

## Dr. Ramakumar to join Arizona Institute of Urology

Effective July 14, 2014 Dr. Sanjay Ramakumar will be seeing patients at: **5670 N Professional Park Dr Ste 100, 395 N Silverbell Rd Ste 315, and 1100 N El Dorado PI.** He holds privileges at Northwest Medical Center and St. Mary's Hospital.

**Call 618-1010**  
to schedule an appointment  
with Dr. Ramakumar.

## CT Scans

Did you know that AIU has a facility to perform your CT scans? CT scans are scheduled at our Northwest location on Tuesdays through Fridays with great availability.

Call **520.618.6445** for more information or to schedule  
5670 N Professional Park Dr #120

**Please take a few  
moments to tell us  
about your  
experience today:**



<http://goo.gl/zHHIFC>



## Arizona Institute of Urology

*Comprehensive Care,  
Focused on You.*

520.618.1010  
[www.aiurology.com](http://www.aiurology.com)

## The Hard Facts About Kidney Stones

**Kidney stone season is upon us once again and there is no better time than the present to educate oneself on the signs/symptoms associated with stones and tips for preventing them.** The warmer months are often associated with poor fluid intake, which directly correlates with a higher incidence of stone formation.

### Clinical presentation:

As a brief overview, the most common types of stones seen clinically are composed of calcium oxalate or uric acid. Many kidney stones are small, non-obstructing, and can reside within the kidney for years without leading to symptoms. The typical symptoms that one might develop when actively passing a stone can include any or all of the following:

- Mild to severe flank pain w/ or w/o radiation to the lower abdomen and groin
- Pain that comes in waves and fluctuates in intensity
- Burning with urination
- Blood in the urine
- Cloudy or foul-smelling urine
- Nausea and vomiting
- Urgency and frequency of urination
- Fever and chills if infection is also present

### Diagnostics:

The initial evaluation for a patient suspected to be actively passing a kidney stone includes a thorough abdominal exam, urine test to check for infection, and upper tract imaging, such as an x-ray, ultrasound, or CT scan. A specialized x-ray, known as a KUB, is one of the least invasive, most cost effective, and most time-sensitive options as far as imaging is concerned. KUB can identify radiodense stones fairly easily, but is limited in patients with excessive gas in the bowel or in those who are obese. KUB is also unable to

determine the presence/absence of hydronephrosis, which is swelling in the kidney. This condition can be caused by a stone causing blockage of urine flow from the kidney to the bladder, as well as from other sources such as chronic kidney disease. If there is concern for hydronephrosis or if KUB shows no evidence of radiodense stones, the next best options would be combination KUB and renal ultrasound, or CT scan. Referral to urology for these tests is reasonable, especially when there is high suspicion of stone presence and possible need for surgical intervention. Metabolic evaluation of kidney stone disease is done if the patient has a history of recurrent stones.

### Treatment:

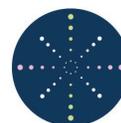
Stones measuring 5 mm or less can usually pass through the urinary tract without requiring surgical intervention. This may



not be the case for those patients with narrow ureters (the tube draining urine from each kidney to the bladder) or in the presence of ureteral stricture (narrowing from scar tissue). First line treatment for stones in the ureter that are less than 1 cm in patients

with no known history of ureteral stricture and with no other contraindications, usually includes Flomax (Tamsulosin) 0.4 mg by mouth daily, adequate hydration, pain management, and medication to help with nausea/vomiting. In some cases, dissolution agents (medication to breakdown stones), such as sodium bicarbonate and potassium citrate can be used.

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arizona institute  
of urology

## Prostate Cancer Support Group

A support group for you and your spouse addressing the concerns of the emotional and physical side effects of prostate cancer. Please join us to share your experiences and life stories.

2nd Wednesday of every month  
5670 N. Professional Park Dr.  
Arizona Institute of Urology's  
Cancer Therapy Center  
5:30 pm - 6:30 pm

Mediator:

Stephanie Keresztes, PA-C  
Please RSVP to: Tresta  
520.784.7084  
tanderson@aiurology.com

## Prolia Injection Network Site

2 shots of Prolia® (denosumab) a year are proven to help women with postmenopausal osteoporosis at high risk for fracture to strengthen their bones. Prolia® is a prescription medicine used to treat osteoporosis (thinning and weakening of bone) in women after menopause who:

- Are at high risk for fracture, meaning women who have had a fracture related to osteoporosis, or who have multiple risk factors for fracture
- Cannot use another osteoporosis medicine or other osteoporosis medicines did not work well.

