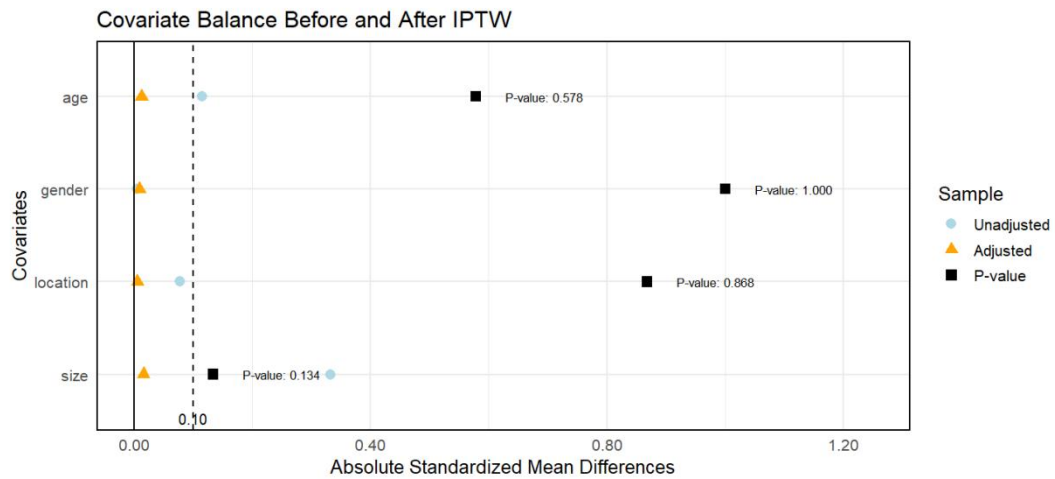**Supplementary Figure 1 Balance in the number of patients in the unweighted and weighted samples.** Precutting EBL: precutting endoscopic band ligation; ESD: endoscopic submucosal dissection; IPTW: inverse probability of treatment weighting.

Supplementary Figure 2 Baseline covariate balance before and after IPTW was assessed using Standardized Mean Differences in both the unweighted and weighted samples. IPTW: inverse probability of treatment weighting.

Comparison of Coefficient Estimates: Unweighted vs IPTW-weighted
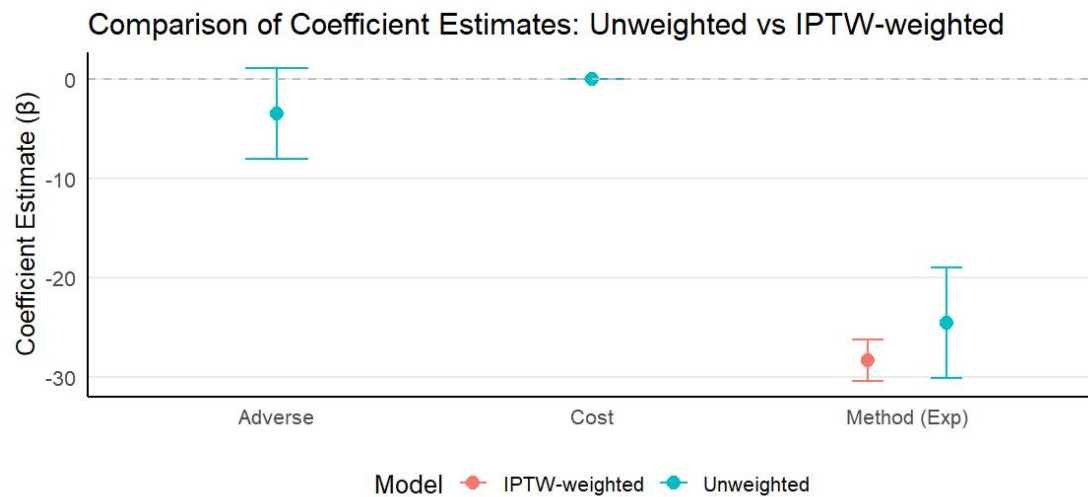
Supplementary Figure 3 Comparison of Coefficient Estimates: Unweighted *vs* IPTW-weighted Linear Regression. This figure compares the estimated effects of three predictors on procedure duration using two models. The unweighted linear regression included method, cost, and adverse events; the IPTW-weighted model included only method based on propensity score adjustment. 95% confidence intervals are shown.

Supplementary Table 1 Histopathology of ESD

Histopathology	ESD (n = 48)
GIST	33
Leiomyoma	14
Other [1]	1

1 Other refers to a patient with ectopic pancreas.

Supplementary Table 2 Comparison of Unweighted and IPTW-Weighted Linear Regression Results for procedure duration

Predictor	95% CI for β					
	B (Estimate)	SE	Lower	Upper	*t* value	*P* value
Unweighted Model						
Intercept[1]	39.71	3.96	31.84	47.58	10.02	<0.001
Method (Exp)	–24.55	2.80	-30.10	-19.00	-8.77	<0.001
Cost	0.0037	0.0023	-0.0009	0.0083	1.59	0.115
Adverse events(Yes)	-3.46	2.30	-8.04	1.12	-1.51	0.135
IPTW-Weighted Model						
Intercept[1]	45.49	1.00	43.51	47.47	45.60	<0.001
Method (Exp)	-28.31	1.04	-30.37	-26.24	-27.27	<0.001

1 Represents reference level

This table compares the estimated effects of surgical method on procedure duration from two models: an unweighted linear regression model selected via AIC-based stepwise regression, which included method, cost, and adverse events as predictors; and an IPTW-weighted linear regression model based on propensity scores estimated from age, gender, location, and tumor size. Coefficients (β), standard errors (SE), *t*-values, and *P* values are reported along with 95% confidence intervals.