



# The Impact of Centralized Care in the Management of Barrett's Related Neoplasia: A Systematic Review and Meta-Analysis

Christian Davis<sup>1</sup>, Andrew Fuller<sup>2</sup>, David A. Katzka<sup>3</sup>, Sachin Wani<sup>4</sup>, Tarek Sawas<sup>5</sup>

<sup>1</sup>Department of Medicine, University of Colorado, Aurora, CO, <sup>2</sup>Department of Internal Medicine, University of Texas Southwestern, Dallas, TX, <sup>3</sup>Division of Gastroenterology and Hepatology, Columbia University, New York, NY, <sup>4</sup>Division of Gastroenterology and Hepatology, University of Colorado, Aurora, CO, <sup>5</sup>Division of Digestive and Liver Diseases, University of Texas Southwestern, Dallas, TX

University of Colorado  
Anschutz Medical Campus



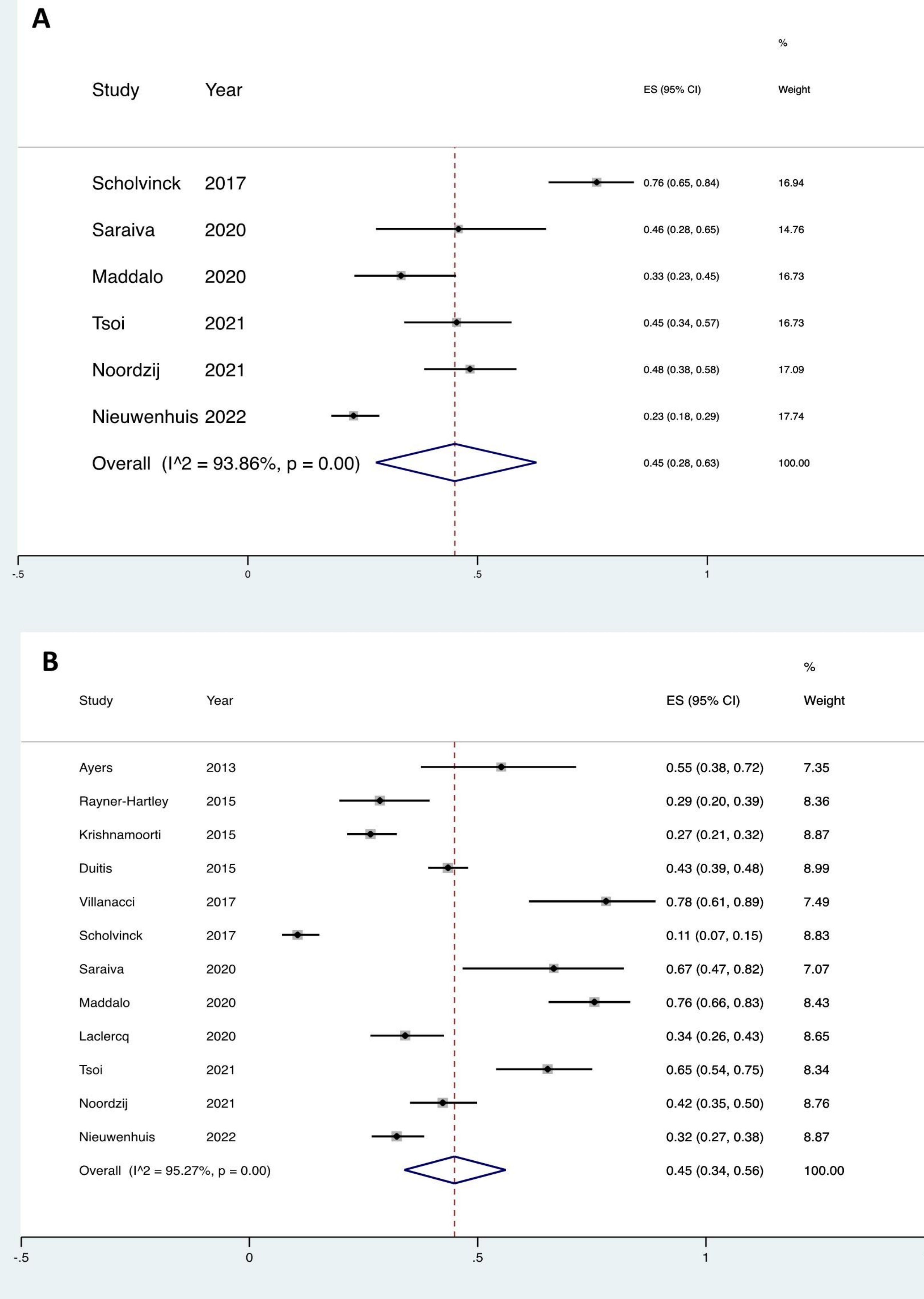
## Introduction

- The incidence of esophageal adenocarcinoma (EAC) continues to rise
- Endoscopic eradication therapy (EET) provides effective and durable outcomes for BE related neoplasia
- Societal guidelines have suggested these patients be evaluated at expert centers, but the impact of this practice has not been evaluated
- We performed a systematic review and meta-analysis to assess the impact of referral of BE-related neoplasia patients to expert centers by assessing the proportion of patients with change in pathologic diagnosis and visible lesions detected

## Methods and Materials

- We searched multiple databases from inception until December 2021 for studies of patients with BE found in the community and referred to an expert center
- Studies were included if they reported endoscopic and/or histologic findings in the community and after referral to an expert center
- Studies were excluded if conducted in one setting only, insufficient data to determine the number of new visible lesions or pathology grade and studies with fewer than 10 subjects
- The proportions of newly detected visible lesions and pathology grade change were pooled and weighted using a random effects model

Figure



Forest plot of pooled proportions of newly detected visible lesions among patients with BE related neoplasia referred from the community to expert centers (A). Forest plot of pooled proportions of pathological grade change among patients with BE related neoplasia referred from the community to expert centers (B).

## Results

- Twelve studies met inclusion criteria that included 1829 patients
- The pooled proportion of newly detected visible lesions was 45% (95% CI: 28%-63%, I2: 93.9%) (Figure A)
- The pooled proportion of pathology grade change when reviewed at an expert center was 45% (95% CI: 34%-56%, I2: 95.3%) (Figure B)
- The pooled proportion of pathology grade change after the endoscopy was repeated at an expert center was 47% (95% CI: 26% - 69%, I2: 97.2%)
- Patients referred with low-grade dysplasia (LGD) to expert centers had a pooled proportion of newly detectable visible lesions of 27% (95% CI: 22% - 32%, I2: 0%)
- The pooled proportion of pathologic grade change in patients referred with LGD when reviewed by an expert GI pathologist was 59% (95% CI: 40% - 77%, I2: 96.3%) and after repeat endoscopy was 40% (95% CI: 34% - 45%)

## Discussion

An alarmingly high proportion of newly detected visible lesions and pathology grade change were found when patients were referred from the community to expert centers supporting the need for centralized care for BE-related neoplasia patients.