

# World Congress on **Breast Cancer**

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## **Breast cancer in young age ( $\leq 40$ years): The University of Tennessee Medical Center at Knoxville 10 year experience**

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Young age at diagnosis of breast carcinoma (BC), triple negative ER/PR/HER2 phenotype, and non-Caucasian race have all been reported to have a negative impact on patient outcome. We evaluated the prognostic value of ER/PR/HER2 subtypes, pathologic tumor characteristics, and TNM stage on overall survival (OS) of young Caucasian female patients ( $\leq 40$ y/o) with invasive BC from our institution over a 10 year period (1/1/1998-7/1/2008), and analyzed the type of therapy received (last follow-up day 8/1/2013). Eighty  $\leq 40$ y/o patients (6.3% of study population) had complete ER/PR/HER2 data and were divided into five-ER/PR/HER2 groups per 2011 St. Gallen International Consensus Panel classification system. The effect of ER/PR/HER2 subtype on OS was measured using a Kaplan-Meier curve. A multivariate Cox regression was used when ER/PR/HER2 subtype was controlled for grade and TNM stage. 41% of patients were ER+/PR+/HER2- subtype, 31% ER+/PR+/HER2+ or ER-/PR-/HER2+, and 28% ER-/PR-/HER2-. The majority presented with grade 3 invasive BC (67.5%) and TNM stage II (50%). Only 17% had negative lymph nodes. 50% underwent modified radical mastectomy, 29% had breast conserving surgery, 46% had radiation, 82% received adjuvant chemotherapy and 80% of ER+ patients received hormonal therapy. Patients with ER+/PR+/HER2- subtype had significantly better OS than ER-/PR-/HER2- or ER+/PR+/HER2+ ( $p=.035$ ) in a univariate analysis. However, when ER/PR/HER2 subtype was controlled for TNM stage and grade, only TNM stage was a significant predictor of OS ( $p<0.001$ ). These results are in concordance with our previously published data on the effects of ER/PR/HER2 on OS, and will be compared/contrasted to results from literature.

### **Biography**

Daniel Snyder received his Bachelor of Science degree in Biology at Tennessee Technological University in Cookeville, TN in 2010, and earned his Medical degree from Lincoln Memorial University-DeBusk College of Osteopathic Medicine in Harrogate, TN in 2014. Currently, he is a PGY-1 resident in the Anatomic and Clinical Pathology Residency Program at the University of Tennessee Medical Center in Knoxville, Tennessee. His research interests include breast cancer, biomarkers, and patient outcomes.

### **Notes:**