P H A R O S

A beacon of hope in the darkness

Newsletter of the Reading Prostate Cancer Support Group (RPCSG)

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THE SEPTEMBER 2022 MEETING

The September meeting was a hybrid meeting with the guest speaker being Dr Fawaz Musa who is a consultant histopathologist at the RBH. The histopathology laboratory receives biopsies from cancer patients in order to examine, assess and grade the biopsy samples. It deals with all types of cancers and Fawaz has a particular interest in urological samples.

Fawaz introduced himself as a consultant histopathologist at the Royal Berkshire Hospital with a specialty in urology. He has been in the role for 19 years and spends about 90% of his time in examining specimens through a microscope. He gave an excellent talk on the role of the pathology laboratory. He presented many very informative slides from which it is apparent that a very experienced eye is needed for cancer cell evaluation.

Fawaz first described the prostate as a gland that produces the liquid part of the semen, is the size of a walnut and lies at the base of the bladder. The rear of the gland is against the wall of the rectum.

Prostate cancer occurs in more than 50,000 men per year and about 1 in 8 men will have prostate cancer in their lives. It is rarely found in men under 50 years of age and becomes more common with increasing age.

The causes of prostate cancer are unclear but it is known that the risk is higher if a father or brother has developed it, and men of African-Caribbean descent are at higher risk. Often there are no symptoms of prostate cancer, but in some cases it can be indicated by change in urinary habits such as difficulty starting or stopping urination, increased frequency, and a feeling that the bladder is not empty. In more advanced cases there can be weight loss and pain in the bones, loins, pelvis or lower back.

Some methods of diagnosis are

- Digital rectal examination in which cancerous cells feel firm
- PSA blood test
- MRI scan
- Biopsy
- CT and bone scans

The traditional method of taking a biopsy was using a tool inserted into the rectum that is guided to the prostate by ultrasound and then samples – usually 5 from each side of the gland – are taken, each sample being about 15mm in length and about 1mm in diameter. This is known as a trans-rectal biopsy. The samples are then processed in which a dye is used to help the investigation. The samples are then examined by microscope in which normal cells are seen to be regular and cancer cells are more diverse and segregated. The extent of the cancer can be evaluated by the appearance under a microscope. In the case of prostatectomy the whole prostate is sent after surgery to the laboratory for evaluation, in which 6 or 7 slices through the prostate gland are examined.

Increasing use of MRI scans before biopsy is now made, alongside a new biopsy procedure known as trans-perineal. A probe is still used in the rectum but its use is only to guide the

biopsy tool that accesses the prostate via the perineum. The advantages of this are that the tool can be guided to any area of suspicion as seen on a previous MRI scan, and that there is less risk of infection.

Fawaz then showed several slides of samples of both normal cells and prostate cancer cells.

Prostate cancer is often slow growing and in some cases watchful waiting (no immediate treatment) is recommended.

Fawaz said that hormone treatment disturbs the structure of cells such that although cancer cells can still be recognised it is not possible to grade them.

Grading of prostate cancer cells is done by the appearance of the cancer cells and gives an idea of how fast they could develop. The Gleason scale is the most popular, that has been in existence since the 1960s and has been modified over the years.

The Gleason scale has grades of 1 to 5 but only 3 to 5 are now used, grade 3 being the least aggressive and 5 being the most aggressive. The Gleason score consists of two numbers to be added together, the first number of the score being that of the most predominant grade of cancer, and the second is that of any lesser grade that is present as a minority. For example if a sample is mostly grade 4 with a lesser amount of cancer cells of grade 3, the score would be 4+3. If the cancer cells seen are all of the same grade then the numbers are the same, for example if all the cancer cells seen are grade 4 then the score would be 4+4.

In the Gleason grade a score of 4+3 is more aggressive than 3+4 yet the total score is 7 in both cases. A new scale is emerging called ISUP (International Society of Urological Pathology). The mapping of Gleason to ISUP is shown in the table to the right.

