



KELOWNA PROSTATE CANCER SUPPORT & AWARENESS GROUP

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We had an excellent turn out to our February meeting. The following is a very small portion of the information I presented on ADT (androgen deprivation therapy). I began my presentation by saying that androgens are male hormones, with testosterone being the major male hormone with about 90-95% of testosterone being produced by the testicles and a small amount produced by the adrenal glands that lay above the kidneys.

I then discussed the research papers that were presented in 1941 by a Canadian physician **Dr. Charles Huggins** working in the U.S. Dr. Huggins found that metastatic prostate cancer responded to androgen-ablation therapy, which heralded the beginning of a new era of prostate cancer therapy. Remarkably, medical castration known as a bilateral orchiectomy or using an estrogen drug called diethylstilbestrol (DES) became the first effective systemic treatment for any cancer, and, to this day, androgen ablation remains the most generally useful prostate cancer therapy. Dr. Huggins was awarded the Nobel Prize in Physiology and Medicine in 1966 for his 1941 research papers. Either the bilateral orchiectomy or the treatment using DES were the major treatments in dealing with metastatic prostate cancer until the early 1990s. One of the problems with the surgical castration approach is that it is non-reversible, and the diethylstilbestrol had some major side effects including blood clots, cardiovascular and stroke.

New approaches were developed in the 1960s - 1980s when researchers were looking for another approach to treat metastatic prostate cancer that involved the development of hormone treatments to block adrenal androgen. It was found that the hypothalamus gland releases a hormone LHRH (luteinizing hormone releasing hormone), which stimulates the release of LH (luteinizing hormone) from the pituitary gland. LH acts on specific cells in the testes to produce the majority of testosterone in the body. **Dr. Andrew Schally** was awarded the Noble Prize for Physiology and Medicine in 1990 for this research. Once this pathway was identified an Agonist – which is a chemical that binds to a receptor and activates the receptor to produce a biological response, had to be developed. The first LHRH Agonist was Leuprolide Acetate, was first developed in 1985. When the efficacy and safety of the Agonist Leuprolide and DES were initially compared the men on the leuprolide acetate arm received a daily subcutaneous injection and the fellows on the DES arm received a pill every day. It was found that actual survival rates at one year were 87% for the leuprolide group and 78% for the DES group.

In 1989 TAP Pharmaceuticals in the U.S. introduced a one-month depot of Leuprolide. Since that time, we now have several agonists to treat prostate cancer including Goserelin (Zoladex), and another form of Leuprolide Acetate (Eligard). The amount of time these drugs last has also greatly changed from 1985. We now have Agonists that last anywhere for one month, to three and four months right up to six months.

One of the problems with the LHRH Agonist is that it causes something referred to as Testosterone Flare, so another class of drugs known as a non-steroidal anti-androgen is prescribed prior to the Agonist to stop this flare. The most common anti-androgen used today is Bicalutamide (Casodex)

These drugs all have side effects that can include – Hot Flashes, Decreased Libido and Erectile Dysfunction, Irritability, Headache, Loss of Muscle Mass, Weight Gain in the mid-section, and possible Cardiovascular events just to mention a few of the more common side effects.

What is the “Gleason Grade” or “Gleason Score?” –

The following information is a brief excerpt of information that was obtained from the Internet and originated with pcri.org/insights

This is a subject that has been discussed before, but considering we have several new people attending our support group meetings as well as reading this newsletter I thought it would be interesting to briefly go over this information again

The Gleason grading system assigns a pattern to the cancer cells depending on their appearance under the microscope, using numbers from 1-5. However, it is important to realize that in these modern times that patterns 1 and 2 are only used very rarely. Therefore, on a needle biopsy, the pathologist almost always reports the grade as pattern 3, 4 or 5. A higher number is assigned by the pathologist when the appearance of the cancer cells deviates more from the visual appearance of normal prostate gland tissue. For example: If the cancerous tissue looks much like normal prostate tissue, it is pattern 1. If the cancer cells and their growth patterns look very abnormal, it is pattern 5. Patterns 2 through 4 have features in between these extremes.

Since prostate cancers in a single patient often have areas with different grades, the first pattern, when assigning a “score,” is the most common pattern seen after review of all biopsy specimens, i.e., the pattern that makes up most of the cancer seen in the biopsy. The 2nd pattern that is assigned is the one showing the next most common pattern. These two different grades are then added together to yield the Gleason score (also called the Gleason grade). For example, if the Gleason score is written as “3+4=7”, it means most of the tumor is primarily pattern 3 and to a lesser amount pattern 4. These two numbers are added together to create a Gleason score of 7.

