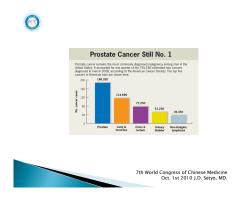
# **Prostate Cancer** 前列腺癌 John D. Setyo, MD.

# World Forum, The Hague, Oct. 1<sup>st</sup> 2010 **7<sup>th</sup> World Congress of Chinese Medicine**

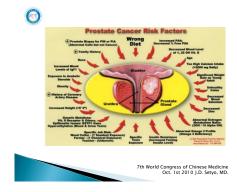


As TCM practitioners we once in a while are dealing with patients suffering from prostate cancer. We need to have sufficient knowledge about the matter, both on the Western and TCM treatments. We also need good communications with the specialist or GP. Prostate cancer is the commonest cancer in men, but, despite this frequency, the clinical course is often unpredictable. Most prostate cancers grow slowly and do not manifest during the life of the man. In fact, many men have been found to have occasional microscopic foci in post-mortem examination. So, many men rather die with than die from prostate cancer; however some forms of them are very aggressive, with a rapidly deteriorating course.



#### **Statistics**

The Netherlands: approximately 10.000 patients/ year. United States: prostate cancer is the second most common cause of cancer deaths in American men. In 2008 186.320 new cases and 28.660 deaths estimated. International incidence and morbidity vary widely around the world. The highest incidence exists in Afro-American men: blacks 100 cases per 100.000, whites 70 cases per 100.000. South American countries and the Scandinavian countries have also reported a high incidence. On the contrary in Asian countries, such as Japan and China, but also among Hispanics there is low incidence. Morbidity risk analysis in a man of 50 year: with microscopic prostate cancer is about 42%, the risk of clinical prostate cancer 10%, and the risk of fatal prostate cancer is 3%. The incidence of prostate cancer increases significantly with age, in fact, even exponentially related to age. Prostate cancer is very rare in men younger than 50 year. Half of all cases occur in men older than 75 year. Maximum mortality was in the age of 85 year and older. Thanks to better results in the treatment of heart disease, stroke and other malignancies, men live longer. This change in life expectancy increases the risk of having a and dying from prostate cancer.



#### **Causes**

According to Western Medicine: the human prostatic adenocarcinoma depends on dihydrotestosterone (DHT) and not on testosterone (T) for growth. It follows that androgen ablative therapy should be directed toward elimination of DHT with retention of circulating Testosterone. Possible risk factors for prostate cancer include dietary, genetic, occupational, racial, and other factors. High fat consumption is a possible risk factor, and diets low in animal fat and protein will decrease the risk. A family history of prostate or breast cancer is a risk factor, also farming or exposure to radiation and cadmium. Neither alcohol nor cigarette smoking is associated with the risk of prostate cancer.



#### **Symptomatology**

Clinical presentations: nocturia, polyuria, dysuria, stranguria, epididymitis, or even asymptomatic. Patients with asymptomatic prostate cancer will survive better. By chance prostate cancer can be detected in tissue obtained during transurethral resection (TUR) during treatment for a urinary outflow tract obstruction. Patients may also present with symptoms of advanced disease, including weight loss, listlessness, obstruction of the bladder, blood in de ejaculate, haematuria and bone pain.



## **Investigation/ Diagnosis**

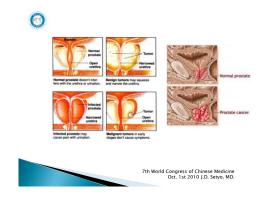
The diagnosis is usually made with abnormal results of digital rectal examination (DRE) or when elevated Prostate Specific Antigen (PSA) levels are investigated.

<u>Digital rectal examination</u> (DRE) should be conducted in men suspected of having prostate cancer as part of a focused physical examination. Consideration should be given to the low sensitivity and low predictive value of this method, especially in an unselected population (as screening).

