

Prostate Cancer

Early Detection Through MRI

FACTS ABOUT PROSTATE CANCER

- After non-melanoma skin cancer, prostate cancer is the most common cancer among men in the US.
- According to the American Cancer Society about 1 man in 6 will be diagnosed with prostate cancer during his lifetime.
- Prostate cancer mainly occurs in older men - about 6 cases in 10 are diagnosed in men 65 years or older.
- Prostate cancer often has no early symptoms.
- Advanced prostate cancer can cause men to urinate more often or have a weaker flow of urine.
- Prostate cancer that is detected early — when it's still confined to the prostate gland — has a better chance of successful treatment.

WHAT IS MRI OF THE PROSTATE?

MRI is an emerging tool for early imaging of prostate cancer and other prostate-related conditions.

The primary indication for MRI of the prostate is the evaluation of prostate cancer and whether or not it is confined to the prostate gland, or spread outside of the prostate gland.

- MRI uses radiofrequency waves to create a detailed cross-sectional image of the prostate and surrounding tissues.
- Prostate MR images can then be analyzed with powerful postprocessing computer programs to offer a wider variety of image viewing options.
- Prostate MR images also identify specific regions of the gland that may appear suspicious.

On occasion, an MRI of the prostate can be used to evaluate other prostate problems, including:

- Infection (prostatitis) or prostate abscess.
- An enlarged prostate.
- Congenital abnormalities.
- Complications after pelvic surgery.



Schedule Your Prostate MRI
(302) 369.4DIA

PROSTATE CANCER

The prostate gland makes fluid that forms part of semen. The prostate lies just below the bladder in front of the rectum. It surrounds the urethra (the tube that carries urine and semen through the penis and out of the body).

Prostate cancer is the most common cancer in men in the United States, after skin cancer. It is the second leading cause of death from cancer in men. Prostate cancer occurs more often in African-American men than in white men. African-American men with prostate cancer are more likely to die from the disease than white men with prostate cancer.

Almost all prostate cancers are adenocarcinomas (cancers that begin in cells that make and release mucus and other fluids). Prostate cancer often has no early symptoms. Advanced prostate cancer can cause men to urinate more often or have a weaker flow of urine, but these symptoms can also be caused by benign prostate conditions.

Prostate cancer usually grows very slowly. Most men with prostate cancer are older than 65 years and do not die from the disease. Finding and treating prostate cancer before symptoms occur may not improve health or help you live longer.

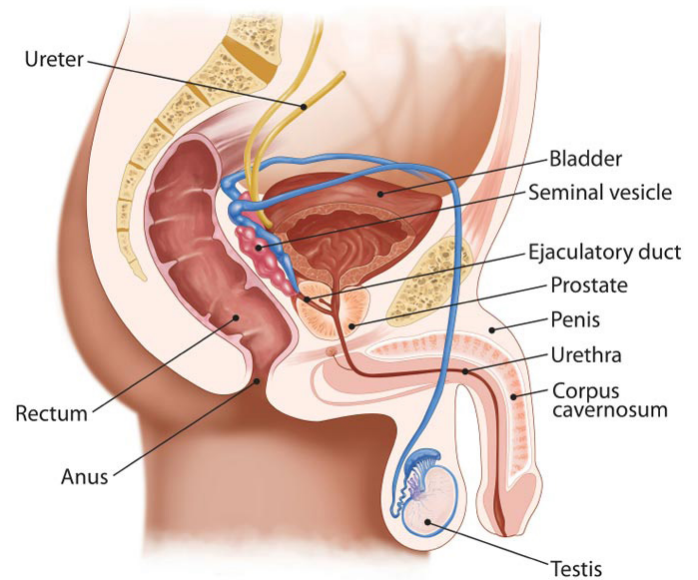


Diagram of the location of the prostate gland and nearby organs



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SIGNS & SYMPTOMS OF PROSTATE CANCER

During the early stages of prostate cancer there are usually no symptoms. Most men at this stage find out they have prostate cancer after a routine check up or blood test (PSA). Symptoms that are present usually are:

- The patient urinates more often or trouble urinating
- He may find it hard to keep urinating once he has started
- There may be blood in the urine/semen
- Discomfort in the pelvic area
- Erectile Dysfunction (less common)

ADVANCED PROSTATE CANCER SYMPTOMS:

- Bone pain, often in the spine (vertebrae), pelvis, or ribs
- Leg weakness (if cancer spread to the spine and spinal cord)
- Urinary incontinence (if cancer spread to the spine)
- Fecal incontinence (if cancer spread to the spine)

CAUSES OF PROSTATE CANCER

Nobody is really sure of what the specific causes are. There are so many possible factors, including age, race, lifestyle, medications, and genetics, to name a few.

