

Patient Guide



Brachytherapy:

The precise answer for tackling skin cancer



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Overview of skin cancer

Skin cancer is the most common cancer worldwide. In fact more people are diagnosed with skin cancer than all other cancers combined. The type of skin cancer depends on which skin cell is affected. Skin cancer types include:

- **Basal cell carcinoma (BCC):** there are two main types, called nodular or superficial; they are slow-growing and rarely spread.
- **Squamous cell carcinoma (SCC):** is also slow-growing but spreads more often than BCC; it includes an early, more common form called Bowen's disease.
- **Malignant melanoma:** is less common than BCC and SCC; it can spread quickly so needs more aggressive treatment.

Treatment for skin cancer

The aim of this booklet is to help people who have been diagnosed with early stage BCC or SCC – together known as non-melanoma skin cancer or NMSC – at a time when they are planning and preparing for treatment.

There are a number of different treatment options for skin cancer that your healthcare team may discuss with you (see adjacent page for more details).

This booklet provides you with information on the treatment options for NMSC, focusing on **brachytherapy** (a type of radiotherapy).

The following pages explain:

- The different **treatments available** for NMSC.
- Specific information on **brachytherapy** for NMSC, including how it works.
- The benefits and possible side effects of **brachytherapy**.
- Where to find **further information**.

“After the initial shock of being told I had skin cancer, I discussed all my treatment options with my doctor.

As the cancer was on my lip, one of my main worries was having a scar if I had surgery. So when my doctor talked me through brachytherapy as an option, I thought it would be great as there was less chance of scarring.

The actual brachytherapy procedure was painless, the treatment sessions took no time at all and I'm pleased to say the result has been fantastic as there is no scar. Brachytherapy really was the right option for me”

Treatment options for NMSC

Following a diagnosis of NMSC, your healthcare team will discuss which treatment might be best for you. The options depend on the type, stage, location and size of the tumor.

Possible treatment options include:

Surgery

This can be a simple tumor removal procedure or a more complicated one known as 'Mohs' micrographic surgery.' In some cases surgery may involve skin grafts.

Cryotherapy

In cryotherapy the tumor is destroyed using a freezing cold liquid, usually nitrogen.

Electrodesiccation and Curettage (ED&C)

During ED&C, the tumor tissue is first destroyed using an electronic surgical device and then the destroyed tissue is removed with a round knife.

Photodynamic therapy (PDT)

For PDT, a 'photosensitizing' cream and then a light source are applied to the tumor to destroy the cancer cells.

Laser therapy

Specific laser lights are used to evaporate cancerous tissue from the skin surface.

Topical treatments

Topical treatments are creams which are applied to the tumor for several weeks under strict instructions. Topical treatments include:

- **Imiquimod:** a cream that stimulates the immune-system to destroy tumor tissue.
- **5-fluorouracil (5FU):** an anti-cancer drug that interferes with tumor cell growth.

Radiotherapy

Radiotherapy works by directly destroying the cancer cells. There are two types of radiotherapy used to treat NMSC:

- **External beam radiotherapy (EBRT)**

During EBRT a low dose of radiation is directed to the area of the tumor from a measured distance. Treatment is most often carried out on a daily basis over a period of several weeks.

- **Brachytherapy**

Brachytherapy works by delivering a precise radiation dose directly to the tumor, sparing surrounding healthy tissue from unnecessary radiation.

As the radiation source is placed directly on the tumor, brachytherapy can deliver more accurate tumor coverage than EBRT. This means brachytherapy can be performed using a higher dose per treatment session, reducing the total treatment time – often lasting only a few days.

Brachytherapy can be divided into **surface brachytherapy** – where applicators are placed onto the tumor – and **interstitial brachytherapy** – where catheters are surgically placed inside the tumor.

This booklet will focus solely on surface brachytherapy.

You should discuss all the different treatment options with your healthcare team to determine the one most suitable for you.

Who is suited for brachytherapy?

