

# PHAROS

*A beacon of hope in the darkness*

*Newsletter of the Reading Prostate Cancer Support Group (RPCSG)*

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## THE OCTOBER MEETING.

Our October RPCSG meeting was held using Zoom with the guest speaker being Andrew Doggart of the Royal Berkshire Hospital.

Andrew is a physicist who runs the brachytherapy unit at the RBH. He said that he would first put brachytherapy in the context of all radiotherapies before concentrating on it as a treatment for prostate cancer.

Andrew first described radiation and the effect that it has on cells. Cells contain DNA that enable them to reproduce. Radiation therapies use primarily X rays that are a type of ionising radiation that reacts with water in the cells to produce free radicals that break the DNA in cells, preventing the cell from reproducing and so the cells die. Normal cells can recover from the radiation but tumour cells are more sensitive to radiation than normal cells and so the cancer cells die.

There are two types of radiotherapy, known as teletherapy and brachytherapy. These terms have their origin in Greek where tele means long and brachy means short. External radiotherapy is a form of teletherapy as the source of the radiation being outside the body, is a distance away from the tumour, in fact about 100cm away. Brachytherapy is so called as the source of radiation is in intimate contact with the tumour. About 95% of all radiotherapy patients receive teletherapy and 5% receive some sort of brachytherapy.

External beam radiotherapy uses linear accelerators that deliver a beam that passes through the body, through the tumour and then exits the body from the opposite side. This unfortunately irradiates and damages healthy tissue in the path of the beam. There is a compromise between delivering a dose sufficient to kill the cancerous cells whilst minimising damage to healthy tissue. The latter is minimised by varying the angle at which the beam is delivered. The accelerator can pivot around the body and apply the beam at several places whilst still directed at the prostate, thus the tumour receives the full dose whilst healthy tissue receives a much lower dose.

Later accelerator machines can shape the beam whilst it is applied at different angles, which further reduces radiation of healthy tissue.

Different radiation sources are used for brachytherapy in different parts of the body. For prostate treatment the radiation source used is iodine 125 that decays by electron capture and releases X rays. Each source seed is a little thinner and longer than a grain of rice, and many of these sources are placed throughout the prostate. Each source has a half life of 60 days which results in 90% of the radiation being delivered in the first 197 days after treatment.

Brachytherapy gives an improved radiation dose to the tumour and compared to external beam radiotherapy as it significantly reduces the dosage to surrounding healthy tissue and thus enables a much higher dosage to be used than with external beam. With brachytherapy it is possible to deliver a dosage that is up to 2.5 times higher than external beam.

Brachytherapy requires much skill from a number of specialists on the team. Extensive planning of the location of the seeds is needed and there are the logistical problems of obtaining the seeds and implanting them at the appropriate time. Positioning of the seeds is tailored to each patient.

Brachytherapy is carried out by inserting needles from the perineum into the prostate and then inserting the iodine seeds down the needles. Between 50 and 100 seeds are normally used and at RBH the procedure is carried out in one session. On the day after brachytherapy a CT scan is carried out to count the seeds implanted to ensure that all were successful. Four weeks after treatment the patient returns for tests and scans from which the actual dose received is compared with the originally planned dose. If there is a discrepancy then the patient can be re-dosed. The RBH has carried out 993 brachytherapies to date and there has been no need of any re-dosing. The seeds remain inside the prostate for ever. Andrew is looking forward to clocking up his 1000th patient.

There were then some questions from the participants in which the following emerged:

The RBH does not currently carry out high dose brachytherapy (sometimes referred to as temporary brachytherapy) which is a treatment whereby a much higher dose is delivered by a single seed that is moved around the prostate and then removed.

There was some discussion on the PSA 'spike' or 'bounce' in the PSA level. This is a phenomenon whereby the PSA increases and may cause some alarm to the patient, but it is a well known effect that is of little concern. It usually occurs about 18 months after treatment and the PSA may then remain stable or it may reduce before becoming stable. This is not an area in Andrew's field of experience but it was said that the effect is caused by the recovery of the normal prostate cells from the radiation and regaining their normal production of PSA, the cancerous cells having been killed. The return to stability varies between patients but could be around three months after the bounce. A member who had brachytherapy over 4 years ago had two PSA bounces, one after about 12 months and the other at about 3 years after treatment. A member whose PSA had risen was told that possible causes of a rise in PSA are infections and irritation caused by the radiation.

