

Fiducial markers

Treatment for prostate cancer



Our advanced radiation therapy techniques include fiducial markers, which help us to target the tumor during treatment with greater accuracy and help minimize treatment side effects.

Fiducial markers

At GenesisCare, we specialize in advanced techniques that are designed to be safe and effective and minimize side effects to the bladder and the bowel for patients undergoing prostate cancer radiation therapy. These include the use of prostate spacers to protect the rectum by moving it away from the prostate gland during radiation therapy and fiducial markers. Both the fiducial markers and rectal spacer are inserted during a procedure, under local anesthetic at our outpatient centers prior to treatment.

Three to four fiducial markers are inserted into your prostate during this procedure. Because they're clearly visible on your planning CT scan, it enables the radiation therapist to identify exactly where your prostate is each day. This helps improve the accuracy of treatment and minimizes the amount of radiation to surrounding healthy organs, reducing side effects.

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Who can benefit from fiducial markers?

We design our care to help give you the best possible life outcomes. This is why we include fiducial markers for patients undergoing most types of radiation therapy. In some cases, you may have fiducial markers without a rectal spacer or no fiducial markers and just a spacer, but your provider will always explain this to you.

How do fiducial markers work?

During the insertion procedure, three to four fiducial markers are inserted into the prostate. Before each of your treatments you'll have a scan where the radiation therapist reviews the position of the fiducial markers and compares it with the position of the markers on your planning CT scan, together with the position of organs located near the prostate. If there's any difference, the treatment couch is adjusted before the treatment is given. This enables the radiation to target the tumor more accurately, reducing toxicity to surrounding healthy organs.

How are fiducial markers inserted?

Fiducial marker insertions are routinely performed under local anesthetic by our radiation oncologists or urologists at several of our outpatient centers. The insertion process usually takes 15 minutes and includes the following steps:

- ➔ **Our team will check your current health and will give you an antibiotic to decrease the risk of any infection.**
- ➔ **You'll need to undress below your waist and lie on your back on the procedure table.**
- ➔ **A local anesthetic will be administered to the skin of your perineum (area of skin behind the scrotum) to numb the area.**

➔ **An ultrasound probe is inserted into the rectum so your consultant can see your prostate. Three to four markers are then inserted using a fine needle, passed through the skin of the perineum and guided into the correct position in the prostate using the ultrasound imaging.**

➔ **During the procedure, your doctor may also insert a biodegradable rectal spacer that increases the distance between the prostate and rectum. They'll let you know if you need this.**

After your procedure, your care team will check that you're feeling okay before you leave the center. You will need to have a ride to and from the procedure.

After your treatment, the fiducial markers will remain in your prostate. It's safe for them to stay in your body. You won't be able to feel them, and they won't prevent you from doing anything.

Will I experience side effects?

Side effects from the insertion of fiducial markers are uncommon but may include:

- ➔ **A small amount of bleeding from the rectum**
- ➔ **Blood present in urine**
- ➔ **Blood staining of the semen after ejaculation**

These changes can last up to two weeks and are nothing to worry about. If you develop a fever, shivering, feel generally unwell or have flu-like muscle and joint aches, you should go to your nearest emergency room as soon as possible.

If you have any questions, please contact your local center.



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