: this is much more common if the surgery is being done where the bladder has been stretched or is emptying poorly and this would be discussed with you in detail.
In men with good bladder emptying there is still a possibility of around 2-3% of some difficulty passing urine after the catheter is removed: this may require a short period with a small soft catheter to rest the bladder but has no long term ill effects and does not require prolonged hospitalisation.
Following the operation it is usual to have mild discomfort only. The majority of men will need only simple painkillers, although some may need tablets to calm bladder spasm. You will be given regular painkillers and also a few days of an antibiotic. About one man in ten will have bothersome discomfort needing a longer course of painkillers.

Despite the absence of a cut in the skin, this is still classified as a major operation. There may be bleeding at the time of surgery or later: so far no patients have had life threatening bleeding. Only one man (who was on blood thinning medication) has required blood transfusion at the time of surgery. Advances in anaesthetic techniques reduce the risk of serious chest infection.

What are the side effects?
The major side effect is of dry orgasm, which is when the semen falls back into the bladder instead of coming out through the penis. This affects about 60% of men after standard PVP, depending on the prostate size (with TURP the figure was 80-90%) Some men may feel the

orgasm to be somewhat less intense if this happens, but usually learn to appreciate the sensations again. Our impression is that this side effect is commoner with larger prostates. It is possible to modify the operation in such a way to reduce the chance of a dry orgasm – down to around 15%. This is a new technique based on research carried out jointly between our surgeons and colleagues in Boston and New York. You will have discussed the option of ejaculation preserving laser prostatectomy with your surgeon.
A dry orgasm may cause sterility but cannot be relied upon as a form of contraception since some sperms may still be expelled.

So far we have seen less than one per cent of men deveolop significant impotence after the operation, but there remains a risk that this could occur if the laser were to be used too close to the penile nerves.

Since not the entire prostate is removed, regrowth can occur. The figures from TURP suggest that one man in seven will need revision surgery over a ten-year period due to prostate regrowth. It is likely that this will be similar with PVP – our re-operation rates at 7 years are just under 7%.
As with TURP, there may be formation of scar tissue (a stricture) following the operation which can require a minor operation to put it right. The risk of this with TURP is around 5% and with PVP it is only around 2%.
Lastly, as with TURP, incontinence may very rarely occur. The risk of incontinence due to damage to the sphincter muscle, in our hands, is around one in 300. This is a treatable problem.

How long does recovery take?
We have observed most patients to have a halving or more of their symptoms within six weeks of surgery. However, the bladder may be overactive for a few weeks after the operation, giving a sense of things getting worse before getting better. It is thus sensible to avoid any long journeys after the procedure for a few weeks. Bladder function can keep improving for up to four months after the procedure.
If urgency and getting up at night are major problems prior to the operation, or of there is any history of incontinence, I will usually have recommended a urodynamic examination to confirm that obstruction is present. Despite this about one man in six with these symptoms may find they persist post operatively, due we presume to a primary overactivity of the bladder. If this does happen there are medical treatments which will usually help.
Severe bleeding is uncommon after PVP, but you will probably pass a little blood in the first few weeks, particularly at the start of the urine stream. If bleeding is a major problem then it is important to drink well and to have a urine sample checked to rule out urinary infection.
It is sensible to avoid very heavy lifting for three weeks after the operation since any sudden increase in abdominal pressure can cause bleeding to occur. Driving presents no problem
You can return to work when you feel fit and depending on your job: usually no more than a week off is needed but some men have gone back to work within 48 hours.
Sport or sexual activity can be resumed as soon as you feel fit. On resumption of intercourse, if you do ejaculate normally, it is likely there will be blood or discolouration of the semen. This is nothing to worry about and will not harm your partner in any way.
After any surgery you may feel tired and a bit emotional for a number of weeks. This is quite normal, but if you feel depressed it is important to let someone know.

What follow up is required?
If all goes smoothly a check within the first ten days will make sure there are no major problems (this can be carried out by telephone.) We suggest a check after three to four months to make sure the symptoms and urine flow have improved as expected.

Pre-op Test Results and Information Required

A number of tests are needed to assess a man's suitability for this operation, and indeed the need for any prostate or bladder treatment. If you have previously seen another specialist and a letter has been sent to us then we will usually have these results.
Otherwise it is a good idea to try to get the tests organised at the time of the first appointment. Our team will help you with this if need be. You may find the list below helpful.