Rises in PSA after brachytherapy cannot be related to rises after prostatectomy as the PSA levels differ due to the fact that the prostate is still in place after brachytherapy.

Where appropriate a gel is inserted between the prostate and rectum to reduce the unwanted dosage received by the rectum.

A member said that his urine flow rate decreased over a fairly long time after brachytherapy. This is due to the fact that all forms of radiation treatment have both immediate effects and long term effects. Also patients differ in their outcomes, hence late side effects are possible after radiation.

A grid is used to insert the needles and the dose is sometimes 'tweaked' because insertion into the prostate can cause deflection of the needle and also the prostate can move, for example if the patient coughs.

Andrew was thanked for his very interesting and comprehensive talk.

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### **NEXT RPCSG ZOOM MEETING - 6th November 2020**

The next RPCSG Zoom meeting will be held on Friday 6th November when the guest speaker will be Mark Little who is a radiologist at RBH.

A link for joining the meeting will be sent nearer to the event. As an alternative to joining group meetings by video, you can join by telephone to listen to the proceedings. To do this dial one of the telephone numbers that you will see at the bottom of the email inviting you to join the meeting, then enter the meeting ID and password using your telephone keypad.

## CHRISTMAS ZOOM MEETING - 4th December 2020

The December group meeting deserves a mention, because we have no idea of what the Covid rules will look like in December! It is certain that we will not be able to have our traditional Christmas social meal in St Andrew's hall. Instead we intend to hold a Zoom meeting that will be an 'Open Meeting' at which your questions sent in advance will be answered anonymously by Beverley and others. As usual at these events new questions can be asked at the meeting. We then intend to hold a quiz, provided that we can work out how to organise a fun quiz online.

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## RPCSG NOVEMBER WALK

The November walk will be on **Tuesday 3rd November** from the Waterside Centre to Reading. We will start at the Waterside Centre car park at 10:45 a.m. and walk into Reading via Caversham. The return will be through Reading Abbey and alongside the river Kennett. Please bring your own refreshments.

Directions to the Waterside car park are to travel towards Reading on the A329M/A3290 and continue to the very end of the road which ends at a roundabout. Turn right at the roundabout onto Thames Valley Park Drive and the entrance to the free car park is about 20 yards on the left. If the gate to the car park is closed or the car park is full, you can continue past the car park entrance and park on the roadside free between 10:30 a.m. and 4:30 p.m. We will return well before 4:30 p.m.

The address of the car park is:  
Wokingham Waterside Centre  
Thames Valley Park Drive  
Earley, RG6 1PQ

A sat-nav using RG6 1PQ will take you beyond the car park so use the directions above as you approach Thames Valley Park Drive

All members are invited to this walk. No need to contact anyone, just arrive at the starting point before 10:45. If you have any queries about the walk please call Richard Brown on 07973 662925.

### Previous walk.

We had an enjoyable walk in October from Aldermaston to Woolhampton with a refreshment stop at The Rowbarge.

Photographs taken during the walk:







*Refreshments at The Rowbarge*

During the walk alongside the canal one of our members spotted this intriguing sign and took the photograph on the right. An internet search found that this is a place where longboats can turn round, and sure enough the sign was next to a widened part of the canal. There is some controversy as to how 'wind' in 'winding' is pronounced and opinion seems to be that it is the meteorological type that blows, as a wind can help a boat to turn around. The 'hole' probably refers to a notch in the bank that one end of a boat is inserted whilst the other end is moved round.

Some more and interesting information on winding holes can be found by an internet search.



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## **COFFEE MORNINGS**

The November coffee meeting will be held again at the Flower Pot in Aston on **Tuesday 17th November** from 11:00 a.m.

There was a previous coffee morning in October with a good attendance. We observed the 'group of six' isolation rule during the event, however we are exempt from this rule as support groups of up to 15 people are permitted.



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**DATES FOR YOUR DIARY.**

**Tuesday 3rd November** will be a walk from the Waterside Centre to Reading.

**Friday 6th November 2020** will be a Zoom group meeting with guest speaker Mark Little talking about his role as a radiologist.

**Tuesday 17th November 2020** will be a coffee morning at The Flower Pot in Aston.