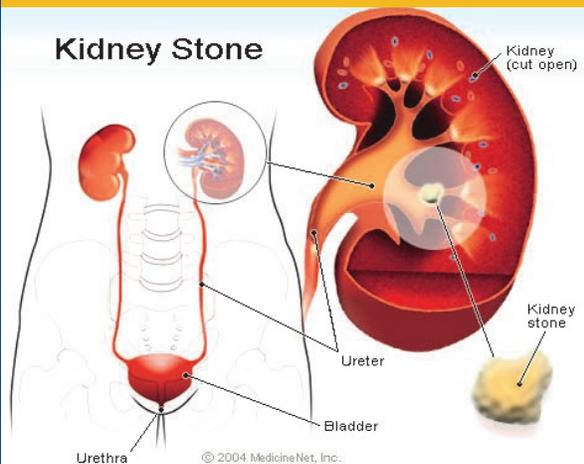
Prolia® isn't for everyone. Ask your doctor for details to see if Prolia® is right for you.

To schedule: 520.618.1010

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However, this option is not ideal in patients with acute symptoms, as 24-hr urine testing and blood testing (metabolic panel, uric acid, and parathyroid hormone) are necessary before initiating one of these agents. In the case of larger stones that do not pass with conservative treatment, surgical treatment is necessary. Surgery to treat stones is not recommended in the presence of infection in the urinary tract, as this can lead to the development of sepsis (infection in the blood). In the case of a patient with a symptomatic ureteral stone and presence of an infection, ureteral stent is typically placed until the infection has resolved and the stone can be treated. A stent is a small tube that allows urine to pass around the obstructing stone.

**Stone prevention:** Stone prevention is typically centered around dietary/lifestyle modifications. In general, recommendations should include increasing ones water intake to 1.5-2 Liters/day, unless on fluid restriction for some other medical condition, increasing dietary citrate (citrus can be found in oranges, lemon, lime, etc.), and decreasing sodium (salt) intake. More specific recommendations can be made based on results of serologic testing and 24-hour urine testing. Stone prevention is often where the use of dissolution agents is most appropriate.

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*There are many factors that increase ones risk of developing kidney stones.*

Factors that increase ones risk of developing kidney stones include:

- Family or personal history.
- Being an adult male: Kidney stones are most common in men 40 years and older. Although, presence of stones are becoming more prevalent in women.

Basic chemical ingredient	Occurrence	Macroscopic view	Neonatal efficiency
Calcium oxalate monohydrate	39.5%		++
Calcium oxalate dihydrate	20.6%		++
Uric acid	15.1%		+++
Calcium phosphate	0.1%		+++
Magnesium ammonium phosphate	23.3%		+++
Calcium hydrogen phosphate	0.1%		+++
Cystine	1.2%		+
Xanthine	0.1%		+

- Dehydration: People who live in warm climates and those who sweat a lot may be at higher risk than others. Dehydration is the number one risk factor for nephrolithiasis.

- Certain diet trends: Eating a diet that is high in protein, sodium and/or sugar may increase ones risk of some types of kidney stones. This is especially true with a high-sodium diet. High sodium intake increases the amount of calcium your kidneys must filter and significantly increases your risk of kidney stones.
- Obesity: High body mass index (BMI), large waist size and weight gain have been linked to an increased risk of kidney stones.
- Digestive diseases and surgery: Inflammatory bowel disease or chronic diarrhea can cause changes in the digestive process that affect the absorption of calcium and water, increasing the levels of stone-forming substances in the urine. This can also be the case following bariatric surgery.
- Other medical conditions: Diseases and conditions that can also increase the risk of kidney stones include renal tubular acidosis, cystinuria, medullary sponge kidney disease, hyperparathyroidism, and others.

~Suzanne Sexton PA-C

## Save the Date!

ZERO Prostate Cancer - 5K/10K Run/Walk & Fun Zoo Walk

Reid Park Zoo  
Saturday,  
October 11, 2014



Lace up your sneakers and join AIU for the 4th Annual Zero Prostate Cancer Run/Walk. This family-friendly event features tech shirts, awards, tasty treats and a chance to win prizes.

TO REGISTER: [www.zeroprostatecancerrun.org/tucson](http://www.zeroprostatecancerrun.org/tucson)

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