

# ROBOT-ASSISTED LAPAROSCOPIC PARTIAL NEPHRECTOMY

## INTRODUCTION

THIS BOOKLET GIVES YOU INFORMATION ABOUT A PROCEDURE WHICH USES KEYHOLE SURGERY TO REMOVE PART OF THE KIDNEY USING ROBOT ASSISTANCE. IT IS CALLED ROBOT-ASSISTED LAPAROSCOPIC PARTIAL NEPHRECTOMY.

THERE ARE OTHER METHODS FOR REMOVING THE KIDNEY INCLUDING OPEN SURGERY OR LAPAROSCOPIC (KEYHOLE) SURGERY. THESE DO NOT INVOLVE THE USE OF A ROBOT.

THE ADVANTAGES OF ROBOT-ASSISTED LAPAROSCOPIC PARTIAL NEPHRECTOMY:

- SHORTER HOSPITAL STAY
- LESS PAIN
- LESS RISK OF INFECTION
- LESS BLOOD LOSS REDUCING THE NEED FOR A BLOOD TRANSFUSION.
- LESS SCARRING
- FASTER RECOVERY
- QUICKER RETURN TO NORMAL ACTIVITIES SUCH AS DRIVING
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ROBOT-ASSISTED TECHNIQUES GIVE THE SURGEON:

- HIGH QUALITY VISION
- 3D VIEW OF THE OPERATING FIELD
- ENHANCED DEXTERITY
- GREATER PRECISION
- 6 - 10 TIMES MAGNIFICATION

## WHAT IS A ROBOT-ASSISTED LAPAROSCOPIC PARTIAL NEPHRECTOMY?

A PARTIAL NEPHRECTOMY IS AN OPERATION TO REMOVE PART OF YOUR KIDNEY THAT HAS DISEASE OR CANCER WITHIN IT. THE OPERATION ENABLES YOU TO HAVE THE CANCER REMOVED BUT ALSO TO PRESERVE YOUR KIDNEY AND ITS FUNCTION. THE SURROUNDING FATTY TISSUE, LYMPH NODES, ADRENAL GLAND AND UPPER END OF THE URETER (TUBE CARRYING URINE FROM THE KIDNEY TO YOUR BLADDER) ARE NOT REMOVED. THESE WILL ONLY BE REMOVED IF A RADICAL/TOTAL NEPHRECTOMY IS REQUIRED.

A PARTIAL NEPHRECTOMY IS USUALLY PERFORMED WHEN A TUMOUR/CANCER IS LESS THAN 4 CENTIMETRES IN SIZE. IN CERTAIN CASES A SLIGHTLY LARGER TUMOUR CAN BE CONSIDERED FOR ROBOTIC REMOVAL. THE LOCATION OF THE TUMOUR IN THE KIDNEY IS IMPORTANT AND YOUR SURGEON WILL DISCUSS THIS WITH YOU.

THE DA VINCI SURGICAL SYSTEM IS A SOPHISTICATED ROBOTIC PLATFORM. IT CONSISTS OF A SURGEON'S CONSOLE WHERE THE SURGEON SITS AND CARRIES OUT THE OPERATION. ROBOTIC-ASSISTED LAPAROSCOPIC SURGERY IS KEYHOLE SURGERY IS WHERE YOUR SURGEON WILL MAKE 5 - 6 SMALL CUTS USING SPECIALISED INSTRUMENTS THAT ARE INSERTED THROUGH KEY-HOLE OPENINGS IN THE ABDOMEN WHICH ARE THEN CONNECTED TO THE ARMS OF THE ROBOT. THE SURGEON MANIPULATES THE INSTRUMENTS WITHIN THE ABDOMEN WITH PRECISION BY MOVING THE MASTER CONTROLS AT THE CONSOLE.

## **CONSENT**

THE SURGEON WILL HAVE EXPLAINED THE PROCEDURE AND THE REASONS WHY THIS PARTICULAR OPERATION IS AN OPTION FOR YOU. THIS INFORMATION IS A PERMANENT RECORD OF WHAT HAS BEEN EXPLAINED. WE ADVISE YOU TO READ THE BOOKLET CAREFULLY BEFORE YOU SIGN THE CONSENT FORM WHICH STATES THAT YOU ARE PREPARED TO GO AHEAD WITH THE OPERATION.

