This was a great way to kick off a new year! 110 attended the presentation of 2 doctors highly recognized in their specialty. Judging by the audience response, one of our best meetings.

First, Lyle introduced Patty Fuller, now a professional consultant for non-profits, who is considering being an advisor to our group in directing our marketing at women in an effort to increase men's awareness. Patty was previously Associate Director at Sanford-Burnham for major gifts and planned estates.

Our guest speakers were AJ Mundt M.D., Professor and Chair, Department of Radiation Oncolo-

Our Group offers the complete spectrum of information on prevention and treatment. We provide a forum where you can get all your questions answered in one place by men that have lived through the experience. Prostate cancer is very personal. Our goal is to make you more aware of your options before you begin a treatment that has serious side effects that were not properly explained. Impotence, incontinence, and a high rate of recurrence are very common side effects and may be for life. Men who are newly diagnosed with PCa are often overwhelmed by the frightening magnitude of their condition. Networking with our members will help identify what options are best suited for your life style.

Be your own health manager!!
Dr. Mundt began by updating us on radiation therapy. He presented five things he felt were good to know about radiation, the last of which will lead into Dr. Rossi’s expertise on proton beam therapy.

Radiation is one of the cornerstones of prostate cancer (PCa) therapies along with Surgery and systemic therapies. Systemic means things you take by mouth or through your veins as opposed to invasive therapy like surgery or radiation.

Radiation can be used as a salvation treatment when, after surgery, the PSA is rising indicating recurrence. Another use of radiation is for palliation (to take away pain) when PCa is in its later stages.

Four of the things he focused on are Photon Radiation Therapy which is a wave of energy as opposed to Proton Beam which is a particle that goes through the air. He noted that often the two are thought of as a “Hatfields and the McCoys” relationship. Here in San Diego, the two are affiliated and Dr. Rossi has joined UCSD as a professor in their medical school. They have a rotation of their students and researchers together. Therefore, a patient needn’t worry about talking about the other treatment with either of their doctors.

#1. Modern Photon Radiation Therapy (RT) is highly effective and is associated with low risk of toxicity. Years ago, Photon RT was not highly effective and had a moderate/high risk of toxicity (rectal injury, bladder problems etc). This is not true anymore. New machines and planning techniques have significantly improved the outcomes of patients. Previously, multiple beams were focused on the prostate and attempts made to shield the surrounding normal rectum and bladder. Considerable volumes of normal tissues were treated exposing patients to toxicity. Intensity Modulated RT (IMRT) is a novel RT approach first developed in the early 1990s that has become increasingly popular today. It involves the use of computers to conform the radiation dose in 3 dimensions to the shape of the prostate (“shrink wrap”) which reduces the dose to the bladder and rectum and reduces toxicity risk. It also allows us to safely use higher doses to improve cure rates and it is also being used to potentially reduce risk of impotence by reducing irradiation of the penile bulb. Results of RT in prostate cancer now rival the best results of surgery. Long-term comparisons show equal cure rates for early stage patients.

#2. Imaging and RT. In the past, imaging was rarely used in prostate cancer patients undergoing radiotherapy. Now it is used both in the planning stage and during treatment. Interest is focused on using sophisticated imaging to improve the targeting of biopsy and treatment. Traditional treatment treated the entire prostate. New approaches help focus treatment on the tumor itself that allow higher more effective doses to be concentrated on the cancer. The newest MRI approach is Restriction Spectrum Imaging done at UCSD that precisely focuses on the tumor. Newer imaging techniques like the Carbon 11 Acetate imaging performed by Dr. Fabio Almeida also find areas of disease—areas we wouldn’t necessarily predict. Frequently (50-70% of the time) they alter how we irradiate a patient.

New radiation machines image patients and deliver radiation. They allow one to see where the tumor is every day immediately before treatment which is very important since many tumors may move from day to day. If you do not account for movement, you will miss the target.

