

# 217P-The impact of obesity on the survival outcomes of women with breast cancer that achieve pathological complete response

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## BACKGROUND

Several studies have reported that obese women with breast cancer (BC) have decreased rates of pathological complete response (pCR) compared to their leaner counterparts. However, whether the survival rates of obese women who manage to achieve pCR differ from those of non-obese patients who also achieve pCR is unclear.

## METHODS

Medical records of women diagnosed with BC between 2009 and 2020 in a center in Monterrey, Mexico were reviewed. Patients with stages I-III at diagnosis who received neoadjuvant chemotherapy and with at least 6 months of follow-up were eligible. Fisher's exact tests were used to compare pCR rates between groups. Recurrence-free survival (RFS) and overall survival (OS) were estimated using the Kaplan-Meier method. Associations between variables were explored using log-rank tests.

## RESULTS

A total of 513 women with a median age at diagnosis of 48 years (range 25-88) were included, of which 250 (49%) were obese. The median follow-up was 38 months (95% CI 34-42). Regarding pCR rates, there were no significant differences between non-obese and obese patients (28% vs. 24%,  $p=0.305$ ). In non-obese women, the 3-year RFS and OS of those who achieved pCR were significantly better than in those who did not (96% vs 79% [ $p=0.010$ ] and 98% vs 87% [ $p=0.018$ ]). On the other hand, the 3-year RFS and OS in obese women who achieved pCR were not significantly different from those who did not (83% vs 76% [ $p=0.122$ ] and 87% vs 83% [ $p=0.440$ ]). Notably, the 3-year RFS and OS of non-obese and obese women who achieved pCR were numerically different, although these were not statistically significant (96% vs 83% [ $p=0.190$ ] and 98% vs. 87% [ $p=0.050$ ]).

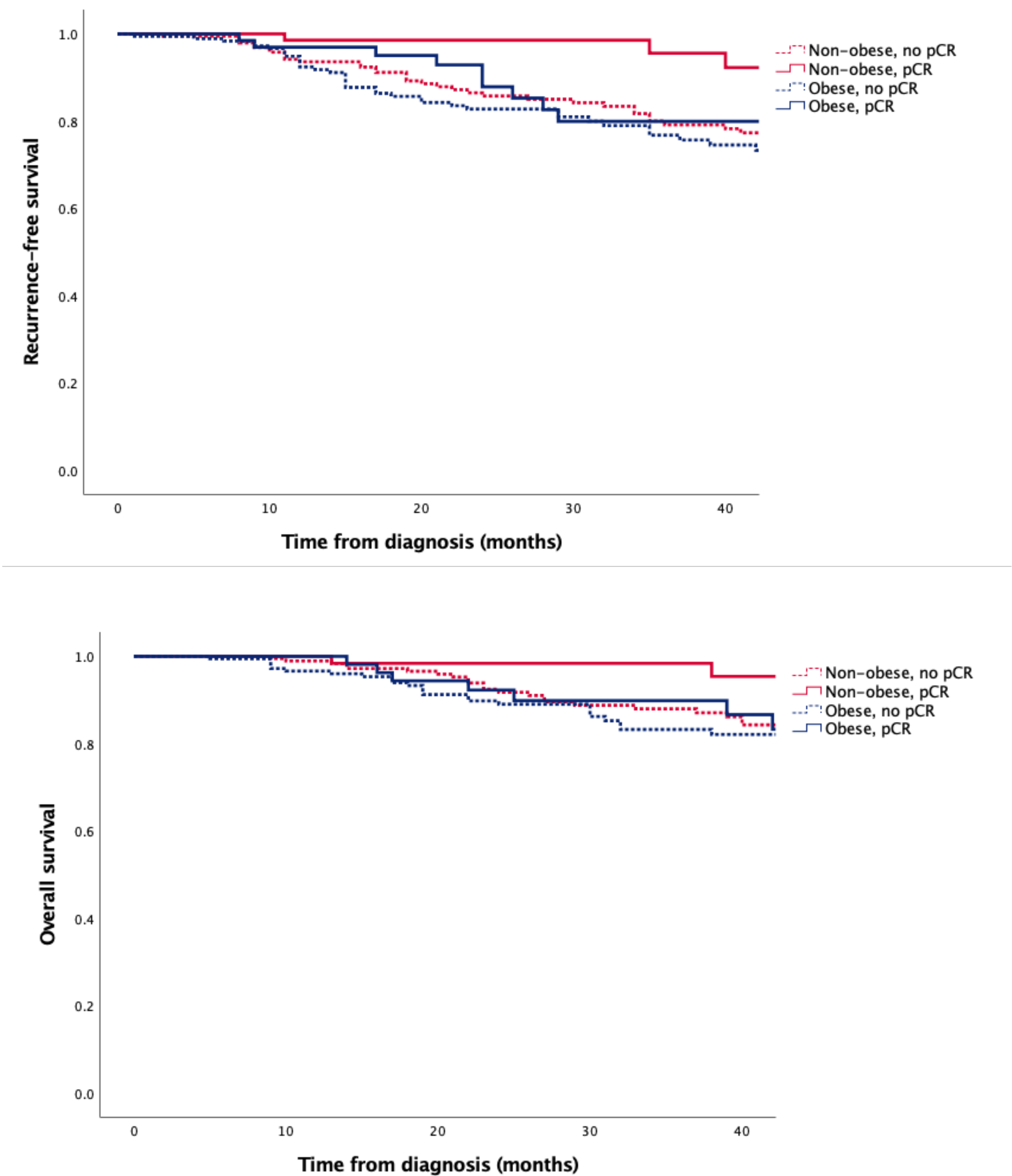
**Table.** Clinicopathological characteristics. *N* (%). Missing values not shown. ER: estrogen receptor; HER2: human epidermal growth factor receptor 2

	Non-obese women			Obese women		
	pCR	No pCR	<i>p</i>	pCR	No pCR	<i>p</i>
<b>Age (years)</b>						
≤40	29	39	.181	16	36	.462
>40	46	154		43	150	
<b>Stage</b>						
I-II	30	73	.441	23	62	.160
III	44	120		33	121	
<b>ER</b>						
Positive	32	136	.134	19	120	.216
Negative	42	56		36	63	
<b>HER2</b>						
Positive	35	41	.097	19	38	.491
Negative	39	151		36	145	

## CONCLUSIONS

Remarkably, almost half of our cohort was obese. Obese patients who achieved pCR had similar outcomes to patients who did not. Further studies are warranted to elucidate the prognostic effect of obesity in cancer patients.

**Figure.** RFS and OS according to pCR and obesity status



The authors declare that there is no conflict of interest.