

# Patient Guide



## Brachytherapy:

*The precise answer for tackling breast cancer*



Because life is for living

This booklet is designed to provide information that helps women who have been diagnosed with early stage breast cancer – and their family and friends – at a time when they are deciding which type of treatment will be best for them.

This is inevitably an emotional and stressful time. It is important to have the advice and support of your healthcare team, together with all the information you require. This can give you confidence that you are in control and making the best choices available to you.

**To treat your early stage breast cancer there are a number of treatments that your healthcare team may discuss with you, including:**

- Surgery
- Radiotherapy – including a treatment called brachytherapy
- Chemotherapy
- Hormone therapy

This booklet provides you with information about **brachytherapy**, also known as '**internal radiotherapy**'.

**The following pages explain:**

- The different **treatment options** available for early stage breast cancer.
- Specific information on the **brachytherapy options** for breast cancer including what they are, how they work and their potential benefits and side effects.
- Where to find **further information**.

“After discussing the different treatment options available to me with my doctor, I knew I wanted to try and keep my breast.

However, I was concerned about the extended treatment time of radiotherapy following surgery and the possible cosmetic effects it may have on my breast. But then my doctor told me about brachytherapy, and that a shorter treatment course may be an option for me.

Brachytherapy was a good choice for me and I have been able to preserve my breast – something which has made all the difference.”



## Treatment options available for early stage breast cancer

Following a confirmed diagnosis of early stage breast cancer your doctor will discuss the treatment choices available to you. The options will depend, in part, on the characteristics of your breast cancer.

Most women with breast cancer will have surgery to remove the cancer from the breast. Often the lymph nodes under the arm are removed and looked at. In most breast cancer cases, additional treatment is given in combination with surgery.

Possible treatment options include:

### Surgery

Surgical removal of the tumor. This can be either:

- **Mastectomy**

Surgical removal of the whole breast. Surgical reconstruction (breast reconstruction) is an option after mastectomy to maintain a natural appearance of the breast.

- **Lumpectomy or partial mastectomy (breast conserving surgery)**

Surgical removal of the tumor and some of the normal tissue that surrounds it, allowing the main part of the healthy breast to be conserved. Radiotherapy used in combination with lumpectomy or partial mastectomy is known as **breast conserving therapy**.

### Radiotherapy

Given to kill any cancer cells that may remain following surgical removal of the tumor. This can be given either as:

- **Whole Breast Irradiation (WBI); with or without 'boost'**

External beam radiotherapy (EBRT) is directed from outside the body to the area in the breast where the tumor was located.

An additional 'boost' dose can be given after WBI either in the form of EBRT or as **brachytherapy**. Brachytherapy works by precisely delivering the radiation dose directly to the area in the breast where the tumor was located, sparing healthy surrounding tissues and organs from unnecessary radiation.

- **Accelerated Partial Breast Irradiation (APBI)**

For some women, it is possible to irradiate only the part of the breast around where the tumor was removed (the 'tumor bed'). This can be done either by brachytherapy or by a form of EBRT called 3D conformal radiotherapy (3D CRT).

### Chemotherapy

Chemotherapy medicines may be given to help kill any cancerous cells.

### Hormone therapy

Hormone therapy is also sometimes given to help prevent the cancer from coming back.

**You and your healthcare team can discuss the advantages and disadvantages of each available treatment and choose the option(s) most suitable for you.**

## What is brachytherapy for early breast cancer?

Brachytherapy is an effective and convenient form of radiotherapy, which delivers radiation from the 'inside, out'. The radioactive source is temporarily placed in the breast, direct to the tumor site, to deliver effective and accurate treatment with minimal side effects.

### When is brachytherapy used?

Brachytherapy is an effective treatment option for early stage breast cancer. It is used after surgery as a component of breast conserving therapy.

Brachytherapy can be used as part of two different approaches to breast conserving therapy: Whole Breast Irradiation (WBI) and Accelerated Partial Breast Irradiation (APBI). Both options are effective.

### How long does treatment take?

The length of treatment depends on what kind of radiotherapy you receive.

