



What is a lumpectomy?

A lumpectomy is a surgery that removes cancerous breast lumps or tumors in people diagnosed with early stage breast cancer (when the cancer has not spread to other areas).

How is radiation helpful after lumpectomy?

Radiation treatment is used to kill cancer cells that may be left after surgery. It is also used to prevent the cancer from coming back at a later time.

After a lumpectomy what are my radiation options?

There are multiple radiation options after a lumpectomy including whole breast radiation therapy (WBRT) and different forms of breast brachytherapy. After a lumpectomy, the National Comprehensive Cancer Network (NCCN) recommends whole breast radiation therapy with or without a brachytherapy boost.

What is whole breast radiation therapy?

In whole breast radiation therapy, a machine outside the body exposes the whole breast to x-rays that destroy cancer cells. Whole breast radiation is typically given five days per week for five to seven weeks, in an outpatient treatment center. Long-term studies have shown that whole breast radiation for early stage breast cancer can help prevent cancer from returning as much as 50% of the time.

What is breast brachytherapy?

Breast brachytherapy involves placing catheters (hollow tubes) into breast tissue to deliver radiation directly to breast tissue. It is used after a lumpectomy and may be given as a boost to whole breast radiation or used by itself. The NCCN recommends a brachytherapy boost in addition to whole breast radiation for people at a high risk for the cancer coming back.

What is accelerated partial breast brachytherapy?

Some people use a high dose brachytherapy called accelerated partial breast brachytherapy therapy without using whole breast radiation. Accelerated partial breast brachytherapy therapy is given twice a day over four or five days and can reduce burning, discoloration and scarring to the skin.

How effective is accelerated partial breast brachytherapy?

Short-term studies have shown that the rates of cancer coming back after accelerated partial breast irradiation may be similar to whole breast radiation. But there are no long-term studies showing it to be as effective as whole breast radiation at eliminating breast cancer.

The FDA warns that the safety and effectiveness of accelerated partial breast brachytherapy have not been established.

When will we know whether accelerated partial breast brachytherapy is as effective as whole breast radiation?

Breast cancer can reoccur after five or more years, so to determine whether a treatment is effective in preventing cancer from returning, a study must follow patients for at least five to eight years. A large study comparing the effectiveness of accelerated partial breast brachytherapy therapy to whole breast radiation therapy started in 2005 and will be completed in 2015.

What if I prefer to only have accelerated partial breast brachytherapy?

If you want accelerated partial breast brachytherapy without whole breast radiation, you are taking the risk of using a procedure that has not been proven to prevent the cancer from returning long-term. If you decide to do this, ask your doctor about getting involved in a clinical trial.

THE BOTTOM LINE

The recommended standard of care after lumpectomy is whole breast radiation therapy. Accelerated partial breast brachytherapy has not been proven to be as effective as whole breast radiation therapy in preventing cancer from coming back in the long-term.

Note: Regence physicians, nurses and pharmacists developed this summary to provide you with information about potential advantages and lack of advantages of breast brachytherapy. This summary was developed based upon an evaluation of information from the US Food and Drug Administration (FDA), scientific studies and input from practicing doctors and specialists.