Serum PSA	Blood test: needs to be done prior to outpatient visit	Yes / No
Serum Creatinine	Blood test needs to be done prior to outpatient visit	Yes / No
Full Blood Count	Blood test needs to be done prior to outpatient visit	Yes / No
Urine Flow rate	Urine test can be done at time of assessment	Yes / No
Urine residual volume	Ultrasound can be done at time of assessment	Yes / No
Urine culture or urinalysis	Urine test can be done at time of assessment	Yes / No

Prior to surgery we also like to have documentation of the amount of bother a man has from his urinary symptoms, as well as an assessement of sexual function and a measurement of urine frequency. The three questionnaires below (IPSS, IIEF-5 and frequency volume chart) will assist in helping arrive at a speedy and accurate diagnosis.

International Prostate Symptom Score (IPSS)

(please let us know if you would prefer to be sent this in editable MS Word format)

Name: **Date:**

Please use the following point scale to answer each of the questions. Write a number in the box at the end of each column, then total the score from all the questions.

0 = Not at all 3 = About half the time
1 = Less than once in 5 times 4 = More than half the time
2 = Less than half the time 5 = Almost always ***Over the past month, how often have you:***

Had the sensation of not completely emptying your bladder after you finished urinating?	
Had to urinate again less than 2 hours after you finished urinating?	
Found that you stopped and started again several times when you urinated?	
Found it difficult to postpone urination?	
Had a weak urinary stream?	
Had to push or strain to begin urination?	
Had to get up to urinate from the time you went to bed at night until you got up in the morning? *For this question, use the following point scale:* *0 = None* *3 = 3 times* *1 = 1 time* *4 = 4 times* *2 = 2 times* *5 = 5 times or more*	
Total score from all questions	

Quality of Life

If you were to spend the rest of your life with your urinary condition just the way it is now, how would you feel about that? (please highlight or circle one response)

Delighted ***Pleased*** ***Mostly satisfied*** ***Mixed*** ***Mostly dissatisfied*** ***Unhappy*** ***Terrible***

Frequency Volume Chart

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This chart helps to assess the activity of the bladder and the bother it is causing you.
You will need to obtain a plastic measuring jug of at least 500ml capacity: this can be got from any ironmongers or cookery shop if you have not been seen at 19 Harley Street.

Try to fill in about four days if possible, preferably making them as typical as possible. If you do not manage to record some voids then make a note at the time you went. The sample chart on this page should show you what is required and do remember to bring the chart to your next appointment so we can go through it together.
Please let us know if you would prefer this in editable MS Word format

Good Luck!

Date	Time	Volume	Volume drunk	Type of drink	Notes
21 / 7/ 98	*0500*	*?*			*Wet the bed*
21 /7/98	*0830*	*150ml*			
21 /7/98	*0900*	*180ml*			*Burning feeling*
21 /7/98	*1200*	*300ml*			
21 /7/98	*1300*	*?*			*Slight incontinence*
21 /7/98	*1600*	*340ml*			
21 /7/98	*2200*	*300ml*			
22/7/98	*0130*	*?*			*Woke up bursting, forgot to measure it*
22/7/98	*0600*	*220ml*			*Urgency +++*
22/7/98	*0900*	*210ml*			
22/7/98	*1000*	*?*			*Major incontinence on lifting*

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Name:

Date	Time	Volume	Volume drunk	Type of drink	Notes

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Modified International Index of Erectile Function (IIEF-5)

This allows objective assessment of any difficulties with erections either before or after treatment.

Please answer the questions by putting a tick by the number in the correct box, thinking of the last month.

Name: _____ Date: _____

1:How do you rate your confidence that you could get and keep an erection?

Very Low	1
Low	2
Moderate	3
High	4
Very High	5

2. When you had erections with sexual stimulation, how often were your erections hard enough for penetration?

No sexual activity	0
Almost never/never	1
A few times	2
Sometimes (about half the time)	3
Most times	4
Almost always/always	5

3. During sexual intercourse, how often were you able to maintain your erection after you had penetrated (entered) your partner?

Did not attempt intercourse	0
Almost never/never	1
A few times	2
Sometimes (about half the time)	3
Most times	4
Almost always/always	5

4. During sexual intercourse, how difficult was it to maintain your erection to completion of intercourse?

Did not attempt intercourse	0
Extremely difficult	1
Very difficult	2
Difficult	3
Slightly difficult	4
Not difficult	5

5. When you attempted sexual intercourse, how often was it satisfactory for you?

Did not attempt intercourse	0
Almost never/never	1
A few times	2
Sometimes (about half the time)	3
Most times	4
Almost always/always	5

Comments: