



Kaiser Oakland Urology

LAPAROSCOPIC KIDNEY SURGERY

What is Laparoscopy?

Minimally invasive surgical alternative to standard surgery



How is Laparoscopy Performed?

- A laparoscope and video camera are used to visualize internal organs without a large surgical incision
- CO2 gas is used to fill the abdomen to create space in the abdominal cavity for the procedure
- Specially designed surgical instruments are used through ports placed through multiple small incisions
- Sometimes a bigger incision is also made just large enough to remove a kidney if needed.

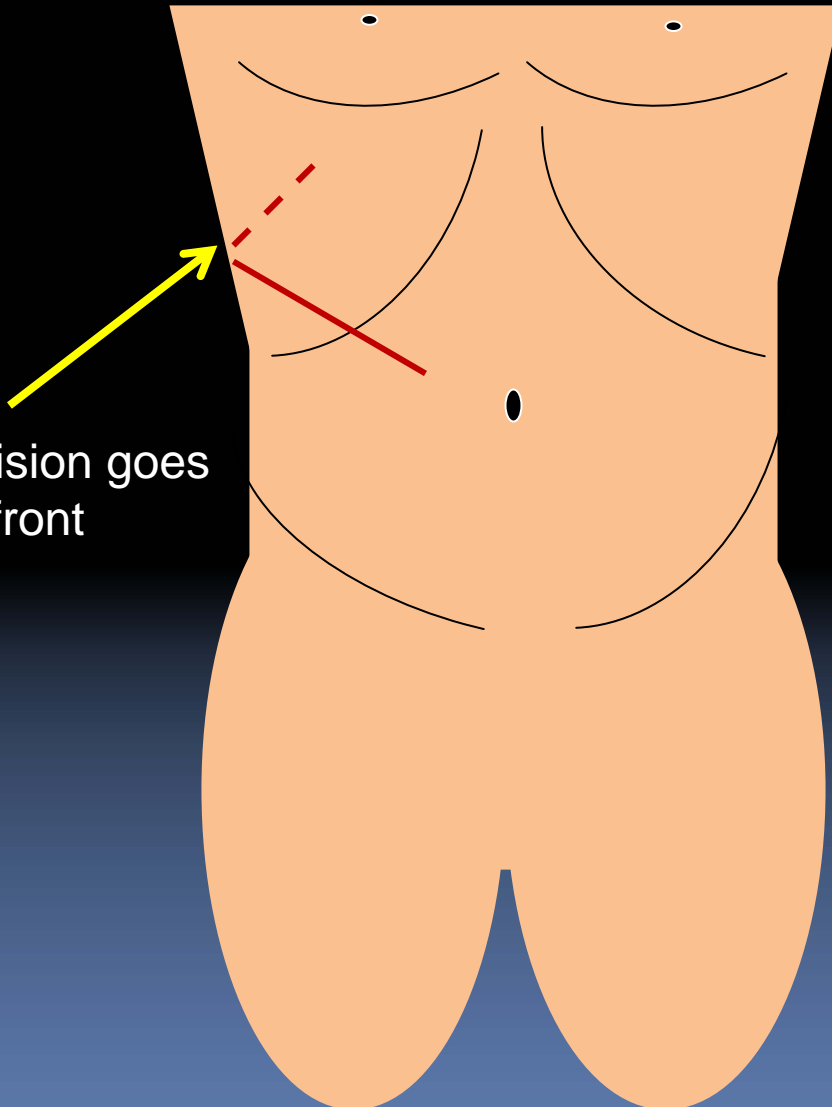


What are the Advantages of Laparoscopic Procedures?

- **Faster recovery**
 - Back to work
 - Back to daily activities
- **Shorter hospitalization**
- **Less post-operative pain**
- **Smaller incisions** – better cosmetic results

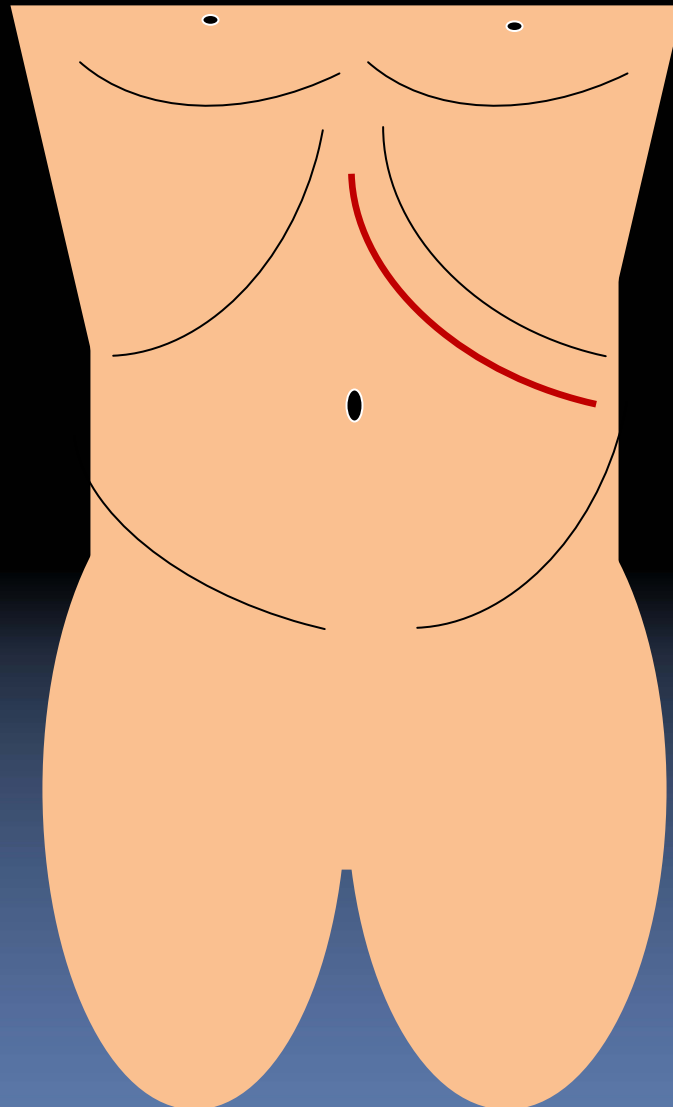


Typical Flank Incision used for Standard Nephrectomy

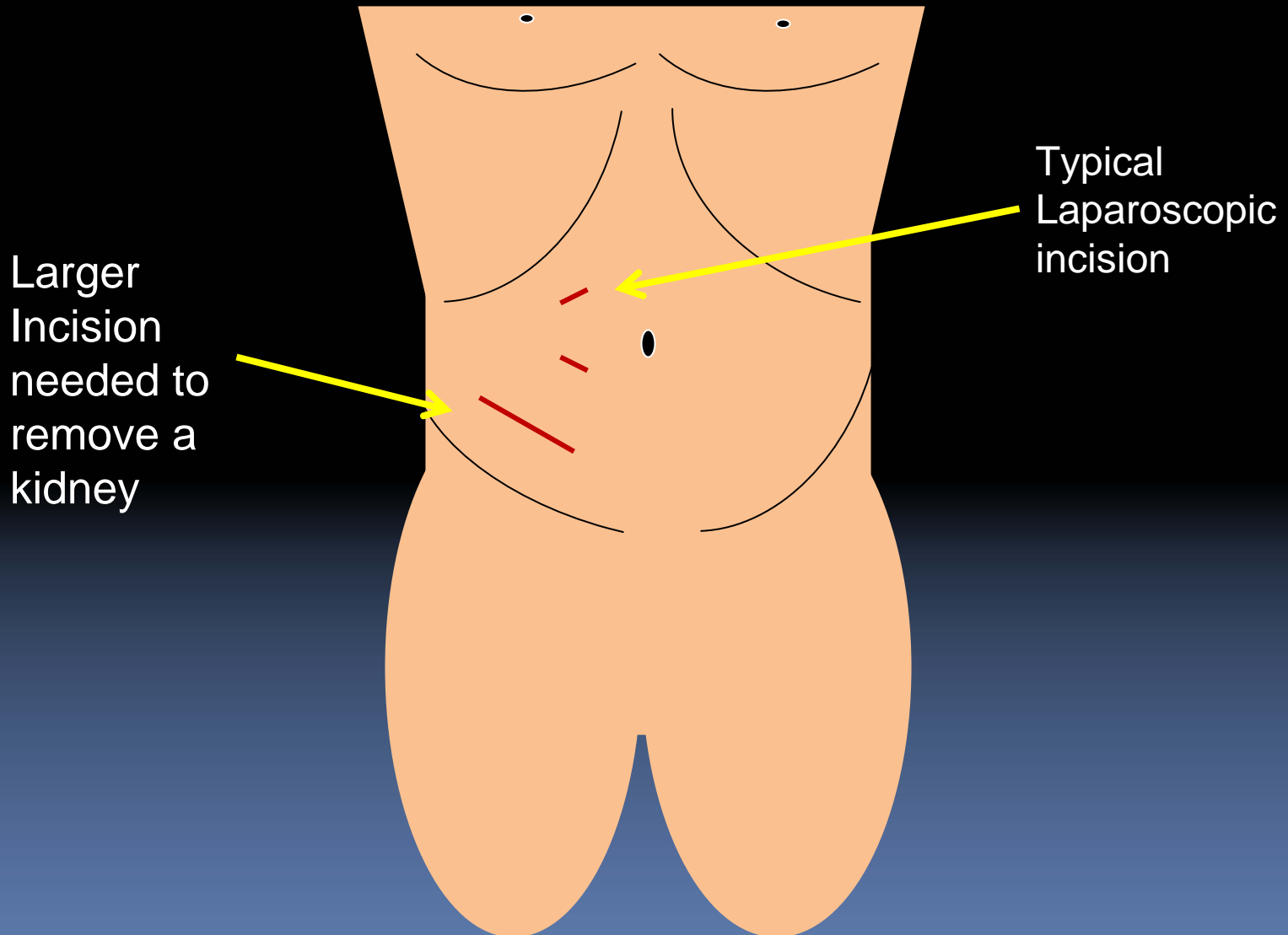


One long incision goes
from side to front

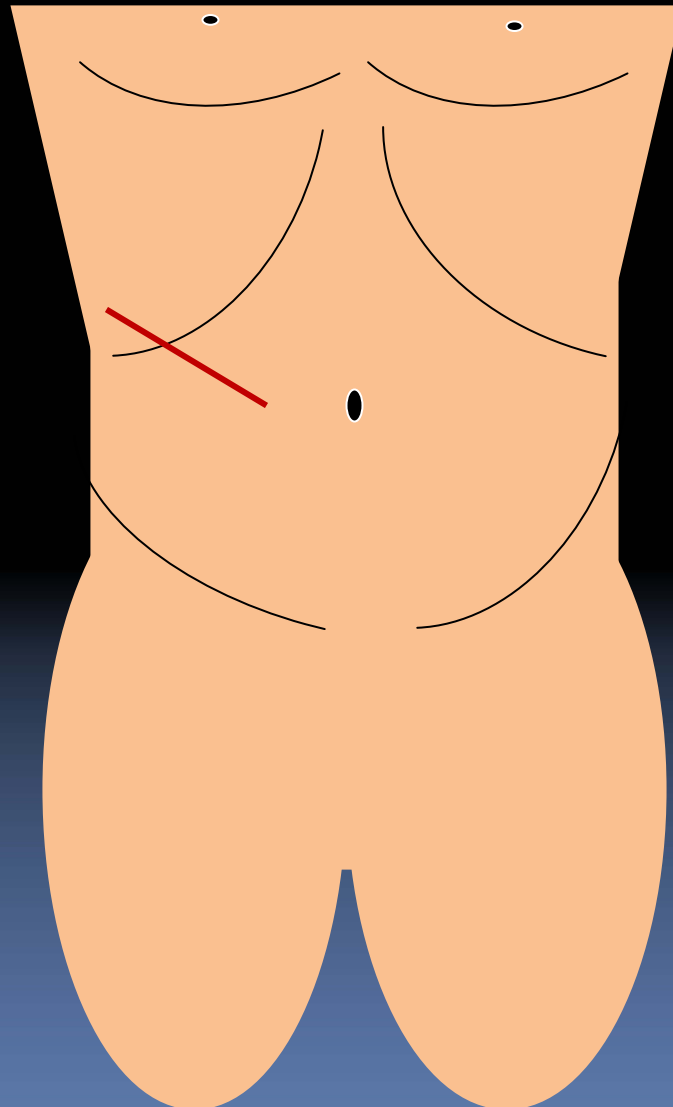
Typical Subcostal Incision used for
Standard Nephrectomy