With a number of treatment options available, patients can choose according to their individual needs and preferences for treatment. Considerations include such aspects as comfort, pain, treatment time, effectiveness and appearance post treatment.

Brachytherapy may be the treatment of choice:

- When scarring needs to be minimal as the tumor is in a visible position (e.g. the nose).
- When the tumor is in an uncomfortable position (e.g. the shin).
- When surgery is not advised due to a health condition you have or medication you take (e.g. blood thinners).
- When it is vital to preserve the structure and use of the area being treated (e.g. the hand or lip).
- When looking for a painless, unobtrusive therapy.

What are the benefits of brachytherapy for NMSC?

The benefits of brachytherapy include:

- **Proven effective:** Cure rates the same as surgery and EBRT; most people receiving brachytherapy remain cancer free.
- **Painless procedure:** Pain-free, knife-free and needle-free; no anesthesia or sedation is needed.
- **Minimal or no scarring:** Outstanding appearance of treatment site.
- **Minimal loss of use:** Little or no healthy tissue affected so loss of use is minimal compared to surgery.
- **Minimal side effects:** Accurate delivery of radiation directly to tumor reduces the risk of side effects.
- **Convenience of short treatment:** Brachytherapy is often given over days, compared to weeks of EBRT and unlike surgery, no recovery time is needed.
- **State-of-the-art therapy:** Established therapy; continued technological advances providing even more effective treatment.



How is surface brachytherapy performed?

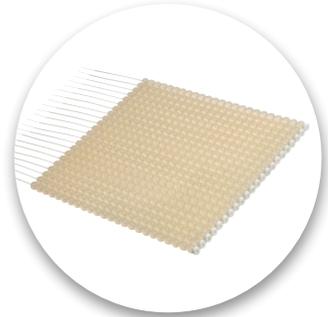
Brachytherapy delivers a radiation dose directly to the tumor via the use of specialized applicators.

The applicator used during surface brachytherapy may depend on the type and location of the tumor and your physician's choice.



Flat applicator

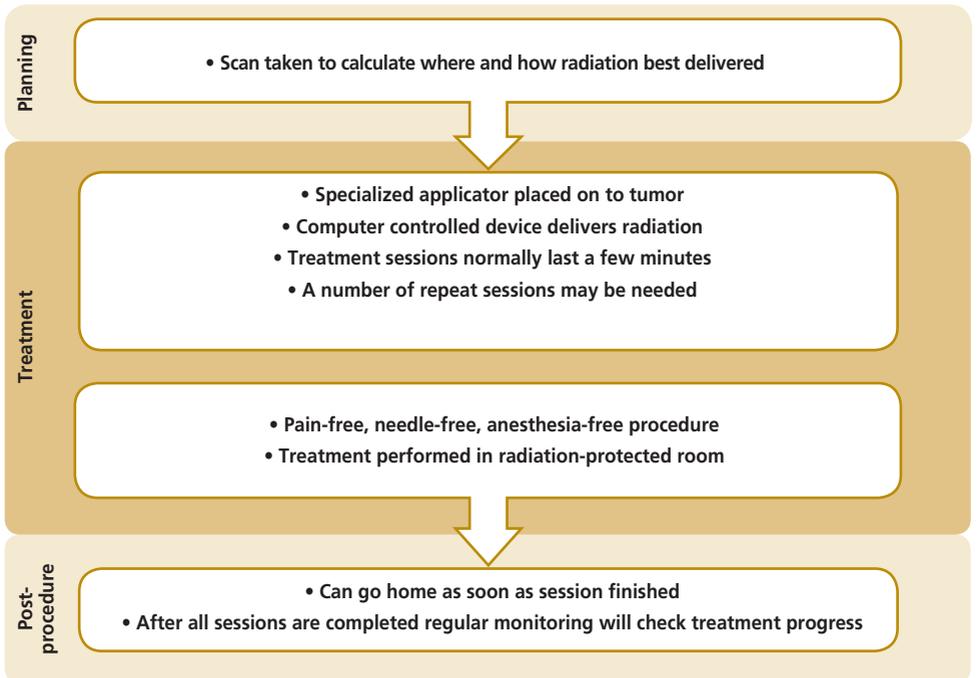
Radiation can be delivered via a round, flat applicator placed on top of the tumor. Different types of applicators are available to best fit your needs.



