

PROSTATE CANCER STAGING AND GRADING

What is cancer grading?

Grading is used to describe how abnormal or aggressive the cancer cells appear. The grade helps to predict long-term results, response to treatment and survival.

What is the Gleason scale?

The Gleason scale is the most common scale used for grading prostate cancer. This system assigns cancer cells a score from 1 to 10, by combining the two most common patterns of cells to give a total score (i.e., 3 + 4 = grade 7). Scores generally range between 4 and, most commonly, 6 or 7. These scores are broken down into three main levels:

- Low-grade (well differentiated): This type of slow-growing cancer has an appearance most like normal prostate cells and is the least dangerous. It has a Gleason score of 4 or less.
- Intermediate grade (moderately differentiated): This type is somewhere between the low- and high-grade cancers and the most common of the three. Depending on PSA level and tumor volume, it can act like a high- or low-grade cancer. It has Gleason score between 4 and 7.
- High-grade (poorly differentiated): This type of cancer has an appearance least like normal prostate cells. It is the most deadly since it is very aggressive and grows very fast -- even into surrounding areas -- such as lymph nodes and bones. These cancer cells also tend to be large, hard to treat, and reappear more frequently. They have a Gleason score between 8 and 10.

What is cancer staging?

Cancer staging describes how much and where the cancer is located. The more cancer there is in the body, the more likely it is to spread and less likely that treatments will work. Therefore, the more advanced stages can affect long-term results and survival.

What are the different stages?

Prostate cancer is broken down into four primary stages:

What are the ABCD stages of prostate cancer?

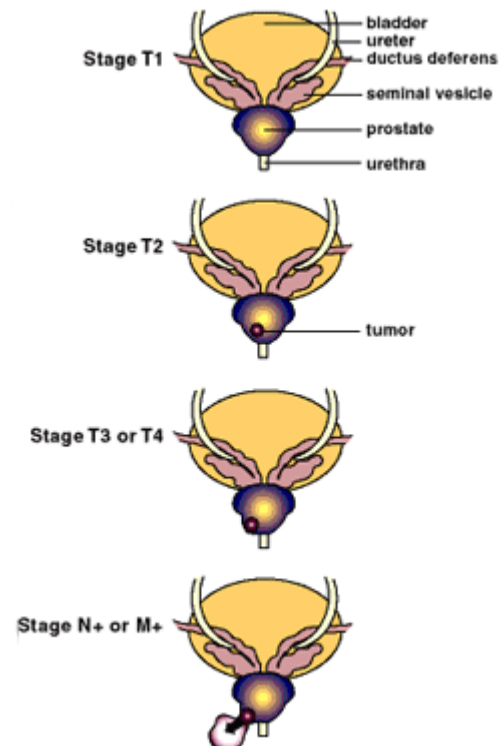
The four stages of prostate cancer were previously broken down into ABCD to describe the detection and location of the cancer.

Stage A: Cancer found when not suspected or due to a high PSA level

Stage B: Cancer found due to abnormal digital rectal exam and is held in the prostate

Stage C: Cancer that has spread to the tissues outside of the prostate

Stage D: Cancer that has spread to the lymph nodes or bone



What is the TNM grading system?

The older ABCD system of staging to gauge the severity of prostate cancer has -- for the most part -- been replaced by the TNM system. This grading system is thought to be more accurate, and is used around the world.

"T" describes the tumor and uses different numbers to explain how large it is.

"N" stands for nodes and tells whether the cancer has spread to the lymph nodes.

"M" means metastatic, and tells whether the cancer has spread throughout the body.

How is the TNM grading system further broken down to describe the cancer?

The TNM system combines the letters with numbers to give an even more accurate description of the cancer...

T Status

- Stage T1: Microscopic tumor confined to prostate and undetectable by a digital rectal exam (DRE) or ultrasound
- Stage T1a: Tumor found in 5% or less of prostate tissue sample
- Stage T1b: Tumor found in more than 5% of a prostate tissue sample
- Stage T1c: Tumor is identified by needle biopsy as a follow-up to screening that detected elevated PSA results
- Stage T2: Tumor confined to prostate and can be detected by DRE or ultrasound
- Stage T2a: Tumor involves less than half of one lobe of the prostate, and can usually be discovered during DRE exam
- Stage T2b: Tumor involves more than half of one lobe of the prostate, and can usually be felt during DRE exam
- Stage T2c: Tumor involves both lobes of the prostate and is felt during a DRE exam
- Stage T3: Tumor has spread to surrounding tissues or to the seminal vesicles
- Stage T3a: Tumor has spread to outside of the prostate on only one side
- Stage T3b: Tumor has spread to outside of the prostate on both sides
- Stage T3c: Tumor has spread to one or both of the seminal tubes
- Stage T4: Tumor is still within the pelvic region but may have spread to organs near the prostate, such as the bladder
- Stage T4a: Tumor has spread beyond the prostate to any or all of the bladder neck, the external sphincter, and/or the rectum
- Stage T4b: Tumor has spread beyond the prostate and may affect the levator muscles (the muscles that help to raise and lower the organ) and/or the tumor may be attached to the pelvic wall

N Status

- Stage N0: Cancer cells have spread, but not yet to pelvic lymph nodes
- Stage N1: Cancer cells have spread to a single lymph node in the pelvic area and are 2 cm (approximately 3/4 of one inch) or less in size
- Stage N2: Cancer cells have spread either to a single lymph node and are more than 2 cm but less than 5 cm (approximately 2 inches) in size, or the prostate cancer cells are found in more than one lymph node and are no larger than 5 cm in size
- Stage N3: Cancer cells have spread to the lymph nodes and are larger than 5 cm in size

M Status

- Stage M0: Cancer cells have spread, but only regionally in the pelvic area
- Stage M1: Cancer cells have spread beyond the pelvic area to other parts of the body