#3. Brachytherapy may make a resurgence. Radioactive sources (Ir192, I125) are placed within (interstitial) the prostate either temporarily or permanently. Enthusiasm for brachytherapy in general in prostate cancer decreased after the 1960s. Many patients treated were not cured and the mainstay of radiation treatment became external beam RT. Brachytherapy later was improved by performing the procedure under ultrasound guidance giving better distribution of seeds in the prostate. It is a very good treatment for men with early stage disease—highly effective with low risk of side effects. Unlike other radiotherapy treatments, it is a 1 day (permanent seed) procedure. It is also the least expensive of the
radiation techniques. But its use continues to fall year after year. A concern is that fewer Radiation On-
cologists are being trained in how to do it. But things may change. In a recent study 400 men random-
ized to either: External Beam + Hormones or External Beam + Hormones + Brachy. The 10 year re-
results: 63% PSA control (no brachy); 83% PSA control (brachy). There was a higher rate of urinary side
effects in the brachytherapy group. Perhaps this could be reduced by using temporary instead of perma-
nent seeds.

#4 Shorter treatment may be just as good (or better). Currently IMRT is 8-9 weeks (5 days/ week). There is considerable interest in shortening treatment. Of course shortening treatment is more con-
venient for the patient. It is yet unknown whether shorter treatment regimens are equally effective as
longer ones and it is also yet unknown whether shorter treatments are more toxic. An important point is
that shorter treatment equals more dose per day. Currently a patient receives 180 cGy for 41 days. If
reduced to 28 days the patient would receive 250 CGy per day and if reduced to 4 days the patient
would receive 950 cGy per day. This is concerning because the rectum receives a higher dose which rais-
es the risk of serious toxicity

Should we do shorter treatments? The answer is yes. Current treatment regimens are becoming
way too long. But the answer is to study progressively shorter regimens: 41 vs 28 days; then if ok, 14 vs
28 days, etc. The wrong answer is to jump to ultra-short regimens now. Several studies are being con-
ducted in the United States and abroad comparing longer and shorter courses. Data so far suggests that
shorter may be possible— but more time is needed to assess for side effects and monitoring of PSA.

#5 Protons. Dr. Rossi opened by commenting that he, too, was gratified that an association with
UCSD was developed. He said that although he and Dr. Mundt agreed on the benefits and viability in
about a week, it took nearly 2 years to bring it to fruition through attorneys and agreements.

Protons are a type of radiation. What makes protons unique are their physical properties. Real-
ize they are not magic. This is applied physics. Protons were discovered in 1895 when x-rays were dis-
covered but it was not studied and advanced at that time. The fundamental difficulty with x-rays is that
they don’t stop. The x-rays used for radiation therapy are just higher energy versions of the same x-rays
used to take an x-ray picture. To get an x-ray picture, something has to go in and something has to go
out. Despite the arguments, even Protons are harmful at some level. Living cells don’t like it, they don’t
benefit from it. Technology today is trying to minimize the amount of normal tissue that gets significant
radiation doses---primarily the rectum. The take home message he emphasized about protons as a mo-
dality is that they stop. They don’t penetrate the entire body. The ability to stop the beam where you
want it results in reducing, not the high dose, but the dose “bath” (the dose the tissue beyond the target
gets). This is the biggest difference between modern x-ray treatment and proton treatment.

The type being delivered at Scripps Proton Therapy Center is called Pencil Beam Scanning. He
made a correlation to the new 3D printers which builds things a very thin layer at a time. They take a
stream of protons about 4 millimeters in diameter and, using electromagnets, they shape the beam to
whatever target they want. They change the depth of penetration by varying the energy. They put the
dose in one millimeter increments. An advantage of their modern facility is that they can change the plan
very rapidly. He showed an animation that went through the treatment process. It is important that the
patient table can be maneuvered to keep the target in exact focus because body parts inherently move.

