Kidney Konnections
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Understanding Your Lab Test Results
By Marco Martin

On May 23rd the BAAKP cordially welcomed Dr. Brian Carrie to share his wealth of knowledge with us on reading and understanding lab test results. This is a topic of great importance in the management of kidney disease, not just to kidney patients but to their loved ones. Originally from Scotland, Dr. Carrie is a nephrologist with the El Camino Renal Medical Group in Mt. View, is privileged at El Camino Hospital, and has served as the head of the Nephrology Division at Santa Clara Valley Medical Center. We were pleased to have a person of Dr. Carrie’s caliber share his time with us and conduct a question and answer presentation. Dr. Carrie also spent one-on-one time with individuals from our audience answering specific questions that an individual’s doctor may not be able to go over as a result of time constraints. This is a hallmark of why the Bay Area Association of Kidney Patients provides these important sessions.

Dr. Carrie advised that the first thing you should do is verify that the lab test report is yours. Check that every page has your name on it; errors can and have occurred.

Being aware that kidney disease can disrupt balances in other bodily systems, doctors like to monitor various chemicals. Below are some comments unique to the presentation on notable items depicted on lab results, as explained by Dr. Carrie.

• WBC = White Blood Cell Count – Indicates if the person has an infection.
• RBC = Red Blood Cell Count – Not considered as important as the WBC or hemoglobin result.
• HGB = Hemoglobin – Indicates if anemia is present and at what level. As kidney function goes down, less erythropoietin hormone is made by the kidneys. This leads to anemia.
• HCT = Hematocrit – This is normally about 3x that of HGB.
• MCV, MCH, MCHC – These indicators center around red blood cells; MCV measures the size of the RBC. Platelet count influences a person’s ability to clot. Aspirin, for example, reduce the platelet function but not the actual platelet count.

**Hematology**

- **Sodium** – A measure of water metabolism, and not how much salt you have ingested. Drinking plenty of water causes this number to decrease due to dilution. Frequently this number is lowest just before dialysis.

**Differential** [This category creates a profile on the types of white blood cells in the person’s body.]

**General Chemistry** [This is a catch all category for measurements not part of a specific group.]

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The detect signs of a urinary tract infection. Microscope. Urine tests are usually order to either check f stick is used to measure certain components of a person’s uri other tests also exist that help a medical professional provide good care. Urinalysis (Urine Analysis) is when a dip stick is used to measure certain components of a person’s urine, in combination with examining the urine under a microscope. Urine tests are usually order to either check for protein in the urine (a clear sign of kidney disease) or to detect signs of a urinary tract infection.

Other tests also exist that help a medical professional provide good care. Urinalysis (Urine Analysis) is when a dipstick is used to measure certain components of a person’s urine, in combination with examining the urine under a microscope. Urine tests are usually ordered to either check for protein in the urine (a clear sign of kidney disease) or to detect signs of a urinary tract infection.

The ANCA panel is geared toward discovering the likelihood of there being an autoimmune disease present. The objective of this test is to measure the inflammatory markers which may damage tiny blood vessels.

Other groups of tests are used to measure, in kidney patients, how the parathyroid gland is functioning. This gland is adjacent to the thyroid gland. It is known that as phosphorus levels rise (diseased kidneys cannot filter phosphorus well), calcium levels drop. This triggers the parathyroid gland to secrete parathyroid hormone (PTH) to try and bring the body’s calcium levels back up. Long term, if left untreated, this condition leads to the body taking calcium from your bones in order to try and neutralize the fall in calcium levels. Needless to say, this is not an ideal situation. The solution is to control the levels of phosphorus and PTH by using both a phosphorus binder (Tums, Fosrenol, Renvela, Phoslo) and vitamin D as a supplement.

As far as dialysis is concerned the KT/V is the standard to measure the effectiveness of a patient’s dialysis treatment. The target KT/V varies according to the frequency of dialysis. For instance, the less often dialysis is performed the higher you want the ratio of KT/V to be. Also this number’s goal is in the 2.x range for peritoneal dialysis and in the 1.x range for hemodialysis.

Dr. Carrie also fielded some interesting questions from the audience. We learned that kidney stones occur more in hot, dry places, where people tend to get more dehydrated. We were told that drinking more liquids in general helps prevent kidney stones. In general doctors advise patients with reduced kidney function to drink to quench thirst and not necessarily to push liquids or restrict them. Dialysis patients who produce little or no urine have to be careful with their fluid intakes. I had the chance to personally speak with Dr. Carrie and I learned that kidney disease really carries no symptoms of pain. Thus we need these laboratory exams to detect and measure the extent of this disease.

