



TRENDS IN IMAGING MODALITIES TO EVALUATE OBESE PATIENTS

ADMITTED FOR ABDOMINAL PAIN

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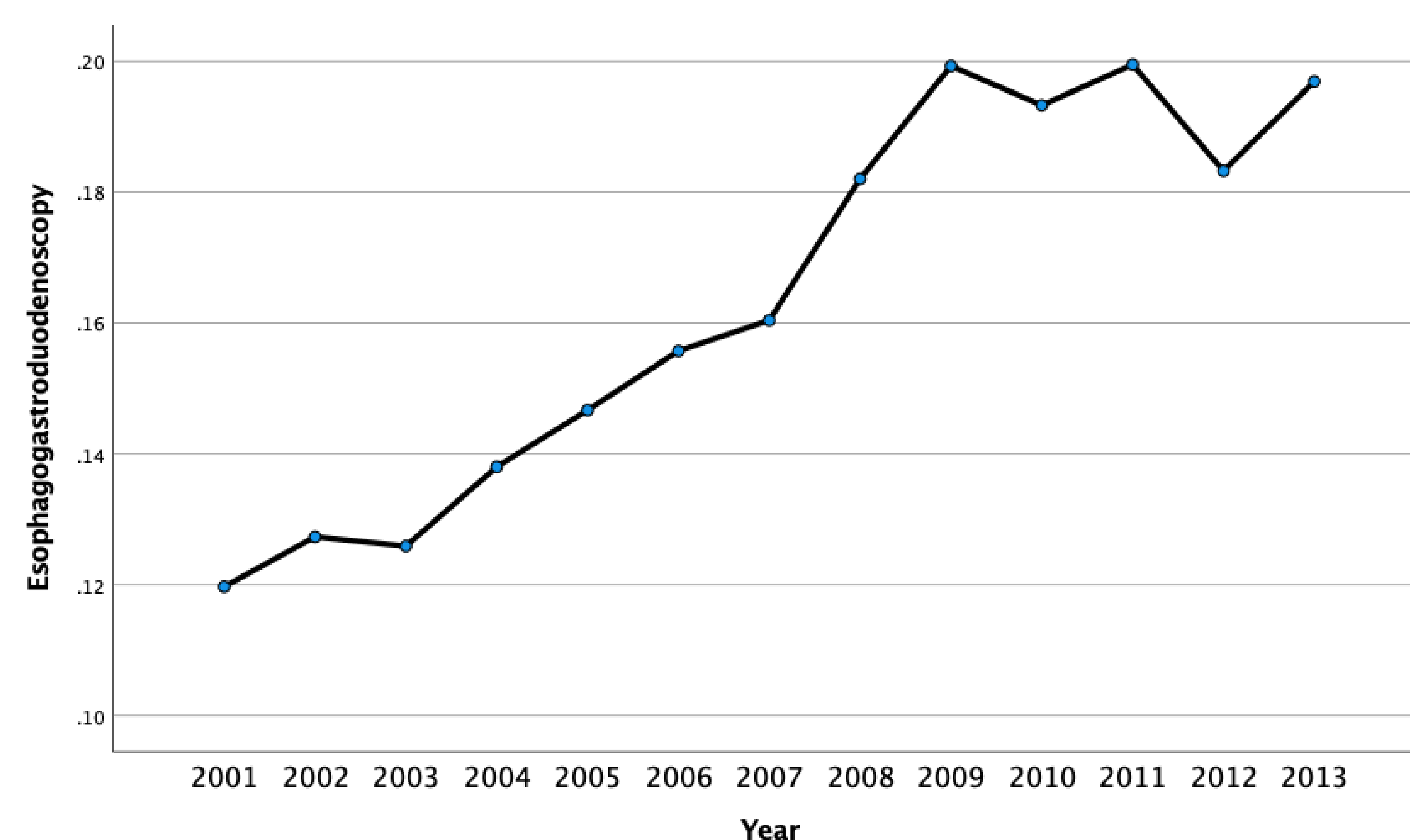
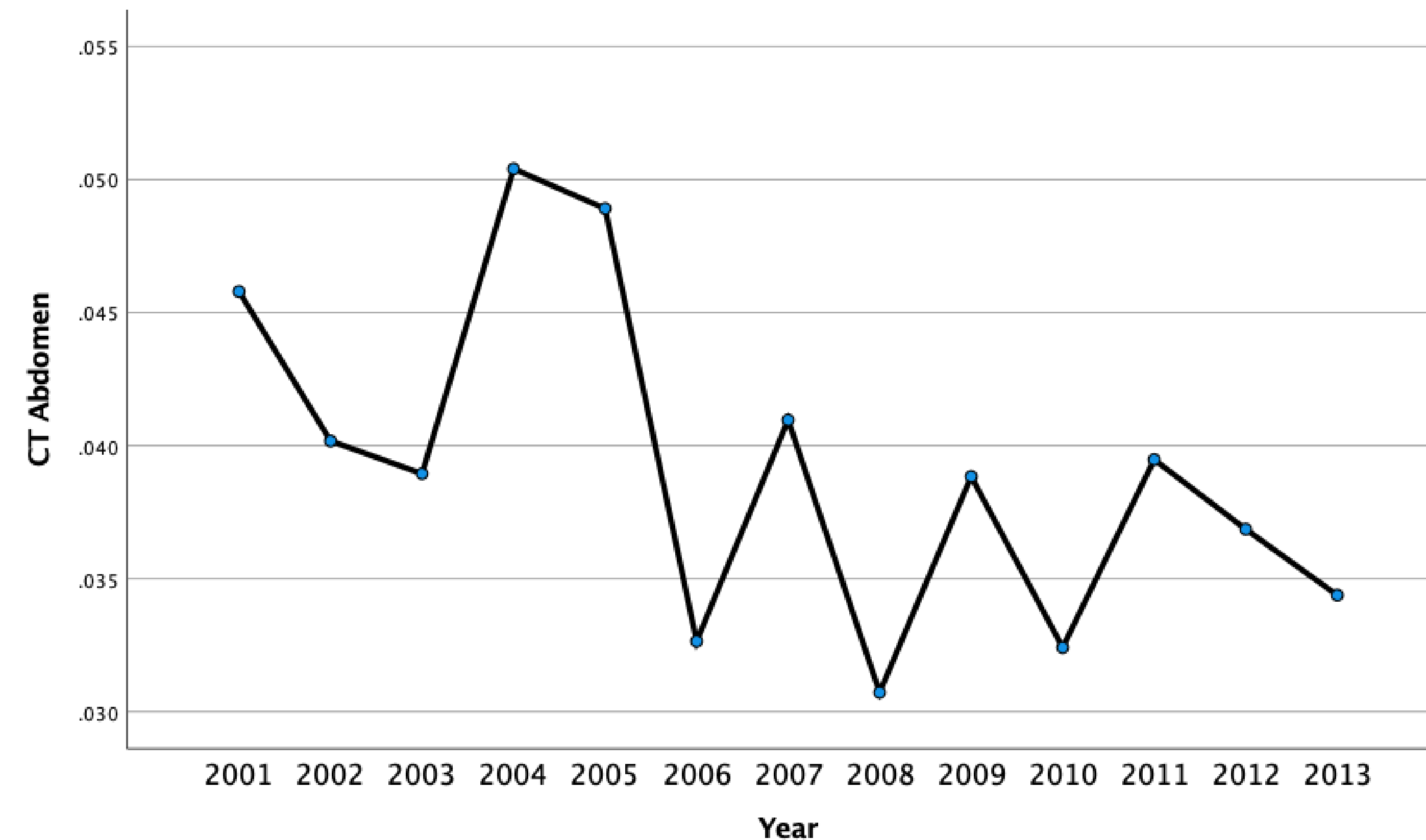
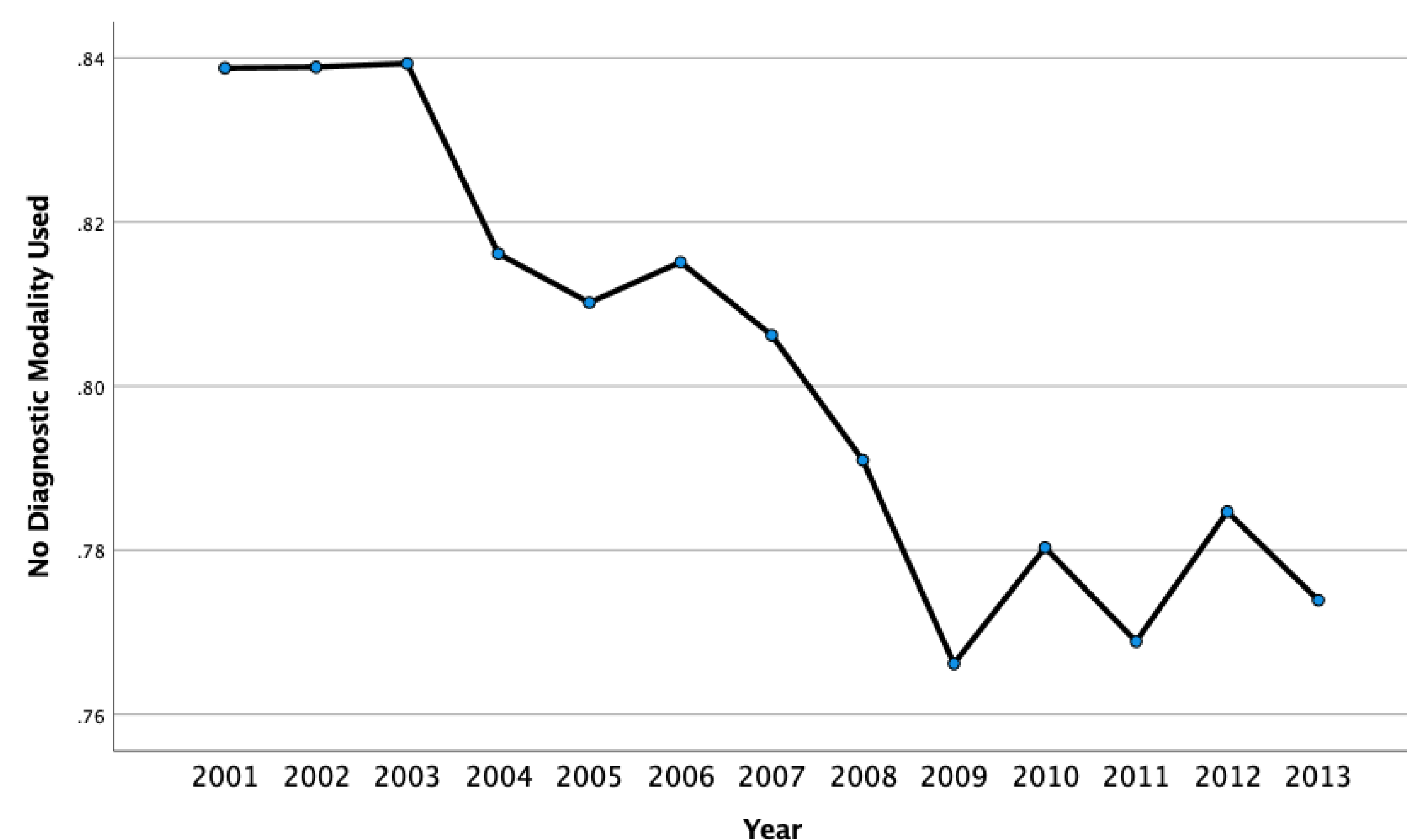
BACKGROUND