Customized applicator

A silicon mat applicator may be cut to size or a customized mold made if your tumor is on a curved surface, is large or is in an awkward place.

What is the brachytherapy procedure?



What else should I know about brachytherapy for NMSC?

People respond to treatments in different ways and you may, or may not, experience side effects after brachytherapy.

As brachytherapy specifically targets the tumor site, this minimizes the amount of radiation going to nearby healthy skin and surrounding tissue. This helps to lower the risk of side effects.

The side effects you might experience depend on a number of factors, including the tumor size, location and type.

Most side effects do not affect your daily routine; however your healthcare team can advise you on methods to reduce any that may occur.

Short-term side effects may include redness, itching, ulceration and scabbing. These are usually mild and resolve soon after treatment.

Long-term side effects may include changes in skin color, scarring at the tumor site and hair loss in the treated area. These are typically minor and usually resolve over time.

Quality of life advantages

The quality of life benefits of brachytherapy can make it a treatment of choice over surgery, EBRT, PDT or other options.

Advantages for appearance:

- Minimal healthy tissue is destroyed, especially compared to EBRT and surgery.
- Does not involve cutting into the skin around the tumor, resulting in little to no scarring.
- Little to no disfigurement, as can occur during surgery.
- No need for reconstructive surgery or skin grafts as no surrounding tissue is removed.

Other advantages:

- Surface brachytherapy is a painless procedure compared to surgery, cryotherapy, PDT and ED&C.
- Minimal or no loss of use or feeling of affected area, for instance after treatment of tumors on the hands or lips.
- Convenient treatment time of days versus weeks of EBRT.
- Minimal recovery time required; everyday activities can be resumed within 1–5 days.
- No need for surgery in areas with problematic wound healing, such as the shin.

Is brachytherapy right for me?

Your healthcare team knows specifically about your condition and whether brachytherapy could be a relevant and helpful option of your individual treatment program. Talk to your healthcare team and discuss your treatment plan as you go through the decision making process.

Writing down a list of questions before you go in to see your healthcare team can help you to feel more in control. Some examples are provided in the box to the right.

You will also find these on the website www.aboutbrachytherapy.com along with some general answers and much more information on brachytherapy.

Finding the right information will help ensure that together with family, friends and your healthcare team, you have explored and understand the different treatments you can be offered. This way, you can be confident about your treatment plan.

Below are some questions you might want to include in your list:

- What are my treatment options?
- How effective are the treatments?
- What are the advantages and disadvantages of each?
- Is brachytherapy an option for me?
- In which cases does brachytherapy work?
- Is the treatment uncomfortable or painful?
- How is the treatment carried out?
- How long will the treatment take?
- Will I need to stay in the hospital and, if so, for how long?
- Will there be any side effects?
- Will the treatment leave a scar?
- Where can I be treated?
- How should I prepare for my treatment?



Further support and advice

About brachytherapy website

For further support and advice about brachytherapy and its role in the treatment of NMSC, you can visit www.aboutbrachytherapy.com

Local patient groups

Local NMSC patient groups are a good source of information and an opportunity to share experiences. The internet, library and your healthcare team are good places to start when looking for a patient group.

Other resources include:

American Cancer Society

<http://www.cancer.org>

National Cancer Institute

<http://www.cancer.gov>

Macmillan Cancer Support

<http://www.macmillan.org.uk>

Cancer Council Australia

<http://www.cancer.org.au>

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- Brachytherapy is a type of radiotherapy that places the radioactive source directly on, or next to, the tumor site
- Brachytherapy is a precise treatment that targets the tumor and minimizes side effects
- Brachytherapy is an effective treatment that can be used alone in early stage NMSC
- Brachytherapy can be administered in a relatively short treatment period allowing people to quickly get back to their everyday life

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