They are testing the newly approved SpaceOar to displace the rectum from high-dose area.
SpaceOar is a gel approved by the FDA in April last year that can be injected under local anesthesia be-
tween the prostate and the rectum. After 3 to 6 months, it is resorbed.
He, too, spoke of increasing dosages over shorter time. For the majority of his low-risk patients, treatment time is being reduced from 40 to 28 fractions. Differential radiation dosage is used wherein the highest doses are given to the dominant disease within the prostate gland. Obviously this significantly reduces costs. Proton therapy is unquestionably more expensive than x-ray treatment.

He showed samples of re-treatment after previous proton therapy that recurred within the gland as well as regional recurrence. He, too, was highly complimentary of the advanced carbon-ll acetate imaging of Dr. Almeida that facilitates targeting.

Dr. Rossi closed by saying that Proton Beam Therapy of Prostate Cancer is an established modality with published Level I data equivalent in efficacy to any other external beam technique, with superior morbidity. The only difference is cost, and that is becoming less of a factor. The optimal dose and dose per fraction remain unknown but are the subject of ongoing clinical research, which is equally true of x-ray therapy based treatment modalities.

This was a highly informative session which could not possibly be fully re-capped here as many supporting slides were used in support of the narratives. Copies of the DVD’s for this meeting will be available by the next meeting date, February 20th at the library or through the website: http://ipcs.org/shop/

DVD’s now include the slide files to enhance your understanding.

FUTURE MEETINGS

February 20. Round Table. A panel of members talk of their experiences followed by Q&A, then breakout sessions by treatment type for networking.

March 29. James Rucks,, Regional Sales Manager, GenPath Diagnostics / BioReference Laboratories. Opco 4K test. The only test to assess a patient’s risk for aggressive prostate cancer prior to a prostate biopsy. www.opko.com/

ON THE LIGHTER SIDE

Quotable Quotes:

“The ability to speak does not make you intelligent.” — George Lucas

“Let a smile be your umbrella, and you'll end up with a face full of rain.” — George Carlin

“Shin: a device for finding furniture in the dark.” — Steven Wright

“Life is much simpler if you don’t notice anything....” — Tom Upton, Just Plain Weird

“The other night I was lying in bed, looking up at the stars, and I wondered, ‘Where the hell is my roof?’” — Steven Wright

“Climate is what you expect, weather is what you get.” — Robert A. Heinlein

“I never did give them hell. I just told the truth, and they thought it was hell.” — Harry S. Truman

(Continued on page 5)
“Where do you see yourself in four million years?”

“When you review your retirement fund then wet your pants and cry — that’s liquidity.”

INTERESTING ARTICLES

Where is the Prostate Cancer? What Do You Do if It Spreads?
By Mark Scholz, MD 1/31/16

As technology advances, our depth of insight improves. In the past, saying “Cancer” would say it all. It meant that someone is dying. Thankfully this is changing and we define a specific individual’s prognosis based on where he falls within a broad spectrum. Many factors define prognosis including the size, location and grade of the tumor. In this short article, I’ll introduce some basic concepts about the cancer’s location and how it relates to prognosis and treatment selection.

Prior to the development of 3-Tesla multi-parametric MRI, extra-capsular prostate cancer was only detected when the doctor felt an abnormality outside the gland with a digital rectal examination. Now, modern imaging and biopsy technology enables us to detect much smaller degrees of cancer spread through the capsule.

Cancer spreading just outside the capsule of the gland or into the seminal vesicles, when CT and bone scans that are otherwise clear, is termed “locally advanced.” Despite having cancer spread past the cap-

(Continued from page 4)

“He’s always asking: ‘Is that new? I haven’t seen that before.’ It’s like, Why don’t you mind your own business? Solve world hunger. Get out of my closet.” — Michelle Obama

“If a man says something in the woods and there are no women there, is he still wrong?”— Steven Wright

“To succeed in life, you need three things: a wishbone, a backbone and a funnybone.” — Reba McEntire

(Continued from page 6)
sule of the gland, modern radiation with IMRT, often with a brachytherapy boost, can be very effective at controlling the primary tumor.

