OUTCOMES OF TRIPLE-NEGATIVE BREAST CANCER (TNBC) VERSUS NON-TNBC PATIENTS: DOES THE SURVIVAL VARY FOR ALL STAGES?

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Background: Triple-negative breast cancer (TNBC) poses a therapeutic challenge. In a cohort treated at a tertiary care centre, outcomes of TNBC patients were compared with those with ER, PR &/or HER2neu expressing tumors (non-TNBC).

Methods: Consecutive patients managed during 2004-2010, and with complete treatment and follow-up (1-147 months, median 36) data were grouped into TNBC and non-TNBC based on ER, PR and HER2neu status. OS and DFS were compared between the two groups, and further compared based on TNM stage.

Results: TNBC (n=249) comprised 35.3% of 705 patients, and were younger than non TNBC (mean age 49.1±11.2y TNBC vs 51.8±11.3 non TNBC, p=0.02). TNM stage was similar in two groups (Stg I&II 37% vs 44.3%, Stg III 47.5% vs 39.5%, Stg IV 15.5% vs 16.2%, p=0.09). Tumor size (5.7±2.9 cm TNBC vs 5.4±2.8 non TNBC, p=0.22) was similar but LN metastases was commoner in TNBC (77.3% vs 69.8%, p=0.03). 97.1% TNBC had histologic grade II/III as against 91.2% non TNBC (p=0.01). Both groups received similar treatment (conservation vs mastectomy; anthracyclines, taxanes or combination chemotherapy). 104(41.7%) TNBC & 268 (38%) non-TNBC received NACT. More TNBC patients (27.5%) achieved pathological complete response (pCR) c.w. non TNBC (17.1%; p=0.04). Kaplan-Meier survival analysis for whole cohort revealed OS (81.8±4.5 TNBC vs 97.9±3.9 months non-TNBC, p<0.001) and DFS (89.2±5.1 vs 113.8±4.3, p<0.001) were shorter in TNBC. In sub-group analysis, OS differed significantly only in stage III (47.4±5.3 months TNBC vs 74.5±4.4 nonTNBC, p<0.001). The survival in stages I/II (p=0.30) and IV (p=0.11) were similar. In patients who achieved pCR, OS (73.5 months TNBC vs 83.6 nonTNBC, p=0.15) and DFS (83.1 TNBC vs 73.6 nonTNBC, p=0.40) were similar. Univariate and multivariate analysis revealed TNM stage and IHC classification of TNBC vs nonTNBC as determinants of survival.

Conclusions: TNBC patients are younger, and have more aggressive pathology. They have poorer OS and DFS than non TNBC patients. However, DFS and OS of only stage III TNBC patients are significantly worse than the same stage nonTNBC patients. TNBC patients who achieve pCR with NACT have similar survival as nonTNBC complete responders.