<u>PSA</u> is physiologically produced in the prostate ductal epithelium by both normal and abnormal prostate tissue. It is excreted in human prostate tunnels, then concentrated in the seminal plasma. In the serum PSA reaches the circulation by distributing through the prostate stroma. PSA screening is currently the single best test and is widely used in the diagnosis, but it does not help to determine whether prostate cancer will be identified clinically or as a serious disease. Whereas PSA is an excellent marker for follow-up purpose, unfortunately, neither normal nor a moderate increase PSA level (4-10 ng/mL), can exclude prostate cancer. An elevated serum PSA level can also be associated with BPH, prostatitis, prostate infarction, PIN (Prostate Intraepithelial Neoplasia/ carcinoma in situ), prostate biopsy and during transurethral resection (TUR) of prostate. Serum PSA level increases with age. The traditional upper limit is 4 ng/mL, but age-specific PSA reference levels developed by Ling et Oyster can also be used.

The advent of molecular diagnostics has led to the promise of a more specific test for prostate cancer: the <u>urinary PCA3 gene test</u>. Early studies indicate that this new marker has a much greater specificity than the PSA test.

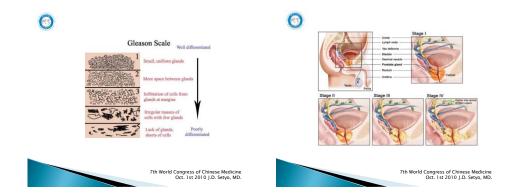
A <u>family history</u> should be taken for each patient younger than 55 year suspected of having prostate cancer. In Holland, patients with a family history indicative of hereditary prostate cancer should undergo periodic review in accordance with the recommendations formulated by the Netherlands Foundation for the Detection of Hereditary Tumors.



## **Pathophysiology**

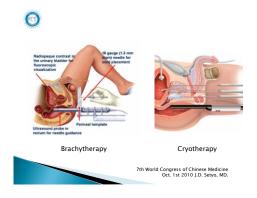
Approximately 95% of prostate cancers are adenocarcinomas that develop in the acini of the prostate tunnels. Other rare histopathological types of prostate cancer originate in approximately 5% of the patients, including almost all other kind of carcinomas. Prostate cancer is often multifocal within the prostate. 70% of it occur in the peripheral zone (PZ) and approximately 25% are found in the transitional zone (TZ). Some authors have suggested that TZ cancers are relatively non-aggressive, while PZ cancers are more aggressive and tend to invade periprostatic tissues: approximately 15% of the cases had capsular penetration, 2.7% seminal vesicle invasion and 3.4% lymph node metastases. The lymphatic spread of prostate cancer is to the lymph nodes of the Obturator, then to the Common iliac and Para-aortic lymph nodes. Pelvic lymph nodes are initially involved, but the Inguinal canal nodes are not involved.

The other usual sites of distance metastases are the bones and lungs. Skeletal metastases are very common in patients with advanced prostate cancer. This occurs as sclerotic osteoblastic metastases, whereas osteolytic metastases are occasionally seen. Liver and brain metastases are uncommon.



### Grading

Different classification systems have been proposed, but the Gleason system is one of the most widely used internationally. It recognizes a primary and a secondary sections and five patterns in each section. The sum of the two patterns in the Gleason score has prognostic significance. Patients with a Gleason score of 4 or less will be doing well clinically, while patients with a score of 8-9 will probably be very ill and will have the worst prognoses. The TNM (tumor, node, metastases) staging system is considered as the international standard for prostate cancer staging.



#### **Treatment Policy**

In the case of localized prostate cancer <u>active monitoring</u> is preferred for patients at low risk (T1c-T2a, Gleason <7, PSA <10 ng/mL), with advanced age (> 75 year). With this approach, the patient should be informed that life is not determined by the prostate and that any treatment is associated with a risk of side effects. Active monitoring can also be considered for patients with moderate or high risk of disease, when the obvious advanced age (> 75 year) and co-morbidity will have a negative impact on life expectancy. Serum PSA level decreases by Finasteride treatment of benign prostatic hyperplasia (BPH). This treatment should therefore be considered when PSA values are evaluated to be high and before the decision to perform a <u>biopsy</u>.

<u>Radical prostatectomy</u> is a treatment option for patients with localized prostate cancer, preferably carried out in institutions that routinely perform this procedure. They check the advantages and disadvantages of different treatment options, including <u>external radiotherapy</u>, <u>brachytherapy</u> and <u>cryotherapy</u>. All these kind of therapies must in turn be weighed against active monitoring.