If you receive WBI, this involves 6–7 weeks of EBRT. The boost with brachytherapy will be done over about 2 days.

If you receive APBI, this can be done in about 5 days. Since APBI is completed in a shorter time than WBI, it can be a more convenient option. However, not all women can be treated with APBI – your healthcare team will tell you more.

### Will I have to stay in hospital?

Most patients will receive brachytherapy on an outpatient basis, meaning that an overnight stay in hospital is not needed.

### The benefits of brachytherapy include:

#### Proven to be effective:

Clinical studies have shown that brachytherapy is an effective component of early breast cancer treatment, either alone as APBI or as a boost in combination with EBRT.<sup>1 2 3 4</sup>

#### Minimized side effects:

The accurate and targeted nature of brachytherapy reduces the risk of side effects and damage to surrounding healthy breast tissue, skin and other organs, including the heart and lungs.

#### Excellent cosmetic results:

Brachytherapy is part of breast conserving therapy, which avoids the need to remove the whole breast and helps to retain the appearance of the breast and skin.

#### Convenience of short treatment:

When used after surgery as APBI, brachytherapy treatment can be completed in just 5 days, allowing you to get back to everyday life quickly. Overall treatment times vary by hospital – ask your healthcare team.

# How is brachytherapy delivered?

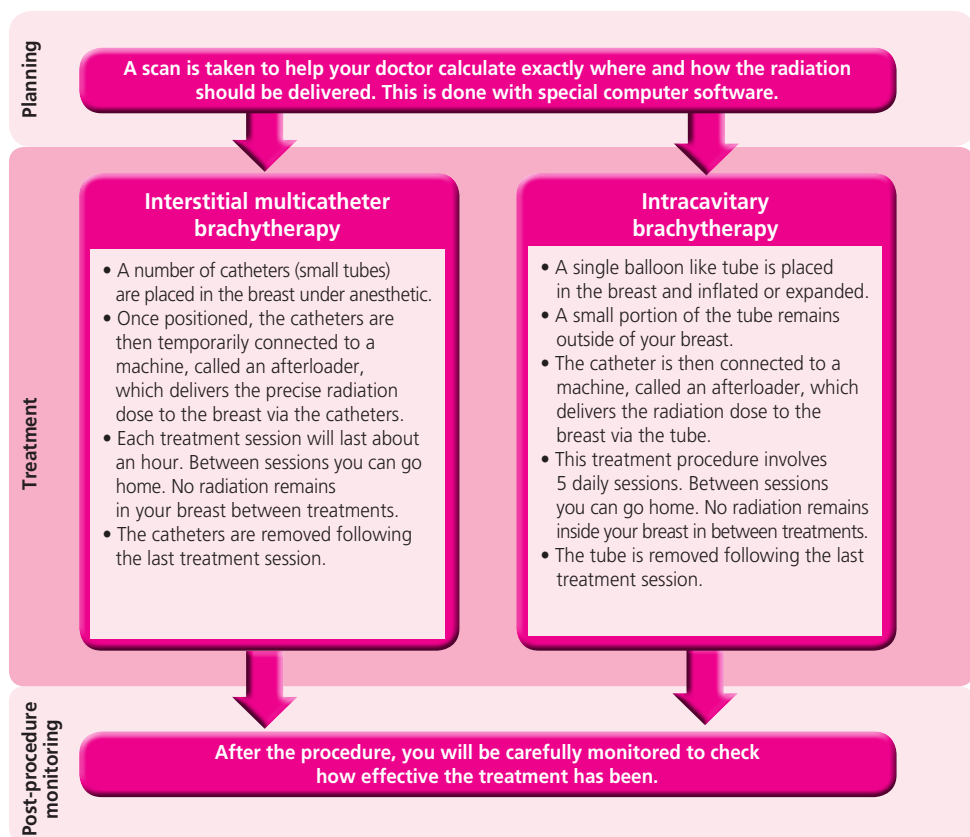
There are two methods of delivering brachytherapy:

## 1. Interstitial multicatheter brachytherapy

This method is used for boost and APBI. The only difference is the length of time the catheters are in place. For boost, this is usually about 2 days, and for APBI this is usually about 5 days.