Cancer can still be cured when it is locally advanced as long as the tumor remains confined to the general region immediately surrounding the prostate. Experience shows that locally advanced prostate cancer will often be associated with microscopic metastases in the pelvic lymph nodes. Prophylactic pelvic radiation along with testosterone inactivation pharmaceuticals (TIP) should be strongly considered as a preventative measure.

After initial staging with a CT or bone scan, sometimes one or two metastases are detected. A metastatic situation with 5 or fewer metastases is called “oligometastases” (oligo in Greek means “few”). Traditional oncology lore dictates that any detectable metastases are only “the tip of the iceberg,” that even a single metastasis invariably indicates that additional microscopic metastases are located in other areas of the body.

This belief originated in a past era when scans were crude and only large metastasis could be detected.

Now, the possibility of curing men with oligometastases with targeted radiation should not be overlooked. Forgoing potentially curative treatment almost always leads to further metastases down the line. It’s sad when straightforward treatment such as radiation to an isolated lymph node or bone metastasis is withheld simply out of a pessimistic fear that it “won’t work.” When oligometastases are treated with radiation, additional systemic treatment with TIP, and possibly with Taxotere should strongly be considered.

When bone scans or CT scans show a more extensive number of metastases, standard radiation is no longer feasible because radiation to multiple areas of the bone will damage the bone marrow. TIP is the standard initial treatment for men with multiple bone metastases. There is now also strong evidence that adding Taxotere chemotherapy to TIP significantly prolongs survival and improves cancer control rates. In addition, supportive agent such as Xgeva or Zometa should also be administered. A FDA-approved form of injectable radiation called Xofigo has also been shown to prolong survival and also effectively controls bone pain.

Uncommonly, usually at very advanced stages prostate cancer may spread to the lung or the liver. Men with lung metastases often respond well to a variety of treatments. Liver metastases are more dangerous and less likely to respond to hormonal treatment. When liver metastases are present, immediate chemotherapy is indicated. I have also seen meaningful remissions from liver metastases with a treatment that is FDA-approved for colon cancer called “SIR-Spheres,” a form of radiation therapy that is infused into the blood supply of the liver.

Prostate cancer presents in a broad variety of ways. Optimal management requires accurate staging and a tailored treatment plan. For best results, patients should undergo aggressive multimodality therapy whenever the staging scans shows cancer spread outside the prostate.

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**Simpler Prostate Cancer Grading System Proposed**

From Prostate Cancer Advisor 2/3/16

A consensus panel of experts has proposed a new and simpler prostate cancer grading system that could help clinicians give patients a better understanding of their prognosis.

The system, initially proposed by Jonathan I. Epstein, MD, Professor of Pathology, Urology, and Oncology at Johns Hopkins Medical Institutions in Baltimore, and supported by the International Society of Urological Pathology (ISUP), is based largely on the 1967 to 1973 Gleason scoring system, but more accu-
rately reflects PCa biology than the Gleason system. It incorporates the latest understanding of the pathologic and clinical aspects of PCa.

Jonathan I. Epstein, MD, Professor of Pathology, Urology, and Oncology at Johns Hopkins Medical Institutions in Baltimore

The new grading system, first described in BJU International in 2013 and recently verified in a large multi-institutional study described in the upcoming March issue of European Urology (2016;69:428-435), consists of 5 “grade groups,” with Grade Group 1 indicating the most favorable prognosis and Grade Group 5 the least favorable. In the Gleason scoring system, 25 grading combinations are possible.

In an interview with Renal & Urology News, Dr. Epstein said the proposed system distills pathologic findings into the key differences in prognosis “that can be intuitive to both patients and clinicians,” he said. “Clinicians will be forced to look at the grades appropriately in terms of different prognoses,” Dr. Epstein said.

The original Gleason system used PCA-related death as an outcome, whereas the new system uses biochemical recurrence as an outcome, although recent studies have verified that the new system also predict death due to PCA.