WE WILL ASK YOU TO SIGN THE CONSENT FORM AGREEING TO ACCEPT THE OPERATION THAT YOU ARE BEING OFFERED. THE BASIS OF THIS AGREEMENT IS THAT YOU HAVE HAD THE OPPORTUNITY TO DISCUSS ANY CONCERNS WITH YOUR TEAM.

## **ARE THERE ANY ALTERNATIVES TO THIS OPERATION?**

THERE ARE ALTERNATIVES TO THIS PROCEDURE. THESE INCLUDE OPEN PARTIAL NEPHRECTOMY OR LAPAROSCOPIC RADICAL NEPHRECTOMY. OPEN PARTIAL NEPHRECTOMY INVOLVES THE SURGEON PERFORMING A BIGGER CUT ON THE SIDE OF YOUR ABDOMEN. THIS WILL MEAN YOU HAVE A LONGER STAY IN HOSPITAL AND A LONGER RECOVERY TIME. RADICAL NEPHRECTOMY MEANS THAT THE WHOLE KIDNEY IS REMOVED. YOUR SURGEON WILL TALK TO YOU ABOUT WHAT MIGHT BE THE BEST OPTION FOR YOU DEPENDING ON THE TYPE OF TUMOUR YOU HAVE.

## **WHAT HAPPENS IF I HAVE NO TREATMENT?**

IF KIDNEY CANCER IS LEFT UNTREATED THEN THE CANCER WILL CONTINUE TO GROW AND COULD CAUSE SYMPTOMS SUCH AS PAIN OR PASSING BLOOD IN THE URINE. IF YOU DECIDE TO HAVE NO TREATMENT THEN THERE IS A RISK THAT THE CANCER WILL SPREAD OUTSIDE THE KIDNEY INTO OTHER PARTS OF THE BODY. THIS MAY MEAN THAT THERE IS NO WAY OF CURING YOU.

## **WHAT ARE THE RISKS AND BENEFITS?**

THE BENEFITS OF THE OPERATION ARE THAT THE TUMOUR WILL BE REMOVED AND THE DISEASE WILL POTENTIALLY BE CURED. AS WITH ANY SURGERY THERE ARE RISKS ASSOCIATED WITH THIS PROCEDURE:

- CHEST INFECTION
- WOUND INFECTION
- BLEEDING REQUIRING A BLOOD TRANSFUSION.
- INJURY TO NEARBY NERVES OR TISSUES.
- URINARY LEAK AROUND THE KIDNEY OR BLEEDING INTO THE URETER TUBE (THE TUBE THAT DRAINS URINE FROM THE KIDNEY TO THE BLADDER). THIS MAY REQUIRE A PROLONGED HOSPITAL STAY AND INSERTION OF A URETERIC STENT (INTERNAL DRAINING TUBE INTO THE URETER). OR A DRAINAGE TUBE THROUGH THE SKIN TO DRAIN URINE FROM THE KIDNEY INTO A BAG ON THE OUTSIDE (NEPHROSTOMY TUBE).
- THE NEED TO CONVERT THE SURGERY TO OPEN SURGERY DUE TO ROBOT FAILURE, BLEEDING OR OTHER COMPLICATIONS.
- THE NEED TO PERFORM A TOTAL (RADICAL) NEPHRECTOMY IF A PARTIAL NEPHRECTOMY IS NOT TECHNICALLY POSSIBLE.
- COMPLICATIONS ASSOCIATED WITH GENERAL ANAESTHETIC, SUCH AS IRREGULAR HEARTBEAT, BLOOD CLOT IN THE LEGS (DVT - DEEP VEIN THROMBOSIS) OR LUNGS (PE PULMONARY EMBOLISM). VERY OCCASIONALLY THERE CAN BE PROBLEMS WITH PATIENT POSITIONING. IN MOST CASES THIS IS MINOR AND RESULTS IN TEMPORARY ACHES AND PAINS. ONLY EXCEPTIONALLY IS IT MORE PROBLEMATIC.