## 2. Intracavitary brachytherapy: single or multi-channel devices

This method is used for APBI. The special catheter will be in place for about 5 days. It is inserted either during your lumpectomy procedure, or shortly afterwards.



## What else should I know about breast brachytherapy?

As with all treatments for breast cancer you may experience side effects after receiving brachytherapy.

What side effects you may experience depends on a number of factors, including the stage of your breast cancer and whether you have any other health problems.

**Please note that people respond to treatments in different ways and you may, or may not, experience some of these side effects.**

### Short-term side effects

Most women will feel tired after the brachytherapy procedure and you may have to rest for a few days while you recover.

After receiving brachytherapy you may experience some soreness in, or mild redness of your breast tissue around the area that has been treated. The breast may also appear slightly swollen and the color of the skin may change slightly. These changes to the breast tissue are usually mild and typically go away a few weeks following treatment.

There is a small risk of infection with the placement of the catheters in the breast tissue. Your healthcare team will assess your level of risk and may give you antibiotics before the brachytherapy procedure.

### Long-term side effects

Some women may experience long-term changes in the breast tissue around the area that has been treated.

The tissue may change in appearance, feeling more firm to the touch. This is known as 'fibrosis'. The risk of developing fibrosis depends on the dose of radiation received.

Radiation can also cause breakdown of the fat tissue within the breast, causing local irritation of the tissue. This is known as 'fat necrosis'. However, this is an uncommon side effect.



## Is brachytherapy right for me?

### So, how do you know if brachytherapy is an option for you?

Ask – find as much information as you can about the options you have before deciding the best course of action. Your healthcare team knows specifically about your condition. Talk to them to discuss if brachytherapy should be added to your treatment regimen.

[www.aboutbrachytherapy.com](http://www.aboutbrachytherapy.com) is a website that can provide you with a good starting point for information and some tips to help you develop questions you should ask your healthcare team about brachytherapy.

Finding all the right information will help ensure that together with family, friends and your healthcare team, you have explored all the different options available to you. This way, you can choose the course of treatment you believe is best to tackle your breast cancer.

### Below are some questions you might discuss with your healthcare team:

- What are my treatment options?
- What impact will the different treatments have on my life (work, family, etc.)?
- How effective are the different options?
- Is brachytherapy an option for me?
- Is APBI an option for me?
- Will there be any side effects?
- In which cases does it work?
- Please describe exactly what happens, step-by-step.
- How long will the treatment last?
- Will I need to stay in hospital and, if so, for how long?
- Where can I be treated?
- How should I prepare for my treatment?
- What will my family need to know?

### Reference:

1. Polgar C et al. Int J Radiat Oncology Biol 2007;69:694-702 2. Polgar C et al. Radiotherapy and Oncology 2012. Volume 103; supplement 2. OC-87 3. Polgar C et al. Int J Radiat Oncol Biol Phys 2004;60:1173-1181. 4. Polgar C et al. Brachytherapy 2008;7:91-92



## Further support and advice

### About brachytherapy website

For further support and advice about brachytherapy and its role in the treatment of breast cancer, you can visit [www.aboutbrachytherapy.com](http://www.aboutbrachytherapy.com)

### Local patient groups

Local breast cancer 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>

#### The European Breast Cancer Coalition

<http://www.europadonna.org>

## Brachytherapy:

*The precise answer for tackling breast cancer*

- Brachytherapy is a type of radiotherapy that places the radioactive source in, or at, the tumor site following surgery
- Brachytherapy is a precise treatment that targets the tumor and minimizes side effects
- Brachytherapy is an effective part of breast conserving therapy when used in combination with surgery (lumpectomy) and sometimes in combination with external beam radiotherapy
- Brachytherapy can be administered over a shorter treatment period allowing women to get back to their everyday life sooner

Because life is for living



Provided by Elekta  
[www.elekta.com](http://www.elekta.com)

Information provided in this brochure does not necessarily reflect the opinion of healthcare professionals or patient groups working in breast cancer, however their input has been sought during its development.