

FAQS: PROSTATE CANCER

UNDERSTANDING YOUR PATHOLOGY REPORT: A FAQ SHEET

When your prostate was biopsied, the samples taken were studied under the microscope by a specialized doctor with many years of training called a pathologist. The pathology report tells your treating doctor the diagnosis in each of the samples to help manage your care. This FAQ sheet is designed to help you understand the medical language used in the pathology report.

1. What is “adenocarcinoma of the prostate”?

Adenocarcinoma of the prostate is a type of cancer (tumor) with a wide range of behavior from cases which are very slow growing with a low risk of causing men harm to cases which are more aggressive.

2. What is a “core”?

The urologist samples the prostate by removing thin threads of tissue with a hollow needle, each one referred to as a “core”, from different areas of the prostate. The number of cores which contain cancer, as well as the amount of cancer present on each core, has a relationship to the tumor’s prognosis.

3. What is the “Gleason grade” or “Gleason score”?

The Gleason score is a measurement of how aggressive your tumor is likely to be. It is made by a pathologist looking at the cancer under the microscope.

4. What are the numbers in the Gleason score, for example 3+4=7 or 3+3=6?

Prostate cancer can have several patterns under the microscope, which are each assigned a different number. The first number in the score is the most common and the second number in the score is the next most common pattern seen under the microscope. The individual patterns typically range 3 to 5 on biopsy, with 3 being least aggressive and 5 the most aggressive. They are added together to get your total “Gleason grade” or “Gleason score”, which typically ranges from 6 to 10. For example, in a Gleason score 3+4=7, most of the tumor is pattern 3 and less is pattern 4 and they are added together

for a Gleason score of 7. In a tumor with a 3+3=6, the tumor is all pattern 3, and they are added together for a Gleason score of 6. Other ways that a Gleason score of 6 may be listed on your report are: “Gleason 6/10” or “Gleason 6 (3+3)” or “combined Gleason grade of 6”.

5. What does it mean to have a Gleason score of 6 or 7 or 8-10?

The lowest Gleason score (least aggressive) tumor that is typically present on prostate biopsy is a 6 with higher grades (maximum Gleason score 10) corresponding to progressively more aggressive tumors.

6. What does it mean when there are different cores with different Gleason scores?

Different cores may sample different areas of the same tumor or different tumors in the prostate. Because the grade may vary within the same tumor or between different tumors, different samples taken from your prostate may have different Gleason scores. Typically the highest (largest number) Gleason score will be the one used by your doctor in predicting prognosis and deciding therapy.

7. Does the Gleason score on my biopsy accurately indicate what the cancer grade is in the entire prostate?

The Gleason score on biopsy is usually an accurate record of your cancer’s true grade. However, in about 20% of cases the biopsy grade is lower than the true grade because the biopsy misses a higher grade (more aggressive) area of the tumor. In some cases, the biopsy grade can also overestimate the aggressiveness of the tumor, where the true grade of the tumor may be lower than what is seen on the biopsy.

8. How important is the Gleason score?

The Gleason score is one of the most powerful predictors of the behavior of prostate cancer but must be factored in with other information, such as the PSA blood test level, findings on rectal exam, number of cores involved by cancer, and in some cases radiology imaging studies to fully predict how the tumor will behave.

9. What does it mean if my biopsy report mentions special studies such as high molecular weight cytokeratin (HMWCK), ck903, ck5/6, p63, AMACR (racemase), 34BE12, or PIN4 cocktail?



These are special tests that the pathologist sometimes uses to help make the diagnosis of prostate cancer. Not all cases need these tests. Whether your report does or does not mention these tests has no bearing on the accuracy of your diagnosis.

10. What does it mean if my biopsy mentions that there is “perineural invasion”.

“Perineural invasion” on biopsy means that there is an increased chance that cancer could spread out of the prostate, but Gleason grade and amount of cancer in the cores are more important. Even with perineural invasion your cancer could still be very curable depending on other factors. In some cases, it may affect treatment and in other cases it has no significance. How this finding will affect your specific treatment is best discussed with your treating doctor.

11. What does it mean if in addition to cancer my biopsy report also says “high grade prostatic intraepithelial neoplasia” or “high grade PIN”?

“High grade prostatic intraepithelial neoplasia” also referred to as “high grade PIN” is a precursor to prostate cancer (i.e. a precancerous lesion) and has no importance in someone who already has cancer. The word “high grade” as it refers to prostatic intraepithelial neoplasia has no relation to the Gleason system and does not indicate a more aggressive tumor.

12. What does it mean if in addition to cancer my biopsy report also says “acute inflammation” (acute prostatitis) or “chronic inflammation” (chronic prostatitis)?

In some cases inflammation may increase the PSA blood test level but in most cases it is of no importance and has nothing to do with prostate cancer.

13. What does it mean if my biopsy report also says “atrophy” or “adenosis” or “atypical adenomatous hyperplasia” or “seminal vesicle”?

All of these terms are things that the pathologist sees under the microscope that in some cases can look like cancer but are of no importance when seen on the biopsy and has nothing to do with cancer.

14. What does it mean if in addition to cancer my biopsy report also says “atypical glands” or “atypical small acinar proliferation (ASAP)” or “glandular atypia” or “atypical glandular proliferation”?

All of these terms are things that the pathologist sees under the microscope that are of no importance when seen on the biopsy if there is cancer elsewhere on the sampling.