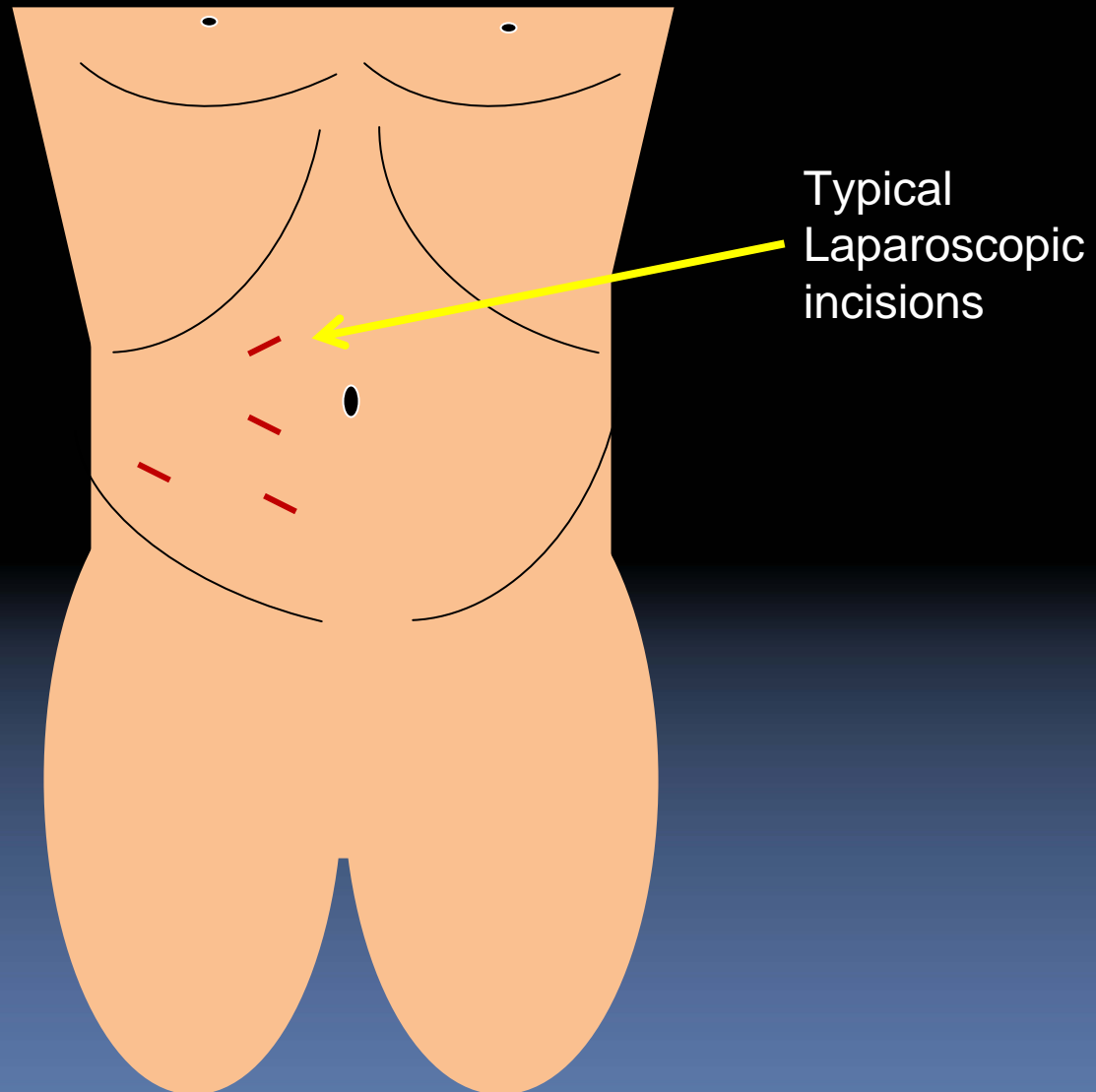
Typical Incisions used for Laparoscopic Nephrectomy



Typical Incisions used for
Standard Pyeloplasty (UPJ repair)



Typical Incisions used for Laparoscopic Pyeloplasty (UPJ repair)



Laparoscopic Procedures are NOT for Everyone!

- Standard surgery may be a better option for some patients
- Common reasons that may make the standard incision surgery a better option:
 - Previous operations
 - Abnormal or difficult anatomy
 - Complex surgical problems
 - Surgical risk



Risks of Laparoscopic Kidney Procedures

- Infection
- Bleeding and blood transfusion
- Lung problems
- Bowel Problems
 - Slowed functions
 - Small bowel obstruction
- Organ injury
 - Small or large intestine
 - Liver
 - Spleen
 - Urinary tract



Change in Plan -

Conversion to Standard Surgery

For successful outcomes or patient safety,
laparoscopic procedures may need to be converted
to a standard surgery

Typical reasons for conversions:

- Bleeding
- Unexpected surgical problems
- Difficult anatomy
- Surgical complications



