Quality of life in men undergoing treatment for prostate cancer

Many of you may have participated in our prospective quality of life study looking at men undergoing treatment for localised prostate cancer. This article outlines what the study is about and where we are up to with our research.

A number of studies from the United States and Europe have looked at health related quality of life (QoL) outcomes in patients undergoing treatment for prostate cancer. Knowing the QoL outcomes for each particular treatment modality is important to the patient and clinician in helping to decide which is the optimal treatment.

The majority of the studies looking at QoL in prostate cancer have either used retrospective data collection from patients or have not assessed baseline QoL function. These two factors are important as they impact on the interpretation of the results from these studies.

The collection of QoL data retrospectively introduces uncertainties such as recall bias. For example, a man who has undergone a radical prostatectomy who is asked how his pain was on day 1 after the operation, is uncertain to give the same answer if he is asked the same question 3 months after the operation about the pain experienced on his first day after the operation.
Assessment of baseline QoL is important, as we want to see how each patient's quality of life varies after the treatment he receives for prostate cancer using himself as his own control. This provides us with wonderfully textured layers of information when comparing the different treatment arms whilst looking at specific areas such as sexual, urinary, bowel function and general health. The treatment arms that we are analysing are open and robotic radical prostatectomy, low and high dose brachytherapy, external beam radiotherapy and active surveillance. Our study is unique since no other study to date has looked specifically at the differences between open and robotic surgery in terms of quality of life and when compared to the other treatment arms.

In the study we are performing, consented men are asked to fill out an Expanded Prostate cancer Index Composite (EPIC) questionnaire, which has been designed and internationally validated by a group of experts from UCLA and Harvard University in the USA. This questionnaire is "prostate specific", it has been designed specifically to cover the majority of issues that affect men who are undergoing or have undergone treatment for prostate cancer. Men are asked to complete the EPIC questionnaire at certain time intervals, pre-treatment (baseline) and post treatment (6 weeks, 3 months, 6 months, 12 months and 24 months). The data is collected prospectively thus reducing the risk of recall bias, and all data is coded and stored on a highly secure database that only the researchers have access to.

Ruban Thangasalam

Since the study began in May 2007 we have almost 300 men actively participating in the research. We are continuing to recruit more men into the study and hope to have some preliminary results by the end of the year. Our aim is to use the knowledge from our QoL research and couple it with what we know about the clinico-pathological aspects of the disease, in order to tailor the best possible treatment for each patient individually.

Without your continued support this study would not be possible, so many thanks to everyone who has taken part.

Ruban Thanigasalam
Urology Research Fellow
May 2008

If you want to receive future newsletters and are not currently on our mailing list please complete and return the form below:

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Please return to:	St Vincent's Prostate Cancer Centre St Vincent's Clinic Suite 508 - 438 Darlinghurst Street Darlinghurst NSW 2010 or email: jmatthews@stvincents.com.au

Transperineal Prostate Biopsies

For those that read the second issue of Lifebuoy in 2007, we mentioned that here at St Vincent's Clinic we perform prostate biopsies via a transperineal approach. Traditionally, a transrectal approach (needles inserted through the rectum) was used to sample the prostate for the diagnosis of prostate cancer. This is often done under a local anaesthetic with the patient awake. This method was quick, easy to perform and sampled well the peripheral areas of the prostate. A transperineal approach is done under a general anaesthetic and uses a grid attached to an ultrasound machine that allows precise systematic biopsies. As this method was done with the patient asleep, a larger number of biopsies can be performed and due to the way the needles are placed into the prostate (through the perineum instead of the rectum), the anterior areas of the prostate are sampled better.

When we last reported, we had 100 biopsies in our study. Subsequently, we have now accumulated a series of 400 transperineal biopsies performed to date by Assoc. Prof Stricker and Dr Phillip Brenner. Our results show that we had excellent cancer detection rates in these anterior zones whilst maintaining detection rates in the peripheral zones. Thus far, we have had only one patient who required hospitalisation for infection. This is an extremely low infection rate and proves that this approach is safe and effective especially in the detection of cancer in areas traditionally difficult to sample with a transrectal approach.

These results were well received at the Urological Society of Australasia State Meeting as well as the Annual Scientific Meeting in Hong Kong this year.