## WHAT HAPPENS BEFORE THE PROCEDURE?

WE WILL ASK YOU TO ATTEND THE HOSPITAL AS AN OUTPATIENT FOR A PRE-OPERATIVE ASSESSMENT. AT THIS PRE-ADMISSION CLINIC A HEALTHCARE PROFESSIONAL WILL:

- ASK QUESTIONS ABOUT YOUR MEDICAL HISTORY
- ASSESS YOUR HEART AND LUNG FUNCTION
- TAKE A SPECIMEN OF BLOOD FOR ANALYSIS
- TAKE SWABS FROM YOUR SKIN TO MAKE SURE THAT YOU DO NOT HAVE AN EXISTING INFECTION
- ASK YOU IF YOU HAVE ANY QUESTIONS ABOUT YOUR OPERATION

YOU WILL BE INVITED TO TAKE PART IN THE ENHANCED RECOVERY AFTER SURGERY PROGRAMME (ERAS+). TAKING PART IN THIS PROGRAMME CAN HELP REDUCE THE RISK OF SURGERY RELATED COMPLICATIONS AND GET YOU BACK TO YOUR NORMAL ACTIVITIES AS SOON AS POSSIBLE. IT WILL HELP YOU TO UNDERSTAND WHAT YOU CAN DO TO IMPROVE YOUR HEALTH AND FITNESS BEFORE YOU HAVE YOUR OPERATION, WHAT TO EXPECT WHEN YOU ARE IN HOSPITAL AND HOW TO CONTINUE YOUR RECOVERY AT HOME.

THE DATE OF YOUR OPERATION WILL HAVE BEEN GIVEN TO YOU BY THE TIME YOU COME TO THE PRE-OPERATIVE CLINIC. YOU WILL BE ADMITTED TO THE WARD USUALLY ON THE DAY OF YOUR OPERATION OR VERY OCCASIONALLY THE DAY BEFORE. ON THE WARD YOU WILL MEET THE MEDICAL AND NURSING STAFF WHO WILL BE LOOKING AFTER YOU DURING YOUR STAY.

## AFTER YOUR OPERATION

WHEN YOU COME OUT OF THEATRE YOU WILL BE TAKEN TO THE RECOVERY AREA WHERE YOU WILL BE MONITORED UNTIL YOUR CONDITION IS STABLE. YOU WILL HAVE A DRIP INTO A VEIN IN YOUR ARM WHERE FLUIDS WILL BE GIVEN TO KEEP YOU HYDRATED. THEN YOU WILL BE READY TO GO BACK TO THE WARD. YOU WILL USUALLY BE ABLE TO EAT AND DRINK AS SOON AS YOU FEEL ABLE BUT THE WARD NURSING STAFF WILL ADVISE YOU.

PAINKILLING TABLETS WILL BE OFFERED TO YOU ON A REGULAR BASIS. IT IS IMPORTANT THAT YOU FEEL AS COMFORTABLE AS POSSIBLE AFTER THE OPERATION SO THAT YOU CAN MOVE WITHOUT ASSISTANCE AND BE WALKING AROUND THE WARD THE NEXT DAY.

THERE WILL BE DRESSINGS ON YOUR ABDOMEN OVER THE SITES USED DURING THE OPERATION. THESE DRESSINGS CAN BE REMOVED AROUND 48 HOURS FOLLOWING YOUR OPERATION. ALSO THERE WILL BE A DRAIN (FINE PLASTIC TUBE) COMING FROM THE AREA AROUND YOUR KIDNEY. THIS IS USUALLY REMOVED THE DAY AFTER YOUR OPERATION.

YOU WILL HAVE A URINARY CATHETER IN THE BLADDER TO DRAIN URINE WHICH WILL BE MONITORED BY THE NURSING STAFF. THE CATHETER WILL BE REMOVED USUALLY ONE OR 2 DAYS AFTER THE OPERATION WHEN YOU ARE ABLE TO GET TO AND FROM THE TOILET.