Common Types of Laparoscopic Kidney Surgery

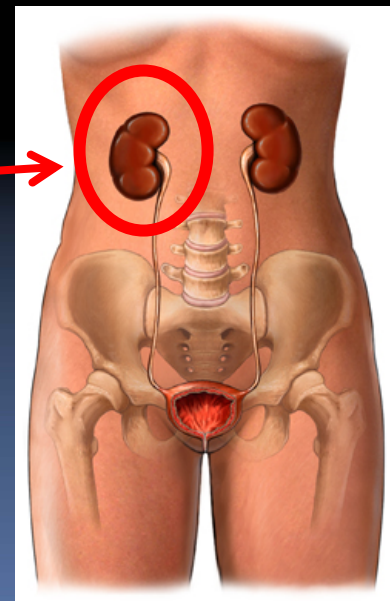
- **Nephrectomy** = total kidney removal
- **Partial Nephrectomy** = partial kidney removal
- **Nephro-ureterectomy** = total removal of kidney and ureter
- **Pyeloplasty** = repair of UPJ obstruction



Total Nephrectomy

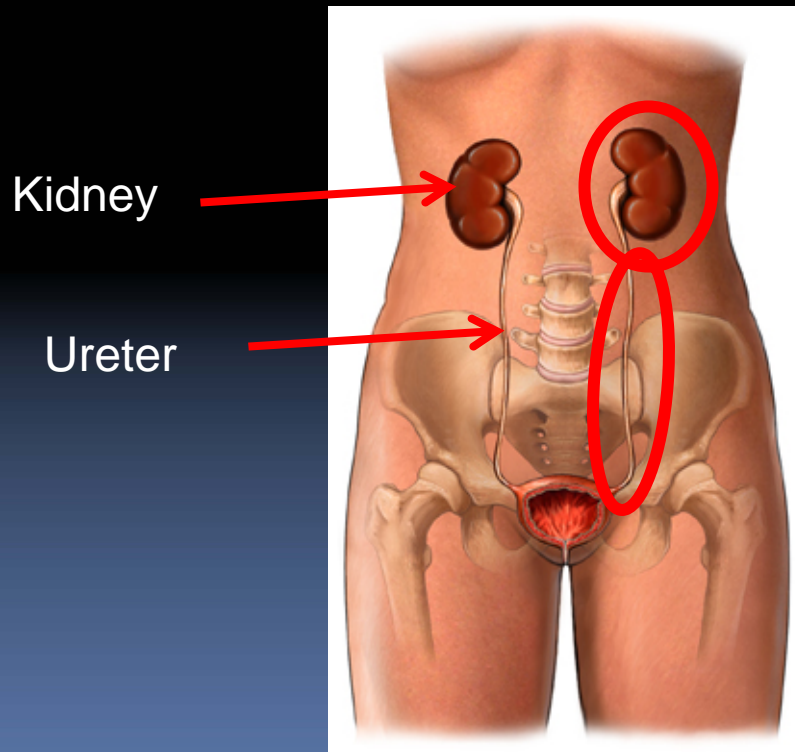
- **Removal of entire kidney**
 - For kidney tumors/cancer
 - For non-functioning kidneys
- Moderate size incision is made in the lower abdomen just large enough to remove the kidney
- Hospital stay: usually about 2 days

Kidney



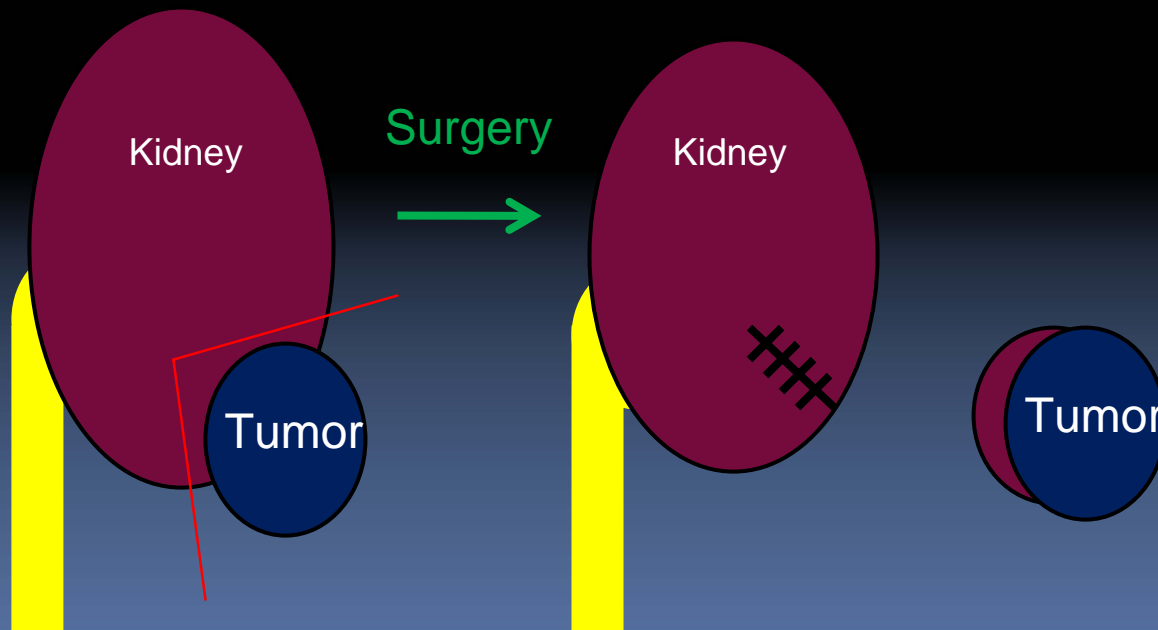
Nephro-ureterectomy

- Remove entire kidney and ureter
- May require a 2nd incision to remove the lower ureter as it enters the bladder
- Hospital stay: usually about 2 days



Partial Nephrectomy

- **Part of kidney is removed**
 - Kidney tumors/cancer
- Maximizes kidney function by preserving as much kidney tissue as possible
- Requires some kidney repair or reconstruction
- Hospital stay = usually about 2 days



