

# The Underutilization of Breast Conservation Therapy (BCT)

Part Number 87818-001 Rev A

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The purpose of this presentation is to provide an overview of the underutilization of Breast Conservation Therapy (BCT).

## Breast Conservation Therapy is Underutilized<sup>1</sup>

- Despite Studies to the Contrary:
  - ~41% of women eligible for BCT receive mastectomy
  - 19% of women who have lumpectomy do not have radiation therapy afterward

1. Cancer Trends Progress Report – 2005 Update, National Cancer Institute, 2005.

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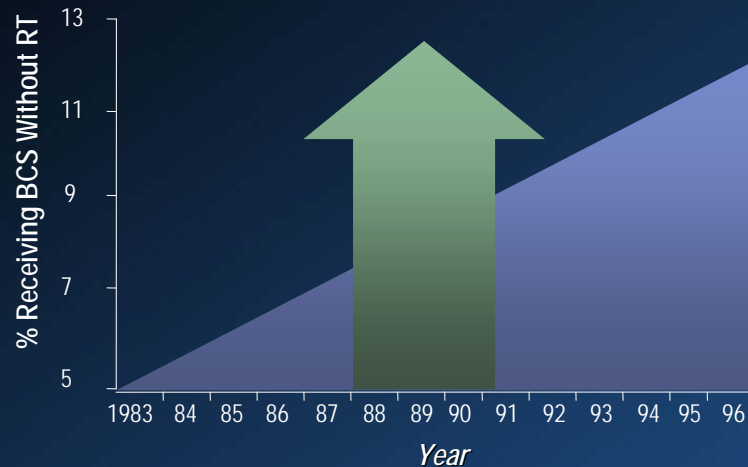
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Breast Conservation Therapy, including radiation therapy, is considered a standard of care. However, BCT is underutilized. Many women who are eligible for BCT are having mastectomies instead, and many of those who do have breast conservation surgery do not receive radiation following their surgery.

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1. National Institutes of Health. *Cancer Trends Progress Report – 2005 Update*. National Cancer Institute, Bethesda, MD. December 2005. Available at: <http://progressreport.cancer.gov>.

## Percentage of Patients Who Receive BCS Without RT Has Increased<sup>1</sup>



1. Nattinger AB, et al. *Lancet* 2000;356:1148-1153.

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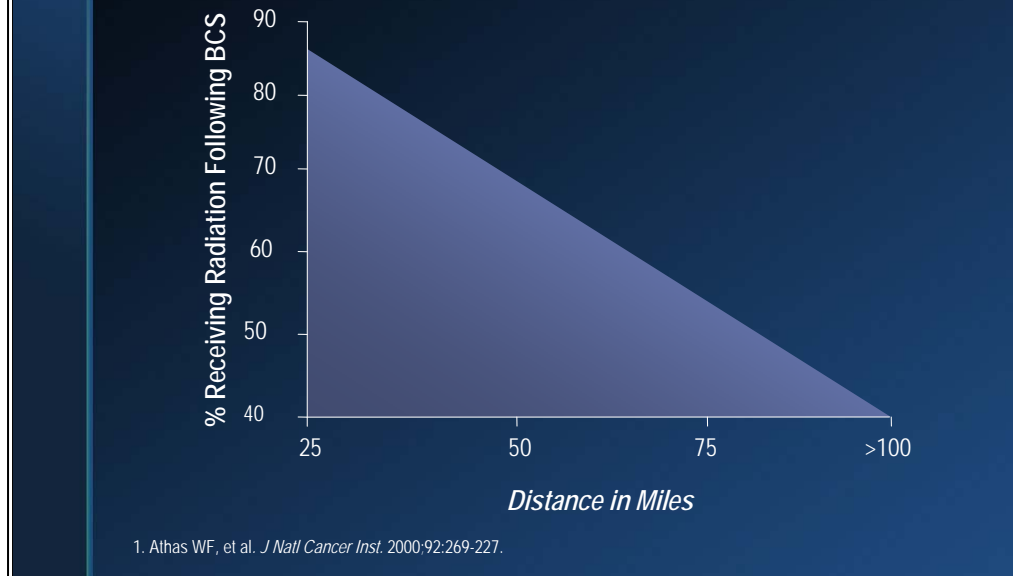
Of significant concern is that as data have accumulated favoring radiation in combination with surgery, there has been a substantial increase in the number of women who have not received radiation. This number more than doubled from 1983 to 1996, increasing from 5% to over 12%, and in fact is now as high as 19% in some areas.

Several factors impact whether a woman receives this recommended treatment. We'll review those factors now.

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1. Nattinger AB, Hoffman RG, Kneusel RT, et al. Relation between appropriateness of primary therapy for early-stage breast carcinoma and increased use of breast-conserving surgery. *Lancet*. 2000;356:1148-1153.

## Distance to the Radiation Facility Affects Who Receives Radiation Therapy<sup>1</sup>



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The distance one has to travel to get radiation therapy significantly decreases the chances that a woman will have radiation therapy.