2005 modified Gleason Grading	2015 ISUP Grade Group
3+3, 3+2, 2+3, 2+2	1
3+4	2
4+3	3
4+4, 3+5, 5+3	4
4+5, 5+4, 5+5	5

Fawaz then described the staging of prostate cancer.
Staging identifies the location of cancer cells as indicated by scans, and a T number is allocated:

T1 The tumour is contained within the prostate
T2 The tumour is within the prostate but can be felt by digital rectal examination.
T3/T4. The cancer has spread beyond the prostate gland into surrounding tissues. These stages are known as locally advanced.

{Editor's note: T3a is used when the cancer has spread to tissue just outside the prostate whereas T3b is used when the cancer has spread into the seminal vesicles. T4 is when the cancer has grown into adjacent organs such as bladder or rectum.}

Fawaz then described the treatments available for prostate cancer, the choice being dependent upon age, Gleason and Stage:

- Active monitoring – for slow growing tumours
- Surgery – the removal of the prostate gland for healthy men under 75 years of age where the cancer has not spread.
- Radiotherapy - uses external radiation to destroy cancer cells
- Brachytherapy – for small tumours, radioactive seeds are inserted throughout the prostate gland that generate radiation for up to a year.
- Hormone therapy – blocks the action of testosterone to slow the growth of cancer cells
- Cryotherapy – a treatment that destroys cells by freezing.

{Editor's note: Cryotherapy and HIFU (high intensity focused ultrasound that destroys cells by localised heating) are not widely available, partly due to the lack of evidence of their long term success rates}.

Finally Fawaz said that researchers are looking for a test that will indicate whether a prostate cancer is slow or fast growing.

Fawaz was asked about a procedure Neurosafe/frozen sections, by which a pathology assessment takes place immediately upon removal of a cancer sample, so that feedback can be given for guidance to the surgeons before they continue the procedure. This practice is not widely used as it requires a great deal of resources in that a team is on standby until a sample is received.

A question was asked about whether any investigation could lead to the disturbing of prostate cancer cells and their migration via the blood stream. Fawaz said that there is no evidence that this occurs in the case of prostate cancer.

Fawaz was thanked for his very interesting talk and was presented with a gift of appreciation.

The next group meeting will be on the 7th October when there will be a talk by Professor Mike Kirby, who is a consultant based in Hertfordshire.

JOIN THE COMMITTEE !

There are 12 members of the committee dedicated to providing help to group members and arranging events. The committee meets by hybrid meetings in the home of one of the committee members and these are very sociable and enjoyable occasions. The committee welcomes new members at any time.

There is no obligation on any committee members, although there are vacancies at present for an editor of Pharos and a refreshment organiser, so if you are interested in either of these posts then joining the committee is ideal for you. If you are interested in joining the committee please contact the chairman on chairman@rpcsg.org.uk

RPCSG WALKS

A walk has been arranged for Tuesday 13th September that will start at Tyle Mill Bridge at 10:45 a.m. The walk will go to Aldermaston with refreshments at The Butt Inn.

Directions to the free car park at Tyle Mill Bridge are to leave the M4 at junction 12 and take the A4 in the direction of Theale. After about 2.1 miles turn left towards Sulhampstead - as you approach the turn you will see the Spring Inn at the junction. Continue for about one third of a mile and you will approach a swing bridge with barriers and warning lights. A few yards after the end of the bridge there is a right turn into the car park.

The walk will start at the car park at 10:45 a.m. If you use a satnav put in the postcode RG7 4BT and if you are travelling south it will take you to a point just before the swing bridge.

A further walk will be on the 11th October, details will be sent to members later.

COFFEE MORNINGS

There will not be a coffee morning in September, the next one will be on the 25th October. Details will be sent to members later.

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DISCLAIMER

This newsletter does not offer medical advice. Nothing contained in the newsletter is intended to constitute professional advice for medical diagnosis or treatment or to advocate or recommend the purchase of any product or use of any service or guarantee the credentials or appropriateness of any health care provider. Members are strongly advised to consult with an appropriate professional for specific advice tailored to their situation.

This newsletter may refer to named providers and their products or services, and such reference expresses no inference upon any aspect of any provider's business, services or products, and expresses no recommendation or preference for any such products or service.

DIARY DATES

Tuesday 13th September will be a walk from the Tyle Mill bridge to Aldermaston.

Friday 7th October 2022 features a talk by Professor Mike Kirby.

Further walk and coffee morning details will be sent to members later.