The Robotic Assisted Laparoscopic Prostatectomy with "da Vinci" robot can minimize the side effects of the classical radical prostatectomy and give better prognosis.

Adjuvant or neoadjuvant hormone therapy (given prior to surgery or radiotherapy) is not recommended for patients with low or moderate risk localized prostate cancer.

The choice of treatment will be determined after consultation with the patient, who should be thoroughly informed regarding the efficacy and toxicity of each treatment modality. Patient's age and general condition are taken into account in the decision, especially when considering the possibility of withholding treatment. To support decision

making, the patient must be well informed about quantitative details of the results and consequences of different options that are specific to the treatment of the treating clinic. In addition to the treating doctor, the nurse and the specialist play an important role in guiding and educating men with prostate cancer. A structured multidisciplinary research is desirable for the treatment of patients with prostate cancer. Counseling and education after treatment should be tailored to individual preferences and needs. Particular attention should be paid to the presence of postoperative pain, urinary symptoms, catheter, tiredness, anemia, incontinence and erectile dysfunction. The medical record should include the guidance and what was discussed. The treatment options and expected side effects that were discussed should be documented. It is advisable to assume that men with prostate cancer will have some specific psychosocial problems due to disease or treatment related to sexual dysfunction, urinary symptoms, gastrointestinal symptoms, also because of the slow progress of the disease. Men with prostate cancer should be provided with sufficient guidance regarding the disease, treatment options, and possible side effects of treatment. Involving the partners in treatment decisions is recommended. Men and their partners should be made aware of the availability of instructional materials, time and location of educational meetings, the services of patient organizations, and contact information for the discussion groups. Specialized (oncology or urology) nurses can play an important role in the detection of psychosocial problems and counseling.



## Prostate cancer and T.C.M.

In TCM the prostate itself is not described as a separate organ but as a part of the Shen (Kidneys). Exhaustion of the Shen-system can therefore affect the prostate directly. The Kidneys store Jing substances, produce Marrow, and control the development of bones. They also control hearing, respiration (inhalation), reproduction, growth, development and aging, and govern the Body Fluids (Jin Ye). The Kidney Jing is the biological basis for woman's menstrual blood and man's semen. The Kidneys are the root of the Yin and Yang Qi of all body organs. The Kidneys energetically open externally through the ears and are sometimes called the Minister of Ingenuity and Vitality, and "the controller of water in the lower 2 Yin organs (urethra and anus)", therefore the Kidney's associated organ is the Bladder and it's element is Water.

The ability to maintain sufficient urine in the Bladder is a Yin function. If there is too little Kidney Yin, the bladder may not control and hold urine and can lead to stress and urge incontinence. Stress incontinence occurs when the bladder leaks while laughing, coughing or sneezing, while <u>urge incontinence</u> is the sudden and urgent need to urinate. Other symptoms of Kidney Yin deficiency are night sweats, red face, thirst, frequent (nighttime) urination, a rapid pulse, and a red tongue.

The ability to easily urinate is a Yang function. If there is too little Kidney Yang, the Kidney cannot control the opening of the urethra, which can result in inhibited urination. A problem with Kidney Yang can lead to <u>overflow incontinence</u>, defined as a difficulty in starting to urinate, urine retention and after that dribbling. Other signs of Yang deficiency are a feeling of cold in the body, possibly loose stools, fatigue, slow pulse and a pale tongue. Impotence and low libido are usually signs of Kidney Yang emptiness.

Like the presence of many forms of incontinence at the same time, it is also common for both Kidney Yin and Yang to be damaged simultaneously.

Kidney Yin flows to the Liver, Heart, and Lungs. It is responsible for the body's (fluid-like) Essences and rules softness, but also birth, growth, maturation and the reproduction cycle. Kidney Yang flows to the Liver, Heart, Lungs and Spleen. It supports the Yang of all organs via the Mingmen.

The Marrow produced from the Kidney Jing flows into the brain. The thinking ability is strengthened when Qi and Blood in the cerebral cortex are abundant. Kidney's essential Qi is derived from the reproductive Essence of the parents (pre-Heaven/ congenital Essence) out of which the embryo develops. After birth, it is gradually nurtured by the Essence of food (post-Heaven/ acquired Essence) and reaches its fullness in puberty, when men are able to produce semen.

