

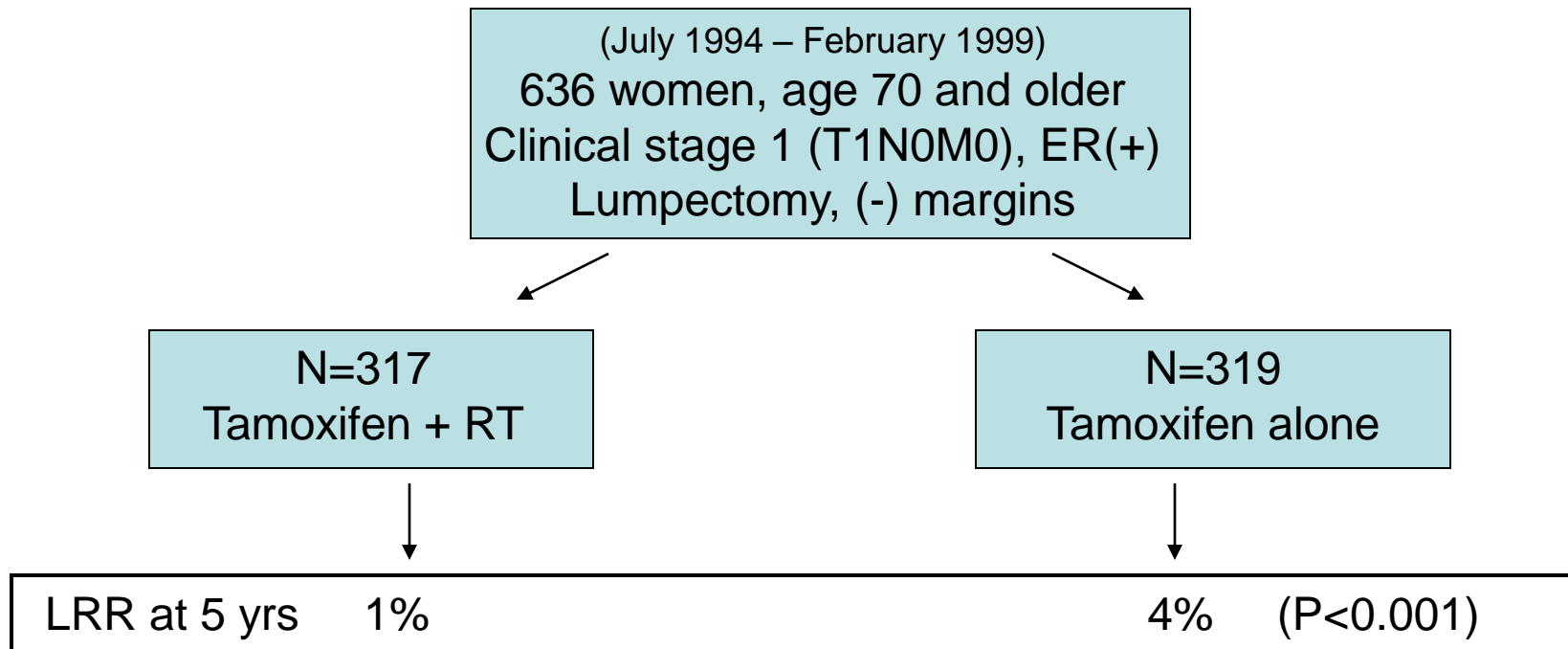
Updates in Breast Cancer: Radiation

Shirnett Matthews, MD

Radiation Oncology

Cancer Centers of the Carolinas

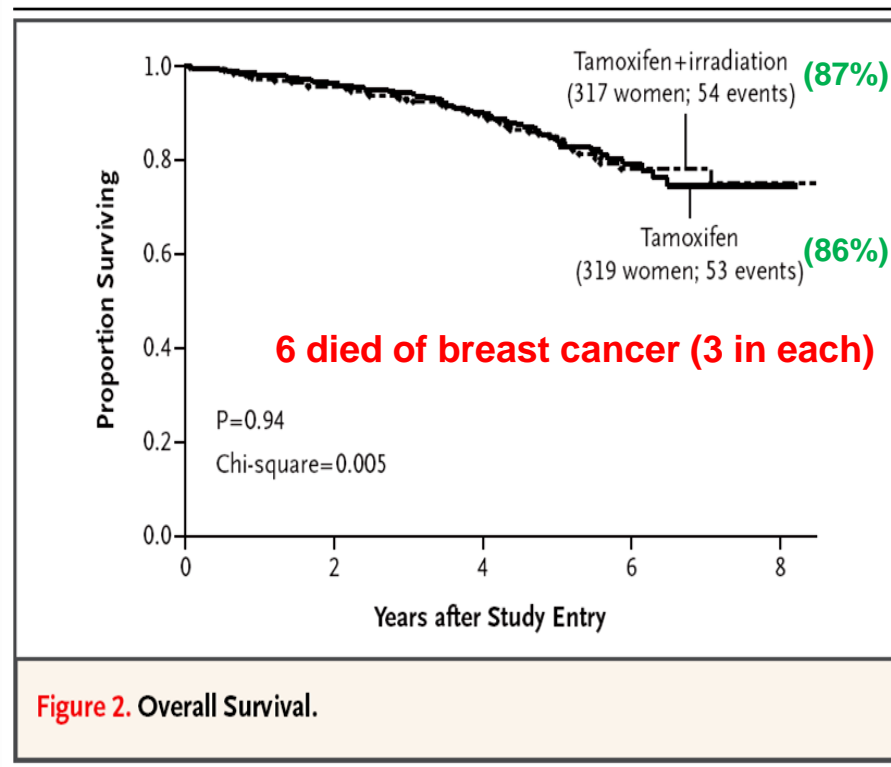
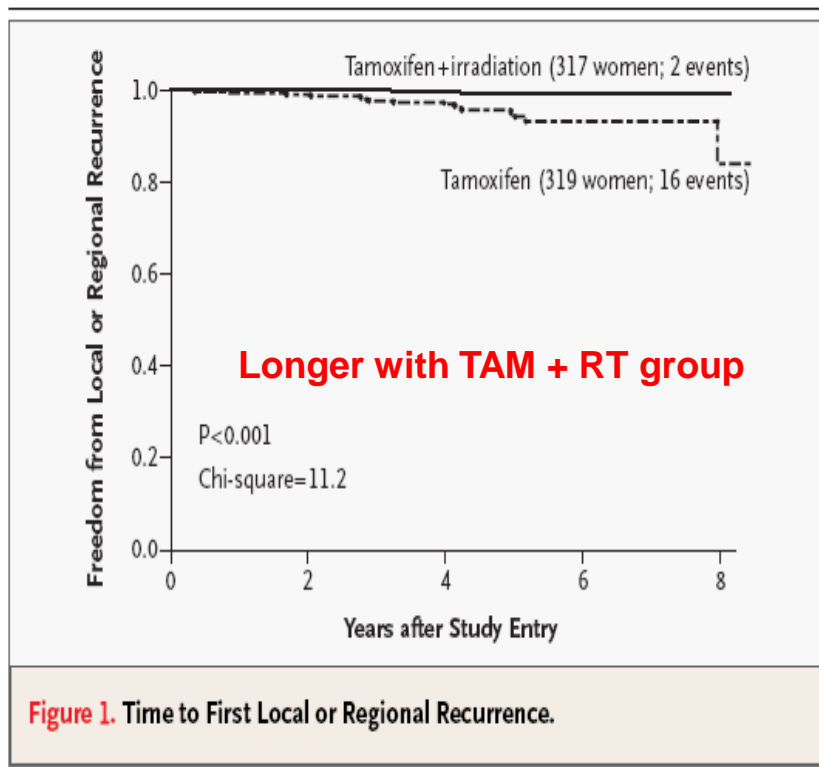
Hughes et al. Lumpectomy plus Tamoxifen with or without Irradiation in Women 70 years of Age or Older with Early Breast Cancer
NEJM 2004; 351: 971-7



No significant difference in any other endpoints: Rates of mastectomy for local recurrence, distant metastases, or five-year rates of overall survival.

Hughes et al. Lumpectomy plus Tamoxifen with or without Irradiation in Women 70 years of Age or Older with Early Breast Cancer

NEJM 2004; 351: 971-7



Conclusion: Lumpectomy + adjuvant Tamoxifen alone was a realistic choice for the treatment of women 70 years of age or older with early, estrogen (+) breast cancer.