Risks of Partial Nephrectomy

A more complex surgery

- Potential for total kidney removal
 - Partial removal may not be safe or possible
- Prolonged Urine leak
- Poorly functioning kidney
- High blood pressure
- Recurrent cancer in kidney
- Healing complications
 - Arterio-venous fistulas



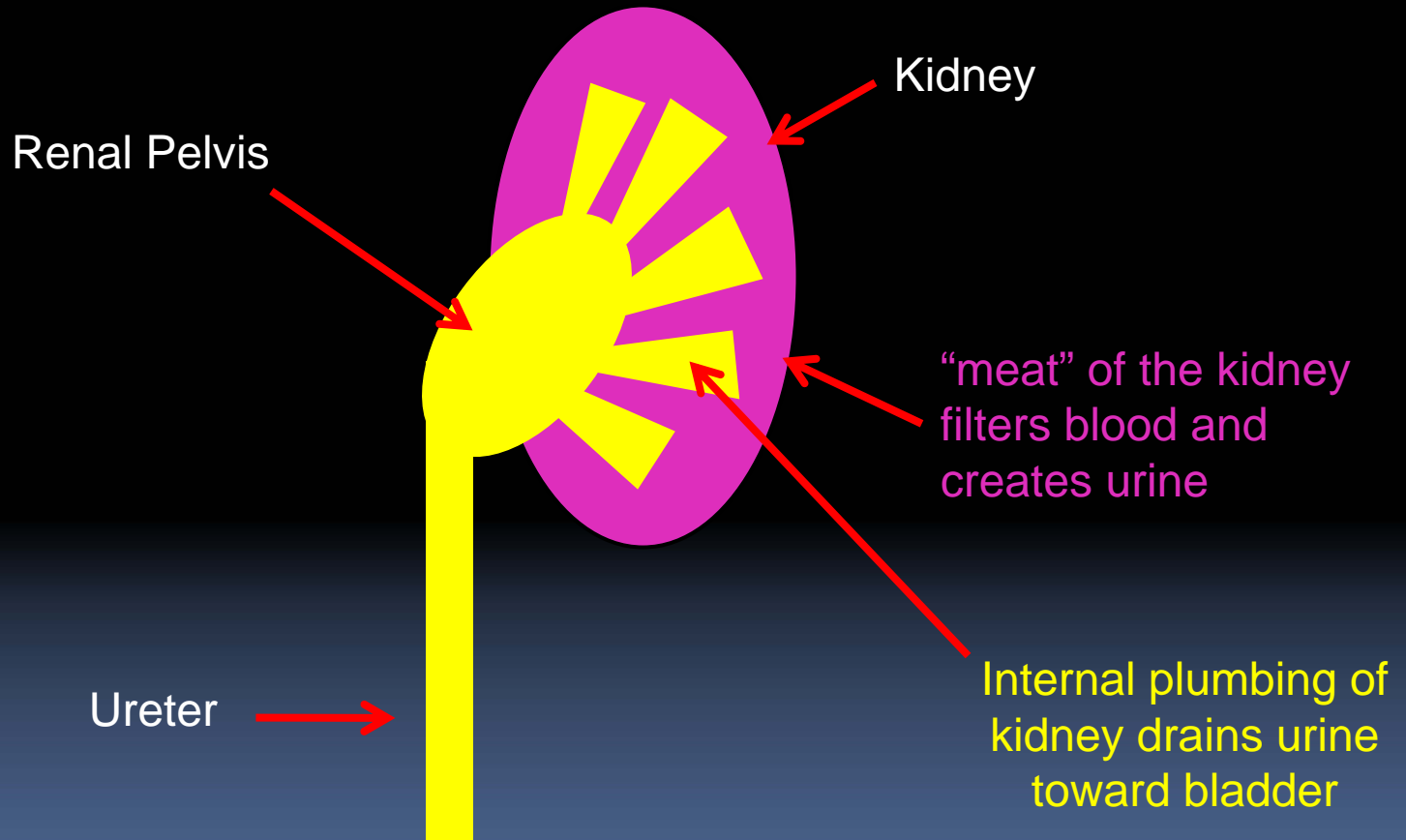
UPJ Obstruction Repair

UPJ Obstruction:

