

What Is Superficial Radiation Therapy (SRT) and When Is It Used?

Superficial Radiation Therapy (SRT) is a non-surgical treatment that uses low-energy X-rays to treat certain skin cancers, particularly selected basal cell carcinomas and squamous cell carcinomas. Instead of cutting out the cancer, SRT delivers radiation directly to the affected area of skin. For some patients, SRT can be an alternative to surgery, depending on the type, size, location, and characteristics of the skin cancer.

At Calvert Dermatology, we offer Superficial Radiation Therapy as one of several treatment options for appropriate skin cancers. Your dermatologist will evaluate your skin cancer and discuss whether SRT is a reasonable option for you.

What Is Superficial Radiation Therapy?

Superficial Radiation Therapy is a type of radiation treatment designed to treat conditions that are located near the surface of the skin. It uses low-energy X-rays that can be directed at the area being treated. Unlike traditional surgery, SRT does not require an incision, cutting, or stitches. The goal is to deliver radiation to the cancer cells while limiting exposure to the surrounding healthy tissue.

SRT has been used to treat certain non-melanoma skin cancers, including basal cell carcinoma (BCC) and squamous cell carcinoma (SCC). Medical literature supports SRT as a treatment option for appropriately selected skin cancers, although it is not appropriate for every patient or every type of skin cancer.

Who May Be a Candidate for SRT?

SRT may be considered for patients with certain basal cell or squamous cell skin cancers that are limited to the skin and are appropriate for radiation treatment. There are several factors your dermatologist will consider before recommending SRT. These may include: The type of skin cancer, the size of the cancer, the location of the cancer, how deeply the cancer extends into the skin, whether the cancer has been treated before, your overall health and individual circumstances, and your preferences regarding treatment.

Some patients may prefer a non-surgical treatment because they want to avoid an incision or stitches. SRT may also be considered when surgery is not preferred or may be less suitable because of the patient's individual circumstances. At Calvert Dermatology, we take these factors into account when discussing treatment options. SRT is not automatically the right treatment for every skin cancer, and your dermatologist will explain the options available for your particular diagnosis.

Is SRT an Alternative to Surgery?

For selected skin cancers, SRT can be an alternative to surgical treatment. However, it is important to understand that different treatments have different advantages, limitations, and risks. Surgery remains an important treatment for many skin cancers, and Mohs surgery may be recommended for certain tumors based on their location, size, type, and risk of recurrence. SRT may be appropriate for other patients.

At Calvert Dermatology, we can discuss the treatment options that are appropriate for your particular skin cancer and help you understand why a specific approach may be recommended.

What Happens During an SRT Treatment?

SRT is performed in the office using a specialized radiation therapy device. The device is positioned over the area being treated, and low-energy X-rays are delivered directly to the skin cancer. The treatment itself does not involve cutting the skin or placing stitches. Calvert Dermatology describes SRT as an outpatient treatment performed during short office visits.

You will be positioned comfortably while the treatment is delivered. The radiation is directed at the treatment area, and the surrounding skin is protected as much as possible. The number of treatments you need depends on your individual treatment plan. SRT is generally given as a series of treatments rather than as one single visit. Your dermatologist will explain how often you need to come in and how many treatments are recommended for your particular skin cancer.

Does SRT Hurt?

The radiation treatment itself is generally not felt. There is no incision, and anesthesia is typically not needed for the radiation treatment. However, the treated skin can become irritated as the course of treatment progresses. You may notice redness, dryness, tenderness, peeling, or scabbing in the treatment area. These effects can develop during or after treatment and usually improve as the skin heals. At Calvert Dermatology, we will explain what to expect during treatment and provide instructions for caring for the treated area.

What Are the Side Effects?

Like any medical treatment, SRT can cause side effects. Since the radiation is directed at the skin, side effects are generally limited to the area being treated. Possible skin changes include: redness, dryness, irritation, peeling, scabbing, tenderness, changes in skin color and temporary hair loss in the treated area.

The severity of these effects can vary from person to person and may depend on the treatment area and the amount of radiation delivered. Your dermatologist will discuss the expected skin changes with you and explain how to care for the area during treatment and recovery.

What Happens After Treatment?

After completing your course of SRT, the treated skin will need time to heal. Some irritation may continue for a period of time after the treatments are finished. It is important to follow your dermatologist's instructions for caring for the treated area. You should also continue regular skin examinations after treatment.

Having one skin cancer increases your risk of developing additional skin cancers, so continued skin checks and sun protection are important. At Calvert Dermatology, follow-up care is part of our approach to comprehensive skin cancer treatment.

Why Choose SRT at Calvert Dermatology?

At Calvert Dermatology in Prince Frederick, Maryland, Superficial Radiation Therapy is offered as part of our comprehensive skin cancer services. Our Skin Cancer Center provides several treatment options, including Mohs surgery, melanoma surgery, local destruction, photodynamic therapy, and SRT.

We understand that being diagnosed with skin cancer can be stressful. Our goal is to explain your diagnosis and treatment options clearly so you understand why a particular treatment is being recommended. If SRT is an appropriate option for your skin cancer, we can discuss what the treatment involves, how many visits may be needed, what you can expect during recovery, and whether other treatment options may also be appropriate.

Frequently Asked Questions

How many SRT treatments will I need?

The number of treatments varies depending on the skin cancer and your individual treatment plan. Your dermatologist will discuss the recommended schedule with you before treatment begins.

Can I go back to my normal activities after treatment?

SRT is performed as an outpatient treatment, so there is generally no surgical recovery period. However, the treated skin may become irritated during the course of treatment, and you may need to modify how you care for the area while it heals.

Will I need anesthesia?

SRT itself does not typically require anesthesia because there is no incision or surgical removal of tissue.

Is SRT better than surgery?

There is not one treatment that is best for every patient. Surgery and SRT have different benefits, risks, and considerations. Your dermatologist can explain which options are appropriate for your particular skin cancer.

Bottom Line

Superficial Radiation Therapy is a non-surgical treatment option for selected basal cell and squamous cell skin cancers. It uses low-energy X-rays to treat the cancer without an incision or stitches, but it is not appropriate for every skin cancer. At Calvert Dermatology, we offer SRT as part of our comprehensive approach to skin cancer care. If you have been diagnosed with skin cancer, your dermatologist can discuss whether SRT, surgery, or another treatment is appropriate based on your individual diagnosis and needs.

References

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- 3. University of Rochester Medical Center researchers.** *Superficial Radiation Therapy versus Mohs Micrographic Surgery: A Systematic Review and Meta-Analysis.* Journal of the American Academy of Dermatology. 2025.
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