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Characteristics of Patients with Invasive Breast Cancer that Refuse Recommended Cancer Therapies and the Impact on Overall Survival

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Introduction

Completion of surgical resection and (neo)adjuvant treatments (chemotherapy, radiation, and endocrine therapy) is necessary to achieve optimal outcomes in invasive breast cancer.

Objective

To determine the characteristics of patients that refuse recommended therapies and the impact of refusal on overall survival.

Participants

2,058,568 patients with invasive breast cancer in the National Cancer Database, of whom 12,163 (0.6%) refused surgery, 143,492 (7.5%) refused chemotherapy, 66,194 (3.5%) refused radiation, and 86,425 (4.5%) refused endocrine therapy.

Results

	Surgery Refusal	Chemotherapy Refusal	Radiation Refusal	Endocrine Refusal
Female	NS	1.44	NS	1.13
Black	2.23	0.91	1.16	0.92
Hispanic	NS	0.76	0.79	0.72
Uninsured	3.53	1.25	1.71	1.38
AJCC Stage	2.38	0.42	1.11	0.76
ER-HER2+	NS	0.16	0.94	NA
ER+HER2+	1.11	0.19	NS	NS
TNBC	0.65	0.21	0.84	NA
Age	1.09	1.09	1.06	1.03
Distance	1	NS	NS	NS

Surgery refusal had the highest hazard ratio for mortality (2.6) compared to chemotherapy (1.3), radiation (1.8), or endocrine therapy (1.5) independent of race, insurance, receptor status, stage.

Conclusions

Patients refusing therapy were older and had more medical comorbidities; they did not live farther from the treating hospital. Black patients more often refused surgery and radiation; Hispanic patients were less likely to refuse adjuvant therapies. Uninsured patients were more likely to refuse treatment, particularly surgery. Patients with triple-negative breast cancer were less likely to refuse any treatment. Refusal of recommended surgery has the highest association with mortality in patients with invasive breast cancer, followed by radiation, endocrine therapy, and chemotherapy.