Hughes et al. Lumpectomy plus Tamoxifen with or without Irradiation in Women 70 years of Age or Older with Early Breast Cancer

Update: J Clin Oncol 28:15s, 2010 (suppl; abstr 507)

- 10.5 Years median follow-up

	TAM	TamRT
LRR (p=0.015)	9%	2%
Mastectomy for recurrence	96%	98%
Distant Mets	95%	93%
Breast Cancer Specific survival	98%	96%
Overall Survival	63%	61%

43% of women have died; 7% due to breast cancer

Hughes et al. Lumpectomy plus Tamoxifen with or without Irradiation in Women 70 years of Age or Older with Early Breast Cancer
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Conclusions:

- At 10.5 years median FU, the data continue to demonstrate that TamRT results in an absolute reduction of 6% in IBTR when compared to TAM alone in this population.
- Lumpectomy with antiestrogen therapy, without the addition of radiation, is an appropriate treatment option for older women with node-negative, hormone receptor (+) disease.
- The low rate (7%) of breast cancer deaths indicates that breast cancer mortality is not a major concern for this subset of older women.

Whelan et al. Long Term Results of Hypofractionated Radiation Therapy for Breast Cancer.
 NEJM 2010; 362: 513-20

- Between April 1993 and September 1996; 1234 patients
- Invasive breast cancer with negative axillary nodes – treated with BCT and axillary dissection (required); boost RT was **not** used
- *Exclusion criteria:* (+) margins; tumors > 5cm; large breast patients (>25cm separation)

N=612
 Standard Radiation
 (50Gy in 25 fxns over 35 days)

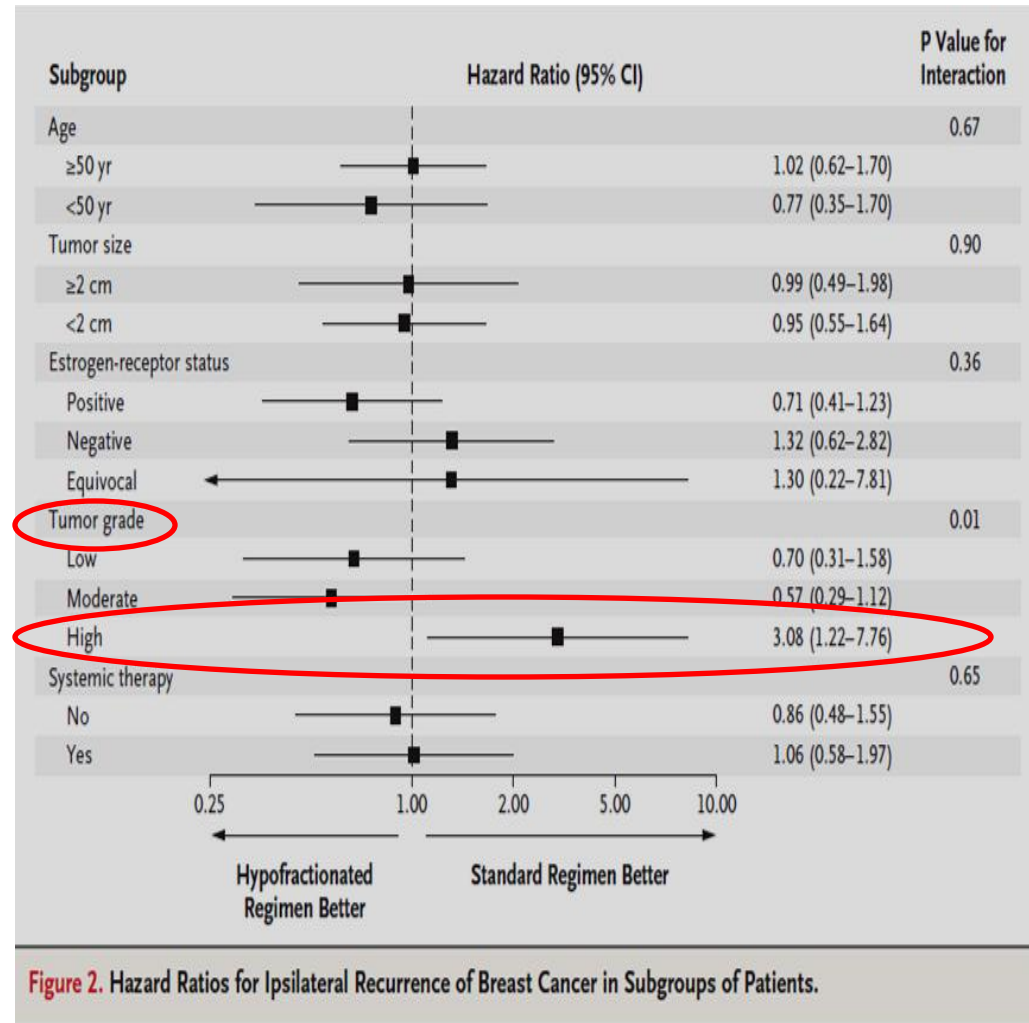
N=622
 Accelerated Radiation
 (42.5Gy in 16 fxns over 22 days)



