Understanding Your Pathology Report: Prostatic Intraepithelial Neoplasia (PIN) and Intraductal Carcinoma

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 pathologist sends your doctor a report that gives a diagnosis for each sample taken. Information in this report will be used to help manage your care. The questions and answers that follow are meant to help you understand medical language you might find in the pathology report from your prostate biopsy.

What does it mean if my biopsy report mentions the word core?

The most common type of prostate biopsy is a core needle biopsy. For this procedure, the doctor inserts a thin, hollow needle into the prostate gland. When the needle is pulled out it removes a small cylinder of prostate tissue called a core. This is often repeated several times to sample different areas of the prostate.

Your pathology report will list each core separately by a number (or letter) assigned to it by the pathologist, with each core (biopsy sample) having its own diagnosis. If cancer or some other problem is found, it is often not in every core, so you need to look at the diagnoses for all of the cores to know what is going on with you.

What is prostatic intraepithelial neoplasia (PIN)?

In this condition, there are changes in how the prostate gland cells look under the microscope, but the abnormal cells don't look like they are growing into other parts of the prostate (like cancer cells would). Based on how abnormal the patterns of cells look, they are classified as:
- **Low-grade PIN**: the patterns of prostate cells appear almost normal
- **High-grade PIN**: the patterns of cells look more abnormal

PIN begins to appear in the prostates of some men as early as their 20s. Almost half of all men have PIN by the time they reach 50. **High-grade PIN** is considered a pre-cancer of the prostate because it may turn into **prostate cancer** over time. **Low-grade PIN** in general should not be on a biopsy report, as it has no significance.

**If I have high-grade PIN, does that mean it will turn into prostate cancer?**

No. In most cases high-grade PIN will not turn into cancer over the next several years. Still, the risk of getting cancer later is higher if high-grade PIN is found in more than one biopsy core.

**What does it mean if the report says that only one of my biopsy samples (cores) shows high-grade PIN, but it does not mention carcinoma (cancer)?**

It means there is no cancer in this biopsy sample. In most cases, even a repeat biopsy will not show cancer.

**Do I need a repeat prostate biopsy over the next year or several years after a diagnosis of high-grade PIN?**

In most cases, the chance of finding cancer is low, so a repeat biopsy done soon after the diagnosis of high-grade PIN is not useful. However, some patients do have a higher risk, such as men with multiple cores showing high-grade PIN. Discuss if and when you have a repeat biopsy with your doctor.

**What is intraductal carcinoma of the prostate?**

Intraductal carcinoma often represents high-grade prostate cancer that is growing into pre-existing prostate ducts. It is often seen next to high-grade prostate cancer.

**What does it mean if there is intraductal carcinoma on my biopsy in addition to high-grade regular prostate cancer?**

In this setting the intraductal carcinoma has no significance and will not change your treatment options or prognosis (outlook).

**What does it mean if there is intraductal carcinoma on my biopsy without regular
prostate cancer?

In this setting, some doctors will recommend treatment, such as surgery or radiation, since intraductal carcinoma is typically associated with high-grade prostate cancer. Other doctors may choose to do a repeat biopsy to try to confirm the high-grade cancer before starting treatment.

The diagnosis of intraductal carcinoma is difficult for pathologists, so you may want to consider asking for a second opinion in this setting.

You should discuss your treatment options with your doctor if your biopsy shows intraductal carcinoma in the absence of usual prostate cancer.

What does it mean if my biopsy report mentions special tests such as high molecular weight cytokeratin (HMWCK), ck903, ck5/6, p63, p40, AMACR (racemase), 34BE12, PIN4 cocktail, or ERG?

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

What does it mean if my biopsy report also says acute inflammation (acute prostatitis) or chronic inflammation (chronic prostatitis)?

Inflammation of the prostate is called prostatitis. Most cases of prostatitis reported on biopsy are not from an infection and do not need to be treated. Sometimes, inflammation may increase your PSA level, but it is not linked to prostate cancer.

What does it mean if my biopsy report also mentions atrophy, adenosis, or atypical adenomatous hyperplasia?

All of these are terms for things the pathologist might see under the microscope that are benign (not cancer), but sometimes can look like cancer under the microscope.

Atrophy is a term used to describe a shrinkage of prostate tissue (when it is seen under the microscope). When it affects the entire prostate gland it is called diffuse atrophy. This is most often caused by hormones or radiation therapy to the prostate. When atrophy only affects certain areas of the prostate, it is called focal atrophy. Focal atrophy can sometimes look like prostate cancer under the microscope.

Atypical adenomatous hyperplasia (which is sometimes called adenosis) is another
benign condition that can sometimes be seen on a prostate biopsy.

What does it mean if my biopsy report mentions a seminal vesicle?

The seminal vesicles are glands that lie just behind the prostate. Sometimes part of a seminal vesicle is sampled during a biopsy. This is not a cause for concern.

Hyperlinks


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Written by

This series of Frequently Asked Questions (FAQs) was developed by the Association of Directors of Anatomic and Surgical Pathology to help patients and their families better understand what their pathology report means. These FAQs have been endorsed by the College of American Pathologists (CAP) and reviewed by the American Cancer Society.

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