Background
Neoadjuvant chemoradiation therapy (NACRT) is widely accepted as the standard of care in the treatment of locally advanced rectal cancer in the United States, based on results of a randomized phase III German Rectal Study (Bauer et al., NEJM 2004). We sought to examine contemporary patterns of treatment for locally advanced rectal cancer in the United States over the past decade.

Methods

Results
Receipt of NACRT increased significantly from 42.9% in 2004–2006 to 50.0% in 2007–2009, and to 55.0% in 2010–2012 (p < 0.0001). In contrast, use of adjuvant chemoradiation (CRT) decreased from 16.7% in 2004–2006 to 10.5% in 2007–2009, and to 6.7% in 2010–2012 (p < 0.0001). Similarly, surgery alone decreased from 13.1% in 2004–2006 to 8.7% in 2010–2012 (p < 0.0001).

Older age, presence of comorbidities, larger primary tumor size, lymph node involvement, not being Hispanic while race/ethnicity, lack of private insurance, and treatment at a non-high volume facility were associated with a significantly lower chance of receiving NACRT.

5-year OS probabilities for patients treated with NACRT, surgery and adjuvant CRT, surgery alone, and definitive CRT were 72.4%, 70.9%, 44.9% and 48.8%, respectively.

Discussion
Utilization of NACRT prior to surgery in US patients with rectal cancer has substantially increased over the past decade. However, only half of patients currently receive this standard therapy, which in part could be explained by socioeconomic factors.

Trimodality therapy is associated with the best outcomes for these patients.