Supplementary Online Content

Schoppy DW, Rhoads KF, Ma Y, et al. Measuring institutional quality in head and neck surgery using hospital-level data—negative margin rates and neck dissection yield [published online October 5, 2017]. *JAMA Otolaryngol Head Neck Surg*. doi:10.1001/jamaoto.2017.1694

eTable 1. Descriptive characteristics of 1,008 hospitals in the final dataset

eFigure. CONSORT diagram illustrating patient/hospital inclusion and exclusion criteria
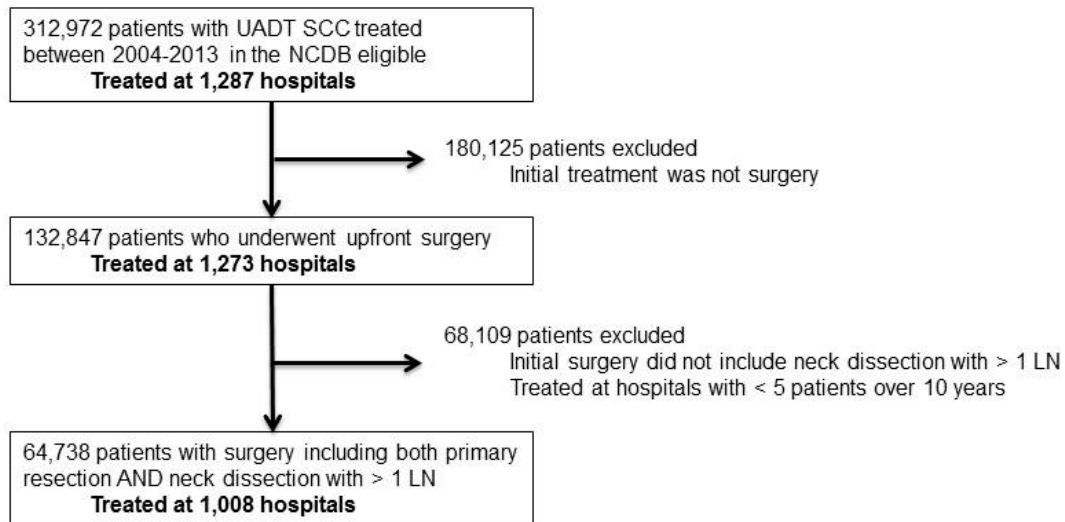
This supplementary material has been provided by the authors to give readers additional information about their work.

Supplemental Table 1: Descriptive characteristics of 1,008 hospitals in the final dataset
(Head and neck cancers, National Cancer Database, 2004 to 2013)

Hospital Characteristic	Overall (n=1,008)	Hospitals not meeting thresholds (n=976)	Neg Margin Rate > 90% LNY ≥ 18 > 80% (n=32)
Avg negative margin rate	79.3%	77.7%	92.8%
Avg rate of LNY ≥ 18	71.1%	69.4%	85.7%
Avg hospital vol (per yr)	32.9	25.1	97.5
% with top quartile vol	25.0%	24.1%	37.5%
% academic teaching	18.9%	18.7%	25.6%
Payer Mix			
% Medicare/Medicaid	47.4%	47.5%	47.1%
% No insurance	5.3%	5.6%	2.7%
% private	44.2%	43.8%	47.1%
Patient Mix			
% Income top quartile	37.2%	37.0%	39.4%
% Education top quartile	33.0%	32.5%	37.1%

(LNY – lymph node yield, neg – negative, avg – average, vol - volume)

Supplemental Figure 1. CONSORT diagram illustrating patient/hospital inclusion and exclusion criteria.

312,972 patients with UADT SCC treated between 2004-2013 in the NCDB eligible
Treated at 1,287 hospitals

180,125 patients excluded
Initial treatment was not surgery

132,847 patients who underwent upfront surgery
Treated at 1,273 hospitals

68,109 patients excluded
Initial surgery did not include neck dissection with > 1 LN
Treated at hospitals with < 5 patients over 10 years

64,738 patients with surgery including both primary resection AND neck dissection with > 1 LN
Treated at 1,008 hospitals

*UADT – upper aerodigestive tract, SCC- squamous cell carcinoma, NCDB – National Cancer Database, LN – lymph node