In old age Kidney's essential Qi weakens, so that the reproductive function gradually fades away and the body degenerates. Elementary Questions (Su Wen: 上古天真论 Shang Gu Tian Zhen Lun) states: "At the age of 2x8 (16 year old) the Kidney is exuberant, the heavenly tenth (Tian Gui) arrives, essential Qi flows forth, Yin and Yang are in harmony and he can beget offspring; at the age of 7x8 (56 year old) heavenly tenth is exhausted, Essence diminishes, the Kidney grows weak, and the body loses its tone; at the age of 8x8 (64 year old) the teeth and head-hair fall out".

The Kidneys house the body's will power (Zhi). They control the short-term memory and store data. The Kidneys provide the capacity and drive for survival, strength, skill and hard work. A patient with strong Kidneys can work hard and purposefully for long periods of time. A patient with weak Kidney Qi will lack strength and endurance. The Kidney's positive psycho-emotional attributes are wisdom, clear perception, gentleness and self understanding. The negative attributes are fear, loneliness, insecurity, dementia and shock (which attack the Heart first, then descends into the Kidneys to become fear). These are characteristics to old people.

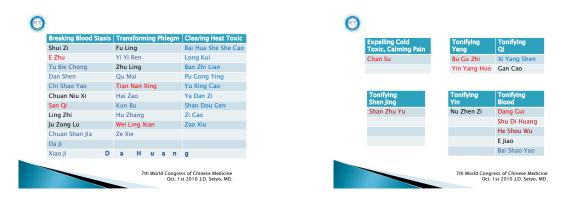
Prostate Cancer and BPH (benign prostate hyperplasia) are obviously two different diseases with different behavioral manifestations, but they show in fact many similarities. Often we thought there were no cases of cancer in the ancient time. But nothing is further from truth! There are actually many TCM syndromes that we already know among them in terms of differentiation, diagnosis and treatment that can be referred as cancer. In light of the TCM, we consider all swellings of the prostate gland due to various conditions, both by Blood- or Qi-stagnation of the Liver (Gan Xue Yu/ Qi Yu) or by Phlegm Heat or -Cold stagnation in the Lower Jiao, with, whether (Liver) Blood- or Qi-deficiency, or (Kidney) Yin- or Yang-deficiency as constitutional pathologic patterns. The good news is that prostate cancer has a very good prognosis when diagnosed and treated early. That is why regular screening and early detection is so important. However, surgery can result in side effects such as frequent and nighttime urination, incontinence and erectile dysfunction. In an advanced stage of prostate cancers, where only conventional palliative care is to be applied, Acupuncture & Herbs but also Taiji/ Qigong and Meditation-exercises will still work very well to ease the suffering.

Acupuncture and Chinese herbal treatments aim at correcting the underlying imbalance at the basic of the regulation-system in the body. The treatment is usually one or two times a week with acupuncture, combined with Chinese herbs. A treatment series is usually 10 to 12 sessions. Treatment should increase the ability to hold urination, decrease nocturia, decrease urinary urgency and smooth urinary stream flow. Improvement of sexual function can occasionally be seen in this period. PSA will usually decline within 6 weeks to levels under 10. The level seldom rises again. If so, herbal treatment strategy should be changed. Treatment after the initial sessions is needed to keep the result or to treat other complications.



**Acupuncture** is very useful to support patients who undergo radical prostatectomy, chemotherapy, radiotherapy or hormonal therapy. Treatment should be adapted to the specific presentations such as to nourish Yin or Yang, stimulate Qi/ Blood and clear Heat. Points such as Ren 4 and 6 on the lower abdomen and Bl 23 and Du 4 on the lower back will tonify the Kidney. Ki 7 can be added to tonify the Yang, whereas Ki 2 and 6 for Yin deficiency. Other points, such as Bl 64 and Ren 3 can directly help in tonifying the bladder and solve incontinence. If the Spleen is involved, Sp 3 and 9 will be useful. If the Liver is in disharmony, Liv 8, 5, 3 or 2 can help the Qi flow and open the channels in the genitals. Many points on the lower back and sacrum can help in case of Qi and Blood stagnation, such as Bl 32 and 33. Sp 6 and 10 helps to move Qi and Blood whereas Ren 1 can also be used to nourish Kidney Yin and Kidney Essence and also clear Damp Heat Toxic stagnation.

