Chemotherapy Decision Making and Outcomes in Very Early-Stage Triple Negative Breast Cancer

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Introduction

- Benefit of chemotherapy in very early-stage TNBC remains unclear.
- NCCN guidelines **do not recommend chemotherapy for T1a** tumors (≤0.5 cm) and recommend **consideration of chemotherapy for T1b** tumors (0.6-1 cm).
- Treatment utilization is heterogeneous, and the benefit remains poorly defined.

Aim: This study aims to evaluate recent trends in treatment patterns, outcomes, and provider decision-making for patients with pT1a and pT1b TNBC using an institutional dataset.

Methods

- ❑ Included patients with pT1a (≤5 mm) or pT1b (>5–10 mm) TNBC and pN0/pN0(i+)/pN1mi disease from our institution between Jan 2016-Jan 2025.
- ❑ Stratified by pathologic T stage and receipt of adjuvant chemotherapy.
- ❑ Conducted qualitative review of decision making documentation, where available.
- ❑ Logistic regression identified factors associated with chemotherapy use, and Kaplan-Meier curves assessed survival.

Table 1. Patient Characteristics of T1a and T1b TNBC

Characteristic	pT1a (n=63) (%)	pT1b (n=139)
Median Age (years)	60 (range 27-81)	62 (range 33-83)
Lymph Node Status, n (%)		
N0	61 (96.8%)	134 (96.4%)
N0(i+)	1 (1.6%)	2 (1.4%)
N1mi	1 (1.6%)	3 (2.2%)
BRCA1 Positive, n (%)	10 (15.9%)	11 (7.9%)
Grade III Tumor, n (%)	34 (53.9%)	96 (69.1%)
Invasive Ductal Histology, n (%)	54 (85.7%)	122 (87.8%)
ECOG 1 vs. 0, %	6% vs 79%	9% vs 72%
Received Chemotherapy, n (%)	13 (20.6%)	94 (67.6%)
Chemotherapy Regimen		
doxorubicin/cyclophosphamide + paclitaxel (AC-T)	5 (38.5%)	40 (42.6%)
Docetaxel + Cyclophosphamide (TC)	4 (30.8%)	46 (48.9%)
Other	4 (30.8%)	8 (8.5%)

Of 63 patients with **pT1a** TNBC, **20.6%** (n=13) received chemotherapy. Among **pT1b** TNBC, **67.6%** (n=94) received chemotherapy.

Results

I. Outcomes Analysis

Figure 1. Kaplan-Meier Survival Curves

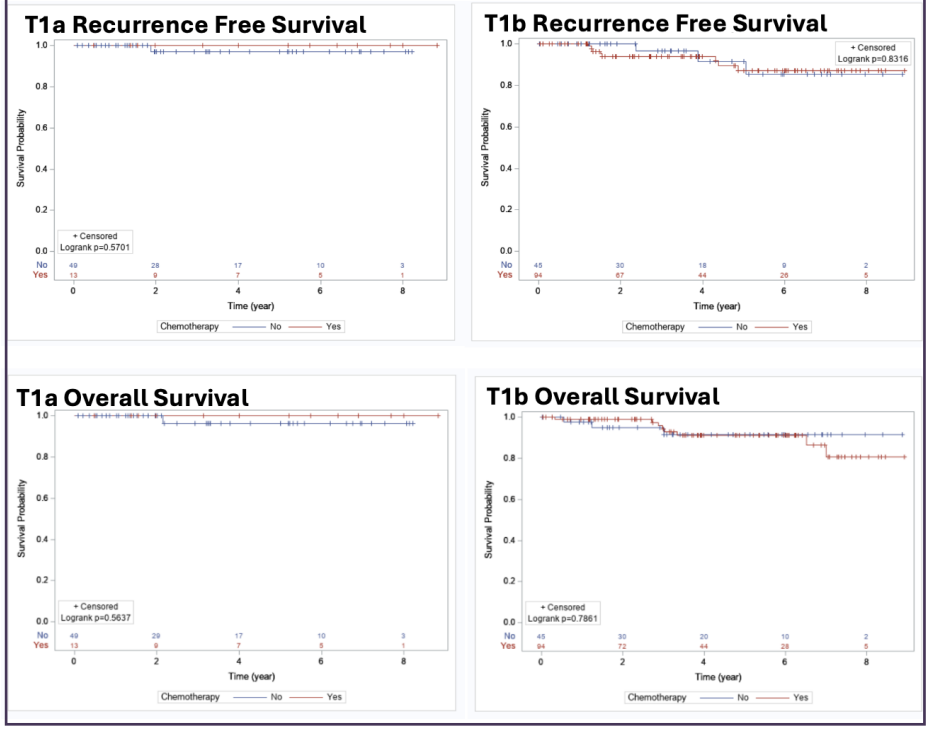


Table 2. Survival Outcomes for T1a and T1b TNBC

	pT1a (n=63)	pT1b (n=139)
Recurrence in No Chemo Group, n (%)	2 (4%)	3 (6.8%)
Recurrence in Chemo Group, n (%)	0 (0%)	8 (8.5%)
3-Year OS (%)	97%	94%
3-Year RFS with chemotherapy (%)	100%	94%
3-Year RFS without chemotherapy (%)	97%	96%

Results

II. Provider Decision Making

Figure 2. Oncologist's Recommendation by Tumor Size

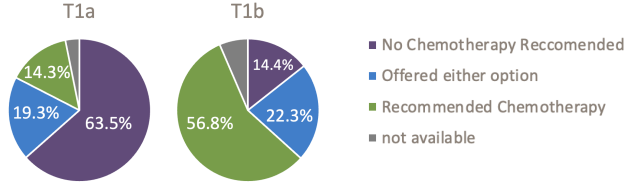
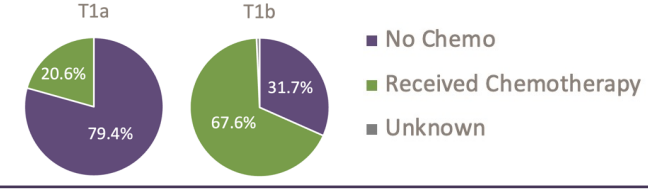


Figure 3. Chemotherapy Receipt by Tumor Size



Logistic regression Analysis

- Older age → **lower likelihood** of receiving chemotherapy in both T1a (OR 0.93, p=0.012) and T1b (OR 0.92, p<0.001)
- ECOG 1 (vs 0) → **lower likelihood** of receiving chemotherapy in T1b (OR 0.22, p=0.013)
- BRCA1-positive → **higher likelihood** of chemotherapy use in T1a (OR 6.27, p=0.019)
- Grade III → **higher likelihood** of chemotherapy use in T1b (OR 7.98, p=0.049)

Documentation of Rationale

Decision-making documentation was available for 191 (95%) cases. In pT1a, multifocal disease was the most frequently cited factor (33%) when chemotherapy was recommended. In pT1b, patient comorbidities (30%), patient preference (20%), favorable histology (20%), and lack of data (20%) were the most cited reasons for recommending surveillance. Lack of high evidence data and departmental group discussions were cited in discussions across all subgroups.

Conclusion

- ❑ Clinical decision-making was often driven by **nuanced considerations.**
- ❑ Findings underscore the **need for prospective data and validated risk tools** to guide chemotherapy decisions in T1a/b TNBC tumors.