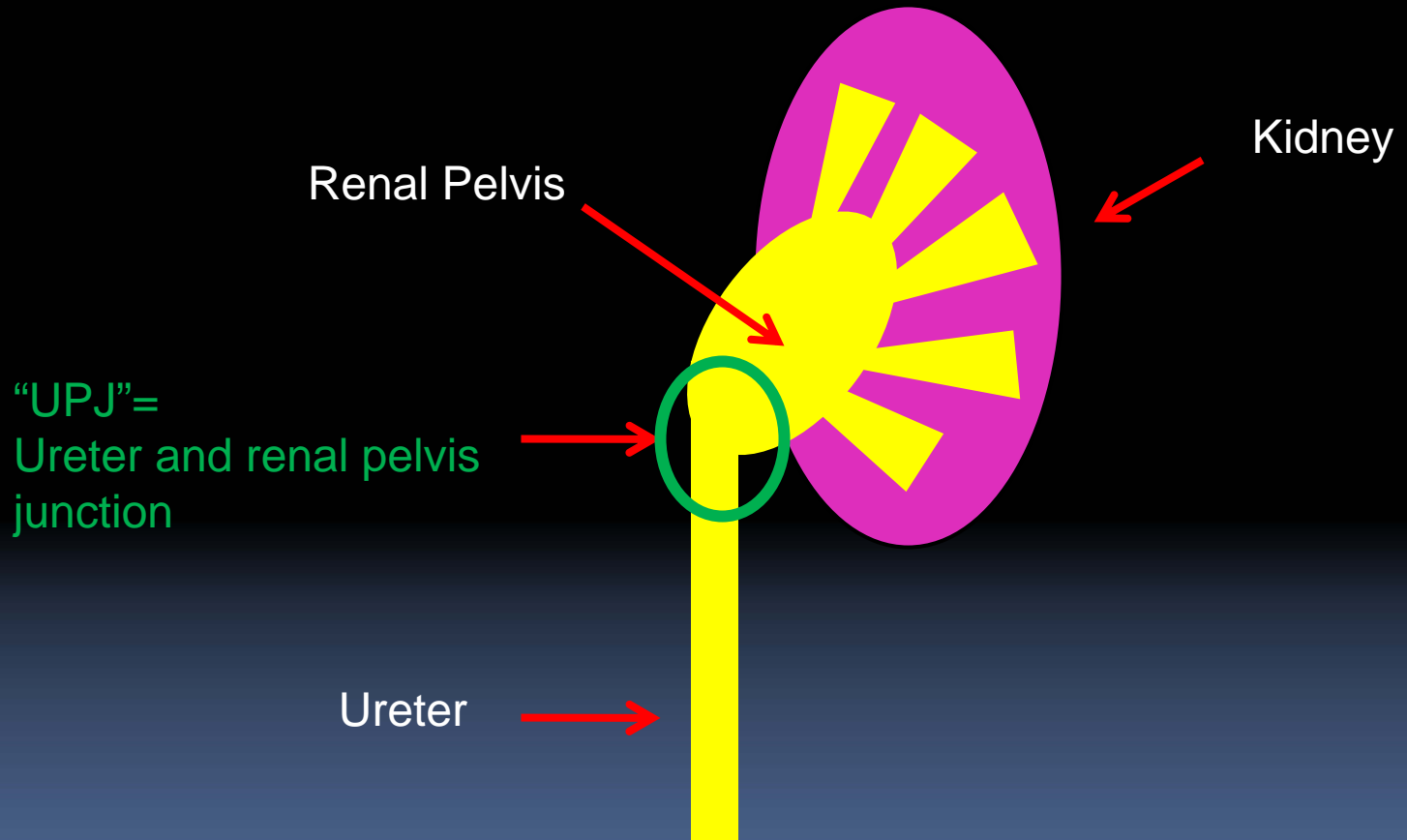
- **Obstruction of urine flow from the kidney**
- UPJ Obstruction may cause:
 - Pain
 - Upper abdomen
 - Side of back
 - Loss of functioning kidney tissue
 - Deteriorating kidney function
 - Kidney stones
 - Serious Kidney infection



Internal Kidney Anatomy



What is the "UPJ"?

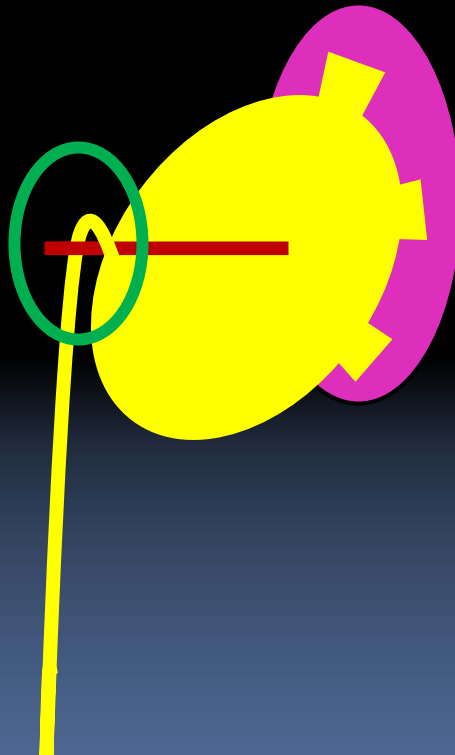


Typical Causes of UPJ Obstruction

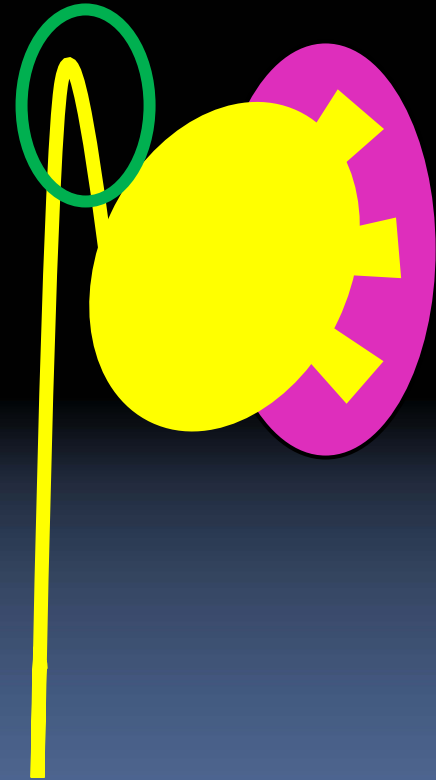
Narrow UPJ



Kinking of UPJ by artery to kidney

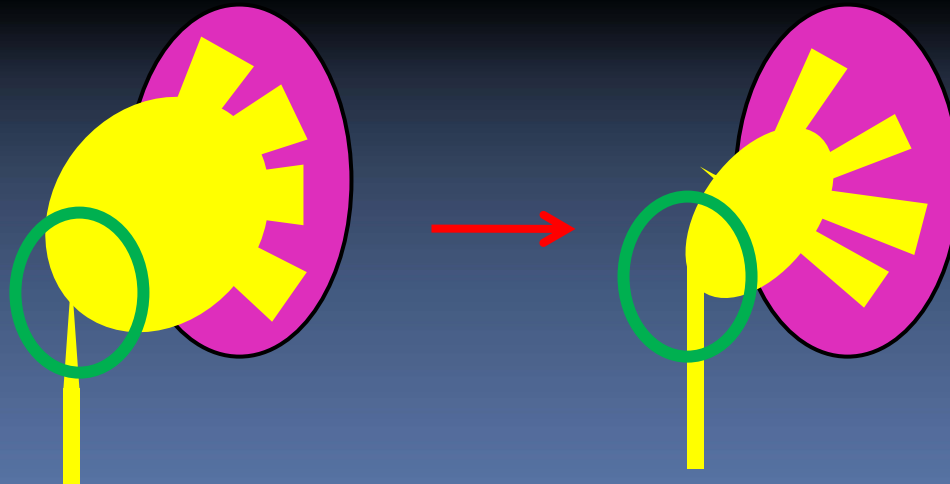


Kinking of UPJ Due to abnormal anatomy



UPJ Repair = Pyeloplasty

- Restore the normal drainage of the kidney
 - Remove the narrow segment of ureter if needed
 - Restore the normal anatomy to prevent ureter kinking
 - Move ureter away from artery if needed



Risks of UPJ Repairs

- Infection
- Prolonged urine leak
- Continued or recurrent obstruction
 - Scar tissue/ poor healing



Let's Get You **READY** for
Surgery!