5-Yr LRR	3.2%	2.8%
10-Yr LRR	6.7%	6.2%
Excellent or Good Global Cosmetic Outcome		
5 Yr	77.4%	76.8%
10 Yr	71.3%	69.8%

Whelan et al. Long Term Results of Hypofractionated Radiation for Breast Cancer. (NEJM 2010; 362: 513-20)

- Subgroup analysis – treatment effect was similar regardless of age, tumor size, ER status; +/- use of chemotherapy
- The hypofractionated regimen appeared to be less effective in patients with high-grade tumors
 - 10 Yr LRR = 4.7% (standard RT) & 15.6% (accelerated group)
- Again – appropriate selection is important



Whelan et al. Long Term Results of Hypofractionated Radiation Therapy for Breast Cancer.

NEJM 2010; 362: 513-20

Conclusions:

- Supports the use of accelerated, hypofractionation, whole breast irradiation in selected women with node-negative breast cancer after BCT.
- Abbreviated course could be more convenient, less costly than standard therapy and may increase the number of women receiving radiation after lumpectomy.
- Most of the patients enrolled in the study had a low risk of disease recurrence, which may mean a shorter course might not be best for women with higher-risk breast cancer.

Sharma R, et al. “Present-Day Locoregional Control in Patients with T1 or T2 Breast Cancer with 0 and 1 to 3 Positive Lymph Nodes After Mastectomy without radiation” Ann Surg Oncol. May 2010

- Hypothesis: The rates of LRR after mastectomy without PMRT in patients with 1 to 3 positive lymph nodes are much lower among patients treated within the past decade than among patients treated in earlier series.
- Retrospective review of 1,022 stage I or II breast cancer patients who received a mastectomy at M.D. Anderson between 1997 and 2002.
 - Of the women, 79% had T1 and 21% had T2 tumors.
 - Of these, 74% (n=753) had negative nodal status;
 - 17% (n=176) had one positive node;
 - **7% (n=69) had two positive nodes; and**
 - **2% (n=21) had three positive nodes.**
 - Their median age was 54 years.

Presented at the March 2010 Society of Surgical Oncology Annual Cancer Symposium.

Sharma R, et al. “Present-Day Locoregional Control in Patients with T1 or T2 Breast Cancer with 0 and 1 to 3 Positive Lymph Nodes After Mastectomy without radiation” Ann Surg Oncol. May 2010

- Of all the patients, 75% received postoperative chemotherapy and/or hormonal therapy.
- No patients in the cohort received radiation or neoadjuvant therapy.
- At a median follow-up of 7.5 years, there was no significant difference in the 10-year risk for local recurrence between women without lymph node spread and those with spread to one node (2.1% vs. 3.3%, respectively).
- Women with two positive nodes had a higher risk for locoregional recurrence, with a 10-year recurrence rate of 7.9% ($P=0.003$).
- Age under 40 was the only independent risk factor for loco-regional recurrence. These women had a 10 year risk of 11% (no nodal disease)

Sharma R, et al ... Ann Surg Oncol. May 2010

- Conclusion: In patients with T1 and T2 breast cancer with 0 to 3 positive node, LRR rates after mastectomy are low (2.7%), with the exception of patients < 40 years old. The indications for PMRT in patients treated in the current era should be re-examined.
- The finding challenges a three-year-old guideline from the National Comprehensive Cancer Network (NCCN) that calls for physicians and patients to “strongly consider radiation therapy to the chest wall and supraclavicular area” after mastectomy in women with one to three positive nodes.
 - *well, maybe not “strongly” but need to individualized treatment; need prospective trial.*
- The NCCN’s recommendation was based on two landmark studies in the 1990s and a meta-analysis in 2005 that demonstrated a survival benefit and decreased risk for locoregional recurrence for early-stage breast cancer patients with node-positive disease who underwent post-mastectomy radiation (*N Engl J Med* 1997;337:949-955; *N Engl J Med* 1997;337:956-962; *Lancet* 2005;366:2087-2106).
 - Extent of axillary surgery less than US (7 nodes removed on average); higher rate of LRR (30% vs. 10%) esp. in 1-3+ group; systemic therapy used no longer standard