

## EARLY BREAST CANCER: ADJUVANT THERAPY

### 880 Validation of the American Joint Committee on Cancer new prognostic stage groups for HER2-positive breast cancer patients treated with adjuvant chemotherapy and trastuzumab in the prospective ShortHER trial

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**Background:** The American Joint Committee on Cancer (AJCC) 8<sup>th</sup> edition staging system introduced prognostic stage groups based on anatomic stage combined with biologic factors. We aimed to validate the AJCC prognostic classification in a large cohort of patients with HER2-positive breast cancer enrolled in the prospective ShortHER trial.

**Methods:** The ShortHER trial randomized 1253 HER2-positive patients to receive 9 weeks or 1 year of trastuzumab in combination with anthracycline and taxane chemotherapy. Patients were classified according to the classic AJCC anatomic groups and the AJCC prognostic groups (8<sup>th</sup> edition). Distant disease-free survival (DDFS) was calculated as the time from randomization to relapse at a distant site or death. The Harrell's C-index was used to compare the prognostic performance of the two staging systems.

**Results:** 1244 patients had complete clinicopathological data for both AJCC anatomic and AJCC prognostic stage classifications. Compared with the anatomic AJCC, the prognostic AJCC moved 41.6% (n = 517) of the patients to a more favorable stage category: 100% of IB to IA (n = 40), 61.6% of IIA to IB or IA (n = 246), 63.0% of IIB to IB or IA (N = 94), 58.7% of IIIA to IIA or IB (n = 71) and 100% of IIIC to IIIB or IIIA (n = 66). Table shows the 5-years DDFS rates according to the two staging systems. The c-index was similar: 0.69209 for anatomic stage and 0.69249 for prognostic stage (P = 0.975).

**Table: 880**

	AJCC anatomic			AJCC prognostic		
	N (%)	5-years DDFS %	Log-rank P	N (%)	5-years DDFS %	Log-rank P
IA	469 (37.7)	96.6	P < 0.001	733 (58.9)	95.7	P < 0.001
IB	40 (3.2)	94.1		139 (11.2)	91.4	
IIA	400 (32.1)	92.4		201 (16.2)	86.9	
IIB	149 (12.0)	87.3		55 (4.4)	85.0	
IIIA	121 (9.7)	81.3		59 (4.7)	77.6	
IIIB	0	–		57 (4.6)	67.7	
IIIC	66 (5.3)	70.5		0	0	

**Conclusions:** The AJCC prognostic classification reallocated 41.6% of HER2-positive patients to a more favorable stage category, while maintaining a similar prognostic performance as compared to the classic anatomic stage. With the AJCC prognostic staging, 59% of patients were classified as IA and showed an excellent prognosis after adjuvant treatment.

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