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the LIFEBUOY

St Vincent's Hospital
Prostate Cancer Support Group

affiliated with the
Prostate Cancer Foundation of Australia

Dear Readers

I had the pleasure of attending the PCFA thankyou function at Government House in Sydney recently. The evening gave a chance for the Foundation to thank corporate and community partners who have helped with its growth through fundraising initiatives. It certainly was inspiring to see so many people and organisations contributing to the PCFA which enables it to provide monies for ongoing research grants, community awareness campaigns and educational and support tools for men with prostate cancer.

In particular, I was pleased to see the "Max Gardner Award" being presented. Max remains in my thoughts often and it is wonderful to see that all his hard work continues to be remembered and acknowledged. The award has been given to people who like him work tirelessly at helping the PCFA and supporting men with prostate cancer.

Another proud moment was when Bruce Fisher was awarded a "Honorary Life Membership". Bruce, a "vinnies boy" along with Max Gardner worked enormously hard gaining support for the PCFA in its early stages. It was a special evening for Bruce and his wife Jennifer and his friends from St Vincent's.

It has been a busy first half of the year with the completion of several projects. These have included a DVD on the different treatment options for prostate cancer and the second edition of the PSA book. "Prostate Cancer for the General Practitioner" is to be distributed to every GP in Australia. A/Prof. Stricker has worked extremely hard to develop both of these.

At our last support group meeting, Dr Gerald Fogarty gave an update on radiotherapy for prostate cancer and once again a large group attended. Gerald has written an article which is included in this newsletter. Dr Lisa Horvath is the guest speaker for our next meeting on Wednesday 6th August. The topic of her talk is "Chemotherapy in Prostate Cancer". The last meeting for the year on Wednesday 5th November is on "Nutrition and Prostate Cancer" by Kathy Chapman from the Cancer Council of NSW.

Jayne Matthews
Co-ordinator
St Vincent's Prostate Cancer Centre

New radiation machines at St Vincent's Clinic and the Mater Sydney

By Dr. Gerald Fogarty

Dr Gerald Fogarty of Radiation Oncology Associates based at Vincent's Clinic recently addressed the Prostate Cancer Group on the 7th of May about new techniques of Radiation Therapy. The focus of the talk was about Image Guided Radiotherapy (IGRT) and Intensity Modulated Radiotherapy (IMRT). These treatments will become available this year when a new Siemens "Artiste" linear accelerator is installed at the Clinic. This will be the first "Artiste" installed in South East Asia. A linear accelerator or "Linac" is the machine that emits high energy external beam radiotherapy.

This article is a summary of his talk. Radiation is used increasingly to treat carcinoma of the prostate. Radiation therapy uses ionizing radiation. This radiation is strong enough to cause chemical changes in the deoxyribonucleic acid (DNA) of the cancer cell nucleus. The DNA is essential for transmitting genetic information from one generation itself to the next. It must be intact for cancer cells to produce new daughter cells and therefore for cancers to grow and multiply and spread throughout the body. Fortunately, normal cells have a very good DNA repair mechanisms. If a small dose of radiation is given to a mixed population of normal cells and tumour cells, the tumour cells are selectively killed and the normal cells repair any damage done. This is why all radiotherapy courses are long and go over quite a few weeks.

Radiotherapy can be given in one of two ways. The usual way is by external beam radiotherapy when radiation is beamed into the body form an external source. This gives a homogeneous dose throughout the target volume but unfortunately means that innocent normal tissues that are in the entrance and exit paths of the beams also are irradiated. This can often mean that the dose to the tumour is compromised because of normal tissue toxicity, especially that of normal bowel.
Another way of giving radiotherapy is brachytherapy. This is when radioactive sources are directly implanted into the gland containing the tumour. Radiation spreads from a source according to the inverse square law, which states that radiation measured at point X from the source is proportion to the inverse square of the distance of X from the source.

Therefore, the cancer very close to the radioactive source receives quite a lot of radiotherapy and those normal tissues just a small distance away, even as little as a centimetre, experience much less dose. This provides an excellent way of escalating the dose to prostate cancer for example. Ways of giving brachytherapy include low dose rate (LDR) radiotherapy where radiotherapy is slowly leached out into surrounding tissues over many months from a permanently indwelling seeds. High dose rate (HDR) brachytherapy is when a lot of dose is delivered in a short time from a powerful temporary source. It has been found that adding brachytherapy to external beam radiotherapy for intermediate and high risk carcinoma to the prostate (generally when PSA is greater than 10 and Gleason score 7 and above) can give a more worthwhile and enduring control compared to external beam alone. St Vincent's Hospital specializes in brachytherapy, and between St Vincent's and the Mater Hospital, which are the same radiotherapy departments, we give the most brachytherapy in Australia.

