Radiotherapy for patients with unresected locally advanced breast cancer

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Introduction

Management of locally-advanced breast cancer (LABC) varies, but in patients without distant metastases treatment often involves neoadjuvant systemic therapy, surgery and radiation. If the primary tumour remains unresectable after systemic therapy, radiotherapy may be used for tumour shrinkage before surgery. When distant metastases are present, locoregional radiotherapy is generally reserved for management of tumour-related symptoms. The present study reviewed our institution's experience of high-dose radiotherapy for unresected LABC.

Materials and Methods

A retrospective chart review was conducted of patients with unresected LABC receiving external beam radiotherapy to the breast, chest wall and/or regional lymph nodes. Patients were stratified based on the presence of distant metastases at presentation. Patient demographics, disease characteristics, and treatment outcomes were recorded. Primary outcomes were locoregional progression-free survival (LPFS) and overall survival (OS) from completion of radiotherapy. Patients' symptoms and quality-of-life were also evaluated.

Conclusion

Radiotherapy provided good response and symptom control in most patients in this study; there is a role for palliative radiotherapy in patients with LABC.

Results

Forty-three cases were identified (Table 1). Median follow-up was 14 months from completion of radiotherapy.

Twenty-four cases (56%) presented with metastatic disease. Tumour shrinkage occurred within 3 months of completing radiotherapy in 36 cases (84%). Ulceration and bleeding were improved in 13 (54%) of the 24 applicable cases. Twenty-six patients (60%) developed moist desquamation but none experienced grade 4 or 5 dermatitis. The median LPFS was 12 months. LPFS (Figure 1; p=0.2) and OS (Figure 2; p=0.4) were not significantly different between patients with and without distant metastases at presentation.

Table 1. Patient and Treatment Characteristics

Patient and Treatment Characteristics	Group 1	Group 2
Demographic information		
Total no. of cases	19	24
Median age (range) in years	60.0 (28-96)	54.5 (30.76)
Sex		
Female	19 (100%)	22 (92%)
Male	0	2 (8%)
Chemotherapy (pre-RT)	6 (32%)	13 (54%)
Positive response	2 (33%)	2 (15%)
No response	2 (33%)	7 (54%)
Progression	2 (33%)	3 (23%)
Unknown response	0	1 (8%)
Endocrine therapy (pre-RT)	5 (26%)	10 (42%)
Positive response	1 (20%)	2 (20%)
No response	3 (80%)	3 (30%)
Progression	0	1 (10%)
Unknown response	0	4 (40%)
Radiation treatment		
Median dose (Gy, range)	50 (40.5-72.0)	50 (25.4-70.0)
Median number of fractions (range)	25 (5-50)	25 (10-50)
Lymph nodes irradiated	16 (84%)	16 (67%)
Boost to tumour bed/nodes	10 (53%)	12 (50%)
Concurrent chemotherapy	3 (16%)	3 (13%)
Concurrent endocrine therapy	5 (26%)	1 (4%)
Concurrent trastuzumab	5 (26%)	1 (4%)
Moist desquamation	11 (58%)	15 (63%)
Radiation pneumonitis	1 (5%)	0
Surgery (post-RT)		
Mastectomy	5 (26%)	2 (8%)
BCS	0	0

Group 1, patients with no distant metastasis on current presentation; Group 2, patients with distant metastasis on current presentation; RT, radiotherapy; BCS, breast conserving surgery

Figure 1. Locoregional progression-free survival from last radiotherapy treatment

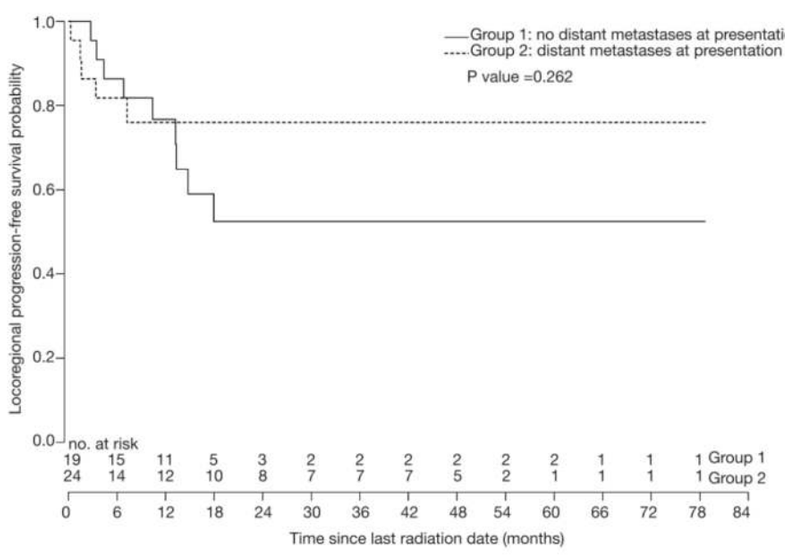
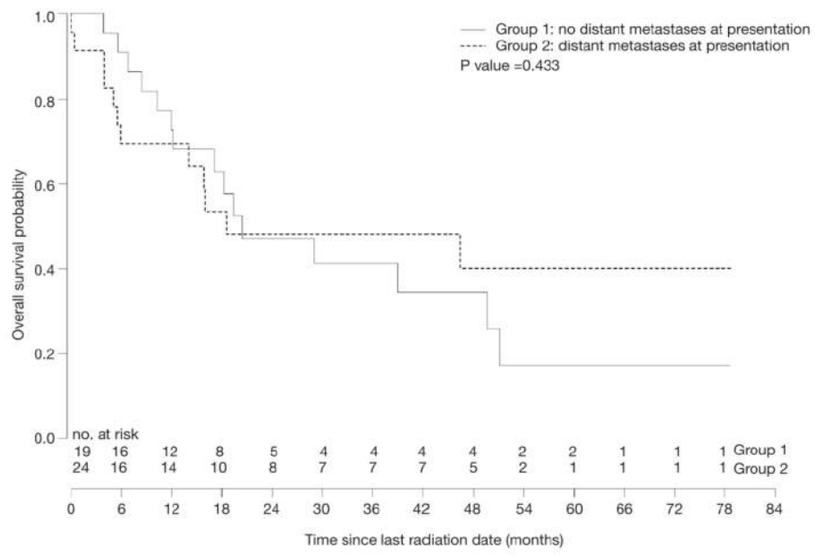


Figure 2. Overall survival from last radiotherapy treatment



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