**Moxibustion** is very useful for incontinence and libido problems of Yang deficiency type. Warming of the abdomen and lower back can be very effective for this problem because Heat moves the Yang Qi and dissolves Blood- and Damp stagnation. Contra indications: Kidney-, Liver- or Heart Yin deficiencies!



#### Some Chinese herbs which can be used in case of prostate cancer, which also:

#### \* Breaking & Expelling Blood Stasis:

Shui Zi (Hirudo)/ also for Activating Blood Circulation

**E Zhu** (Curcumae rhizoma)/ also for Removing Qi Stagnation, Stopping Pain **Tu Bie Chong** (Eupolyphaga, Steleophaga)/ also for Promoting Bone Healing **Dan Shen** (Salviae miltiorrhizae radix)/ also for Stopping Pain, Clearing Heat in Blood and Calming the Spirit

Chi Shao Yao (Paeoniae radix rubra)/ also for Activating Blood Circulation, Cooling Heat in Blood and Calming Pain

**Chuan Niu Xi** (Achyranthis bidentatae)/ also for Moving Blood, Draining Damp Heat, Promoting Urination, Tonifying Liver and Kidney

San Qi (Notoginseng radix)/also for Stopping Pain

**Ling Zhi** (Reishi/ Ganoderma Lucidum)

Ju Zong Lu (Saw palmetto/ Serenoa repens/ Sabal serrulata)/ also as Phyto-estrogen

**Da Ji** (Cirsii japonici herba sive radix) & **Xiao Ji** (Herba cephalanoplos) / also for Cooling the Blood, Stopping Bleeding, Promoting Wound Healing and Urination **Chuan Shan Jia** (Manitis squama)

\* <u>Transforming Phlegm</u>, <u>Expelling Dampness and Water Retention</u>, <u>Promoting Urination</u>:

Fu Ling (Poria)/ also for Expelling Heat

Yi Yi Ren (Coicis semen)/ also for Eliminating Pus

**Zhu Ling** (Polyporus)

Qu Mai (Dianthi herba)/ also for Eliminating Blood Stasis

Tian Nan Xing (Arisaematis rhizoma)

Hai Zao (Sargassum)

Kun Bu (Eckloniae thallus)

**Hu Zhang** (Polygoni radix et rhizoma)/ also for Regulating and Invigorating Blood, Cooling & Draining Downward Heat and anti-oxidant Resveratrol

Wei Ling Xian (Clematidis radix)/ also for Opening Channels, Stopping Pain

## \* Clearing Heat and Toxicity:

**Bai Hua She She Cao** (Hedyotis diffusae herba)/ also for Promoting Blood Circulation, Breaking Blood Stasis, Clearing Dampness, Promoting Urination

Long Kui (Solani nigri herba)/ also for Promoting Urination

**Ban Zhi Lian** (Scutellariae barbatae herba)/ also for Eliminating Blood Stasis and Stopping Bleeding, Promoting Urination

Pu Gong Ying (Taraxaci herba)

Yu Xing Cao (Houttuyniae herba)/ also for Clearing Dampness

Ya Dan Zi (Bruceae fructus)

**Shan Dou Gen** (Sophorae tonkinensis radix)

**Zi Cao** (Arnebiae/ Lithospermi radix)/ also for Invigorating Blood, Moistening Intestines **Zao Xiu** (Paridis rhizoma)/ also for Calming Pain

#### \* Expelling Cold and Toxicity, Calming Pain:

**Chan Su** (Bufonis venenum)

#### \* Tonifying Yang:

**Bu Gu Zhi** (Psoraleae fructus) **Yin Yang Huo** (Epimedii herba)

### \* Tonifying Qi:

Xi Yang Shen (Panacis quinquefollii radix) Gan Cao/ Licorice (Glycyrrhiza glabra)

#### \* Tonifying Yin:

**Nu Zhen Zi** (Ligustri lucidi fructus)

## \* Tonifying Blood:

Dang Gui (Angelicae sinensis radix)