Review the Oakland Urology Presentation



“Prepare for Your Surgery”

“Prepare for Your Surgery” Presentation

Like this presentation, it can be found on the Oakland Urology Presentations on your Urologist’s KP website

Covers the pre-surgery preparation for urology surgery at Oakland Kaiser



My Home Page

- Home
- Prepare for your Procedure (Emmi) **New!**
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- Oakland Urology Presentations**
- Recommended Web Links

The Permanente Medical Group
Paul E. Li, MD



Facility

[Oakland Medical Center](#)
[Department of Urology](#)

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Hospital Building
Ground floor
280 W. MacArthur Blvd.
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[Map & Directions](#)

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Appointments/Cancellations: (510) 752-6789
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[E-mail your doctor](#)

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Sunday Monday Tuesday Wednesday Thursday Friday Saturday

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Oakland Urology Presentations

- [Basic Catheter Care](#)
- [Bladder Cancer](#)
- [Bladder Catheters](#)
- [BPH and Lower Urinary Tract Symptoms](#)
- [Cystoscopy](#)
- [Erectile Dysfunction](#)
- [Female Recurrent Urinary Tract Infection](#)
- [Hematuria](#)
- [Kidney Stones](#)
- [Localized CaP](#)
- [Prepare for Your Surgery](#)
- [Primary Nocturia](#)

- Healthy Living Resources
- Podcasts
- Videos

Typical Recovery after Laparoscopic Kidney Surgery



After Surgery In the Recovery Room

- Expect to stay in the **Recovery Room for about 1-2 hours** while anesthesia wears off
- Most patients do not remember much from the operating room due to the sedatives and anesthesia medicines
- **You will be comfortable, but groggy!**
- **Your Urologist will call your family** with a full report
 - Expect good news!
 - No visitors are allowed in the Recovery Room



What to Expect after Laparoscopic Surgery

- Some abdominal discomfort
 - Pain medications will be available
- Shoulder pain
 - From CO2 gas. Harmless!
- Slow return of normal bowel function
 - Eat smaller and easy to digest meals to avoid:
 - Nausea
 - Bloating
 - Abdominal Cramps



After Surgery

In Your Hospital Room

- The night after surgery you may get out of bed with nurse assistance, if you wish
- Your pain should be easy to control with intravenous injections



First Day After Surgery

- Goals
 - Pain Control
 - Pain pills and/or injections
 - Start Diet
 - Start with clear liquids
 - Slowly progress to solid foods as your digestive system will allow over the next 1-2 days
 - Start with small and frequent meals
 - Try easy to digest foods first
 - Walk at least 4 times daily
 - You will need assistance the first time out of bed
 - Prevents blood clots
 - Promotes strength return



2nd Day After Surgery

- Goals:

- Pain Control

- Pain pills
- Injections for breakthrough pain

- Start Diet

- Slowly progress to solid foods as your digestive system will allow.