A way of decreasing the dose of external beam radiotherapy to normal structures is to use techniques such as image-guided radiotherapy (IGRT) and intensity modulated radiotherapy (IMRT). Image-guided radiotherapy means that everyday the prostate position is once again verified using special optics available on the linear accelerator with a technique known as cone beam positioning. This means that the normal margin of error added to the prostate to compensate for daily uncertainties in prostate position(eg rectal gas) can be decreased and so less normal tissues are irradiated. This also means that the total dose to the prostate can be safely increased ensuring more lasting tumour control. Fiducial markers need to be implanted in the prostate to do IGRT. IMRT builds on IGRT. IMRT involves using multiple radiation field angles and multiple segments so the radiation treatment volume is even more conformal. This allows further dose escalation and sparing of normal surrounding tissues. The St Vincent's Clinic new machine will be followed by the installation of another "Artiste" at the Mater Clinic later this year. These machines are capable of both IGRT and IMRT.

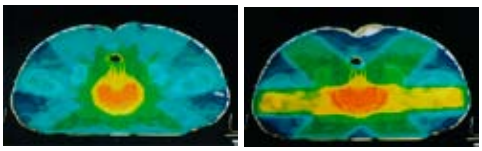

Fig. A Fig. B

Figure A: This isodose map is from a radiotherapy plan of a man receiving external beam radiotherapy to the pelvis. It shows the dose given to prostate and normal tissue via a 3D conformal radiotherapy technique.

Figure B shows the same dose being given to the prostate this time using IMRT. The IMRT technique gives a dose cloud that conforms more truly to the prostate shape, avoiding the rectum. Overall there is less dose to normal structures for the same dose to the prostate, meaning a avoiding the rectum. Overall there is less dose to normal better quality of life for the same disease control. (Photos courtesy of Siemens).

New PSA Book & DVD

By A/Prof. Phillip Stricker

Over the past six months along with Prof Kerryn Phelps I have been heavily involved in updating the "PSA Book for GP's". This booklet was first released in 2004 and was distributed to every GP in Australia. The updated version "Prostate Cancer for the General Practitioner" was released in July and was distributed to over 21,000 GP's and Specialists in Australia. The book has broadened and now takes in other aspects of prostate cancer including pathology of prostate cancer as well as some of the early aspects of treatment. It does,however, primarily focus on the correct use of the PSA test and appropriate testing. References have included all major papers to date. It has become a popular resource for patients and the book is available through the Prostate Cancer Foundation of Australia or St Vincent's Prostate Cancer Centre to anyone who wishes. The production of the book was generously supported by the Rotary Club of Narellan NSW.

Another project I have been busy with is an education DVD as a resource for patients diagnosed with localised prostate cancer. This DVD is to help patients choose which therapy is most appropriate for them. It goes through all the different forms of therapy, including radical prostatectomy surgery (open & robotic), high & low dose rate brachytherapy, HIFU and active surveillance. It explains the pros and cons of each treatment and the appropriate selection of a treatment. This should be a further and more detailed aid to the excellent DVD put out by the PCFA.

The DVD has tried to, in particular, focus on some critical areas that would influence a person's decision. These include: the type of cancer, the size of the prostate, the presence or absence of lower urinary tract symptoms, a person's perspective with regard to quality of life priorities eg sexual priorities as well as general health issues, local conditions within the pelvis and finally institutional, surgeon's or radiotherapist's expertise. The DVD aims to make a fairly complex decision making process more evidence-based. Several patients were interviewed for the DVD and I am very grateful to them for their courage to tell their story. I am indebted to the generosity of Walker Corporation for their donation to enable the production of the DVD. The producer David Westbrook has been enormously supportive throughout the whole process and it is hoped that this will be a useful resource for patients faced with the decision as to which treatment to undergo.

PCFA
Thank you function

by Steve Callister

The Prostate Cancer Foundation of Australia hosted a major thank you function for their corporate and community partners on March 24th 2008. The event was held at NSW Government House and was attended by Her Excellency the Governor Marie Bashir and her husband Sir Nicholas Shehadie.