**Shu Di Huang** (Rehmanniae radix preparata)

He Shou Wu (Polygoni multiflori radix)

**E Jiao** (Asini corii colla)

Bai Shao Yao (Paeoniae radix alba)

### \* Tonifying Kidney Jing:

Shan Zhu Yu (Corni fructus)

## Modified Herbs Formula's

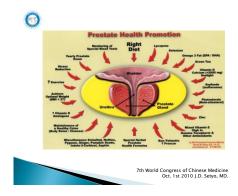
Syndrome Differentiations	Main Possible Basic Formula's
Phlegm Heat Toxic	Ba Zheng Tang
Phlegm Cold Toxic	Gan Cao Gan Jiang Fu Ling Bai Zhu Tang
Blood Stagnation	Shao Fu Zhu Yu Tang
Qi Stagnation	Ju He Tang
Yin Deficiency	Liu Wei Di Huang Tang
Blood Deficiency	Tao Hong Si Wu Tang
Qi + Blood Deficiency	Shi Quan Da Bu Tang
Yang Deficiency	Jin Gui Shen Qi Tang
Qi Deficiency	Shen Ling Bai Zhu Tang
Shen Jing Deficiency	Gui Zhi Jia Long Gu Mu Li Tang
<b>COMBINATION</b> of Syndromes	COMBINATION of Strategies!!
	7th World Congress of Chinese Medicine Oct. 1st 2010 J.D. Setyo, MD.

**Herbal formulas**, such as modified Liu Wei Di Huang Tang can be used to cases of prostate cancer with Kidney Yin deficiency as constitution, while modified Ba Wei Di Huang (Jin Gui Shen Qi) Tang is effective for prostate cancer with underlying Yang deficiency. If the root of the imbalance is in the Spleen modified Bu Zhong Yi Qi Tang or Shen Ling Bai Zhu Tang are highly effective formulas. For Blood stagnation can herbs like Dan Shen, Chi Shao Yao and Wang Bu Liu Xing be added. For Qi and Blood deficiency we can use Shi Quan Da Bu Tang as a basic formula.

When taking Chinese herbs, it is very important to make the right diagnosis first. If there is a combination of syndromes, the treatment sequences must be first to Clear the Phlegm, than to Remove the Blood or Qi stagnation, than reinforcing the constitutions. The treatment should be done by an experienced practitioner of Chinese medicine to avoid exaggeration of the disease.

As already mentioned above, cooperation between TCM practitioners, the treating specialists and the GP's is very important for successful treatments. Our treatment strategies should not only be determined by TCM history, symptoms and observations alone but also by the Western clinical presentation and investigation results from the hospital. The combination of Traditional Chinese Medicine and modern Western treatments can except improve the therapy result and prognoses more to achieve medical costs control and improve the life quality!

Although the treatment of prostate cancer according to TCM seems relatively simple, yet, further scientific research are certainly needed in order to obtain better recognition and understanding between East and West.







## **Recommendation for Prevention**

Substances that may offer some protections include: vitamin D & E, selenium, lycopene from tomato, zinc rich food (e.g. seafood, spinach, sunflower seeds and mushrooms), legumes, grapefruit, papaya, bean, broccoli, bee pollen. Some authors have postulated that high soy consumption may be given a high protection due to the plant phytoestrogens; some also believe that green tea, pygeum africanum, turmeric (with antioxidant: curcumin), buchu, echinacea, goldenseal, pau d'arco, suma, pomegranate, damiana, garlic, saw palmetto and red clover can give some protections.

Also regularly done Taiji and Qi Gong exercises will certainly decrease the risk.



#### Finally

You would certainly wonder what is the young man doing hidden behind a big tree? According to an Australian case-control study of July 2003 by Giles et al under almost 2500 men (<75 year) is clear that as young men between 20-30 regular to masturbate at least 5 times a week the chances of developing prostate cancer later in life will be greatly reduced, by regularly flushing out the carcinogens from the prostate ducts, the so called: prostatic stagnation hypothesis. The theory is maybe speculative, but if it holds we must encourage young men to do that.

Unfortunately it's too late for older people.

Have a Happy Prostate!