Abdominal pain is one of the most common complaints in patients presenting to the ED. Of patients with abdominal pain, studies have shown that obese patients suffer from more structural and functional GI disorders. Conventional radiology, CT scans, and MRI have become common imaging modalities used in the diagnostic workup of abdominal pain. This study aimed to analyze the trends in the use of diagnostic imaging, specifically EGD and CT, in the evaluation of abdominal pain in obese patients.

METHODS

The Nationwide Inpatient Sample (NIS) 2001-2013 database was queried for patients with a primary diagnosis of abdominal pain with a concurrent diagnosis of obesity using International Classification of Diseases, Ninth Revision (ICD-9) codes. EGD and CT of abdomen were queried using ICD-9 procedure codes. A one-way analysis of variance (ANOVA) test with linear trend analysis was used to compare the means for patients who received an EGD, CT scan of the abdomen, or had neither performed.

RESULTS



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A one-way analysis of variance with linear trend was used to determine significance for the trends. The mean (M) EGD rate was 16.95%, the standard deviation (SD) was 37.52%, and the sample size (n) was 157,889. EGD procedures for these patients increased from 11.97% to 19.69% ($p < 0.001$). For CT scan of the abdomen $M = 3.86\%$, $SD = 19.26\%$, $n = 157,889$. The average total CT scans went down from 4.58% to 3.44% (< 0.001) from 2001 to 2013. Finally, not performing an EGD or CT scan was found to have a $M = 79.73\%$, $SD = 40.20\%$, $n = 157,889$. The trend for this patient population went down from 83.88% to 77.39% ($p < 0.001$) from 2001 to 2013.

CONCLUSION

The use of diagnostic imaging in the evaluation of abdominal pain has increased over the years, particularly amongst obese patients. The use of EGDs in the evaluation of abdominal pain in obese patients has increased, while the use of CT scans has decreased. Additional studies are needed to understand symptoms and clinical presentation of GI disorders in obese patients to allow for appropriate diagnostic imaging and therefore, diagnostic accuracy.