It was a superb evening weatherwise and 120 guests were able to enjoy the gardens at twilight. The Governor gave a wonderful speech where she thanked all those associated with the PCFA for their contribution which has helped in the Foundation's development and continuing growth since its inception just over 10 years ago. She informed the group of her personal interest in the PCFA as her grandfather had suffered from a prostate condition.

There were also speeches by Graeme Johnson (National Chairman), David Sandoe AOM (Deputy National Chairman) and Steve Callister (NSW Chairman). Andrew Giles (PCFA's CEO) presented certificates of appreciation to: Commonwealth Bank / AstraZeneca / The Sponge (who have redesigned the PCFA website) / Angry Anderson / Dan Power / Rotary Club of Lane Cove / Angela Fleming/Armando of Buon Ricordo / Tony Sonneveld.

David Sandoe awarded two inaugural "Max Gardner Awards" for distinguished service to John Goodall and John Conroy. This was particularly special as Max's widow Whilhemina was able to attend as well as his friends from St Vincent's including A/Prof. Phillip Stricker, Jayne Matthews and Bruce and Jennifer Fisher. Max Gardner had a long association with the PCFA. This commenced in 1996 when along with Phillip and Jayne he started the St. Vincent's Hospital Prostate Cancer Support Group through to being the National Chairman of the PCFA up until he passed away in 2005.

To conclude the evening Graeme Johnson awarded a "Honorary Life Membership" to Bruce Fisher. Bruce, along with Max was instrumental in gaining support for the PCFA when it first began.

A memorable evening was had by all, with deserved recognition being shown to the tireless work for the PCFA by many volunteers and professionals.

Governor Marie Bashir, Bruce Fisher & Graeme Johnson

Prostate Support Group Conference
held in Wagga Wagga

On Saturday April 12th 2008, the Prostate Cancer Foundation of Australia (PCFA) support group representatives gathered from across NSW in Wagga Wagga to attend the PCFA's largest Prostate Cancer Support Group Conference. The Conference was attended by more than 40 delegates, many joined by their partners and carers, representing more than 20 support groups from across the state.

The conference opened with an introduction from the National Deputy Chairman David Sandoe OAM. David provided updates on National and State Board matters, particularly the success of Movember and the recent large research grants awarded by the PCFA.

Lively and stimulating discussions on the State Chapter structure were led by the State Chapter Chairman, Steve Callister. It was resolved to have a working party determine the future operational guidelines for recommendation to the national board so that elections of office bearers can be completed using these guidelines as soon as possible. Stretching the PCFA resources – a plan was proposed by the Combined North West With increasing demand for assistance to commence twelve new support groups in 2008 support groups (Bathurst; Orange; Dubbo; Mudgee and Broken Hill) to assist development of new groups with publicly raised funds matched dollar for dollar by PCFA to provide a laptop computer and data projector for combined groups as they spread their way across NSW.

As the Support Groups Services Manager Paul Redman observed, this will greatly enhance the ability of local volunteer support groups to assess where to go and how to start new groups based on their past experience of the areas to be serviced. This model for expansion was offered as a challenge to any other part of the State to combine Support Groups in a given area and plan how to expand and respond to demands and needs for prostate cancer information and support in regional areas. All delegates showed their enthusiasm to take up this challenge. The next year should see exponential growth in the number of support groups and the overall membership in the State.

The contribution of co-convenors and carers to this conference was significant and well received. This was the first conference when carers attended and joined in the debates over the critical issues facing the support groups in New South Wales. It is also the first time that a PCFA Conference of this scale has been held in a regional area and in addition to being the best attended Conference to date, the location also provided a poignant reminder of the additional challenges faced by rural and regional support groups and indeed this became a focal point for much planning and discussion. It also empowered Paul Redman and Wendy Farrow, PCFA staff members, to engage with local health authorities in all regions for the future establishment of a support groups, specifically based at Wagga Wagga. The ideas for improving the content and format of Chapter Conferences were insightful and many will be adopted for 2009. Naturally, the social side was enjoyed by all and thanks must go to the many people that attended with their ideas, enthusiasm and commitment to join together to support those affected by prostate cancer.

Support Group Meetings for 2008.

- Wednesday August 6th Dr Lisa Horvath
  "What's new in prostate cancer research"
- Wednesday November 5th - Kathy Chapman - Camcer Council of NSW
  "Nutrition & Prostate Cancer"

Meetings from 7pm to 9pm
Level 4, Function Room, St Vincent's Clinic