Large randomized trials have shown that adjuvant anti-HER2 therapy is efficient in reducing the risk of recurrence and improving the survival in patients with HER2+ breast cancer (BC). We evaluated whether the introduction of adjuvant anti-HER2 therapy for treatment of HER2+ BC patients in an academic institution settings outside of clinical trials had similar effect on overall survival (OS). Two-hundred-fifteen of 309 Caucasian females diagnosed with HER2+ invasive BC at our academic institution from 1998-2009 were studied. They were divided into 2 groups based on the time of diagnosis (before or after 11/2005, the start date of adjuvant anti-HER2 therapy administration as standard practice for operable HER2+ BC at our institution). Group 0 (G0) included 119 HER2+ patients diagnosed before 11/2005; Group 1 (G1) included 95 HER2+ patients diagnosed after 11/2005. Both groups were further subdivided based on ER/PR/HER2 subtype: G0 had 72 ER+/PR+/HER2+ and 48 ER-/PR-/HER2-patients. G1 had 56 ER+ PR+/HER2+ and 39 ER-/PR-/HER2+ patients. Ninety-four patients from G0 followed for >120 months were excluded from the study, to balance the G0 and G1 groups' follow-up time. OS was measured by Kaplan-Meier curve. Although only 2/3 of G1 patients received anti-HER2 therapy, OS significantly improved (p<0.003), largely due to an effect on the ER-/PR-/HER2+ group. This was also reflected in five-year survival (G0:ER-/PR-/HER2+=68.8%, G1:ER-/PR-/HER2+=84.6%; G0:ER+/PR+/HER2+=83.3%, G1:ER+/PR+/HER2+=85.7%). Our results are comparable to results from the clinical trials for anti-HER2 therapy in adjuvant settings. Similarities and differences will be discussed including the role of ER/PR positivity in HER2+ BC.

Biography
Heather Gage received a Bachelor of Arts degree in Physics from Bryn Mawr College, Pennsylvania in 2008, and received her Medical degree from University College Cork, Ireland in 2013. Currently, she is a PGY 1 resident in the Anatomic and Clinical Pathology Residency Program at the University of Tennessee Medical Center in Knoxville, Tennessee. Her research interests include breast cancer, biomarkers, and outcomes.

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