205P - Immunomodulation in early triple negative breast cancer (TNBC). Analysis of soluble markers as predictive biomarkers to neoadjuvant chemotherapy in TNBC.

Núñez M[1], Torres S[4,7], Ferriol C[1], Escorihuela E[4], García C[1], Franco M[1], Montagud L[1], García JA[2], Gumbau V[3], Castañer C[3], Matoses P[1], Barreres I[1], Godes MJ[1], Calabuig-Fariñas S[4,5,7], Caballero C[1,7], Blasco A[1,7], Camps C[1,4,6,7], Iranzo V[1,6,7].

Department of Medical Oncology[1], Department of Pathological Anatomy[2],Department of General Surgery[3], Hospital General Universitario de Valencia, Spain. Molecular Oncology Laboratory, General University Hospital Research Foundation, Hospital General Universitario Valencia, Spain[4]. Pahtology Department[5], Medicine Department6[6] Universitat de València, Spain. CIBERONC, Spain[7].

The author of this publication has not conflicts of interest to declare. The authors acknowledge grant CB16-12-00350 from CIBERONC, the AMACMA foundation, and Lopez Trigo 2017.

INTRODUCTION

Recent evidence suggests that chemotherapy (CT) efficacy relies in part on the capacity of chemotherapeutic agents to interact with the immune system. CT can induce various tumor cell death modalities processed by immune cells leading to their activation and induction of antitumor immunity. Long-term effects of conventional CT may be attributed to the stimulation of immunological responses.

RESULTS

21 patients were evaluated (mean age 55 years, 100% females). 19% stage I-B, 52.4% stage II-A/B, 28.6% stage III-B/C (8ª AJCC edition). 71.4% had EGFR expression and two patients were *BRCA1* mutated. NACT was administered in all patients using schemes with taxanes; carboplatin was added in half of the patients.

Baseline median plasma levels of soluble biomarkers are shown in table 1. It was significantly observed ($p<0.05$) that patients with lower levels of sPD-1 (<920 pg/ml), sCTLA-4 (<34 pg/ml) and sLAG3 (< 190575 pg/ml), have more rates of pathological complete response (pCR) than those with higher levels (Table 2). Moreover, lower levels of sPDL1 (<362 pg/ml) was correlated with patients without lymph node involvement (Table 3).

CONCLUSIONS

Higher levels of sPD-1, sCTLA-4 and sLAG3 at the beginning of NACT can predict a worse response to chemotherapy compared to low levels of these biomarkers. This shows a way to investigate therapies including neoadjuvant immunotherapy that can reverse this resistance to NACT in this subgroup of patients. This fact reveals the importance of the immunomodulation role of chemotherapy in early triple-negative breast cancer.

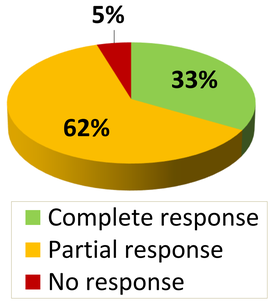

Figure 2. Rates of pathological responses after NACT.

METHODS

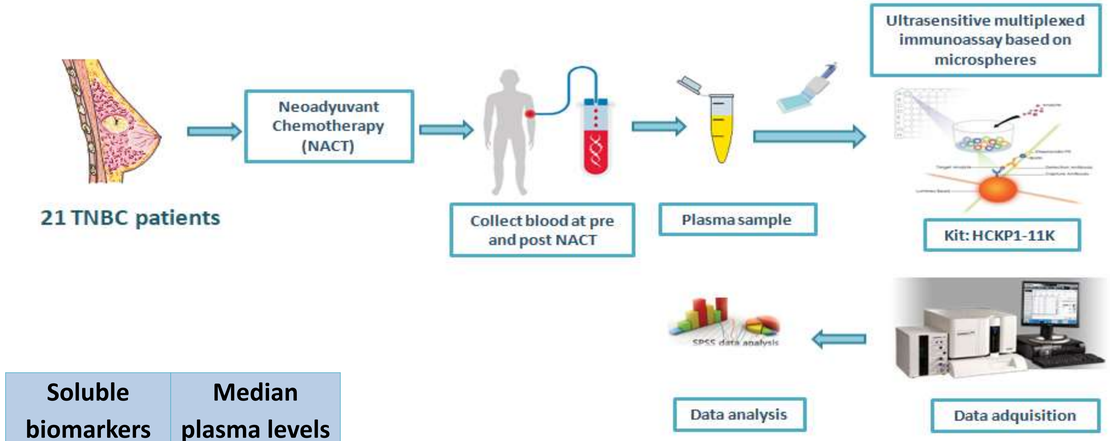

Figure 1. Execution diagram.

Soluble biomarkers	Median plasma levels (pg/ml)
sPD1	2745
sPDL1	803
sPDL2	9779
sCTLA-4	90
sLAG3	270,771
sCD27	1381
sCD28	6325
sCD80B7	766
sICOS	4596

Table 1. Baseline median plasma levels of soluble biomarkers.

Soluble biomarker	Levels	pCR	No pCR	p value
sPD1, sCTLA-4 and sLAG3	Low Levels	6	5	0.031
	High Levels	1	9	

Table 2. Correlation between plasma levels of soluble biomarkers and response rates.

Soluble biomarker	Levels	Lymph node involvement response				p value
		A	B	C	D	
sPDL1	Low Levels	9	0	1	1	0.038
	High Levels	2	1	1	5	

Table 3. Correlation between plasma levels of Spdl1 and lymph node involvement.

Contact: Martín Núñez Abad, email: martin230292@hotmail.com