- Age is considered as the primary risk factor. The older a man is, the higher is his risk. Prostate cancer is rare among men under the age of 45, but much more common after the age of 50.
- Genetics is definitely a factor in prostate cancer risk. It is more common among certain racial groups - in the USA prostate cancer is significantly more common and also more deadly among Afro-Americans than White-Americans. A man has a much higher risk of developing cancer if his identical twin has it. A man whose brother or father had prostate cancer runs twice the risk of developing it, compared to other men.
- Diets high in vegetable consumption was found in a study to be beneficial. Other studies have indicated that lack of vitamin D, a diet high in red meat may raise a person's chances of developing prostate cancer.
- Medication - Some studies say there might be a link between the daily use of anti-inflammatory medicines and prostate cancer risk. A study found that statins, which are used to lower cholesterol levels, may lower a person's risk of developing prostate cancer.
- Obesity - A study found a clear link between obesity and raised prostate cancer risk, as well as a higher risk of metastasis and death among obese people who develop prostate cancer.
- Sexually transmitted diseases (STDs) - Men who have had gonorrhea have a higher chance of developing prostate cancer, according to research from the University of Michigan Health System.
- Agent Orange - Veterans exposed to Agent Orange have a 48% higher risk of prostate cancer recurrence following surgery than their unexposed peers, and when the disease comes back, it seems more aggressive, researchers say.

CURRENT STANDARD FOR DIAGNOSIS

- PSA: When determining whether patients have prostate cancer or another prostate-related condition, a prostate-specific antigen (SA) blood test can be initially conducted.
- DRE: Physicians typically use the PSA test results, along with a Digital Rectal Examination (DRE) to help detect prostate cancer in men.

WHO IS A CANDIDATE FOR PROSTATE MRI?

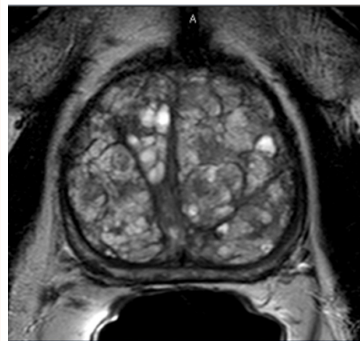
- Patients with elevated Prostate-Specific Antigen (PSA) level >4.
- Patients with negative prior Trans-Rectal Ultrasound-Guided (TRUS) Biopsy.
- Patients with positive Digital Rectal Examination (DRE) with negative Trans-Rectal Ultrasound-Guided (TRUS) biopsy.

HOW TO PREPARE FOR A PROSTATE MRI

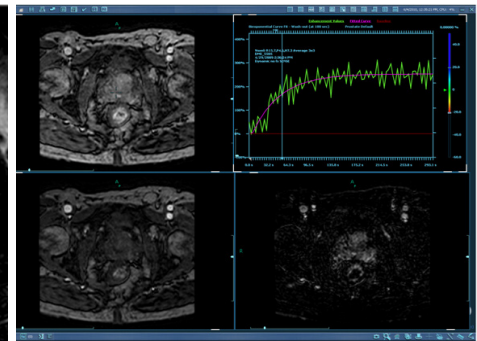
- Your MRI exam may, but will not necessarily involve the use of an endorectal coil.
- You may be asked to wear a gown during the exam or you may be allowed to wear your own clothing if it is loose-fitting and has no metal fasteners.
- Some MRI examinations may require you to receive an injection of contrast material into the bloodstream called gadolinium.
- Advise the radiologist if you have any serious health problems, or if you have had any recent surgeries. Some conditions, such as severe kidney disease, may prevent you from being given gadolinium contrast for an MRI.

DIAGNOSTIC IMAGING AND STAGING PROSTATE CANCER

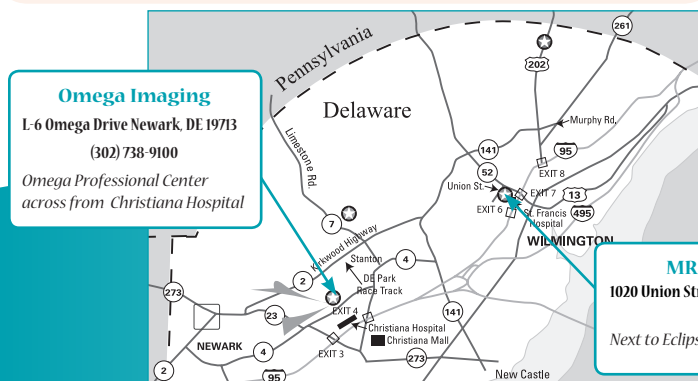
DynaCAD[®] for Prostate is a powerful, easy-to-navigate digital imaging system, which allows physicians to perform real-time, comprehensive analyses of prostate MRI studies. After a patient has undergone a prostate MRI, DynaCAD[®] for Prostate will allow our physicians to quickly process and manage large volumes of prostate images. This technology then allows physicians to synchronize patient studies for easy review while providing complete, extensive summary reports that highlight all crucial aspects of the study, and communicate study results to patients in an effective and timely manner.



MRI Scan of the Prostate Gland without DynaCAD[®] Software.



MRI Scan of the Prostate Gland using DynaCAD[®] Software



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