A noteworthy aspect of new grading system is the distinction it makes between Gleason score 3 + 4 and 4 + 3 cancers, which often are simply called Gleason score 7 disease in discussions with patients. Dr. Epstein emphasized that Gleason 3 + 4 tumors are associated with substantially better prognoses than Gleason 4 + 3 tumors. The new grading system separates these cancers into Grade Group 2 and 3, respectively.

This distinction could affect patient decisions whether to be placed on active surveillance if their doctors recommend it. Patients may feel more comfortable with this approach if they are told their cancer is a grade 2 out of 5 instead of a Gleason 7 out of 10, Dr. Epstein said.

Another important feature of the new system is the placement of Gleason score 6 cancers into Grade Group 1. Dr. Epstein pointed out that patients with Gleason score 6 disease often believe their prognosis is worse than it is because Gleason score 6 is half way along the Gleason scoring scale of 2 to 10, when, in fact, a Gleason score 6 tumor is the lowest-grade cancer currently assigned with an excellent prognosis. The new system reflects this.

The new grading system has been in use at Johns Hopkins since 2013, with biopsy reports including both Gleason scores and grade groups, and clinicians at the institution have embraced it, Dr. Epstein said. “It helps them to explain to patients in simple terms the relative prognosis of their tumors,” he said.

The consensus panel was convened in 2014 by ISUP and included 65 PCA pathology experts as well as 17 clinicians, including urologists, radiation oncologists, and medical oncologists from 19 countries.

The new grading system and terminology of Grade Groups 1 through 5 have been accepted by the World Health Organization for the 2016 edition of Pathology and Genetics: Tumours of the Urinary System and Male Genital Organs. As for how quickly the new system will be adopted by U.S. clinicians, Dr. Epstein noted that this depends largely on its adoption by the College of American Pathologists checklists, to which every medical institution adheres. This often follows what the Union for International Cancer Control (UICC) and the American Joint Committee on Cancer (AJCC) do with respect to the TNM Classification of Malignant Tumors, which both groups maintain.

David F. Penson, MD, Chair of the Department of Urologic Surgery and Director of the Center for Surgical Quality and Outcomes Research at Vanderbilt University Medical Center in Nashville, Tenn.

“The new grading system has some significant advantages over the Gleason grading system,” said David F. Penson, MD, Chair of the Department of Urologic Surgery and Director of the Center for Surgical Quality and Outcomes Research at Vanderbilt University Medical Center in Nashville, Tenn. “The
Gleason system can be quite confusing to patients. Patients often misinterpret the news of a Gleason 3 + 3 = 6 tumor as bad news, as the scale runs from 2 to 10 and 6 is in the middle, implying intermediate-risk disease. Resetting the grading system so the lowest risk cancers are a Grade Group 1 will be very helpful for patient counseling and will aid in the further uptake of active surveillance in appropriate men with low-risk disease.”

The differentiation between Gleason 3 + 4 and 4 + 3 as Grade Groups 2 and 3 is also an important advance that will improve patient education and future studies of PCa, Dr. Penson said. “Specifically, many administrative and institutional databases fail to differentiate between 3 + 4 and 4 + 3 disease, reporting both as Gleason score 7, he said. “This is probably not the optimal approach given that studies show that there are differences in outcomes between the 2 groups.”

Although the proposed Grade Group system is an advance, some questions still remain, Dr. Penson said. The validation data presented by Dr. Epstein uses biochemical recurrence-free survival as the endpoint, Dr. Penson pointed out. “As we know, not all biochemical recurrences result in a clinical event such as metastasis or death and, of course, the definition of a biochemical recurrence differs between surgery and radiation. It’s also not entirely clear to me how patients who have a tertiary Gleason pattern on prostatectomy will be graded in the new system.”

Given these and other remaining questions, further study of the new system is needed. “That being said, however, it is definitely time for us to take a critical look at the Gleason grading system and develop better approaches to pathologic grading of prostate cancer,” Dr. Penson said. “Gleason developed his scoring system roughly 50 years ago. Our understanding of prostate cancer has obviously advanced exponentially since then. The new grading system is definitely a big step forward in the care of this disease.”

