36- Efficacy, safety profiles and outcomes of neoadjuvant pertuzumab -containing regimens in stage II-III Her2neu overexpressed breast cancer patients, single institute Data KFSH&RC, Riyadh.

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Background: prognosis of HER2-positive breast cancer has been transformed Over the past few years, with the introduction of anti-HER2 targeted therapies. Pertuzumab in combination with trastuzumab based chemotherapy is currently FDA- approved
as a standard neoadjuvant treatment for stage II-III (HER2+) breast cancer patients. It improves pathological complete response (pCR) if used in combination with standard chemotherapy in many prospective trails. chemotherapy backbone may include: taxane (Docetaxel/paclitaxel), and/or anthracycline, or platinum . **Methods**:Forty-six HER2-positive breast cancer patients received neoadjuvant chemotherapy, with dual anti her blockade Pertuzumab and Trastuzumab from April 2013 to July 2017 in KFSHRC, Riyadh were included. patients were internally divided into 3 groups according to type of chemotherapy used, group A (sequential anthracycline/docetaxel), group B (sequential anthracycline/paclitaxel) and group C (taxane based chemotherapy without anthracycline), Pertuzumab and Trastuzumab were given with the taxane part. Main objective was to access pCR, Secondary endpoints included the disease-free survival (DFS), overall survival (OS), local control (LC) and toxicity profile. survival endpoints studied were pCR (defined as ypT0/is, ypN0). **Results:** Median age at diagnosis was 46.5 (23-65) years, 26(56.5%) were premenopausal. All patients had IDC [G2 (61%), G3 (39%)],36(78.3%) patients had T3/T4 and 44(95.7%) had node +ve disease, Stage III 33(71.7%). Hormone receptor was positive in 22(48%) patients. MRM done in majority of patients 39(85%), while 6(13%) had BCT. Adjuvant radiation therapy was given in 43(93.5%). The treatment course was discontinued only in two cases (one had drop in EF>10% to <50% , second progressed while on treatment), no other reported acute or chronic G3/4 toxicity. Twenty-five (54.3%) patients achieved (pCR). median follow-up 26 months (range: 15-59 months),45(97.8%) patients were alive, only one patient died due to disease. Five (10.9%) patients developed systemic recurrences; among them 4(8.7%) had also loco-regional recurrences. The 4-year (LC) rate, (DFS) and (OS) rate were 96%, 93% and 94% respectively. In univariable analysis, clinical response was independent prognostic factors for pCR and LC, while positive hormone receptor status significantly correlated with better LC and DFS. No incidence of grade 3–4 rash, diarrhea, neuropathy, neutropenia, or thrombocytopenia. Overall, one patient developed grade 3–4 left ventricular systolic dysfunction.
Conclusion: Pertuzumab containing neoadjuvant chemotherapy was safe and effective in our population, with overall observed pCR, DFS and OAS rate comparable to international data. although most of the patient had poor prognostic features of young age, premenopausal status and high grade and tumour size, but they achieve good disease control.

Table 1Survival and pattern of recurrence

Characteristic		Group A (n=34)		Group B (n=3)		Group C (n=9)		all (n=46)	
Recurrence	No	31	91.2%	3	100.0%	7	77.8%	41	89.1%
	Yes	3	8.8%	0	0.0%	2	22.2%	5	10.9%
LC	Yes	33	97.1%	3	100.0%	7	77.8%	41	89.1%
	No	2	5.9%	0	0.0%	2	22.2%	4	8.7%
DFS	Yes	31	91.2%	3	100.0%	7	77.8%	41	89.1%
	No	3	8.8%	0	0.0%	2	22.2%	5	10.9%
OS	Yes	33	97.1%	3	100.0%	9	100.0%	45	97.8%
	No	1	2.9%	0	0.0%	0	0.0%	1	2.2%