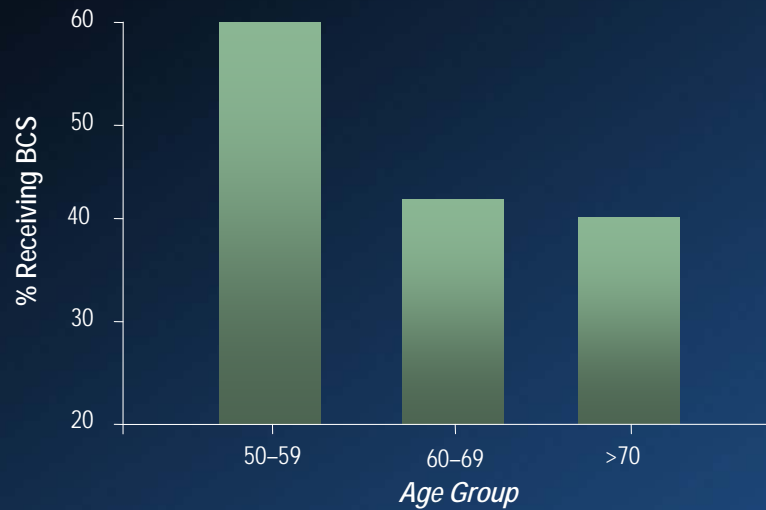
Significant increases in distance from a facility that offers radiation therapy cut in half the portion of women receiving radiation therapy. As you can see on this chart, 85% of women who lived within 25 miles of a facility received radiation following BCS, while just over 40% of the patients who lived over 100 miles away received radiation therapy.

The percentage of those who had breast conservation surgery versus mastectomy did not vary by distance to the facility.

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1. Athas WF, Adams-Cameron M, Hunt WC, et al. Travel distance to radiation therapy and receipt of radiation therapy following breast-conserving surgery. *J Natl Cancer Inst.* 2000;92:269-271.

## Age Affects Who Receives Breast Conservation Surgery<sup>1</sup>



1. Joslyn S. *Int J Radiat Oncol Biol Phys.* 1999;44:821-826.

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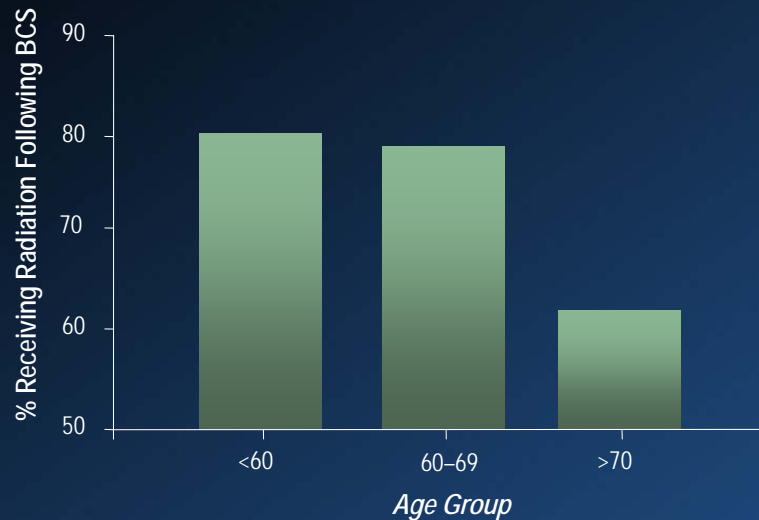
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Age is also a factor in patient selection for breast conservation surgery. Here are two studies that showed significant effects due to age. The first shows the significant reduction in the use of breast conservation surgery for women over the age of 59.

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1. Joslyn S. Radiation therapy and patient age in the survival from early-stage breast cancer. *Int J Radiat Oncol Biol Phys.* 1999;44:821-826.

## Age Also Impacts Radiation Therapy Following Breast Conservation Surgery<sup>1,2</sup>



1. Ballard-Barbash R. *J Natl Cancer Inst.* 1996;88:716-725.  
2. McCormick B. *Brachytherapy* 2002;1(4):179-180.

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The second study showed that the percentage of women who got radiation therapy after BCT declined markedly with age, irrespective of their comorbidity or their disease stage. Overall, about half as many women over the age of 69 got radiation therapy, compared to the younger age groups.

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1. Ballard-Barbash R, Potosky AL, Harlan LC, et al. Factors associated with surgical and radiation therapy for early stage breast cancer in older women. *J Natl Cancer Inst.* 1996;88:716-725.

2. McCormick B. The politics and the ethics of breast cancer. *Brachytherapy* 2002;1(4):170-180.

## Summary for BCT with RT for Treatment of Early Stage Breast Cancer

### *RT Rates are Dropping*

- Large increase in omission of RT after breast conservation surgery
- RT use decreases as distance from facility increases

### *Age Impacts Treatment*

- Decreased use of BCT with increasing age
- Decreased use of RT with increasing age

### *RT Improves Outcomes*

- No RT with DCIS → high risk of local recurrence
- No RT after breast conservation surgery increases risk of death

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In summary, there has been a tremendous increase in the omission of RT after breast conservation surgery. Several studies have identified who is not receiving the standard of care, breast conservation therapy plus Radiation Therapy—those who live farthest from a radiation facility tend to forego RT, as do those who are older. And older women tend to be treated with mastectomy more often than others.

Yet as studies have also shown radiation in combination with surgery improves outcomes. Omitting radiation therapy after breast conservation surgery increases the risk of recurrence or death.