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**PET/CT Scans More Sensitive Than CT and Bone Scans For Detecting Metastatic Prostate Cancer**

According to an article in the Journal of Nuclear Medicine, researchers compared a PET/CT scan using the radiotracer F-18 DCFBC to conventional imaging modalities — an expanded Tc-99m-methylene diphosphonate (MDP) bone scan and contrast-enhanced CT of the chest, abdomen and pelvis — to detect prostate-specific membrane antigen (PSMA), which is associated with prostate cancer metastases.

In a study of 17 men the researchers found that the F-18 DCFBC PET scans were able to detect a larger number of prostate cancer lesions than the other imaging modalities. The researchers found 592 positive lesions compared to 520 identified by the other methods. They also found that the F-18 DCFBC PET was much better at detecting lesions in the lymph nodes, bone and visceral tissue, and found a large proportion of lesions that would be negative or ambiguous using the other imaging methods.

One of the researchers, Dr. Steven Cho, an associate professor of nuclear medicine at the University of Wisconsin School of Medicine and Public Health, said PET scans have the potential to replace CT and bone scans. Further trials may also show that earlier detection and treatment could lead to better outcomes.

“The value is not necessarily (in) replacing those two scans,” Cho said. “I think it’s really much more accurate. This will pick up the disease, and the location of the disease, much earlier.”

Men with advanced prostate cancer should check with their doctors about the availability of a PET/CT scan with the radiotracer F-18 DCFBC.
NETWORKING

The original and most valuable activity of the INFORMED PROSTATE CANCER SUPPORT GROUP is “networking”. We share our experiences and information about prevention and treatment. We offer our support to men recently diagnosed as well as survivors at any stage. Networking with others for the good of all. Many aspects of prostate cancer are complex and confusing. But by sharing our knowledge and experiences we learn the best means of prevention as well as the latest treatments for survival of this disease. So bring your concerns and join us.

Please help us in our outreach efforts. Our speakers bureau consisting of Lyle LaRosh, Gene Van Vleet and George Johnson are available to speak to organizations of which you might be a member. Contact Gene 619-890-8447 or gene@ipcsg.org to coordinate.

Member and Director, John Tassi is the webmaster of our website and welcomes any suggestions to make our website simple and easy to navigate. Check out the Personal Experiences page and send us your story. Go to: http://ipcsg.org

Our brochure provides the group philosophy and explains our goals. Copies may be obtained at our meetings. Please pass them along to friends and contacts.

Ads about our Group are in the Union Tribune 2 times prior to a meeting. Watch for them.

FINANCES

We want to thank those of you who have made special donations to IPCSG. Remember that your gifts are tax deductible because we are a 501(c)(3) non-profit organization.

We again are reminding our members and friends to consider giving a large financial contribution to the IPCSG. This can include estate giving as well as giving in memory of a loved one. You can also have a distribution from your IRA made to our account. We need your support. We will, in turn, make contributions from our group to Prostate Cancer researchers and other groups as appropriate for a non-profit organization. Our group ID number is 54-2141691. Corporate donors are welcome!

If you have the internet you can contribute easily by going to our website, http://ipcsg.org and clicking on “Donate” Follow the instructions on that page. OR just mail a check to: IPCSG, P. O. Box 4201042, San Diego CA 92142
Directions to Sanford-Burnham-Prebys Auditorium
10905 Road to the Cure, San Diego, CA 92121

Take I-5 (north or south) to the Genesee exit (west).
Follow Genesee up the hill, staying right.
Genesee rounds right onto North Torrey Pines Road.
**Do not turn into the Sanford-Burnham-Prebys Medical Discovery Institute or Fishman Auditorium**

Turn right on Science Park Road. Watch for our sign here.
Turn Left on Torreyana Road. Watch for our sign here.
Turn Right on Road to the Cure (formerly Altman Row). Watch for our sign here.