- Walk at least 4 times daily

- Learn home care if any

- Prepare for going home

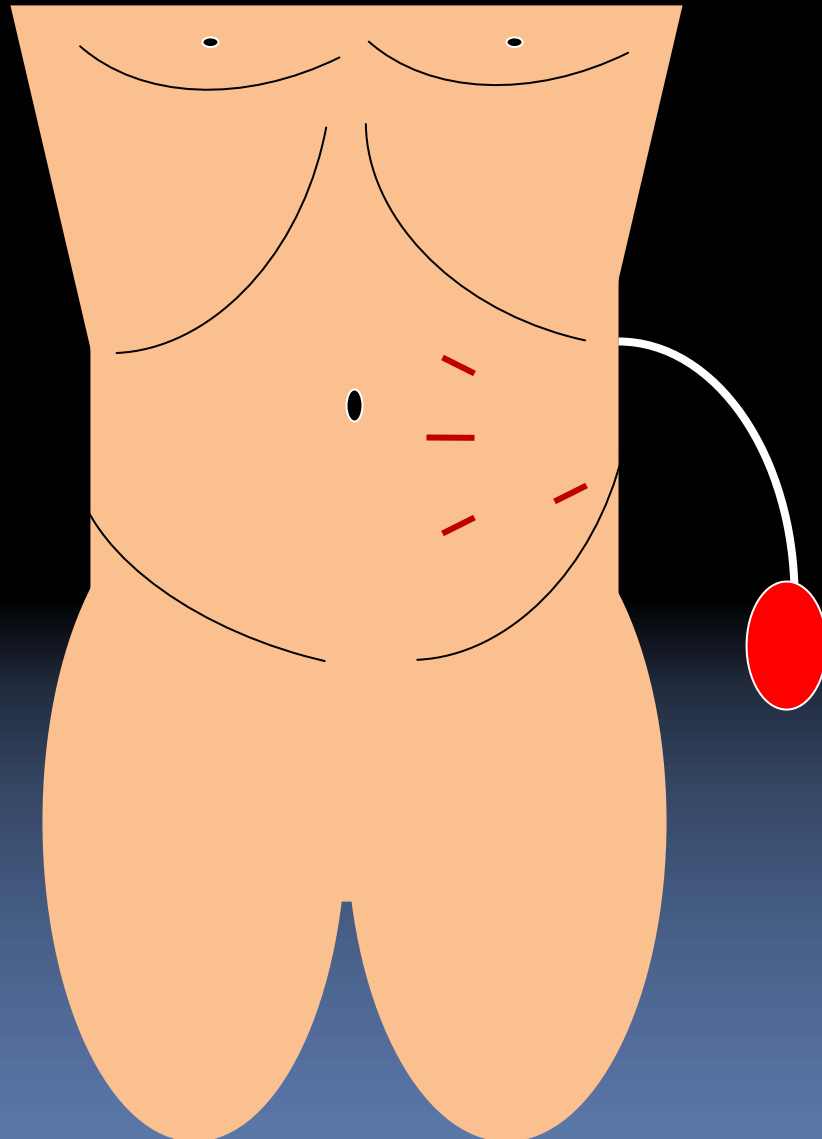


Bulb Drains

- Commonly used with:
 - Partial Nephrectomy
 - UPJ Repair/Pyeloplasty
- Drainage bulb may be placed for a few days to collect excessive fluids
- Held in place with small stitch – cut to remove drain
- Usually removed within a few days when the repaired urinary tract becomes water tight.



Bulb Drain



Bulb
Drain



Wound Care

If you have a bulb drain...

Change the gauze:

- If dirty, wet or soiled
- If uncomfortable

Do not shower:

- Sponge bath is OK!



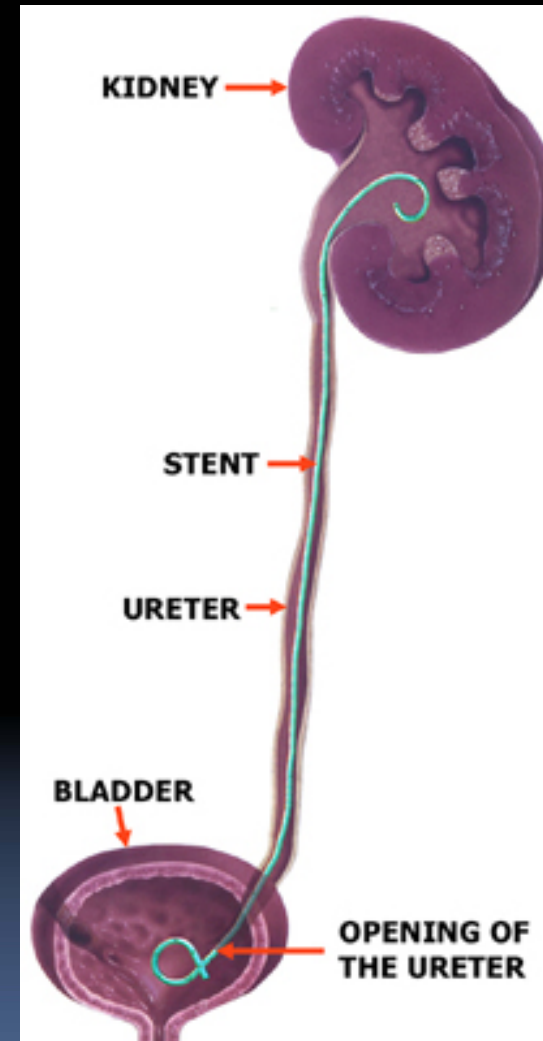
If you go home with a bulb drain

- Empty and recharge every 8 hrs
- Keep a record of the 8 hr output
 - Measure in ounces or “cc” or “mls”
 - A specimen cup works well for this!
 - It has measurement lines on the side
 - Your Urologist will determine when to remove the drain based on your report!



Ureteral Stents

- Commonly used with
 - **Partial Nephrectomy**
 - **UPJ Repairs/Pyeloplasties**
- Hollow tube placed in kidney, ureter and bladder
- Allows urine to drain urine from kidney to bladder
- An ureteral stent is used to assure:
 - Maximum kidney drainage
 - Good position of the ureter (Pyeloplasty)
- Remains in a few weeks
 - Removed with minor office procedure



Please Review The Oakland Urology Presentation “Your Ureteral Stent”



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Oakland Urology Presentation

"Your Ureteral Stent"

The screenshot shows a Windows Internet Explorer browser window displaying the website for Mark A. St. Lezin, MD, at The Permanente Medical Group. The browser's address bar shows the URL: <http://www.permanente.net/homepage/kaiser/pages/c5703-55505.html>. The page content includes a navigation menu on the left and a main content area titled "Oakland Urology Presentations".

Navigation Menu (Left):

- Home
- Prepare for your Procedure (Emmi) **New!**
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 - Podcasts
 - Videos
 - Online Programs
- Healthwise Health Encyclopedia
- La Guía en Español
- Awards and Recognition

Main Content Area (Oakland Urology Presentations):

- [Basic Catheter Care](#)
- [Bladder Cancer](#)
- [Bladder Catheters](#)
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- [Primary Nocturia](#)
- [PSA](#)
- [Retropubic Prostatectomy](#)
- [Scrotal Problems](#)
- [Self Catheterization](#)
- [Transurethral Prostatectomy and Prostate Biopsy](#)
- [Your Ureteral Stent](#) (highlighted with a red circle)

The browser's taskbar at the bottom shows the Start button, several open applications (Powerpoints, Laparoscopic Kidney..., Retropubic Prostatec...), and the current page (Mark A St. Lezin, MD ...). The system tray on the right shows the Internet icon, a 100% zoom level, and the time 9:21 AM.

Activity Level after Surgery

Individual Recoveries Vary!

- Walking and stairs:
 - Even the day after surgery!
 - At least 4 times daily – very important
- Return to normal activities
 - Self Care: when you get home!
 - Work
 - Office work: 2 weeks
 - Physical labor: 4 weeks
 - Exercise: 4 weeks



Kidney Tumors Pathology Report

- The Pathology report is usually back within 1 week of surgery
- The report will tell us:
 - Type of cancer or Tumor
 - Grade of the cancer
 - If the cancer appears to be:
 - Confined to the kidney
 - Involving the surgical margins
 - Spread to lymph nodes (if biopsied)



Questions?

Call our nursing staff or **E-mail your surgeon**

Our nursing staff know the answers!

510- 752-6796



Stephanie



Kris



Cleo