### WHEN WILL I BE ALLOWED HOME?

MOST PEOPLE WILL BE READY FOR HOME APPROXIMATELY 2 - 3 DAYS AFTER THE OPERATION.

### YOUR ARRANGEMENTS FOR GOING HOME

WE WILL GIVE YOU A SUPPLY OF PAINKILLERS TO TAKE HOME. IF YOU FIND THAT YOU ARE STILL UNCOMFORTABLE WHEN YOU HAVE FINISHED THE SUPPLY, YOU CAN GET SOME MORE FROM YOUR GP.

AS PART OF BLOOD CLOT PREVENTION THERAPY YOU WILL HAVE BLOOD THINNING INJECTIONS (FRAGMIN) FOR 28 DAYS AFTER YOUR OPERATION AND YOU WILL ALSO NEED TO WEAR ANTI-EMBOLISM STOCKINGS DURING THIS TIME.

AT FIRST YOUR ABDOMEN WILL BE SWOLLEN FROM THE GASES THAT ARE PUT INTO YOUR ABDOMINAL CAVITY DURING SURGERY TO ALLOW THE OPERATION TO BE CARRIED OUT. THIS SWELLING WILL REDUCE OVER THE COURSE OF THE NEXT FEW DAYS BUT, IN THE MEANTIME, IT'S BEST TO WEAR CLOTHES THAT ARE LOOSE-FITTING AROUND THE WAIST.

BEFORE YOU ARE DISCHARGED HOME THE, WARD NURSES WILL CHECK YOUR WOUNDS AND MAY GIVE YOU SOME SPARE DRESSINGS TO TAKE HOME. THEY WILL ALSO SHOW YOU HOW TO SELF-INJECT YOUR BLOOD THINNERS AND GIVE YOU A SUPPLY TO TAKE HOME. IF YOUR WOUNDS NEED FURTHER ATTENTION OR YOU ARE UNABLE TO GIVE YOUR OWN INJECTIONS YOU WILL BE REFERRED TO THE DISTRICT NURSES FOR FURTHER SUPPORT.

## **GETTING BACK TO NORMAL**

RECOVERY AFTER ROBOTIC LAPAROSCOPIC SURGERY IS MUCH QUICKER THAN FOLLOWING 'OPEN' SURGERY. HOWEVER, YOU WILL NEED TO ALLOW YOURSELF SOME TIME TO RETURN TO NORMAL ACTIVITIES. GENTLE EXERCISE SUCH AS WALKING IS ENCOURAGED AS SOON AS YOU GET HOME. YOU SHOULD AVOID HEAVY LIFTING FOR 6 - 8 WEEKS.

YOU SHOULD BE ABLE TO START DRIVING AGAIN WHEN YOU ARE ABLE TO MAKE AN EMERGENCY STOP WITHOUT FEELING PAIN, AROUND TWO WEEKS. PLEASE ALSO CHECK WITH YOUR INSURANCE COMPANY BEFORE RETURNING TO DRIVE.

YOU SHOULD BE ABLE TO RETURN TO WORK AROUND 6 WEEKS ALTHOUGH IF YOUR JOB INVOLVES HEAVY MANUAL-TYPE ACTIVITIES, YOU MAY NEED TO WAIT ANOTHER MONTH BEFORE RETURNING.

## **FOLLOW-UP AFTER A ROBOTIC PARTIAL NEPHRECTOMY**

WE WILL ASK YOU TO RETURN TO THE OUTPATIENTS DEPARTMENT FOR REGULAR REVIEWS FOLLOWING YOUR OPERATION. THE FIRST TIME WILL USUALLY BE A MONTH AFTER THE OPERATION WHEN WE WILL BE ABLE TO DISCUSS THE RESULTS OF THE KIDNEY ANALYSIS FROM THE LABORATORY (HISTOLOGY RESULTS).

AFTER THE FIRST VISIT, WE WILL USUALLY SEE YOU ON A REGULAR BASIS FOR 5 - 7 YEARS. THE FOLLOW-UP PROTOCOL WILL BE DISCUSSED WITH YOU.