We hope you learned enough from this article to get you started with learning more on your own. Our presentations always carry more information than can fit into an article. The entire presentation can be viewed on our web site at www.baakp.org. A great way to participate in your education is to learn more about our quarterly meetings where you can have the chance to ask the speaker(s) questions directly, and also obtain information from other patients, members, and professionals who attend our events.
**California Living Donor Registry**

The first hurdle in creating a registry of living organ donors in California was cleared when Measure SB1395 was passed unanimously by the State Senate on May 31, 2010. The measure now heads to the Assembly.

SB 1395 would authorize the creation of a not-for-profit entity to be designated as the Altruistic Living Donor Registrar and authorizes the establishment and maintenance of the Altruistic Living Donor Registry for persons who would like to identify themselves as kidney donors during their lifetime. In other words, the bill would create a central database of people willing to donate a kidney to one of thousands of Californians awaiting transplants. It would also make it easier for individuals to register as organ donors by requiring them to check a box when they fill out a driver's license application. Currently, you can voluntarily register to donate your organs upon your death through the Donate Life California Registry (donatelifecalifornia.org). Donate Life reports that approximately 25 percent of those applying or renewing a driver's license or identification card sign up to be deceased donors.

More than 21,000 people in California are in need of new organs according to state figures. Of them, 17,000 are specifically waiting for kidneys. One-third of them will die before receiving a transplant.

In many cases, living donors give a kidney to a family member or loved one. But sometimes, the loved one isn't a good match. A living donor registry would help with paired exchanges, in which a living donor could swap with a stranger in return for that person's loved one offering a kidney to theirs.

The registry is being championed by Apple co-founder Steve Jobs, the recipient of a donated liver, and is supported by Gov. Arnold Schwarzenegger.

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**Thank You to Our Supporters!**

The BAAKP is grateful to Dr. Brian Carrie of El Camino Renal Medical Group for presenting this helpful information on “Understanding Your Laboratory Tests,” especially his sacrifice of a Sunday afternoon. Special thanks too to Genzyme Pharmaceuticals, for the grant of $1000, thereby supporting the last four meetings. We also appreciate the generosity of Willows Market for again donating the speaker’s gift basket. Also, special thanks to the Palo Alto Medical Foundation for the perfect meeting room and their continuing support of our activities. Without the efforts of these community members, our programs would not be possible.

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**Other Local Kidney Support Groups & Meetings**

|-----------------------|--------|----------------------------------|-----------------------------------------------------------|
| Open to all pre-dialysis, dialysis, pre-transplant, and transplant patients, friends, and family | Silicon Valley Chapter  
Meets on the 2nd Thursday of each month at 7:30 pm. El Camino Hospital, Conference Room E, 2500 Grant Road, Mountain View, CA 94040  
[www.bayareatrio.org](http://www.bayareatrio.org)  
408-353-2169 | For general PKD information, call:  
1-800-PKDCURE  
For information about local groups, go to:  
[www.pkdcure.org/sanfranciscochapter](http://www.pkdcure.org/sanfranciscochapter)  
For chapter specific questions, please send email to:  
[sanfranciscochapter@pkdcure.org](mailto:sanfranciscochapter@pkdcure.org) | Has many resources available and sponsors many events.  
For more info:  
[www.kidneyncga.org](http://www.kidneyncga.org)  
415-543-3303  
National Kidney Foundation  
[www.kidney.org](http://www.kidney.org) |

| Contact: Lorraine Maloon, LCSW  
408-851-1044 | | | |
On Sunday, October 3, 2010, we are thrilled to have scheduled Dr. Toby Gottheiner as our featured speaker. Dr. Gottheiner is a local nephrologist with the Palo Alto Medical Foundation and recently received the Champions of Hope Award for Physicians from the National Kidney Foundation (of N. Ca. and N. Nev.). Dr. Gottheiner also acts as the BAAKP Medical Advisor.

Dr. Gottheiner’s talk will cover the impact of high blood pressure on the kidneys and treatment strategies (in people with normal as well as impaired kidney function). He will also cover various diet and nutritional aspects of hypertension including salt.

We will also be celebrating 3 years of educating and supporting kidney patients and their families in the San Francisco Bay Area!

This free celebration will take place at the Palo Alto Medical Foundation, 795 El Camino Real, 3rd floor Conference Room, Palo Alto, CA 94301 on Sunday, October 3, 2010 from 1 PM to 4 PM. There will be ample time for audience questions, social interaction and patient support. Kidney-friendly refreshments and birthday cake will be served!

To reserve your seat, please email us at bay.area.kidney@gmail.com or call us at 650-323-2225.