Can the Gleason Score from a Random Biopsy Really Tell What the Cancer Grade is in the Entire Prostate?

The Gleason score on the biopsy usually reflects the cancer's true grade. However, in about 20% of cases, the biopsy underestimates the true grade, resulting in under-grading. This can occur because randomly directed biopsy needles occasionally miss a higher grade (more aggressive) area of the cancer. Under-grading is statistically more likely to occur in men with: 1) larger tumors, 2) higher PSA levels, and 3) smaller prostates.

Somewhat less commonly, the true grade of the tumor is lower than what is seen on the biopsy resulting in over-grading.

WITT'S WIT (ON THE LIGHTER SIDE -

"Guts or Balls"

People are referred to as having "Guts" or "Balls". Do you know the difference between them?

Here's the official distinction: straight from the British Medical journal: Volume 323; page 295.

GUTS - Is arriving home late, after a night out with the lads, being met by your wife with a broom, and having the "Guts" to ask: "Are you still cleaning, or are you flying somewhere?"

BALLS - Is coming home late after a night out with the lads, smelling of perfume and beer, lipstick on your collar, slapping your wife on the bum and having the "Balls" to say: 'You're next, Chubby.'

I trust this clears up any confusion.

Medically speaking, there is no difference in the prognosis: both are fatal.

High-Dose Radiation Therapy as Good as Surgery in Aggressive Prostate Cancer –

The following is an excerpt of information that was obtained from the January 2018 Manitoba Prostate Cancer Newsletter

A study by researchers at UCLA provides convincing evidence that radiation-based treatments and surgery are equally effective treatments for aggressive prostate cancer.

It also suggests that a particular form of radiation therapy, consisting of external radiation followed by brachytherapy provides the best chance of preventing metastatic disease.

The study was the first of its kind to directly compare outcomes between radiation-based treatments and surgery for patients with cancers that are Gleason score nine or 10 (the highest score possible, which represents the most aggressive form of cancer).

Because prostate cancer is the most common form of cancer among men in both Canada and the United

States, identifying the optimal treatment strategies for this malignancy is particularly important.

In the past oncologists suggested that surgery and radiation-based treatments offer equivalent outcomes. However, optimal treatment for prostate cancer patients remains controversial, in part because technologies and treatment strategies are continually improving.

Both surgery and radiation-based treatments have vocal supporters and detractors within the medical community.

The relative efficacy of these treatments is particularly relevant for the most aggressive forms of prostate cancer, which will most likely lead to metastatic disease and eventually death.

The aggressiveness of prostate cancer is dependent on many factors, one of which is the Gleason score – a grading system of how aggressive the disease appears under the microscope.

Researchers analyzed 487 prostate cancer patients treated for Gleason scores of 9 or 10 prostate cancer between 2000 and 2013 at UCLA, the California Endocrine Therapy Center and Fox Cancer Center. Institutional databases were used to identify patients, and clinical follow up was obtained.

The findings only included advanced prostate cancer patients who were treated since 2000, because the standard of care of these patients has significantly changed over time, particularly for radiation-based treatments.

Dr. Amar Kishan, a chief resident in the department of radiation

oncology at UCLA stated that, “Our conclusions are relevant to both physicians advising patients about the effectiveness of different treatment options, and patients who would like to learn more about these options on their own.”

The treatments received by the patients included in the study are much more likely to be similar to treatments being offered to patients at various medical institutions across the world today.

The Kelowna Prostate Cancer Support & Awareness group does not recommend treatment modalities or physicians: However, all information is fully shared and is confidential. The information contained in this newsletter is not intended to replace the services of your health professionals regarding matters of your personal health.

The Kelowna Prostate Cancer Support & Awareness Group would like to thank Janssen - manufacturer of Zytiga® - Abiraterone for their support in producing this newsletter.



UP COMING MEETING DATES FOR 2018 –

April 14th – May 12th – June 9th.

Meeting Location:

Our meetings will be taking place in the Harvest Room at the Trinity Baptist Church, located at the corner of Springfield Rd. & Spall Rd., enter through the South Entrance. Follow the signs. The doors open at 8:30A.M. and the meeting begins at 9:00A.M. -There is elevator access if needed.

