Neoadjuvant chemotherapy for patients with breast cancer during pregnancy (BCP)

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Abstract #1071

Background

- Neoadjuvant therapy (NAT) is increasingly considered the treatment of choice for patients with HER2+ and triple negative breast cancer (TNBC).
- It is generally recommended to treat patients with breast cancer during pregnancy as closely as possible according to patients diagnosed outside pregnancy [1].
- Data on NAT during pregnancy are scarce.

Materials and Methods

- We compared patients with BCP who received NAT with pregnant patients who received NAT after delivery
- Patients from the registry from the German Breast Group (GBG 29/BIG 02-03 and the INCIP initiative) with BCP who received NAT were analyzed. A non-pregnant control cohort was matched using the Propensity Score based on age, cT Stage (cT 1-2 vs 3-4), cN Stage (cN0 vs cN+), grading (1 vs 2 vs 3), ER/PgR, HER2, neoadjuvant trastuzumab therapy.

Table 1: Baseline patient and tumour characteristics

		Non-pregnant controls (%)	BCP (%)	P-value
Age median, range		34, 21-43	34, 26-42	0.880
Tumour stage	cT1-2	73.3	69.5	0.541
	cT3-4	26.7	30.5	
Nodal status	cN+	51.4	55.2	0.678
Histo Type	Lobular	5.8	3.8	0.538
Grading	G3	63.8	65.7	0.324
ER	negative	46.7	52.4	0.490
HER2	positive	37.1	41.0	0.671
TNBC		33.3	35.2	0.884

Results

- 105/130 neoadjuvant treated BCP patients were identified with complete data, n=63 of whom received NAT during pregnancy and n=42 after delivery. BC was diagnosed in the first or second trimester in 63% of patients with NAT during pregnancy and in 19% of patients with NAT after delivery (p<0.001). Baseline characteristics were not different between pregnant and non-pregnant patients (**Table 1**).
- BCP patients were more likely to receive non-taxane regimens (**Table 2**). 60% of HER2+ non-pregnant patients received Trastuzumab neoadjuvant compared with 47.6% of BCP patients (postpartum) (p=0.283). Treatment interruptions (p=0.274) , dose reductions (p=0.569) and gestational age (p=0.782) were not different between BCP patients who received NAT during pregnancy or after delivery.
- There was no difference in pCR (ypT0 ypN0) rates between control and BCP patients (**Figure 1**). There was no difference in DFS and OS for patients with NAT during pregnancy vs thereafter (**Figure 2**).

Table 2: Chemotherapy regimens administered

		Non-pregnant controls, N(%)	BCP, N(%)	P-value
Chemotherapy	non-taxane	0 (0.0)	17 (16.2)	<0.001
	taxane sequence	71 (67.6)	77 (73.3)	
	taxane combination	34 (32.4)	11 (10.5)	
Non-taxane, specification	EC/AC	0 (0.0)	10 (9.5)	
	FEC/FAC	0 (0.0)	7 (6.7)	
	other	0 (0.0)	0 (0.0)	
Taxane sequence, specification	EC/AC-Doc/Pac	60 (57.1)	47 (44.8)	
	Pac-EC/AC	0 (0.0)	5 (4.8)	
	FEC/FAC-Doc/Pac	0 (0.0)	17 (16.2)	
	other	11 (10.5)	8 (7.6)	
Taxane combination, specification	TAC	34 (32.4)	8 (7.6)	
	GET	0 (0.0)	2 (1.9)	
	other	0 (0.0)	1 (1.0)	

Figure 1: pCR (ypT0 ypN0) in BCP vs non-pregnant controls

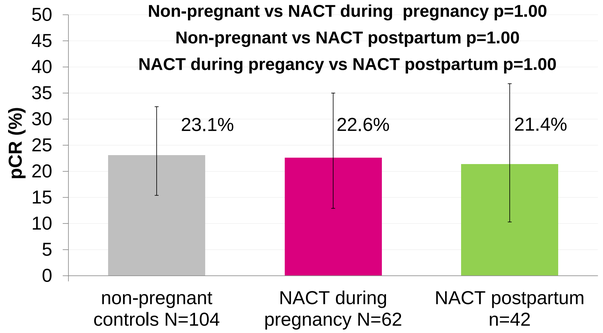
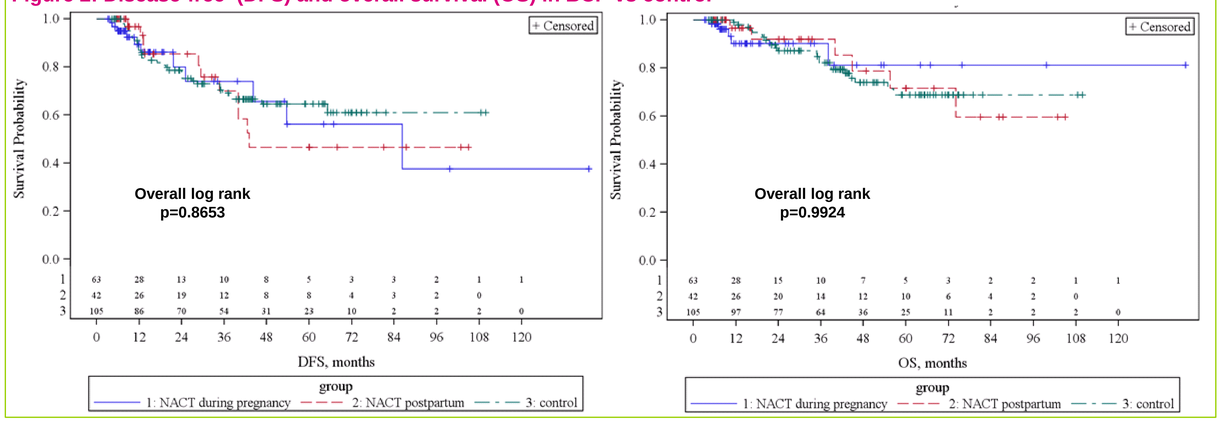


Figure 2: Disease-free (DFS) and overall survival (OS) in BCP vs control



Conclusions

Neoadjuvant Chemotherapy for patients with breast cancer during pregnancy results in the same pCR rate if given during pregnancy or after delivery and as in non-pregnant controls.
Disease free and overall survival is not different between the three cohorts.
Patients with BCP can be treated with neoadjuvant therapy without compromising short and long-term outcome. This suupports earlier data from the group that the survival is not different between BCP and non-pregnant controls. [2]

References

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